Zimbabwe’s Beneficiation Policy

Part 1: Understanding the drivers and objectives
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Ref: Zimbabwe's beneficiation policy: Understanding the drivers and objectives

Madam, Sir:

Eunomix Research is establishing a comprehensive research agenda focused on developing and sharing a better understanding of mineral beneficiation, a policy now central to most of Africa’s mineral-rich countries. Beneficiation, while representing a worthwhile commitment in principle, remains critically understudied: its theoretical underpinnings are disputed, its conditions of application are not well understood, and its implementation models untested.

However, given the importance of a beneficiation policy to so many countries, and given the current downturn in the fortunes of the mining industry after a long decade of rapid, and perhaps reckless, growth, understanding the conditions under which beneficiation is both desirable and feasible is of great importance.

Our research agenda, which is currently being finalised, and of which the present report constitutes the second endeavour, seeks to contribute to policy making and the dialogue between government, industry, international donors and other interested parties.

The report herein focuses on Zimbabwe, a country that plays a symbolic role in how minerals are and should be managed and leveraged for sustained economic transformation and development. The Government of Zimbabwe has embarked upon an ambitious beneficiation strategy, and implemented some decisive measures intended to foster downstream activities.

Through a two-stage project, Eunomix seeks to provide a comprehensive and fair description of the government’s strategy and its impact so far, as well as to anticipate the policy’s longer-term impacts. In this first report, we present the first stage of our work, with the expectation that it will lead to constructive conversation.

This research involved extensive consultation and benefited from the wise and constructive advice of many subject matters experts. We are grateful to them.

We hope you will find this work and value, and invite your comments.

Sincerely yours,

Claude Baissac
Eunomix Group CEO
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<tbody>
<tr>
<td>AMV</td>
<td>Africa Mining Vision</td>
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<tr>
<td>ATI</td>
<td>African Trade Insurance Agency</td>
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<tr>
<td>AU</td>
<td>African Union</td>
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<tr>
<td>BEE</td>
<td>Black Economic Empowerment (South Africa)</td>
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<td>CNRG</td>
<td>Centre for Natural Resource Governance Zimbabwe</td>
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<tr>
<td>COMESA</td>
<td>Common Market for Eastern and Southern Africa</td>
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<td>CPIA</td>
<td>Country Policy and Institutional Assessment</td>
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<tr>
<td>ECDPM</td>
<td>European Centre for Development Policy Management</td>
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<tr>
<td>ETF</td>
<td>Exchange trade funds</td>
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<tr>
<td>FDI</td>
<td>Foreign direct investment</td>
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<tr>
<td>GATT</td>
<td>General Agreement on Trade and Tariffs</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GNESD</td>
<td>Global Network on Energy for Sustainable Development</td>
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<tr>
<td>GNU</td>
<td>Government of National Unity</td>
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<tr>
<td>IEEA</td>
<td>Indigenisation and Economic Empowerment Act</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>IPP</td>
<td>Independent Power Producers</td>
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<tr>
<td>koz</td>
<td>Thousand ounces</td>
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<tr>
<td>MPRDA</td>
<td>Minerals, Petroleum and Resources Development Act (South Africa)</td>
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<tr>
<td>MW</td>
<td>Megawatts</td>
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<td>NTP</td>
<td>National Trade Policy</td>
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<tr>
<td>PGMs</td>
<td>Platinum group metals</td>
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<td>R&amp;D</td>
<td>Research and development</td>
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<tr>
<td>RBZ</td>
<td>Reserve Bank of Zimbabwe</td>
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<tr>
<td>RISDP</td>
<td>SADC Regional Indicative Strategic Development Plan</td>
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<tr>
<td>SADC</td>
<td>Southern African Development Community</td>
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<tr>
<td>UNECA</td>
<td>United Nations Economic Commission for Africa</td>
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<tr>
<td>UNPAN</td>
<td>United Nations Public Administration Network</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organisation</td>
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<tr>
<td>ZANU-PF</td>
<td>Zimbabwe African National Union – Patriotic Front</td>
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<tr>
<td>ZEPARU</td>
<td>Zimbabwe Economic Policy and Research Unit</td>
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<tr>
<td>ZESA</td>
<td>Zimbabwe Electricity Supply Authority</td>
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<tr>
<td>ZimASSET</td>
<td>Zimbabwe Agenda for Sustainable Socio-Economic Transformation</td>
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1. Executive Summary

Over the past few years the Government of Zimbabwe has embarked on an ambitious policy to transform the mining sector. This policy has entailed both indigenisation and beneficiation, and has found broad support in regional initiatives like the African Union’s African Mining Vision (AMV).

The government has already taken decisive regulatory steps to minimise the export of unprocessed minerals, including an export ban on unrefined gold and raw chrome (the latter being currently suspended), and export taxes. The aim is to encourage mining companies to engage in additional downstream processing activities, although the government has generally tended to favour legislative intervention rather than incentivisation.

Beneficiation is being adopted by a growing number of resource-rich developing countries as a policy tool to advance large-scale industrialisation. But beneficiation remains a controversial policy in many countries, particularly at a time of rapidly declining commodity prices and mining industry crisis. Many governments in similar positions are hesitant and revisiting decisions in an attempt to balance supporting an industry in distress and encouraging fundamental structural change.

In this context, the pioneering role played by Zimbabwe represents a very valuable case study. The government views beneficiation as a targeted policy mainly focused on establishing limited transformation downstream from mining, including smelting and refining. This differs, for instance, from South Africa’s beneficiation policy, which includes the transformation of metals and other final products of mining and mineral processing into manufactured products.

Zimbabwe’s objectives include job creation, an increase in government revenue, and the acquisition of technical knowhow through smelting and refining capabilities.

There are three key drivers behind this new policy focus: (i) An increased dependence on mineral exports amid mounting fiscal pressures; (ii) A trust deficit between the government and the largely foreign owned mining industry encourages the state’s belief in more legislative control; and (iii) beneficiation is being advocated by several regional bodies – including, most importantly, by way of the AMV.

A review of the international debate on the implementation of beneficiation policies – detailed in the report – shows that aspects of Zimbabwe’s interventionist approach might be inappropriate and present potential risks.

Zimbabwe has superior natural resources to many of its neighbours and its private sector has the potential for sustained growth unlike typical states in ‘fragile’ situations. However, its mining policy needs to contend with the country’s latecomer status as a potential manufacturing hub, a regulatory and governance deficit, falling commodity prices, and significant infrastructural challenges.

Despite the anomalies, government policy is coherent at a high level and internally logical. There is also room for dialogue between the stakeholders involved in the process of formulating and implementing mining and beneficiation policy.

Forcing beneficiation to take place through legislation and regulation, rather than through incentivisation schemes, as the Zimbabwean government has elected to do, could have a number of unintended negative consequences, particularly at a time of weak commodity prices. The stakes for the Zimbabwean approach to beneficiation are thus exceptionally high. The anticipated benefits from this strategy are extremely ambitious and the economic situation tremendously fragile.

There is significant room for the private sector to support the government in this process through the transparent exchange of knowledge and information. With so much riding on the extractive sector, getting the implementation right will be essential for Zimbabwe’s economy.

This report represents an initial effort to provide a common understanding of the current situation in the country as it relates to beneficiation, in order to facilitate future dialogue between government and the private sector on this issue.
2. Introduction

The importance of the mining sector to Zimbabwe’s economy is increasing. According to Zimbabwe’s National Statistics Agency (Zimstat), mining’s contribution to gross domestic product (GDP) increased from 3.2% in 2008 to 9.2% in 2012, at which point mining accounted for 73% of the country’s exports.

In the late 1990s mining overtook agriculture, historically one of Zimbabwe’s principal economic sectors. The growing contribution of mining to GDP in recent years has been largely driven by a surge in large-scale platinum and diamond mines. At present the Zimbabwean economy largely depends on mining.

Buoyed by over a decade of high commodity prices – the so-called super-cycle – similar trends have taken place across the continent, which is why the African Union has developed a roadmap to guide African governments’ management of natural resources – the Africa Mining Vision (AMV). The AMV has identified mineral beneficiation as one of the key means by which African governments can use mineral resources to catalyse broad-based and inclusive growth, and foster economic diversification and industrialisation throughout the continent. More concretely, the idea behind beneficiation is to encourage downstream processing to improve trade performance and accelerate a structural transformation of the economy. However, despite having garnered widespread support on the continent, downstream beneficiation remains a controversial policy and several economists do not agree with its central tenets. In practice, its effects are yet to be demonstrated.

The Government of Zimbabwe has responded to the AMV by identifying minerals beneficiation as one of the key objectives of its economic policy – outlined in the Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZimASSET). Currently holding the Southern African Development Community (SADC) and African Union (AU) chairmanship, it appears that Zimbabwe is eager to present concrete results in this supra-regional context.

In 2011, the Government of Zimbabwe banned the export of raw chrome with the intention of forcing mining companies to set up chrome smelters, as part of its broader beneficiation policy. In a press release in April 2011, the Ministry of Mines and Mining Development explained that “Zimbabwe has banned the export […] as it looks to build internal refinery capacity.” In 2012, the government made public its intention to ban the export of raw platinum if platinum producers did not construct a refinery by the end of 2014. In addition, the government has implemented a 15% export tax on unbeneﬁciated platinum. The industry responded by pointing to insufficient economies of scale in order to justify the construction of a dedicated platinum refinery in Zimbabwe. Currently, the ban on chrome exports and the export tax on unbeneﬁciated platinum have been lifted.

This study provides a comprehensive account of the economic context and objectives of the Government of Zimbabwe’s beneficiation policy. It builds on the ongoing debate on beneficiation in Zimbabwe and conferences that have been held on the subject in the recent past.

Structure of this study

This study has been conducted in two phases. Phase one is represented by this report: an analysis of Zimbabwe’s beneficiation policy in terms of its context, objectives and implementation framework. This is the ‘top-down’ view. Phase two, which is currently being conducted by Eunomix Research, will seek to evaluate the policy’s impacts, insofar as the impacts of this young policy can be measured or anticipated.

Phase one of the study, contained below, investigates beneficiation as a concept and as a policy tool in Zimbabwe’s specific context. This paper therefore analyses both the formulation of the policy and its initial implementation in order to evaluate any potential intended and unintended consequences that could emerge in the near future.

1 “Zimbabwe bans chrome exports, to boost refining.” Reuters. April 19, 2011.
This theoretical analysis of the Government of Zimbabwe’s beneficiation policy will be complemented with Phase 2, to be published in mid-2015, which will seek to analyse the real economic impacts – positive and negative – of Zimbabwe’s chrome export ban and calculate potential economic effects – positive and negative – of a ban on platinum exports through several scenarios.

**Methodology disclaimer**

Beneficiation in Zimbabwe is a relatively new field of inquiry. Little formal research has been conducted on it, and there are few documentary sources available, whether primary (data) or secondary (analysis).

This study was written on the basis of qualitative research. A multitude of data sources was explored to ensure justification of the presented information. Public domain research and in-person interviews were conducted in Zimbabwe. Interviewees included government officials and subject matter experts. Additionally, Eunomix invited the Zimbabwe Economic Policy Analysis and Research Unit (ZEPARU) to review the paper.

The results of the research conducted are provisional.

## 3. Beneficiation as a concept

This section presents an overview of mineral beneficiation in the mining sector as a theoretical concept, including its definition, a literature review on the topic and a summary of differing views from academics and policymakers. Broadly speaking, the ability of a resource-rich country to derive economic benefits from different parts of the mining value chain is an important dimension of economic development. However, it is important to determine how beneficiation is defined and how it is used as a policy tool.

### 3.1. In the value chain

#### 3.1.1. The mineral value chain

In order to understand beneficiation, it is important to understand the different processes that are part of the mineral value chain. Figure 1 provides a process-based breakdown of that value chain. The chart separates mining activities from manufacturing activities, where stages 1-3 belong to the first industry and stages 4-5 to the manufacturing industry. Mining, in this categorisation, includes the metallurgical processes that transform the ore produced by mining sensu stricto into metals or alloys. Manufacturing comprises the activities which transform these metals or alloys into semi-fabricated products that are generally intermediate goods for further inclusion into other manufactured products.

