



Comparative Study on Local Content in Mineral, Oil and Gas Sectors: Policies, Legal and Institutional Frameworks-Trends and Responses in Selected African Countries

SYNTHESIS REPORT JULY 2017



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EXTRACTIVES



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Acronyms

ACET African Center for Economic Transformation

ADB African Development Bank

AMDC African Minerals Development Centre

AU African Union

ASM Artisanal and Small Scale Mining

BBBEE Broad-Based Black Economic Empowerment

COMESA Common Market for Eastern and Southern African States

CSR Corporate Social Responsibility

ECOWAS Economic Community for West African States

EDC Enterprise Development Centre

EMDE Ethiopian Mineral Enterprise Development

ECMI Equipment Components Manufacturing Initiative

EPNGDE Ethiopian Petroleum and Natural Gas Development Enterprise

EPZ Export Processing Zone

FeMSEDA Federal Micro and Small Scale Enterprises Development Agency

FDI Foreign Direct Investment

FPSO Floating, Production Storage and Offloading

GRN Government of Namibia

GDP Gross Domestic Product

GNPC Ghana National Petroleum Corporation

HDN Historically Deprived Namibians

HDSA Historically Disadvantaged South Africans

IMF International Monetary Fund

JSE Johannesburg Stock Exchange

JTTC Jubilee Technical Training Centre

JVAC Joint Value Addition Committee

LC Local Content

LCVA Local Content and Value Addition

LNG Liquid Natural Gas

MOG Minerals, Oil and Gas sectors

MNCs Multinational Companies

MQA Mining Qualification Authority

NCDMB Nigerian Content Development Monitoring Board

NCDF Nigerian Content Development Fund

NEEF National Equitable Economic Empowerment Framework

NIRP Nigerian Industrial Revolution Plan

NOGICD Nigerian Oil and Gas Industry Content Development

NORCAT Northern Centre for Advanced Technology

NNPC Nigerian National Petroleum Corporation

OPEX Operational Expenditure

PAYE Pay As You Earn

PGEs Platinum Group Elements

PMMC Precious Minerals Marketing Company

RR Resource Rich countries

SADC Southern African Development Community

SMEs Small Medium sized Enterprises

SOEs State-owned enterprises

SSA Sub Saharan Africa

STEM Science Technology Engineering and Mathematics

Tcf Trillion cubic feet

TEN Tweneboa-Enyenra-Ntomme

T&T Trinidad and Tobago

TVET Technical Vocational Education and Training

UNECA United Nations Economic Commission for Africa

VA Value Addition

ZAMCSMBA Zambia Chamber of Small and Medium Business Associations

ZAM Zambia Association of Manufacturers

ZCCM-IH Zambia Consolidated Copper Mines Ltd – Investments Holdings

ZMLCI Zambian Mining Local Content Initiative

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Preface

There is a changing landscape, especially since the turn of the millennium, in terms of how Africa should govern, control, and use its natural resources for the greater benefit of citizens. Citizens, communities and civil society organizations are compelling their governments and mining companies to reckon with past failures that have limited the contributions of Africa's minerals, oil and gas resources to broad-based growth.

The experience of most resource-rich developing economies is that an abundance of natural resources buried deep in the ground does not necessarily guarantee or improve growth, human development outcomes; neither does it transform economies. Paradoxically, resource-rich countries in Africa have tended to do far worse in growth and in most human development indicators than non-resource rich countries. Indeed, most of the former have been plagued by different combinations of corruption, conflicts, social grievances and weak governance, all leading to negative socio-economic outcomes.

The expectations of individual resource-rich countries are changing. In the broader context, the expectations of the continent are changing even more in terms of development focus and the use of resources. The overarching theme, as articulated in the African Mining Vision and the AU Agenda 2063, is how to support broad-based growth by improving the developmental impact of extractive resource activities. The method involves promoting broad economic linkages. The pathways are in pursuing local content and local participation, pursuing value addition to the extracted resources, and promoting small and medium enterprise development, in and around the resource sector. And the need to move towards development objectives has never been stronger.

Countries have set ambitious targets to increase local inputs in the extractives value chain, and create greater local value. However, implementation has varied according to approach and emphasis. Still, the potential benefits are widely acknowledged. An effective local content strategy provides a winning formula for all. Efficient, competitive local suppliers meet the needs of industry, expand the depth of linkages with the non-resource sector of the economy, open up more opportunities for suppliers further downstream, create jobs, promote technology transfer and, where opportunities for value addition exist, promote diversification of the local economy. The “how to” of ensuring a “win-win” outcome for host economies and extraction companies remains the challenge.

In order to deepen understanding of the debate around “resources and development” and to fill knowledge gaps about actual country practices, the World Bank engaged the African Center for Economic Transformation (ACET) to undertake an eight-country study on local

content and value addition policies in the mining, oil and gas sectors in Africa. The goal is to review country practices in promoting the use of local inputs, deepening linkages along the resource production value chain, and adding value to the resources extracted to benefit their growth and achieve their development goals. The selected countries — Burkina Faso, Ethiopia, Ghana, Mozambique, Namibia, Nigeria, South Africa and Zambia — are a mixture of mineral-rich and oil- and gas-rich economies, at varying stages in their mineral, oil and gas development. They have different linguistic and geographic orientations, and they have different socio-economic histories. The study was undertaken through collaboration with researchers from the study countries.

The report concludes that from the benchmark countries (Canada, Trinidad and Tobago) to the eight selected African countries, the evidence suggests that there is no “single best strategy” for all resource-rich countries for maximizing local content and value addition opportunities for broad-based growth. But there are some contributory success factors. Accurate knowledge of your resource endowment and the stock of reserves is vital for informed decisions on the scope of local content and value addition policies. Size matters, and the scope of what is “local” must have some element of elasticity because large markets attract investments that advance local content and value addition strategies.

Finally, the study concludes with two important considerations. First, the developmental case for local content and value addition strategy must align with the business case from the perspective of resource companies. Governments may legislate the former. Industry is inclined towards the latter. Compliance is greatest and alignment is strongest when there is open debate, consultation and collaboration at the onset of policy design. Resource companies that can frame their business case to align with host countries’ development needs are likely to secure a comparative advantage. In which case, what countries need may be less rather than more legislation and regulations that may be difficult to enforce.

Second, whether it is in skills development or in the procurement of inputs and financing, broadening local boundaries into expanded regional spaces and supply structures helps to leverage individual country resources for sustainable long-term development.

Executive Summary



CONTEXT AND OBJECTIVES OF STUDY

1. How can resource-rich countries use their resources to expand job creation, stimulate growth of local enterprises and contribute to broad-based development? The answer is now widely acknowledged: widen and deepen linkages with other sectors of the economy through four main pillars: create local employment opportunities and encourage skills transfer; promote in-country spending and procurement of local goods and services; promote local participation in ownership and management; and promote domestic financing. A fifth pillar, value addition, promotes further opportunities for processing the extracted resource. To these ends, many mineral-rich countries are introducing requirements for local content (LC) and value addition (VA) in their policy, legislative and regulatory frameworks.
2. However, little is known about the nature of these policy, legislative and regulatory frameworks and how industry is responding to them. The strategy is simple and laudable and the focus by governments is understandable because the prize of getting the strategy right is great and the potential benefits to citizens immense. The challenge is in the way governments proceed. The following key questions motivated this study:
 - a. Are resource-rich sub-Saharan African (SSA) countries getting the local content and value addition strategy right?
 - b. Are local content policies and legislation effective in achieving national development objectives?
 - c. Are there 'best practices' of sorts? And what lessons can be learnt from country experiences?

3. The two objectives of the study are:
 - a. to assess the nature, content and scope of policies, laws, and institutions regulating local inputs into mineral, oil and gas (MOG) sector activities and the responses from both the public and the private sector; and
 - b. to identify opportunities and challenges with the view to informing public policy on strengthening local content and value addition in African countries.

SCOPE AND METHODOLOGY

4. The study focused on analysis of national policies and strategies for resource sector development, any legislation that applies to local content and value addition, the institutional framework and guidelines developed to ensure compliance. The study documents the experiences of countries promoting the use of local inputs, deepening linkages along the resource production value chain and adding value to the resources extracted to benefit growth and achieve their development goals.
5. The eight countries selected are Burkina Faso, Ethiopia, Ghana, Mozambique, Namibia, Nigeria, South Africa and Zambia. This is a mixture of mineral-rich and oil- and gas-rich economies, in varying stages of their MOG development, of different linguistic and geographic orientations, and of different socio-economic histories. All these considerations inform their country development strategies. The study was undertaken through collaboration with researchers from the study countries. "Benchmark countries" were also selected, identified as those from which African countries could draw lessons. Trinidad & Tobago (T&T) was selected for its laudable experience with oil and gas sectors, and the Province of Ontario, Canada for its diverse mining sector.

FINDINGS

General Observations

6. Summary of key general findings of the country studies:
 - a. Two countries in the study, Nigeria for petroleum and South Africa for minerals, have pursued with varying success local content and value addition longer than most of the other countries.
 - South Africa's relative success in integrating its mineral development with the rest of the economy is due to its historical circumstances of apartheid which compelled some self-sufficiency and propelled its resource-based industrialization.
 - Nigeria's efforts in building resource-based industrialization using its oil and gas have not been as successful. Its recent relative success in pushing local content and value addition points in the right direction and could provide a regional anchor for industrialization in West Africa through the supply of energy from its abundant gas reserves.
 - For the rest of the study countries, progress in local content and value addition has been mixed for a host of reasons including the small size of local markets, and relatively paucity of small and medium enterprises capable of satisfying the high standards of industry in the procurement of goods and services.
 - b. The study also concludes that local content in South Africa and Namibia has become more than a strategy to deepen backward linkages and ultimately maximize the benefits of resource activities to the national economy. For these countries, local content is an instrument to promote the achievement of the constitutional right to equality, bring about socio-economic transformation to enhance equity, social justice and the empowerment of historically disadvantaged majority of the population along racial lines. At the same time, local content policy provides higher economic growth, increased employment and more equitable income distribution in both countries. For these reasons, the pursuit of local content in these two countries has been less than straightforward, mired in industry-government disagreements in standard setting, enforcement of local content requirements, measurement, assessment and compliance.
 - c. For the rest of the study countries, local content strategy reflects some elements of South African and Namibian objectives except for the aspect of being an instrument for redressing historical disadvantages. The general focus is on promoting employment at national level, empowering local communities where there are such opportunities and increasing local procurement of local goods and services and local participation in general. Emphasis and implementation have varied.
 - d. From the benchmark countries (Canada, Trinidad and Tobago) to the eight study countries, the evidence suggests there is no "single best strategy" for all resource-rich countries to maximize the local content and value addition opportunities for broad-based growth. But there are some contributory success factors:
 - Knowing what you have and the stock of reserves is vital for informed decisions on the scope of local content and value addition policies.
 - Size matters and the scope of what is "local" must have some element of spatial elasticity because large markets attract investments that advance local content and value addition strategies.
 - Whether it is in skills development or procurement of inputs and financing, broadening local boundaries into expanded regional spaces and supply structures helps to leverage individual country resources for sustainable long-term development.
 - Success in beneficiation depends on the particular commodity and its intrinsic characteristics for further end uses.
 - e. Development planning, industrial policy, local content and value addition go together. Optimizing all local content pillars may not be ideal or possible for every country and optimizing local content within the context of regional integration surmounts several disadvantages.
 - f. And just as important, the developmental case for local content and value addition strategy may not always align with the business case from the perspective of resource companies.
 - Governments may legislate the former. Industry is inclined towards the latter. Government-industry collaboration and consultation early in the formulation of local content and value addition strategy is the cornerstone of ensuring that both cases do not diverge.

- Trinidad and Tobago's approach is exemplary. Only international oil companies (IOCs) that clearly delivered on building local capacity and developing a diverse gas industry in line with country's development policy were granted licenses.
 - Resource companies that can frame their business case to align with host countries' development needs are likely to secure a comparative advantage. In which case, what countries need may be less rather than more legislation and regulations that may be difficult to enforce.
- g. Across the eight study countries, success in beneficiation depends on the particular resource and its intrinsic characteristics for further end uses. Countries must evaluate the value addition potential of each resource as well as the complementary inputs needed for further processing. Having the resource itself is necessary but not a sufficient condition for beneficial value addition. Namibia's approach of setting up a Joint Value Addition Committee to determine which mineral commodities offer potential for value addition is exemplary.
 - h. Finally, across the study countries and the benchmark countries (Trinidad and Tobago and Canada), it is evident that local content and value addition strategy must be championed at the highest political level. For the strategy to work, the government needs to play a proactive role in a development-oriented state. The most important foundation is political will, clear vision and sense of purpose, identifying the present and future prospects of the resource, and having a deep understanding of local capacity in human, financial and technological terms. This combination determines the focus of a country's resource extraction strategy.
 - i. The convergent commitment of government, industry and business leaders is key and these aspirations must find clear expression in a national development plan, as in the cases of South Africa, Namibia and Ethiopia and, to a lesser extent, Mozambique and Zambia. Collaboration and effective coordination between government and private sector, as well as intra-government coordination and cooperation are vital.

Specific Local Content Pillars

PILLAR 1: Promoting Local Employment and Skills Development

7. Local content policies and legislation to promote direct employment of locals have become the norm. All the countries studied have preferential provisions for local employment as a fundamental principle, stated as a guideline or in legislation. Of the four pillars, increasing local employment and skills development appears to have been the most successful. In Ghana, employment of locals increased by 65% between 2009 and 2012, driven more by an increase in foreign direct investment (FDI) in mining than by legislation. Employment levels among locals in the South African context is considered to be quite high. Employment gains tend to be higher for low-skilled and mid-lower level technical positions. However, skilled locals are in short supply. Consequently, there are not enough skilled locals to address the high rate of attrition in the resources sector. This is true in Zambia and Ethiopia, and to a lesser extent in Ghana. Even in South Africa, which produces more mining engineers than all other English-speaking countries combined, the limited numbers with the requisite skills and experience remains a concern.
8. A major underlying driver of the skills deficiency concern is that technological innovations are beginning to shape the future of the productive systems of resource extraction companies. The intensification of the application of technology means that direct employment, especially in mining, is sharply on the decline. This makes employment requirements less viable and increasingly difficult to enforce, therefore raising questions about the primacy of the employment objective of local content legislation.
9. The future of employment lies in a new kind of workforce beyond unskilled and semi-skilled operations. This need cannot be left to legislation. Building a local workforce and the technical capacity of local institutions to make them adapt and embrace efficient technological operations requires considerable investment and continuous skills development. These are often beyond the capacity of individual companies, and certainly cannot be left to industry voluntarism.

10. In sum,

- a. There are ambitious expectations for the MOG sectors to address unemployment in resource-rich countries. The reality is that the sector can only supply a relatively small amount of direct employment.
- b. Automation and technological innovations in the industry are inevitable and thus the labour absorptive capacity of the industry is expected to decrease further.
- c. There are several highly educated graduates with skills that are inappropriate for the industry. A technical and vocational education and training system is needed to develop the adaptable and transformative skills that meet industry requirements.
- d. Quotas are desirable from a policy viewpoint, but can be problematic for industry and are often ineffectively enforced.

PILLAR 2: Promoting procurement of local goods and services

- 11.** Country data suggest that spending by resource companies on local procurement (excluding wages and salaries) represents the largest share of expenditures – 48% in South Africa for the period 2008-2010, and 42.9% in Namibia in 2015. Most countries have enacted provisions for procurement specific to the MOG sectors over and above general country procurement measures. Almost all countries have specific legislation to that effect. Performance in local procurement is mixed. In Nigeria, local procurement of goods and services between 2004 and 2010 increased from 5% to 35%, and to almost 70% by 2015. In 2004, goods and services were described as very low consumables. By 2015, local procurement had moved up into heavy industries and equipment manufacturing. In Ghana's mining sector, industry expenditure on local goods and services increased from 50.2% in 2013 to 73% in 2014. In Mozambique, the limited data on the performance of local suppliers in the Mozambique SME Linkage Program (MozLink) II (2007-2010) show that local procurement among this group more than doubled.

- 12.** However, Zambia has experienced a decline in the local share of inputs supplied to the large-scale mining companies from 72% in 1966 to an average of 5% in recent times. One major mine stated that 96% of all its inputs are procured from foreign manufacturers. Constraints to Zambia's local capacity are largely described as structural, including the high cost of inputs, low production capability, adverse tariff structure on imported goods and limitations in access to affordable local finance. In Ethiopia, similar structural challenges have hindered indigenous companies and have contributed to the low procurement of local goods and services – the ratio of local to foreign goods is estimated at 40:60.

- 13.** It is unclear how much of the progress made in Ghana, Nigeria, and South Africa can be attributed to legislation. One thing is certain, procurement should not be left to legislation only. Entrepreneur and supplier development programs have been critical. Seen as a business imperative for industry players, there are efficiency gains to be made since procuring locally reduces logistical costs associated with transportation of goods, people and equipment. Commendable examples of effective supplier development programs include South Africa's Anglo-Zimele, arguably one of the most effective on the continent, while Mozambique's MozLink is also widely touted. Ghana's oil and gas majors in collaboration with the government have established an Enterprise Development Centre in the oil-producing Western Region.
- 14.** For Nigeria and South Africa, the emphasis on local content appears to have shifted from ownership and employment affirmative action to the issue of procurement of domestic goods and services, entrepreneur and supplier development, and fostering linkages to other sectors of the economy. In Zambia, stakeholders see local procurement as the most important of the local content pillars, more so than their counterparts in Burkina Faso, Ethiopia, Namibia and Mozambique. Meanwhile, procurement from foreign companies provides much more opportunity for transfer pricing.
- 15. In sum:**
- a. The definition of "local content" in procurement varies from country to country, making data comparisons across countries difficult.

- b. Procurement should not be left to legislation alone. It needs an enabling environment in terms of local capacity, access to finance, quality of local suppliers and ability to meet industry quality and safety standards.
- c. Lack of country databases and knowledge of the depth of the local private sector can hinder contract awards.
- d. Local procurement is often hindered by three factors: the lack of competitiveness of domestic firms, especially in meeting safety and quality requirements; tax exemptions on imports of capital goods; and transfer pricing mechanisms for companies to circumvent local procurement of local goods and services. Even the more advanced South Africa has not been able to deal satisfactorily with the scourge of transfer pricing.

PILLAR 3: Promoting ownership/equity participation and management by locals

- For most of SSA, extractive operations remain largely foreign owned, followed by host state ownership, and very low but increasing local private ownership.
 - The state typically has been the main vehicle for local participation in Ghana, Mozambique, Namibia, Zambia and Ethiopia. In Ghana, the government has at least 10% shareholding in all but three of the major mining operations. In Ethiopia, the government has the option of 5% free carried interest in all mining operations.
 - Using state participation as an instrument to promote citizens' participation is the model currently used in Zambia and Namibia. In Zambia, the government, through the Zambian Consolidated Copper Mining Investment Holding (ZCCM-IH) has at least 10% and as much as 20% in all but one of the major mining operations.
- 16.** Local private equity is highest in Nigeria and South Africa. Local private equity in Nigeria has increased by 118% since 1990, with 24 indigenous oil producing companies owning and managing oil and gas production assets, and collectively producing 10% of total output. In South Africa, the state supports local entry into the sector through development-based lending mechanisms but they have not been very successful. Black South African ownership is reported as 26%, however, mining associations suspect this figure is more likely closer to 3-4%.

- 17.** In addition to giving first refusal to locals in allocating projects and in the acquisition of ownership rights, the main intervention to increase ownership includes listing shares on the local stock exchanges. South Africa leads, with a total of 49 mining companies listed on the Johannesburg Stock Exchange. While only a few mining companies are listed on the stock exchanges in Zambia and Ghana, Ethiopia and Burkina Faso do not have stock exchanges. The major challenge for this method of increasing local ownership is a lack of interest in and knowledge of local stock exchanges.
- 18.** The use of minimum quotas appears to have had some impact by increasing the level of local management in MOG operations in Ghana, Nigeria, South Africa, Mozambique and Zambia. In Ethiopia, management by locals in major extractive operations is assessed as moderate. In Nigeria and Ghana, legislation strictly prescribes a time period and maximum limit for management positions held by expatriates. Within this time period, MOG companies must execute a strong succession plan for local management.
- 19.** The enforcement of local ownership by setting quotas and the attempts to comply have often spawned "fronting", that is the misrepresentation of the facts of a company's ownership. The most commonly known is collusion between foreigners and local players in order to gain for the foreigners the preferential treatment given to locals through local content initiatives. Most prevalent in Ghana appears to be local companies fronting for local politicians or officials. To some extent, increased local participation has thus detrimentally become operative on a "whom you know basis".

Fronting undermines the effectiveness of promoting local equity participation, so much so that it is considered a criminal offence in Nigeria, South Africa and recently in Ghana. Burkina Faso, Ethiopia, Namibia and Zambia have no such legislation. In Ethiopia, there is a perception that about 20% of mining companies are not without fronting problems.

20. Finally, ownership matters and may influence the extent of local procurement of goods and services, as noted by Morris et al. But it does not always yield the optimum outcome of job creation and resource-based industrial development. Resource companies may use legal structures to impose limits on profit sharing and effective control of joint ventures through shareholding arrangements. There is a growing recognition that local ownership may not be the most important tool for resource-based industrial development.

PILLAR 4: Promoting participation of local financial institutions

- 21.** Promoting the participation of local financial institutions appears to be the weakest link among the local content pillars. Few countries have requirements for project sponsors to procure finance using local financial institutions. In reality, both state-owned and local private financial institutions are the first to admit that they have weak capacity to conduct the type of financial transactions specific to the extractive sectors. This is largely the reason why in most African countries, there are no concrete requirements for project sponsors to procure finance through local sources.
- 22.** Companies typically obtain financing for projects from retained earnings, investments or from external sources. With the exception of South Africa, in most countries, participation of local financial institutions has been limited to offering related banking services and products. Even this activity is widely perceived as insignificant. In Ethiopia, for example this is only about 30% of their banking operations.
- 23.** South Africa's local financial institutions are recognized as very capable of playing a meaningful role in the mining industry. For example, in 2011, local financial institutions were able to provide US\$25bn in financing to the mining industry. To put this into perspective, this was 10 times the size of the entire loan portfolio of the financial sector in Zambia.

24. On the other hand, there are few other good examples of increasing participation of local financial institutions. In Nigeria, there are two main government initiatives to provide working capital and financing for development and acquisition to Nigerian companies – the Cabotage Vessel Financing Fund and the Nigerian Content Support Fund provide operational and working capital for Nigerian companies to execute oil and gas contracts. Nigeria also has several industry-driven schemes in collaboration with local commercial banks to provide financing to indigenous contractors.

25. In Zambia, local branches of some international banks have successfully syndicated with their regional headquarters to finance mining sector projects, but this practice is not widespread. The only known attempt of local bank syndication in Ghana's petroleum sector was unsuccessful due to delays in the syndication process and the unfriendly macroeconomic environment.

RECOMMENDATIONS

The recommendations coming out of this study cover the general and specific local content provisions and are clustered around their key pillars at continental, regional and national levels.

At continental level, it is important for the African Mining Development Center (AMDC), under the umbrella of the UNECA, to become more engaged in helping resource-rich countries strengthen their local content and value addition strategy.

- For local content, AMDC must help clarify the legislation required for enforcement mechanisms; do country assessments of local capabilities (financial and human resources and skills sets); and provide technical assistance to help smaller resource-endowed economies rationalize their local content strategy.

At regional level, regional economic blocs can play a supporting and coordinating role, and as in SADC, play an instrumental role in advancing regional resource-based development. Specifically:

- Promote the rationalization of the definition of "rules of origin" in local content requirements to include regional neighbors.

