

The Republic of Zambia

**Data Collection Survey
on Promoting Manufacturing Industry
in the Republic of Zambia**

Final Report

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JAPAN INTERNATIONAL COOPERATION AGENCY

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Acronyms

AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AGS	Accelerated Growth for SMEs in Zambia
ASM	Artisanal and Small-Scale Mining
ASTA	Agrifood System Transformation Accelerator
AZWIM	Association of Zambian Women in Mining
BDS	Business Development Services
BDSPAZ	Business Development Service Providers Association in Zambia
CCPC	Competition and Consumer Protection Commission
CDF	Constituency Development Fund
CEEC	Citizens Economic Empowerment Commission
CIT	Corporate Income Tax
CKD	Complete Knock Down
CNC	Computerized Numerical Control
COMESA	Common Market for Eastern and Southern Africa
COVID-19	Coronavirus Disease 2019
DAZ	Dairy Association of Zambia
DRC	Democratic Republic of Congo
DRI	Direct Reduced Iron
ECF	Extended Credit Facility
EV	Electric vehicle
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GTS	Good Time Steel
HATTAZ	Handloom Textiles Association of Zambia
IDC	Industrial Development Corporation
IFC	International Finance Corporation
ILO	International Labor Organization
IMF	International Monetary Fund
ITC	International Trade Centre
JICA	Japan International Cooperation Agency
JISF	Japan Iron and Steel Federation
KIZ	KAIZEN Institute of Zambia
KVTC	Kitwe Vocational Training Center
LS-MFEZ	Lusaka South MFEZ
MCC	Milk Collection Centers
MCTI	Ministry of Commerce, Trade and Industry
MFEZ	Multi Facility Economic Zone

MNCs	Multinational Mining Companies
MoFNP	Ministry of Finance and National Planning
MoGEE	Ministry of Green Economy and Environment
MoH	Ministry of Health
MoTS	Ministry of Technology and Science
MSME	Micro, Small and Medium-sized Enterprises
MSMED	Ministry of Small and Medium Enterprise Development
MTWG	Manufacturing-sector Technical Working Group
MVA	Manufacturing Value Added
NAO	National Authorizing Officer
NDP	National Development Plan
NORTEC	Northern Technical College
OEM	Original Equipment Manufacturer
PAZ	Poultry Association of Zambia
PFI	Participating Financial Institutions
PPDF	Public-Private Dialogue Forum
PPP	Public-private partnership
PSIF	Private Sector Investment Finance
SABS	South African Bureau of Standards
SADC	Southern African Development Community
SAP	Structural Adjustment Program
SDF	Skills Development Fund
SME	Small and Medium-Sized Enterprises
SOP	Standard Operating Procedures
STEM	Science, Technology, Engineering and Mathematics
TEVETA	Technical Education, Vocational and Entrepreneurship Training Authority
TICBAS	Trade and Institutional Capacity Building in the Apiculture Sector
TOT	Training of Trainers
TSL	Two-Step Loan
TVET	Technical and Vocational Education and Training
UAE	United Arab Emirate
UMCIL	United Mining and Chemical Industries Limited
UNDP	United Nations Development Program
UNIDO	United Nations for Industrial Development Organization
USAID	United States Assistance for International Development
VAT	Value-added Tax
WTO	World Trade Organization
ZABS	Zambia Bureau of Standards
ZACCI	Zambia Chamber of Commerce and Industry
ZAM	Zambia Association for Manufacturers
ZAMRA	Zambia Medicines Regulatory Authority
ZAMSA	Zambia Medicines and Medical Supplies Agency

ZCSA	Zambia Compulsory Standards Agency
ZDA	Zambia Development Agency
ZEMA	Zambia Environmental Management Agency
ZESCO	Zambia Electricity Supply Corporation Limited
ZHC	Zambia Honey Council
ZMW	Zambian Kwacha
ZNFU	Zambia National Farmers' Union
ZPMI	Zambia Pharmaceutical Manufacturing Initiative
ZQF	Zambia Qualification Framework
ZRA	Zambia Revenue Authority
ZSMPF	Zambia Steel and Metal Processing Federation

Exchange Rate (January 2024)

USD 1 = JPY 142.4

ZMW 1 = JPY 5.59

Summary

Introduction

The Republic of Zambia (Zambia) is the largest copper producer in Africa with approximately 800,000 tons of output per year with copper accounting for around 70 percent of the country's export earnings. The agriculture, manufacturing and tourism sectors, which have the potential for high employment generation, account for only 12 percent of Zambia's Gross Domestic Product (GDP) as of 2022, in contrast to the wholesale and retail, mining and extraction, and transport and storage sectors that account for roughly 46 percent of GDP.

In response to this situation, the Zambian Government identified agriculture, mining, manufacturing and tourism as key sectors in its Eighth National Development Plan (2022-2026) (8NDP). With this the government has set out its commitment to increasing trade and private investment in order to achieve high value addition and industrial diversification. The manufacturing sector in particular has a high potential for job creation and is expected to have multiplier effects on other industries such as agriculture and mining through value addition. Hence, within the 8NDP the Government has identified seven sub-sectors (food processing, engineering, wood and wood products, textiles, leather and leather products, metals and non-metallic minerals, and pharmaceuticals) as priority value chains with a focus on light industries that engage in labor-intensive operations. The development and operation of Multi-Facility Economic Zones (MFEZs) and industrial parks are also being promoted. It is also necessary to strengthen the capacity of the Zambian manufacturing sector so that high value-added products are produced.

This Survey aims to identify the challenges and prospects for the development of seven priority manufacturing sub-sectors through an analysis of the latest information on the Zambian manufacturing sectors, MFEZs and industrial parks; based on which future JICA projects will be proposed.

1. Economic Outlook of Zambia

Zambia's GDP is USD 22.2 billion as of 2021. Zambia's per capita GDP has achieved steady growth with an average annual growth rate of 5.4% since 2000. The performance of the Zambian economy is closely linked to copper prices with copper and related articles accounting for approximately 80% of Zambia's export.

Zambia was in a fiscal deficit from 2011 to 2022 with the situation worsening due to increased government expenditure. The major driver of this increased expenditure was payments on external debt interest. This attributed to the Zambian government's excessive borrowing.

The share in Zambia's GDP from the "Agriculture, forestry, and fishing sectors" was 5% in 2021 and the share from "Services sector" was 56% in 2021. The nominal value of the "Manufacturing" sector almost doubled over the last 20 years; however, its share in total GDP declined from 11% in 2005 to 8% in 2018. Although manufacturing's share in GDP declined from 2005 to 2018 with some sub-sectors within manufacturing such as textiles and leather having experienced downward trends; the industrial

production index (IIP) for the manufacturing sector as a whole has shown a modest increase. Zambia's employment shifted from the primary industry to the secondary and tertiary industries in line with the industrial structure shift.

Zambia recorded a trade deficit between 2015 and 2016 mainly due to lower copper prices. In 2020, Zambia's trade balance turned into a surplus with an increase in its export of "Ores and Metals (copper)". "Ores and Metals" has been the largest exported product group since 2015, followed by "Manufactures" and "Food". "Manufactures" comprised nearly half of Zambia's imports in 2021.

Foreign Direct Investment (FDI) inflows to Zambia have shown fluctuations over the past 30 years with total FDI inflows declining continuously following a peak in 2013. Between 2012 and 2019, Zambia's FDI stock grew by an average annual rate of 4.3%. The mining and quarrying industry (particularly the copper sector) comprised approximately 70% of Zambia's FDI stock in 2019, followed by the manufacturing industry at 17%.

2. Manufacturing Sector Landscape and Support Structures in Zambia

The GDP share of Zambia's manufacturing industry has remained between 8% and 11% over the last 20 years. Although the manufacturing industry has achieved a level of growth at pace with overall economic growth, it is difficult to say that the manufacturing industry has made a significant contribution to the "Economic transformation and employment promotion" advocated in the 8NDP.

"Vision 2030," the country's overarching national development plan announced in 2006, states that Zambia aims to "become a middle-income country by 2030". The new government administration led by President Hichilema, inaugurated in August 2021, announced the 8NDP for the years 2022-2026. Under the theme of "socio-economic transformation for improved livelihoods", "economic transformation and job creation" has been set as the primary strategic development area. Agriculture, mining, manufacturing and tourism have been positioned as key drivers upon which the country's economic growth agenda is tethered.

The Ministry of Commerce, Trade and Industry (MCTI), Ministry of Small and Medium Enterprise Development (MSMED) and Ministry of Technology and Science (MoTS) have been the major policy-making authorities for manufacturing industry promotion since 2021.

MCTI is in charge of formulating industrial policies. The Zambia Development Agency (ZDA) under MCTI is an implementing entity for industrial policy. MSMED, a new ministry established in 2021, is responsible for policy formulation and implementation monitoring of the promotion of MSMEs. Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), a government body under MoTS, is responsible for planning regulations and monitoring the performance of vocational training schools. The Citizens Economic Empowerment Commission (CEEC), a statutory body under the MSMED, was established in 2006 to foster economic empowerment in Zambia. Under an initiative by President Hichilema and with support from the International Finance Corporation (IFC), the Public-Private Dialogue Forum (PPDF) was established in April 2022 as an arena for public-private policy dialogue. The Zambian government launched MFEZ with a view to fostering the country's

competitiveness and industrialization.

The Survey Team has identified a total of 18 donor-funded projects (13 ongoing and 5 completed) that have contributed to the promotion of the Zambian government's seven priority sub-sectors in the manufacturing sector. 10 out of the 13 ongoing projects addressed challenges faced by agri-businesses and farmers in rural areas, such as limited access to markets and financing, through the provision of technical assistance and grants. The remaining two projects intend to nurture the mining and construction sectors by developing the capacities of major vocational training centers.

Zambia has approximately 800 Business Development Services (BDS) providers. A significant number of BDS providers are capable of providing business training aimed at imparting basic business knowledge while a limited number of BDS providers are able to respond to enterprises' specific needs such as fund raising, strategic planning, market research and operation management as well as sector-related issues. The major challenges for the Zambian BDS market are a lack of Micro, Small and Medium-sized Enterprises (MSMEs) willing to pay for the services and the unavailability of affordable financing. It should be also noted that the level of local BDS providers in Zambia would not be adequate to respond to MSME needs depending on the type of services required.

3. Overview of the Target Sub-Sectors

Food Processing

Zambia has a massive irrigation potential, estimated at 430,000 hectares, of which only 100,000 hectares is developed and mostly by large scale commercial enterprises. Zambia's 1.5 million smallholder farmers, who produce 80 percent of the domestic food supply, are extremely vulnerable to climate stresses and shocks as they depend on rainfed agriculture. Other issues faced by smallholder farmers include low grain productivity and low income as a result of limited access to high-quality inputs, financial services, post-harvest storages, technologies, markets and information.

Both maize and wheat are important staple foods from a food security perspective given the fact that (i) the country has achieved more or less self-sufficiency with these products; (ii) prices for these as international commodities are susceptible to significant fluctuations; and (iii) increases in production would require heavy irrigation infrastructure investment. As such it would not be cost-effective to invest in an expansion of their production. Instead, a diversification of smallholder farmers' income sources could increase and stabilize their income. To this end, for example, the strengthening of linkages between breweries and farmers (including smallholders) in cassava and sorghum production, which are not dependent on heavy irrigation, could be beneficial for both parties.

The bottleneck for most food processing industry growth is the limited availability of raw materials. Out-grower schemes for sunflower seeds and soybean should be promoted in the interest of cooking oil production while an increase in cotton seed production would be more difficult due to the necessary access to abundant water. The processing of honey and peanuts, which can also be promoted through an out-grower scheme, does not require heavy equipment investments since the technology is not complicated. Financing and BDS (product development, production and quality management,

marketing, packaging, etc.) support should be provided to farmers' groups and MSMEs to promote honey and peanut products, while support for out-grower scheme expansion could also be provided to larger companies.

An expansion of medium to large sized dairy farms (commercial farms) would be a prerequisite for the growth of the Zambian dairy industry since economies of scale cannot be achieved through a Milk Collection Center (MCC) model in which small amounts of milk are collected from individual smallholder farmers, though the MCC model is important to their income. Given the availability of domestically produced feed, which is one of the Zambia's advantages, the provision of financing to commercial dairy farms could boost the production of raw material (fresh milk), leading to the growth of dairy product processing companies.

Apart from consumption at the village level that does not require formal distribution channels, the major constraint on the growth of Zambian beef industry is financing for cattle breeders; due to immediate cash needs, breeders tend to sell immature cattle. Should long-term financing be available to smallholder cattle breeders, they would be able to fully fatten and mature their cattle, increasing their income with more meat being delivered to distributors.

In Zambia, 35% of chickens are processed commercially. In order to promote further import substitution for frozen chicken cuts; the financing of chicken farm expansion, rationalizing of feed distribution to reduce input costs, and strengthening of breeding stock providers are needed.

Wood and Wood Products

Despite the increasing demand for wood furniture, a lack of access to financing remains the major constraint on the Zambian wood and wood product industry. In order to respond to immediate customer demand, sawmillers and furniture manufacturers need capital to secure certain stocks of timber. Moreover, customers' upfront payments usually cover only a small portion of the order; the manufacturers thus need a large amount of working capital since full payment is only received upon delivery. Furniture manufacturers' lack of working capital results in lost order opportunities. Their inability to meet demand prevents the industry from realizing growth opportunities. Although obsolete processing equipment and facilities are problematic, the working capital issue should first be addressed in order for stability in sales to be achieved.

Leather and Leather Products

The most immediate challenge to the Zambian leather industry is a shortage of raw materials (i.e., hides and skins). This is caused mainly by exports to Nigeria as human consumed leather and the presumably low prices offered by Zambian tanneries because of the low quality of skins and hides due to branding. Should a proper mechanism, along with sensitization to farmers, be introduced in which higher prices are offered for high quality hides and skins without brands, it is highly likely that ear-tags will become the norm, replacing branding. This will lead to a revival of tanneries in Zambia, contributing to a revival of the Zambian leather industry as a whole. Though the equipment and facilities owned by the tanneries are outdated, the raw material issue must be addressed first.

Textiles

Although the Zambian textile industry contributed significantly to the country's economy and employment in the past, this value chain collapsed during the 1990s and 2000s due to an influx of cheap foreign products. Currently, the Zambian textile market is heavily dominated by imported, finished products and raw materials. Due to the low capacity of domestic spinning and weaving companies, Zambian garment manufacturers are highly dependent on raw materials (fabrics) imported from South Africa and China. The resulting high production costs have contributed to a loss in these enterprises' competitiveness, leading to cheap foreign products flooding the Zambian market, even for public procurements. Most Zambian garment manufacturers only produce niche products, such as school uniforms and jerseys, public institution uniforms and mining workers' clothes, on a small-scale basis.

Metals and Non-Metallic Minerals

Despite Zambia's abundant mineral resources, most small-scale miners remain poor due to limited access to financing and a lack of processing equipment and skills. The strengthening of small-miners' production and marketing capacities would have a large impact on their income and employment opportunities, leading to gem and jewelry sector growth. Both financial and technical support, including the strengthening of cooperatives' organizational and managerial capacity, would be needed.

Demand for non-metallic minerals such as cement and sulfur has been strong, reflecting increasing mining and construction activities in Zambia and the Democratic Republic of Congo (DRC). Product quality, environmental protection measures and labor safety in the manufacturing operation are key to the sustainable development of this growing sub-sector. Blockmaking is one of the most vibrant businesses that provides income generation opportunities to numerous small-scale businesses in Zambia. However, their inefficient and outdated techniques and machinery result in low quality products that do not meet the standards required by major construction projects. Both financial and technical support, including awareness raising and skill development for operational practices, to improve quality, environmental protection and labor safety, would be needed.

Engineering

Within Zambia's engineering sector, sub-sectors, such as iron and steel, steel fabrication, copper fabrication and steel-related processing and assembly, are growing. Among them, the iron, steel and steel fabrication sub-sectors have a particularly large potential for growth given the increasing demand for steel and steel-fabricated products in Zambia and surrounding countries. The iron and steel sub-sector is also known to have large multiplier effects for other industrial sectors. However, in promoting iron and steel businesses, particular attention needs to be paid to environmental controls, energy saving, recycling, and labor safety. Increased awareness and technological upgrading in these areas are key to the sector's sustainable development.

Steel fabrication is conducted not only by medium- to large-scale engineering steel fabricators but also by many MSME manufacturers scattered across the country. Challenges for small-scale fabricators include a difficulty in procuring quality-assured materials from the domestic steel market. Furthermore,

inefficient and outdated technologies and machinery result in low quality products that fail to meet market standards. Cluster development through the formulation of an industrial area hosting a number of steel-related companies is recommended as a development approach for this sub-sector. In light of this, an industry federation consisting of steel and metal fabrication related industries needs to be organized so that public-private partnership (PPP) forums are convened to discuss and plan the promotion of cluster development in the industrial area.

Pharmaceuticals

According to the interviews by the Survey Team, the Zambian government does not have a consistent policy for the promotion of pharmaceutical industries. In launching Zambia Pharmaceutical Manufacturing Initiative (ZPMI) in 2022 with the aim to create a conducive environment for promoting pharmaceutical product manufacturing, the Zambia Revenue Authority (ZRA) now levies taxes on raw materials used for pharmaceuticals production while exempting imported final pharmaceutical products from import duties and taxes. With Zambian pharmaceutical manufacturers heavily dependent on imported raw materials, the above policy leads to a significant loss in their products' competitiveness with imported final products.

4. Business Environment in Zambia

The Zambian government has been improving its business environment through a number of economic reforms over the past 20 years in order to make legislation and institutional systems more open to both local and foreign investors. However, the impact of the government's reforms has been undermined by several factors, such as weak governance, unreliable electricity, poor infrastructure, the high cost of capital, cumbersome administrative procedures, and a lack of skilled labor.

Since 2005, with the aim of attracting investment and promoting trade, Zambia has carried out a number of tax reforms, including the introduction of fiscal and non-fiscal incentives such as the reduced general corporate income tax rate and the preferential taxation for industries that are strategically important to the growth of Zambia's economy. However, the insufficient implementation of these tax policies and schemes has prevented Zambia's manufacturing companies from fully benefitting from these incentives.

Manufacturing companies in Zambia are troubled by redundant licensing systems. Zambian MSMEs' competitiveness is also undermined by an irrational licensing and permit system. Investors and enterprises in Zambia are also faced with additional challenges such as high cost of and limited access to financing, high labor costs compared to low labor productivity, and depreciation and volatility of the Zambian Kwacha. In spite of these challenges, investors are optimistic about the country's long-term potential for economic development, particularly in the fields of renewable energy, agriculture, financial services and the environment.

The Zambian government has been reforming investment incentives aimed at attracting more investors into Zambia. The Zambian government has been continuously giving fiscal and non-fiscal incentives to investments in its priority sectors; namely manufacturing, infrastructure construction, tourism, energy and water. On the other hand, investors are discouraged from investing in Zambia by the high transaction

costs attributed to inefficient administrative procedures which require them to consult with many different agencies. Zambia would be able to attract more investment into its MFEZs should these mandatory yet cumbersome license and permit procedures for investors to benefit from MFEZ incentives be streamlined.

5. Proposed Orientation for JICA Assistance to Promote the Manufacturing Sector in Zambia

The Survey Team made proposals on the orientation for JICA assistance, based on the survey results described in Chapter 2, 3 and 4. The comparative advantages and constraints of JICA's technical and financial assistance are also taken into consideration.

The following table summarizes the potential JICA assistance in each respective sub-sector as well as cross-sectoral topics based on the Survey Team's findings.