The diagram below demonstrates the process of transformation of a mineral product through different processes and by adding other inputs. As an illustrative example, mined gold could eventually, through processing, manufacturing, and the addition of several other inputs and products, be transformed into a watch. In theory, under optimal economic conditions, this transformation results in a higher value, i.e. the gold refiner can make a profit buying the raw gold and refining it, the fabricator can make a profit by buying the refined gold and fabricating it, and the jeweller can make money by buying the fabricated gold and selling a watch. In reality, however, one needs to be wary to make the assumption that such profits can automatically be made as a product moves down the value chain. The ultimate price of the product will be determined by the utility of the product in the marketplace, rather than the sum of its production inputs. This is where competitiveness comes into play.
The question of precisely what constitutes beneficiation and the potential economic benefits to be captured are subjects of debate, though it is generally agreed that beneficiation occurs within the above mineral value chain. A review of various reference sources has shown that there are many different definitions of beneficiation, most of which focus on where most of the economic opportunities lie within the value chain.

Some proponents of beneficiation are in the main interested in capturing the potential economic benefit streams that derive from moving further down the value chain toward manufacturing (i.e. stages 1-3 in Figure 1), which transforms a raw mineral into one or a succession of higher value products. Beneficiation is then the downstream transformative process which begins at mineral processing (stage 3 in Figure 1) and sees forward linkages as the potential economic benefits to be captured.

However, others have adopted a broader view of beneficiation that includes upstream (also known as backward linkages) and side-stream linkages.

3.1.2. Linkages: The economic benefits from mining

Indeed, significant direct benefits can be derived from the mining stages of the value chain (stages 1 and 2 in Figure 1). Such direct benefits include royalties and taxes, employment, exports (contributing to the balance of payments), and community and social support (e.g. Corporate Social Responsibility (CSR), as well as direct social spending such as housing or shared infrastructure development).

Furthermore, significant upstream benefits can develop as mining-supply companies supply goods and services to the mine operators, e.g. mining equipment, geological services, security services, mining camp goods and services etc.

Side-stream linkages take place in the form of financial services, provision of telecommunications, developing research and development (R&D) to support the mining industry and through general skills development (see Figure 1). A thorough consideration of all the economic benefits derived from mining is necessary when trying to understand the debate around downstream beneficiation policy tools.

Several authors have argued that beneficiation should be defined and implemented more broadly, if only for the sake of identifying meaningful spaces of economic opportunity. For instance, in a 2013 presentation, Dr. Iraj Abedian, a former advisor to the South African Mining Minister, differentiated between ‘core beneficiation’ – i.e. the downstream processing – and other important forms of beneficiation, namely water, logistics/ports, R&D, construction, engineering, telecommunication, and transport, which are...
effectively upstream and side-stream (see Figure 2). Economic opportunity, he argued, may lie anywhere in this beneficiation ecosystem.

According to Abedian, there are inherent risks and limitations to focusing only on downstream beneficiation as a policy tool for reasons of competitiveness. An emphasis on the core only may end up undermining the economy and risks decreasing a country’s capacity to not only beneficiate, but also remain competitive in mining. It also fails to account for the significant amount of beneficiation the industry has created throughout the economy.

3.1.3. The role of mining companies

Another point of contention is the role of mining companies in the beneficiation process. The mining stages of the value chain are stages 1-3 in Figure 1 – depending on the mining company’s strategic direction and financial capabilities. Although not all parts of the processing stage may strictly be classified as part of the core function of miners, some level of processing is very often carried out by mining companies.

There exists a fundamental difference in expertise between the industries involved in the downstream beneficiation value chain along the continuum mining-metallurgy-manufacturing, with metallurgy representing a transition area between mining and manufacturing. While metallurgical processes often occur within the mining industry, and notably the metals and associated minerals branch, manufacturing proper does not. Mining and manufacturing are clearly distinct industries, requiring different capital, skills, and market configurations.

Yet, there are different levels of expectation in certain countries about the extent of mining companies’ obligations in the beneficiation process. Some governments (e.g. South Africa) see the role of miners as extending down to and including manufacturing, while other governments (e.g. Zimbabwe) have defined their beneficiation policy as simply a targeted measure to increase downstream value addition through the establishment of refineries and smelters (The particularities of Zimbabwe’s understanding of beneficiation will be discussed in section 4).

Hence, beneficiation is a complex technical process with many subtle conceptual nuances and differing interpretations.

3.2. As a policy paradigm

In addition to beneficiation as a technical process, the concept can also be understood as a policy paradigm, used by governments seeking to spur economic growth by mitigating the so-called resource curse and achieving large-scale industrialisation.
The term ‘resource curse’ was coined by Richard Auty in 1993 to describe how countries rich in natural resources were generally unable to use that wealth to boost their economies and how, counter-intuitively, these countries had lower long-term economic growth than countries without an abundance of natural resources. According to this theory, developing countries have limited industrial capabilities and infrastructure and therefore their governments frequently become overly dependent on the export of raw materials to more industrialised economies, which have the capabilities to produce the finer products and sell them at higher prices – paradoxically often back to those same developing countries. Hence, in view of a country’s Terms of Trade (TOT) – i.e. the relative price of exports in terms of imports – exporters of raw minerals are theoretically losing out on substantial value and economic potential.

Under downstream beneficiation as a policy paradigm, the governments of resource-rich developing countries seek to reverse the dependency on the exports of raw materials by acquiring the technological capabilities to add value to the minerals domestically. Hereby, these governments hope to reap the economic benefits associated with beneficiation, namely a large manufacturing sector that generates higher skilled employment, technological advancement, and increased government revenue from higher value exports. Improving industrial and manufacturing capabilities in developing countries shifts the focus from having comparative advantage in only mining to becoming a ‘beneficiator’ of minerals and developing a comparative advantage in exporting more valuable metal and mining products to the global market.

Thus, beneficiation in resource-rich developing countries does often not only refer to the technical processes (including processing and manufacturing) explained earlier, but can rather be equated with a government’s policy effort to achieve large-scale industrialisation and create the associated jobs required to support this industrialisation.

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4. Zimbabwe’s beneficiation policy

In order to faithfully account for Zimbabwe’s beneficiation policy, this study analyses the formulation and initial implementation of the policy and investigates the factors underpinning the government’s approach to implementing the strategy. The former part will therefore take a closer look at the policy documents governing the issue.

4.1. At the centre of economic planning and policy formulation

Aware of the declining performance of the economy and confronted with serious revenue challenges, high indebtedness, insufficient liquidities in the financial system and decreasing confidence, the government formed after the 2013 election set out to consolidate reforms. Beneficiation was placed squarely at the centre of the formulation of this post-2013 economic policy and planning. Several policy documents lay testament to this and identify the specific objectives of the policy.

4.1.1. ZimASSET

The government released the ZimASSET in 2013. Since then, ZimASSET is the overarching economic blueprint and most important guide for Zimbabwe’s economic policy planning. This document represents an ambitious programme destined to take effect through higher and sustained growth: “During the plan period (October 2013 – December 2018), the economy is projected to grow by an average of 7.3%. It is expected to grow by 3.4% in 2013 and 6.2% in 2014 and continue on an upward growth trajectory to 9.9% by 2018.”

One of the four main clusters of ZimASSET is the value addition and beneficiation cluster. This cluster has four main objectives:

• Improving capacity utilisation;
• Achieving a net trade gain;
• Creating employment; and
• Increasing fiscal revenues

4.1.2. National Trade Policy

According to the Zimbabwe National Trade Policy (NTP) document, which governs the period 2012 to 2016, the objectives of the country’s trade policy are:

• Annual export growth rates of 10% to reach a target of USD 7 billion by 2016;
• The promotion of value addition of primary commodities to improve manufacturing sector contribution from export earnings from 16% to 50%; and
• Consolidation and expansion of existing markets and to explore new markets in the region amongst others

The strategy of developing value addition linkages and clusters is expected to grow the exports, create employment, minimise the trade deficit, and increase fiscal incomes.

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The key drivers of this policy are to be export-led industrialisation, export development and promotion, regional and multilateral trading arrangements, strategic trade policy instruments and institutional capacity development.

The export development and promotion programme outlined in the NTP seeks to promote the country’s exports through a duty drawback system, which offers rebates on raw materials imported for local value addition as well as the retention of export earnings for exporters. The policy also hopes to facilitate funding for companies in the currently discussed Special Economic Zones (SEZs) programme to improve production capacity. The NTP further mentions an export credit reinsurance fund and the willingness to join the African Trade Insurance Agency (ATI), a Common Market for Eastern and Southern Africa (COMESA) institution which provides export credit, political risk and investment insurances. Successful implementation of this policy hopes to attract both foreign and local investors as well as financial institutions in capitalising the distressed engineering and metals sector.

Strategic trade policy instruments for the implementation of the NTP’s beneficiation objectives include tariff-based instruments, non-tariff measures, trade defence mechanisms and trade development instruments. According to the document, these instruments will be necessary to stimulate domestic production, promote value added exports and safeguard domestic industry. The policy also aims at streamlining and simplifying exporting and importing procedures, eliminating customs delays and improving customs administration.

4.1.3. ZANU-PF 2014 party resolution on beneficiation

ZANU-PF has been Zimbabwe’s ruling party since the country’s independence in 1980. As such, the party’s political doctrine to a great extent determines national policy planning. ZANU-PF reconfirmed its commitment to the beneficiation concept at its December 2014 Congress, at which resolutions were passed focusing particularly on reducing the export of minerals in their raw, unprocessed form. The full text of the ZANU-PF December 2014 party resolution on beneficiation and value addition states:

- “Concerned about the high levels of revenue and employment losses precipitated by the export of raw materials;
- Cognisant that the export of raw materials and commodities is tantamount to export of jobs;
- Determined to revive and boost productivity in the mining, agriculture and manufacturing sectors and to enhance their commercial viability through value addition and beneficiation;
- Conscious of the negative impact of the prevailing energy and power deficit on value addition and beneficiation investment; and
- Cognisant of the strategic importance of skilled labour and technology in achieving viability of value addition and beneficiation.

Congress, therefore:

1. Enjoins government to facilitate value addition and beneficiation of local primary goods across all sectors, such as the establishment of refineries in mining and the processing of primary agricultural produce, among other initiatives, in order to increase the value of exports and to create employment across the value chain.
2. Resolves that government revives the manufacturing sector by enforcing current mechanisms to curb the exportation of unprocessed products and protects identified efficient local industry from cheap imports.
3. Urges government to concertedly promote technological innovation around energy and power generation and energy conservation strategies as a key enabler to the value and beneficiation strategies.
4. Encourages government to prioritise market-influenced manpower development programmes, skills retention measures, and well-resourced initiatives to support research and development for the viability of value addition and beneficiation projects.4

4.1.4. Indigenisation policy

The Indigenisation and Economic Empowerment Act (IEEA) was drawn up in 2007 and signed into law in 2010. It requires that a 51% stake of all companies be sold to ‘indigenous Zimbabweans’, defined as anyone who was disadvantaged in the period before Zimbabwean independence in 1980. Since 2010, the implementation of the law has seen several policy shifts, including recent promises to foreign investors that the law would not be an impediment to their ventures.

The indigenisation policy overwhelmingly targets the mining sector. Statements in January 2015 by Zimbabwe’s Ministry of Indigenisation confirmed that there would be no flexibility on the implementation of the 51% ownership rule in that particular sector.5 One of the objectives of economic planning in Zimbabwe is that the nation’s natural resources will be predominantly exploited by indigenous Zimbabweans.

As noted in the Draft Minerals Policy (see next section), local content obligations will be configured to privilege indigenous suppliers and the Chamber of Mines of Zimbabwe will be encouraged to establish a venture capital fund, in partnership with government, to support indigenous enterprises to effectively supply the mining industry with the requisite quality and quantity of goods and services. Beneficiation is seen as one of the measures by which this interpretation of indigenisation can be realised.

4.1.5. Draft Minerals Policy

The Draft Minerals Policy aims to achieve down-stream linkages into mineral beneficiation and manufacturing. In terms of policy instruments, the policy advocates for government intervention “through incentives and disincentives.”