- Promote regional economies of scale in the mining, oil and gas sector. The great potential to increase regional local content and value addition opportunities and investment provides yet another reason to accelerate regional integration and trade.
- Promote sharing of regional talent mobility in the development of skills.
- Promote the development of regional centers of excellence in skills development.
- Promote the understanding that strategies to improve local participation cannot be left to country legislation alone. Incentives for skills development, entrepreneurship development, financing opportunities and sharing experiences are useful complementary tools.
- Encourage regional sharing of experiences in small and medium enterprise development.
- Encourage resource companies to support regional procurement and skills development.

At national level, country governments should

- Recognize that the most important preconditions are political will, a clear vision and a sense of purpose which in turn determine strategic outcomes for a country's extractive resources.
- Promote appropriate policies and decide what aspects of local content and value addition should stand as fundamental principles and how much to legislate because the legislation comes with enforcement and compliance costs. Overly stringent legislation (in Ghana, for example) as a way to promote development is less likely to generate optimal results for all stakeholders.
- Encourage government-industry collaboration and consultation early in the formulation of country resource development strategy as the cornerstone for ensuring convergence of development and business interests.

Initiatives to address local content and value addition challenges

On local employment and skills development:

- Quotas and targets for local employment should be carefully applied and adapted to suit country circumstances, taking into consideration the reality that technological innovations along the industry chain can "disrupt" stringent legislative requirements;

- There is greater scope for indirect employment opportunities along the industry value chain;
- Investment in training must be strategic to meet the dynamics of industry demand for skills and this needs cooperation between government-industry and educational institutions.

On procurement, the scope of local content should be input specific, opening spaces for wider rules of origin depending on the capacity of a national economy to meet industry needs. A tiered approach to local content to include regional and continental participation is worth considering. If local content requirements cannot be met locally (in the area of operations) or nationally, the sub-region should be considered, and then the continent should be considered. Companies that opt for this alternative should be given more incentives than for procuring inputs from elsewhere. Foreign-owned companies that produce locally using a high percentage of national and sub-regional personnel and other local inputs should be encouraged with incentives, rather than focusing on the shareholding in the company. To improve and develop local suppliers, there must be a deliberate industrial policy to build local capacity along the following lines:

- Strengthen support to institutions that build the capacity of suppliers.
- Incubators.
- Develop active partnerships with foreign companies to transfer skill/knowledge and technology over time.
- Increasing access to finance for local suppliers through venture capital, interest subsidies, and a resource development fund financed through royalties.

SADC countries are developing a regional mining vision linked to the regional industrialization strategy. ECOWAS should consider making a similar effort, recognizing that minerals can be central to an industrialization strategy, but that each country may not have enough of each mineral resource, and enough of all the complementary inputs.

1. Optimizing Benefits from Africa's Extractive Resources Through Local Content and Value Addition



1.1 Introduction

Two factors have contributed to the push for local content (LC) in most resource-rich countries. First is history. There is an observation that extractive sector activities for resource-rich sub-Saharan Africa (SSA) countries have developed as enclaves, weakly linked to the rest of national economies and, with few exceptions, have not provided any meaningful stimulus to growth. Moreover, most countries export a disproportionate share of their resources in raw form and in doing so, export jobs and lose opportunities to maximize the benefits from further processing and refining of the extracted resources.

Second is the nature of the benefit-sharing of resource rents. Reliance on a tax/royalty system as an instrument for benefit sharing has historically not yielded much material benefit to local communities and to national development for a host of reasons. Poorly designed contracting systems, weak national systems to convert resource revenues into instruments of development, corruption and lack of transparency invariably have led to disappointing results for the majority of citizens, especially those who live in communities in which resource extraction takes place.

Resource-endowed countries in Africa have tended to do far worse on most human development and growth indicators than non-resource rich countries. Most have been plagued by different combinations of corruption, conflict, social grievances and weak governance, all leading to negative socio-economic outcomes. But there are changing perspectives on how African countries should govern and use their natural resources on behalf of citizens.

Citizens, communities and civil society organizations are compelling governments and resource companies to acknowledge past failures. The expectations of individual resource-rich countries are changing, as are the expectations of the continent in its development focus, and in its engagement with resource companies. The overarching theme is how to support broad-based growth by improving the developmental impact of resource extractive activities. The method is in promoting economic linkages that encompass both

the use of local inputs and the local use of extracted resources, and promoting small and medium enterprise development, in and around the resource sector.

For resource-endowed countries, the need to promote linkages to achieve diversification and structural transformation has never been stronger. The merits are widely acknowledged. An effective local content strategy provides a winning formula for all. An efficient, competitive local supplier meets the needs of industry, expands the depth of linkages with the non-resource sectors of the economy, opens up more opportunities for suppliers farther downstream, creates jobs, promotes technology transfer and, where opportunities for value addition exist, promotes diversification of the local economy. The “how to” ensure a “win-win” outcome for resource companies and host economies remains the challenge.

It is to deepen understanding of the debate around “resources and development” and to fill knowledge gaps about actual country practices that the World Bank engaged the African Center for Economic Transformation (ACET) to undertake an eight-country study on local content and value addition policies in the mining, oil and gas sectors in Africa. The goal is to document and assess the experiences of countries promoting the use of local inputs, deepening linkages along the resource production value chain and adding value to the resources extracted to support growth and achieve their development goals.

1.2 Objectives and Expected Outcomes of Study

The two-fold objectives of the study are:

1. Assess the nature, content and scope of policies, laws and institutions regulating local inputs in the MOG sectors and the responses from both the public and private sector; and
2. Identify opportunities and challenges with a view to informing public policy on strengthening local content and value addition in African countries.

The study was commissioned to look at country experiences in their approach to the design and implementation of LC strategies and just as important, how industry is responding. Gathering a set range of information through a multi-country study provides the empirical evidence necessary to understand the realities on the ground. These realities include policy, legislative and implementation gaps, different country strategies, how institutions are working and, therefore, how to fine-tune country approaches. The output is intended to be a lesson-learning instrument, not necessarily of best practices, but rather of country experiences highlighting the opportunities and challenges. The output will help countries define their way forward, especially in terms of how to make LC an effective development strategy. The country studies and the country-level case studies provide a sufficiently rich empirical base for clarifying issues of local content and value addition policy and implementation.

1.3 Methodology

This synthesis report draws from the eight country studies and key lessons drawn from two more experienced resource-rich countries: Canada and Trinidad and Tobago. First conceptualized in 2012, the full implementation of the project began in 2015, with funding from the World Bank's Institutional Development Fund and the William and Flora Hewlett Foundation. The main research and field work was conducted over a period of 6-7 months, from August 2015 to March 2016.

Country Selection

The selection aimed for a cross-section of resource-rich countries based on the following criteria: ensuring regional balance as well as a balance of minerals, oil and gas (MOG) sectors. For regional balance, countries were selected from East, Southern and West Africa. Ghana, Nigeria and Burkina Faso were selected from the ECOWAS region; Ethiopia from the Common Market for Eastern and Southern African States (COMESA); Zambia, Namibia, South Africa and Mozambique from the Southern African Development Community (SADC). The selection also provided for countries at differing stages of development and production of their MOG resources. South Africa, Ghana, Namibia and Zambia have a long history of mining. Nigeria and Angola are mature oil and gas producers while Ghana and Mozambique are newly emerging oil and gas producers. However, mineral-rich Namibia was substituted for oil-rich Angola when it became clear after the inception report that there



would be difficulties in collecting data and obtaining interviews with key Angolan officials.

"Benchmark countries" were also selected, identified as those from which African countries could draw lessons. Trinidad and Tobago (T&T) was selected for its oil and gas sectors, and the Province of Ontario, Canada, for its mining. Home to many of the major international mining companies which also operate in Africa, including DeBeers in diamonds, IAMGOLD and Dundee Precious Minerals, Ontario also produces almost all the minerals found in the ACET study countries. These include copper (Zambia), gemstones (Ethiopia), gold (Burkina Faso and Ghana), diamonds (Namibia), aluminum (bauxite) (Mozambique and Ghana) and iron and platinum group metals (South Africa).

The project benefited from four country advisors, two during the project development stage, and another two during the country field work. The country researchers were selected in close consultation with the project advisors. The researchers comprised a combination of MOG professionals that have worked within the industry with considerable experience as technocrats, along with university lecturers, engineers, and economists.

The country studies were conducted by country researchers with overall guidance provided by ACET. The two phases of the project were desk review then field work to collect secondary data through

surveys, interviews, followed by a country validation workshop. The study drew from an extensive desk review of about 230 documents, largely from national and government sources. Across countries, just over 30% of all the documents reviewed were from sources such as national policies, particularly various policy making and executive agencies (central banks, sector ministries, related implementing agencies). About 28% of the data was drawn from national universities, chambers of MOG industries, local sector associations as well as documents by authors from African countries. The research also drew almost 20% of the data from international sources such as the World Bank, International Monetary Fund and the United Nations. Roughly 10% of the data came from key African institutions such as the African Union, UN Economic Commission for Africa, African Mining Development Centre (AMDC) and African Development Bank.

Stakeholder Consultations

In all, about 327 stakeholders were consulted across the eight countries (an average of about 40 persons and institutions for each country). The six main stakeholder groups were government institutions, private sector, academia, financial institutions, development partners and civil society and community-based organizations. At country level, stakeholders within each group were selected to reflect the institutional and organizational context of each country in implementing their local content and value addition policies. Government institutions included the implementing agencies, the policy and regulatory institutions. Within the private sector, it was important to distinguish between the international MOG companies (as investors) and the local private sector made up of local small- and medium-sized enterprises (SMEs) which are service providers to the larger MOG projects. In order to get an idea of key issues facing stakeholders in MOG, private sector associations included Chambers of Industry and local business associations. Academia and vocational institutions included think-tanks, universities and training institutions related to the MOG sectors.

Country Validation Workshops

The major preliminary findings of each country study were presented in country validation workshops for key MOG stakeholders to discuss the research findings, provide further inputs while exchanging experiences and knowledge on the LC landscape of the country.

Case Studies

Where feasible, country case studies have been used to provide a more in-depth understanding of each of the main components of local content and value addition. For example, regarding human capital development, the Ghana study explored the nature and scope of the country's efforts (or lack of them) in developing human capital for the sector, with an emphasis on direct employment opportunities. The case study of grinding media in Ghana illustrates how an unfair tax exemptions regime may undermine the development of local content opportunities that create jobs, maximize the retention of industry spending within the economy and expand the scope for import substitution with export potential in the West African sub-region.

Nigeria's case study explores the achievements of the Equipment Components Manufacturing Initiative in the oil and gas sector. The case studies on South Africa and Mozambique provide examples of effective supplier and enterprise development programs, highlighting the critical role that the industry, in collaboration with development partners, can play in skills and enterprise development. The Ethiopian case study provides lessons on how to formalize the artisanal and small-scale mining sector. The Namibian case study explores some limits of beneficiation and the need for regionalism to maximize the opportunities of value addition when the resource reserves are unknown and when there is a clear case of a resource-rich neighbor with a comparative advantage in value addition. Scale matters.

Challenges

There were several process-related challenges at country level, including the duration of the study because different countries needed different time periods to complete field work. Researchers also identified a number of key country-specific issues such as change of government in Nigeria and Mozambique, which led to major policy, structural and personnel changes which created concern and uncertainty among stakeholders. The availability and cooperation of key stakeholders hampered the Namibia and Mozambique studies.

There were issues of the quality of findings as a result of limited quantitative and empirical country-level data on LC, and the paucity of data, especially on procurement, for confidentiality reasons. Then there were issues of timing of the survey against the backdrop of declining commodity prices when investors seemed less willing to commit to LC development in the face of declining profits.

1.4 Study Context and Conceptual Framework

Figure 1 shows that besides getting the domestic foundations for resource governance right, governments can increase the contribution of extractive resources to national growth and development through two non-mutually exclusive channels:

- Redesigning benefit-sharing fiscal arrangements to ensure that countries optimize revenue benefits through taxation and royalties;
- Promoting linkages with the non-resource economy, maximizing linkages and generating spin-offs for resource-based industrialization

The fiscal pathway involves three steps: getting a good deal for the country through the design of its fiscal regime, managing the resource revenues in a transparent and accountable manner, and prudently investing the revenues for long-term growth. With few exceptions, the experience of resource-rich countries in SSA has not been positive. The resource curse is often associated with the imprudent use of resource revenues more for consumption than for investment, and with practices replete with corruption. The second option is through the development of production linkages (backward, lateral or forward linkages) as a catalyst for economic diversification and industrial development. The African Mining Vision, African Union Agenda 2063 and all the different continent-wide strategies, while advocating better revenue-sharing arrangements in the fiscal channel, also point towards making the most of Africa's natural resources through local content strategies, and forging links with the non-resource sectors of the economy throughout the value chain from exploration to production to processing, smelting, and refining (**Figure 2**).

To be effective, each option alone or in combination requires (a) good resource control – in terms of who gets access to explore, develop and extract the resources; (b) well-defined and focused sector policies; and (c) strengthened state capacity in resource control and good governance by way of legislation and institutions assigned the responsibility of overseeing sector activities. Countries must also integrate resource sector policies into their broader national development framework and, as in the case of Botswana, take into account their regional space and opportunities for value chain development, and the extent of their resource endowments in the design of country strategies.

1.5 Making the Case for Local Content and Value Addition

A number of resource-rich economies in the past two decades have sought to actively promote non-fiscal measures through local content requirements — the minimum levels of labour or material inputs that extractive companies must use from the host country— and value addition provisions—the further processing of output. LCVA strategy has sought to deepen and broaden Africa's natural resources development agenda, orienting it towards the larger goal of resource-based industrialization.

Driven by the compelling case to make the most of natural resource wealth, LCVA strategy is now on the agenda of most resource-rich countries. What was once a "gentlemen's agreement," according to Ms. Mercedes E. Milam of the Ministry of Mines, Industry, and Energy of Equatorial Guinea, is now increasingly a binding constraint on resource companies. Every resource-rich African country is pursuing local content development in some shape or form. At the core of it is the requirement for investors to expand employment opportunities, invest in local supply chains, open up equity to local partners, encourage some technology transfer and stimulate broad-based growth of the non-resource sectors as envisaged broadly in the Monrovia Declaration (1979) and the Lagos Plan of Action (1980). The former was about creating a dynamic and interdependent African economy driven by collective self-reliance. The latter outlined the concrete measures for the implementation of the Monrovia Declaration and emphasized natural resource development as an anchor for growth and industrialization.

African Mining Vision

For the next generation of Africa's extractive resource regimes, an agenda to manage the emerging landscape is now imperative. For mineral resources, the African Mining Vision (AMV) adopted by African Heads of State and Government in February 2009 is seen as an answer. More than just how to avoid the resource curse, the AMV seeks to highlight the potential role of the mining sector in transforming these economies through more diversified and broad-based growth, and with better outcomes for citizens. It provides a forum for Africa to make its case on how to use its natural wealth buried underground.

The overarching goal of the AMV is to create circumstances that support a "transparent, equitable and optimal exploitation of (Africa's) mineral resources to underpin broad-based sustainable growth and

Figure 1: Framework for Linkage Development in the Mineral, Oil and Gas Sectors

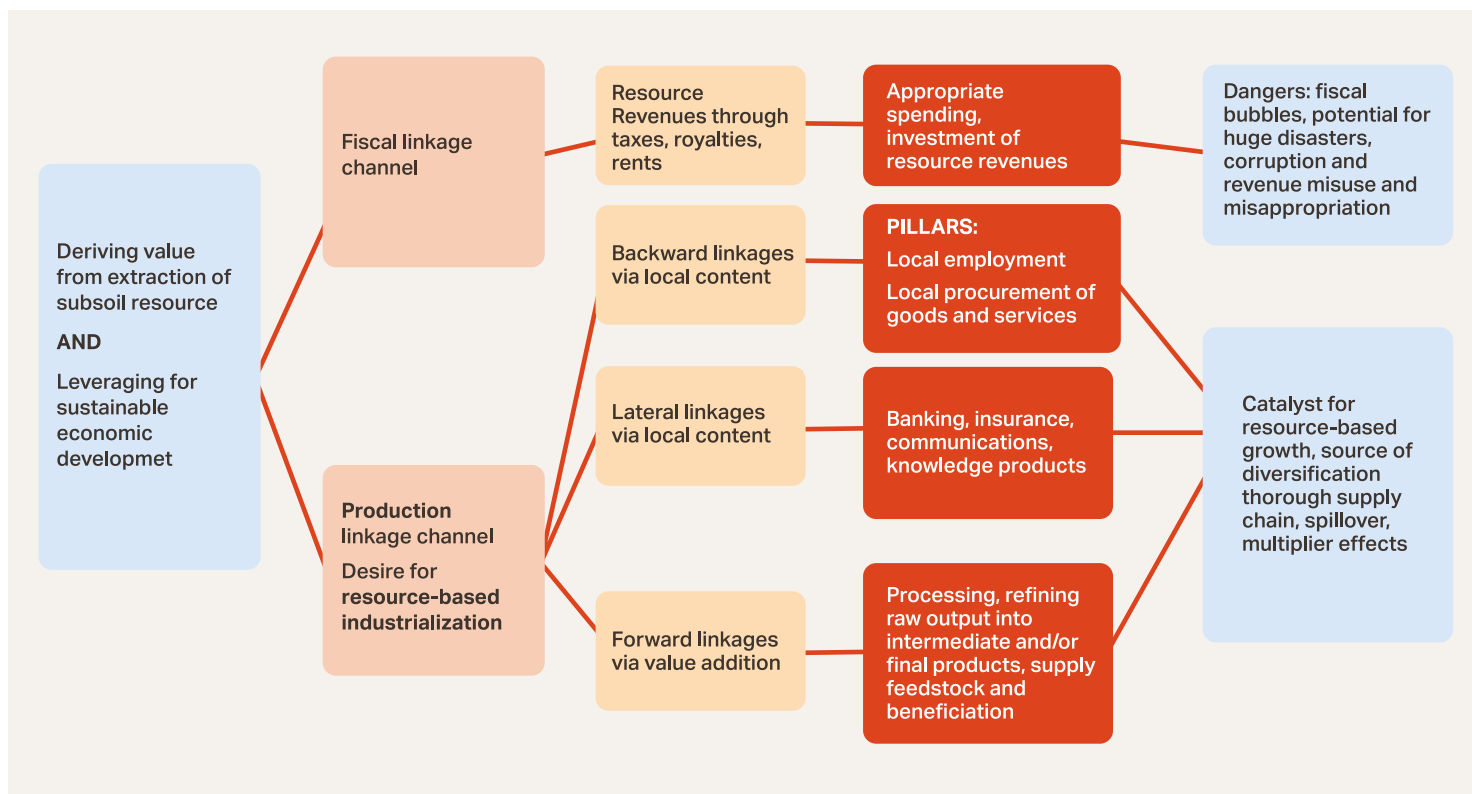
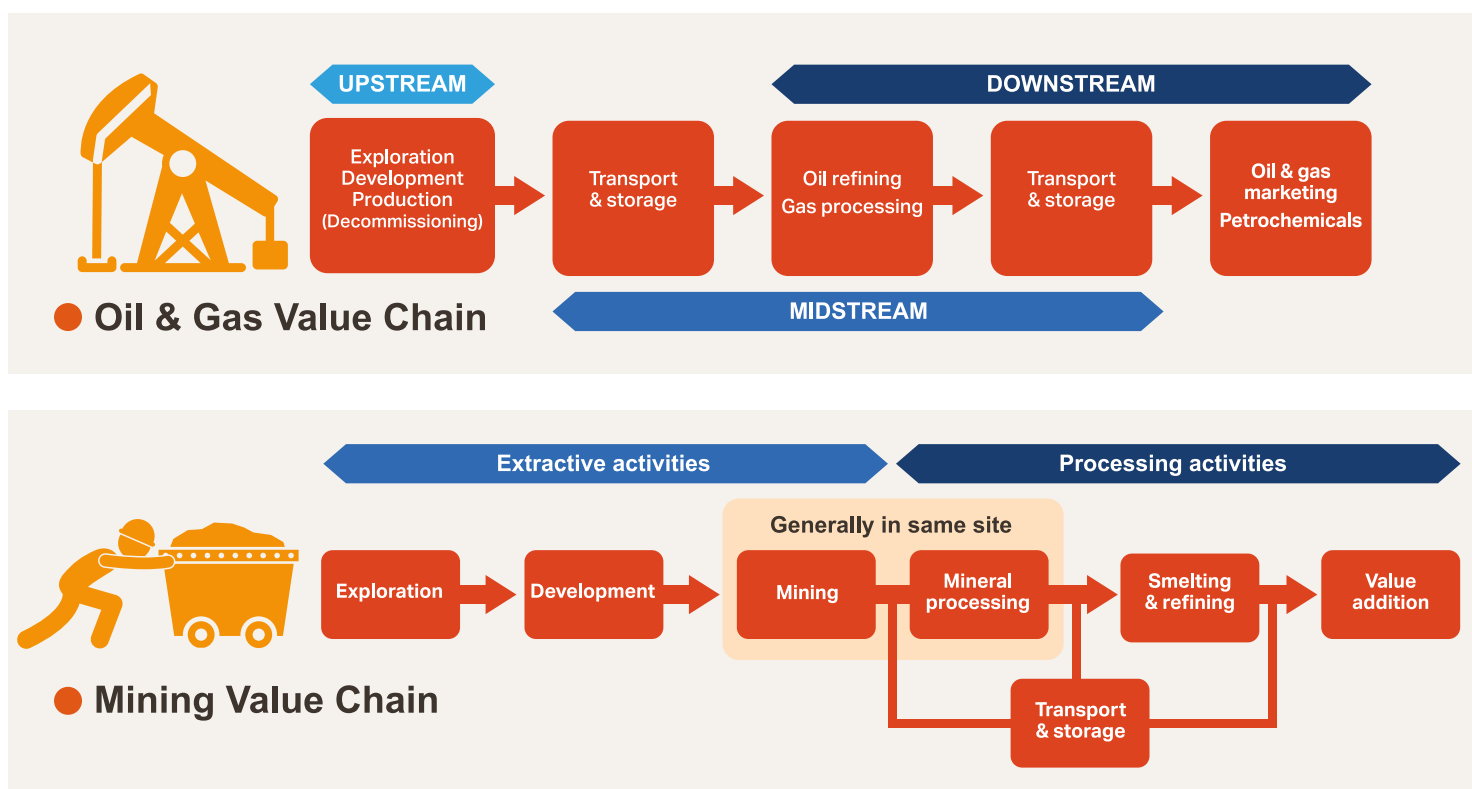


Figure 2: Local Content and Value Addition Chain



SOURCE: African Center for Economic Transformation (2014), *Economic Transformation Report*.

socio-economic development”.² By articulating the political directions for Africa’s mineral resource extraction, by signaling the need for a strategic shift in the management of those resources, and by recognizing and modifying the role of governments to be more proactive and directive, the AMV advocates a transformative role for mineral resources to turn natural wealth into human, physical and financial capital to spur and sustain inclusive growth.³

Most importantly, the AMV stresses that developing strong and capable mineral management systems and institutions and “an astute understanding of African’s relative advantages in the global mineral value chain...” is the key to optimizing the continent’s benefits from the exploitation of mineral wealth.⁴ The principal policy themes include a proactive role for the government in promoting and expanding the role of linkages (backwards, side-stream and forward linkages); in optimizing MOG fiscal regimes; in transforming small-scale and artisanal mining; in creating transparent and accountable mineral governance regimes; and in investing resource wealth for sustainable development.