Sub-Sector / Issue	Key Factors	Potential JICA Assistance
Food processing	The food processing industry has a large growth potential due to increasing domestic and international demand. Though there are off-takers and food processing companies that are ready to increase the purchase of domestically produced raw materials, farmers are not able to respond due to a lack of financial and technical means. Diversifying smallholder farmers' income sources could increase and stabilize their income.	By applying Two-Step Loan (TSL) and Private Sector Investment Finance to the promotion of out-grower systems for cassava, sorghum, sunflower seeds and soybean; linkages between off-takers / food processing companies and farmers could be strengthened, leading to import substitution and sectoral growth. JICA's Two-Step Loan could also include the provision of financing to commercial dairy farms, cattle breeders and chicken farms, which would boost the commercial production of livestock products.
Wood and wood products	Though there are mixed views as to the availability of forest resources in Zambia, the domestic demand for wood furniture is increasing. Sawmill and furniture manufactures' lack of working capital constrains the volume of orders they can accept. Their inability to meet demand prevents the industry from realizing growth opportunities.	JICA's Two-Step Loan for SME financing could include the provision of equipment and working capital to sawmills and wood furniture manufacturers.
Leather and leather products	An increase in cattle population could be translated into high growth potential for Zambia's leather industry should all hides/skins be transformed into finished products domestically, which would contribute to job creation, poverty reduction and a substantial increase in foreign currency savings.	The biggest challenge to this sub-sector is the tanneries' difficulties in procuring raw materials. The current state of hide and skin distribution in Zambia needs to be investigated, based on the results of which remedial measures would need to be developed and implemented.
Textiles	Due to an influx of cheap foreign products, Zambia's textile value chain collapsed, resulting in most Zambian garment manufacturers producing only niche products using imported raw materials (fabrics).	Due to a lack of comparative advantage, cost-effectiveness cannot be easily achieved through an intervention in Zambia's textile industry. As such, this sub-sector would not be prioritized under such circumstances.
Metals and non-metallic minerals	Though Zambia has abundant mineral resources, most small-scale miners remain poor due to limited access to financing and a lack of processing equipment and skills. Strengthening of small-scale miners' production and marketing capacities would have large impacts on the generation of their	By strengthening BDS provider capacities and involving CEEC's Empowerment Fund, the organizational and managerial capacities of small-scale miner cooperatives could be strengthened with their technical skills developed and access to processing equipment improved.

	<p>income and employment opportunities, leading to growth in the gem and jewelry sector.</p> <p>Demand for non-metallic minerals, such as cement and sulfur, has been strong, reflecting increasing mining and construction activities in Zambia and the DRC.</p>	<p>The economic impact of cement and sulfur sub-sector development is limited due to its low value addition and weak linkages with other manufacturing sector value chains. As such, the priority for supporting this sub-sector is deemed to not be high.</p>
Engineering	<p>Within Zambia's engineering sector, the iron and steel and steel fabrication sub-sectors have a particularly large potential for growth, given the increasing demand for steel and steel-fabricated products in Zambia and surrounding countries.</p> <p>In promoting iron and steel businesses, particular attention needs to be paid to environmental controls, energy saving, recycling, and labor safety. Increased awareness and technological upgrading in these areas are key to the sector's sustainable development.</p>	<p>Cluster development through the formulation of an industrial area hosting a number of steel-related companies is the recommended approach for developing this sub-sector together with the provision of financial and technical support. In light of this, an industry federation consisting of steel and metal fabrication related industries would need to be organized in such a way as to facilitate the forming of PPP forums as platforms for discussing and planning the promotion of cluster development in the industrial area.</p>
Pharmaceuticals	<p>The Zambian government does not have a consistent policy for the promotion of domestic pharmaceutical industries. This leads to a significant decline in their products' competitiveness with imported final products.</p>	<p>It is recommended that JICA continues monitoring the Zambian government's policy on the promotion of the pharmaceutical sector.</p>
Business environment	<p>The Zambian government has been improving its business environment through a number of economic reforms over the past 20 years in order to make legislation and institutional systems more open to both local and foreign investors. However, the impact of the government's reforms has been undermined by several factors, such as weak governance, unreliable electricity, poor infrastructure, the high cost of capital, cumbersome administrative procedures, and a lack of skilled labor.</p>	<p>There are initiatives undertaken by the World Bank ZATP 2 and USAID Business Enabling Project to improve the business environment. Moreover, EU's "Technical Assistance to Develop a Regulatory Environment Conducive to Business" is about to launch. Since the effectiveness of these projects is dependent on their target agencies' commitment to reforms, it is recommended that JICA continue monitoring the progress of these projects and identify gaps that could be bridged with JICA resources.</p>
TVET	<p>Training courses and subjects in TEVETA institutions are dependent on traditional, old technologies that are further constrained by obsolete equipment. Should these technologies (facilities, equipment and human resources) be upgraded, it would contribute greatly to the growth of newly emerging manufacturing sub-sectors.</p>	<p>Though some major TEVETA institutions have received assistance from development agencies, positive impacts on the ground have yet to be seen.</p> <p>The strengthening of TEVETA institutions would require full-fledged support in both hardware (equipment) and software (management and technical capacity). Moreover, technologies would need to be continuously upgraded in order for these institutions to respond to the industries' needs. From this perspective, the relevance of JICA assistance should be carefully examined.</p>
Quality improvement	<p>Quality improvement has been an important issue in the promotion of the manufacturing industry. The strengthening of Zambia Bureau of Standards (ZABS) and ZCSA's capacity to respond to the specific needs of emerging manufacturing sub-sectors would contribute to the enhancement of their competitiveness.</p>	<p>The World Bank's ZATP has recently provided equipment to ZABS along with some technical assistance; the impact of this intervention needs to be monitored in order to determine the need for further assistance in the field of quality assurance.</p> <p>In developing the iron / steel and metal processing cluster in Kafue, specific technical fields to be strengthened in ZABS and Zambia Compulsory Statutory Agency (ZCSA) would need to be identified, and capacity development on a pilot-scale (with the provision of some equipment) could then be implemented when necessary.</p>
MFEZ development	<p>Infrastructure, particularly the supply of industrial water, is insufficient across all Multi Facility</p>	<p>Grant aid could be applied to the development of the water supply and distribution system in the Lusaka</p>

	<p>Economic Zones (MFEZs). Should a sufficient supply of industrial water be ensured, the development of MFEZs would be accelerated and a larger number of enterprises attracted.</p> <p>The adoption of a cluster approach would attract more investment. In particular, promoting cluster development for emerging manufacturing sub-sectors, such as iron / steel and metal processing, would contribute to an increased value addition and employment generation.</p>	<p>South MFEZ (LS-MFEZ).</p> <p>For the development of the Kafue MFEZ (an iron / steel and metal fabrication special economic zone), grant aid could be applied towards realizing a infrastructure development should a blueprint be developed through the PPP initiative.</p>
BDS	<p>There are a number of BDS providers in Zambia. Though many of them have been trained through donor projects, such as the World Bank's ZATP and Finland's Accelerated Growth for SMEs in Zambia (AGS), there remains a large gap between MSME capacity development needs and local BDS provider capacities.</p> <p>Moreover, the major challenges for the Zambian BDS market are a lack of MSMEs willing to pay for the services. Part of this challenge could be resolved by combining BDS and affordable financial services through CEEC.</p>	<p>CEEC manages the Empowerment Fund which is intended to support MSME's investment in physical infrastructure and working capital; however, the fund has not been effectively utilized due to CEEC's limited implementation capacity.</p> <p>Should CEEC's capacity be strengthened through JICA support, investment impacts could be significantly increased, contributing to the growth of hundreds of MSME.</p>

In this chapter, the Survey Team provided following ideas for JICA projects: (i) application of JICA Private Sector Investment Finance; (ii) application of JICA Yen Loans; (iii) application of JICA Grant Aid; (iv) development and implementation of a strategy for the improvement of hide and skin supply; (v) project for the Improvement of CEEC's Organizational Capacity; (vi) project for the Strengthening of the Capacity of Small-Scale Gemstone Processors; and (vii) assistance in the Development of a Steel and Metal Processing Cluster through Strengthening the Zambia Steel and Metal Processing Federation (ZSMPF).

Introduction

1 Background and Objective of the Survey

The Republic of Zambia (Zambia) has a population of approximately 19.6 million (based on the 2022 census), and borders eight countries. While the country is the largest copper producer in Africa after the Democratic Republic of Congo (DRC) with approximately 800,000 tons of output per year, copper accounts for around 70 percent of the country's export earnings. The mining industry as a whole has a poor employment absorption capacity and is in need of transformation away from its current industrial structure. The agriculture, manufacturing and tourism sectors, which have the potential for high employment generation, account for only 12 percent of Zambia's GDP as of 2022 (Ministry of Finance and National Planning: MoFNP), in contrast to the wholesale and retail, mining and extraction, and transport and storage sectors that account for roughly 46 percent of GDP.

In response to this situation, the Zambian Government identified agriculture, mining, manufacturing and tourism as key sectors in its Eighth National Development Plan (2022-2026) (8NDP). With this the government has set out its commitment to increasing trade and private investment in order to achieve high value addition and industrial diversification. The manufacturing sector in particular has a high potential for job creation and is expected to have multiplier effects on other industries such as agriculture and mining through value addition. Hence, within the 8NDP the Government has identified seven sub-sectors (food processing, engineering, wood and wood products, textiles, leather and leather products, metals and non-metallic minerals, and pharmaceuticals) as priority value chains with a focus on light industries that engage in labor-intensive operations. The development and operation of Multi-Facility Economic Zones (MFEZs) and industrial parks are also being promoted.

Along with high expectations for the private sector in Zambia, there is also an urgent need to identify and resolve bottlenecks in high-value addition value chains and in industrial diversification. In order to reap the benefits of intra-African free trade such as the African Continental Free Trade Area (AfCFTA), the Southern African Development Community (SADC) and the Common Market for Eastern and Southern Africa (COMESA), it is necessary to strengthen the capacity of the Zambian manufacturing sector so that high value-added products are produced.

Through technical cooperation projects such as the "Zambia Investment Promotion Project - Triangle of Hope" (2009-2012), JICA has provided support to improve the investment environment by strengthening the Zambian Government's institutional capacities. Under the National KAIZEN Project (2014-2016 and 2017-2022), JICA supported the capacity development of the KAIZEN Institute of Zambia (KIZ) so that KIZ could disseminate KAIZEN initiatives for increasing productivity throughout the country independently.

This Survey aims to identify the challenges and prospects for the development of seven priority manufacturing sub-sectors through an analysis of the latest information on the Zambian manufacturing sectors, MFEZs and industrial parks; based on which future JICA projects will be proposed.

2 Survey Area

The Survey covered all of Zambia in its information collection on the overall industrial structure, the manufacturing sector and other donors' assistance. The detailed survey included enterprise interviews on the value chains of the seven manufacturing sub-sectors across five provinces: Lusaka, Copperbelt, Central, Eastern and Southern Provinces.

3 Survey Team Members

The following are the team members engaged in the Survey.

Responsibilities	Name
Team Leader / Industry Analysis / Policy, Institution and Business Analysis	MORI Shinichi
Industrial Value Chain / Enterprise Survey	IWASE Nobuhisa
BDS Provider Survey	AKAHORI Junki, ZHANG Yahan
Research assistant	PHIRI Chirizani, MUSHOKE Simon

4 Survey Methodology

This Survey was based on a desk review and information collected through field surveys of manufacturing companies centered within the seven priority sub-sectors designated by the Zambian Government. The field survey was conducted from September 2023 through January 2024 and was supplemented by a seminar jointly held with PPDF on 23 January 2024.

During the field surveys, the Survey Team visited the government agencies responsible for the promotion of the manufacturing sector and SME development as well as donor agencies and projects playing leading roles in the relevant fields. Interviews were also conducted with institutions that provide Business Development Services (BDS). The JICA Survey Team conducted interviews with SMEs, associations and NGOs to identify constraints on SME development from an SME perspective. The organizations interviewed by the Survey Team are presented in Annex 1 Organizations Interviewed by the Survey Team hereto.

Based on the findings of the desk review and field surveys, the Survey Team proposed an orientation for JICA assistance to promote the manufacturing sector in Zambia.

Chapter 1 Economic Outlook of Zambia

1-1 Economy

Zambian economy encompasses approximately 19.6 million people with a Gross Domestic Product (GDP) of USD 22.2 billion as of 2021. As shown in Figure 1, Zambia’s per capita GDP has achieved steady growth with an average annual growth rate of 5.4% since 2000. Much of this economic growth rests on the Structural Adjustment Program (SAP), which was introduced in 1991 and brought about a number of drastic changes such as the liberalizing of exchange and interest rates, the removing of quantitative restrictions on trade and the privatizing state-enterprises.¹ Following negative growth in the mid-1990s, the economy has moved along into an upward trend and begun to grow.

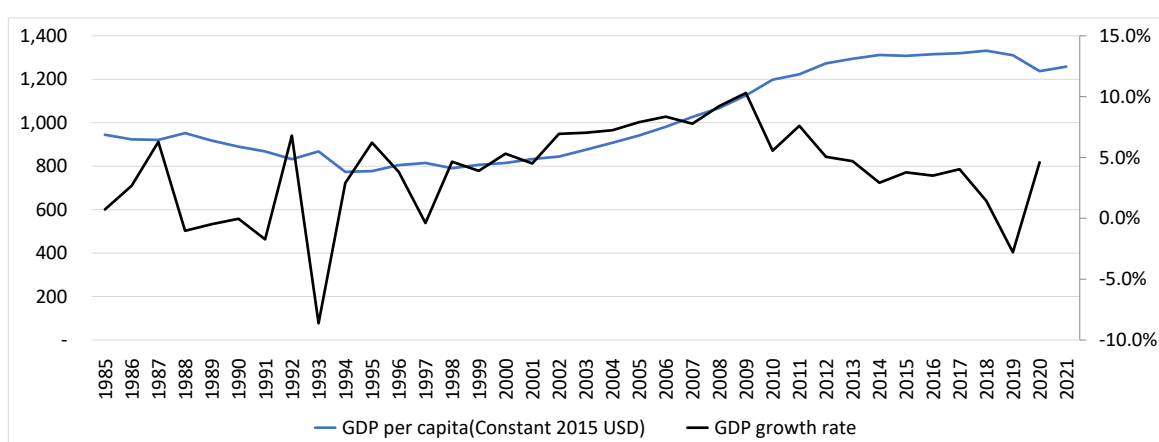


Figure 1: GDP per Capita and GDP Growth Rate (1995-2021)

Source: Compiled by the Survey Team based on data available in World Bank Open Data

The performance of the Zambian economy is closely linked to copper prices with copper and related articles accounting for approximately 80% of Zambia’s export (as detailed in the below sections). Figure 2 illustrates the strong correlation between Zambia’s GDP and copper price trends. After reaching its peak in 2013, the Zambian economy began to decline due to decreasing copper prices.

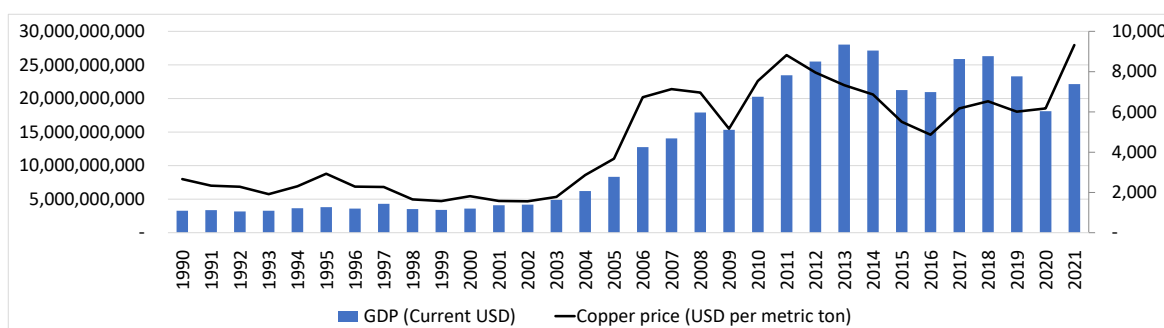


Figure 2: GDP and Copper Prices (1990-2021)

Source: Compiled by the Survey Team based on data from World Bank Open Data and IMF Commodity Data Portal

¹ UNCTAD (2021), “COVID-19 and the Challenge of Developing Productive Capacities in Zambia”

1-2 Central Government Budget

Zambia was in a fiscal deficit from 2011 to 2022 with the situation worsening due to increased government expenditure. The major driver of this increased expenditure was payments on external debt interest;² Zambian interest payments increased from USD 0.182 billion in 2011 to USD 1.351 billion in 2020 according to World Bank interest payment data.³ This is attributed to the Zambian government's excessive borrowing.⁴ With surged expenditures in 2020, Zambia fell into default, resulting in the signing of the International Monetary Fund's (IMF) Extended Credit Facility (ECF) in 2022; a USD 1.3 billion 38-month program for restoring Zambian government's fiscal sustainability.⁵

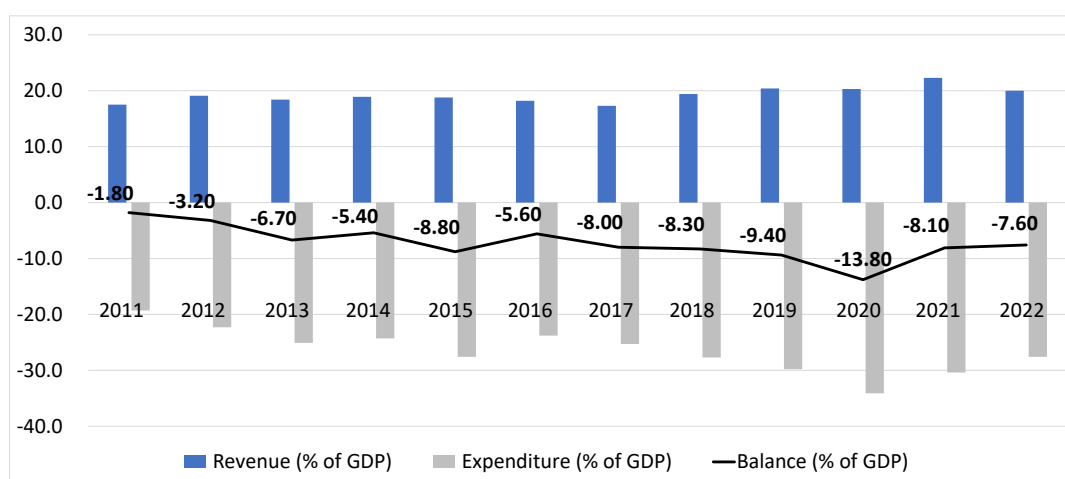


Figure 3: Zambia's Central Government Budget between 2011 and 2022

Source: Compiled by the Survey Team based on IMF (2023) "IMF Country Report No. 23/256" and IMF (2017) "Press Release No. 17/394"

1-3 Industry Structure

Zambia's industrial structure has shifted over the past 30 years with the share of GDP from the "Agriculture, forestry, and fishing sectors" (Primary Industry) decreasing from 15 % in 1990 to 5% in 2021 and the share from "Services sector" (Tertiary Industry) increasing by 18 percentage points to 56% in 2021. The share of the industrial sector⁶ (Secondary Industry) has remained at around 40% of GDP since 2000.

² IMF (2023) "IMF Country Report No. 23/256"

³ "<https://data.worldbank.org/indicator/GC.XPN.INTP.RV.ZS?locations=ZM>", calculated by the Survey Team.

⁴ IMF (2023) "Zambia: Selected Issues"

⁵ IMF (2022) "IMF Country Report No. 22/292"

⁶ The industrial sector includes manufacturing, mining and quarrying, construction and utilities.

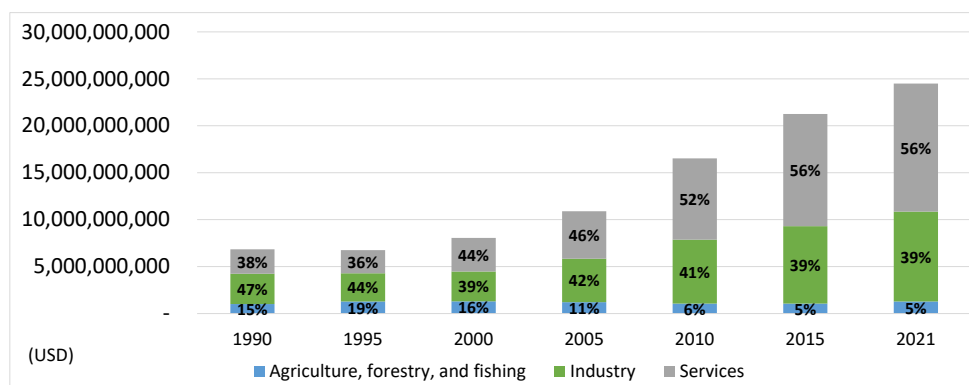


Figure 4: Industrial Structure (1990 -2021)

Source: Compiled by the Survey Team based on data obtained from World Bank Open Data

Table 1 shows Zambia’s major industrial sub-sectors and each sub-sector’s contribution to the nation’s GDP. “Wholesale and retail trade; repair of motor vehicles and motorcycles” had the largest share in 2018, followed by “Mining and quarrying” and “Financial and insurance services”. In contrast to “Mining and quarrying”, which had the largest increase (12 percentage points), the share of “Agriculture, forestry and fishing” had the most significant decrease (18 percentage points) among all industrial sub-sectors. The nominal value of the “Manufacturing” sector almost doubled (from USD 0.88 billion in 2003 to USD 1.9 billion in 2021) over the last 20 years; however, its share in total GDP declined from 11% in 2005 to 8% in 2018.