Concretely, beneficiation should be encouraged through the tax system. The Draft Minerals Policy proposes “a small export tax if the next value addition step is clearly viable.” Additionally, “judicious export taxes will be imposed on crude mineral exports where the next beneficiation step has been independently shown to be commercially viable. Mining licenses for the export of crude ores, concentrates, alloys or minerals will be conditional on a feasibility study being undertaken by an independent agency within a stipulated time period. If then feasibility indicates that the beneficiation project is viable (gives a reasonable return on investment), then the Government will reserve the right to impose an equitable export tax on exports of the crude form.” The Policy calls for a new Minerals Development Act that includes milestones for viable backward and forward linkages and a minimum corporate spend on knowledge formation, such as skills development and technology development.

Also, the Policy recognises that further skills and technology development is critical to developing upstream and downstream economic linkages. “Minerals knowledge formation” (skills and technology development) is thus determined critical to growing and indigenising the minerals sector as well as for developing the seminal minerals economic linkages, particularly the backward (inputs) and forward (beneficiation) linkages.6

4.1.6. Mines and Minerals Act

The Mines and Minerals Act defines an “approved beneficiation plant” as one or more of the following: a bank assay department, factory, refinery, smelter or treatment plant. It is only in applying for a special lease that a plan and timetable for a beneficiation plant is required. Section 247 of the Act lays out how the

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owner of a beneficiation plant can have it approved and that producers have to spell out the degree of beneficiation they seek to achieve for which the Minister shall grant them the rate of rebate of royalty. The declaration of an approved beneficiation plant can be withdrawn (a) where the approved beneficiation plant is not operated as such for any period which exceeds, or aggregate of periods which exceed, three months in any one year; or (b) where the degree of beneficiation carried out at the approved beneficiation plant is reduced below that specified in the application made in terms of section 247 subsection (1). However, the Act does not state the minimum level of beneficiation required for mines.

### Table 1: Summary of main policy documents guiding beneficiation in Zimbabwe

<table>
<thead>
<tr>
<th>Policy document</th>
<th>Time period</th>
<th>Overall objectives</th>
<th>Beneficiation objectives</th>
<th>Beneficiation measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constitution</td>
<td>n.a.</td>
<td>n.a.</td>
<td>• “The equitable sharing of national resources”</td>
<td>n.a.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• “The equitable access by all Zimbabweans to the country’s natural resources</td>
<td></td>
</tr>
<tr>
<td>ZimASSET</td>
<td>2013 - 2018</td>
<td>Economic growth by an average of 7.3%</td>
<td>One of the four main clusters of ZimASSET is the value addition and beneficiation cluster. This cluster has four main objectives:</td>
<td>Government should “facilitate” beneficiation capabilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Improving capacity utilisation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Achieving a net trade gain</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Creating employment</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Increasing fiscal revenues</td>
<td></td>
</tr>
<tr>
<td>National Trade Policy</td>
<td>2012 - 2016</td>
<td>• Annual export growth rates of 10% to reach a target of USD 7 billion by 2016</td>
<td>Promotion of value addition of primary commodities to improve manufacturing sector contribution from export earnings from 16% to 50%</td>
<td>Duty drawback system, which offers rebates on raw materials imported for local value addition</td>
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<tr>
<td></td>
<td></td>
<td>• Consolidate and expand existing markets and explore new markets in the region</td>
<td>• Value addition linkages are expected to grow exports, create employment, minimise the trade deficit, and increase fiscal incomes</td>
<td>Funding for companies in export processing zone</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Tariff and non-tariff measures and other trade defence mechanisms</td>
</tr>
<tr>
<td>Indigenisation and Economic Empowerment Act (IEEA)</td>
<td>2010 - present</td>
<td>Economic empowerment of “indigenous Zimbabweans”</td>
<td>The law promotes the exploitation of the nation’s natural resources by indigenous Zimbabweans. Implementation of the law has therefore specifically targeted mining firms. Beneficiation is seen as one of the measures by which this aspect of indigenisation can be realised</td>
<td>Mining firms need to cede a 51% stake to Black Zimbabweans</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Configuration of local content obligations to privilege indigenous suppliers</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Venture Capital Fund to support indigenous enterprises</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Tax policy, e.g. “a small export tax if the next value addition step is clearly viable”, “judicious export taxes will be imposed on crude mineral exports where the next beneficiation step has been independently shown to be commercially viable”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mining licences for the export of</td>
</tr>
</tbody>
</table>
4.1.7. Acknowledgement of challenges

Despite the comprehensive commitment to beneficiation that the examined policy documents represent, these official government documents also offer an acknowledgement of challenges and difficulties that the beneficiation endeavour presents, which include:

- Current inadequacies in human capacity and technical skills (ZimASSET);
- Lack of infrastructure, particularly the lack of reliable energy supply (ZimASSET, ZANU-PF party resolution);
- Unfeasibility of economies of scale due to low demand and the small size of the domestic market (NTP);
- Stiff competition from South Africa and low-cost producers in Brazil, Russia, India, China, Japan, and Europe (NTP);
- Global excess of steel products (NTP);
- The ‘distressed’ nature of the engineering and metals sector (NTP); and
- Difficulty of designing a ‘one-size fits all’ tax regime with generic fiscal (tax) and linkage conditions (local content, beneficiation, skills formation, et al, and milestones) that will efficiently maximise the potential development impacts of all deposits over time.

The policy documents therefore include a certain extent of pragmatism with regards to a consciousness of potential negative impacts and the necessity of strategic inputs. Nonetheless, they also include economic claims that need to be further explored and empirically engaged.

4.1.8. Coherence across government

In sum, beneficiation is strongly embedded in the government’s short- to medium-term economic plans. The recurrence of the issue in several policy documents points to a broad policy design and implementation coherence across government institutions. The policy appears to guide the decision-making of several state entities, such as the Ministry of Finance and Economic Development (through ZimASSET), the Ministry of Industry and Commerce (through the NTP), the Ministry of Youth, Indigenisation and Economic Empowerment (through the IEEA), the Ministry of Mines and Mining Development (through the Draft Mines and Minerals Act n.a. | n.a. | n.a. | n.a. | n.a. 

Source: Eunomix Research
Minerals Policy), and ZANU-PF (through the most recent ZANU-PF party resolution). Research conducted for this study has confirmed that the policy is furthermore endorsed by the Presidency, both at the technocratic and at the leadership level.

Recurring objectives of the policy include the creation of employment, an increase in government revenue, and the acquisition of smelting and refining capabilities. In terms of instruments for the implementation of the policy, government documents consider amending the tax regime, changing policy on mining licences, and imposing other tariff and non-tariff trade measures. On the other hand, the policy documents also acknowledge several key challenges in a beneficiation-induced industrialisation process, including shortcomings in human capital and infrastructure and the competitiveness of the global trade context.

4.2. The government’s definition of beneficiation

The terms beneficiation and value addition are not defined by the Government of Zimbabwe in its policy documents. However, in-person interviews conducted for this study shed light on the government’s interpretation of the concept.

In Zimbabwe, beneficiation is generally deemed to have taken place when a product has migrated from one tariff heading to another. The government defines beneficiation as refining of minerals into metals, and therefore beneficiation is an activity to be conducted by miners. The term is equated by Zimbabwean lawmakers to ‘refining and smelting’, or taking the mineral resource to its purest form. The main objective of the Zimbabwean government’s beneficiation policy is hence to encourage companies to set up precious metals refineries, smelters and catalytic converters domestically. Thus, refining a mineral into base metal is not appropriate because it does not capture the entire potential value of the metal production value chain. Indeed, in-person interviews conducted for this study confirm that the construction of a precious metal refinery would be a requirement of any future mining deals between the government and foreign companies.

The Zimbabwean definition is therefore different from the one prevalent in South Africa, where government sees beneficiation as the inclusion of mining output into manufacturing products and where beneficiation refers to manufacturing and final consumer products using domestically produced metals, alloys and other refined or fully processed minerals.

4.3. Concrete and planned measures to force local refining: The ‘stick’ as a paradigm

As this study will show later, the implementation of a beneficiation policy has been the subject of vociferous international debate. In essence, and to simplify, there are two main approaches to implementing a beneficiation policy:

1. **Negative incentivisation (the ‘stick’):** The use of regulation and legislation to force the producer of minerals to beneficiate or make those minerals available for beneficiation – mainly through restrictions on exports

2. **Positive incentivisation (the ‘carrot’):** The use of incentives, such as tax cuts or energy subsidies, to encourage beneficiation

The Zimbabwean government’s beneficiation policy primarily follows the ‘stick’ approach, i.e. increased regulation and state intervention in the mining sector. Instead of reacting to market forces and the industry, the government appears to want to ‘force’ mining companies to invest in beneficiation capabilities, using ultimatums and outright bans of raw mineral exports to trigger progress.

To date, the government has implemented or is considering implementing concrete measures in four sectors of the mining industry:

1. **Chrome:** In 2011, the government banned the export of chrome ore. The government initially expressed its intention to ban chrome ore exports in early 2009 but due to low capital resources in the sector, the government opened an 18-month export window period commencing in October 2009, to allow miners to export unprocessed ore in a bid to raise capital to build smelting capacity. Chrome ore exports were
to be subjected to a 15% export levy that was later increased to 20% with effect from August 2010 and an additional 2% levy. Upon the lapse of the export window in April 2011, the ban was re-imposed. In June 2015, the government lifted the ban after the Ministry of Mines admitted the ban had failed to stimulate activity in the ferrochrome industry.\textsuperscript{7}

2. **Platinum:** The government considered imposing a 15% tax on the export of un-beneficiated platinum. A recent amendment to the Value Added Tax Act has broadened the definition of ‘un-beneficiated platinum’ to include platinum ore which has not been crushed or semi-processed. Where platinum concentrate has undergone a smelting process which results in pellets and ingot, the platinum concentrate shall be considered to have been beneficiated and will not be liable to any potential export restrictions. The government had initially threatened to impose the tax if platinum miners did not present concrete plans for the construction of platinum refineries. What the media labelled an “ultimatum” expired in December 2014. More recently, concrete plans for such a levy have been placed on hold due to a reduction in production.\textsuperscript{8}

The government has also made several public statements that it is considering an outright ban on the exports of raw platinum. Most notably, President Robert Mugabe announced in November 2013 that the government intends to ban the export of raw platinum in much the same style as the chrome ban.\textsuperscript{9} While no fixed timeframe was provided for these plans, officials have recently confirmed that such a move is on the table in the medium term.

3. **Diamonds:** The government imposed a 15% levy on un-beneficiated diamond exports\textsuperscript{10} as of January 2014 and removed value added tax (VAT) on the local cutters and polishers. The 15% royalty on rough diamonds sold to firms licensed to cut and polish diamonds was removed with effect from January 2015. However, an export ban on rough diamonds is currently pending, according to the Ministry of Mines and Minerals Development.\textsuperscript{11} In the 2014 national budget statement, the Minister of Finance also announced that the government had licensed only three diamond cutting and polishing firms in 2015, down from 29 in 2011. Mines and Mining Development Minister Walter Chidhakwa announced in mid-March that the government plans to merge all diamond companies under one firm in which the state will hold a 50% share.

4. **Gold:** In the 2014 national budget statement, the Minister of Finance announced that the government implemented a ban on the export of unrefined gold in January 2014 and consequently mandated Fidelity Printers and Refinery as the sole buyer and exporter of gold from Zimbabwe.

### 4.4. Factors underpinning the government’s intentions

The policy documents analysed earlier outline the objectives of the government’s beneficiation policy. However, they do not sufficiently explain why the government has chosen such heavy-handed measures to implement the beneficiation policy. In reality, the ‘stick’ approach has been chosen as a response to several context-specific factors that underpin the government’s intentions, including the current economic situation, the government’s budgetary difficulties, a regional and continental policy thrust, and a strained relationship with the mining industry.

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\textsuperscript{7} “Zimbabwe lifts chrome ore export ban, lowers power tariff.” The Source (Zimbabwe). June 9, 2015.

\textsuperscript{8} “Zimbabwe ices 15% platinum levy.” Mining MX. May 22, 2015.

\textsuperscript{9} “Government to ban all raw platinum exports.” The Chronicle (Zimbabwe). November 9, 2013.

\textsuperscript{10} N.B.: The Government of Zimbabwe has not defined ‘un-beneficiated diamonds’.

4.4.1. The country context: a challenging status quo

An economy in decline

During the 1980s and early 1990s, the Zimbabwean state made significant progress in achieving many economic and social development goals. Unfortunately, during the decade between 1998 and 2009, Zimbabwe experienced a political, social and economic crisis, leading to a rapidly contracting economy, hyperinflation and considerable internal instability. This caused international dissatisfaction and led to the straining of international political and economic relationships, including economic sanctions against Zimbabwe.