The Evidence

The push for LCVA at the turn of the century coincided with rising prices of mineral and energy commodities and would be seen by industry experts as one of the trends in development policy.⁵ The push also coincided with the trend among resource companies to move away from the vertically integrated corporate model toward outsourcing different activities in the supply chain.⁶ Finding the lowest-cost suppliers whose output is of the required quality, and who can meet delivery schedules is central to an optimal local content strategy. It provides a winning formula for all.⁷ An efficient, competitive local supplier meets the needs of industry, expands the depth of outsourcing, opens up more opportunities for suppliers further downstream, creates local jobs, promotes technology transfer and learning-by-doing, and offers opportunities for local management and ownership.

LCVA strategy has since taken on different forms, with varying emphasis across countries. Businesses have responded with caution, some firms working with the tide or ahead of it to ensure compliance or to gain the “social license to operate”. The result is an emerging landscape of local content and value addition provisions across the continent.

For SSA, the evidence so far has already raised a number of compelling questions, including:

- Are resource-rich countries getting the strategy right?
- Are there elements of the strategy best managed through legislation, through administrative measures, or best left to industry guided by policy incentives?
- What should governments and companies do to increase local content in practice?
- Is the lack of country long-term development plans and coherent industrial policies undermining Africa’s quest for resource-based industrialization?
- Are local content requirements and regulations alone sufficient to achieve the desired objectives?
- Is regional integration an imperative to leverage Africa’s natural resources for resource-based growth and economic transformation?
- How can regional integration catalyze linkage development for broad-based growth?

Hanlin (2011) examines whether the drive to increase local content is a myth or reality and observes that despite the obvious potential, across the continent local suppliers are seldom used, and that, with the exception of South Africa and arguably Ghana, an indigenous service and supply sector for the mining industry has not developed to any significant extent. Hanlin notes that the multi-national nature of resource companies predetermines the procurement route from design phase to operation phase of the mine life-cycle.

The 2012 study by Morris, Kaplinsky and Kaplan, “One Thing Leads to the Other”, examines country experiences of promoting industrialization during the commodity boom of the first decade of the 2000s. It observes that experiences with linkage development have been mixed and modest. Local content linkages were comparatively well developed in Ghana’s gold, Nigeria’s oil and Zambia’s copper. But the breadth and depth of linkages were limited in Angola’s oil, Botswana’s diamonds and Tanzania’s gold. Only South Africa had a broader spectrum of linkages with the manufacturing sector of the economy. In Angola, Botswana and Tanzania, local value addition was more evident in labour content, with higher levels of labour skills in Angola and Botswana. In Nigeria and Zambia and especially South Africa, there were greater efforts towards horizontal linkages (such as the financial and insurance sector, transport and communications making efforts to meet the needs of the resource sector).

In its 2013 *Economic Report on Africa*, UNECA observes that some governments have not adopted linkage policies and as a result they are losing opportunities to develop local manufacturing and services on the back of their extractive resources. The Report observes that countries that have adopted measures to promote linkages have not followed through with measures to support skills, local enterprise and technological capacity development. The missing drivers, the Report concludes, are the competitiveness of domestic firms and the effectiveness of government policy.⁸

In 2014, Africa Practice and Pinsent Masons organized a panel of experts to address the question: "Are local content policies effective in achieving national development objectives and how should investors approach national participation?" The unanimous view was that "local content is here to stay and those companies that fail to recognize the evolving investment reality will fall quickly behind" (The African Sessions, Q1, 2014).

The rest of this study is organized as follows. An outline of the resource endowments of the study countries follows next in Section 2. The section concludes with an analysis of the policies and the legislative environment that governs the implementation of LCVA strategies. The experience of implementation of local content strategies follows in Section 3 on the basis of the four key pillars: employment and skills development, procurement of goods and services, equity participation and project financing. Section 4 presents the scope of value addition, followed in Section 5 by the conclusions and policy learning recommendations.

First, what is local content and what are its dimensions? For the purpose of this study, the four dimensions of local content are defined below, followed by the concept and the type of linkages.

1.6 Pillars of Local Content

Local Employment, Skills Development and Human capital includes employment of locals, the economic value of an employee's skill set and human capital requirements entail developing technical skills, commercial knowhow and support services skills. The bulk of the skills needed is technical. Human capital is an important form of local input that can be leveraged to transform domestic economies while providing the required competencies to resource companies.

Local Procurement is the sourcing and purchasing of local goods and services for business use. Procurement of goods and services requirements are intended to help local suppliers of manufactured goods and services by promoting vertical and horizontal linkages between the host economy and the investing companies. The scope of procurement may vary from country to country and in many ways underlies the ambiguity in the use of the term local content. A narrow definition of local procurement applies to the volume of goods and services bought by resource companies that is produced in the local economy using only local factors of production and inputs. For most resource-rich African countries this definition is likely to yield a low volume of procurement. Procurement can also be defined broadly to cover the finished goods and services imported by local suppliers from parent companies or overseas manufacturers. This range of procurement offers little to no scope for domestic manufacturing, has little job-creation potential other than service and maintenance of machinery and equipment, and certainly offers no scope for linkages with the non-resource sector of the economy. An intermediate form of procurement can be defined to include all goods and services procured or produced in the local economy regardless of the source or origin of the inputs.

Equity participation and management by locals.

Equity participation is defined as the acquisition of partial ownership in an organization or venture taken through an investment. Equity participation requirements refer to the set of laws that allows governments and private citizens of resource rich-countries to acquire shares in MOG development projects and, therefore, share in the profits of the company, and have a say in the management and strategic decisions about the exploitation of national assets when the holdings exceed a minimum threshold.

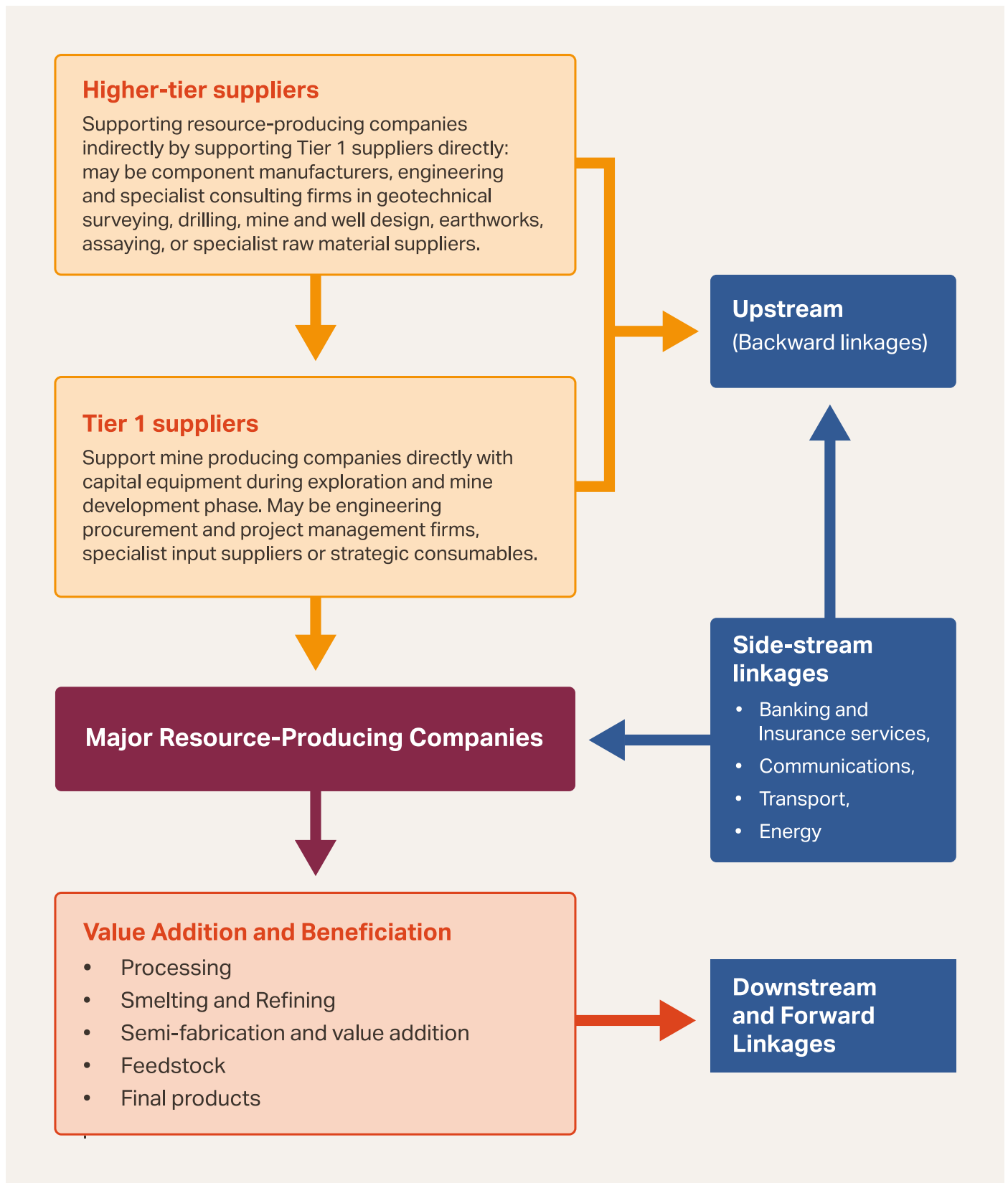
Project finance is the long-term financing of infrastructure and industrial projects based on the projected cash flows of the project. Project finance requirements in LC policy consist of stipulating that some of the finance for the MOG projects be procured from domestic financial institutions. Given the type of activities project finance can be used for (e.g. physical development of a mine or an oil platform, associated building and engineering processes necessary to extract and transport the products, etc.), it can have a high multiplier effect on a resource-rich country's economy through its impact on domestic financial sector development. Indeed, if local content laws provide that a given percentage of project finance should be obtained from the local economy, host country banks stand to reap huge benefits as mine or oil platform development does not come cheap.

1.7 Concept and Types of Linkages

Linkages

The conventional definition of local content focuses only on the input side, including ownership and financing, as in Trinidad and Tobago. This is often described as upstream linkage and typically refers to the various direct and indirect relationships between producing firms, suppliers or input supply chain and input providers of labor and services. The broad definition encompasses both inputs and further processing (or downstream linkages) and use of the extracted resource. Downstream linkages in most resource-rich African countries are often weak because most metal ores and minerals are exported in their raw state. They are not consumed in the domestic manufacturing sector of most African economies. A third dimension is the side-stream linkages which involve other services such as power use, communications, financing and research and development. Mineral-producing firms, inputs suppliers and downstream processors all require the use of such services throughout the resource value chain.

This study recognizes all three dimensions and will refer to them together simply as linkages. Upstream linkages shall refer to the narrow definition of local content, and downstream linkages to value addition. If local content can stimulate multiplier effects through the chain of suppliers and job creation, its counterpart – value addition – matters just as much. They both determine and are in turn influenced by the scope and extent of side-stream linkages (*Minerals and African Development*, 2011). The scope of potential backward, forward and side-stream supply chain linkages in the mining industry is illustrated in **Figure 3**.

Figure 3: Linkages in The Resource Industry

2

2. Mineral Resource Endowment, Local Content and Value Addition Policies, Legislation and Institutional Environment

To provide context to the study, this section first outlines the resource endowments of each of the study countries, followed by the guiding policies and legislative environment that countries are putting in place to pursue their local content and value addition strategies.

2.1 Country Resource Endowments



Selected African countries	Sector Focus
● Burkina Faso	Minerals
● Ethiopia	Minerals
● Ghana	Minerals, Oil and Gas
● Namibia	Minerals, Oil and Gas
● Nigeria	Oil and Gas
● Mozambique	Minerals, Gas
● South Africa	Minerals
● Zambia	Minerals

2.1.1 Burkina Faso

Land-locked Burkina Faso is located in the heart of West Africa. Most parts of the country have reported the presence of a variety of mineral resources, but few with significant mineral production. Its 70,000 km² geological formations are favorable to mining of gold, zinc, manganese and copper. Other precious stones and metals include diamonds, magnetite, nickel, antimony, zinc and lead. Non-metallic substances include phosphate, limestone materials and ornamental stones.

Since 2007, Burkina Faso's mining sector, more particularly gold mining, has been growing rapidly. Between 2007 and 2010, six gold mines began production. There were 666 valid prospecting permits in 2013. Currently, there are seven gold-producing

mines while six advanced gold projects are in the pipeline as of 2016. Zinc exports began in June 2013 and the Tambao manganese project is picking up gradually.

Contribution of the mining sector to the economy

The contribution of the mining sector to national economic growth has been noteworthy. According to data from the website of the Burkina Faso Chamber of Mines, the contribution of mining to GDP was 7.7% in 2010, 12.1% in 2011 and 20.0% in 2012. However, it is too early to determine whether the income and employment generated by the sector will have a lasting impact on poverty reduction, given the short history of the country's mining industry. The provision of goods and services (subcontractors, geo-services,

consultants, etc.) represents a promising channel for local content which, if well exploited, can contribute to the creation and growth of local small and medium enterprises. According to a World Bank survey, between 2010 and 2012, six mining companies made procurements valued at US\$340 million. After a long period of inactivity, artisanal gold mining has gained renewed attention, with over 300,000 gold winners currently in Burkina Faso.

Gold has replaced cotton as the leading export commodity. Smuggling, however, is the major conduit for small-scale mining, depriving Burkina Faso of foreign exchange earnings. In February 2015, the customs services arrested a group of smugglers that had declared 2 kg of gold for export instead of the 70 kg they were actually exporting. Almost all the gold panning in Burkina Faso (estimated at about 5 tonnes per year), is carried out by smuggling rings. Smuggling networks, which supply Asian, European and American gold markets, also sometimes divert part of the gold produced from industrial extraction. Gold smuggling is one of the main channels of money laundering and undermines prospects of further refining and value addition.

2.1.2 Ethiopia

While gold production is considered to have huge potential in Ethiopia, a wide variety of mineral resources are also available in the country. Recent exploration has confirmed deposits of platinum, tantalite, soda ash and phosphate. Petroleum and other metallic, industrial and chemical minerals have also been identified. Ethiopia currently has no commercial production of hydrocarbons. In February 2014, it was reported that the El Kuran-3 well in the Ogaden Basin (operator New Age) had encountered oil and gas shows. The country's current total proven reserves of natural gas have reached 6 trillion cubic feet (TCF). Ethiopian minerals are being mined by state-owned enterprises (SOEs), large private companies and artisanal and small-scale miners (ASM). Presently, there are only two operational large mines (gold and tantalum). Gold, marble, silica sand, and soda ash mining companies are privately owned. The state-owned Ethiopian Mineral Development Enterprise (EMDE) produces dolomite, feldspar, niobium (columbium), quartz, and tantalum. Artisanal miners produce gemstones, gold, niobium, and tantalum. Opals account for nearly 98% of precious stone exports of the country. The Wollo opal has gained popularity in the wider global market since 2010.

Contribution of the mining sector to the economy

Ethiopia's share of global tantalum mine production amounted to 10%. In 2012, Ethiopia's gold exports were \$602 million in fiscal year 2012 or 19% of the value of total exports.¹⁰ Other significant mining and mineral processing operations include cement, crushed stone, and dimension stone. Mining in the past has been a marginal activity in Ethiopia, contributing very little to the country's economy (less than 1%). However, by generating employment, improving the livelihood of artisanal miners and their families and earning foreign exchange, mining is currently playing some role in the country's development. Gold now is the number two export earner after coffee.

Ethiopia provides significant incentives for resource companies to undertake exploration. In 2015, more than 20 local and 15 foreign companies were engaged in prospecting and exploration for gold and base metals, platinum, industrial and construction minerals.

2.1.3 Ghana

Mining

Ghana remains the second largest gold producer in Africa after South Africa and tenth largest globally. With average annual production of approximately 2.6 million ounces since 2003, gold is Ghana's leading mineral, and accounts for 95% of Ghana's mineral revenue.

Ghana is endowed with a range of minerals, though only a few are actively exploited. Traditional minerals include gold, diamond, manganese and bauxite. Ghana's gold reserves of about 2,000 tonnes constitute about 3.1% of global gold reserves. At a spot price of US\$1,250 per ounce, Ghana's gold reserves are estimated to be worth about US\$80 billion as of 2015.¹¹

Bauxite reserves are estimated at between 530,000-900,000 tonnes.¹² The level of reserves is unclear at Awaso, home of the country's only currently operating bauxite mine. Reserve figures for diamonds are very difficult to obtain. Beyond traditional minerals, Ghana's non-traditional minerals include salt, clay, iron, phosphate, copper, nickel, chromium and uranium. Reserve figures on these minerals were not available at the time of writing.

Contribution of the mining sector to the economy. With the exception of diamonds, the growth index of minerals output and exports has been on a steady rise since 2003, peaking in 2012 due largely to the hike in gold prices experienced in 2012 and to the inflow of new foreign investment in the sector. On the average, solid mineral exports constitute 40% of Ghana's total exports. Foreign investment in the sector has averaged US\$776 million between 2003 and 2012, with keen investor interest in gold production.

Fiscal benefits from mining activities have been notable. Between 2003 and 2014, the sector on average contributed 16% to domestic tax revenue and led in royalties and corporate income tax payments. For example in 2012, royalties and corporate income tax payments were US\$916 million and US\$228 million, representing approximately 16.9% and 4.2% of total tax revenues respectively.¹³ About 1.6% of all formal sector jobs in Ghana were created by the large-scale mining and quarrying sector, and more if the indirect and induced effects are factored in.¹⁴

Oil and Gas

Compared to the mining industry, Ghana's oil and gas industry is relatively new. Production only begun in 2010 from the Jubilee Field, after commercial discovery in 2007. Ghana's current production is from two main offshore operations, the Jubilee and the Tweneboa-Enyenra-Ntomme (TEN) fields. First oil from TEN was achieved in August 2016. As an oil producer, Ghana now ranks 13th in Africa, 47th in the world

and second only to Nigeria in the ECOWAS region.¹⁵ Estimated recoverable natural gas reserves are about 6.4 TCF, of which 4.2 TCF is non-associated gas.¹⁶ Since the first discovery in 2007, an additional 24 discoveries have been made and are currently in various stages of appraisal (29%), development (21%) and production (0.1%), while 42% are at exploration, re-evaluation and relinquished stages.¹⁷

The share of petroleum revenue to GDP is quite low, around 1%, an average of 1.3% between 2011 and 2015. However, as a proportion of total tax revenue and grants, petroleum tax revenue contributed on average 4%, while mining revenues amounted to 2% between 2012 and 2015.¹⁸

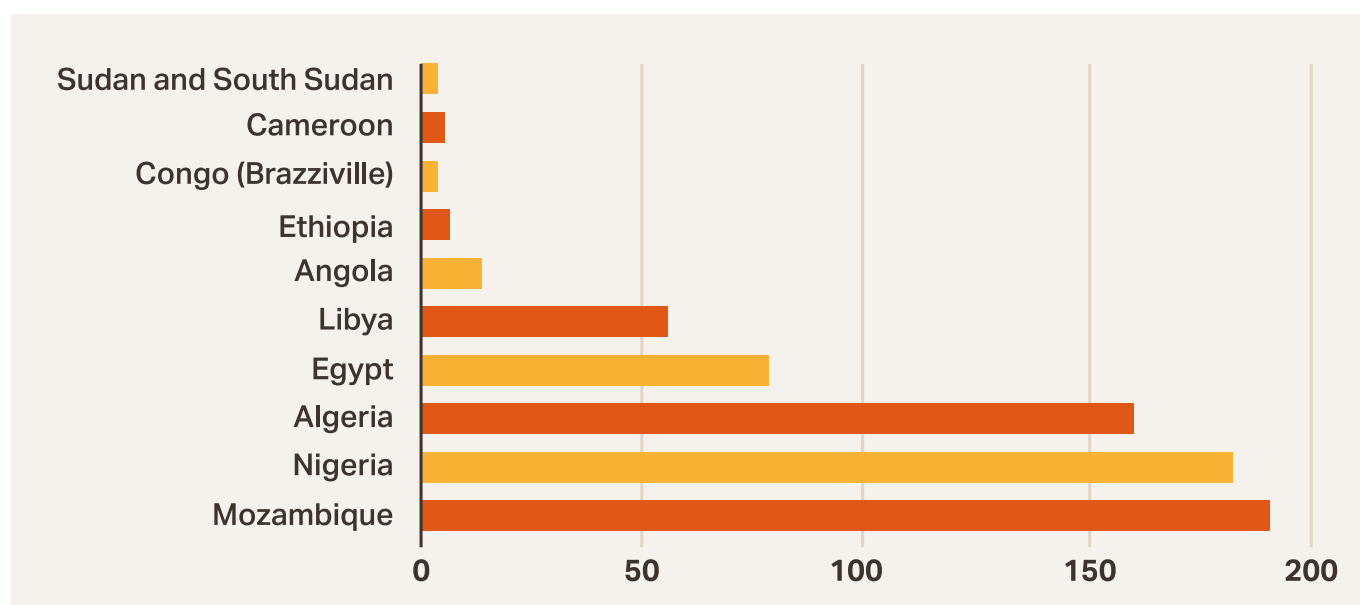
2.1.4 Mozambique

Boosted by the recent discoveries of over 20 billion tonnes of coal (coking and thermal) and total proven reserves of around 180 to 190 TCF of natural gas, Mozambique has become an important player in the upstream oil and gas industry of southern Africa. Mozambique has the largest reserves of natural gas in Africa, ahead of Nigeria, Algeria, Egypt and Libya.

Mozambique has been producing natural gas since 2004 from 5 TCF of reserves, much of that by the South African petrochemicals giant Sasol which exports almost all of its production to South Africa.

Mozambique's coal estimates are sizeable and have the potential to provide 20% of the world's seaborne coking coal by 2025. Mozambique may also have

Figure 4: Proven Reserves of Natural Gas (TCF) 2014



SOURCE: African Center for Economic Transformation (2014), Economic Transformation Report.

large deposits of other valuable minerals. Current projections indicate around 100 million tonnes of heavy mineral sands that could provide 20% of global demand for titanium. Other minerals include tantalum, limestone, gold, uranium and iron ore.

Contribution of the Extractive Sector to the Economy. In 2011, the extractive sector accounted for around 1.7% of GDP. This has the potential to grow to 15% by 2020. The IMF estimates that the government's share of profits from the extractive sector could amount to about US\$3.5bn a year, or 18% of GDP, by 2025. Given that most projects are still in the exploration phase, the industry's contribution to revenue remains small. The IMF estimated that for the period 2008-2010, revenues from mineral and gas resources averaged 0.3% of GDP and 1.8% of total revenues, with a big increase between 2010 and 2015 to average of 3.7% of the GDP. In terms of employment, the capital-intensive nature of the industry means that its direct contribution to job creation remains extremely limited, at less than 0.5% of formal sector jobs.

Changes are expected in Mozambique's economy and trade in the next decade when liquefied natural gas (LNG) will likely provide the bulk of government revenue. By 2023, the contributions to GDP of coal and gas are expected to grow by 2 percentage points per annum. When LNG production reaches near full capacity, around 2023, LNG exports will represent almost 30% of GDP and nearly 50% of total exports. By 2030, the IMF projects that revenue from both LNG and coal will constitute around 25% of all government revenue or 9% of non-coal, non-LNG GDP.

2.1.5 Namibia

Namibia is the world's fourth largest exporter of non-fuel minerals, and ranks fifth among the top producers of uranium behind Kazakhstan, Canada, Australia and Niger. Other metals include arsenic, copper, gold, lead, manganese, silver, and zinc. Industrial minerals include dolomite, granite, marble, salt, semi-precious stones, industrial minerals, sulphur, and wollastonite.¹⁹

Potential for discovery of economic deposits of PGMs exists in northern Namibia. Among the world's top 10 diamond producers, Namibia's production increased by 5.7% to 1.7 million carats in 2013, driven by increased onshore and offshore mining. Discovery potential exists offshore and to a lesser extent from primary sources onshore. Namibia is also endowed with rich deposits of coal and industrial minerals. In 2013 the Fraser Institute, ranked Namibia the second most favorable investment destination for mining and exploration activities on the African continent.