Table 1: Major Industrial Sectors and Each Sector’s Contribution to GDP

Ranking in 2018	Sector	Share in GDP		Change in share (2005-2018)
		2005	2018	
1	Wholesale and retail trade; repair of motor vehicles and motorcycles	18%	21%	3% points
2	Mining and quarrying	3%	15%	12% points
3	Financial and insurance services	15%	12%	-3% points
4	Construction	10%	9%	-1% point
5	Manufacturing	11%	8%	-3% points
6	Transport and storage	4%	7%	3% points
7	Community, social and personal services	6%	7%	1% point
8	Government	3%	4%	1% point
9	Agriculture, forestry and fishing	21%	3%	-18% points
10	Electricity, gas and water	3%	3%	0% point
11	Information and communication	0%	2%	2% points
12	Accommodation and Food service activities	3%	1%	-2% points
13	Others	3%	8%	5% points

Source: Compiled by the Survey Team based on data obtained from the Zambia Statistics Agency

Growth in service sectors, such as transportation and wholesale/retail trade, has been noticeable, being induced by increases in private consumption in Zambia and neighboring countries and in domestic infrastructure and construction investment, as well as by a revitalization of copper mining investment and production in Zambia and the DRC. Although manufacturing’s share in GDP declined from 2005 to 2018 with some sub-sectors within manufacturing such as textiles and leather having experienced downward trends; the industrial production index (IIP) for the manufacturing sector as a whole has shown a modest increase. Among the manufacturing sectors, a boom is being seen in food processing, such as the manufacturing of beverages and other agro-processing products that have experienced

increased consumption increases both domestically and in neighboring countries; and construction material production such as steel, metal products and cement.⁷

1-4 Employment

Figure 5 illustrates the progression of Zambia’s unemployment rate over the past 30 years. The unemployment rate has declined by 12.7 percentage points from a high of 18.9% in 1991 to 6.2% in 2021, despite the growing labor force.

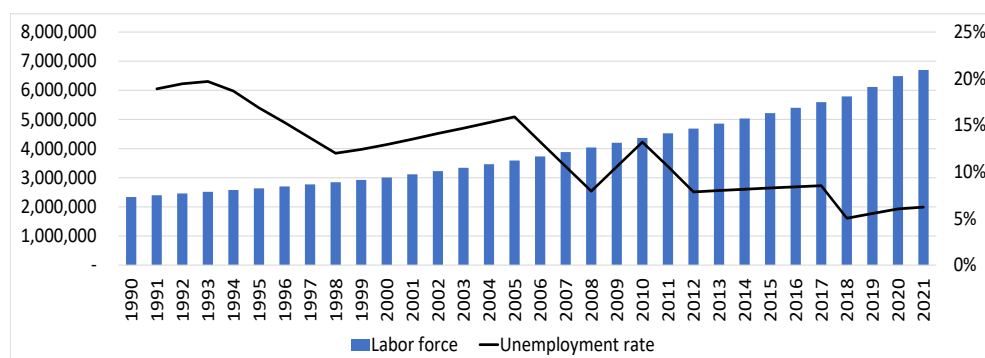


Figure 5: Labor Force and Unemployment Rate (1990-2021)

Source: Compiled by the Survey Team based on data obtained from World Bank Open Data

Overall, Zambia’s employment shifted from the primary industry to the secondary and tertiary industries in line with the industrial structure shift explained in “1-3 Industry Structure”. In 2022, “Wholesale and retail trade” had the largest share of employment (29.0%), followed by “Agriculture, forestry and fishing (24.1%)” and “Manufacturing (9.7%)”. It should be noted that “Mining and quarrying” contributed only 2.0% to total employment in 2022, though it accounted for 15% of Zambia’s GDP.

Table 2: Employed Population and Employment Rate by Industrial Sector (2005, 2018 and 2022)

Ranking in 2022	Industrial Sector	Share in total employed population			
		2005	2018	2022	Change in share (From 2005 to 2022)
1	Wholesale and retail trade	10.5%	23.7%	29.0%	18.5% points
2	Agriculture, forestry and fishing	78.0%	27.5%	24.1%	-53.9% points
3	Manufacturing	4.3%	8.1%	9.7%	5.4% points
4	Transport and storage	2.3%	4.1%	5.8%	3.5% points
5	Construction	1.5%	6.0%	4.9%	3.5% points
6	Administrative and support service activities	0.0%	2.9%	4.3%	4.3% points
7	Education	0.0%	6.2%	3.8%	3.8% points
8	Accommodation and Food service activities	0.0%	2.2%	2.9%	2.9% points
9	Human health social work activities	0.0%	2.8%	2.1%	2.1% points
10	Mining and quarrying	1.5%	2.9%	2.0%	0.5% point
11	Financial, insurance services and real estate	1.1%	1.5%	1.8%	0.7% point
12	Government	0.0%	2.3%	1.7%	1.7% points
13	Professional, scientific and technical activities	0.0%	0.4%	0.8%	0.8% point
14	Information and communication	0.0%	0.5%	0.7%	0.7% point
15	Electricity, gas, steam and water	0.9%	1.4%	0.3%	-0.5% point

Source: Compiled by the Survey Team based on Ministry of Labour and Social Security (2005, 2018 and 2022) “Labor Force Survey Report”

⁷ Source: Observations by the JICA Survey Team, based on website search and interviews with companies in Zambia

The unemployment rate decreased across most age groups between 2005 and 2022, except for the youth population (aged between 15 and 29).

Table 3: Unemployment Rate by Age Group

Age Group	Unemployment rate in respective age group's labor force		Change in share (2005-2022)
	2005	2022	
15-19	25.0%	32.0%	7.0% points
20-24	22.0%	29.8%	7.8% points
25-29	15.0%	16.1%	1.1% points
30-35	13.0%	12.2%	-0.8% points
35-39	8.0%	7.1%	-0.9% points
40-44	9.0%	5.9%	-3.1% points
45-49	8.0%	5.8%	-2.2% points
50-54	10.0%	4.8%	-5.2% points
55-59	10.0%	2.1%	-7.9% points
60-64	12.0%	2.7%	-9.3% points
65+	10.0%	2.7%	-7.3% points

Source: Compiled by the Survey Team based on Ministry of Labour and Social Security (2005 and 2022 "Labor Force Survey Report")

1-5 Trade

Zambia recorded a trade deficit between 2015 and 2016 mainly due to lower copper prices. In 2020, Zambia's trade balance turned into a surplus with an increase in its export of "Ores and Metals (copper)" as shown in Figure 6.

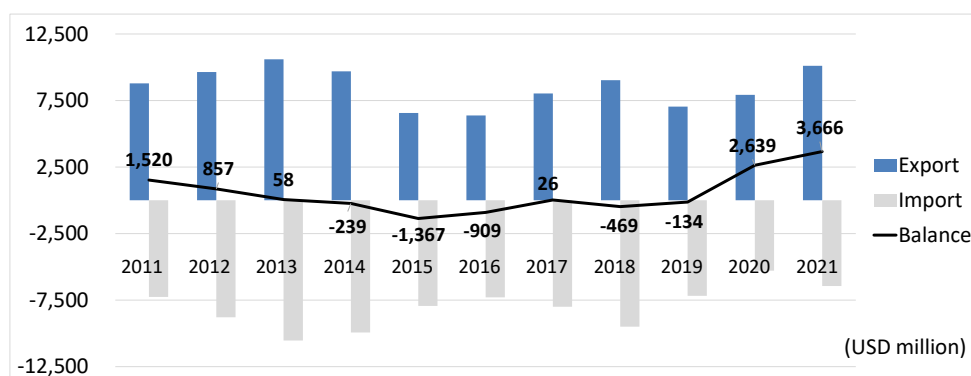


Figure 6: Trade Balance (2011-2021)

Source: Compiled by the Survey Team based on data obtained from World Bank's World Integrated Trade Solution

Zambia's export of goods and services is shown in Table 4. "Ores and Metals" has been the largest exported product group since 2015, accounting for 75.6% of Zambia's exports in 2021, followed by "Manufactures" and "Food". "Agricultural Raw Materials" and "Textiles" share of total exports decreased by 1.3 percentage points and 0.5 percentage point between 2015 and 2021, respectively.

Table 4: Export of Goods and Services by Product Group (2015-2021)

Ranking in 2021	Product group	Export amount (USD million)							Share in total export in 2021
		2015	2016	2017	2018	2019	2020	2021	
1	Ores and Metals	4,853	4,589	6,325	6,906	5,160	6,159	7,946	75.6%
2	Manufactures	760	929	888	1,294	1,098	887	1,095	10.4%
3	Food	640	581	579	552	522	603	778	7.7%
4	Chemical	177	159	220	368	347	269	279	2.7%
5	Machinery and Transport Equipment	193	414	163	206	213	154	169	1.6%
6	Fuel	109	59	74	95	95	136	148	1.4%
7	Agricultural Raw Materials	94	94	63	80	88	64	66	0.6%
8	Textiles	67	76	45	64	62	37	35	0.3%
Total		6,893	6,901	8,357	9,565	7,585	8,309	10,516	100%

Source: Compiled by the Survey Team based on data obtained from World Bank's World Integrated Trade Solution

In terms of the import of goods and services, "Manufactures" comprised nearly half of Zambia's imports in 2021 as shown in Table 5. More than 80% of Zambia's imports in 2021 were accounted for by "Manufactures", "Machinery and Transport Equipment" (18.4%) and "Chemicals" (16.7%).

Table 5: Imported Goods and Services by Product Group (2015-2021)

Ranking in 2021	Product group	Import amount (USD million)							Share in total import in 2021
		2015	2016	2017	2018	2019	2020	2021	
1	Manufactures	5,107	4,321	5,002	6,057	4,959	4,050	4,793	47.3%
2	Machinery and Transport Equipment	2,302	2,132	2,284	2,868	2,151	1,510	1,864	18.4%
3	Chemicals	1,326	1,168	1,471	1,670	1,419	1,436	1,698	16.7%
4	Fuel	1,749	1,692	1,342	1,340	1,258	497	643	6.3%
5	Ores and Metals	556	776	1,105	1,480	357	190	368	3.6%
6	Food	477	445	489	501	521	460	569	5.6%
7	Textiles	111	106	146	146	157	197	162	1.6%
8	Agricultural Raw Materials	40	49	40	49	51	38	47	0.5%
Total		11,668	10,689	11,879	14,111	10,873	8,378	10,144	100%

Source: Compiled by the Survey Team based on data obtained from World Bank's World Integrated Trade Solution

Zambia's major trade partners are set out in Table 6. Switzerland, China and Singapore were the three major destinations for Zambia's exports over the last decade; these countries accounted for approximately 95% of "copper and related articles" exports in 2021.⁸ The fourth placed DRC was the export destination for materials such as salt, sulfur, lime and cement. In terms of imports, South Africa and China were the largest trade partners from which Zambia imported manufactured goods such as "mechanical appliances and parts", "vehicles, parts and accessories" as well as "plastics and articles thereof".⁹

⁸ According to Zambian export statistics (customs data submitted to the United Nations WTO/ITC), the country's major export destinations include Switzerland, Singapore and Luxembourg with copper-related products (HS74) representing almost all of the export value to these countries. However, trade statistics from these three countries do not reflect the corresponding copper-related imports from Zambia. This data discrepancy is apparently attributable to the common practices of customs declarations recording the locations of the registered headquarters of multinational corporations as the export destinations. Advanced industrialized countries (Europe, America and Asia) account for most of copper-related imports, especially those of upstream products along the copper value chain, such as copper ore (beneficiated ore), and intermediate materials, such as anodes and cathodes. It is thus natural to presume that multinational corporations based in Zambia that exploit natural resources are selling anodes and cathodes to copper smelting and processing companies located in such countries, and are not limited to Switzerland, Singapore and Luxembourg.

⁹ Bank of Zambia (2021) "Direction of Trade Report"

Table 6 Zambia's Trade Partners

Trade flow	Ranking in 2021	Country	Export in 2021 (USD million)	Share in total (2021)
Export	1	Switzerland	4,249.4	44.8%
	2	China	1,911.1	20.2%
	3	Singapore	1,367.1	14.4%
	4	DR Congo	981.7	10.4%
	5	South Africa	262.4	2.8%
	6	Luxembourg	223.9	2.4%
	7	Zimbabwe	180.7	1.9%
	8	Malawi	115.9	1.2%
	9	India	95.5	1.0%
	10	Hong Kong	93.8	1.0%
Import	1	South Africa	2015.2	31.3%
	2	China	810.8	12.6%
	3	India	403.0	6.3%
	4	United Arab Emirates	363.9	5.7%
	5	DRC	297.7	4.6%
	6	Seychelles	274.3	4.3%
	7	Japan	227.8	3.5%
	8	United States	195.3	3.0%
	9	United Kingdom	179.9	2.8%
	10	Namibia	118.0	1.8%

Source: Compiled by the Survey Team based on Bank of Zambia (2016-2021) "Direction of Trade Report"

Regarding trade with Japan, Zambia's export value was a paltry USD 2 million in 2021, while Zambia's imports from Japan were around USD 250 million. Among the imported items, transportation machinery (HS87: mainly passenger cars and commercial vehicles) was the largest share, accounting for 72% of total import value. This was apparently attributable to strong demand for Japanese passenger cars and commercial vehicles, including used cars. In terms of exports from Zambia, there was a period in the mid-2010s when cathodes (HS7403) were exported at a level of USD 50 to 80 million, which was an isolated incident. Being a major importer of copper ore (beneficiated ore), Japan owns an entire copper value chain along the coast lines with integrated production facilities from copper ore to refined copper and final products. Without the necessity to import intermediate materials such as anodes and cathodes, Japanese manufacturers prefer to import ore from copper-producing countries with seaports that are capable of transporting ore in large quantities at low prices, such as Chile, Australia, Peru and Indonesia. As such, they avoid the importation of ore from Zambia where transportation costs from inland mines to international ports are high. Japan's integrated manufacturers in copper smelting and processing have also established global value chains between themselves and customer manufacturing companies in major Asian markets, such as China and Southeast Asian countries, to whom these Japanese companies export a certain amount of refined copper (cathode) and processed copper products (see 3-6 Engineering).

When looking at the volume in detailed trade data, a different picture emerges. The total export volume of major products, excluding copper, sharply increased from 801,000 tons in 2012 to 2 million tons in 2022 (see Figure 7). The destination of these export products was primarily the African regional market (share 86%), particularly the DRC (64%).

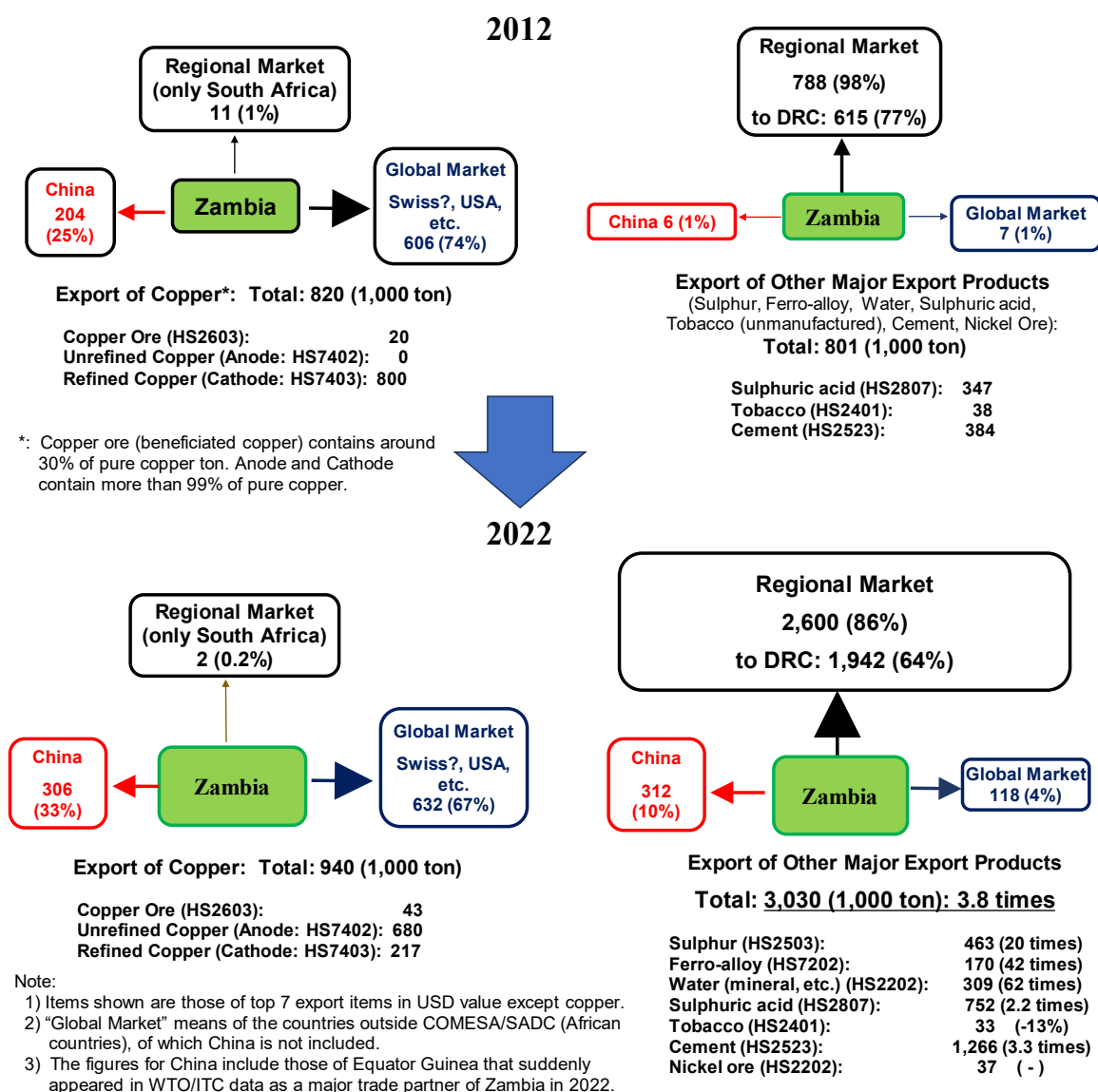


Figure 7: Volume and Destination of Major Export Items of Zambia

Source: Survey Team

1-6 Foreign Direct Investment (FDI)

FDI inflows to Zambia have shown fluctuations over the past 30 years with total FDI inflows declining continuously following a peak in 2013. Between 2012 and 2019, Zambia's FDI stock grew by an average annual rate of 4.3%. The mining and quarrying industry (particularly the copper sector) comprised approximately 70% of Zambia's FDI stock in 2019, followed by the manufacturing industry at 17%. Canada, Switzerland, Australia, China, the Netherlands and the United Kingdom were the top six sources of FDI stock in 2019, accounting for nearly 70% of total FDI. FDI inflows decreased by nearly 50% between 2012 and 2019.¹⁰ The mining and quarrying industry attracted the largest investment (USD

¹⁰ The decline in FDI inflows in the second half of the 2010s can be associated with reduced (or suspended) copper-related investments triggered by: (1) a low international copper price that persisted between 2013 and 2020 at a level lower than USD 6,000 /ton; and (2) repeated changes in copper-related taxation by the Zambian government due to a decline in fiscal revenue caused by reductions in copper production. These resulted in a decreased investment appetite by multinational copper-related companies.

406.5 million), accounting for 47% of total FDI inflows in 2019. The share of FDI inflows of manufacturing industry was approximately 30% in 2019. Australia is the largest source of FDI inflows, accounting for 25% in 2019, followed by the British Virgin Islands (24%) and Ireland (15%).