**Figure 3: Zimbabwe’s annual GDP growth (in %), 2005 - 2013**

Between 2000 and 2009, the economy registered decline of as much as 40%, affecting agriculture, manufacturing and services alike. The manufacturing sector, for instance, collapsed from a peak contribution to GDP of 26.9% in 1991 – an industrialised world level unmatched in Africa – to 7.2% in 2002. In 2013, capacity utilisation in the manufacturing sector was at only 39%.[12] Massive disinvestment and capital flight occurred, accompanied by mass emigration of skilled workers. By the end of the 2000s, Zimbabwe was one of the world’s worst faring economies and ranked at the low end of all established comparative indexes of political stability, political governance, and socio-economic performance.

The Government of National Unity (GNU), which was in power between 2009 and 2013, is credited with having stabilised the economy, notably through dollarisation, budgetary and fiscal consolidation, and investment climate reform. These measures, as well as the relative political stability provided by the GNU, took effect rapidly and the economy expanded between 2009 and 2012, albeit from a low base.

Despite reforms during the GNU from 2009 to 2013, the Zimbabwean economy is still under significant strain, with government revenue remaining low and new economic programmes being constrained by a lack of liquidity. GDP growth for 2013 had originally been expected to be near 5%. Instead, it slowed to 4.5% from 10.6% in 2012 (see Figure 3). The government now expects a GDP growth of 3.1% as per its 2015 budget, signalling a progressive worsening of conditions. In the same budget statement, Finance Minister Patrick

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Chinamasa admitted that between 2011 and 2014, nearly 5,000 firms closed down, affecting over 55,000 employees.

The rising economic importance of mining

The role of the mining sector in Zimbabwe’s economic growth is increasing. This is mostly due to the fact that the potential for recovery of the agricultural and industrial sectors remains stunted. Indeed, a World Bank (2014) report acknowledges that mining has been the sector to lead the rebound.\(^3\) Exports are therefore even more dependent on a few large mining operations to provide foreign exchange and employment.

Generally, the period from 2010 to 2012 saw a mining boom in Zimbabwe. While the value of exports only increased by about 30% from 2000 to 2009, in 2010 there was a substantial increase in mineral exports of over 150%, which was followed in 2011 by another increase of near 30% (see Figure 4).

![Figure 4: Zimbabwe's mineral exports, 2001 – 2012](chart.png)

The sector’s export growth was largely due to the resurgent mineral prices after the 2009 financial crisis. This culminated with substantial expansions of the production of platinum and diamonds, and partial recovery of production in gold. Once dominated by small-scale gold production, in recent years there has been a surge in large-scale operations in platinum and diamonds.

Nonetheless, investment remains below potential and limited to large-scale known deposits. Based on findings from a World Bank survey in 2012, the value of investment plans in existing mining projects (USD 5 billion) is less than half the potential of absorption of new investment by existing projects (USD 12 billion).\(^4\) The aforementioned boom thus understates the existing potential of mining projects, let alone the potential of new developments from exploration phase.

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Additionally, the dwindling of other sectors of the economy such as agriculture and manufacturing contributed to the increasing dominance of the extraction of raw minerals (see Figure 5). During the 1990s, while agriculture was by far the main contributor to export growth, the contribution of the other sectoral drivers of export growth – mining, manufacturing, and services – was much lower, yet relatively balanced. However, by the start of the new century, a new pattern emerged. In recent years, agriculture – formerly the country’s single most powerful economic activity – hardly featured at all. Only minerals have contributed significantly and positively to export growth until the post stabilisation period. Diversification and more equal income distribution thus remain elusive.

The growing dependence on mineral exports along with fiscal pressures and the under-performance of non-mining sectors have contributed to the formulation of economic policy that explicitly views the extractive sector as the key source for revenue and economic growth. Despite declining commodity prices, from the government’s perspective, mining appears as the economic sector from which to extract the most rents, royalties, and taxes (to ease fiscal pressures), and main vehicle for large-scale industrialisation. Thus, the declining economy, the rising dependence on mining and the need to move away from export of primary commodities which are determined on the international market (for which Zimbabwe is a small country and cannot influence the terms of trade) are three important contributing factors to the government’s ‘stick’ approach to beneficiation.

**Figure 5: Increasing dominance of resource-intensive exports**

![Graph showing increasing dominance of resource-intensive exports](source)

*The 2011 figure from these World Bank calculations was a projection at the time that report was released (2014).*
Trust deficit between the government and mining companies

In addition to the real economic pressures on the government’s budget and the national economy, a more historical factor contributes to the government’s beneficiation push. This contributing factor pertains to the fact that the Zimbabwean government distrusts the mining industry in several ways.

In-person interviews conducted for this study show that, on the government’s side, the perception that mining companies continue to attempt to cheat the system is deeply held. Accordingly, foreign mining companies, and particularly South African ones, would be engaging in questionable activities such as smuggling, transfer pricing, and under-accounting of associated minerals in order to avoid paying tax and other revenues owed to the Zimbabwean government. For instance, Mines and Mining Development Minister Walter Chidhakwa lamented in March 2014 that many of the country’s mining operations are “shrouded in secrecy and government is not receiving its fair share of revenues.” It further appears that at least some in government believe that both the South African government and South Africa-based mining companies collude in some way to ensure that Zimbabwe will remain a provider of raw minerals to keep South Africa’s refining businesses busy and profitable. These allegations have yet to be substantiated by solid economic analysis, with empirical demonstration of fiscal impacts of these practices should they exist.

Further in-person interviews conducted for this study have shown that the Zimbabwean government continues to be highly doubtful of the argument presented by companies that Zimbabwean platinum and chrome mining has not yet achieved the economies of scale to justify building dedicated refineries. For instance, Finance Minister Patrick Chinamasa in 2015 publicly justified a pending 15% export tax on unbenefticiated platinum by saying that “miners have failed to provide a roadmap on how they plan to set up a local refinery.” Chinamasa told the media that he had assumed that producers in Zimbabwe had a firm plan to set up a refinery. “So when there was a non-existent roadmap, because they had been given this warning two years back and there was nothing to show for it, I then decided to keep the provisions which we had put in the finance bill to remain as is.” Additionally, Dr. Desire Sibanda, the then Permanent Secretary in the Ministry of Economic Planning and Investment Promotion, said in 2013 that the government banned the export of chrome explicitly due to the assumption that mining players “did not want to venture” into value addition.

In this context of extreme distrust, the strong rhetoric around the issue of beneficiation can be understood as the government’s response to what it perceives as disingenuousness on behalf of mining companies. Additional in-person interviews conducted for this study have shown that this perceived lack of transparency contributes to government’s unwillingness to accept the argument forwarded by companies that Zimbabwe has not yet achieved sufficient economies of scale to justify investments in refineries and smelters. This argument will thus not inhibit the government’s intentions to implement the beneficiation policy.

Economic costs as ‘labour pains’

In this context, the government perceives any economic losses that may arise from an export ban or increased export taxes as ‘labour pains’ in a broader process across the mining sector. At a 2014 conference, Mining Minister Walter Chidhakwa recognised “that in order to create that new industry that we never had before, we might have to give up certain revenue inflow through government.”

In-person interviews conducted for this study have revealed that the chrome sector was deliberately chosen for such ‘labour pains’ due to its comparatively small economic impact. Accordingly, the chrome export ban is a deliberate policy experiment designed to achieve two goals:

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• Signify to other sectors of the mining industry that government is serious about beneficiation by sacrificing a small sector; and

• Experiment with the export ban approach to see if it yields internal results, hopefully leading to investment by chrome miners into smelters.

The chrome export ban is thus a critical policy experiment that must be well understood by the mining industry and observers, and whose empirical results, positive and negative, must be thoroughly monitored and analysed.

4.4.2. The regional context: policy support from the ‘neighbourhood’

In addition to the aforementioned economic and ideological factors that inform the government’s approach to beneficiation, its enthusiasm is also encouraged by a supportive broader policy context. The desire to re-set and re-invigorate manufacturing (or ‘reindustrialisation’, as it is commonly called nowadays) in Africa has been a priority since the virtually total collapse of this activity in the last 25 years. The total domination of global manufacturing by China and other Asian countries has eroded African competitiveness and seen the exodus of many specialised skills.

Beneficiation, powered by the mineral sector, is seen by many African countries as the simple answer to a number of complex problems – building up local skills, improving foreign direct investment, diversifying the economy, creating jobs and accelerating exports. South Africa and Zimbabwe in particular have placed reindustrialisation at the top of their economic policy agendas in the last few years.

One of the main drivers behind Zimbabwe's beneficiation policy is thus the regional context. Three regional bodies in particular have been driving the beneficiation agenda in Africa: the AU, SADC, and COMESA. These organisations’ regional policy agenda played an important part in the initial formulation of the Zimbabwean beneficiation policy and recent events have put Zimbabwe in the driver’s seat of regional policy: in 2014, Zimbabwe’s President Robert Mugabe assumed the chairmanship of SADC and in January 2015 he assumed the chairmanship of the AU.

SADC

Mining is one of the most important economic activities in SADC. It contributes to 60% of the group’s foreign exchange earnings, 10% to 11% of gross domestic product, and about 5% of total employment. In addition, as a proportion of total world production, the SADC region contributes about 72% of the production of platinum group metals (PGMs), 55% of diamonds, 46% of vermiculite, 41% of chrome, 26% of gold, 21% of zinc, 18% of cobalt, 15% of manganese, 13% of uranium, 11% of antimony, 8% of copper, 7% of nickel, and 6% of coal. Furthermore, many parts of the region have not undergone systematic modern exploration and, consequently, the potential for the discovery of new deposits is considered to be very high. Among SADC members seeking to enter the field of mining are Malawi and Lesotho.

Mineral beneficiation and value addition is a key issue for SADC. In January 2014, all SADC member states concluded the SADC Industrial Development Policy Framework. This policy document views “limited value addition and beneficiation” as one of the grouping’s core challenges, designates regional collaboration to “deal with problems related to […] beneficiation” as a key intervention area, and identifies the processing of mineral products as one of its sector-specific strategies. Some of the concrete measures encouraged include waiving royalty payments by holders of mineral rights who are benefiting their minerals.

Furthermore, the 34th SADC summit, hosted by Zimbabwe in August 2014, focused on the theme ‘SADC strategy for economic transformation: leveraging the region’s diverse resources for sustainable economic


and social development’. Then Zimbabwean foreign minister Simbarashe Mumbengegwi said that the theme of the summit reflects the region’s belief in the ‘importance of beneficiating and value adding of our resources.”22 One of the explicit inspirations for SADC’s beneficiation push has been the experience of Australia, where the resource industries are employing close to 64,000 people directly and over 300,000 indirectly (further explored in section 5.3.1).

President Robert Mugabe has always been a vocal advocate of beneficiation in the continental, regional and local Zimbabwean context. He has been active in translating the beneficiation objective at a regional level as well. Most recently, in his acceptance speech as chairman of SADC in August 2014, President Mugabe chose to focus intensely on the question of beneficiation. SADC’s main planning document, the Regional Indicative Strategic Development Plan (RISDP), was also going to be revised to make sure that the beneficiation of natural resources featured prominently under President Mugabe’s chairmanship. “While the SADC is potentially one of the richest regions in the world, most of its agricultural and natural resources are exported unprocessed, which earns the region 10% of their actual value. Through beneficiation we will be able to increase our returns ten-fold,” President Mugabe said in his acceptance speech, referring to statistics that value addition from the primary sectors of mining and agriculture is as low as 15% in the region. He believes that the prospects of an expanded market will stimulate intra Africa trade and lend a multiplier effect to economic growth, while industrialisation will enable SADC countries to produce quality goods.

**COMESA**

COMESA23 also recently decided to focus on the importance of commodity-based industrialisation. Member states have introduced the COMESA Initiative on Minerals Value Addition and Industrial Clusters, concluded a cooperation with the Australian government (for a case study of Australia’s beneficiation efforts, see section 5.3.1) to support beneficiation and value addition in the COMESA region, and decided during their Kinshasa summit in February 2014 to develop a common industrialisation policy, which will focus on beneficiation.