Contribution of Mining Sector to the Economy. The MOG sector remains an important pillar of the Namibian economy as a consistent, significant contributor to GDP fluctuating between 15.8% and 23.5% from 2000 through 2011. In 2011, mining contributed 8.2% of GDP and 11.5% of GDP in 2012. Mineral exports accounted for over 55% of all foreign exchange earnings, amounting to N\$17 billion in 2012. The Namibian Chamber of Mines estimates that directly and indirectly, the mining industry provides income for some 100,000 people, roughly 4% of the population.

Although the sector has remained a significant contributor to government revenue mainly through royalties, the government views this contribution as inadequate and disproportionately small, taking into account the total value of Namibia's natural endowment of minerals. In other words, the contribution of the mining industry does not allow ordinary Namibians to benefit adequately from their country's natural resources.

To address the anomaly, Epangelo Mining Company (Pty) Ltd., a wholly state-owned entity was established in 2008. This step appears to have been taken in pursuit of the government's long-term development framework, Vision 2030, "To ensure national participation in the discovery, exploitation and beneficiation of Namibia's mineral resources whilst developing and consolidating a portfolio of high-quality assets and services for the benefit of its stakeholders."

2.1.6 Nigeria

Although the focus of this report is limited to Nigeria's oil and gas sector, solid minerals have played a significant role in the evolution and development of the Nigerian economy and still have the potential to contribute meaningfully to national development. Nigeria has a varied endowment of more than 34 different solid mineral types including: iron ore, limestone, niobium, lead, zinc, coal, tin, columbite, gold, silver, bitumen, gypsum, glass sands, clays, asbestos, graphite and tantalite. There are also coal, iron ore, gold and tin deposits in several parts of the country. Nigeria has one of the world's top 20 natural gas reserves, estimated at about 182 TCF and second to Mozambique in SSA. Its annual natural gas production is 31.36 billion cubic metres). Ranked 12th in the world for oil production and first in Africa, Nigeria has proven reserves of about 37.2 billion barrels. The country's oil output has risen from 1 million bpd in 1970 to around 2.5 million bpd at present.

Contribution of Extractives Sector to the Economy

The oil and gas industry is estimated to account for between 90% and 95% of foreign exchange earnings and between 60% and 70% of government revenue. Although these financial contributions are significant, the industry only contributes between 11% and 15% to GDP.

There are strong indications that the industry is poised to perform better as current local content and value addition policies become institutionalized and the oil and gas industry gets integrated with other sectors of the economy in coming years.²⁰

Overall, while the trajectory for the oil and gas and mineral sectors have been historically different, both groups of extractives have the potential to play an even greater role in Nigeria's economy. It would appear that the country's policy makers have reached a consensus that the country must restructure, retool and refocus the MOG sectors to serve effectively as the engine and feedstock for industrial transformation in other sectors of the economy. In this regard, the opening statement of the Nigeria Industrial Revolution Plan (NIRP) aptly notes that, "history shows that no country has ever become rich by exporting raw materials without having an industrial sector, and in modern terms an advanced services sector. The more a country specializes in the production of raw materials only, the poorer it becomes" (NIRP, 2014).

2.1.7 South Africa

South Africa (SA) has an abundance of minerals worth an estimated US\$2.5 trillion (Citibank, 2010) excluding energy minerals, making it the wealthiest mineral jurisdiction in the world. The mining sector, together with its related industries, continues to be critical to the country's socio-economic development. South Africa accounts for a significant proportion of world gold production and has the lion's share of some of the rare minerals such as platinum, manganese, chrome and vanadium. Given the history of the South African mining industry over decades, it is no surprise that it has high levels of technical and production expertise and comprehensive research and development activities.

Contribution of Mining Sector to the Economy. SA has a well-established mining industry. It has developed considerable expertise and related supply industries, and is estimated to have the world's fifth-largest mining sector in terms of contribution to GDP. Against this background, it is understandable that mining is

the foundation on which the South African economy is built. Although its contribution to GDP is on a downtrend, the industry continues to make valuable contributions in terms of foreign exchange earnings, employment and overall economic activity.

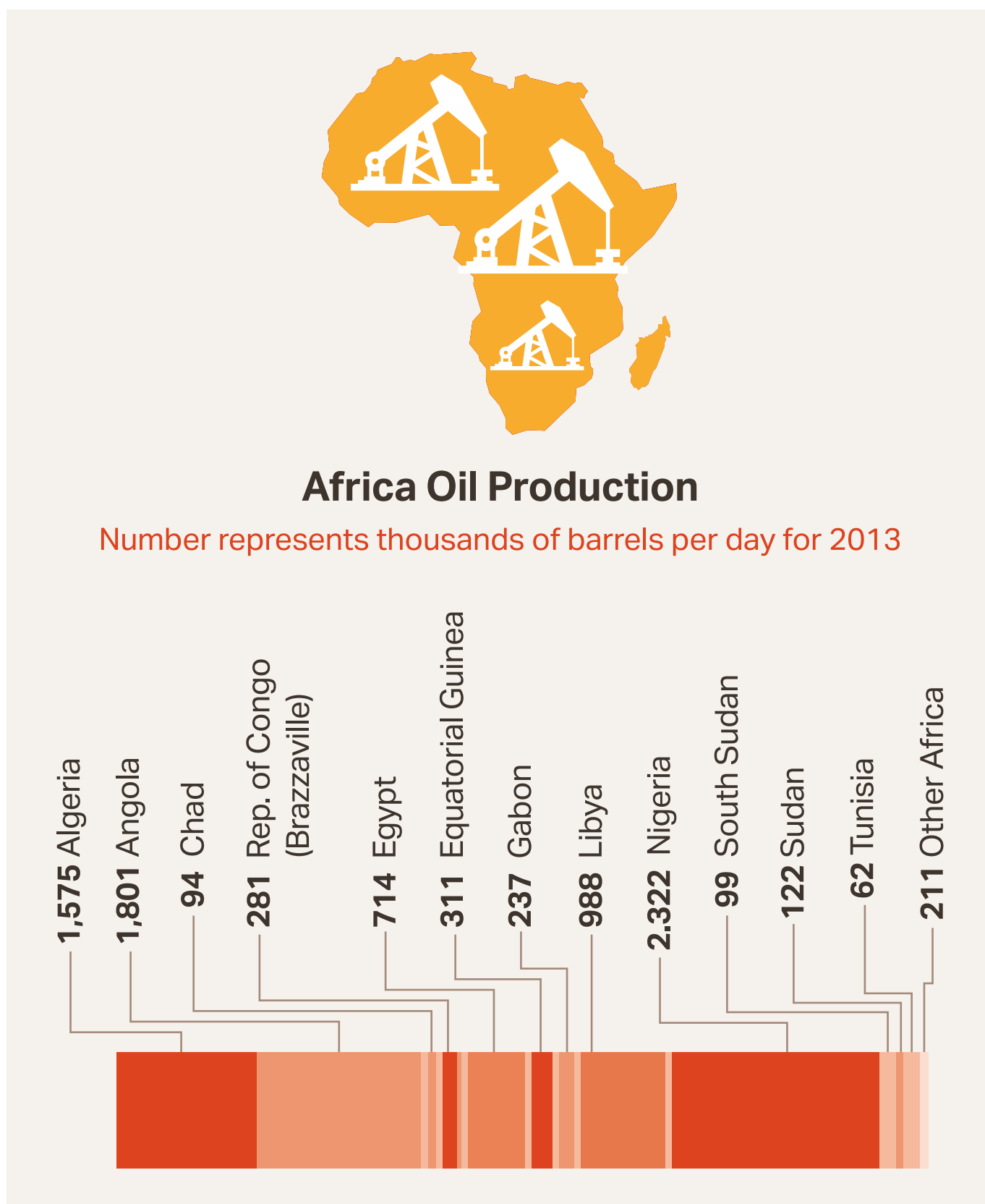
As South Africa moves towards becoming a knowledge-based economy, the contribution of mining to employment has dwindled to nearly 3% while other sectors which are labour absorptive such as manufacturing, retail, finance and real estate contribute more. The role of mining in direct job creation has declined over the years as the economy diversifies.

2.1.8 Zambia

Despite a wide range of minerals in the country, copper has dominated the mining industry and much of the economy since 1930 and has overshadowed the exploitation of other mineral resources. The Fraser Institute ranked Zambia 26th out of 79 jurisdictions worldwide for mineral potential. In Africa, only the Democratic Republic of the Congo and Burkina Faso have been reported to have an appreciably higher score for mineral potential. Even this ranking is based on potential mineral resources available to existing mines in Zambia, currently estimated at 2.8 billion tonnes of ore. Added to recent successful explorations, this is estimated by experts to be sufficient to sustain even an expanded industry well beyond the middle of the twenty-first century.²¹ These estimates are made on the basis that only 60% of the country has been prospected.

Apart from copper, Zambia has unexploited gold, zinc, iron and uranium deposits. In the non-metallic subsector and specifically in gemstones, available minerals include emeralds (by far the most prevalent), followed by diamonds, amethyst, aquamarine, tourmaline, garnets and citrine. The other non-metallic minerals are in the main agro-industrial minerals. These include cement, lime, manganese, phosphates and coal. This rich variety of mineral resources offers great potential to provide the needed resources for financing broad-based and sustainable development.

Contribution of the Mining Sector to the Economy. The World Bank extrapolations of the potential economic benefit that Zambia could derive in an environment of policy best practices indicate potential annual output of 1.5 million tonnes of copper, which far outstrips the current actual average output of 600,000 tonnes. Accordingly, the Bank determines that Zambia's annual copper production is at 40% of what it could be if best-practice conditions

Figure 5: Africa's Oil Production, 2013

SOURCE: BP Statistical Review of World Energy, 2014.

in the business environment were applied. The same goes for export earnings and government revenue, which stood at 52% and 48% respectively of best-practice levels.²² Therefore, Zambia's resource setting could provide optimal conditions for accelerated growth of local content and value addition, driven by mining sector.

2.2 Policies, Legislation and Regulating Environment for Local Content

Against the background that the resource sector historically has remained an "enclave" industry, unconnected to other sectors of the economy, the argument goes that resource extraction firms can be expected to promote local content and beneficiation only to the extent that they see such initiatives as beneficial to them. In the context of their global value chains, promoting local content and domestic value addition in the resource-producing economy is not always a business imperative. So it is incumbent on resource-rich country governments to create the required policy and legislative environment to promote linkage development and to pursue resource-based industrial development.

The challenge is in the way governments pursue their strategy to achieve development goals. Globally, 90% of resource-rich countries have local content policies, while 50% have regulatory policies. There has been a tendency for resource rich countries to develop policies,²³ legislation, and establish institutions for oversight and enforcement. The key questions of interest are as follows:

- Are resource-rich SSA countries getting the strategy right?
- How do the policies, legislative and institutional framework compare across the study countries?
- What is the level of political will?
- What lessons can be learnt from country experiences?

The study countries represent a mixture of mineral-rich and oil- and gas-rich economies, in varying stages in their MOG development, of different linguistic background and geographic orientation, and with different socio-economic histories. All these considerations inform policy directions, country development strategies, the set of legislative instruments and the institutions that oversee policy implementation.

Findings

Of the eight study countries, the earliest local content strategies date back to the 1960s and 1970s. In Zambia, it was called "Zambianization" policy regarding mining activities. In Nigeria, it was the establishment of the Nigerian Oil Corporation to promote indigenization of the oil industry. In Ghana, the establishment of the Ghana National Petroleum Corporation in 1984 registered state equity in oil and gas activities even if all other elements of local content were less explicit then.

Most other countries have explicitly adopted local content strategies in the last two decades, shifting policy focus from foreign investment to greater local involvement. South Africa's Broad-Based Black Economic Empowerment (BBBEE) Act, 2003, represents a post-apartheid effort to promote local content via ownership especially among historically disadvantaged citizens, with clear provisions on employment, skills development and procurement. The recently revised BBBEE codes signal a more interventionist and prescriptive approach by the government.

Namibia lacks an explicit LCVA policy. Its Mineral Policy, 2003, and National Equitable Economic Empowerment Framework (NEEEF), 2015, followed South Africa's approach to redressing historical injustices in employment and procurement. The NEEEF is considered by both government and industry to be Namibia's game changer. Most importantly, it establishes the economic empowerment pillars, emphasizing ownership, management control and employment equity, human resources and skills development, value addition, technology transfer and investment, among other features. Namibia's approach is for now voluntary in nature.

More explicitly than before, Ghana has since 2010 worked on local content policies in both mining and the oil and gas sectors. 2012 marked the beginning of implementation of local content policies in the mining sector. The Minerals and Mining Law, 2006 had earlier sought to promote a localization policy, facilitate production linkages, and called for eventual "localization" of mining staff. But it was the Minerals and Mining (General) Regulations, 2012 (Legislative Instrument 2173), that would be the game changer because it focused explicitly on two pillars: (i) employment and promotion of the local workforce; and (ii) procurement of locally produced goods and services, setting quotas and timelines for compliance. In oil and gas, the Petroleum (Local Content and Local Participation Regulations), 2013 (LI 2204), defines Ghana's expectations of local content.

Ethiopia's Draft Mineral Policy, 2013 asserts the prioritization of citizens in employment and preference for local goods and services. Ethiopia's expectation of LCVA are codified as fundamental principles not in law but in operations agreements. Ethiopia's approach is therefore voluntary in nature although there are high expectations of industry cooperation in submitting documentation on progress in respecting those principles.

Zambia's Mineral Resource Development Policy, 2013 and the revised Mines and Mineral Development Act, 2015, provide more explicit requirements on preference for employment and procurement of goods and services. The Citizens' Economic Empowerment Act, 2008, commits companies to give preference to qualified Zambian nationals in employment and in procurement.

Mozambique's Poverty Reduction Action Plan of 2011-2014 pursues a general economic policy to promote broad-based growth, diversify the economy, create jobs and linkages between foreign investment and the local economy. The provisions of local content requirements are in the Mining Law and Petroleum Law, both of 2014. A comprehensive local content law was initiated in 2014 and remains in draft at the time of writing.

The latest local content legal and institutional framework for the Nigerian oil and gas industry is the essence of the Nigerian Oil and Gas Industry Content Development Act 2010 (NOGCID Act). This is the product of many years of legislative and institutional evolution as the industry matures and adapts to changing policy directions and industry imperatives. The process has been shaped especially by the desire of successive governments for greater industrialization and domestication of the country's oil and gas industry in order to ensure maximum financial returns, job creation, value addition and integration with the rest of the Nigerian economy.²⁴ From the NOGCID Act has emerged subsidiary legislation, regulations and procedures establishing institutions and regulating the implementation of local content policies. As comprehensive as Nigeria's policies, legislation and institutional framework appear to be in the effort to retool and refocus policy, the effectiveness has received mixed reviews. Nigeria may have been successful in pursuing ownership and private participation in the industry. However, it appears to have been less successful in the local procurement of inputs. The latter appears far more complex than legislating ownership.

2.3 Developing a Conducive Policy, Legal and Institutional Framework: The Case of Canadian Atlantic Provinces and Trinidad and Tobago

Canada

Canada was identified as a benchmark case from which the study could draw lessons. Home to many major international mining companies which also operate in Africa, the province of Ontario produces almost all the minerals produced by the selected countries of focus in this study: gold, diamond, iron, aluminum (bauxite) (Ghana), copper (Zambia), gemstones (Ethiopia), platinum group metals (South Africa), and diamonds (Namibia).

Under Canadian federalism, provincial governments have jurisdiction over resources development with the oversight of Natural Resources Canada. Known for its long history of resource development and its emergence as a resource-based industrialized economy, Canada has not had explicit local content legislation as part of its resource development history. The business case in the development of the resource sector has always been the dominant paradigm. No legislation explicitly oversees procurement or ownership requirements as a means to develop national industries and generate employment. Local content requirements, in the form that is emerging in resource-rich African countries, is a recent phenomenon, especially in the Atlantic provinces of Newfoundland and Nova Scotia for their offshore gas development, under the rubric of Benefits Plan. The key components of the provincial Benefits Plan are summarized in **Box 1**. Essentially, the Benefits Plan provides guidelines and companies cannot be compelled to enter into uncompetitive hiring and procurement contracts for goods and services. The requirements are considered to be fundamental principles but which may be waived by provincial regulators.

Trinidad and Tobago (T&T)

After decades of natural gas production, Trinidad and Tobago's local content policy was promulgated in 2004 under the auspices of the Ministry of Energy and Energy Industries, which manages and regulates the petroleum and gas sectors. T&T's approach recognizes the finite, non-labor intensive, skill-intensive nature of the sector and therefore seeks to put sustainability at the heart of policy making.

The policy emphasizes the critical need to build “local capability”, recognizing that local capacity is limited and not internationally competitive. The policy addresses key objectives for capacity development, technology and knowledge transfer as well as maintaining databases on supply and demand needs of the sectors. T&T’s gas policy focused not simply on increasing local employment and procurement, but also on developing local capacity to become globally competitive through practice and experience (Box 2).

2.4 Concluding Observations

Should local content requirements be legislated, if so to what extent, or which aspects are best left for administrative arrangements? First, there is the history. Local content policies have emerged largely in response to failures of the past. Resource firms can be expected to promote LC only to the extent that they see such initiatives as beneficial to overall corporate strategies. So the argument goes that it is incumbent on resource-rich country governments to put in place policies and legislation to maximize the benefits to their domestic economies of resource development.

However, legislation and regulations alone may not be sufficient to achieve the desired developmental effects. There is the problem of scale. With the exception of Nigeria and South Africa, most SSA resource-rich countries have small-size economies, and enforcing local content requirements through legislation may not yield desired outcomes. Resource reserves may not be large enough to sustain business development strategies for countries to maximise the domestic benefits of their resources through enforced local content and value addition. There is a general sense that the imperatives of legislation must be balanced against the enforcement requirements (both manpower and institutional capacity) and compliance costs. Rather than wholesale legislation of several aspects of local content (employment, skills development, technology transfer, procurement and ownership), countries may focus on limited aspects of local content requirements that are realistic and achievable. Trinidad and Tobago has relied less on legislation and more on guidelines and administrative measures to pursue its LCVA strategy. As we see later in the report, insistence of ownership requirements has spawned instances of fronting in Ghana, Nigeria and South Africa that are difficult to detect and to sanction.

In Zambia, large mines are known to be consistently seeking to circumvent aspects of local content requirements for local ownership. In Ghana as in South Africa, industry concern has as much to do with the ease and costs of compliance as with the clarity of requirements and the capacity of regulators to provide oversight. For example, weak capacity of regulators makes it difficult to detect and tackle fronting. In both Ghana and South Africa again, resource companies are reported to be sending considerable volumes of documents to regulatory bodies knowing very well that the capacity of these bodies to read and digest them is limited. Besides the difficulty of enforcing quotas and targets, the challenge is that organizational structures of businesses are not always simple and may be compound other problems in providing usable information for purposes of enforcing compliance in all aspects of local content.

Canadian local content provisions are generally considered to be fundamental principles which underlie resource extractive activities, particularly natural gas extraction, focusing on employment and procurement of goods and service. Even then, there are no set quotas or timelines of enforcement, requirements may be waived by the respective provincial regulators, and regulators cannot compel companies to enter into employment or procurement contracts for goods and services which are not competitive.

BOX 1: Key Components of Benefits Plan for Resource Development in Canada's Atlantic Provinces

By the Benefits Plan, resource companies must submit documentation to address the following requirements and demonstrate commitment to achieving them:

- **Opportunity: To provide** . . . "manufacturers, consultants, contractors and service companies in the Province and other parts of Canada with a full and fair opportunity to participate on a competitive basis in the supply of goods and services used in any proposed work or activity".
- **Employment: To provide for** . . . "the employment of Canadians, and, in particular, members of the labour force of the Province". . . More specifically . . . "consistent with the Canadian Charter of Rights and Freedoms, individuals resident in the Province be given first consideration for training and employment". In addition, provide for . . . "disadvantaged individuals or groups to have access to training and employment opportunities and"... "to participate in the supply of goods and services used in any proposed work or activity".
- **Procurement:** "first consideration is (to be) given to services provided from within the Province and to goods manufactured in the Province where those services and goods are competitive in terms of fair market price, quality and delivery" . . .
- **Education & Training; Research & Development** . . . "a program be carried out and expenditures be made for the promotion of education and training and of research and development in the Province in relation to petroleum resource activities in the offshore area" . . .

BOX 2: Evolution of Policy on Natural Gas in Trinidad and Tobago

T & T local content policy has evolved over time. The policy established a Permanent Local Content Committee (PLCC) with a mandate to develop subsequent policies and strategies to ensure the transfer of technology and know-how to improve local skills, businesses and the capital market. The Committee was also mandated to ensure compliance and report to the Minister and the Cabinet.

The case of T&T is exemplary: the role that the State played in developing the sector with a long-term national development perspective compelled international investors to support or not be able to participate in the sector. At the peak of oil production in the 1970s, IOCs operating in T&T were not interested in downstream production to gas, but the government boldly set out an ambitious vision for T&T to develop its oil sector into a diverse gas industry.

A key lesson from T&T is the importance of identifying the present and future prospects of the industry and having a thorough understanding of existing local capacity (human, financial and technological). Given these factors in T&T, policy focused not simply on increasing local employment and procurement, but on developing local capacity to become competitive globally through practice and experience. Second, policy has evolved over time. Only IOCs that clearly demonstrated and delivered on developing local capacity and developing a diverse gas industry were granted licenses. Third, also critical was a strong governance framework including effective monitoring, reporting, oversight over the sector and alignment to the national development plan. The national oil company was pivotal as a market to buy local goods and services and in helping to develop the national supply chain in the downstream sectors.

Finally, an important lesson is having a high-level champion, a clear national vision and development plan, grounding the strategy for development of the industry on a thorough understanding of current and future prospects for the resources and for local capacity (human, business, capital, technology). Critics point to the lack of legislation to date as the reason why T&T could not fully capture and maintain the potential local value gains from its downstream activities.

3

3. Local Content Pillars

3.1 Introduction

For the purpose of this study, the degree of local content is assessed in the following four areas.

- The use of local manpower/personnel in the activities of that specific industry as source of employment.
- The use of local manufacturing and enterprise to supply the goods and services required by the industry to forge linkages with the mineral, oil and gas (MOG) sectors of the domestic economy.
- The participation of State and the local private sector in equity ownership and management by locals in the industry.
- The extent of local domestic financing of resource activities.

The higher the percentage of local personnel engaged in the industry, the higher the degree of local private ownership as well as goods and services supplied by local businesses, the higher the employment and income multiplier effects, and the higher the beneficial spillover effects out of the MOG sectors. Apart from providing business and profits to local financing institutions, local financing also limits financial outflows by way of dividend and interest payments to foreign institutions and non-resident investors. Local domestic financing has its dynamic impact directly on employment and interest income, which in turn positively affect tax revenues and spending multiplier effects and, indirectly, important corporate procurement decisions. This chapter summarizes the findings of the eight country studies in relation to the four pillars identified above, with selected case studies.

3.2 Promoting Local Employment and Skills Development

Local content policies and legislation to promote direct employment of locals have become the norm. All study countries have preferential provisions for local employment. Of the four local content pillars,

increasing local employment and skills development appears to have been the most successful, even if at lower skills levels. For Ghana in the mining sector, employment increased by 65% between 2009 and 2012. Employment levels among “locals” in the South African context is considered to be quite high. Employment gains tend to be higher for low-skilled and mid-lower-level technical positions. However, the supply pipeline for skilled workers is often too small to replace the retiring skilled workforce. This is true of Zambia’s minerals sector, Ghana’s oil and gas, and especially Ethiopia’s minerals sector. Even in South Africa with its world-class educational and skills development systems and institutions, the lack of skilled workers remains a concern. What is the future of employment promotion through local content policies and legislation?