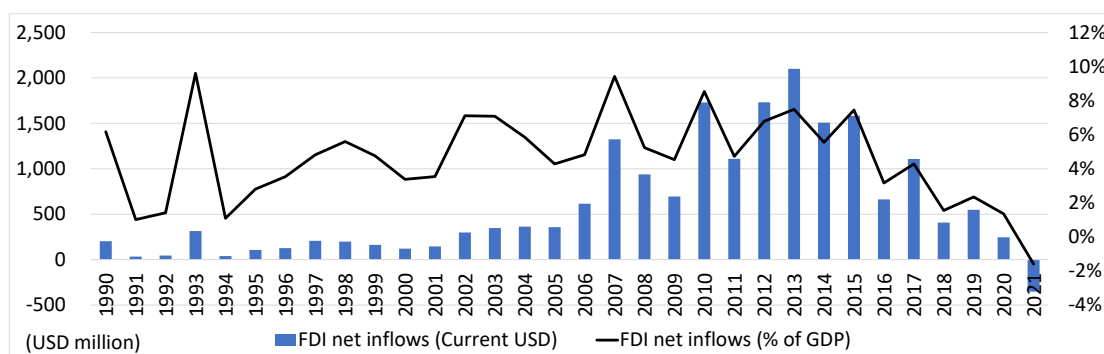


Figure 8: FDI Net Inflow (1990-2021)

Source: Compiled by the Survey Team based on data obtained from World Bank Open Data

Table 7: FDI to Zambia and Southern Africa¹¹

FDI	Country/Region	USD million/percentage								Annual average growth rate (2019-2012)
		2012	2013	2014	2015	2016	2017	2018	2019	
FDI stock (inward)	Zambia	11,994	14,260	15,009	16,544	14,936	16,973	21,367	20,906	4.3%
	Southern Africa	175,900	191,597	195,328	194,846	249,601	235,027	233,413	252,207	4.4%
	Zambia's share in the region	7%	7%	8%	8%	6%	7%	9%	8%	-
FDI flow (inflow)	Zambia	1,732	2,100	1,489	1,305	663	1,108	408	860	-3.3%
	Southern Africa	7,330	10,949	17,827	19,374	6,978	-941	4,469	4,514	-79.6. %
	Zambia's share in the region	24%	19%	8%	7%	9%	N/A	9%	19%	-
Greenfield investment (The number of projects)	Zambia	20	26	17	13	13	15	16	20	-2.6%
	Southern Africa	303	311	255	224	195	193	200	252	-6.1%
	Zambia's share in the region	6.6%	8.4%	6.7%	5.8%	6.7%	7.8%	8.0%	7.9%	-

Source: Compiled by the Survey Team based on Bank of Zambia (2013-2019) "Survey on Private Sector Foreign Investment in Zambia" and UNCTAD (2023) "World Investment Report 2023"

¹¹ 10 countries, i.e. Zambia, Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa and Zimbabwe, are grouped as "Southern Africa".

Chapter 2 Manufacturing Sector Landscape and Support Structures in Zambia

2-1 Manufacturing Industry in Zambia

The GDP share of Zambia’s manufacturing industry has remained between 8% and 11% over the last 20 years.¹² Although the manufacturing industry has achieved a level of growth at pace with overall economic growth, it is difficult to say that the manufacturing industry has made a significant contribution to the “Economic transformation and employment promotion” advocated in the 8NDP.

The export of copper resources mined in Zambia has accounted for approximately 70% of net export earnings (export value minus import value). However, sectors downstream of copper-related manufacturing such as secondary refining of the mined copper and copper fabrication, have remained underdeveloped. As such, a low value-addition ratio for copper resources has been a long-standing issue. The employment absorption capacity of the mining industry on its own is small with the number of workers engaged in mining remaining at about 2% of Zambia’s total employed population.¹³

Apart from the recently added “pharmaceuticals” sub-sector, the Zambian Government has consistently prioritized six manufacturing sub-sectors (food processing, engineering, wood and wood products, textiles, leather and leather products, and metals and non-metallic minerals) over the past 20 years since these were all “resource-based manufacturing” that in principle used domestically produced resources. The strengthening of these value chains along with increasing the value-addition of resourced-based manufacturing sub-sectors has been on the table for many years.

2-2 Eighth National Development Plan and Industrial Policy in Zambia

“Vision 2030”, the country’s overarching national development plan announced in 2006, states that Zambia aims to “become a middle-income country by 2030”. Even after the three democratic general elections and successive changes in administration, major policies for economic and industrial development have been set out in line with this long-term vision. Under this vision, an industrial policy document was announced about every five years.

The new government administration led by President Hichilema, inaugurated in August 2021, announced the 8NDP for the years 2022-2026. Under the theme of “socio-economic transformation for improved livelihoods”, “economic transformation and job creation” has been set as the primary strategic development area. Agriculture, mining, manufacturing and tourism have been positioned as key drivers

¹²Source: World Bank data. The latest data for 2021 is 8%.

¹³ On the other hand, the GDP of the mining sector fluctuates due to changes in the level of activity by international resource majors engaged in mining. Currently, the trend of high natural resource prices continues, and the further development of mining resource in Zambia and neighboring countries is expected to increase.

upon which the country's economic growth agenda is tethered. The following table outlines the strategies related to manufacturing industry promotion as set out in the 8NDP.

Table 8: Zambian Government's Development Strategies Related to Industry Development

Strategic Development Area	Development Outcome	Strategies
Economic transformation and job creation	Creation of industrialized and diversified economy	Increase agricultural production and productivity Promote traditional and non-traditional minerals Promote value addition and manufacturing Promote tourism growth Improve transport and logistics Enhance generation, transmission and distribution of electricity Enhance management of petroleum products Enhance management and productive use of water resources Enhance digital capacity Promote applied research and development
	Enhanced citizenry participation in the economy	Promote local and diaspora participation in the economy Promote enterprise development Promote technical and vocational training Promote financial inclusion
	A competitive private sector	Promote quality and productivity Facilitate increased domestic and international trade Improve access to finance for production and exports.
Human and social development	Improved education and skill development	Enhance access to quality and inclusive education Improve technical, vocational and entrepreneurship skills Increase access to higher education Enhance science, technology and innovation

Source: 8NDP

In short, the 8NDP intends to expand trade and increase private investment with a view to increasing value addition and diversifying industries. The promotion of the manufacturing industry, which has a high potential for job creation and multiplier effects on other industries, has been set as a key issue. Seven manufacturing sub-sectors have been prioritized: specifically food processing, engineering, wood and wood products, textiles, leather and leather products, metals and non-metallic minerals, and pharmaceuticals. At the same time, the government plans to promote the development and operation of MFEZ and industrial parks. The goal is to increase the average annual growth rate of the manufacturing industry to 5% or more during the 8NDP implementation period.

Under the previous administration, MCTI, which is responsible for manufacturing industry promotion, developed three policies: the "National Industrial Policy (2018)", "National Investment Promotion Strategy 2018 to 2022" and "National Local Content Strategy 2018-2022" (Table 9). Under the new administration MSMED announced the revised National Micro Small and Medium Enterprise Development Policy in December 2023, which sets out the definition of Micro Small and Medium Enterprises (MSME) as well as the orientation of support to MSMEs. The policy seeks to increase MSME participation and competitiveness in commerce, increase MSME production and productivity, and create an enabling environment that reduces the cost of doing business.¹⁴ The definitions and classification of MSMEs and the contents of the policy are summarized in Table 10 and Table 11.

¹⁴ Source: Foreword by Minister of MSMED, Revised National MSME Development Policy, MSMED, 2023

Table 9: National industrial Policy Papers Announced before 2021

Strategy Papers	General description	Strategic objectives
National Industrial Policy (2018)	<p>The policy sets out the vision, rationale, guiding principles, policy focus, objectives and strategies, and implementation framework, which is to be implemented between 2017 and 2027.</p> <p>Vision: Zambia to be an industrialized and competitive nation with a diversified and globally industrial base, which contributes to sustainable growth and employment creation by 2027.</p> <p>Overall objectives: To transform Zambia from a producer and exporter of primary products into a net exporter of value added goods utilizing local primary resources with increased citizens' participation.</p>	<p>Nine strategic objectives:</p> <ol style="list-style-type: none"> 1) To increase the growth of the manufacturing sector from an average of 5% to 20% and its contribution to GDP from 8% to 15% by 2027, 2) To attain 100% employment growth in the manufacturing sector by 2027 3) To facilitate the development and implementation of the Industrial Upgrading and Modernization Program 4) To facilitate effective utilization of domestic raw materials in industrialization 5) To promote growth of Cooperatives and Micro Small Medium Enterprises in Industrial development 6) To facilitate the production of high quality Zambian goods 7) To promote environmentally sustainable industrial production, 8) To increase actualized Domestic and Foreign Direct Investment in Priority Sectors 9) To mainstream cross cutting issues of HIV and AIDS, Gender, Youth and Disability in the industrialization agenda
National Investment Promotion Strategy 2018-2022	<p>The strategy sets out the vision, rationale, guiding principles, objectives/ strategies / targets, and implementation framework, which is to be implemented over five (5) years from 2018 to 2022.</p> <p>Vision: Zambia to be a prosperous, competitive and preferred investment destination by 2030.</p> <p>Overall objectives: To increase domestic and foreign direct investments by 25% annually that supports sustainable socio-economic development.</p>	<p>Six strategic objectives:</p> <ol style="list-style-type: none"> 1) To effectively mobilize domestic and foreign direct investments in order to increase actualized investments in target sectors by 5% annually 2) To undertake targeted investment marketing programs in order to attract and retain investments in the country 3) To promote and facilitate investments by cooperatives in target sectors of the economy in order to increase citizen's participation in the economy 4) To promote re-investments and diversification by already operationalized investors in order to increase the value of domestic investments in the target sectors by 10% annually 5) To strengthen the coordination and collaboration of investment promotion and facilitating institutions in order to improve investor support 6) To develop and implement monitoring and evaluation mechanisms in order to monitor the performance and contribution of local and foreign investments to the economy
National Local Content Strategy 2018-2022	<p>With reference to the international practices in Nigeria, South Africa and Australia, the strategy sets out the scope, guiding principles, specific objectives/ activities, and implementation framework, which is to be implemented over five (5) years from 2018 to 2022.</p> <p>A couple pf numerical targets are set under some activities such as</p> <ul style="list-style-type: none"> - "Ensure that 35% of inputs in growth sectors are locally produces" under the first specific objectives, and - "35% of Government procurement shall be reserved for MSMEs according to the public procurement act under the fifth specific objectives". 	<p>Eight specific objectives:</p> <ol style="list-style-type: none"> 1) To promote utilization of local products and services in growth sectors 2) To create sustainable linkages for MSMEs with large domestic and foreign companies 3) To promote the development of both human and institutional capacity of domestic private sector through skills and technology transfer from foreign companies 4) To promote employment of Zambian citizens 5) To promote MSMEs and cluster development through targeted Government procurement 6) To promote a culture of local ownership and control of firms in aspects of productive economic activity 7) To promote competitiveness to facilitate competitive behavior during utilization of local content 8) To promote formalization of informal industries/businesses

Source: Compiled by the Survey Team based on each National Industrial Policy Paper

Table 10: Definition and Classification of MSMEs (2023)

Classification	Annual turnover	Employment	Total investment, excluding fixed assets (ZMW)
Micro	up to ZMW 1 million	up to ten (10) persons	Agriculture: up to 250,000 Mining and quarrying: up to 5 million Manufacturing and other: up to 400,000 Services and trade: up to 250,000 Construction: up to 400,000
Small	above ZMW 1 million up to ZMW 10 million	between 11 and 50	Agriculture: 250,001 - 5.25 million Mining and quarrying: 5,000,001 - 10.5 million Manufacturing and other: 400,001 - 8.4 million Services and trade: 250,001 - 5.25 million Construction: 400,001 - 8.4 million
Medium	above ZMW 10 million up to ZMW 50 million	between 51 and 100	Agriculture: 5,250,001 - 25 million Mining and quarrying: 10,500,001 - 50 million Manufacturing and other: 8,400,001 - 40 million Services and trade: 5,250,001 - 5 million Construction: 8,400,001 - 40 million

Source: Revised National Micro Small and Medium Enterprise Development Policy

Table 11: Revised National Micro Small and Medium Enterprise Development Policy (2023)

General description	Objectives and policy measures
<p>With reviews of the performance of the 2009 MSME policy, a situation analysis on MSMEs, the revised National MSME Policy sets out the vision, rationale, guiding principles, policy objectives and measures, and implementation framework.</p> <p>Characteristics and challenges of MSMEs are described as follows;</p> <p>Characteristics of MSMEs in Zambia:</p> <ol style="list-style-type: none"> 110,558 taxpaying MSMEs in 2019 (27% increase from the 2012 estimates) <ul style="list-style-type: none"> - 47% in wholesale and retail trade, repair of motor vehicles / motorcycles - 5% in construction, 4% in agriculture - 2% in the manufacturing sector Among 100,538 MSMEs, 44% are located in Lusaka, 25% in Copperbelt and 7% in Southern Provinces. Most MSMEs are managed by family members and remain characterized by low-level of technology and are oriented towards local and informal market segments. <p>Challenges:</p> <ol style="list-style-type: none"> Limited access to affordable finance Lack of innovation and poor uptake of technological solutions for business Weak entrepreneurial culture Inadequate decentralization of services that support MSMEs Weak coordination of MSME empowerment interventions Unfavorable MSME business environment Limited access to local and foreign markets Limited access to business development services Inadequate business infrastructure Prevalent informal MSMEs 	<p>Vision: “Prosperous Micro, Small and Medium Enterprises that significantly contribute to wealth and job creation”</p> <p>General objectives: To achieve MSMEs’ sustainable growth which contributes to socio-economic transformation.</p> <p>Five specific objectives and policy measures:</p> <ol style="list-style-type: none"> To achieve a prosperous MSME sector that contributes to employment and wealth creation <ol style="list-style-type: none"> Promote the development and growth of MSMEs Promote MSMEs access to affordable finance Promote MEMEs access to appropriate business infrastructure Promote participation of MSMEs in the value chains Enhance MSME access to domestic, regional and international markets Promote the enhancement of entrepreneurial capacity of MSMEs Promote MSME access to business development services Promote formalization of MSMEs Promote MSMEs product and service standards for competitiveness To contribute significantly to the country’s economic diversification agenda <ol style="list-style-type: none"> Promote MSMEs growth in non-traditional sectors Enhance MSMEs’ participation in key economic sectors To develop a culture of innovation among MSMEs <ol style="list-style-type: none"> Promote innovations among MSMEs Promote MSME awareness of intellectual property rights to patent their innovation To develop a culture of technological adoption among MSMEs <ol style="list-style-type: none"> Promote MSME uptake of modern technology Strengthen collaboration among public institution, research institutions and MSME apex bodies to deliver technological support to MSMEs Promote MSMEs compliance with intellectual property rights To attain an integrated coordinating framework for MSME development programs <ol style="list-style-type: none"> Develop a mechanism, for coordination of empowerment interventions Develop an integrated Management Information System

2-3 Organizations that Support the Manufacturing Industry

MCTI, MSMED and MoTS have been the major policy-making authorities for manufacturing industry promotion since 2021. MCTI is responsible for policy formulation and implementation monitoring for overall industrial development, overseeing implementation agencies such as the Zambia Development Agency (ZDA) and the Zambia Bureau of Standards (ZABS). MSMED is a newly established agency as of 2022, responsible for policy formulation and implementation monitoring related to the promotion of MSMEs and cooperatives with these duties having been transferred from MCTI. MSMED oversees the Citizens Economic Empowerment Commission (CEEC), which was also transferred from MCTI. CEEC is primarily responsible for promoting cooperatives in the agriculture and agro-processing sectors as well as MSMEs in general. While both ZDA and CEEC engage in MSME promotion, ZDA's primary focus is on growth-oriented MSMEs, to which it provides training, consulting, and other support services for market access, product development and export promotion. CEEC is engaged in entrepreneurship promotion and general support to provincial MSMEs that have relatively low business knowledge and skills. MoTS is also a new government agency established in 2021 and is responsible for policy formulation and implementation monitoring related to digitalization, technological innovation, and vocational education and training. MoTS oversees the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), which certifies and supervises vocational education and training institutions nationwide. The following are the major organizations involved in manufacturing industry promotion.

2-3-1 MCTI

MCTI is in charge of formulating industrial policies. Among the four MCTI departments responsible for industry promotion and regulation, the Department of Industry is in charge of industrial policy planning, including the promotion of the manufacturing industry. After a restructuring, the department's staff was reduced to 17. MCTI's mandate for MSME promotion has been transferred to the newly established MSMED. MCTI does not have dedicated staff with deep knowledge to handle matters for specific manufacturing sub-sectors. Improving the capacity of the staff and organization has been seen as a long-standing issue, which is set as one of the strategic objectives (among seven) of the MCTI Strategic Plan 2022-2026.

2-3-2 ZDA

ZDA under MCTI is an implementing entity for industrial policy. The agency was established in 2007 in accordance with the Zambia Development Agency Act of 2006 through the merging of five agencies specializing in issues such as privatization, export promotion, investment promotion and MSME promotion. Following the newly enacted ZDA Act of 2022, ZDA has undergone a restructuring. ZDA's major functions were redefined in the new Act as follows:

- (i) Issue licenses, permits or certificates of registration under the Investment, Trade and Business Development Act, 2022;
- (ii) Advise the Minister on matters related to investment, export promotion, business development and privatization;
- (iii) Implement and monitor the policies and strategies in investment, export promotion, business development and privatization;
- (iv) Assist in securing permissions, exemptions, authorizations, licenses, bonded status, land and other approvals required from state institutions for the purpose of establishing or operating a business;
- (v) Facilitate and promote the development of special economic zones;
- (vi) Promote and facilitate partnerships, joint ventures, business linkages, access to capital and other strategic alliances, including the transfer of appropriate technology and skills relating to industry development and productivity;
- (vii) Maintain regular, productive and effective dialogue and cooperation with the public and private sectors;
- (viii) Provide business development services to businesses; and
- (ix) Collect, collate and disseminate information on matters of investment, export promotion, business development and privatization.

ZDA screens the Multi Facility Economic Zones (MFEZ) development applications received from private investors and also provides support and incentives to the companies wishing to settle in an MFEZ. Regarding MSME support, with the policy formulation and monitoring functions related to MSME development having been transferred from MCTI to MSMED, ZDA continues to serve as a policy implementation agency under MCTI, primarily focusing on the promotion of growth- and export-oriented MSMEs with the provision of BDS support related to market access and acquisition of quality standards. The current number of personnel is around 10 each for its three departments, namely, Investment Promotion, Business Development and Export Promotion Departments.¹⁵

2-3-3 MSMED

MSMED, a new ministry established in 2021, is responsible for policy formulation and implementation monitoring of the promotion of MSMEs. The specific functions of the Ministry are defined on the Government Gazette Notice as follows:¹⁶

¹⁵ While both ZDA and CEEC provide BDS to MSMEs, the services provided by CEEC are centered around basic training to supplement its investment. That said, no clear difference has been observed between the contents of the BDS provided by these organizations, based on the interviews conducted by the Survey Team.

¹⁶ Government Gazette Notice No. 1123 of 2021

- (i) Co-operatives development;
- (ii) Small and medium enterprises incubation;
- (iii) Small and medium enterprises mentorship, loans, incentives and credit schemes;
- (iv) Small and medium enterprises policy; and
- (v) Small and medium scale enterprises development.

The Ministry also oversees CEEC, a statutory body, which has been transferred from MCTI.

MSMED has four policy formulation and implementing departments: the Department of SME Development, the Department of Business Development and Grants, the Department of Cooperatives and Entrepreneurship Development, and the Department of Registration and Regulation. The ministry also has entrepreneurship development officers in 116 districts all over the country, whose duties have been transferred from MCTI. Officers of the Department of Cooperatives and Entrepreneurship Development originally belonged to the Ministry of Agriculture; they were first transferred to MCTI and then transferred to MSMED. These officers were previously engaged in agriculture-related issues, including inspections, but now handle business-related issues.