**Africa Mining Vision**

Perhaps the most influential regional policy document is the Africa Mining Vision (AMV). The following section provides a summary of its content, the challenges surrounding its implementation, and its application in the Zimbabwean context.

The AMV was born out of concerns that the absence of a shared vision and common approach limited the capacity of African states to use their mineral resources to drive meaningful development. This lack of coordination manifested in differing priorities for mineral resources at country level, and a lack of collective funding and investment in knowledge and technology regarding mining at continental level. In response to this, the AU identified the need for a shared vision, and the process of drafting the Vision was initiated in the late 2000s.

The AMV was officially adopted by African Heads of State at the 2009 AU summit. It has quickly become one of the AU and the UN Economic Commission for Africa’s flagship initiatives, and has drawn international praise for putting in place a coherent framework and set of agreed priorities on how to leverage mineral resources for economic growth. It is generally considered internationally as a cogent and practical framework on which member states could base their mineral policies.

Since its adoption, African states have been responsible for ‘domesticating’ the AMV in their own national economies. This has been taken up with varying degrees of enthusiasm by different states. Surprisingly, South Africa – increasingly inward-looking and distracted since 2009 and the end of the Thabo Mbeki era – has largely ignored the AMV, despite being Africa’s biggest mining economy and the Chair of the AU

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Commission, Nkosazana Dlamini-Zuma, being South African. This might be due to the age of the South African mining industry (well over 100 years old), its (relatively) strong economic linkages, and a diversified economy, thus rendering redundant the need for the ‘domestication’ of the AMV.

Other relatively mature mining economies such as Ghana and Tanzania have adopted active leadership roles in the Vision and its implementation. States with significant resources and major mining potential such as Sierra Leone, Guinea, and Zimbabwe, and even surprisingly small mining players such as Malawi and Lesotho, have all become involved in the AMV, eager to use the framework to unlock economic potential.

The AMV’s influence on ZimASSET

There is a connection from the continental AMV, to the regional SADC, down to the local ZimASSET. The vision for Zimbabwe’s mining sector is explicitly based on the AU’s AMV. For one, it is clear that the implementation of the AMV is a priority for a state such as Zimbabwe. With the notable exception of ownership issues – the AMV makes no explicit pronouncements on ownership of mineral resources or the companies extracting them – the principles informing various Zimbabwean beneficiation policies and legislation in recent years (as shown earlier) are consistent with a coherent continental (AU) and regional (SADC) framework.

The AMV is built around several key clusters. In the Zimbabwean context, particular focus has been given in recent years to the AMV clusters eight (linkages and diversification) and nine (mobilising mining infrastructure – notably smelters, refineries and power supply) – particularly in the ZimASSET blueprint document that currently shapes the country’s economic policy. The drive to strengthen linkages between mining and other parts of the economy is central to the AMV and – in a country with a strong mining tradition and history such as Zimbabwe – holds the potential for meaningful economic transformation, which is no doubt why it features prominently in Zimbabwean economic policy planning.

When explaining the importance of linkages, the 2011 Action Plan for Implementing the AMV states that the Vision aims to achieve: “A knowledge-driven African mining sector that catalyses and contributes to the broad-based growth and development of, and is fully integrated into, a single African market through:

• Down-stream linkages into mineral beneficiation and manufacturing;
• Up-stream linkages into mining capital goods, consumables and services industries;
• Side-stream linkages into infrastructure (power, logistics, communications, water) and skills and technology development.”

President Mugabe’s close work with the AU – for which he is the current chairman – has no doubt informed this prioritisation, and his language has always been consistent with the text and phrasing of the AMV.

In sum, the Zimbabwean beneficiation policy does not operate in a vacuum. Rather it is clearly situated inside a context that enjoys (relative) alignment between continental, regional and local thought leadership on these issues.

4.4.3. The stakes are high

The goal of value addition in Zimbabwe is not new. The issue has been pronounced in several budget statements since the 1980s. Value addition has been expressed as the desire to transform from an exporter of primary products to exporter of manufactured or value added products. However, the recent fiscal challenges have added more impetus to this policy desire.

Currently, beneficiation in Zimbabwe is also a reaction to increasing economic and financial pressures that present potential threats to the stability of the Zimbabwean economy. Not least, the government sees its

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“Action Plan for Implementing the AMV ‘Building a sustainable future for Africa’s extractive industry: From vision to action.’”
beneficiation policy as a signal to the mining industry that it is willing and capable to regain control of a sector that has allegedly spun out of control. Lastly, the AMV presents the broad supportive international encouragement needed.

In response, the government has taken concrete steps to minimise the exports of raw minerals in an effort to encourage mining firms to construct beneficiation capabilities in the forms of refineries and smelters. However, given the country’s dependence on the mining sector, the stakes for this approach are exceptionally high. The anticipated impacts of the strategy – as outlined in the aforementioned policy documents – are extremely ambitious and the economic situation tremendously fragile. With so much riding on the extractive sector, getting the implementation right will be essential. Thus, the chosen ‘stick’ approach must be carefully analysed, both from an international and domestic perspective.
5. The implementation debate: What role for the state?

As a theoretical concept, the transformation of a country’s natural resource endowment into more value-added products (downstream beneficiation) is widely considered a positive and worthwhile economic strategy. However, the different approaches to implementation are a subject of debate. This debate is defined in many cases by the orthodox discourse advocating for a market-driven approach to the matter, on the one hand, and the developmental state discourse that advocates that the state play an important role in the facilitation of the value-added process, on the other hand.\(^5\)

5.1. Mining not solely for profit: The developmental view

The rationale behind mineral beneficiation through government intervention is derived from the proposition that mineral resources are finite and non-renewable. As such, they represent an endowment whose economic value must be adequately captured for the benefit of their countries of origin. Mere extraction and exports of unprocessed minerals fail to capture the full economic opportunity afforded by the presence of that natural bounty, and carry a tremendous opportunity cost in the form of lost investment, employment, growth, exports and transition to higher stages of development. Proponents of the developmental view advocate for an increase of the developmental impact of mining by enhancing its contribution to poverty eradication and improvement of the lives of citizens.

According to government advisors like Paul Jourdan (2012), minerals should not be extracted solely for profit maximisation. Jourdan, co-author of the African National Congress’ (ANC) State Intervention in the Mining Sector (SIMS) report in South Africa, was in 2012 quoted as saying: “I'm not sure that we want companies that are just going to dig holes. I think that we want companies that are going to make those linkages and build our economy for the future, post mining.”\(^6\) This represents the sense that mineral-rich countries have not gained enough from their mineral assets, which does not only refer to collected taxes and other forms of monetary compensation. Countries are increasingly realising that the minerals sector can be used to kick-start an economy. In order to achieve this, developing linkages with the rest of the economy is central to the developmental argumentation.

For the developmental view, extractive industries have historically been enclave industries, most often characterised by investment decisions that neither sustain broader economic development and diversification over time, nor reduce vulnerability to commodity price volatility. For instance, in a study of mining sector policy, Paul Jourdan and several Zimbabwean authors (2012) strongly criticise what they call the current “colonial minerals governance regime of free mining”, or limited mining lease conditions.\(^7\) To leverage the development of a nation’s mineral resources towards broader national development strategy, policies and state actions are needed in order to enable nations to ensure natural resource sector investments towards broader growth objectives.\(^8\)

But, given the structure of the international trading system, which works to the advantage of established beneficiating countries, the economic imperative toward greater capture of the inherent value that rests further along the value chain cannot be served without decisive intervention by government.

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Consequently, value-added processing is best managed by the state to ensure that the benefits from a natural resource endowment ‘trickle down’ to the rest of the economy and the country’s citizens. Such methods have often been equated with ‘resource nationalism’. They are developmental in intent.

A common government strategy proposed by developmental authors to kick-start the beneficiation process is legislation. In particular, the state seeks to pressure mining firms into developing in-country beneficiation capabilities by placing heavy taxes on the export of raw materials, or outright banning the export of unbeneficiated minerals if they have not been processed in some way or another. For instance, Jourdan et al. (2012) call for “the introduction of a resource rent tax” and “a small export tax if the next value addition step is clearly viable.” 29 This approach seeks to emulate the Chinese model of industrialisation, where the government protected its domestic economy through trade barriers and built domestic manufacturing capabilities, until Chinese products reached the stage where they were competitive in the international market. Implicitly, the developmental perspective thus views beneficiation as downstream value-addition, as its enthusiasm for regulation does not take into account the loss in upstream and side-stream value addition that might occur when export barriers mitigate the profits of mining companies.

Developmental observers also call for government investments in human and technology development. This maximisation of human resource development and research and development opportunities should increase employment and competitiveness in the mining sector. In this regard, proponents of the developmental view often cite Norway, Sweden, Chile, and Canada as best practice examples.

The developmental view thus advocates that mining should not solely be a revenue source, but that the minerals sector should be at the heart of a country’s development strategy. Rather than being an isolated, stand-alone sector, it is hence critical that the minerals sector is integrated into existing long-term government strategies so that its development is planned in a way consistent with long-term interests and national priorities.

5.2. Factor intensities and the global market: The orthodox view

According to the ‘orthodox’ view, a view that many developmentalists call ‘neo-liberal’, a particularly important factor for the success or failure of a government-driven beneficiation strategy is the maturity of the economy. There are two schools of thought on the orthodox perspective:

- **Political economy**, which emphasises political instability, lack of transparency, etc; and
- **Economy**, which emphasises lack of competitiveness of domestic factors (costs, skills, electricity, transport infrastructure), macroeconomic instability (e.g. wide currency variations), and a lack of the microeconomic ability to reach economies of scale.

From the political economy side, a key counter-argument to those advocating for government intervention in mineral beneficiation is that developing countries often face political instability, lack of transparency, corruption and lack of fiscal and technical capacity – notably in government. According to authors like Michael Solomon (2012), these characteristics hinder the government’s ability to effectively manage the ambitious endeavour of large-scale industrial transformation.30

This economic point of view is often defended by the World Bank, whose discourse points to the detrimental effects of state intervention in mineral beneficiation on foreign direct investment (FDI). From the World Bank’s perspective the statist approach endangers the overall investment climate and will decrease the presence of foreign companies, which will have a negative ripple effect on employment and

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29 Jourdan et al. 2012.

industrial development in the affected country. The World Bank has in the last years funded a number of studies opposing downstream beneficiation, including a critique of Zambian copper beneficiation.\textsuperscript{31}

In one of the most important academic papers from the economic perspective, Ricardo Hausmann\textsuperscript{32}, Bailey Klinger, and Robert Lawrence (2008) question the presumption that downstream processing is an appropriate development path for countries that are endowed with raw natural resources. Based on a large international data sample from the past 25 years, they have found very few countries that export raw materials also export their processed form or transition to greater processing. Hausmann et al. conclude that this is due to two reasons:

- **Technological requirements and factor intensities (i.e. skills and other inputs) are more important for structural industrial transformation than a large natural resource endowment:** The most prominent example for this phenomenon is Japan, which attained industrial prowess despite poor natural resources. Another example is Jamaica, which does not process any of its abundant Bauxite due to a lack of cheap energy; and

- **As global markets have become more integrated, the advantage of proximity to raw materials production has been diminished:** This is one of the main reasons why England’s industrial revolution – when coal and iron ore endowments favoured a local steel industry – is an outdated case study today.

The study found that these observations are even more applicable for downstream movements from raw materials than for other manufactured goods. A similar conclusion is found in the work of Morris, Kaplinsky and Kaplan (2012), who more broadly advocate for upstream policies.\textsuperscript{33}

Thus, according to Hausmann et al., beneficiation is a “pervasive policy paradigm”. Governments take a risk in concentrating on beneficiation on ideological grounds, while potentially overlooking more attractive ‘lateral’ development opportunities, such as the emergence of other export sectors or other types of engineering.\textsuperscript{34} This corresponds with Abedian’s view (2013) on the need to incorporate side-stream and upstream dimensions in defining beneficiation. In the orthodox view, optimal economic and social conditions are more important success factors than government intentions.

### 5.3. Case studies: A resurgence of resource nationalism?

As a policy paradigm, mineral beneficiation is currently gaining international popularity. The following provides a brief summary of a few selected government approaches to the matter.