Across the study countries, there is recognition that technological innovations are increasing rapidly, touching on many facets of the resource extractive industry, from surveying, exploration, production, processing and data analytics. Investments in highly automated equipment and machinery are changing the mix of physical capital and labour in the production process. At the 2015 West Africa Mining and Power Conference, the emphasis was on the need for mining firms to adopt new technologies in order to improve operational efficiency and to stay competitive. The Mineral Policy of Namibia acknowledges that the sustainability of the industry will be determined by the ability to adapt to the use of new and efficient mining technologies.

What is driving the rapid adoption of technology? First, depleting reserves means exploration must reach for greater depths. Greater depth means more intensive data analytics and greater safety needs. Second, rising labour costs, due in part to the influence of labour unions and to the overall cost-push effects (due to declining easily accessible reserves), compel technological innovations and greater operational efficiency.

Clearly, there is an understandable need to improve efficiency, minimize on-the-job accidents and health hazards, and to improve data analytics. Moreover, at

the firm level, from Ghana to Zambia, extractive firms are required to submit annual reports to regulators on how the employment affirmative action plan is being implemented. A capital-intensive production system cuts down on this need.

3.2.1 The employment effects of increased technological innovation

The intensification of the application of technology also means that the direct employment effects, especially in mining, are sharply on the decline. In South Africa, Namibia and Ghana mining companies are spending less and less on low- and semi-skilled labour. Generally, technology is making resource extraction less and less labour absorbing, raising questions about the primacy of the employment objective of local content legislation, making it less viable and increasingly difficult to enforce.

In Zambia, for example, the government's calculation that "investment in the mining industry would lead to more output and that additional output would mean an increase in Zambian employment" is becoming less and less a reality. While every additional 10 tonnes of copper extracted created 4 jobs in the 1960s, currently every additional 10 tonnes of copper generates only one more job as a result of the accelerated capital intensity and technological innovations in copper production. In Namibia, the Employment Equity Commission in its 2014/2015 Annual Report observed that the mining sector workforce recorded a 12% decline between 2013/14 and 2014/15 despite the rise in production.

Moreover, the innovations are further undermining the status and force of the conventional mine worker, who is not likely to be a beneficiary of skills and technology transfer because of the low initial level of education. Clearly, the future may not lie in legislating direct employment targets or in setting quotas. This is particularly the case for resource-rich countries such as Burkina Faso, Ethiopia and Mozambique where substantial extraction is relatively new and skills in the sector are at an embryonic stage. Intensive production systems may have shifted the potential for job creation into upstream activities along the supply chain. The future of employment lies in a new kind of workforce beyond unskilled and semi-skilled operations. Forthcoming opportunities will favour medium- to top-level technical skills who can operate and manage high-tech machines and technological processes along the entire supply value chain.

As the bulk of resource company spending shifts to non-labour goods and high-technology services, future local content in strengthening linkages may lie more in indirect employment opportunities, in the procurement of goods and services and the engagement of SMEs in the supply chain than in direct mine employment. As spending shifts to consumables and technology embodied in capital goods, the locus of local content requirements may have to change.

As shown above, countries are responding. However, building a local workforce and the technical capacity of local institutions to make them adapt to and embrace efficient mining technologies requires considerable investment and continuous skills development. These are often beyond the capacity of individual companies, and certainly beyond industry voluntarism. The Canadian case study below (**Box 3**) shows a model of collaboration between government-industry and educational institutions in skills and capacity development.

3.2.2 Skills Upgrading and Development Policies for Employment Creation

Technology threatens low-skill jobs in the extractive industry. There are efforts to upgrade skills through legislation. In South Africa, a Skills Development Levy is required of all employers in the mining sector, set at 1% of a company's payroll. The levy funds education and training of businesses and the workforce for the sector. South Africa's Mining Charter requires mining companies to invest an additional 5% of their payroll in essential skills development for the sector. Most companies comply with this additional investment, and many even provide more than the required 5%.

In Nigeria, there are provisions for both skills development and the development of research and development (R&D) institutions. In Ghana, however, the Oil and Gas Business Development and Local Content Fund, which was established in 2010 under the local content policy primarily for education, training and R&D, is still not operational.

In the absence of pooled initiatives and funding, policies and legislation oblige companies to provide training for locals and provide forecasts for future employment and training needs. Most skills development schemes are often specifically funded activity. Training ends once project funds are exhausted, raising questions about sustainability in skills development unless such training is mainstreamed in the educational curriculum.

BOX 3: Case Study on Manpower Development through Government-Industry-University Collaboration in Canada

The Goodman School of Mines (GSM) is one of the newest major mining schools in the world. The School was created to address Canada's predicted mining manpower shortfall, estimated to be between 60,000 to 130,000 additional workers needed by 2030.²⁴ The school is strategically based in Sudbury, one of the richest mining camps in the world close to Canada's "Ring of Fire", an area rich in several minerals such as chrome, copper and diamonds.

GSM is based in Laurentian University in Sudbury in the northern part of the Province of Ontario. The School offers education, research and professional training across the spectrum of the mining cycle, including: Mineral Exploration, Project Feasibility, Mine Development, Mine Closure and Ecological Restoration. It also places emphasis on sustainability and community relations issues, the three key areas in society – People and Community, Environment and Ecology, and the Economy – that are impacted by mining.²⁵ The school is largely funded by government, industry and other private donors. Companies typically allocate money for research work. Thematic research work is often financed by the universities.

The School boasts of several "productive partnerships" with mining and mining-related industries and is closely affiliated with the Minerals Exploration Research Centre (MERC). This helps to ensure that the curriculum addresses the needs of the sector and industry. The School facilitates access to innovative research facilities around Sudbury and around the world. It is also a hub for an International Network of Schools. At the national level, the school links with other new provincial, national and international alliances with other post-secondary institutions. More specifically in Africa, the School is twinned with the University of Limpopo, South Africa through a five-year agreement.

3.3 Promoting Procurement of Local Goods and Services

For resource-rich economies, the need to deepen linkages to achieve economic diversification and structural transformation has never been stronger. The merits are widely acknowledged. An effective local content strategy by way of procurement of local goods and services provides a winning formula for all. A strong local procurement of non-labour inputs and building strong local businesses for the industry supply chain has several advantages. An efficient, competitive local supplier that meets the needs of industry expands the depth of linkages with the non-resource sector of the economy, opens up more opportunities for suppliers farther downstream, creates jobs, promotes technology transfer, and, where opportunities for value addition exist, promotes diversification of the local economy.

But promoting local procurement and SMEs to be part of the industry supply chain has not been straightforward. Constraints include the lack of competitiveness and the low-quality standards of local suppliers, weak local entrepreneurial capabilities in a capital-intensive and high-quality standards industry, lack of access to credit, and the general lack of cooperation between government, industry and local businesses.

- a. **Country data highlight the fact that spending on procurement by mineral, oil and gas (MOG) companies represents the largest portion of their expenditure.** It is estimated that MOG companies spend between 40% and 80% of their revenue on procurement of goods and services. In South Africa, according to the Chamber of Mines, the largest chunk (48%) of industry expenditure between 2008 and 2010 went on procurement. In Namibia in 2015, the largest proportion of industry expenditure – 43% (N\$11 bn, or almost \$USD845 nm) – was on procurement, compared to just 15% spent on wages and salaries. A significant amount of industry spending is on the procurement of goods and services through backward and lateral linkages.

b. As presented in the annexes, most countries have enacted provisions for procurement specific to the MOG sectors over and above general procurement measures. In addition to general rules on preferential treatment for local goods applicable to all sectors, almost all the study countries have specific legislation and policy for the MOG sectors. For Namibia, Zambia and Burkina Faso, legislation is limited to obliging companies to make a selection based on the competitiveness of local firms in terms of “price, time, quality and quantity”. Ethiopia provides some margins for local preference in the Procurement and Supply Management Manual. Similarly, in Namibia, while there is no specific MOG law compelling companies to procure goods and services locally, the Petroleum Operating Agreements make provision for companies in the oil and gas sectors to spend locally. The exact amount is subject to negotiations between the Ministry of Mines and individual companies. Legislation in Ghana, Nigeria and South Africa includes provisions which favor locals more clearly. Uniquely in Namibia, however, industry policy is more decisive than government policy in this area. Through the Namibian Mining Charter (2014), there is a commitment by industry to “progressive discretionary expenditure on locals by 2020” (25% by 2015, rising to 40% by 2020).

Performance on local procurement of goods and services is mixed

c. The data show that in Ghana, South Africa and Nigeria, the procurement of local goods and services has increased since the introduction of specific policy and legislation. In Nigeria, local procurement of goods and services increased from 5% in 2004 to almost 35% by 2015. Up until 2004, nearly 95% of annual expenditure by the oil and gas industry in Nigeria went to foreign suppliers and service providers.

d. In Ghana’s mining sector, industry reports that expenditure on local goods and services increased from 50.2% in 2013 to 73% in 2014. In Mozambique, there is data only on the performance of local suppliers on the MozLink supplier development initiative – local procurement among this group more than doubled.

e. Some data and stakeholder perception suggests local procurement has been weak in the other countries. Notably in Zambia, local procurement has significantly declined. This is in spite of the increased policy and legislative focus on the promotion of local suppliers to the mining sector since 2008. Although there is not much hard data available on performance in Namibia, Ethiopia and Burkina Faso, stakeholders perceive that performance in this area is lower than expected.

The impact on local manufacturing has been mixed, with successes reported in Nigeria and Ghana, but less favorable results in Zambia and to some extent South Africa.

f. In Ghana’s mining sector, there has been laudable achievement in terms of local manufacturing. The proportion spent on locally produced manufactured goods has been increasing according to data from the Minerals Commission Ghana. With the exception of heavy duty electricals and grinding media, the amount spent on locally produced goods is above 85% for each product.

g. In Nigeria, the Equipment Components Manufacturing Initiative (ECMI) is one of a few initiatives aimed at import substitution and increasing fabrication and assembly in Nigeria of major equipment and their components used in the oil and gas industry. This is a major value-addition programme to increase procurement of local goods and services, to lead to “spend retention” and industrialization of the economy, as well as unlocking jobs in the oil and gas industry. It is estimated that between 2010 and 2015, over US\$5 billion has been invested in the establishment and upgrade of fabrication yards, acquisition of marine vessels, rigs and other assets by Nigerians and setting up of manufacturing facilities by original equipment manufacturers. Over US\$10 billion more is expected to be invested in new fabrication yards, floating, production, storage and offloading vessels, integration yards, and establishment of shipyards and dry docks supporting the construction and outfitting of marine vessels between 2015 and 2018.

h. Evidence from Zambia suggests local manufacturing is weak and has plummeted since the 1960s. For South Africa, although evidence suggests that local content is happening most in the procurement of local capital goods, stakeholders perceive that rather more is happening in local services. Stakeholders in

South Africa doubt the impact on actual HDSA businesses, believing that South African capital goods companies are largely multinational companies (MNCs) operating in South Africa.

- i. There is a critical need for local businesses to increase their value addition. Industry players state that greater emphasis needs to be placed on value addition by local businesses, rather than just employment and obtaining contracts. Industry players especially perceive that there is a high tendency for indigenous Zambian companies to secure contracts and just import the goods, with zero local value addition or manufacturing. In the Nigerian context also, stakeholders perceive that there is a need to ensure that local companies and service providers develop their capacity to be competitive, subsequently to be able to deliver the same level of quality as foreign entities.

Entrepreneur and supplier development is critical

- j. There have been a few successful government supplier development programs but they are no longer running. In Ethiopia, the government agency, Federal Micro and Small-Scale Enterprises Development Agency (FeMSEDA) provides training for enterprise and business development through short training programs to support capacity development of local companies providing goods and services for the various economic sectors. In Mozambique, MozLink was a program that developed business development skills of SMEs, resulting in a 20% increase in performance by SMEs while local procurement doubled. This program ended in 2014.

- k. The World Bank-led Zambian Mining Local Content Initiative (ZMLCI) was launched in 2012 as a collaborative, public-private forum comprising representatives of the large-scale mining industry, the Zambia Association of Manufacturers (ZAM), the Zambia Chamber of Small and Medium Business Associations (ZAMCSMBA) and key government agencies connected with the mining sector in Zambia. Until recently, the Office of the Vice-President was championing this initiative. However, the study found that the Office was no longer championing the cause, the Ministry of Mines having taken over. However, stakeholders felt that the initiative was no longer in operation.

Industry sees supplier development as a business imperative, and a good source of capacity development support. Industry-government collaboration has been effective in building enterprise and supplier development in Canada. This collaborative approach is demonstrated in **Box 5**.

- l. Industry Initiatives in Nigeria, South Africa and Ghana have been successful in developing suppliers. The case study of an industry-led initiative by Tullow Oil and the Petroleum Commission of Ghana to develop local suppliers is exemplary as shown in **Box 4**. Tullow's efforts were a response to the first local content legislation in Ghana's petroleum sector in 2013.

Box 4: Case Study on a Proactive and Collaborative Approach to Developing Local Capacity in Ghana's Petroleum Sector

Tullow Oil Ghana began operations in 2006, seven years before the first primary legislation on local content was passed in Ghana. Prior to the law, Tullow had in place a guiding policy to maximize local participation, partly because provisions for local content were included in the petroleum agreement between the government and the consortium for the Jubilee oil field development, of which Tullow is the main operator. Key provisions in the agreement included domestic supply requirements, a fixed annual obligatory payment dedicated to employment and training of nationals, and preferential purchasing of local goods and services.

The new legislation was promulgated in 2013. It was perceived as prescriptive with several targets. Tullow and many industry experts saw the targets and timelines as unrealistic at that time, given the embryonic local capacity and capability in the sector. For example, a key provision in the law was that anyone working in the sector must work in a joint venture with an indigenous company that had at least 10% equity. But when the law was passed in 2013, almost three years after first oil, there was no national database on indigenous companies operating in the sector. Tullow conducted a baseline study designed to fill knowledge gaps on local companies and personnel available in the sector in order to make progress in meeting many of the provisions in the law. This data was not available at the national level.

Using the baseline study, Tullow categorized procurement into three main areas: (1) indirect goods and services, (2) direct services, and (3) specialist services.

- Category 1 is reserved for indigenous companies; they are considered the “low-hanging fruit”, areas for locals which require much less capital investment and are largely goods and services transferable to other sectors such as catering, transportation/haulage, and communications.
- Category 2 involves goods and services for which Tullow encourages more joint ventures between international and local companies, given that they require more capital and skills/technology transfer. Examples include vessels, spare parts and field construction services.
- Category 3 includes highly specialist goods and services which few companies in the world provide. Examples include Floating Production Storage and Offloading platforms (FPSOs), drilling rigs and seismic services. For this category, Tullow prescribes that certain proportions must be supplied by locals, for example, of tonnage, fabrication or man-hours. Such requirements were critical in building local capacity in manufacturing for the industry. There are now a fabrication yards located in-country, especially in the environs of the oil operations. Heavy-duty equipment such as large steel cylinders for anchoring the FPSOs and large steel pyramids to hold modules in place have been successfully made in Ghana by Ghanaians, thus developing high-value industries locally.

The baseline study revealed the need to strengthen local institutions in building local capacity. Tullow supported the establishment of critical capacity-building institutions in Ghana. The newly established local institutions are a collaboration between government (the Ministry of Petroleum, the Petroleum Commission) and the industry (Tullow, in collaboration with the other Jubilee partners). Industry players contributed funding for the establishment of the Enterprise Development Centre (EDC) and the Jubilee Technical Training Centre (JTTC).

The EDC is building the capacity of local businesses. Tullow as the key operator shares with the EDC the procurement needs and plans of the industry, with the aim of informing local SMEs of business opportunities from the industry as well as developing the international standards of local SMEs largely in soft skills such as management and proposal writing. Tullow and its partners in the consortium, in collaboration with the PC, conduct specialist workshops to sensitize local SMEs on the scope of contracts, and the environmental, health and safety requirements. All such training helps in the award of contracts. Tullow's selection criteria are most favorable to companies which demonstrate a commitment ►

to partnering with locals to develop their capacity over time, and developing institutions which work with locals.

The JTTC was established for developing manpower in the more technical and vocational skills critical for the industry. This high-tech facility is equipped with state-of-the-art simulation equipment of oil rigs and vessels to provide the experience of real-life off-shore facilities. The centre was designed to fill the large gap in knowledge between real life and the theory taught in university or for more vocational courses which provide more hands-on practical training critical for the industry.

Both the EDC and the JTTC have been handed over to local institutions to manage, and are largely funded by internally generated funding – the EDC is handled by the Petroleum Commission and JTTC by Takoradi Polytechnic. The JTTC especially, is positioning itself to be a centre of excellence for oil and gas training in the sub-region. Tullow as well as the other Industry players still follow the developments of both institutions closely, not only because they made huge financial investments in the establishment of the institutions, but also because the local suppliers and personnel that emerge are critical in supplying the industry and demonstrating compliance with local content law.

SOURCE: Intervention made by Tullow at ACET's Policy Learning Event on Local Content and Value Addition in Selected African countries; 5th AGI Local Content & Investment Summit, 26-27 October, 2016, Accra, Ghana, and Tullow Oil (Ghana) limited website

Box 5: Case Study on Enterprise and Supplier Development through Collaboration in Canada

The Northern Centre for Advanced Technology (NORCAT) is a private, not-for-profit institution created to support the development of local entrepreneurs and small and medium local enterprises (SMEs) located in the Greater Sudbury area in Canada. Given the strength of the mining industry in Ontario, the Centre has focused mainly on providing world-class, short training programs to serve industry needs. The Centre has now expanded its programs to also serve the manufacturing, oil/gas and construction sectors. It is a "one-stop-shop" for personnel, industry, suppliers, academia and government to ensure that personnel training and the development of SMEs all meet established standards and the needs of industry. It provides approved common core training, specialized, company-tailored training. The Centre also encourages innovation by facilitating joint ventures between locals and industry, and provides mentoring to SMEs to use the Center's equipment and laboratory for product development.

NORCAT receives some government support, but is primarily funded by industry and through internally-generated funding through its short programs for skills update and innovation learning. The Centre works closely with the ministries of Labor, Health, and Natural Resources, and with key industry players such as Sandvik, 3M and Vale. Its academic partners include Laurentian University, more specifically the Centre for Research in Occupational Safety and Health (CROSH). A key objective is to provide tailored support to supply the demands of industry and draws on former industry specialists and academics to deliver its support services and training.

In the 20 years since the Centre opened, more than 195,000 contractors have undertaken training there. The Center acts as a central authority to provide industry certification and houses a database of all records and certificates attained by contractors to enable companies to quickly access the database to consult, verify and select contractors based on their company needs. As well as developing personnel, the Centre seeks to develop and grow SMEs by providing mentor programs, services and resources for start-ups.

Compiled by authors

3.4 Strengthening Local Participation through State-held and Private Equity

The conventional view that the state's role is simply to license, regulate, collect royalties and taxes and use the revenue to generate value and to create benefits for citizens is increasingly under scrutiny. The emerging perspective is that the implied "watchman" role of the State is not developmental enough. Some form of state-held equity is needed as a catalyst for change and economic transformation. Citizens see state participation as an extension of the government's custodial role and a legitimate position given state (and de facto public) ownership of the resources. Investors and some industry observers see the matter differently. Investors often comply with the laws as a precondition to acquiring resource extraction rights, but would prefer wholly-owned and investor-operated entities. Industry observers see it as a form of "resource nationalism" and therefore state equity represents a risk to investments in resource-rich countries due to state control of private assets.

State or private equity participation is considered as one of the proxies of local content because it also means more localisation of earnings. Enhanced local ownership of mining and exploration companies in order to appropriate a greater share of profits is an approach that has enhanced the wider economic benefits of MOG activities in other resource rich advanced countries such as Norway and Brazil.

Increasingly, short of nationalization, governments want to be involved in resource extractive activities, especially in mining in the way that has been done in oil production joint ventures. Zambia's state mining company, Zambia Consolidated Copper Investment Holdings (ZCCM-IH), exists partly for that reason. Namibia is transferring all new mining and exploration to Epangelo — a state-owned mining company. Namibia's Desert Diamonds follows the model of Botswana's Debswana, the 50-50% joint venture between De Beers Consolidated Mines and the Government of the Republic of Botswana for profit sharing. More details of Namibia's State equity holdings are provided in **Box 6**.

Some guiding questions in this study are:

- What are countries policies towards state-held and citizens' equity participation as part of local content strategy?
- What model of state equity participation can advance country development objectives?
- Can state-held equity participation be an instrument to broaden citizens' ownership participation in resource sector activities?

Findings and Observations

- For most of SSA, extractive projects remain largely foreign owned, followed by state ownership, with very low but increasing local private ownership. The state rather than local private equity is most dominant in Ghana, Mozambique, Namibia, Zambia and Ethiopia.
- Across the study countries, there is some form of state equity participation. The three general forms are:
 - 100% state-owned entities, as in Ethiopia and Namibia in the mining sector, and the Ghana National Petroleum Corporation (GNPC) and the Nigerian National Petroleum Corporation (NNPC) in oil and gas through special purpose Vehicles;
 - Use of "free equity" as in Burkina Faso, Ethiopia, Ghana, Namibia and Zambia which ranges between 5% to 25%; and
 - Direct purchase of stocks in existing mining, oil and gas companies.
- Production sharing, a popular form of state participation in the oil and gas sector in Nigeria especially, provides the state with an equity share of income through ownership of the resource after cost recovery, without any offsetting financial obligations. Free equity and production sharing have the potential to add to the capture of revenue and resource rents. This form of state participation has not been widely replicated in the mining sector.
- Namibia, Mozambique and Zambia offer a form of state enterprise special vehicle to hold equity. Namibia's government holds equity in major resource projects either directly – as in the case of its 5% equity in Rio Tinto Rossing Uranium – or through the wholly owned state enterprise, Epangelo Mining, or through a joint venture partner such as Namdeb which has a

50-50 share with DeBeers. Mozambique employs special purpose vehicles – ENH which holds between 10%-25% in all oil and gas projects, and EMEM which holds between 5% and 50% in mining projects. These are public entities and part of their equity may be offloaded to the public through the stock exchange. Zambia's Consolidated Copper Mining Investment Holding (ZCCM-IH) is compelled by a 2014 law to offload its shares to the public through the Lusaka stock exchange.

- In Ghana, there is no special vehicle that holds government shares in mining. Instead, the government has at least 10% shareholding in all but three of the major mining operations with debatable benefit as a shareholder in sharing dividends. Most mining companies minimize dividends through various mechanisms e.g. declaring carried forward loss, transfer pricing etc.

Box 6: Case Study on Namibia's State Equity Holding via Special Purpose Vehicles

Namibia Epangelo Mining Company

Namibia established Epangelo Mining Company in 2008 as a special purpose company, with the government as the sole shareholder. Epangelo's objective is to ensure state participation in mineral resources development, mining, beneficiation and creation of mining-related employment opportunities for Namibians. Epangelo's aim is to be a premier local, regional and global mining asset management company, and to occupy a significant position in major commodity businesses, inclusive of uranium, diamonds, copper, gold and various precious metals.

Currently, Epangelo holds 7.5% stock in QKR Corporation's Navachab gold mine, and 10% in Husab Uranium with Chinese and Australian groups as partners. Epangelo has 10% stock in Canada's Kombat Copper. In addition, Epangelo has 30 exclusive prospecting licenses (EPL) that it owns 100%. Its strategy is to carry out generative work to the level where it is able to attract investments from global MOGs to participate in farm-in arrangements. The company accepts dilution of up to 90%. The Company Act stipulates a 25% stockholding for a stockholder to be a significant player in decision making.