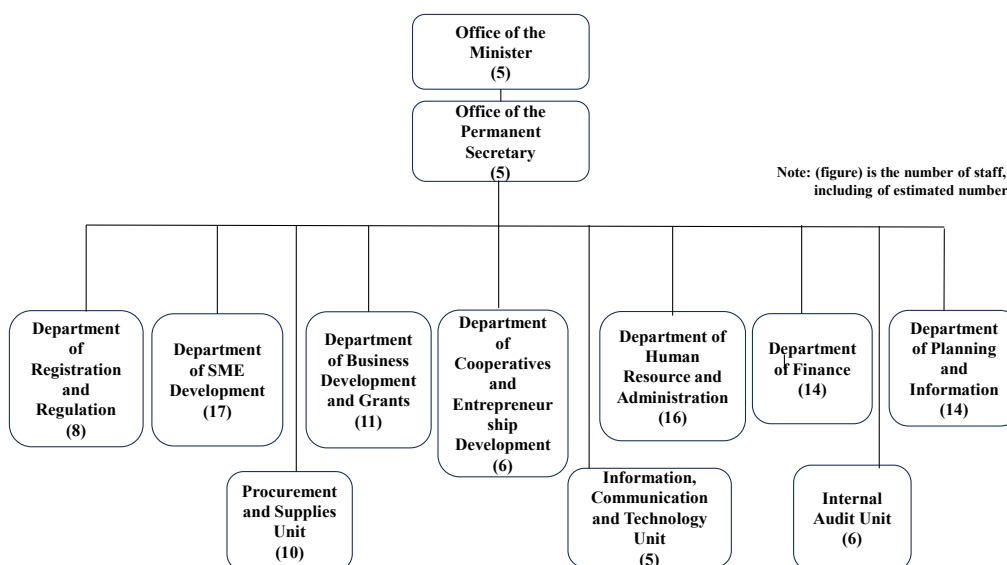


Figure 9: MSMED’s Organizational Structure

Source: MSMED

The Department of SME Development is responsible for facilitating investments in MSMEs to promote value addition, income generation and employment opportunities. The department coordinates the capacity building programs of different institutions and provides on-demand training for SMEs. The ministry has four staff members who have received training in the “Start and Improve Your Business” program provided by the International Labor Organization (ILO).

Under the Department of Business Development and Grants, the Business Development and Services Unit is engaged in capacity building, market linkages, and financial support for MSMEs. The Grants Unit provides MSMEs with financial support through CEEC.

The Department of Cooperatives and Entrepreneurship Development has a “Cooperative College” that provides training in various cooperative-related aspects. The college was established under the Ministry of Agriculture in 1979, transferred to MCTI, and then transferred to MSMED in 2021. Its mission is “to provide training and consultancy services to emerging and established cooperatives, entrepreneurs and development facilitators”. It has facilities and equipment, such as training rooms, accommodation and dining facilities, a printing unit, and a cooperative college farm. Its programs include “long-term training in cooperatives and agri-business” (two-year diploma course: with an accreditation by MoTS/TEVETA), “capacity building programs” (short-term training), and “consultancy services”.

The Department of Registration and Regulation is responsible for the registration and regulation of cooperatives and enterprises in the country. The department developed a capacity-building booklet specifically for associations.

According to MSMED, the capacity of provincial and district officers needs to be strengthened as they should have a deep understanding of how to handle SME problems and address the challenges faced by SMEs.

2-3-4 TEVETA

TEVETA, a government body under MoTS, is responsible for planning regulations and monitoring the performance of vocational training schools. TEVETA is mandated to coordinate and register training institutions, including those set up by the private sector, making sure that minimum standards are maintained.

(1) TVET (Technical and Vocational Education and Training) system and Zambia Qualification Framework^{17 18}

The Zambian education system provides learning opportunities through both academic and skills training (vocational) pathways. The academic pathway leads to the attainment of an academic qualification while the vocational pathway leads to the acquisition of skills and competencies.¹⁹ The TVET system in Zambia comprises not only formal learning but also informal and non-formal learning for educational dropouts and those who have never been to school.

The Zambia Qualification Framework (ZQF) provides a basis for improving the quality, accessibility, linkages and public or labor market recognition of qualifications within Zambia and internationally.

¹⁷ Zambia Qualification Authority (2016) Zambia Qualifications Framework Level Descriptions

¹⁸ TEVET Prospectus-2012, TEVETA

¹⁹ <https://www.zaqa.gov.zm/about/>

ZQF is organized into ten qualification levels from a Grade 7 Certificate (primary education) at Level 1 through to a Doctoral Degree at Level 10 with the TVET qualifications ranging from level 3 (trade test) to level 6 (diploma). The vocational programs are offered at secondary schools, vocational training centers, trades training institutes, youth resource centers, community development centers and technical colleges. As of September 2023, a total of 386 institutions were registered at TEVETA²⁰ of which 39.1% of them were public/government-owned institutions, followed by private institutions (25.9%) and church institutions (14.5%).²¹ As shown in Figure 10, 40% of training institutions are concentrated in Lusaka, followed by 24% in Copperbelt Province and 10% in Southern Province.

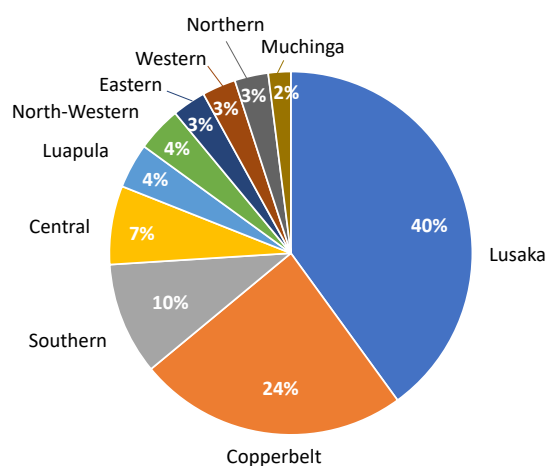


Figure 10: Distribution of Training Institutions

Source: TEVETA annual report 2021

(2) Curriculum and Programs

TVET programs in Zambia cover a wide range of fields. The curriculum is often designed in collaboration with industry stakeholders to ensure relevance to the job market. The sectors currently covered by TVET are:²²

- Agriculture
- Automotive Engineering
- Aviation and Electronics
- Business Studies
- Construction
- Electrical Engineering
- Health and Related Sciences
- Hotel and Tourism
- Garment Manufacturing, Textiles and Design

²⁰ <https://www.teveta.org.zm/> (accessed on 9 December 2023)

²¹ TEVETA annual report 2021

²² TEVET Prospectus-2012, TEVETA

- Mechanical Engineering
- Media and Applied Arts
- Secretarial Studies.

(3) TEVET Funding

The TEVET Amendment Act No. 11 of 2005 provided for the establishment and management of the TEVET Fund, which led to the enactment of the Skills Development Levy Act No. 46 of 2016.²³ Funding to the TEVET sector in Zambia is mainly through the Skills Development Levy (Skills Development Fund: SDF), which represents approximately 80% of TEVETA’s revenues contributed by employers. A total of 28 institutions are currently supported by the SDF. The grant amounts that each vocational training institution receives are marginal; just enough for covering utility costs. Each institution must generate income on its own to cover operating costs including lecturers’ salaries.

(4) Challenges²⁴

The largest challenge in Zambia’s TVET sector is that most of the technologies used in training institutions are outdated and thus no longer applicable to the industry. This mismatch is further exacerbated by the slow review of curricula, though efforts have been made by the Government to regularly review curricula with the involvement of industry and trainers. Factors affecting the quality of training include poor infrastructure, inadequate and outdated tools and equipment, limited teaching and learning materials, insufficient qualified and experienced trainers and a poor working environment for staff in the TEVET sector. In addition, there is inadequate capacity at the management and supervisory levels for effectively and efficiently developing and implementing the quality assurance systems for the training institutions. More specifically, the following table illustrates the major challenges faced by the three TEVETA institutions interviewed by the Survey Team.

Table 12 Challenges Faced by TEVETA Institutions

Institution	Highlights	Challenges
Northern Technical College (NORTEC) Ndola, Copperbelt Province	<ul style="list-style-type: none"> • Having more than 6,000 students • Having more than 100 lecturers • Received JICA assistance in Kaizen • Received UNIDO technical assistance for establishing training courses in heavy equipment vehicle/machinery operation • Received AfDB grant for training facilities, laboratories and workshops installed with Computerized Numerical Control (CNC) lathe machines and a machining center 	<ul style="list-style-type: none"> • Having difficulties in technology upgrading due to insufficient management and technical capacity • Having difficulties in recruiting / retaining qualified lecturers due to insufficient budget • Kaizen activities have slowed down • After the completion of the technical assistance from AfDB and other development partners, the provided equipment, including CNC lathes machines, are not in operation.
Kitwe Vocational Training Center (KVTC)	<ul style="list-style-type: none"> • Having more than 800 students • Having around 7 lecturers and 50 staffs • Received technical assistance from UNIDO 	<ul style="list-style-type: none"> • Having difficulties in catching up with technology upgrading, particularly in the mining sector (wishing to receive JICA

²³ https://unevoc.unesco.org/countryprofiles/docs/UNESCO_Funding-of-Training_Zambia.pdf.

²⁴ Ministry of Higher Education (2020) National Education Policy, highlights on P8 -P9)

Kitwe, Copperbelt Province	and Hitachi Construction Machinery for establishing training courses on heavy construction machinery operation.	volunteers in auto-maintenance). • Having difficulties in recruiting / retaining an appropriate number of lecturers without sufficient budget
Chipata Trades Training Institute (CTTI) Chipata, Eastern Province	<ul style="list-style-type: none"> • Having around 1,300 students • Having around 24 lecturers • Having 12 training courses Focusing on agriculture / agro-processing subjects • Received GIZ assistance for different agricultural equipment and machinery such as mixers and milling machines 	<ul style="list-style-type: none"> • Insufficient management / technological capacity to become a hub of capacity development for farmers in the region • Having difficulties in recruiting / retaining qualified lecturers and investing in equipment without sufficient budget

Source: Interview by the JICA Survey Team with each institute, September and October 2023

TVET in Zambia has strived to achieve fairness and inclusion in terms of gender, disabilities, HIV/AIDS status, geographical location and financial vulnerability. In 2017, less than 31% of enrolled TVET students were female. The participation of females was even lower in Science, Technology, Engineering and Mathematics (STEM) programs. However, great improvements have been made with increased female participation, particularly in commercially-oriented fields. Most TVET learning institutions do not have the requisite facilities to support the needs of persons with disabilities.

TVET training institutions are not sufficiently geographically distributed to ensure rural population access to skills training. The barriers to accessing TVET in rural areas include: unavailability of reasonable accommodations, inadequate space in training institutions, persistent gender biases, lack of support to learners with special educational needs and vulnerable living conditions. While the Government has strived to increase access to skills training, the majority of the facilities only service urban areas.

2-3-5 CEEC

(1) Organization

CEEC, a statutory body under MSMED, was established by the Citizens Economic Empowerment Act No. 9 of 2006 to foster economic empowerment in Zambia with the following nine pillars:²⁵

- (i) Equity/Ownership, Management and Control;
- (ii) Preferential Procurement;
- (iii) Skills Development;
- (iv) Access to Finance;
- (v) Transformation of Society;
- (vi) Corporate and Social Responsibility;
- (vii) Good Political and Corporate Governance;
- (viii) Greenfield Investment; and
- (ix) FDI.

²⁵ <https://www.slideshare.net/wezindhlovu/nine-pillars-of-empowerment-part-two>

For Pillar (iv) “access to finance”, CEEC manages an “Empowerment Fund” through which low-interest rate loans are offered to MSMEs (discussed later). CEEC has negotiated with banks for a special financing window to realize preferential interest rates by combining CEEC’s financing scheme and bank loans (blended finance). For Pillar (ix) “FDI”, CEEC promotes local participation in FDI through joint ventures between local and foreigner entities in both new business (greenfield) and existing one (brownfield). In collaboration with ZDA, CEEC also seeks to increase Zambian involvement in all sectors of the economy.

Table 13 presents the number of CEEC staff members by province. Currently employing 86 staff members, CEEC would like to increase its employees to 250 to adequately address MSMEs’ needs. Many of the staff members are new due to recent government restructuring, having different levels of knowledge.

Table 13: Number of CEEC Staff Members by Province

Province	District	Number of staff
Lusaka	Lusaka (Headquarters)	56
	Lusaka (MFEZ)	3
North Western	Solwezi	4
Southern	Choma	4
Muchinga	Chinsali	4
Northern	Kasama	3
Central	Kabwe	3
Eastern	Chipata	3
Copperbelt	Ndola	3
Luapula	Mansa	2
Western	Mongu	1
Total		86

Source: CEEC

The CEEC board consists of part-time Commissioners representing the Ministry of Finance, MCTI, the Ministry of Labor and Social Security, Attorney General, the youth, the private sector, civil society organizations, the university community, central statistical office and the trade unions and the disabled.

CEEC consists of four Directorates and the Office of the Director General (see Appendix for CEEC’s organizational structure). Among them, the Business Development (BD) Directorate and Credit Control and Risk Management (CCRM) Directorate are mainly engaged in providing services to MSMEs. BD is mandated to provide loan applicants with BDS such as training on business proposal development and pre-financing, instructing them the conditions of CEEC’s loan scheme and the basics of financial management. CCRM is responsible for managing the CEEC’s credit portfolio, including recommending sub-projects to the Credit Committee and facilitating the disbursement of funds.

(2) Budget

The CEEC budget for 2023 is set out below. CEEC has two budget components: operational funding and the Empowerment Fund. “Empowerment Fund” and “Treasury Grants” were the two items allocated from the national budget with all other revenue having to be earned through operations. The Empowerment Fund supports loans for SME capacity development while operational funding covers CEEC’s operating expenses. The new government has drastically increased the budget allocation to the Empowerment Fund. In contrast to the 100 million ZMW disbursed between 2008 to 2021, an additional 500 million ZMW was budgeted in 2022.

Table 14: CEEC Budget for 2023²⁶

Revenues	Amount (ZMW)	Expenses	Amount (ZMW)
(1) Empowerment fund	894,410,644	(1) Empowerment fund	894,410,644
Empowerment fund	397,410,644		
Loan recovery	497,000,000		
(2) Operational funding	131,000,842	(2) Operations expenditure	304,620,570
Treasury grant	35,210,867	Operating expenditure	174,899,759
Interest from paid-up loans	11,775,429	Personnel expenditure	101,120,811
Facility fees on Treasury funding	60,372,718	Capital expenditure	28,600,000
Facility fees on ZAEDP ²⁷ funding	10,446,975		
Other incomes	13,194,853		

Source: CEEC

(3) Empowerment Fund

Financing Facilities and Loan Products

The Empowerment Fund is composed of three financing facilities: (i) project finance, (ii) trade finance and (iii) micro-finance. Project finance is a long-term loan facility targeting large projects whereas trade finance is a short-term loan with a repayment period of 12 months. CEEC has recently developed two micro-finance facilities. “Marketeer Booster Loan” is a zero-interest loan facility launched in 2022 that channels micro finance to small businesses through cooperatives. In 2023, CEEC launched “Busulu Loan” targeting individuals (not enterprises) such as the youth and women. The table below shows the conditions for each loan facility.

²⁶ Both the "Treasury Grant" and the "Facility fees on Treasury Funding" are the state budget to cover CEEC’s capital and operational expenditures, with the former being a fixed amount and the latter linked with the disbursed amount of loans.

²⁷ Zambia Aquaculture Enterprise Development Project implemented by the Ministry of Fisheries and Livestock, financed by African Development Bank

Table 15: CEEC's Loan Facilities Offered in 2023

Financing facility		Loan amount		Interest rate and repayment period	Grace period
		Minimum	Maximum		
Project Finance		ZMW 50,000	ZMW 3,000,000	12% (5 years)	6 months
Trade Finance		ZMW 50,000	ZMW 3,000,000	12% (12 months)	None
Microfinance	Marketeer Booster Loan	ZMW 500	ZMW 5,000	No interest (6 months)	None
	Busulu Loan	ZMW 5,000	ZMW 50,000	8% per annum (6 -36 months repayment)	None

Source: CEEC

Table below sets out CEEC's loan products offered in 2022 and 2023; the number of CEEC's loan products increased from 9 in 2022 to 16 in 2023. Loan products are offered to businesses in different sectors. For instance, "Agricultural Mechanization Loan Product" is aimed at facilitating the mechanization of agricultural activities by funding tractors, trucks, combine harvesters and other types of farm equipment.

Table 16: CEEC's Loan Products Offered in 2022 and 2023

Finance facility	No	Product name	Interest rate and repayment period	Maximum amount	Provision status	
					2022	2023
Project finance	1	Energy Loan Product	12% (5 years)	ZMW 3 million	-	X
	2	Tourism Loan Product	12% (5 years)		-	X
	3	Mining Loan Product	12% (5 years)		-	X
	4	Construction and Infrastructure Loan Product	12% (5 years)		-	X
	5	Light Manufacturing Loan Product	12% (5 years)		X	X
	6	Agro-Processing Loan Product	12% (5 years)		X	X
	7	Agricultural Mechanization Loan Product	12% (5 years)		X	X
	8	Industrial Yards ²⁸	12% (5 years)		X	X
	9	ICT Innovation and Creative Arts Loan Product	12% (5 years)	ZMW 2 million	X	-
	10	Auto Mechanics Loan Product	12% (5 years)		X	-
	11	Graduate Loan Product	12% (5 years)	ZMW 1 million	-	X
	12	Livestock Outgrower Scheme for Beef and Dairy	12% (5 years)		-	X
	13	Own a Taxi and Minibus Loan Product	12% (5 years)	ZMW 500,000	-	X
	14	Aquaculture Loan Product for Cage Farming	12% (5 years)	ZMW 180,000	-	X
Trade finance	15	Trade Finance including Working Capital	12% (12 months)	ZMW 3 million	X	X
Micro-finance	16	Marketeer Booster Loan for Individuals	0% (6 months)	ZMW 5,000	X	X
	17	Loan for cooperatives with a focus on Bulking, Cold Storage and Processing facilities	12% per annum (5 years)	ZMW 500,000	X	X
	18	Busulu Loan	8% per annum (6 -36 months)	ZMW 50,000	-	X

Source: CEEC

From 2022 to 2023, CEEC provided a total of 614 loans amounting ZMW 608,578,089 under its Project Finance and Trade Finance schemes. The average loan size was ZMW 1 million. Apart from this, CEEC provided a total of 81,454 micro-loans amounting to ZMW 231 million (the average loan size was ZMW 3,000).

²⁸ CEEC provides loans to enterprises in its industrial yards to support them procure processing machinery and equipment.

Table 17: Numbers of Loans and Loan Amounts Offered from 2022 to 2023

Finance facility	Number of loans	Amount of loans disbursed (ZMW) ²⁹	Average loan size (ZMW)
Project Finance	430	460,511,603	1,070,957
Trade Finance	184	148,066,486	804,709
Total	614	608,578,089	991,170

Source: CEEC

Table below summarizes the size of loan products offered under the Project Finance Scheme. The loan products targeting the agriculture sector (“Agricultural Mechanization Loan Product” and “Agro-Processing Loan Product”) had the largest share (59.7%), followed by “Light Manufacturing Loan Product” (8.1%) and “ICT Innovation and Creative Arts Loan Product” (7.6%).

Table 18: Loan Size of Project Finance disbursed from 2022 to 2023 (By Loan Product)

Sector/Loan Product	Number of loans	Amount of funds disbursed (ZMW)	Share in total amount	Average loan Size (ZMW)
Agricultural Mechanization Loan Product	134	145,796,839	31.6%	1,088,036
Agro-Processing Loan Product	104	129,590,071	28.1%	1,246,058
ICT Innovation and Creative Arts Loan Product	44	35,211,008	7.6%	800,250
Auto Mechanics Loan Product	37	30,986,472	6.7%	837,472
Light Manufacturing Loan Product	36	37,377,077	8.1%	1,038,252
Construction and Infrastructure Loan Product	21	29,450,200	6.4%	1,402,390
Tourism Loan Product	20	23,697,500	5.1%	1,184,875
Unsolicited ³⁰	14	10,238,455	2.2%	731,318
Mining Loan Product	7	13,556,640	2.9%	1,936,663
Energy Loan Product	3	3,298,835	0.7%	1,099,612
Livestock Outgrower Scheme for Beef and Dairy	3	1,843,760	0.4%	614,587
Aquaculture Loan Product for Cage Farming	1	542,320	0.1%	542,320
Total	424	461,589,177³¹	100%	1,088,036

Source: CEEC

Loan Application Process

Table below provides the overview of CEEC’s standard loan provision process and the actors involved in each process. One of the biggest challenges associated with this loan provision process is the timing of loan disbursement. It usually takes more than 6 months for CEEC to disburse a loan, in contrast to the standard defined in CEEC’s Service Charter, 14 days. This is because the disbursement of CEEC’s Empowerment Fund is dependent on the release timing of Treasury funding which often delays. Another challenge to CEEC is its limited human resources, especially in provincial offices. For instance, in order to gather information for the screening of applications, CEEC provincial officers are required to visit numerous applicants who have submitted incomplete data.