#### 5.3.1. Australia

As a country where tax incentives and energy subsidies have been used to promote the downstream steel industry, Australia is often cited as a successful example of the ‘carrot’ approach. According to experts from the European Centre for Development Policy Management (ECDPM), successive attempts to mandate beneficiation through interventionist policy mechanisms have for the most part failed in Australia.\textsuperscript{35} Rather, market-driven, non-mandated beneficiation has successfully occurred: for example bauxite to aluminium


\textsuperscript{32} N.B.: Ricardo Hausmann, a former minister of planning of Venezuela, has re-iterated his views in a paper that he co-wrote with Dani Rodrik and Charles Sabel (2008).

\textsuperscript{33} Mike Morris, Raphael Kaplinsky, and David Kaplan. 2012. “One Thing Leads to Another: Promoting Industrialisation by Making the Most of the Commodity Boom in Sub-Saharan Africa.


\textsuperscript{35} David Doepel and Geoffrey Bolton. 2013. “Extracting the value from the Extractive industries: Insights from the Australian Experience.” European Centre for Development Policy Management (ECDPM).
production, synthetic rutile production, and gold bullion production. Further analysis suggests that the main drivers behind these investment decisions include access to competitively priced energy, abundant water, a world-class research environment and a skilled workforce. Furthermore, the government supports mining firms in securing land tenure. The state has also successfully built cross-linkages between the extractive and other areas of the economy by allowing for research and development tax concessions and commercialisation incentives backed by sophisticated capital support structures. One example of a cross-linkage between mining and agriculture in Australia is a 600 km water pipeline providing water from Perth to the gold deposits in Western Australia. The pipeline today provides water not only to the mining operations in Western Australia, but also to the intermediate region, while the area along the pipeline has transformed marginal grazing land into one of the world’s most productive wheat growing areas.

Today, mining in Australia is considered to be fully integrated into the economy and a skilled workforce is sourced locally with goods and services largely procured from within the jurisdiction, thus increasing economic multipliers. In 2010, Australia exported USD 13 billion in processed minerals and is today the world’s leading producer of processed alumina and rutile. The mining industry employs approximately 64,000 fulltime resident employees, of which only 5% are characterised as low skilled, while state royalties and federal company taxes totalled approximately USD 8 billion (USD 3 billion in royalties, and USD 5 billion in taxes) in 2011.

5.3.2. Botswana

As the world’s largest diamond producer by value, Botswana is a truly exceptional case. In 2012, the country produced USD 4 billion worth of diamonds. Since the late 1960s, the government has forged a special relationship with diamond firm De Beers, in particular by progressively increasing its share in the joint venture Debswana. In the 1990s, the government started lobbying the country’s diamond firms to move most of their sorting and rough sales operations to Botswana and to set aside a percentage of rough diamonds for local cutting and polishing. Initially, De Beers suggested that cutting and polishing activities were not economically viable in Botswana. However, seeking to renew their mining licence in 2005, De Beers was only granted the licence on the condition that they contribute to establishing a viable cutting and polishing industry. At first, minimalist operations were set up to simply comply with the letter of the law, upon which the government adopted more business-friendly regulations on employment, taxes and currency exchange.

Today, Botswana’s drive to create a local diamond manufacturing industry is widely considered a success. More than 3,000 workers are employed in polishing operations (compared to fewer than 500 in 2006) and several thousand more through ancillary businesses serving the diamond sector. Polished diamond exports neared USD 800 million in 2013 and were forecast to top USD 1 billion by 2015, compared to USD 100 million in 2008. A diamond technology industrial park between the airport and the capital Gaborone hosts more than 20 technology-driven diamond operations.

The key success factor for Botswana is its unique context, namely the fact that with one very large player (De Beers/Debswana) mining one particular mineral (diamonds), the move to enact a beneficiation policy and not cause capital flight or disinvestment was easier to achieve. In fact, the state had a very large bargaining power when allocating licences, given the government’s large stake in Debswana and the profitability diamond companies had been able to achieve in Botswana.

5.3.3. **Indonesia**

A legislated beneficiation strategy was implemented in January 2014 by the government of Indonesia, where the export of unprocessed nickel and bauxite was banned. The initial objective of the decree was to force Indonesia's largest miners to comply with new requirements to construct smelting facilities for all minerals. However, in a last minute presidential decree, all of Indonesia's primary mineral commodities were exempted from the ban except nickel and bauxite: raw ore exports of copper, iron, lead, zinc, and magnetite can continue until 2017, at which point in time processing facilities must be established. Until 2017, a progressive tax on all exported commodities will be applied: 25% in the first year for copper and 20% for all other commodities, thereafter increasing to 60% of all minerals. According to observers, this tax is aimed at punishing the country's mining industry for failing to comply with the government's initial mandate of constructing smelters and refineries.\(^{41}\)

Although it is too early to pronounce on the policy's economic effects, the World Bank has warned that Indonesia could lose USD 6 billion in exports in 2015, and could expect a cut of USD 6.5 billion to government revenue in the period leading to 2017. Further, layoffs of thousands of staff at several mining companies as a result of the ban have been reported. Local unions have warned that over 100,000 jobs are at risk, while the Indonesian Chamber of Commerce and Industry's estimate is much higher at 800,000 jobs. Additionally, Indonesia may soon face a complaint at the World Trade Organisation (WTO) for violating its international trade obligations by placing unlawful restrictions on exports.\(^{42}\)

5.3.4. **South Africa**

In South Africa, the government's beneficiation efforts fall into two overarching policy objectives: i) Black Economic Empowerment (BEE) and ii) achieving state-led industrialisation by means of a ‘developmental state’. The South African government's beneficiation policy must firstly be seen as a policy of social justice to increase the access of the previously disadvantaged population to the country's resource wealth. Secondly, a consistent objective across government is the desire to change South Africa’s comparative advantage in its mineral resources into a competitive advantage in manufacturing.\(^{43}\) Hereby, the government also hopes to create more jobs. For key economic policy-makers inside the South African government, competitive advantage is seen as achievable through highly interventionist tools like currency manipulation, trade arrangements, taxation, incentives and regulation.

South Africa’s mineral processing industries developed as a result of the apartheid government pursuing state-led beneficiation with the establishment of companies such as Iskor and Sasol. In South Africa’s early days as a democracy, the ANC-led government generally liberalised the economy with less state-led planning. Over the years, however, government incentives have grown, particularly in trying to encourage certain manufacturing industries. The automotive sector, for example, has been heavily subsidised and the incentive schemes continue to attract new investments. In the past five years, there has been increasing talk of further incentive schemes, including tax allowances for greenfield industrial projects and the expansion and upgrade of brownfield sites, R&D tax incentives, and the development of Special Economic Zones (SEZs).

Recent proposed amendments to promote beneficiation within the Minerals and Petroleum Resources Development Act (MPRDA) significantly increase the legislative control over South Africa’s mineral

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\(^{41}\) JP Stevenson. 2014. “Pricing Progress: Indonesia’s push for mineral beneficiation facilities may cost the country all.” Global Business Reports.

\(^{42}\) Timm Wesley and Jonathan Veeran. 2014. “Lessons on mineral beneficiation: the stick or the carrot.” Webber Wentzel.

\(^{43}\) N.B.: In trade theory, the terms ‘comparative’ and ‘competitive advantage’ differ. While the theory of comparative advantage encourages countries to pursue production in sectors, in which other countries may not have similar endowments of productivity and resources (in South Africa’s case, mining), the theory of competitive advantage encourages countries to not only focus on those sectors, but become more competitive in sectors that may not appear to be attractive compared to other countries.
endowment. The proposed legislative framework allows for ministerial discretion in determining what are considered to be ‘strategic’ minerals for South Africa – these could potentially be iron ore, coal, platinum group metals (PGMs), polymers and titanium. The government will be able to enforce the volume and the price at which these designated minerals have to be sold domestically in order to encourage local downstream industry. The Bill also sets out that any company wishing to export a mineral or mineral product must first comply with the beneficiation provisions.

While most observers agree that it is too early to pronounce on the economic impacts of beneficiation in South Africa, there is ample evidence that South Africa is rapidly losing competitiveness in manufacturing, and that the incentives in place are not sufficient to compensate for that.

For example, the domestic ‘developmental’ prices and the amount to be supplied to local industries are not yet outlined or specified. However, the South African media reported in 2013 that the diamond manufacturing sector for example, which forms a key part of the government’s beneficiation plan, has decreased dramatically in size – from 3,000 polishers to about 300 between 2010 and 2013 – and production costs have soared compared to the international competitors in China and India.

5.4. A context-specific issue

In sum, beneficiation is a context-specific issue. It is a very complex process and its success depends on a plethora of inter-related factors. From a policy perspective, mineral beneficiation presents one possible option for governments of resource-rich developing countries to better manage their natural resources and, ultimately, their country’s socio-economic development paths. However, the use of the beneficiation concept in economic development has been the subject of vociferous academic debate, as factors such as factor intensities and the global trade context are considered.

In reality, different implementation models have enjoyed different degrees of success. For instance, the ‘carrot’ approach of pro-business incentives for investments in beneficiation capabilities in Australia has been widely recognised as a successful beneficiation policy.

However, on the more recent ‘stick’ approaches of more legislated control of the mining sector in South Africa and Indonesia, it is still too early to pronounce on success or failure. What is more, the assumptions forwarded by proponents of the stick approach remain mostly untested. This includes the hypothesis that measures like export bans and taxes are an effective policy tool because they will supposedly change the structure of incentive from raw exports (Zimbabwe) or refined exports (South Africa) to beneficiated exports. In reality, markets may respond very differently from government’s expectations; companies may comply or they may leave. Other factors include prices or the relative dominance in a given commodity; as the Botswana example shows, mining companies may stick it out if losing a particular resource has a devastating impact on their reserve portfolio, while a country with a vast share of a particular mineral may be able to exert some degree of control over pricing. Hence, at this stage, the effectiveness of export restrictions and other measures is only an assumption, which must be imperatively explored theoretically and empirically. The following section presents an initial theoretical attempt to do so.

In this respect, Zimbabwe’s experiment with chrome represents a unique opportunity to explore whether such a policy, in such a difficult economic context, offers a viable solution toward effecting a greater economic contribution by mining in the medium and long term.

6. Risks and opportunities

This section seeks to identify some of the risks and opportunities that might arise from Zimbabwe's plans to implement an interventionist beneficiation policy.

This analysis builds on the theoretical underpinnings, logic, coherence, and possible intended and unintended consequences of the country's beneficiation efforts. It investigates potentially mitigating and enabling factors for the success of the government's beneficiation strategy, which are divided into external and internal factors.

The popularity of the idea that beneficiation is a policy guaranteed to create jobs, attract technical skills and restore national pride means that it is likely to remain a key commitment for the near future. In the longer term, it remains to be seen whether beneficiation investments by donors and private companies do in fact materialise and – if so – how successful they are in creating jobs and supporting economic growth. The case remains to be made that beneficiation is achievable and that its benefits are likely to outweigh the unavoidable costs that underpin its implementation. While it is widely accepted by governments promoting beneficiation in the form currently practiced in Zimbabwe that such a policy comes with costs, rational policymaking requires that, in time, benefits that can be objectively measured must outweigh the costs.

There are several factors that determine the influence of Zimbabwe's beneficiation efforts on broader economic growth. The following factors thus either potentially mitigate or enable the Zimbabwean government's ability to reap the benefits from its mineral endowment by further implementing its beneficiation policy.

6.1. Zimbabwe’s competitive disadvantages

Zimbabwe is part of a global trade system, which to a large extent influences the success or failure of the country's efforts to reinvigorate its manufacturing sector by means of encouraging investment in beneficiation. Several of these potential risks reflect elements from the orthodox view.

6.1.1. The international trade context as an external mitigating factor

Declining commodity prices

Minerals and metals have been hit by a ‘perfect storm’ at the international level. Along with all other key commodities, the metals and minerals price fell by 35% between early 2011 and the end of the 2014 (see Figure 5), and will continue to contract this year, according to the World Bank. As a result of waning interest by institutional investors, prices of precious metals are expected to decline by 3% in 2015, on top of the 12% decline seen in 2014, while overall metal prices are forecast to drop by more than 5% in 2015. Ample supply, weak demand, negative roll yields – where investors are forced to replace expiring futures contracts with more expensive later-dated ones – and a strengthening US dollar are seen as the most important contributing factors to the crisis. Overall, 2014 will go down as one of the most difficult years ever for commodity investments, according to Barclays, which has calculated that steep price falls and liquidations triggered a USD 50 billion decline in assets under management across all commodities. While the micro-economic implications of Zimbabwe’s beneficiation policy will be further assessed in the second phase of this study, the steep fall in metals and minerals prices substantially increase the risk of mining companies exiting Zimbabwe in response to further state regulation. This raises the question of how many

concessions can be extracted from a battered mining industry. Also, low global prices negatively impact the investor appetite of potential beneficiators and point to the consequences of a saturated global market.