Namibia's Desert Diamonds

The government in July 2016 announced the establishment of a wholly state-owned Desert Diamonds (Pty) Ltd. The functions of the company are to market and sell Namibian rough diamonds. On 16 May 2016, the government and DeBeers announced the conclusion of a new Diamond Sales and Marketing Agreement. The agreement gives Namibia some control in the sales and marketing of local rough diamonds. Under the agreement, the government of Namibia, through Desert Diamonds, will be allocated 15% of rough diamonds produced locally by Namdeb Diamond Corporation. The company will also serve as a window on the market through which the government will be able to assess what price the international market is prepared to pay for Namibia's highly rated rough diamonds. The sales and marketing agreement with Namdeb will last for 10 years.

According to the Minister of Mines and Energy, the primary benefit of the agreement is to pave the way for an increased supply of Namibian rough diamonds to the local diamond industry. The continuous supply of rough diamonds in all sizes and shapes to local cutting and polishing houses will allow them to operate at full capacity thus creating more jobs as well as enhancing profitability and sustainability.

However, the Chamber of Mines of Namibia (CMN) has expressed concern that increased involvement of the state in mining would be a discouraging factor for future private investment. The Chamber's point of view is that the government should strictly play an enabling role rather than participate in actual mining activities.

- As of 2001, 12 out of the 16 operating mines were at least 90% foreign owned. In 2011, 7 of the top 9 mining companies had 90% foreign ownership, AngloGold Ashanti had 99.66 foreign ownership and Newmont had 100% foreign ownership.²⁶ The opportunity for further participation in mineral operations notwithstanding, the government by and large lost its voice in exploitation and overall management decisions in the extraction of its mineral resources from the nineties, when it resigned the state to 10% “free” equity participation (zero in the case of Newmont).
- In Zambia, the government, through ZCCM-IH has at least 10% and as much as 20% in all but one of the major mining operations. In Ethiopia, the government has the option of 5% free carried interest in all mining operations.

Local Private Equity

- Among the study countries, local private equity is highest in Nigeria and South Africa. Local private equity in Nigeria has increased by 118% since 1990, with 24 indigenous companies owning and managing oil and gas production assets, and collectively producing 10% of total output. Similarly, in South Africa, black South African ownership is reported as 26%, however, mining associations suspect this figure is more likely closer to between 3% and 4%.
- In addition to giving first refusal to locals in allocating projects and in the acquisition of ownership rights, the main intervention to increase private ownership includes listing shares on local stock exchanges. South Africa leads with a total of 49 mining companies listed on the Johannesburg Stock Exchange. In Nigeria, there are only a few Nigerian upstream companies listed on the local stock exchange, while a number of international and local downstream companies also participate in the country’s equity market. Ethiopia and Burkina Faso do not have local stock exchanges. And only a few companies are listed on the stock exchanges in Zambia and Ghana. Major challenges identified with this method of increasing local ownership is a lack of interest and knowledge by locals in stock exchanges.
- Enforcement of local ownership by setting quotas has often spawned fronting. Simply put, fronting is the misrepresentation of facts regarding the nature of a company’s ownership. Fronting undermines the effectiveness of promoting local equity participation, so much so that in some jurisdictions fronting is considered a criminal

offence. This is the case in Nigeria’s oil and gas sector, while South Africa has followed suit and recently in Ghana’s oil and gas sector. Zambia, Ethiopia, Burkina Faso and Namibia have no such legislation.

- In all study countries, even in more advanced, resource-rich South Africa, the challenge is the capacity of the oversight and regulatory institutions to detect fronting and the capacity to deal with it. In Ethiopia, there is a perception that about 20% of companies in the mining sector are not without fronting problems. In South Africa, it is not only the state regulators in licensing that must deal with fronting; mining companies also must deal with fronting from unscrupulous suppliers, often in order to achieve the objectives of the Black Economic Empowerment Act.
- Using state-owned entities to promote citizens’ participation is the model currently being practised in Zambia and Namibia. Zambia’s ZCCM-IH sale of shares to citizens is a model to increase citizens’ opportunity to benefit from the profits of resource companies. Here the state plays an enabling role for citizens’ participation.
- Beyond local employment and procurement of goods and services. In South Africa and Namibia local content has involved more than promoting local employment and local procurement of goods and services. It has focused heavily on local ownership to redress historical inequities for indigenous citizens disadvantaged by apartheid. Namibia’s Equitable Economic Empowerment Framework is envisaged as the overarching legal instrument to promote greater equity participation by previously disadvantaged Namibians.
- Ownership matters because of the potential to influence the extent of local procurement of goods and services. But it may not always yield the optimum outcome of job creation and resource-based industrial development. Resource companies may use legal structures to impose limits on profit sharing and effective control of joint ventures through shareholding arrangements. There is a growing recognition that local ownership may not be the most important tool for resource-based industrial development.

Management by Locals

- The use of minimum ownership quotas appears to have had some impact on increasing the level of local management in mining, oil and

gas operations in Ghana, Nigeria, South Africa, Mozambique and Zambia. In Ethiopia, management by locals in major extractive operations is assessed as medium. In Nigeria and Ghana, legislation strictly prescribes a time period and maximum limit for management positions held by expatriates. Within this time period, MOG companies must execute a succession plan providing for local managers.

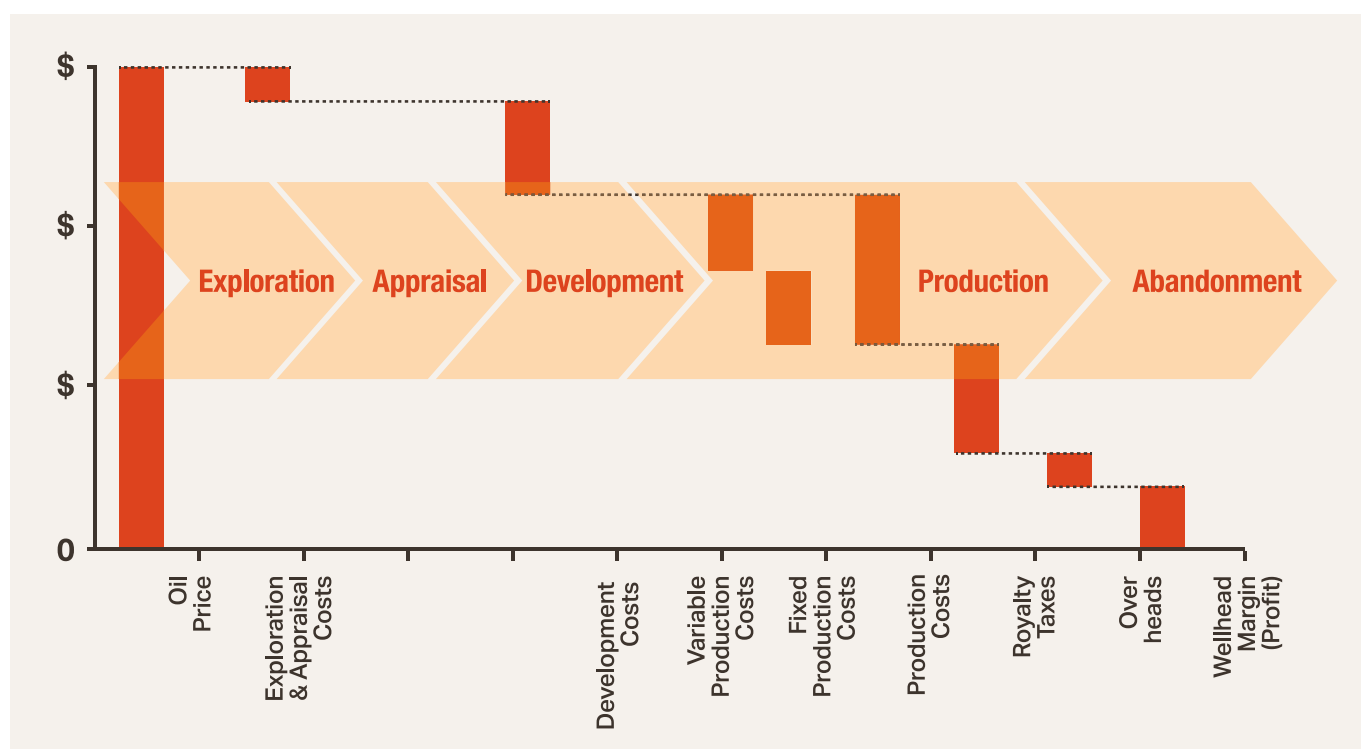
- Finally, as with most questions on appropriate policy directions, there is no single solution. Rather, the policy choices may be context-specific and a more useful approach is to assist policy makers to come to terms with the trade-offs, and use this knowledge to design appropriate policy direction that meet specific conditions. State equity participation has substantial merit if it is more than just a token of ownership through free carried interest. Paying state equity holdings has its cost and must be balanced against the alternative uses of the investible funds. For citizens' participation, maximizing the value benefits from extractive activities through local ownership may be more a myth than a reality. For the private sector, the large potential for economic gain lies more in being part of the procurement value chain or input supply chain than in ownership of the resource.

3.5 Strengthening Local Participation and Lateral Linkages through Local Financing of Extractive Projects

Discovering and extracting resources buried deep in the ground involves a complex set of activities and it is capital intensive. There are several stages involved in bringing any ore from below the ground into an end-product which can create value and generate revenue. From exploration, appraisal, development to production and finally to closure, resource companies require considerable human and physical capital, all of which must be financed through debt or equity or both. Substantial financial requirements must be front loaded because cost build-up begins from the exploration and prospecting stages. If successful, cost build-up continues in the development and production stages. Costs can run into millions of dollars.

Cost build-up can take years. The chain is laced with uncertainties. As **Figure 6** illustrates, extractive projects are capital intensive from exploration to appraisal, development and production. There are long periods of pre-production cost build-up during during which no revenue is earned, and when production begins, profit depends on highly volatile commodity prices.

Figure 6: Financing Exploration and Production Cost Structure: A Model



SOURCE: African Center for Economic Transformation (2014), Economic Transformation Report.

Risk capital is also patient capital in extractive projects. Financing, therefore, is an important element in undertaking such projects. Its rewards are in the form of interest payments on debt and dividends to equity financing. The added benefits are that successful resource activities become an indirect source of revenue through taxes on interest income and dividends. They support employment in the financial sector, yielding further downstream multiplier effects through spending and re-spending of factor incomes channeled through the financial sector. The greater the local financing of extractive projects, the greater the value gain to the domestic economy. It is for these reasons that promoting local financing is seen as an important component of local content strategy.

Findings and Observations

Participation of Local Financial Institutions in the MOG Sectors

There are very few provisions regarding local financing requirements across the eight study countries. Only Ghana and Nigeria have any requirements concerning financing arrangements with local financial institutions. Financial sector participation in the extractive resource sector is for the most part limited only to offering lateral financial intermediation services other than lending. In both Ghana and Nigeria, legislation prescribes that all operators in the oil and gas sectors must maintain a bank account with an indigenous bank and transact business through banks in the country. In Ethiopia, this type of financial services has been quantified as about 30% of banking services. Similarly, in Namibia, although there is no legislation, participation by local financial institutions is also limited to banks acting as fund managers rather than a source of funding themselves.

It is widely perceived that local financial institutions lack sufficient resources to participate in project financing on the scale required for MOG operations, with the exception of South Africa. In 2011, South African financial institutions provided \$25 billion in financing for the mining industry. This was 10 times the size of the entire loan portfolio of the financial sector in Zambia. In Ethiopia, the financing constraint is further exacerbated by the fact that there are no foreign financial institutions operating in the country, thus limiting the availability of potential funds for project financing. MOG companies largely procure project finance from retained earnings and investments, as well as international sources, typically in their home countries.

Financing for Local Private Sector Participation in the MOG Sectors

Most countries provide some level of general support to the local private sector but not specific to the extractives sector. Few countries provide government-backed financial opportunities for local private sector firms for MOG operations. Despite the critical need for financing to support the local private sector, there is a lack of any legislative and policy requirements in the MOG sectors. Generally, access to finance is always identified as one of the major impediments limiting participation of the local private sector in the economy. The situation of the local private sector is thought to be worse with regard to the extractive sectors due to the high risk and high costs associated with MOG projects, as noted above. In Namibia, the Mineral Development Fund, established by an Act in 1996, has largely been used to finance state equity in mining projects to purchase stock from some major MOG corporations.

Ghana and Nigeria have statutory funds to support local SMEs to participate in the MOG sectors. The Nigerian Content Development Fund is a fund dedicated to supporting implementation of the development of Nigerian content. This Fund has evolved since its inception in 2005 from simply providing working capital for Nigerian companies in the sector to addressing more of the capacity constraint issues which local firms face. Consequently, the Fund now provides more long-term funds for investment in capacity and asset acquisition. Additionally, Nigeria set up the Cabotage Vessel Financing Fund to promote the development of indigenous marine services such as ship building. This has been pivotal for the domestic coastal shipping industry. The Nigerian Content Support Fund is also operational and provides working capital for Nigerian companies to execute oil and gas contracts. However, despite the high level of funding available from the NCDF, only three disbursements have been made in over five years.

More recently in Ghana, the legislative instrument to back the Oil and Gas Development Fund was introduced only in 2016, six years after the local content policy. Therefore, the Fund has barely become operational. Legislation also prescribes how both the Nigerian and Ghanaian Funds should be funded. The recently passed Mining Code (2015) in Burkina Faso has established two funds, one for local communities in the affected area, and the other is for research and training in the sector.

Box 7: Lessons from T&T on Financing from Local Banks to the Oil and Gas Sector

In the early days, the state was the major source of funding as there was little private capital. Local banks began their participation fairly late in the boom period of the industry. As currently is the case in African countries, T&T banks did not have the financial capacity or capability to participate in the MOG sector. They were very risk averse regarding lending to the industry. They only came on board after in-depth learning and understanding of the industry and were then able to develop appropriate financial instruments for the sector. Examples include contract financing, invoice discounting, syndicated loans and lease financing.

Industry-driven financing initiatives to support the local private sector appear to be more progressive than government financing initiatives. South Africa, Nigeria, and Burkina Faso provide illustrative examples. In Burkina Faso, the Chamber of Mines provides letters of guarantee for local private sector companies to enable them to secure financing to supply the mines. In South Africa, through the Mining Charter, industry has committed to assisting Historically Disadvantaged South Africans (HDSAs) in securing finance to an amount of R100 bn (about US\$7 bn). Nigeria has also several industry-driven schemes in collaboration with local commercial banks to provide financing to indigenous contractors. Large companies such as Exxon Mobil, Shell Nigeria and Total Nigeria have partnerships with Nigerian banks to provide a total of almost \$17 billion to local contractors for supplier development

There appears to be more potential for financing contracts and more scope for local financial institutions to get involved in the extractive sector. Stakeholders from Nigeria's oil and gas sector suggest that there is need to distinguish between contract financing and financing for asset acquisition. A major constraint to financing contracts is that banks are more interested in financing actual contracts than providing support at the bid-to-tender stage. Also, operators do not tend to provide comfort letters, thus hindering local business opportunities for obtaining available financing. **Box 7** illustrates how local banks in the oil and gas sectors in Trinidad and Tobago

(T&T) increased their participation in the sector after understanding better how the industry works and developing appropriate financing solutions.

The country validation workshop in Nigeria highlighted the need for commercial banks to offer more reasonable, single-digit lending rates. In response the government, through the Nigerian Content Development and Monitoring Board (NCDMB), is collaborating with the Bank of Industry (BOI) to provide much-needed long-term financing for locals in the sector. BOI will be managing the Nigerian Content Development Fund (financed from 1% of every oil and gas contract). They will offer locals long-term financing to participate in the sector – at single digit interest rates – with an upward limit of \$10 mn. The local company must be in the manufacturing sector. As NCDMB has no capability to assess business proposals, partnering with BOI allows BOI to undertake risk assessment and appraisals using the prudential Central Bank guidelines.

In Ethiopia, the government is providing substantial financial support mainly in the form of foreign currency for local MOG companies. It is felt in some quarters that local insurance companies could easily be supported and provisions made to ensure that all insurance aspects of mining projects in Ethiopia are covered locally.

Syndication is not widespread. There are few instances of syndication, in Zambia's minerals and in Ghana's petroleum sector, with no success in the latter case. In Zambia, however, some local branches of international banks have successfully syndicated with their regional headquarters to finance some mining sector projects. But this practice is not widespread. The only known attempt at local bank syndication in Ghana's petroleum sector has been unsuccessful due to delays in the syndication and the unfriendly macroeconomic environment.

On the whole, financing appears to be a critical missing link impeding local private sector participation in MOG activities, and losses to the domestic economy through forgone interest income, dividends and employment opportunities through lateral linkages remain substantial. Despite increased policy and legislative attention on promoting local content, there is little by way of government financial support to increase participation by the local private sector. Where available, industry-backed financing mechanisms have had more success than government funds. There is a lot more scope and potential for local financing institutions to play a role in servicing the sector for contract financing.

"Low-hanging fruit" for local financial institutions would be for all operators to maintain bank accounts with indigenous banks. For larger resources and asset-financing arrangements, there is an obvious opportunity for regional development banks to participate in financing business enterprises and even local private ownership in the extractive sector.

3.6 Conclusion

At the core of local content strategy is the requirement for resource companies, mostly foreign investors, to expand employment opportunities at local and national level where resource projects are undertaken, invest in local supply chains to stimulate backward, forward and lateral linkages, open up equity to local participation, encourage some technology transfer and stimulate broad-based growth of the non-resource sector. Local content has sought to broaden and deepen the natural resource development agenda. The discussion above explores insights into whether the strategy has been effective in promoting national development goals. Country experiences reveal mixed results.

First, all study countries show evidence of positive local employment effects in resource activities and low levels of expatriate employment. But local employment for the most part has tended to be in low- and mid-level jobs. A deficiency in skills as well as a high level of skills attrition in the mining sector is prevalent in all study countries. Ambitious expectations of the job-creation capacity of the resource sector have not been matched by the emerging reality. Automation and technological innovation in resource projects have meant a diminished labour-absorbing capacity, which is likely to decrease further. This has meant that even educated graduates need skills training to adapt to technological innovations. And training must not be left to industry alone. To develop a dynamic workforce, there has to be collaboration between government, industry and educational institutions, establishing centers of excellence on a regional basis. Quotas are in principle desirable, but they can be problematic and ineffective.

Second, the multi-country study reveals a number of issues. Legislation requiring preferential treatment for local goods and services procurement has been catalytic in MOG sectors in Ghana and in Nigeria. However, despite progress made, local purchases of goods and services are not nearly as much as wished for. Reported high levels of local procurement need not translate into desired backward linkage effects because in most cases, local sources may be merely fronts for the importation of goods and services. In Burkina Faso, Namibia and Zambia, local businesses struggle because of cost, efficiency and quality.

The absence of explicit strategic policy to leverage extractive activities to advance economic development has not helped. Aspirational signals have been weak. Other key constraints are the lack of competitiveness, low quality standards of local suppliers, weak local entrepreneurial capabilities, poor infrastructure (roads, rail lines and power), and poor access to finance. Challenges arise in the quality of cooperation between government, industry and local businesses, and in the general capabilities of the local private sector in a capital-intensive and high quality standards industry. The perception of sub-standard locally produced goods may have some merit, but carried too far for too long, it may become an excuse to discourage local procurement. There is greater scope for procurement as a source of indirect resource sector jobs through the supply chain. But much hinges on the development of small and medium enterprises, which cannot be left to legislation. Governments have a catalytic role to play, including strengthening support to institutions that encourage the development of suppliers. Optimizing procurement within the context of national and regional spaces can stimulate opportunities and overcome the disadvantages of small market effects. There is huge potential in procurement of goods and services, far more than any other local content pillar.

4

4. CONCLUSIONS

Key Messages and Looking Ahead

4.1 Introduction

Besides getting the domestic foundations for resource governance right, governments can increase the value contribution of extractive activities to their countries growth and development opportunities broadly through fiscal and non-fiscal pathways. Fiscal pathways generate revenue directly for government coffers through royalties and tax instruments. In which case, the opportunities for turning resource wealth into expanded growth and stimulus for transformation depend on how the revenues are managed or spent by governments. Most resource-rich sub-Saharan African countries have followed this fiscal path, and for the most part, the record has been poor.

Countries are now making efforts to maximize the benefits from their vast extractive resources, embarking on a path different from that of the past. The aim is to deepen and broaden Africa's natural resources development agenda towards the larger goals of resource-based industrialization and also to contribute to the continent's social and economic development. At the core of this new direction is the call for investors to expand employment opportunities, invest in local supply chains, open up equity to local partners, encourage some technology transfer and stimulate broad-based growth of the non-resource sectors as envisaged in the Lagos Plan of Action, the Monrovia Declaration and translated into action in the African Mining Vision. Africa's mineral, oil and gas resources are more than sources of immediate fiscal revenue; they can also support broad-based growth and development if well managed.

Promoting local content and can provide opportunities for economic diversification, for broad-based growth, for beneficial externalities in expanding job growth, plugging into higher global value chains, and becoming part of how global production processes are organized for greater benefits. Many countries have introduced laws, regulations and administrative guidelines to this end. The focus by governments is understandable because the prize for getting the strategy right is great and the potential benefits to citizens immense.

The challenge is in the way governments go about doing it, prompting the broad questions:

- a) Is Africa getting the local content strategy right?
- b) Are local content policies and legislation effective in achieving national development objectives?
- c) Are there "best practices" of sorts? What lessons can be learnt from country experiences?

Seeking insights into these questions, this study analyzed eight countries with different mineral, oil and gas experience, different development history, different political and institutional characteristics. This comparative study has sought to shed light on country experiences, the lessons to consider and the recommendations going forward.

The remainder of the concluding chapter is organized in three parts: first, the general observations drawn from the study; second are the specific observations based on the pillars of local content; and third are the specific policy actions in response to the latter observations. The recommendations are organized according to the four key pillars of local content.

4.2 General Observations

Two countries in the study, Nigeria for petroleum and South Africa for minerals, have pursued local content longer than most other countries, with varying success. South Africa's relative success in integrating its mineral development with the rest of the economy is due to its historical circumstances of apartheid which compelled a large degree of self-sufficiency and propelled its resource-based industrialization. While Nigeria's efforts have not been as successful as those of South Africa, its relative success points in the right direction and could provide a regional anchor to industrialization in West Africa for the supply of energy, petrochemicals and fertilizer.

Local content in South Africa and Namibia in particular among the study countries has become more than a strategy to deepen backward linkages and ultimately maximize the benefits to the national economy of resource activities. For these countries, local content is also an instrument for the achievement of the constitutional right to equality and to bring about socio-economic transformation in order to enhance equity, social justice and the empowerment of historically disadvantaged majority of the population along racial lines. At the same time, LC provides higher economic growth, increased employment and more equitable income distribution in both countries. For these reasons, the pursuit of local content in these two countries has been less than straightforward, mired in industry-government disagreements in standard setting, enforcement and compliance.

For the rest of the study countries, LC strategy reflects some elements of the South African and Namibian objectives, without the role of an instrument to redress historical racial disadvantages. Everywhere, there are ambitious expectations that LC will boost employment at the national level, empowering local communities where there are such opportunities, increasing local procurement of local goods and services, and local participation in general. Emphasis and implementation have varied.

4.2.1 Start-off conditions: Political Will, Clear Vision and Sense of Purpose

The most important start-off conditions for resource-rich country governments is having the political will, a clear vision and a sense of purpose which in turn determine the strategic focus of desired outcomes of resource extraction in the country. Most governments legislate their expectations rather than define purpose and strategy and how to achieve objectives. Rather than broad-brush legislation of local content, a government should first identify where its priorities lie or what is most beneficial for the greatest number of citizens. Legislation must be preceded by a country strategy framework exploring alternatives or different pathways, making a distinction between what ought to be done (the ideal) versus what can reasonably be done and the steps and instruments to accomplish the goals. Politics and legislation more often trump the economics of examining alternatives courses of action.