²⁹ This is the disbursement status in line with the empowerment fund released by the Treasury of Zambia.

³⁰ Viable projects that were funded but not applicable to any of the loan products (e.g., projects in the transport and logistics sector) are grouped as “Unsolicited”.

³¹ The total loan amount in Table 18 is inconsistent with the loan amount of project finance shown in Table 17. This is apparently caused by CEEC’s incomplete data management system.

Table 19: CEEC's Loan Application Process

Item	Tasks	Person in Charge
Advertise loan	CEEC calls for applications through its Facebook page and website, indicating the target sectors. CEEC also conducts workshops to disseminate information about funding.	Headquarters
Receive loan applications	Applicants are requested to apply for a loan program via CEEC's online application system. Those who have limited access to Internet are allowed to submit paper applications to CEEC provincial offices. Information in paper applications need to be entered by provincial officers in the online system. In order to be considered as eligible applicants, applicants need to meet the following criteria: <ul style="list-style-type: none"> • (i) have PACRA business certification (issued to a registered enterprise) • (ii) have ZRA clearance showing tax compliance; and • (iii) present an evidence that shows the existence of their business. 	N/A (applicant)
Conduct a preliminary application screening	Upon receiving applications, the provincial officers conduct a preliminary evaluation through which applicants who fail to meet the eligibility are screened out. Then, the provincial officers make a physical visit to each applicant to ensure accuracy and legitimacy of the requested sub-projects, particularly for high-value projects. The list of applicants who passed the evaluation is shared from the provincial offices to the Directorate of Business Development (BD) in CEEC headquarters.	Provincial office
Conduct an evaluation of applications	BD evaluates the business viability of applicants from a financial and governance perspective. For instance, BD assesses whether applicants have a stable cash flow, i.e. whether they generate enough cash to continue repayments. If information is missing in applications, BD requests the provincial offices to collect necessary information. Regarding the governance aspect, BD assesses whether applicants have a right management structure in place. Based on the results of evaluation, BD sends screened applications to the Directorate of Credit Control and Risk Management (CCRM) which conducts a further evaluation especially on the risks of the businesses.	Directorate of Business Development
	CCRM verifies the credit history of applicants with the data obtained from the Credit Reference Bureau (CRB). CCRM submits the list of prospective beneficiaries to the Credit Committee for final approval.	Directorate of Credit Control and Risk Management

Source: Compiled by the Survey Team based on the data provided by CEEC

Table below indicates the number of applications for the Project and Trade Finance Facilities and the total requested loan amount. From 2022 to 2023, CEEC received 50,141 applications (the requested loan amount totaled ZMW 29 billion), from which only 1.2% were approved. As for the CEEC's micro-finance scheme, CEEC receives millions of applications (no data is available on the exact number of applications). This indicates the necessity to develop a mechanism to reduce the number of applications to a manageable level without compromising the impact and equity of the funds.

Table 20: Number of Applications for the Project and Trade Finance Facilities from 2022 to 2023

Province	Number of applications		Share in total number of applications	Requested amount (ZMW)	Average loan size (ZMW)
	Online application	Paper application			
Lusaka	20,904	17	41.7%	9,598,798,025	458,812
Southern	10,327	2,230	25.0%	5,533,851,032	440,698
Copperbelt	4,306	2	8.6%	4,465,883,249	1,036,649
Central	4,049	14	8.1%	3,176,488,126	781,809
Eastern	2,299	1	4.6%	809,617,159	352,007
North-Western	1,666	1	3.3%	1,110,567,817	666,207
Western	1,512	0	3.0%	1,851,450,254	1,224,504
Northern	1,146	0	2.3%	962,284,991	839,690
Luapula	1,044	0	2.1%	1,021,957,195	978,886
Muchinga	623	0	1.2%	642,871,879	1,031,897
Sub total	47,876	2,265		29,173,769,726	581,835
Total	50,141				

Source: CEEC

Another issue that affects the efficiency in the application process is the limited Internet access especially in rural areas. Interviews with CEEC suggested the possibility that the number of applications submitted in paper was much larger than the figures shown in the table. Taking the example of the Southern Province, applicants residing in remote districts requested the provincial office to send applications online for them.

Repayment

As of 2021, CEEC had approximately 2,000 non-performing loans of which the total amount exceeded ZMW 232 million, which resulted in the overall loan recovery rate of only 27%. In order to recover these non-performing loans, CEEC under the new Director General started to take measures such as: (i) issuing request letters, (ii) visiting borrowers' project sites to request loan repayment, (iii) using external debt collectors and (iv) bringing the cases to the court. Some of these measures have already been implemented. For instance, through using 11 external debt collectors, CEEC succeeded in recovering a total ZMW 82.6 million. Though legal proceedings could be a last resort; their procedures, time frame and cost do not usually justify their application.

In order to encourage repayment, CEEC tries to educate borrowers on proper fund utilization.³² As a result of this, the recovery rate (repayment was due by the end of December 2023) for the loans that were disbursed from 2022 to 2023 was 70%.³³

³² CEEC offers to the target citizens who wish to apply for its loan schemes a half-day training in which basic loan conditions as well as borrowers' obligations are explained.

³³ The updated figure for the recovery rate of the loans disbursed by 2021 is not disclosed.

Table 21: Recovery Rate of the Loans Disbursed from 2022 to 2023

Total amount due for repayment as of December 2023 (ZMW)	Total loan amount repaid (ZMW)	Loan repayment rate
124,421,088	87,094,762	70%

Source: CEEC

Challenges

With the Empowerment Fund primarily supporting physical investments, the capacity building component is usually not included in the funding though it is essential to ensure/improve beneficiaries' skills and knowledge for the effective usage of the funding. The CEEC head office's processing capacity is also an issue. Multiple projects have been approved simultaneously, resulting in approved amounts often being less than requested due to resource constraints. This unexpected gap must then be filled with the enterprises' own funds, which often lowers the viability of the sub-projects.

(4) Industrial Yards

Funded by the African Development Bank (AfDB), CEEC has set up eight industrial yards in seven provinces. The aim of industrial yards is to promote priority industries which have a growth potential with utilizing local resources available in each province. CEEC plans to provide enterprises (primarily cooperatives) with financial support (loans) as well as technical assistance (e.g. business plan development, mentoring/coaching and linking with off-takers) aimed at supporting the value addition of their products. CEEC identified the priority industries for each industrial yard based on the results of a value chain mapping conducted by MCTI in 2015, which is summarized in the table below.

Table 22: Priority Industries for Industrial Yards

Province	Location	Priority industries
Copperbelt	Kitwe	Maize processing, Edible cooking oil, Stock feed, Vegetables (dried and fresh), Fruits (dried & fresh) Sweet potatoes, Soyabeans milk, Sausages, Instant porridge (millet, sorghum and soyabeans) and cornflakes
	Ndola	Art paintings, Tie and dye Chitenge outfits (African fabrics), Sculpture (wood and marble stone), Pottery, Embroidery, Crafts (bead work, baskets, wooden plates and so on), Graphic designing and printing, Wood processing, Manufacturing of bolts and nuts, Mineral testing, Processing of gemstone and gold
Lusaka	Kafue	Adult & Baby cereals, Artifacts and fabric dye, Essential oils, Spices, Fruits (dried and fresh), Soyabeans milk, Sausages, Instant porridge (millet and sorghum) and cornflakes, Manufacturing of bolts and nuts, Metal fabrication, Processing of gemstones and gold
Luapula	Mansa	Edible cooking oil (groundnut, soyabeans, sunflower), Vegetables (dried and fresh), Fruits (dried and fresh), Rice, Sweet Potatoes, Confectionery and Cassava (starch processing)
North-Western	Solwezi	Pre-cooked beans, Maize processing, Pineapple processing, Honey, Wood processing, Manufacturing of bolts and nuts, Gemstone and gold processing, Mineral testing, Edible cooking oil, Sweet Potatoes
Eastern	Chipata	Edible cooking oil (groundnut, soyabeans, sunflower), Vegetables (dried and fresh), Fruits (dried and fresh), Rice, Sweet Potatoes, Processing and polishing of gemstone and gold
Northern	Kasama	Edible cooking oil, Vegetables (dried and fresh), Fruits (dried and fresh), Rice, Sweet Potatoes, Confectionery, Processing of gemstone, Spices, Sweet Potatoes, Beans, Cassava (starch processing)
Western	Mongu	Cashew, Rice, Cassava (Starch processing), Confectionery, Fruits (dried and fresh), Vegetables (dried and fresh)

Source: CEEC

All of the industrial yards were constructed following the same standards in terms of size and number of facilities; each yard should accommodate up to 26 enterprises.³⁴ According to the CEEC, none of these industrial yards are fully operational, with very limited technical supports having been budgeted. Environmental issues are another challenge to promoting industrial yards. For instance, due to a nearby dump site, the industrial yard in Chipata (a 100-hectare industrial area) has difficulties in onboarding enterprises, especially food processing enterprises. Though CEEC would like to subsidize enterprises that have a growth potential for attracting them to the industrial yards, this is contingent on the availability of budget.

(5) Other Initiatives

CEEC is an implementation partner in several projects conducted by ministries other than MCTI such as the Ministry of Agriculture and the Ministry of Fisheries and Livestock. Currently ongoing projects are listed in Table 23.

Table 23: CEEC’s Projects Conducted in Cooperation with Ministries apart from MCTI

Project name	Overview	Achievement
Cashew Matching Grant Facility	CEEC is the fund manager of the Cashew Matching Grant Facility, one of the components of the Cashew Infrastructure Development Project (CIDP) which is implemented by the Zambian government, through the Ministry of Agriculture, with support from the AfDB. CEEC is engaged in the distribution of matching grant as well as the procurement of processing equipment for local cashew processors.	CEEC approved 123 projects in ten target districts and disbursed approximately ZMW 15 million As of December, 2020, CEEC (the number of projects that have already been funded is unknown).
Aquaculture Seed Fund	CEEC is the implementation partner of the Aquaculture Seed Fund, one of the components of Zambia Aquaculture Enterprise Development Project (ZAEDP) which is implemented by the Government of the Republic of Zambia, through the Ministry of Fisheries and Livestock, with support from the AfDB. CEEC is engaged in the disbursement of loans to fish hatcheries/nurseries and fish farming.	CEEC disbursed approximately ZMW 246 million to 1,135 beneficiaries.

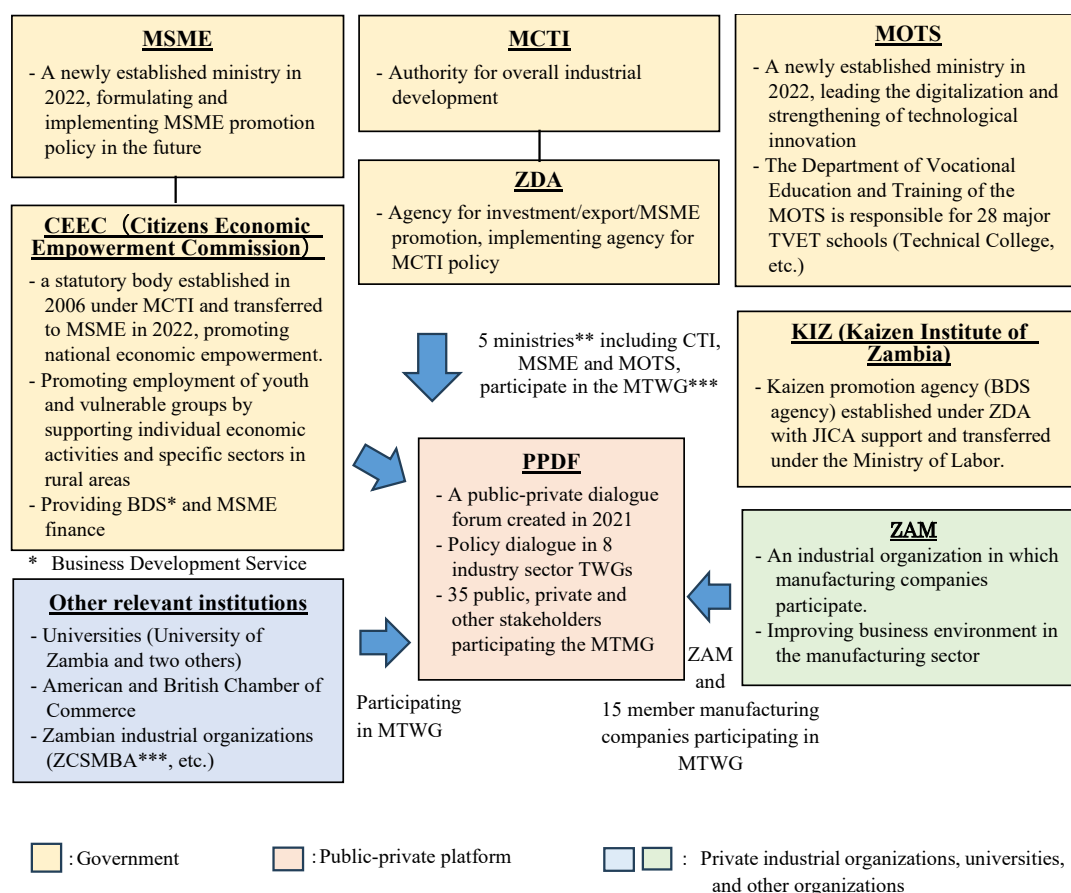
Source: CEEC Annual Report 2020

2-3-6 PPDF

Under an initiative by President Hichilema and with support from IFC, PPDF was established in April 2022 as an arena for public-private policy dialogue with seven industrial sector technical working groups (agriculture, energy, financial sector, ICT/digitalization & media, manufacturing, mining and tourism) holding policy dialogues on an ad-hoc basis. Among these, the Manufacturing-sector Technical Working Group (MTWG), which includes 35 representatives from the public and private sectors, has been proceeding with discussions on the theme of “strengthening value chains and creating jobs”. Representatives include 6 people from ministries, 13 from industrial organizations and universities, and 15 from private companies. MTWG is chaired by the MCTI Permanent Secretary and co-chaired by the

³⁴ Details of these standards as well as data on the currently number of enterprises operating in each industrial yard were not provided from CEEC.

Zambia Association of Manufacturers (ZAM) president. The former CEO of Industrial Development Corporation (IDC), who is also the former ZDA Director General, heads the four-member secretariat.



** The other two ministries are the Ministry of Finance and National Planning and the Ministry of Local Government.
 *** The Manufacturing Technology Working Group
 **** Zambia Chamber of Small and Medium Business Associations

Figure 11: Key Agencies for Manufacturing Industry Promotion in Zambia

Source: Survey Team

2-3-7 MFEZ and Industrial Yards

(1) Overview of MFEZ

The Zambian government launched MFEZ with a view to fostering the country's competitiveness and industrialization. The enactment of the ZDA Act 2006 that created ZDA also endorsed the development of MFEZs with the aim of fostering a conducive business environment, promoting manufacturing and exports, and enhancing domestic trade, technology and knowledge transfer, as well as boosting job creation. Another important objective of the MFEZ is to promote the development of SMEs, especially by integrating SMEs into the value / supply chains of large enterprises within the zones.

The government has granted fiscal incentives for companies within MFEZs as well as other companies in priority sectors. Companies operating within MFEZs benefit from tax exemptions on profits and

dividends for ten years;³⁵ a reduced corporate income tax rate for the subsequent five years of operation; zero-rated import duties for raw materials, supplies, machinery and equipment for five years; and exemption from withholding taxes on management fees. ZDA also provides investors with non-fiscal incentives free of charge through the facilitation of land acquisitions, immigration permits and the installation of utilities in MFEZs. MFEZs are also expected to provide better investment climate through such things as the sufficient supply of industrial water and electricity, and road infrastructure as well as by facilitating applications for business registration, permits and licenses via its “One-stop services”.

MCTI/ZDA has approved the establishment of five MFEZs, as shown in Table 24. Below are the three major MFEZs which have been established in the country:

Table 24: MFEZs Approved in Zambia (as of end-2021)

MFEZ	Number of companies in operation	Pledged* number of employment	Realized number of employment	Realized investment (USD mill.)	Pledged* infrastructure investment (USD mill.)	Realized* infrastructure investment (USD mill.)
Chambishi	23	12,897	12,755	1,667	250	169
Lusaka East	10	2,249	1,190	45	50	25
LS-MFEZ	13	10,432	2,500	947	100	39
Roma Park	20	2,500	1,000	45	100	20
Jiangxi	1	10,000	65	10	600	50

Note: Figures with * show the pledged numbers by the MFEZ developer and its realized investment value.

Source: ZDA

- (i) **Chambishi MFEZ (CMFEZ):** established in 2007 by the China Nonferrous Metal Mining Company (CNMC) Group; a Chinese state-owned enterprise. The zone is located in the city of Chambishi in Copperbelt Province, focusing on the copper and cobalt mining value chain such as mining, processing, recycling and services. The MFEZ has attracted more than 40 companies, most of which are Chinese. The biggest and core entity is Chambishi Copper Smelter Ltd., an arm of CNMC, which is an integrated operator with activities ranging from mining to smelting with the aim of producing and exporting copper blister and anodes. In terms of corporate governance, CMFEZ functions as a subzone of the Zambia-China Economic and Trade Cooperation Zone (ZCCZ) described below.
- (ii) **Lusaka East MFEZ (Zambia-China Economic and Trade Corporation Zone (ZCCZ)):** declared in 2007 under the ZDA Act, and formally established by CNMC in 2010. This zone is the first overseas economic and trade cooperation zone established in Africa through Chinese capital (a Chinese state-owned enterprise), focusing on light manufacturing industries such as food-processing, construction materials and services (real estate, hotels, conference centers). ZCCZ is located next to the Lusaka International Airport and functions as a distribution hub for construction materials. ZCCZ also functions as a parent company of CMFEZ.

³⁵ The period for tax exemption on profits and dividends for new investments to MFEZ was originally set at 5 years in ZDA Act 2006, which was later extended to 10 years for promoting investment further in the MFEZs.

(iii) **Lusaka South MFEZ (LS-MFEZ):** a public sector led commercial project through which the government has provided hard and soft infrastructure. The LS-MFEZ was established in 2010 to house light manufacturing, technology and knowledge transfer, and commercial and residential activities. The LS-MFEZ master plan formulation of was assisted by JICA in cooperation with Malaysia in 2009. Zone management is operated by Lusaka South Multi-Facility Economic Zone Ltd., all of whose shares are owned by IDC. LS-MFEZ sits on 2,100 hectares of land, of which 680 ha is allocated to industrial use and the rest to residential, commercial, institutional, and research and development use. Currently, the LS-MFEZ' industrial area is fully occupied by 101 firms. Out of them, 22 firms are currently in operation with 12,300 workers, mobilizing investments totaling USD 530 million. Several large-scale Zambian companies employing more than a total of 2,000 workers are engaged in the home-care product manufacturing and beverage industries. Furthermore, four Chinese companies were reported to have invested a total of USD 213 million in LS-MFEZ, employing around 2,100 people for the production of construction materials and auto-services.³⁶ The management of the LS-MFEZ plans to create 33,000 jobs in the LS-MFEZ. LS-MFEZ's current priority sub-sectors are agro-processing, engineering, pharmaceuticals and wood processing.³⁷ Advantages of investment within the LS-MFEZ are the availability of land for large-scale production, road and power infrastructure for large-scale production, and proximity to the Lusaka city center.³⁸ On the other hand, challenges include instability and high rates for water supply and less incentives for domestic-market oriented businesses.³⁹ It was also reported that 24 companies were at the construction stage as of end-2022 with a total investment of USD 244 million while newly approved investments reached 28 (of which 11 were SMEs).⁴¹

Table 25: Principal Indicators for LS-MFEZ (as of end-2022)

Industrial sector	Total value of pledged investment (USD million)	Total number of jobs to be created	Number of investors*
Agriculture & agro-processing	246.7	6,314	25
Manufacturing	505.3	16,171	29
Construction	87.9	250	2
Packaging & printing	18.0	544	3
Processing of minerals	33.0	633	3
Diagnostics services & other medical	41.9	1,229	5
Education & skills training	2.6	386	1
Energy	146.4	93	4
Health	10.0	100	1
High-tech	34.0	896	3
Recreation	3.4	123	1
Transport & Logistics	41.3	1,637	12
Total	1,176.5	28,526	91

Source: "Annual Report 2022", LS MFEZ Ltd.