Figure 5: Commodity price indices, January 2011 – October 2014

The changing structure of commodity markets
Connected to the issue of declining prices and their impact on the overall appetite for investment from the mining industry is the rapidly evolving structure of commodity markets. A combination of ‘financialisation’ and freer trade conditions in the post-GATT (General Agreement on Trade and Tariffs) era have ensured that end demand fundamentals (demand by consumers and their manufacturing suppliers) are less prevalent in determining demand (in quantity and price) than they used to be. The rise of exchange trade funds (ETFs), for instance, has significantly decreased the power of producers who tend to function through private markets and long-term contracts to the benefit of open-market investment buyers ('speculators').

The structure of the platinum market is exemplary of that. Taking the year 2013 as a point of reference (which is more accurate than 2014, which was affected by the South African platinum industry five-month strike):

- Production of refined platinum amounted to 6,070 koz (thousand ounces), of which South Africa accounted for 4,355 koz and Zimbabwe 405 koz. After producer inventory adjustments, the total for sale was 5,855 koz. Recycling represented an additional 1,985 koz, bringing total new platinum to the market at 7,840 koz. Recycling thus contributed 25% of global supply, and is almost exclusively done by industrialised countries like Germany, Japan and the US.

- Total demand outstripped supply, standing at 8,515 koz, and representing a supply deficit in relation to demand of about 5%. Demand was made of 3,135 koz from the automotive industry, 1,510 koz from the industrial sector, and 925 koz from the investment sector, of which ETFs represented 900 koz.

- Stocks above grounds stood at a very large 44% of total supply.
• Therefore, taking into account recycling, ETFs and stocks above ground, producers of ‘new’ platinum only accounted for 48% of globally available platinum.\(^{47}\) This represents a significant dilution of the capacity of producers to control prices.

This means that producers are increasingly *price takers* rather than *price makers*. While price makers can influence the price of their commodity through a variety of means (restrictions on output, collusion on price, restrictions on exports, etc.), price takers operate in an environment which they cannot influence significantly. If they cannot operate competitively, the risk is that they will simply be priced out of production. This risk is all the more present if price takers do not have a large captive market to which they can sell.

An added obstacle is represented by the rules established under the WTO, which proscribe discrimination between domestic and export markets, and forbid measures that incentivise or disincentivise exports. This includes export licences, but not necessarily export taxes. In a recent ruling, the WTO found against China in its deliberation on the country’s quantitative restrictions on the export of rare earth.

These obstacles highlight the difficulty of deploying policies that seek to influence the market via regulatory fiat but essentially still rely on market mechanisms within a liberalised, competitive, and regulated international trading system. At the end of the day, beneficiated products must be sold at a price that the market commands – no matter where in the value chain. Beneficiated products must be manufactured by operators willing to mobilise capital in exchange for the promise of acceptable returns.

*Latecomer challenge*

There exists an inherent challenge for Zimbabwe trying to enter these value-added markets at such a late stage, comparatively speaking: “It is not an easy task due to the barriers of entry posed by countries already dominating beneficiation. Even though Africa has the raw materials and is heading towards the fundamentals of greater predictability and stability of supply, other countries have the advantage of human capital and are already installed as efficient suppliers with which we struggle to compete on price,” the Angolan Minister of Mines and Geology, Joaquim David, admitted at the 2012 Trade and Investment Conference hosted by the South African Department of Trade and Industry.

One World Bank study on diamond beneficiation noted that “producing countries hoping to establish a viable cutting industry are squeezed by competition from two directions: one from low-cost economies such as India and China, another from high-skills economies such as the United States, Belgium, Israel, and Canada. For any latecomer, the challenge is plain: Either be cheaper (or work harder) than the former or be more knowledgeable and skills-intensive than the latter.”\(^{48}\)

Indeed, one of the major causes for the steep fall in prices for metals and minerals over the last years (see following section on declining commodity prices) has been the abundant supply of metals on the international market, with a commensurate lack of pick-up in demand. Demand for manufacturing products from Zimbabwe would thus be very low.

*The place of Zimbabwe’s domestic manufacturing market in the global trade arena*

A related factor is the size of Zimbabwe’s local manufacturing market. Zimbabwe’s domestic manufacturing market is small, which limits the purchasing power and economies of scales of beneficiators. Furthermore, aside from South Africa, Zimbabwe is geographically distant from its main consumer markets in Asia, be they of primary resources, intermediary or final products. Regional integration in Zimbabwe and beyond remains nominal, both in the transport/transit of goods and in regulatory facilitation. This factor is further compounded by the fact that Zimbabwe is landlocked.

\(^{47}\) World Platinum Investment Council. 2015. “Platinum Quarterly, Q4.”

The reality, as outlined above, is that a healthy manufacturing sector, capable of producing value-added products, is driven by factors such as cost competitive production, skills, technology and innovation, infrastructure, cost to markets and business facilitation, and not primarily by the availability of raw materials. For instance, the vast majority of global beneficiation through manufacturing actually takes place in countries that do not qualify as resource-rich, such as China, India, Dubai, or parts of Europe. These countries have focused their skill sets on the manufacturing sector, have large markets at their disposal, and efficient cost structures. In a largely free-trading international economy, the input material can be accessed at roughly the same price anywhere in the world, bar transport costs. Steel exports from South Africa, a country rich in iron ore, were 30-35% more expensive than international competitors from Ukraine and Brazil, a 2011 study of South African steel exports highlighted. What is more, the study conducted by Kumba Iron Ore also found that even if South African iron ore were free, the competitiveness gap would not be closed.49

6.1.2. The investment climate as an internal mitigating factor

Several local or domestic challenges compound the difficulties that arise from the international trade context. These internal factors make a successful translation of beneficiation policy even more difficult to achieve.

**Governance challenges and policy volatility**

Shifts in Zimbabwe’s political and economic priorities have had a direct effect on the country’s policy and institutional indicators, measured by the World Bank’s Country Policy and Institutional Assessment (CPIA). Figure 6 shows Zimbabwe’s performance in the CPIA. This low state capacity has negative effects on the overall regulatory environment.

For instance, the application and implementation of the indigenisation policy has seen substantial shifts over the last few years, ranging from a far-reaching extension of the policy to the banking sector to declarations that the policy will only be applied to foreign companies that are exporting raw materials. A 2012 Centre for Global Development (CGD) report also identified political patronage and corruption as one of the major constraints to investment in Zimbabwe.50

Zimbabwe’s political economy is characterised by high policy volatility, low government capacity and a high degree of state intervention and regulation. These observations are all the more critical since ZimASSET squarely puts responsibility for implementation of the highly ambitious growth plan on the public sector, which is tasked with designing and implementing the multifarious strategies identified and funding these – though reference is made to public-private partnerships. Intended to be fully implemented in a short five years, ZimASSET is essentially a wish list of economic and social targets and reforms, at the same time very broad and loosely defined. Short on implementation details, and leaving aside key constraints and enablers, it relies on a number of assumptions for its success, including fiscal and financial. Given the aforementioned governance constraints, it remains doubtful that government will be able to successfully implement the Agenda. Indeed, so far, progress on achieving the goals of the ZimASSET has been weak.

Thus, there can be little confidence that the beneficiation policy will not experience the same constraints affecting the politics, policy stability, and administrative and fiscal capacity. Furthermore, the unpredictable policy environment makes investments in local refining less likely. Lastly, state capacity may be insufficient to implement large-scale industrial transformation due to the mere size and timeline needed for such an immense development step.

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Shortcomings in the knowledge economy

The ‘knowledge’ economy is only a marginal part of the beneficiation strategy. In order to achieve significant industrialisation and employment, however, requires a depth of skills and technological innovation Zimbabwe has yet to reach. Producing the necessary skills along the value chain remains a major challenge for the country’s education system. Indeed, ‘low human capital’ has been identified by the 2012 CGD report as one of the major constraints to investment in Zimbabwe.51

Despite beneficiation being regarded as one of the means by which to achieve indigenisation, a study conducted by the Zimbabwean Centre for Natural Resource Governance (CNRG) shows that most indigenous Zimbabweans neither have the skills, nor the financial resources to venture into value addition and beneficiation activities. Whilst the country’s indigenisation law and economic blueprint aim to create economic opportunities for previously disadvantaged black Zimbabweans, value addition and beneficiation favours foreign direct investments due to a lack of technical skills and the lack of financial capacity. Respondents to the CNRG study noted that “value addition and beneficiation is a highly technical exercise that requires world class expertise and experience, which Zimbabwe is lacking” – partially due to the mass emigration of skilled workers.52

Lack of adequate transport infrastructure

Zimbabwe's infrastructure is largely degraded after decades of non-investment and poor maintenance. This has affected all aspects of the country’s logistical capacity: transportation networks, utilities and their distribution networks, etc. Transport infrastructure constraints, in the form of a lack of capacity and rapid

51 Leo et al. 2012.
52 Centre for Natural Resource Governance. 2015. “Perceived national benefits and feasibility of implementing the mineral beneficiation and value addition agenda.”
cost escalation, are limiting access to imported inputs, export markets and effective domestic production logistics. All of these elements are necessary requirements for beneficiation to take place. The country faces a massive backlog and lacks the funding and capacity to catch up. The 2012 CGD report also mentions “deteriorating infrastructure” as a constraint.53

Energy constraints

Beneficiation is an energy-intensive economic activity, particularly in its metallurgical stages, requiring smelting and re-smelting of products. These facilities require competitive prices and a large and stable power grid, preferably with surplus capacity to accommodate growth and expansion. Despite the argument that some pro-beneficiation advocates have made, that power supply will grow ‘in response’ to the building of refineries, smelters, factories and associated infrastructure, meaningful growth in fact requires immediate power to be available. In the Zimbabwean context, availability of energy to power new large-scale mineral beneficiation operations, however, remains a major challenge. According to the Global Network on Energy for Sustainable Development (GNESD), poor electricity supply is the greatest infrastructure problem confronting the mining sector in Zimbabwe.54 An IMF study calculated that power outages could cost mining firms 5-6% of revenue.55 A 2010 study showed that in Zimbabwe power cuts directly cost platinum companies USD 1.48 million and gold miners USD 2.53 million (see Table 2).56

Table 2: Direct cost caused by power cuts on surveyed Zimbabwean mines of each mineral

<table>
<thead>
<tr>
<th>Mineral type</th>
<th>Output loss cost (USD)</th>
<th>Idle labour cost (USD)</th>
<th>Material cost (USD)</th>
<th>Restart and damage (USD)</th>
<th>Total direct cost (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum</td>
<td>1 242 800</td>
<td>151 200</td>
<td>33 280</td>
<td>53 280</td>
<td>1 480 560</td>
</tr>
<tr>
<td>Chrome</td>
<td>540 000</td>
<td>49 333</td>
<td>37 667</td>
<td>24 000</td>
<td>641 000</td>
</tr>
<tr>
<td>Gold</td>
<td>2 378 563</td>
<td>82 725</td>
<td>24 531</td>
<td>44 700</td>
<td>2 530 519</td>
</tr>
<tr>
<td>Diamond</td>
<td>700 000</td>
<td>104 000</td>
<td>126 000</td>
<td>134 000</td>
<td>1 064 000</td>
</tr>
</tbody>
</table>

Source: Kaseke, 2010

The current energy supply in Zimbabwe is below par. Electricity supply falls short of the national demand resulting in a supply deficit. In 2013, the government’s existing power stations supplied 1,134 MW against a peak demand of 2,100 MW, which amounts to a supply deficit of 966 MW – or 54%. Power supply has gradually been decreasing since 2004. With added beneficiation capacity, electricity consumption by the mining sector is expected to rise by 19% by 2020, according to figures obtained from Zimbabwe Economic Policy Analysis and Research Unit (ZEPARU). Therefore, electricity demand in Zimbabwe is likely to increase considerably, particularly due to the fact that the government is now focusing on value addition and beneficiation of minerals.