4.2.2 Planning, Industrial Policy and Extractive Resources

For resource-rich economies, integrating resource activities into national development plans is an important first step to optimizing local content linkages and value addition for beneficial growth outcomes. Among study countries, with the exception of South Africa, the general absence of long-term planning and industrial policy means that there is no coherent local content and value addition strategy in the overall context of national development. The question of what to do with a country's extractive resources is often not publicly debated as a possible transformative path to growth. There also tends to be a lack of inter-ministerial or institutional coordination on how to govern and manage the sector for resource-based growth.

4.2.3 Human Resources, Employment and Technological Innovation

Technological innovation in the MOG sector is inevitable raising questions about its labor-absorptive capacity in future. While there is an understandable need to improve efficiency, minimize mine accidents and health hazards, technological innovations is having a "disruptive effect" on mining employment. In South Africa, mining companies are spending less and less on low-skilled labour. As mining, oil and gas activities generally become less and less labour absorbing, the employment objective of local content legislation is becoming less viable and increasingly difficult to enforce. Countries are recognizing that the technical capacity of local workforce and local institutions is an important precondition for maintaining a competitive mining industry. This trend raises a number of questions. Are technological innovations occurring on the blind side of conventional LC strategy and how should it inform the government approach to local content legislation and regulations? How can resource-rich countries develop the local workforce and small and medium enterprises to make them adaptable in the emerging environment of rapid technological innovation?

4.2.4 Local Participation in Procurement and Industry Value Chain

With the exception of South Africa, the supplier industry base in the other study countries, both in mining and in oil and gas, has struggled generally to find entry points into the supply chain. In Ghana as in Namibia, capacity, quality and capability of local suppliers to meet industry demand are problems

commonly cited by industry as to why it is very difficult to build local content, maximize opportunities for local procurement and foster backward linkages. While industry can be accused of making exacting demands, there are just as many questions to answer as to what governments are doing or not doing to help build SMEs and local manufacturing.

It must be noted that some study countries have initiated supplier development programmes. However, success stories have been few. The challenge is how to transform the industry to widen and deepen the supplier base so as to create demand for the upgrading of local suppliers to enable their increased participation in the mining industry supply chain. Common bottlenecks include the following.

- Access to domestic financing to support start-ups and business expansion to be able to bid for resource supply projects.
- High commercial bank lending rates.
- Inability of governments to provide financial support to local companies.
- Weak support to build the capacity of local companies to meet the high quality standards of procurement. One industry expert, however, remarked that quality standards and skills are often used as “barriers” to exclude nationals in favour of foreign suppliers and technicians.

4.2.5 The Development and Business Case for Local Content and Value Addition Strategy

Promoting LC strategy works best if the developmental case aligns with the business case from the perspective of resource companies.

Throughout the study countries, industry-government collaboration seems uneven: of late strong in Ghana, less so in Zambia, Burkina Faso and Mozambique. Government-industry collaboration and consultation early in the formulation of LC strategy is the cornerstone of ensuring convergence of interests. When this is done, countries may need less, not more, assertive policies, legislation and regulations that may be difficult to enforce. Governments may use a combination of legislation and administrative measures to promote local content and value addition. But industry compliance depends on its perception of the impact on business activities. Overly stringent legislation as a way to push the development case is less likely to generate the desired results for all stakeholders.

4.2.6 Regional Space: Regional Integration and Local Content and Value Addition

The potential to grow regional value addition opportunities and investment provide yet another reason to accelerate regional integration and trade. Value addition need not be confined to the countries where the primary ore or commodity is extracted or produced. Mineral processing, oil and gas refining and other value addition investment hubs could be established at regional or continental levels. Regional value addition has the benefit of economies of scale. Recent commodity price slumps and the reality of commodity price swings put a premium on strengthening regional strategy for value addition to promote resource-based regional industrialization.

4.3 Specific Observations

The following specific observations of the study are clustered around key pillars of the study:

- Local employment and manpower development;
- Local procurement of goods and services and supplier development;
- Local equity participation;
- Local project financing;

PILLAR 1: Promoting Local Employment and Skills Development

Local content policies and legislation to promote direct employment of locals, skills development and technology transfer have become the norm. There are expectations for resource projects to create job opportunities as the first step in affecting the livelihood of locals, and the most consequential for the communities in which resource activities take place.

Findings and Observations

- All the countries studied have preferential provisions for local employment. Of the four pillars, increasing local employment and skills development appears to have been the most successful. Employment gains, however, tend to be more for low-skilled and mid-lower level technical positions.

- Ironically, the supply pipeline for skilled workers is often too small and insufficient to replace the retiring skilled workforce. This is true of Ethiopia's and Zambia's minerals sectors. Even in South Africa, which produces more mining engineers than all other sub-Saharan African, English-speaking countries combined, the lack of skilled workers remains a concern. Across the study countries, if less so in Mozambique and Namibia, there are several highly educated graduates with low levels of adaptable skills.
- There are efforts to upgrade skills through legislation. In South Africa, a Skills Development Levy is required of all employers in the mining sector. It is 1% of companies' payroll. The levy funds education and training of businesses and workers for the sector. South Africa's Mining Charter requires mining companies to invest an additional 5% of their payroll in essential skills development for the sector. Most companies comply with this additional investment, and many even provide more than the required 5%.
- In Nigeria, there are provisions for both skills development and building research and development institutions. In Ghana, however, the Oil and Gas Business Development and Local Content Fund, which was established primarily for education, training and research and development under the local content policy in 2010 is still not operational.
- In the absence of pooled initiatives and funding, in all selected countries, legislation and policy obligates companies to provide training for locals and provide forecasts for future employment and training needs. Training is therefore specific to industry needs.
- Overall,
 - There are ambitious expectations of the MOG sectors to address unemployment and other social issues.** The reality is that the sector can only supply a relatively small amount of direct employment, and it is relatively skilled.
 - Mechanization of the industry is inevitable, thus the labor-absorptive capacity of the industry will decrease further.**
 - There are several highly educated graduates with low levels of adaptable skills and experience.** The challenge is how to convert this "book" knowledge into practical skills.
- Technical and vocational education and training is widely neglected despite the acknowledged fact that this system provides the transformative skills needed for industry.** SADC conducted a skills mapping exercise in beneficiation industries which found that there was a lack of TVET personnel such as geologists and engineering technicians while there was a surplus of engineers and geologists.
- Quotas are desirable from policy makers' perspective, but quotas can be problematic and ineffective.** For less advanced resource-rich economies such as those of Ethiopia and Burkina Faso, quotas in the early stages would be difficult to meet due to the lack of local capacity. This could effectively deter investors. During downturns in the industry, nominal quotas of locals could also unduly disrupt operations.
- Transfer pricing in employment practices are not uncommon.** Companies often hire skilled labor from overseas when the jobs can be done in-country and by locals. They use complex job titles which, when disaggregated, amount to jobs that locals can easily do. Duplication of jobs done by expatriates locally also has the effect of increasing the cost curves of the company and thus decreasing taxable income.

PILLAR 2: Promoting Procurement of Local Goods and Services

Definition and therefore measurement of what constitutes local procurement varies from country to country, underlines the ambiguity in the use of the term local content, and makes cross-country comparisons of country spending data problematic. Broadly, the discussion focused on the sourcing and purchasing of goods and services for business use from suppliers domiciled in the country. It is their chain of purchases from other local suppliers that generate the linkage and multiplier effects. Country data made no distinction between the volume of goods and services bought by resource companies that is produced in the local economy using only local factors of production and inputs and goods and services procured or produced in the local economy regardless of the source or origin of the inputs.

Findings and Observations

- Country data suggest that spending by resource companies on local procurement (excluding wages and salaries) represents the largest share of expenditure – 48% in South Africa for the period 2008-2010, and 44% in Namibia in 2015. Most countries have enacted provisions for procurement specific to the MOG sectors over and above general country procurement measures.
- Almost all countries have specific legislation to that effect. For Burkina Faso, Namibia and Zambia legislation in place is limited to obliging companies to make a selection based on competitiveness of local firms in terms of price, timely delivery, quality and quantity. Legislation in Ghana, Nigeria and South Africa includes provisions which clearly favour local firms. In Namibia, however, there is specific law compelling companies to procure goods and services locally. Uniquely in Namibia, industry policy is more decisive than government policy in this area. The Namibia Mining Charter makes a commitment to “progressive discretionary expenditure on local procurement by 2020” (25% by 2015 rising to 40% by 2020).
- Performance on local procurement is mixed. Local content legislation that provides preferential treatment for local goods and services has been key to increasing the level of local purchases. In Nigeria, local procurement of goods and services between 2004 and 2010 increased from 5% to 35%. In 2004, the goods and services procured locally were described by NCMD as “very low technology capacity”. By 2015, Nigerian goods and services procured included heavy industry and equipment manufacturing. In Ghana’s mining sector, industry reports that expenditure on local goods and services increased from 50.2% in 2013 to 73% in 2014. When locally domiciled companies import finished goods, they add little to no value to the linkages envisaged under LC requirements.
- Supplier development programs are described as a business imperative for industry players, and there are efficiency gains to be made as procuring locally reduces logistical costs associated with transportation of goods, people and equipment. Commendable examples of effective supplier development programs include South Africa’s Anglo-Zimele, arguably one of the most effective on the continent. Mozambique’s MozLink is also widely touted. Ghana’s oil and gas majors in collaboration with the government established an Enterprise Development Centre in the oil-producing Western Region.
- However, Zambia has experienced a decline in the share of local inputs supplied to the large-scale mining companies from 72% in 1966 to an average of 5% in recent times. One major mine stated that 96% of all its inputs are procured from foreign manufacturers. Constraints to Zambia’s local capacity are largely described as structural, including the high cost of inputs, low product quality, adverse tariff structure on imported goods and limitations in access to affordable local finance. In Ethiopia, similar structural challenges have hindered indigenous companies and have contributed to the procurement of local goods and services is thought to be low; although the ratio of local to foreign goods is estimated at 40:60.
- It is unclear how much of the progress made in Ghana, Nigeria, and South Africa can be attributed to legislation. One thing is certain, procurement should not be left to legislation only. Entrepreneur and supplier development programs have been critical, as seen in South Africa, Mozambique and Ghana.
- As in Trinidad and Tobago, there is a growing emphasis and shift in Nigeria and South Africa from ownership and employment affirmative action to procurement of domestic goods and services, entrepreneur and supplier development. In Zambia, stakeholders saw local procurement as the most important among the local content pillars, more so than in Burkina Faso, Ethiopia, Ghana, Namibia and Mozambique. Procurement from foreign companies provides many more opportunities for transfer pricing.
- Local procurement is generally hindered by three factors: the lack of competitiveness of domestic firms, especially in meeting safety and quality requirements; tax exemptions on imports of capital goods; and transfer pricing mechanisms for companies to circumvent local procurement of local goods and services. Even more advanced South Africa has not been able to deal satisfactorily with the scourge.

PILLAR 3: Promoting State/Private-held Equity and Participation in Management

By all indications, perspectives on the role of the state in extractive projects are changing. Various governments are seeking to hold some form of equity in resource activities, either directly as state participation to enhance the developmental effects of extractive projects, or indirectly, as a means to encourage citizens' equity holdings through off-loading. The perception is that the "watchman" role of the state implied in most resource regimes across the continent is not developmental enough.

Findings and Observations

- For most of SSA, extractive projects still remain largely foreign owned, followed by state ownership, with very low but increasing local private ownership. The state rather than local private equity is dominant in Ghana, Mozambique, Namibia, Zambia and Ethiopia.
- Production sharing, a popular form of state participation in the oil and gas sector, has not been widely replicated in the mining sector. Namibia, Mozambique and Zambia offer a form of state enterprise as special vehicles to hold equity. Except in oil and gas, Burkina Faso and Ghana offer no such vehicles in their mining, raising questions about the accountability of state-held equity in mining projects and the degree of influence in corporate decision making. Most mining companies minimize dividends through various mechanisms. Local private equity is highest in Nigeria and South Africa.
- The main interventions to increase local private ownership includes listing shares on the local stock exchange. South Africa leads with a total of 49 mining companies listed on the Johannesburg Stock Exchange (JSE). Ethiopia and Burkina Faso do not have stock exchanges. Only a few companies are listed on the stock exchanges in Zambia and Ghana. Major challenges are a lack of interest in and knowledge of local stock exchanges.
- **Enforcement of local ownership by setting quotas and the attempts to comply with ownership have often spawned fronting, namely the misrepresentation of the extent of a company's local ownership.** Fronting undermines effectiveness in promoting local equity participation, so much so that in some jurisdictions, fronting is considered a criminal offence as in Nigeria, South Africa and recently Ghana. Zambia, Ethiopia, Burkina Faso and Namibia have no such legislation.
- In South Africa, it is not only the state regulators in licensing that must deal with fronting, but mining companies also must deal with fronting from unscrupulous suppliers, often in order to achieve the objectives of the Black Economic Empowerment Act.
- **Using state-owned entities as an instrument to promote citizens' participation is the model currently being practised in Zambia and Namibia.** Here the state plays an enabling role in citizens' participation. **But the instrument of using stock exchange listing to promote and to broaden citizens' participation has had mixed results, at best moderate in most countries, with the exception of South Africa.** Stock exchanges in most of these resource economies (with the exception of the JSE in South Africa) remain undeveloped.
- **Ownership matters because of the potential to influence the extent of local procurement of goods and services.** However, there is growing recognition that local ownership may not yield the optimum outcome of job creation and neither may it be the most important tool for resource-based industrial development.
- **Finally, state equity participation has substantial merits if it is more than just a token of ownership through free carried interest.** Paying state equity holdings has its cost and must be balanced against the alternative uses of the investible funds. For citizens' participation, maximizing the value benefits from extractive activities through local ownership may be more a myth than a reality. For the private sector, the large potential for economic gain lies more in being part of the procurement value chain or input supply chain than in ownership.

PILLAR 4: Promoting Participation of Local Financial Institutions

Project finance is the long-term financing of infrastructure and resource projects based on the projected cash flow of the project. For extractive projects, substantial financial requirements must be front-loaded because cost build-up begins from the exploration and prospecting stages. If successful, cost build-up continues in the development and production stages. Cost build-up can take years and can run into millions of dollars. The chain is laced with uncertainties. Given the type of activities project finance can be used for along the value chain and its long-term nature, it can have a high multiplier effect on resources-rich countries' economies through its impact on domestic financial sector development. Indeed, if local content laws provide that a given percentage of project finance should be sourced from the local economy, host countries' banks stand to reap huge benefits as mine or oil platform development does not come cheap.

Findings and Observations

- Local participation in financing of MOG projects has for most countries not yielded any noticeable results. Again with the exception of South Africa, the financial market in the rest of the study countries is not capable of providing the capital requirements for projects in the magnitude of MOG sectors. The sheer smallness of the business portfolios of most banks in these economies places major constraints on financing large-scale resource exploration, development and production projects. Low private and public savings rates, and high lending rates are contributory factors. For example, at its currently targeted growth rate of 6.6% to achieve its Vision 2030 objectives, Zambia already has an investment shortfall estimated at USD 4.1 billion, making it impossible to support increased local participation in the financing of mining projects other than through FDI.
- Promoting participation of local financial institutions appears to be the weakest link. Few countries have requirements for project sponsors to procure finance or use local financial institutions. In reality, state-owned and local private financial institutions are the first to admit that they have weak capacity to oversee the type of financial transactions specific to the extractive sectors. This is largely the reason why in most African countries, there are no real requirements

for project sponsors to procure finance from the country.

- Companies typically obtain financing for projects from retained earnings, investments or procure project finance from external sources. With the exception of South Africa, in most countries, participation of local financial institutions has been limited to offering related banking services and products. Even these activities are widely perceived as insignificant. In Ethiopia, the level of related banking services is perceived as low at 30%.
- South Africa's local financial institutions are recognized as very capable of playing a meaningful role in the mining industry. For example, in 2011, local financial institutions were able to provide US\$25bn in financing to the mining industry. To put this into perspective, this was 10 times the size of the entire loan portfolio of the financial sector in Zambia.
- There are a few other good examples of increasing participation of local financial institutions. In Nigeria, there are two main government initiatives to provide working capital and financing for development and acquisition to Nigerian companies. The Cabotage Vessel Financing Fund promotes the development of indigenous marine services such as ship building. It has been pivotal for the domestic coastal shipping industry. The Nigerian Content Support Fund provides working capital for Nigerian companies to execute oil and gas contracts. Furthermore, Nigeria has several industry-driven schemes in collaboration with local commercial banks to provide financing to indigenous contractors. Large companies such as Exxon Mobil, Shell Nigeria and Total Nigeria have partnerships with Nigerian banks to provide a combined worth of almost \$17 billion for local contractors for supplier development.
- In Zambia's minerals and Ghana's petroleum sector, there are few cases of syndication. Noteworthy in Zambia, some local branches of international banks have successfully syndicated with their regional headquarters to finance some mining sector projects. But this practice is not widespread. The only known attempt of local bank syndication in Ghana's petroleum sector, however, was unsuccessful due to delays in the syndication and the unfriendly macroeconomic environment.

4.5 Actionable Steps

Local Employment and Personnel Development

The recommendations are broken into two parts, (1) employment and (2) skills development. No distinct recommendations are made for implementation at national and/or regional levels.

On employment:

- Some form of employment opportunity for locals at national or regional level should be a fundamental principle in the development of extractive resource sectors;
- Define what is local – in the vicinity of the operation, in the country, within the regional bloc;
- Member states to domesticate protocols on free movement of people, enabling skilled individuals within the region to fill skills gaps;
- Establish strong monitoring institutions, institute policies and, if need be, spell out sanctions to encourage compliance.
- Artisanal and Small-Scale Mining (ASM) is a source of employment: bring the sub-sector into the mainstream mining sector and provide necessary support.

On skills development:

- Align education curriculum with industry requirements;
- Harmonize curriculum in specialized skills development across regional member states;
- Develop nodes of regional technical training centres to serve regions;
- Encourage industry to pay a minimum of 1% of its payroll, with matching counterpart
- funding from governments for regional skills development.

Procurement of Local Goods and Services

The four main issues and recommendations are:

- **Conception of local content**, planning/unpacking, value chain analysis and identification of key products and requirements with country SWOT analysis. This allows planning for the short,

medium and long term with proper strategizing. It is essential to engage all stakeholders in the process.

- **Definitions and measurements.** There is strong national definition of local content in terms of company registration, with some indigenous ownership and measurement thereof. A move from national definition to regional and continental definition is recommended. A two-tier approach regarding measurement is also recommended, the first tier being a local firm and the second based on the value of local raw materials or inputs, local personnel and local services used in executing the contract.
- **Approach to Local Content: policies, laws, guidelines.** A combination of both legal and non-legal approaches often helps. Government and industry should collaborate in designing an approach to LC and do so in the early stages of policy formulation.
- **Capacity issues and support mechanisms.** Capacity limitations (in skills, technology, infrastructure, finance and energy) are a challenge to local content policy implementation. Governments (with industry support) should prioritize support to local firms and deal with their capacity limitations.

Equity Participation and Project Financing

Participation of Africans in ownership and management of MOG operations covering the whole value chain has been low. There have been three types of participation in the sector, state, private sector and community-based. The principle is that the desired local participation should be one that supports sustainable social improvement. Hence, the following recommendations:

- State participation on joint venture basis with an independent management team that aims to optimize efficiency gains and profitability. The direct financing involved in South Africa's Black Economic Empowerment (BEE) would be most appropriate type, considering the huge capital injection required, for which the state is the only capable local institution.
- Private sector ownership configured with either joint-venture or majority owners. Funding options for ownership participation through collateralization of mining license or local financial market-based access to resources.

4.6 Matrix of Issues and Takeaways

The matrix below highlights priority issues.

Pillars	Key Issues and Takeaways
Planning and Industrial Policy	<ul style="list-style-type: none"> • Absence of country long-terms plans and industrial policy often means there is no coherent local content and value addition strategy in the context of national development. • What to do with a country's extractive resources is often not publicly debated as a possible transformative path to growth. • For many countries, the immediate fiscal benefits through taxation and royalties and the pressing need for foreign exchange remains the major thrust of public policy. • There is growing realization that progress on all aspects of local content may be the ideal.
Employment and Personnel Development	<ul style="list-style-type: none"> • The use of quotas and minimum targets for local employment must be country specific, based on a thorough assessment of local capacity. • Talent mobility: skills should be sought at local, national, regional and continental levels. • Improving skills development: while there are several graduates, there is a lack of skills/experience in the industry. Attrition of skilled workers is also a problem. • Technical and vocational education and training (TVET) curricula must be tailored to industry needs. This can be achieved by strengthening the interface between industry, the TVET system, government and academia. • Establishment of skills development institutions should be considered at country, regional and continental level. Outcome would be regional centers of excellence, vocational training centers to train personnel for planning and implementation. • Need for a fund for skills development: the source can be a percentage of industry payroll e.g. as in Namibia, South Africa and Nigeria.
Procurement of Local Goods and Services	<ul style="list-style-type: none"> • Effective procurement and backward linkages in the supply chain should not be left to legislation alone. • Value chain analysis to identify key products which are economically viable for effective supply chain management. The focus should be on increasing national and regional production of required inputs, not just increasing procurement by locals of imports of finished products. • Government and industry should increase support for capacity and enterprise and supplier development, e.g. by providing critical financing/loans, incubators for local private sector firms to enable participation in the sector. Government-industry and regional joint ventures should be encouraged to increase technology and knowledge transfer to local companies, and for economies of scale.

4.6 Matrix of Issues and Takeaways

The matrix below highlights priority issues.

Pillars	Key Issues and Takeaways
Equity Participation and Local Project Financing	<ul style="list-style-type: none"> To increase local participation: the community around the extractive areas should be considered as shareholders in MOG operations in their communities Government should encourage exploration in ways that address the informational asymmetry on the potential and the worth of the asset. Raising finance abroad must be done in collaboration/joint venture with the state at exploration stage and at production stage, then the state can unbundle and divest for local private sector.
Value Addition and Regionalism	<ul style="list-style-type: none"> Value chain analysis at regional level could increase the viability of beneficiation on the continent. Requires identification of variable geometry across countries to ensure that the benefits of beneficiation are adequately shared within regional blocs Ensure there is a coherent VA policy formulated within a regional framework: harmonization of national policies is critical, especially to avoid e.g. a race to the bottom in fiscal frameworks. Then VA policies must be integrated into national industrial policy and industrialization. Stronger links needed for regional value chains and realizing regional industrialization strategies. There is scope for an increased role for regional development banks for financing beneficiation projects. Energy and infrastructure incentives should be considered for firms that go into beneficiation.
Cross-cutting Issues	<ul style="list-style-type: none"> There is a need for a more elastic local content definition. Issues of definition must be explicit and may be based on ownership, spatial factors and by rules of origin of inputs and percentage domestic component of production and value addition. The choice of policy or legal instruments should be made with close collaboration between government and industry. A developmental state is needed to ensure that policies are enforced, there is adequate planning, monitoring and evaluation of implementation.