³⁶ Times of Zambia, September 2023

³⁷ Interview by the JICA Survey Team with the management of LS-MFEZ Ltd., October 2023

³⁸ Interview by the JICA Survey Team with the management of LS-MFEZ Ltd., November 2023

³⁹ The water tariff was increased from ZMW 11.36 to 16.70 per cubic meter in 2022 based on an agreement between Lusaka Water and Sanitation Company. (Source: "Annual Report 2022", LS MFEZ Ltd.)

⁴⁰ Interviews by the JICA Survey Team with companies located in LS-MFEZ, November 2023

⁴¹ Source: "Annual Report 2022", LS MFEZ Ltd.

Other MFEZs and industrial parks have also been developed mainly by foreign, private sector initiatives. Lumwana MFEZ was established in 2010 close to a mine in Solwezi District in North Western Province. The Roma Industrial Park, located about 20 km northeast of the Lusaka International Airport, is a mixed-use zone accommodating residential housing, commercial and retail facilities, and light industrial development. The Jiangxi MFEZ in Chibombo, Central Province, was recently inaugurated with a 600-ha land area by China's Jiangxi United Industrial Investment Ltd. Its expected investors are from the steel, tobacco, lead-acid battery manufacturing, pharmaceuticals and logistics sectors. In addition, Zambia's Seventh National Development Plan (7NDP) in 2017 described the Kalumbila MFEZ and the Kafue MFEZ as national long-term development projects. The Kalumbila MFEZ, which is to be developed and managed by Kalumbila Town Development Corporation in cooperation with a mining multinational company, First Quantum Minerals (FQM); officially obtained a MFEZ status in September 2022 with an expected combined investment of more than USD 100 million covering around 100 hectares of land. As a special economic zone for clustering iron and steel, the Kafue MFEZ aims to attract engineering companies as well as metal processing industries. Detailed designs and development for these two MFEZs have yet to be realized.

(2) Challenges and Issues with the MFEZs

MFEZs have achieved neither the growth nor job creation expectations of the government, with many of the companies operating within the zones facing the same deficiencies as those outside of the zones.⁴² According to a survey in 2021, companies which were granted fiscal incentives identified poor infrastructure, limited road access, and problems with electricity and water supplies as the key challenges to their activities. Other issues included lease durations on land within MFEZs, delays in reimbursing VAT, limited access to financing, administrative delays and barriers to receiving various licenses and permits.⁴³ In particular, according to the Survey Team's interviews with the LS-MFEZ residents, agencies (excluding ZDA) responsible for issuing licenses and permits take too much time in the examination of documents, which causes negative impacts on businesses. Most companies deemed the incentives as insufficient and asked for better quality infrastructure and services of. For example, the 10-year tax exemption period (which was extended from 5 years) given to MFEZ-located companies was only for new investors and did not apply to existing MFEZ investors. These views were confirmed by a couple of companies interviewed in October 2023 by the Survey Team as well as within a policy issue paper developed by ZAM and discussed at a meeting of the manufacturing sector technical working group of PPDF.⁴⁴ Moreover, MCTI does not have a clear strategy to systematically promote MFEZ development nationwide, instead expecting the private investor to take the lead.

⁴² Linda Spahia, "Boosting Sustainable Growth; Zambia", IMF, 2023

⁴³ Report on the Monitoring of Companies Granted Incentives under the ZDA Act, March 2021

⁴⁴ "Manufacturing Issue PPDF", ZAM, 2023

Another analytical paper prepared by *Zambian entrepreneurs* highlighted other issues and problems with the existing MFEZs:⁴⁵

- (i) MFEZs have tended to invite investors from broad industrial sectors rather than focusing on specific manufacturing sub-sectors. A cluster approach should be adopted with enterprises within the MFEZ having interdependent positions along the value chains, which would attract more investment;
- (ii) Though copper mining is the leading sector in some zones, the downstream copper value chain remains undeveloped. The Chambishi MFEZ has primarily served as an extension of Chinese value chains with a heavy dependence on imported goods from China; and
- (iii) Participation by *Zambian companies* is limited. Most of the MFEZs are based on foreign initiatives and investments, which encourages the utilization of imported raw materials for the export market. Linkages between the companies located in MFEZs and local firms, particularly MSMEs, are weak.⁴⁶

2-4 Major Donor Projects Related to the Promotion of the Manufacturing Sector

The Survey Team has identified a total of 18 donor-funded projects (13 ongoing and 5 completed) that have contributed to the promotion of the *Zambian government's* seven priority sub-sectors in the manufacturing sector. 10 out of the 13 ongoing projects addressed challenges faced by agri-businesses and farmers in rural areas, such as limited access to markets and financing, through the provision of technical assistance and grants. In particular, two projects (AfDB's Cashew Infrastructure Development Project and UNIDO's Agrifood System Transformation Accelerator (ASTA)) are specifically engaged in the development of the agro-processing sector.

The remaining two projects intend to nurture the mining and construction sectors by developing the capacities of major vocational training centers such as the Kitwe Vocational Training Center (KVTC) and the Northern Technical College (NORTEC).

Table 26 provides the summaries of the donor projects related to the manufacturing sector in Zambia:

⁴⁵ The Kafue Iron and Steel Multi-facility Economic Zone; Concept Note, Julius Kaoma, Bright Chunga, Wilfred Lombe and Eeneest Mande, April 2019

⁴⁶ This issue is also raised in "Multi-facility Economic Zones in Zambia: Progress, Challenges and Possible Interventions (Working Paper)", Douglas Zhihua Zung, World Bank Group, February 2016

Table 26: Major Donor Projects for the Promotion of the Manufacturing Sector

Donor	Period	Implementing Agency	Project title	Cost	Objective	Target sector
World Bank	2017-2024	MCTI	Zambia Agribusiness and Trade Project (ZATP)	USD 170 M	The project aims to develop market linkages in agribusiness and strengthen the regulatory and institutional framework for agribusiness and trade to diversify Zambia's sources of inclusive growth.	Agribusiness
	2023-2028	MCTI	Zambia Agribusiness and Trade Project-II (ZATP-II)	USD 170 M	The project aims to increase access to markets and finance and promote firm growth in the Zambia's Agribusiness sector.	Agribusiness
AfDB	2016-2024	Min. of Agriculture	Cashew Infrastructure Development Project	USD 55.4 M	The aim of the project is to lay the foundation for the production and processing of cashew nuts in Western Province.	Agriculture
	2014-2022	MESVTEE	Support to Science and Technology Education Project (SSTEP)	USD 26 M	The Project aims to help improve the quality and relevance of skills development levels in Zambia for job creation and youth employability.	All sectors
UNIDO	2023-2028	Min. of Agriculture	Agri-food System Transformation Accelerator (ASTA) - Soybean Value Chain Development in Zambia	USD 19.9 M	The Project aims to upgrade the soybean value chain through blended finance (equity and loans).	Agriculture
	2021-2025	MoTS, TEVETA	The Project for Promoting Youth Employment through Construction Equipment Operating Skills Training	USD 4.4 M	The project aims to professionally qualify Zambian youths to fulfil the human resource demands for skilled construction equipment operators in the construction and mining sectors.	Construction, mining
	2019-2023	MoTS	Zambian Industrial Training Academy (ZAMITA) Phase 2	USD 4.1 M	The project aims to boost the capacity of a major Vocational Training Center to decrease the skills shortage in the transport sector and empower youth in finding meaningful employment.	Transportation, construction, mining
UNDP	N/A	MCTI	Growing Inclusive Business	N/A	The program aims to help youth and women living in peri urban and urban areas of Zambia, through the provision of technical assistance, the injection of risk capital to MSMEs as well as the creation of innovation and business incubation hubs.	All sectors
	2016-2018	MMMD ⁴⁷	Development Minerals Programme	EUR 13.1 M	The program is aimed at supporting sustainable and inclusive development in the mining sector through capacity development of key stakeholders such as regulatory agencies and private stakeholders including small-scale mining enterprises.	Construction, mining
USAID	2022-2027	N/A	Business Enabling Project	USD 14 M	The project aims to facilitate an enabling environment for increased private-sector investments by strengthening Zambian government and civil society organizations to improve and streamline policies and processes for economically viable rural enterprises.	Agriculture, eco-tourism, energy, trade
	2020-2025	N/A	Enterprise Development and Growth Enhanced	USD 14.5 M	The project aims to increase profitability for agricultural small-and-medium sized enterprises	Agriculture

⁴⁷ Ministry of Mines and Mineral Development

					(SMEs) in Zambia by supporting their competitiveness (management, marketing, networking, etc.) and access to finance.	
	2012-2023	N/A	Development Finance Cooperation (DFC)	USD 93 M	The project is aimed at increasing access to financing for individuals and businesses that may otherwise struggle to qualify by providing loan guarantees to partner financial institutions.	Agriculture, energy
FCDO ⁴⁸	2020-2027	N/A	Private Enterprise Programme Zambia (PEPZ) Phase II	GBP 85 M	The project aims to spur access to finance and investment for Zambian SME in high potential growth sectors by creating more effective routes and mechanisms to deploy UK, international, and Zambian capital.	Agriculture, tourism, mining)
	2013-2022	N/A	Africa Division funding to the Africa Agriculture Development Company (AgDevCo)	GBP 152 M	AgDevCo is an impact investor in nine African countries including Zambia with the aim of contributing to the transformation of African agriculture from subsistence farming to a modern, commercial sector.	Agriculture
GIZ	2016-2025	Min. of Agriculture	Promotion of agricultural finance for agri-based enterprises in rural areas	EUR 13.7 M	The project aims to provide financial services to agricultural and agri-based enterprises in rural areas that are tailored to their business models.	Agriculture
Finland	2018-2023	MSMED	Accelerated Growth for SMEs in Zambia (AGS)	EUR 9 M	The project is aimed at improving MSMEs' competitiveness through developing their business skills such as how to evaluate market feasibilities as well as through providing commodity funding for accelerating their business growth.	Agriculture, forestry, renewable energy, circular economy, mining, education and ICT
UNDP	2016-2018	MMMD	Development Minerals Programme (Regional program financed by EU)	EUR 13.1 M	To improve small-scale miners' livelihoods; local processing and innovations were promoted and markets for construction bricks and jewelry gemstones were explored.	Mining
EU	2024-2026	MCTI	Technical Assistance to Develop a Regulatory Environment Conducive to Businesses	N/A	Enhancing policy and regulatory frameworks, strengthening regulatory agencies' capacity, streamlining the business regulatory framework, etc.	All industries

Source: Survey Team

2-5 Business Development Service Providers in Zambia

Zambia has approximately 800 BDS providers across both state institutions and private enterprises (consultancy firms, accelerators/incubators and associations) though reliable data on the total number of beneficiaries is not available.⁴⁹ A significant number of BDS providers are capable of providing business training aimed at imparting basic business knowledge while a limited number of BDS providers are able to respond to enterprises' specific needs such as fund raising, strategic planning, market research and operation management as well as sector-related issues (e.g. food packaging in the agro-processing sector). These BDS providers are often contracted by donor projects and engaged in supporting the

⁴⁸ Foreign, Commonwealth & Development Office

⁴⁹ FCDO (2013) "Zambia Private Enterprise Programme - Business Case 2013-2019"

growth of enterprises. Table 27 lists the major BDS providers in Zambia which have experience working in Zambian government or donor agency programs.

The major challenges for the Zambian BDS market are a lack of MSMEs willing to pay for the services and the unavailability of affordable financing. As is the case for most countries in the world, the provision of BDS to MSME in Zambia depends on government (or donor) subsidization. In terms of financing, the high interest rates of Zambian financial institutions prevent MSMEs from making long-term investments especially in the agriculture and manufacturing sectors. Without low interest rate loans or matching grants that stimulate investment by MSMEs, the effectiveness of BDS will be limited.

On the BDS supply side, Finland's Accelerated Growth for SMEs in Zambia (AGS) has built cadre of 76 certified trainers who can be engaged in either of the ILO training modules: (i) Start Your Business (SYB); (ii) Expand Your Business (EYB); or (iii) Improve Your Business (IYB).⁵⁰ With these trainers, AGS has provided training to a total of 507 SMEs. For the implementation of its acceleration program, AGS identified appropriate BDS providers within the country for six of its seven priority sectors, namely agriculture, forestry (including wood industry), renewable energy, the circular economy (e.g. enterprises engaged in waste management and waste recycling business), education and ICT.⁵¹ The World Bank's ZATP contracted international consultants to address SMEs' technical issues. Due to their high costs, it was decided that ZATP II should mobilize local BDS providers instead of international firms; however, local BDS providers' service quality (technical capacities) was found to be much lower than that of international firms. It should be thus noted that the level of local BDS providers in Zambia would not be adequate to respond to MSME needs depending on the type of services required.

Table 27 summarized the state of BDS in Zambia.

⁵⁰ SYB is aimed at imparting basic business knowledge while EYB aims to help participants develop a growth strategy and an implementation plan. IYB is a training package aimed at improving operations and processes in issues such as marketing, record keeping, stock control.

⁵¹ Initially BDS was also provided to the mining sector, one of the priority sectors; however, due to the unsatisfactory performance of the BDS provider, the contract was terminated in the middle.

Table 27: BDS Providers in Zambia

Main target	BDS Provider's Category	Institution Name	Overview	Type of BDS				
				Business training	Mentoring/coaching	Consulting services	Market linkage	Networking/information
MSMEs	State organization	ZDA	ZDA provides a wide range of business development services targeting MSMEs in the manufacturing sectors which are formally registered. ZDA provides basic business training and training tailored to specific needs of MSMEs such as “branding and labelling”. ZDA helps MSMEs gain market access both domestically and internationally through connecting with stakeholders in their respective value chains such as processors and chain stores. In 2022, 2,380 MSMEs received the training provided by ZDA and 470 enterprises were supported in gaining gain market access.	X	X	-	X	-
		CEEC	CEEC provides MSMEs with not only basic business training, but also financial support (loan) ranging from 5,000 to 3 million ZMW utilizing CEEC Fund (The interest rates range from 8% to 12%). ⁵²	X	-	-	-	-
	Private (Association)	ZAM	In cooperation with development partners, ZAM provides various types of training such as “SME bootcamp” and “Cross-border toolkit” to SMEs. ZAM also has a campaign named “Proudly Zambian Campaign” which aims to promote high-quality goods of local enterprises meeting international standards. More than hundreds of products manufactured by around 50 enterprises have been certified under the campaign since the start of the campaign in 2018.	X	-	-	X	X
		Zambia Chamber of Commerce and Industry (ZACCI)	ZACCI is an association comprised of businesses (from MEMEs to large enterprises) in Zambia. In partnership with other educational institutions such as Texila American University, ZACCI offers SMEs mentorship programs on issues such as finance and brand building. ZACCI also hosts business forums and trade fairs in order to connect Zambian manufacturing companies to potential business partners abroad.	-	X	-	X	-
		Local Chamber of Commerce and Industry (Kitwe, Chipata CCI, etc)	The main roles of local CCIs are to facilitate discussions among its members (mainly SMEs) in order to make policy advocacy to the Zambian government. No practical BDS other than the provision of networking opportunities and the dissemination of market information is provided by local CCIs.	-	-	-	-	X
		Business Development Service Providers	BDSPAZ is an association of BDS providers in Zambia targeting MSMEs across all sectors. BDSPAZ is comprised of 157 companies and institutions which provide SMEs with either mentoring on pro bono basis or the services such as business	X	X	-	-	-

⁵² The Development Bank of Zambia (DBZ), a state bank aiming to proactively provide loans to MSME, was placed under the Bank of Zambia in July 2023 due to its deteriorated financial status. DBZ was then put under the MoFNP’s control for its recapitalization. “The Indo-Zambia Bank, a commercial bank that is 40% owned by IDC, also provides MSME-friendly loans.

49		Association of Zambia (BDSPA Z)	training on fee basis sponsored by the government or donors. BDSPA Z is one of the implementation partners of the Finland government funded “Accelerated Growth for SME” (AGS) aimed at developing capacities of MEMEs through training and mentorship.					
	Private (Accelerator and incubator)	Impact Hub	Impact Hub is an incubator center which provides capacity building services such as business training on topics such as book-keeping, digital marketing and business pitching. Coaching services are provided to SMEs which wish to and gain funding for their businesses. Impact Hub also provides funding opportunities for SMEs which win the incubator’s business pitching competitions.	X	X	-	-	X
		Prospero	Prospero is an accelerator which aims to achieve inclusive economic development through supporting SMEs in the food and agriculture, tourism, and manufacturing sector. Prospero facilitates investment to the target beneficiaries them; Prospero makes SMEs investment ready through providing mentoring services and then linking them to investors.	X	X	-	-	X
		She Entrepreneur Zambia (SEZ)	SEZ is an incubator which specifically target women entrepreneurs. The institution provides basic business training “Small Business Academy” to women who wish to start their own business. SEZ also provides entrepreneurship training such as “Woman in agribusiness” and “SeedCo” that addresses specific challenges faced by entrepreneurs in the agriculture sector.	X	-	-	-	-
		Growth Africa	GrowthAfrica is the accelerator in Zambia that runs “The GrowthAfrica Accelerator”, a 6 months-long intensive acceleration program aimed at developing entrepreneurs’ growth strategy, financial modeling as well as leadership skills through training and mentoring. GrowthAfrica also provides advisory services to entrepreneurs on issues such as market research and investment readiness and facilitation.	X	X	X	-	-
	Private (consultancy firm)	Edgewise Business Solutions Limited (EBSL)	EBSL is a private consultancy established in 2017 which provides business development services such as basic business training and mentoring services specifically designed for MSMEs. EBSL also provides training program customized for MEMEs’ specific needs in enhancing their managerial and entrepreneurial skills. EBSL’s focus is to promote development in North-western, Northern Muchinga, and other rural provinces of Zambia.	X	X	-	-	-
		AMSCO Zambia	AMSCO Group is a consultancy firm operation in across 29 sub-Saharan countries, supporting the private sector to make a significant impact in African economies (The Zambia branch was established in 2017). In Zambia, AMSCO provides a range of business training and advisory services to MSMEs. One of AMSCO’s program is “Zambia MSME Access to Finance Programme” aimed at strengthening MSMEs’ capacities for growing and sustaining their businesses through better management and preparation of bankable proposals for funding.	X	X			
	Startup (growth-	Private (Accelerator)	BongoHive	BongoHive is an incubation hub which aims to boost innovation in Zambia by providing entrepreneurs with startup and tech programs, extended workshops and	X	X	X	

oriented company)	and incubator)		customized skill-focused workshops, co-working spaces and consulting services. For instance, BongoHive organizes a bootcamp program called “the Zambia Agribusiness Bootcamp”, a mentoring and training program designed to help growth-oriented entrepreneurs (and SMEs) in the agro-processing businesses create feasible expansion plans.					
		The Women’s Entrepreneurship Access Center (WEAC)	WEAC is an entrepreneurial community supporting women and youth in cooperation with the U.S. Department of State. WEAC provides training, mentoring programs and funding to the most innovative and promising entrepreneurs and startup companies with a high potential to succeed financially and make a positive impact on the lives of others. One of the programs provided by WEAC is “Africa Food360 Accelerator” a learning program aimed at improving the efficiency of female agro-processors so that they can scale their businesses.	X	X	-	X	X

Source: Survey Team

Chapter 3 Overview of the Target Sub-Sectors

This Survey covers seven sub-sectors designated in the 8NDP adopted by the new President Hichilema administration as sectors with a high potential for job creation and value addition as well as multiplier effects on other industries. These sub-sectors include: (i) food processing; (ii) wood and wood products; (iii) leather and leather products; (iv) metals and non-metallic minerals; (v) engineering; (vi) textiles; and (vii) pharmaceuticals.

3-1 Food Processing

The food processing sector has demonstrated significant potential for growth as a result of the country's agricultural richness as well as a rapid increase in both domestic and international demand. Zambia's land area encompasses 75 million hectares (752,000 km²) of which 58% (42 million hectares) is classified as arable land. However, only 15% of all land is being cultivated.⁵³ Food processing companies typically source raw materials from domestic farmers who fall into either of the three categories "Small-scale Farmers (C)", "Medium-scale Farmers" or "Commercial Farmers" outlined below (data on the land share of each category for Zambia's total agricultural area was unavailable).