The government is unlikely to resolve these energy constraints in the near future. An analysis of the governance and financial sustainability of Zimbabwe’s power authorities shows that the sector faces several structural problems, including substantial financial constraints, a lack in technical capacity, and management deficits. For instance, representatives from Oliken, an indigenous company that operates a chrome smelting plant in Central Zimbabwe, as part of the CNRG (2015) study revealed that it is getting electricity from the state-owned holding company Zimbabwe Electricity Supply Authority (ZESA) at domestic usage rates which are higher than normal industry rates. While Oliken has attempted negotiating

53 Leo et al. 2012.
56 Nyasha Kaseke. 2010 “The cost of power outages in Zimbabwe’s mining sector.” Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.
with ZESA, this has not borne any fruits.\textsuperscript{57} Without immediate access to a stable and affordable power supply, beneficiation activities remain in the realm of the unattainable.

There exists then an undeniable tension between the objectives of Zimbabwe’s beneficiation goals and policies and the reality of its power capacity. A continuous push and insistence on investing in beneficiation without first considering the power requirements is likely to result in frustration for government and resistance from investors. The risk of forcing the construction of ‘white elephant’ beneficiation capacity, which stands unused or under-utilised because there does not exist the energy to power it, is substantial.

\textit{Unattractive overall investment climate}

Zimbabwe’s business environment is not viewed as favourable to large-scale investments in refineries and smelters, and might be too weak to attract foreign investment in mining when the pending export barriers are in place.

The investment climate suffered considerably during the economic depression between 1999 and 2008. Since 2009, business conditions have improved but there are still significant constraints to private sector growth.

The World Bank’s Doing Business Report showed that access to finance was the most regularly recorded obstacle to running a business in Zimbabwe. Zimbabwe also performs poorly in the top factors affecting investor decision-making, namely cost and quality of utilities, access to transport infrastructure, business regulatory environment, tariffs, duties, rules of origin, and level of corporate taxes. For example, representatives of Olikon see high interest rates and the political climate as two main challenges to expanding its business.\textsuperscript{58} According to the 2015 Doing Business Report, Zimbabwe was ranked 171 out of 189 economies in the world, one place down the rung from the 2014 ratings. The World Economic Forum’s Global Competitiveness Report 2014 ranked Zimbabwe at 131 out of 148 countries.

In sum, the majority of potentially mitigating factors for Zimbabwe’s beneficiation policy are internal. They include weak governance, shortcomings in the knowledge economy, a lack of adequate transport infrastructure, energy constraints, and an unattractive overall business environment. In addition, substantial externalities are also working against Zimbabwe’s beneficiation agenda, namely the country’s latecomer challenge and the position of its manufacturing sector in the world economy. The implementation of the envisaged beneficiation policy could thus be marred by several inconsistencies. For instance, Chinese investors have already demanded a reform of parastatals in order to realise a substantial platinum investment.\textsuperscript{59} This indicates that large foreign investors will require special treatment, which could have further negative effects on the formulation of the beneficiation policy. Whether beneficiation investments will occur, if they will create the amount of jobs, and if they will spur the kind of economic growth the government hopes, will depend on the government’s awareness of these potentially mitigating factors.

### 6.2. Opportunities

Despite the aforementioned mitigating factors, there are also several enabling factors that have the potential to contribute positively to the design and implementation of a successful beneficiation policy. Indeed, the government is cognisant of many of the structural challenges that may inhibit the acquisition of beneficiation capabilities and has several plans in place to address these issues. The following paragraphs analyse these enabling factors.

\textsuperscript{57} Centre for Natural Resource Governance. 2015.

\textsuperscript{58} Ibid.

Quality and accessibility of natural resources

Zimbabwe has the world’s second largest platinum reserves, second only to South Africa. In comparison with South Africa’s natural resource endowments, however, Zimbabwe’s minerals are of higher quality, more accessible, and can be mined by a more productive labour force. Zimbabwe’s platinum is closer to the surface than South Africa’s, which can lie up to 10 km under the earth. It is therefore easier and cheaper to mine for the region’s large mining companies. Additionally, while South Africa has been plagued by increasing labour unrest in the last decade, Zimbabwe’s labour force is comparatively well-educated, and more skilled: The World Bank’s last measurement of Zimbabwe’s gross primary school enrolment in 2009 showed 97%.

Private sector potential

Despite the current difficulties, Zimbabwe has great potential for sustained growth and poverty reduction, and the economy could bounce back quickly. Unlike typical fragile and conflict affected states, the country has potential on several counts, including:

- Favourable agronomic endowments including land and water;
- Major hydropower potential;
- A historically diversified industrial base;
- A potential regional role in information and communication technology, energy and financial services;
- Trunk roads and transmission lines still in reasonable condition; and
- A global diaspora with significant business experience and capital waiting for conditions to improve.

Capacity in the private sector has suffered from a decade of under investment, but it could, with a conducive environment, be a driver of growth. These elements point to an environment in which beneficiation could become a possibility.

Clear and sustained policy support

Contrary to perceptions – particularly in the private sector – government policy is coherent at a high level and internally logical – if not effective or responsive to external economic realities. There is broad consensus amongst stakeholders on the need for beneficiation and indigenisation, the reasons why these policies are needed, and the measures required to deliver these policies. Yet, though coherent, it is also clear that understanding of the policy and its implementation remains contradictory and confused. The government needs to significantly invest in correcting this.

Documentation outlining the government’s beneficiation strategy takes into account some, although not all, of the potential risks discussed in this report, including low specialised human capital, infrastructure constraints, the current state of the domestic manufacturing sector, and the global trade context (see section 4.1.7). This indicates that the government may be considering concrete measures to address these mitigating factors. For example, as mentioned in the Draft Minerals Policy, given the current capital, skills and technology constraints facing the sector, the government of Zimbabwe “seeks to encourage equitable partnerships between local and foreign investors that overcome these impediments and to progressively build local capital, skills and technological prowess.”

More importantly, as noted above, the beneficiation policy is consistent across numerous government institutions, including the Ministry of Mines, the Presidency, the Ministry of Finance, and the Ministry of

N.B.: A trunk road is a major road, usually connecting two or more cities, airports, ports, and other locations, which is the recommended route for long-distance and freight traffic.
Trade. Thus, the potential fear that a lack of institutional coordination could compound the governance deficits could be unfounded.

**Energy supply expansion plans**

In order to address its power supply problems, the government has given a concrete commitment to expanding public power supply. This commitment is anchored in the policy documents ZimASSET and the National Energy Policy and in numerous expansion projects. For instance, the government has put plans in place to expand two major power stations in Hwange and Kariba South. According to the Ministry of Finance and Economic Development, together, both government projects are expected to contribute an additional 900 MW by 2018. Financing is said to be in place for the Kariba South project. In addition to several other public power projects, according to ZEPARU, total installed capacity could increase from 1,200 MW today to 3,160 MW in 2018 (see Figure 7). This could significantly lower the current power deficit.

The government has also enacted several reforms of the power sector in the last years that saw the unbundling of the main power authority and the continuous liberalisation of the sector to allow for private sector participation in power generation through an Independent Power Producer (IPP) framework that is today deemed by legal experts interviewed for this study as fairly progressive. Thus, the government has formulated an energy policy that appears to take into consideration additional energy demand pressures that might arise from beneficiation efforts.

In sum, all enabling factors are internal. They thus present an opportunity for the government to take advantage of these factors in order to design and implement a successful mineral policy. The government exhibits the willingness to seriously undertake a beneficiation policy and is cognisant of the numerous challenges that this decision may pose.

**Figure 7: Installed electricity generation capacity from public projects (in MW)**

![Installed electricity generation capacity from public projects (in MW)](source: ZEPARU)

### 6.3. Potential exists for dialogue on local beneficiation policy

The government’s choice of beneficiation strategy is driven primarily by an economic need to diversify and grow the economy, and then informed by various economic, theoretical, and political factors. In order to achieve these objectives of growth and diversification, cooperation between the government and the private sector is vital to ensure stability and continuity in a policy that is sustainable. At this important point in time, there exists room for dialogue between the stakeholders involved in the process of formulating
and implementing the policy, in order to facilitate better mutual understanding so as to achieve a more resilient policy with longevity.

In-person interviews conducted for this study reflected that government officials are positive about their relationship with mining industry. Representatives from the Ministry of Mines and Mining Development, for instance, expressed in in-person interviews for this report that there is a potential for dialogue between the government and mining companies. Enhanced dialogue and communication between the Zimbabwean government and the mining sector, focusing on each party’s particular perceptions (and misconceptions) around beneficiation might create a significant opportunity for meaningful improvement in the relationship, particularly if the focus of that dialogue shifts from dispute-generative and oppositional issues to prospective and cooperation-generative ones.

Eunomix Research is of the view that there is significant opportunity for enhanced direct engagement as the government and the industry are – in fine – both seeking a very similar objective: growing the development of the country’s unique resource endowment thanks to the presence of comparatively good geological and economic fundamentals. Despite its hard public stance, the political officials consulted indicated to Eunomix Research that government is committed to upholding its end of the bargain in terms of improving the business environment to make the establishment of refineries more viable. Officials engaged proudly pointed towards concrete public-private projects to significantly increase the country’s power supply (Kariba South, Hwange, etc.). Progress in the power generation sector is a clear demonstration that space exists for a shift from confrontation to cooperation.

Additionally, government officials indicated their interest in further impartial studies on the cost and impact of beneficiation. Thus, the government appears open to a discussion informed by facts and data to guide the further implementation of its beneficiation policy. There is potential to guide this discussion and bridge the information gap between government and industry. Thus, the need for focused coordination across a range of government departments and the mining sector is recognised.

This is essential: the test of good policy is not simply its theoretical elegance but its empirical validity. There is a current risk that the balance of evidence has shifted too much toward theoretical elegance, while experience and independent cost-benefit analysis is lacking.
7. Conclusion

This report has sought to analyse the particulars of the Zimbabwean context and the ways in which the Zimbabwean government seeks to apply a beneficiation policy to this particular context, and to what end.

The government has formulated a coherent and rational beneficiation policy that takes into account several mitigating factors and produces concrete initiatives to address some of those constraints. There are several, formulated as well as implied, economic and policy drivers behind the government’s beneficiation push, which include job creation, fiscal revenue, a supportive regional context, and a trust deficit between the government and the mining industry. In that sense, the beneficiation policy is not irrational. The chrome export ban for example represents a deliberate policy experiment designed to signify to other mining sectors that government is serious about beneficiation by sacrificing a small sector.

As noted, there exist significant challenges which could lessen or prevent any positive consequences the interventionist ‘stick’ approach could have on the country’s economy. These factors include governance deficits, shortcomings in the knowledge economy, lack of adequate transport infrastructure, energy constraints, and an unattractive overall investment climate. Several conceptual issues that the orthodox view raises remain relevant and applicable to Zimbabwe’s case, including a challenging competitive global context and the importance of economic maturity. Forcing beneficiation through legislation and regulation rather than through incentivisation schemes, as the Zimbabwean government attempts to do, appears to carry significant risks and could have several unintended negative consequences – especially given the country’s dependence on mining.

In the case of the chrome export ban, this may yet mean that the economic sacrifice made by the country may not result in justifiable economic benefits. At this point in time, and given the fact that the policy is still relatively new, judging its success or failure is difficult, though it certainly contributed to a significant fall in the production and exports of chrome. On the other hand, smelting and refining investments appear to be occurring.

The Zimbabwean government is accountable for identifying the appropriate solutions to its own economic challenges. However, at the end of the day, Zimbabwe is a small country that must rely on external sources of investment and expertise, and must export to the global market. This is a constraint that it cannot escape. The policies it develops must therefore be sufficiently pragmatic to allow economic operators to derive reasonable returns. The alternative, which would be for the government to fully subsidise producers so that they may function outside market constraints, is simply not available.

There is significant room for the private sector to support the government in this process through dialogue, coordination, and the exchange of knowledge and information.

This report represents an initial effort to provide a common understanding of the current situation in the country as it relates to beneficiation, in order to facilitate future dialogue between government and the private sector on this issue. Part 2 of this study will continue to explore these issues through economic analysis.
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