ANNEX 1: Typology of General Policy, Legal and Institutional Framework in the Mineral, Oil and Gas sectors

Country	Policy	Legislation	Institutions
Burkina Faso (Mining)	Mining Sector Policy (POSEM) 2013	New Mining Code, 2015 Promotion of CSR and local procurement	Ministry of Mines and Energy
Ethiopia (Mining; some Oil and Gas)	Draft Mineral Policy (2013) not yet approved No similar Oil and gas sector policy	LC VA codified in Mining Operations Proclamation (MOP) and Petroleum Operations Proclamation (POP) but provisions lack legal enforcement mechanisms	Ministry of Mines, Petroleum and Natural Gas Federal Public Procurement and Property Administration Agency (FPPAA) Ministry of Trade Ministry of Industry
Ghana (Mining, Oil and Gas)	Local Content and Local Participation in Petroleum Activities: Policy Framework (2011)	Petroleum (Local Content and Local Participation) Regulations, 2013 Petroleum (Exploration and Production) Act, 2016	Petroleum Commission, Ministry of Petroleum Local Content Committee
	Minerals and Mining Policy 2016	Minerals and Mining General Regulations 2012 LI 2173 Minerals and Mining (Support Services) Regulations 2012 Minerals and Mining Act 2006 (Act 703)	Ministry of Lands and Natural Resources Minerals Commission
Mozambique (Mining, Oil and Gas)	Poverty Reduction Action Plan (2011-2014) – pursuing a policy that promotes broad-based growth, diversifying the economy, creating jobs and linkages between foreign investment and the local economy Previous 5-year plan 2010-2014 stresses crowding-in FDI as a means to stimulate local economic growth	Provisions in Petroleum Law (2014) LC requirements Mining Law (2014) Local labor law Still in draft, Local Content Law initiated in 2014	Ministry of Economy and Finance Ministry of Mineral Resources and Energy Proposed in draft law – Committee of Local Content Affairs

ANNEX 1

Country	Policy	Legislation	Institutions
Namibia (Mining, Oil and Gas)	<p>Minerals Policy 2003</p> <p>National Equitable Economic Empowerment Framework (NEEEF) Draft Bill (2015)</p> <p>Namibian Mining Charter 2014-2020 (2014) Industry led (Namibia Chamber of Mines)</p>	NEEEF Bill (2015)	<p>Office of the Prime Minister</p> <p>Ministry of Mines and Energy</p>
Nigeria (Oil and Gas)	<p>Comprehensive implementation guidelines and initiatives focused on:</p> <ul style="list-style-type: none"> • Human capital development and employment of citizens • Procurement of local goods and services • Promotion of equity participation and development of capacity of local companies • Access to finance by local companies 	Nigerian Oil and Gas Industry Content Development Act (2010) (NOGICD Act)	<p>Ministry of Petroleum Resources</p> <p>Nigerian Content Development and Monitoring Board (NCDMB)</p> <p>Department of Petroleum Resources</p> <p>Nigerian National Petroleum Corporation</p> <p>Petroleum Technology Development Fund</p> <p>Nigerian Content Consultative Forum (NCCF)</p>

ANNEX 1

Country	Policy	Legislation	Institutions
South Africa (Mining)	Beneficiation Strategy (2011)	<p>Mining Charter (Mineral and Petroleum Resources Development Act) (gazetted in 2004 and amended in 2010)</p> <p>Broad Based Black Empowerment (BBBEE) (2003) includes:</p> <p>Promotion of locals – Historically Disadvantaged South Africans (HSDAs)</p> <p>Employment Equity Act</p> <p>Skills Development Act</p> <p>Skill Development Levies</p> <p>Preferential Procurement Policy Framework Act</p> <p>National Business Act</p> <p>Liquid Fuel Industry Charter (LFC) 2000</p>	<p>Department of Mineral Resources</p> <p>Department of Energy</p> <p>Department of Trade and Industry</p>
Zambia (Mining)	<p>Mineral Resources Development Policy (2013)</p> <p>Citizens Economic Empowerment Strategy for the Mining Sector</p>	<p>Mines and Minerals Development (MMDA) Act 2008 and 2015</p> <p>Citizens Economic Empowerment Act 2008 provides preferential access to public sector market only</p>	<p>Department of Mineral Resources</p> <p>Department of Energy</p> <p>Department of Trade and Industry</p>

ANNEX 2: Typology of Local Employment and Human Capital Development Requirements

Country	Preference for Nationals	Targets for Nationals	Expatriates	Skill Development
Burkina Faso (Mining)	Preference for Burkinabès in compliance with the labor law	None	Gradual replacement of foreign workers by Burkinabès	Fund for financing earth sciences, geological and mining research
Ethiopia (Mining; some Oil and Gas)	Draft mineral policy asserts the prioritization of Ethiopians who are qualified and that license holders must include in their license applications employment and training plans	No minimum quota or target for nationals	Employed to fill gaps that nationals cannot fill	In TVET training, mining has been identified as one of four priority specialization areas (with agriculture, industry and construction). However, not yet any plan to link industry with TVET
Ghana (Mining, Oil and Gas)	Oil and Gas Sector Qualified Ghanaians are given first consideration; Ghanaians employed only in middle-junior level positions	Progressive targets depending on the timeframe of the operation (Start, 5 years, 10 years) Management and Technical core staff Start 30%; <ul style="list-style-type: none"> • 5 years: 50-60% • 10 years: 70-80% • Other staff: • Start 80% • 5 years: 90% • 10 years: 100% 	Cumbersome permit requirements through Immigration Service Mining Sector: Not more than 10% expatriate staff. After 3 years not more than 6% expatriate staff; Submission of proposals on expatriates and plans to replace them with locals; Law specifies that foreigners cannot be employed in unskilled or clerical positions.	Employment and Training Subplan Succession plan for management and phased release of expatriates Mining Sector – training plans for local employees Penalties from wrongful employment of expatriates are paid into a Fund which is used for training Ghanaians
Mozambique (Mining, Oil and Gas)	Involvement of locals in the area of MOG operation	None specific	None specific	Human Capacity Building Strategy 2010-2020 in MOG sectors. Focus on both institutional strengthening and human resources
Namibia (Mining, Oil and Gas)	Affirmative Action Act 1998 – employers must submit annual plans for employment, training and promotion of locals	None specific	Cumbersome permit requirements	Namibian Mining Charter Petroleum Training and Education Fund (PETROFUND) (1993) for STEM training institutions and students

ANNEX 2

Country	Preference for Nationals	Targets for Nationals	Expatriates	Skill Development
Nigeria (Oil and Gas)	<p>Nigerian Oil and Gas Industry Content Development Act (2010) (NOGICD Act)</p> <p>Nigerians should be given first consideration for employment and training in any project in the industry</p> <p>All operators must submit employment and training plans outlining their hiring and training needs</p>	<p>Progressive targets depending on the time frame of the operation (Start, 5 years, 10 years)</p> <p>Management and Technical Core Staff Start: 30%;</p> <ul style="list-style-type: none"> • 5 years: 50-60% • 10 years: 70-80% • Other Staff: • Start: 80% • 5 years: 90% • 10 years: 100% 	<p>Cumbersome permit requirements through Immigration Service.</p> <p>Nigerians must understudy all expatriates for a maximum of four years after which time they should be able to take the job.</p> <p>Operators may be able to retain a maximum of 5% of expatriates in management roles to take care of investor interests</p>	<p>Submission of quarterly employment and training plans.</p> <p>Where Nigerians are not employed because of lack of training, the operator must ensure that every reasonable effort is being made to train Nigerians within a reasonable period of time to do the job.</p> <p>Succession plan for management and phased release of expatriates.</p> <p>The minister shall establish the minimum standards, facilities, personnel and technology for training in the industry, including modalities for collaboration with operators in training, development and steady growth of indigenous companies.</p>

ANNEX 2

Country	Preference for Nationals	Targets for Nationals	Expatriates	Skill Development
South Africa (Mining)	Historically Disadvantaged South Africans (HSDAs), youth and women are given priority for employment	<p>40% HDSA in management within 5 years</p> <p>Identification of talent and fast tracking</p> <ul style="list-style-type: none"> • Top Management: 40% • Senior Management: 40% • Middle Management: 40% • Junior Management: 40% • Core skills: 40% 		<p>Establishment of the Mining Qualification Authority (MQA), the sector education and training authority in 2000. Mandate includes:</p> <p>Skills development, mine health and safety; development and implementation of skills development plan; development and maintenance of quality standards and qualifications in the sector</p> <p>Workplace Skills Plan and annual training reports are done with MQA. Governing structure including Dept. of Higher Education, Dept. of Mineral Resources representatives, employers and labor organisations to compile the MQA's strategic direction and identify the skills needs in the sector</p> <p>Non-sector specific (economy-wide) funds for skills development</p> <p>-Skills Development Act Funds for education and training in various sectors</p> <p>-Skill Development Levies (economy-wide) all companies required to pay 1% of payroll to Education Fund</p> <p>-Employment Tax Incentive – youth wage subsidy paid by government in the form of tax deduction to encourage employment of youth</p>

ANNEX 2

Country	Preference for Nationals	Targets for Nationals	Expatriates	Skill Development
Zambia (Mining)	<p>Minerals Development Act requires mining companies to give preference to Zambian products, local contractors and services</p> <p>Act specifies preference for materials and products made in Zambia and service agencies located in Zambia and owned by Zambian citizens or citizen-owned companies</p>	None specific	None specific	None specific

ANNEX 3: Typology of Requirements for Local Procurement of Goods and Services

Country	Preference for Local Goods and Services	Margins of Preference for Locals	Targets for Local Goods and Services	Development of Local Supply Chains
Burkina Faso (Mining)	Preference for any good or service under same conditions in terms of price, quantity and time frame	None	None	None
Ethiopia (Mining; some Oil and Gas)	<p>Procurement and Property Administration Proclamation No. 649 (2009) also MOP and POP</p> <p>Preference for Ethiopian goods and services when they are available at a competitive price and comparable quality ("Ethiopian" means 35% or more of the value is added in Ethiopia)</p> <p>Minerals policy obliges companies to submit procurement plans</p>	Some margins for local preference in the Procurement and Supply Management Manual	No targets for LC procurement	<p>Federal Micro and Small Enterprise Development Agency (FeMSEDA) organizes short training courses to support capacity development programs</p> <p>MOG companies do not provide such training programs to local firms</p>
Ghana (Mining, Oil and Gas)	Oil and Gas Sector: A non-indigenous company which intends to provide goods and services must incorporate a joint venture with an indigenous company with at least 10% equity	10% for an indigenous company	<p>Minimum content levels</p> <p>Start: 10%</p> <p>5 years: 50%</p> <p>10 years: 60-90%</p> <p>Specified levels within differing categories of goods</p>	<p>Submission of Technology Transfer Plan</p> <p>Program of initiatives aimed at promoting the effective transfer of technology from contractor to indigenous company</p>

ANNEX 3

Country	Preference for Local Goods and Services	Margins of Preference for Locals	Targets for Local Goods and Services	Development of Local Supply Chains
Ghana (Mining, Oil and Gas)	Mining Sector – Operators must “procure goods and services with Ghanaian content to the maximum extent possible and consistent with safety, efficiency and economy”. Submission and approval of procurement plans which include targets and prospects for local procurement and measures to develop the supply of goods and services, including broadening access to opportunities and technical and financial assistance	2% preference for items on the procurement list that contain the highest level of Ghanaian content in terms of ownership, management and employment of Ghanaians	Procurement List includes mainly physical goods, later revised and expanded to services (catering and haulage); soon to include financial services	Procurement plans must include targets and prospects for local procurement and measures to develop the supply of goods and services, including broadening access to opportunities and technical and financial assistance
Mozambique (Mining, Oil and Gas)	Preference for any good or service under same conditions in terms of price, quantity and time frame	Preference given if local product is not more than 10% more expensive than same product imported	Foreign persons must associate themselves with Mozambican persons to supply goods and services to the mining sector	Mozambique SME Linkage Program (Mozlink) ended in 2010
Namibia (Mining, Oil and Gas)	No specific provisions until Draft NEEF Bill 2015 Companies select based on price, time, quality and quantity	Namibian Mining Charter (2014) progressive discretionary expenditure on locals by 2020. (25% by 2015; 40% by 2020)	Mining Law 2014 gives preference to locals to the extent that price, quality, time, quantity criteria are met	No provisions
Nigeria (Oil and Gas)	Nigerian independent operators shall be given first consideration in the award of oil projects/ contracts etc. subject to the fulfillment of conditions specified by the Minister Compliance with the promotion of Nigerian content development shall be a major criterion in the award of license, permits, contracts	The award of a contract shall not be solely based on the lowest bidder if a Nigerian company can execute it, provided the Nigerian company's bid does not exceed the lowest bid price by 10%. the value does not exceed the lowest bid price by 10% for an indigenous company	Promotion of big-ticket, high-value goods and services: Marine vessel services Equipment components Manufacturing Pipe mills manufacturing Offshore rig acquisition	Promotion of big-ticket, high-value goods and services Marine vessel services Equipment components Manufacturing Pipe mills manufacturing Offshore rig acquisition

ANNEX 3

Country	Preference for Local Goods and Services	Margins of Preference for Locals	Targets for Local Goods and Services	Development of Local Supply Chains
South Africa (Mining)	<p>Preferential Procurement Policy Framework Act (2000)</p> <p>Preferential procurement for HDSAs Capital Goods 40%</p> <p>Consumable Goods 50%</p> <p>Services 70%</p>		MNCs must use 0.5% of revenue on corporate social investment in communities	Commercial and procurement departments and corporate social investment departments have been restructured to ensure accelerated economic distribution through small, medium and micro-sized enterprise development programs geared for HDSAs
Zambia (Mining)	<p>Act requires mining companies to give preference to Zambian products, local contractors and services</p> <p>Act specifies preference for materials and products made in Zambia and service agencies located in Zambia and owned by Zambian citizens or citizen-owned companies</p>			

ANNEX 4: Typology of Requirements for Equity Participation: State, Private and Management by Locals

Country	State Participation	Private Equity	Management by locals	Support for Asset Acquisition
Burkina Faso (Mining)	State shareholding between 10-20% free carried. State can increase its participation in accordance with law	No provisions	No provisions	No provisions
Ethiopia (Mining; some Oil and Gas)	<p>Oil and Gas Sector: POP (2010) legislation provides for 1) a negotiable government equity participation with the obligation to reimburse exploration costs; and 2) an interest-bearing loan from licensee to fund the government's share of development costs</p> <p>State company – Ethiopian Petroleum and Natural Gas Development Enterprise (EPNGDE) – to act as a vehicle for commercial participation in petroleum activities</p> <p>Mining Sector:</p> <p>Federal State has the right to 5% free carried share in mining projects</p> <p>Established in 2016, state-owned Ethiopian Mining , Petroleum and Biofuels Corporation (EMPBC) covers exploration, production and selling fuel, minerals and biofuels</p>	<p>No stock exchange market</p> <p>No provisions for private equity</p> <p>Focus on promotion of ASM and MSM</p>	No provisions	Support for ASM for locals

ANNEX 4

Country	State Participation	Private Equity	Management by locals	Support for Asset Acquisition
Ghana (Mining, Oil and Gas)	<p>Oil and Gas Sector</p> <p>Ghana National Petroleum Company (GNPC), Ghana Gas, GOIL 100% shareholding</p> <p>Government equity in all E&P licences. Carried participation at a minimum of 15% and extra participation is paid and can be accessed after discovery</p> <p>State also has first right of refusal if any other party wants to sell equity</p>	At least 5% equity participation of an indigenous company and only transferable to another Ghanaian company	Succession plan for management and phased release of expatriates	Local Content Fund
Ghana (Mining, Oil and Gas)	<p>Mining Sector:</p> <p>State participation is 10% free carried interest in the major mining operations.</p> <p>State divestiture. No real regulations, guidelines on State's role or objectives in these entities</p>	<p>While the mining policy encourages greater state and local ownership, there are no requirements for percentage of equity for locals. However, there is reservation and exclusivity of licenses for artisanal and small-scale mining rights for Ghanaians only – most prospecting and reconnaissance licences are held by Ghanaians Also fees that Ghanaians pay for licensing are a lot less than those paid by foreigners</p> <p>However, two major mining companies – AngloGold Ashanti and Golden Star Resources – are listed on the Ghana Stock Exchange voluntarily</p>		

ANNEX 4

Country	State Participation	Private Equity	Management by locals	Support for Asset Acquisition
Mozambique (Mining, Oil and Gas)	<p>Petroleum Law 2014 reinforces the role of the state and ENH (national oil company) 5%-25% stake</p> <p>Mining Law also requires the State to progressively increase its participation in mining projects through ENEM state mining company</p>	<p>Petroleum Law (2014): foreign companies must be listed on the local stock exchange in order to carry out petroleum operations</p> <p>Same for mining companies per the Mining Law (2014)</p>	No provisions	No provisions
Namibia (Mining, Oil and Gas)	<p>National Petroleum Corporation of Namibia (NAMCOR) 100% Government</p> <p>Epangelo, Desert Diamonds (State Mining)</p> <p>5% in Rossing Uranium (Rio Tinto)</p> <p>55% Namdeb (with DeBeers)</p>	<p>Only three mining companies listed on the local stock exchange – limited local participation.</p> <p>Namibian Mining Charter (2014): all mining, development and exploration companies must make 5% equity (of Namibian operations, not international) available for sale to locals</p>	<p>Affirmative Action Act (1998) sets progressive targets for locals in management positions</p> <p>End-2014 – 30%; end-2016 – 40%; end-2018 – 50%; end-2020 – 60%</p>	No provisions

ANNEX 4

Country	State Participation	Private Equity	Management by locals	Support for Asset Acquisition
Nigeria (Oil and Gas)	State oil company- Nigerian National Petroleum Company (NNPC) involved in upstream, midstream and downstream activities	<p>The Minister shall make regulations setting out targets to ensure full utilization and steady growth of indigenous companies engaged in the upstream, midstream and downstream sectors</p> <p>Acquisition of Divested Assets has led to more opportunities for increased participation and ownership of upstream assets</p> <p>International or MNCs working through their Nigerian subsidiaries shall demonstrate that a minimum of 50% of equipment deployed for operations are owned by Nigerian subsidiaries</p> <p>Exclusive consideration to Nigerian indigenous service companies which demonstrate ownership of equipment, Nigerian personnel and capacity to execute</p> <p>Nigerian independent operators shall be given first consideration in the award of oil blocks, oil field licenses in all projects</p>	<p>Succession plan for management and phased release of expatriates</p> <p>Nigerians must understudy all expatriates for a maximum of four years, after which they should be able to take the job as it becomes "Nigerianized"</p> <p>Operators may be able to retain a maximum of 5% of expatriates in management roles to take care of investor interests</p>	<p>Nigerian Content Development Fund provides loans for asset acquisition by indigenous companies</p> <p>A number of asset-financing programs and equity financing schemes initiated by major oil and gas operators and major Nigerian banks</p>

ANNEX 4

Country	State Participation	Private Equity	Management by locals	Support for Asset Acquisition
South Africa (Mining)	<p>African Exploration Mining and Finance Corporation -the State Owned Mining Company established to secure South Africa's energy supply primarily through the mining and supply of coal for the generation of electricity, as well as securing other resources that will provide energy for the future, including key minerals for beneficiation in the energy and steel value chain.</p> <p>More focus on increasing private equity rather than state equity</p>	<p>Focus on promoting private equity through both Mining Charter and Liquid Fuel Charter</p> <p>BBBEE beneficiation targets can even be offset with greater HDSA ownership;</p> <p>Minister gives preference to locals (HDSAs)</p> <p>Target of 26% HDSA ownership</p> <p>Mining companies listed on the Johannesburg Stock Exchange (JSE)</p>	<p>Top Management – 40%</p> <p>Senior Management – 40%</p> <p>Middle Management – 40%</p> <p>Junior Management – 40%</p> <p>Core skills – 40%</p>	<p>Support provided by Industrial Development Cooperation</p> <p>Business partners</p> <p>Public Investment Corporation and vendor financing</p> <p>Willing buyer-willing seller principle</p>
Zambia (Mining)	<p>State mining company ZCCM-IH (Zambia Consolidated Copper Mines Investment Holding)</p> <p>ZCCM-IH holds 10%-20% of shares in the top eight mining operations in the country</p>	<p>Minerals policy key objective is to facilitate the empowerment of Zambians to become owners/shareholders in the mining industry</p> <p>Minerals Policy encourages companies to float their shares on the local stock exchange</p>	None	<p>Citizen Economic Empowerment Strategy for the mining sector seeks to reserve a portion of mineral royalties for the development of businesses in mining communities</p>

ANNEX 5: Typology of Requirements for Local Financing Institutions and Funding Support for Participation by Locals

Country	Provisions for Local Financing	Provisions for Loan Acquisition	Statutory Funds for LCD
Burkina Faso (Mining)	No provisions	No provisions	New Mining Code has two funds; Local communities affected by mining Research and training in mining sector
Ethiopia (Mining; some Oil and Gas)	Micro-Financing Business Proclamation (2009) – basic legislative framework for project financing of all SMEs including in MOG sectors, but nothing specific for MOG sectors	No provisions	No provisions
Ghana (Mining, Oil and Gas)	Oil and Gas Sector Must maintain a bank account with an indigenous Ghanaian bank and transact business through banks in the country	Local Content fund provides loans on a competitive basis to SME's to support their participation in the sector	Petroleum Act 2016 Oil and Gas Business Development and Local Content Fund Sources of income: Contributions from contractors/sub-contractors per agreements; grants; moneys approved by Parliament and 1% of total contracts of sub-contractors
	Mining Sector No provisions for local financial institutions to engage in the mining value chain	No requirement to increase participation of local financial institutions in the sector	Financial penalties concerning Ghanaian labor and expatriates are directed towards a fund for training Ghanaians. Penalties and fines for not procuring Ghanaian goods on the procurement list and breaking other laws, fines go to the Minerals Commission as internally generated funds used for their operations.
Mozambique (Mining, Oil and Gas)	No specific provisions	No specific provisions	No specific provisions

ANNEX 5

Country	Provisions for Local Financing	Provisions for Local Acquisition	Statutory Funds for LCD
Namibia (Mining, Oil and Gas)	Inadequate capacity of local banks Facilitate funding from external banks	Local banks act more as fund managers as opposed to being the source of funding	Minerals Development Fund (1996) Established by an Act
Nigeria (Oil and Gas)	Must maintain a bank account with an indigenous Nigerian bank and transact business through banks in the country	A number of financing programs offered by major Nigerian banks and major operators for supporting their service providers and supply companies attached to specific projects: Niger Delta Contractor; Revolving Credit Facility (Shell Nigeria/IFC/Diamond Bank); Shell Contractors Support Fund (Shell Nigeria in collaboration with four Nigerian banks – Fidelity, First Bank, Access Bank, Standard Chartered Bank Contractor's Finance Scheme (ExxonMobil in partnership with 12 Nigerian banks); Nigerian Contractors Initiative (Total Nigeria in collaboration with 8 Nigerian banks)	Nigerian Content Development Fund (NCDF) Cabotage Financing Vessel Fund NCDMB receives statutory budget allocations for its activities as well as dedicated funding from the Nigerian Content Development Fund – 1% of every contract awarded should be paid into the NCDF There is currently a review of the operating model of the NCDF to improve accessibility of the funds for local companies
South Africa (Mining)	Mining Charter: Industry has committed to assist HDSA companies in securing financing of R100bn within the first five years of signing the Charter		Above-mentioned funds for education and training
Zambia (Mining)	No provisions	Non-specific	Non-specific

Footnotes

- 1 Making the Most of Africa's Commodities, UNECA, 2013
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- 23 Isabelle Ramdoo, www.ecdpm.org/dp179, Sept. 2015
- 24 Nwapa, 2014.
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<https://laurentian.ca/goodmanschoolofmines/>
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- 27 The government remains open to partnering strategic investors to pursue various value addition options in the sector.



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Mineral, Oil and Gas Sectors: Policies, Legal and Institutional
Frameworks-Trends and Responses in Selected African Countries**

SYNTHESIS REPORT 2017

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