Category	Farm Size Range	Number of Farms
Small-scale Farmer (A)	Less than 2 hectares	1,144,000
Small-scale Farmer (B)	2-5 hectares	380,800
Small-scale Farmer (C)	5-25 hectares	75,200
Medium-scale Farmer	20-100 hectares	4,000
Commercial Farmer	Over 100 hectares	740

Source: World Bank. 2017. Climate-Smart Agriculture in Zambia. CSA Country Profiles for Africa Series. International Center for Tropical Agriculture (CIAT), Washington, D.C. p.25

Information gathered through interviews indicates that many of the farmers in the above three categories have been integrated into the market system through contract farming in response to domestic and international demand for different products that has been increasing over recent years.

In its Strategic Plan 2022-2026, the Ministry of Agriculture expressed its intention to promote the production of maize, cotton, rice, soybean, sorghum, millet, cassava, mixed beans, tobacco, ground nuts, sunflower, Irish potatoes, sweet potatoes, wheat, barley and cowpeas. Among them, this Survey selected maize, wheat, cassava, sorghum, groundnuts, soybean, cotton seed and sunflower seeds in consideration of their food-processing potential.⁵⁴ In addition, value chains for beef, milk and poultry, which are livestock products more or less integrated into the food-processing sector in Zambia, are presented.

⁵³ (2022) ITA <https://www.trade.gov/country-commercial-guides/zambia-agriculture>

⁵⁴ Although the production volume of barley in Zambia is larger than that of sorghum, the variety of barley usually cultivated in Zambia is different from the one used for beer breweries which requires irrigation and attentive application of fertilizer. As such, compared with imported barley, Zambian barley is not competitive as the raw material for beer production.

3-1-1 Maize

Zambia is one of Africa's largest maize producers with a domestic consumption rate for locally produced maize at over 90%.⁵⁵ Maize farming is also the most dominant agriculture activity among smallholder farmers in Zambia.⁵⁶ The maize production volume was around 2.87 million tons for the 2015/16 season.⁵⁷ With an annual per capita consumption of around 150 kg, the country's total maize consumption is estimated at 2.9 million tons.⁵⁸

Maize is processed into various products including mealie meal (also known as maize meal) and samp (dehulled kernels).⁵⁹ Nshima, a traditional dish made from maize flour, is a staple food in Zambia and neighboring countries.⁶¹ This report presents the value chain actors for mealie meal which consist of farmers, processors, retailers and exporters.⁶²

Farmers

Smallholder farmers account for 80% of total maize production in Zambia. Maize cultivation in the country is mostly rain-fed. Among the nine Zambian provinces, the Eastern Province is the largest maize producer, followed by the Southern and Central Provinces. The Luapula, Lusaka, North-western and Western Provinces registered only small production amounts.⁶³ The planting starts in November or December with harvesting taking place between April and May. Once harvested, maize is either stored for the producer's own consumption or sold to processors.⁶⁴

Smallholder farmers face several challenges. Despite massive subsidies flowing into the sector, growers remain poor due to low productivity. An increase in productivity will require heavy investment in irrigation infrastructure.⁶⁵ According to the Chipata Chamber of Commerce and Industry, smallholder farmers are unable to grow and sell their crops during off-seasons due to a lack of access to irrigation and storage, which results in a shortage of supply in the market during off-seasons. In order to fill the gap between supply and demand, maize is imported from neighboring countries such as South Africa.

⁵⁵ African Union. (2023). Zambia: Country Food and Agriculture Delivery Compact.

⁵⁶ Kaliba, M. (2021). Food Processing Value Chains in Zambia: Governance in the Maize Value Chain. *International Journal of Humanities Social Sciences and Education (IJHSSE)*,8(2), 59-69. DOI: 10.20431/2349-0381.0802007.

⁵⁷ USAID (2017) ZAMBIA Food Security Outlook

⁵⁸ African Union. (2023). Zambia: Country Food and Agriculture Delivery Compact.

⁵⁹ Kaliba, M. (2021). Food Processing Value Chains in Zambia: Governance in the Maize Value Chain. *International Journal of Humanities Social Sciences and Education (IJHSSE)*,8(2), 59-69. DOI: 10.20431/2349-0381.0802007.

⁶⁰ Samp is a food made from dried corn kernels that have been pounded and chopped until broken, but not as finely ground as mealie-meal or mielie rice.

⁶¹ Interviews with a mealie meal company in Kabwe (21 September 2023)

⁶² Kaliba, M. (2021). Food Processing Value Chains in Zambia: Governance in the Maize Value Chain. *International Journal of Humanities Social Sciences and Education (IJHSSE)*,8(2), 59-69. DOI: 10.20431/2349-0381.0802007.

⁶³ UNDP (2013) Zambia Agriculture Investment Opportunities Brief

⁶⁴ Ibid.

⁶⁵ Norfund (2016) Investing for Development

Cooperatives are responsible for purchasing maize from buying posts with transport being contracted out to private companies.⁶⁶

Processors

Maize processors include millers, breweries and animal feed manufacturers. Milling is dominated by two large foreign-owned firms, which account for 40% of the domestic processing industry.⁶⁷

Retailers and Exporters

Mealie meal is distributed through wholesale and retail stores. The major formal retailers are supermarket chains such as Spar and Shoprite.⁶⁸ While the Zambian government occasionally bans maize exports, Zambia exported 1.1 million metric tons of maize to East Africa and neighboring countries in 2022/23.⁶⁹ One company the Survey Team interviewed exported approximately 75% of its production to regional countries such as the DRC, Tanzania, Rwanda and Sudan.⁷⁰

Box 1: Mealie Meal Manufacturer in Kabwe

Overview

The current CEO established the company (100% Zambian owned) in Lusaka in 1998 with two small machines. It moved to Kabwe in 2000. Currently employing 61 workers, the company has grown to be the second largest producer of mealie meal in Zambia. The company produces 170 metric tons of mealie meal per day for its two mealie meal brands. The company also sells animal feed, a byproduct of mealie meal.

Challenges

The owner mentioned that grain production in Zambia has benefitted from favorable weather conditions in comparison with neighboring countries. The owner regards government regulations as mostly acceptable, except when the government restricts the export of maize due to the occasional poor rainfall. The company also faces a lack of capital for buying raw materials whenever retailers delay their payments.

3-1-2 Wheat

Wheat is the second most widely grown cereal crop after maize. It is planted during the dry season in April or May on well-tilled land and grown during the rainy season. Wheat consumption in Zambia has been maintained at around 250,000 metric tons annually over the last decade, while the production volume has fluctuated significantly over the same period; the production volume was 274,000 tons in 2013 but then decreased to 152,000 tons in 2019 before recovering to 235,000 tons in 2020.^{71 72} Central

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Kaliba, M. (2021). Food Processing Value Chains in Zambia: Governance in the Maize Value Chain. *International Journal of Humanities Social Sciences and Education (IJHSSE)*,8(2), 59-69. DOI: 10.20431/2349-0381.0802007.

⁶⁹ USDA (2023) Zambia: Zambia Maintains its Status as a Net Exporter of Corn <https://fas.usda.gov/data/zambia-zambia-maintains-its-status-net-exporter-corn>

⁷⁰ Interviews with a mealie meal company in Kabwe (21 September 2023)

⁷¹ Ly, R., Matchaya, G., Kasoma-Pele, W., and Dia, K. 2023, 'Ukraine Crisis and African Countries - Predicting Food Crop Production in Times of Crisis: The Case of Wheat in Zambia ', AKADEMIYA2063 Publications

⁷² (2020) Country Focus _Grains and Milling Industry in Zambia

Province is the largest producer of wheat (49.5%).⁷³ Most wheat flour is used for bread, cereal and confectionaries.

The Zambian government has occasionally banned wheat imports. Statutory Instrument 18 of 2009 banned the import of wheat grain and wheat flour to improve food security and encourage local production.⁷⁴ However, the government lifted the ban in 2015 to boost supplies and restrain price rises.⁷⁵ According to the interviews by the Survey Team conducted in October 2023, the government has restituted restrictions on wheat imports in spite of its announcement of importing 125,000 tons of wheat in early 2023 due to the production shortfalls.⁷⁶

Box 2: Instant Noodle Manufacturer in Lusaka

Overview

Established in 2012, the company initially produced Chinese style instant noodles under its own brand name using an Original Equipment Manufacturer (OEM) factory in China. In 2020, the company established its own plant in Zambia with a capital investment of USD 5 million sourced from international impact investment funds and individual investors. The company has become Zambia's pioneer instant noodle producer, making its noodles from locally sourced wheat. The company has 110 employees, of whom 80 are full-time staff.

Market

The company mainly targets the urban market for which packaged noodles is in high demand. 90% of the company's supply is directed towards the domestic market with the remaining 10% being exported to foreign countries such as Zimbabwe and Kenya.

Challenges

The company faces several operational challenges. First, the company lacks skilled workers. The owner has to develop the capacity of his new employees. Second, government institutional processes, such as those of ZABS, take excessive amounts of time; resulting in the company having to use institutions in foreign countries every month for quality testing, which is more cumbersome and costly, negatively impacting the business.⁷⁷

3-1-3 Peanuts

Peanuts, also known as groundnuts in Zambia, are Zambia's third most widely grown crop over recent years with production volume estimated at 127,172 tons in the 2019/2020 season and 175,329 tons in the 2020/2021 season.⁷⁸ Peanut farming in Zambia has a great potential to economically empower women farmers. In the Eastern Province, women are said to control over 40% of peanut cultivation. The figure is much higher than that of other crops like maize for which women manage less than 20% of fields.⁷⁹

This crop faces several challenges. The peanut yields attained by smallholder farmers in Zambia are low due to poor production techniques and an inadequate supply of inputs such as quality seed and

⁷³ IFC (2014) <https://gmaptool.org/report/overview/ZMB/wheat>

⁷⁴ World Bank (2013) Light Manufacturing in Zambia Job Creation and Prosperity in a Resource-Based Economy.pdf

⁷⁵ FAO (2017) <https://www.fao.org/giews/food-prices/food-policies/detail/en/c/885403/>

⁷⁶ Interviews with an instant noodle enterprise in Lusaka (22 September 2023)

⁷⁷ In Zambia, Zambia Compulsory Standards Agency (ZCSA) administers compulsory standards to protect consumers while Zambia Bureau of Standards (ZABS) administers voluntary accreditation for quality assurance such as safety standards.

⁷⁸ Zambia Statistics Agency. <https://www.zamstats.gov.zm/agriculture-environment-statistics/>

⁷⁹ IAPRI (2013) Value Chain Analysis of the Groundnuts Sector in the Eastern Province of Zambia

fertilizer.⁸⁰ Moreover, aflatoxin, which is harmful to human body, continues to be a problem in both formal and informal trades. Efforts are underway to minimize aflatoxin contamination through interventions such as the use of soil amendments, risk indices, improved drying techniques and new storage options.⁸¹

Farmers

Peanuts are produced by nearly half of the 1.4 million rural smallholder farmers. This crop is planted on approximately 8.8% of land cultivated in Zambia with half of the volume produced in the Eastern and Central Provinces.⁸² ⁸³ According to an interview the Survey Team conducted, the average yield is approximately 200 kg per hectare.⁸⁴ Some farmers sell peanuts in raw form while others dry the peanuts for sale at higher prices. Dried peanuts can be stored for up to 1 year.⁸⁵

Peanut processor

Peanuts are processed into peanut butter, cooking oil, sweets and animal feed. Peanut butter is an important source of nutrition for infants and young children in Zambia.⁸⁶ Its production process involves several steps including shelling, roasting, grinding and mixing. After the groundnuts are harvested, their outer shells are removed. The shelled groundnuts are then roasted, which enhances their flavor. Once roasted, the groundnuts are ground into a paste, mixed with ingredients such as salt, sugar and oil before being turned into peanut butter.⁸⁷

Peanuts can also be processed into powder, which is used with other foods, especially vegetables, as relish.⁸⁸ Regarding the usage of process wastes, a company the Survey Team visited in Chipata processes nut shells into fire brick aids, which are then used as a source of energy within the factory.⁸⁹

Retail

There is apparently at least one dominant local large-scale trader in every district who is engaged in the collecting, wholesaling and retailing of peanuts. These traders either collect peanuts via collectors or directly receive peanuts from farmers in their shops. Collected peanuts are usually transported to stores

⁸⁰ Chikobola, M. M. (2016). Profit Efficiency of Groundnut Production: Evidence from Eastern Province of Zambia. *Journal of Economics and Sustainable Development*, Vol.7(8).

⁸¹ <https://ftfpeanutlab.caes.uga.edu/Locations/Zambia.html>

⁸² IAPRI (2013) Value Chain Analysis of the Groundnuts Sector in the Eastern Province of Zambia

⁸³ Mukanga, M., Matumba, L., Makwenda, B., Alfred, S., Sakala, W., Kanenga, K., Chancellor, T., Mugabe, J., & Bennett, B. (2019). Participatory evaluation of groundnut planting methods for pre-harvest aflatoxin management in Eastern Province of Zambia. <https://doi.org/10.1051/cagri/2019002>.

⁸⁴ Interview with a peanuts butter processing cooperative (03 October 2023)

⁸⁵ Ibid.

⁸⁶ The University of Queensland (2017) Peanut Butter in Zambia

⁸⁷ Interview with a peanuts butter processing cooperative (03 October 2023)

⁸⁸ Chikobola, M. M. (2016). Profit Efficiency of Groundnut Production: Evidence from Eastern Province of Zambia. *Journal of Economics and Sustainable Development*, Vol.7(8).

⁸⁹ Interview with a social enterprise (25 September 2023)

on a weekly basis.⁹⁰ Processed peanuts, such as peanut butter, are distributed to individuals either informally or through small shops or supermarkets.

Export

At present the high level of aflatoxin in produced peanuts is not compliant with international quality standards which in turn prevents exporting.⁹¹

Box 3: Women's Peanut Butter Cooperative in Livingstone

Overview

The cooperative, established in 2020 by 2 individuals, is engaged in peanut butter production. In 2020, the members received two-week training in peanut butter processing sponsored by the Sun International Hotel (currently known as "Avani").

Market

The cooperative directly sources its raw materials from farmers, primarily during the harvest season from local farmers. Owing a smaller roaster, the cooperative initially produced 10 bottles (410 g) of peanut butter per day. The cooperative now sells peanut butter in 1kg containers to meet increased consumer demand, especially for children. The cooperative produces peanut butter without preservatives or sugar, which differentiates their product in the market. The price is 50 ZMW for a 1kg container and 25 ZMW for a 450 g bottle, which makes the product competitive with other brands on the market.

Machinery

The cooperative now has three machines: one grinder (valued at around 2,000 ZMW) funded through savings, another grinder that the cooperative bought and one roaster provided by United States Assistance for International Development (USAID). The chairman would like to have a peeling machine to be more efficient in peanut skin removal.

Challenges and Future Plans

Challenges include difficulties in sourcing jars and containers locally (currently the cooperative sources them from Lusaka), as well as high electricity costs. Additionally, the chairman plans to purchase a printer to reduce label printing expenses.

Box 4: Social Agro-Processing Enterprise in Chipata

Overview

The company was founded in 2009 under a Wildlife Conservation Society (WCS) initiative. The company aims to promote sustainable farming practices. The company currently engages approximately 130,000 farmers in the Eastern Province where a total of 230,000 farmers reside. The company provides both seed and training to the farmers. Farmers who work with the company produce a variety of crops including peanuts, cowpeas and honey. These raw materials are then processed by the company into a range of products such as white and brown rice, YamSoy (a soy meal), peanut butter, poultry feed and honey. The company also produces rice flour as well as dried vegetables and fruits, including mangoes.

Market

The company's products are sold both domestically and internationally, with the majority being sold on the domestic market. The company also exports honey to Europe.

Challenges

The company faces several challenges, including a lack of financing for expansion, farmers' insufficient skills, a lack of machinery and equipment, such as ground rippers and irrigation systems, and competition with other products in the market. The company also suffers from significant inspection costs charged by ZABS and Zambia Compulsory Standards Agency (ZCSA) who visit the company every quarter.

⁹⁰ IAPRI (2013) Value Chain Analysis of the Groundnuts Sector in the Eastern Province of Zambia

⁹¹ Chikobola, M. M. (2016). Profit Efficiency of Groundnut Production: Evidence from Eastern Province of Zambia. Journal of Economics and Sustainable Development, Vol.7(8).

3-1-4 Cassava and Sorghum (as Raw Materials for Beer)

Cassava is the main food crop after maize in Zambia. The cassava production is confined to the north and northwestern parts of Zambia where it has been produced by over 350,000 smallholder farming households for consumption.⁹² Cassava is a starchy root tuber vegetable, often grown without the use of chemical inputs. The crop is a common staple food in the Luapula Province where it is consumed by an estimated 70 percent of households on a daily basis and is not commonly recognized as a significant source of income.⁹³ Many consider cassava to be a women's crop as women provide a majority of the labor in growing and preparing the crop, and have control over when and how it is used at the household level. Cassava also provides food security for households as it is drought-tolerant, especially in comparison to Zambia's most prominent staple food, maize.⁹⁴ As such, a commercial cassava project initiated by Zambia Breweries is drawing attention since it contributes to an increase in farmers' incomes by producing cassava.

Box 5: Zambia Breweries Cassava Project⁹⁵

In 2016 Zambia Breweries, a subsidiary of the global beverage giant Anheuser-Busch InBev, launched a commercial cassava project in the Luapula Province in order to feed its brewing plant in Ndola; Zambia's third largest city. The company partnered with GroAfrica, a local private agricultural company, and Musika, an agriculture-focused non-profit organization, to source cassava from small-scale farmers for the production of low-cost beer for rural consumers. In exchange for a guaranteed market, small-scale farmers participating in the project received improved varieties of cassava and guidance in farming techniques. The project now involves more than 5,000 small-scale farmers.

By sourcing raw materials from local small-scale farmers for the production of cassava beer, Zambia Breweries received a tax break from the government of Zambia that enabled the company to sell the beer at a lower cost than other commercially sold beer.

In December 2018, Zambia Breweries cassava development was held up as a success at the National Development Conference for its empowering of cassava farmers in the Luapula Province and for supporting goals outlined in Vision 2030.

Sorghum used to be an important crop for smallholder farmers in Zambia until the 19th century; it was replaced by maize in the 20th century.⁹⁶ It was estimated that the country had 24,927 hectares of sorghum cultivation in 2019, while the production volume was 18,372 tons in 2021.⁹⁷ ⁹⁸ Sorghum is primarily used as a raw material for food and beverage products. According to the owner of a local sorghum

⁹² Emmanuel Oladeji Alamu et al, (2019) "Evaluation of cassava processing and utilization at household level in Zambia" Food Security

⁹³ Chapoto, Antony, and Subakanya Mitelo. "Rural Agricultural Livelihoods Survey 2019 Report." (2019): 150.

⁹⁴ Ann Crumbaugh (2021) "Assessing the Development Impact of Zambia Breweries Cassava Project; Reflections on Process, Indicators, and Evidence"

⁹⁵ Ibid.

⁹⁶ USAID (2010) Sorghum and Pearl Millet Improved Seed Value Chains in Zambia: Challenges and Opportunities for Smallholder Farmers

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1002&context=intsonmilpubs>

⁹⁷ Selina Wamuchi

<https://www.selinawamucii.com/insights/prices/zambia/sorghum/#:~:text=The%20production%20of%20sorghum%20in%20Zambia%20was%2020%2C052.country%20had%20approximately%2024%2C927.00%20hectares%20under%20sorghum%20cultivation.>

⁹⁸ FAOSTAT

processing company, brewery companies in Zambia are using imported milled sorghum in addition to imported malt; the owner sees a potential for supplanting foreign products with local ones (refer to Box 6 below). Zambia imported USD 28.9 million of beer in 2021, primarily from South Africa (USD 27.3 million), while its beer exports were negligible.⁹⁹

Box 6: Domestic Sorghum Processing Enterprise in Livingstone

Overview

The company, consisting of nine employees, was registered in 2017. Its milling operation is conducted in a large warehouse that used to be utilized by a textile company. The owner, with previous experience in wheat and maize milling, decided to start a sorghum milling business in October 2022 after seeing an import substitution opportunity with sorghum, which is produced and consumed in small quantities for home consumption in Zambia.

The company sources 80% of its raw materials (sorghum) from three commercial farmers with the rest purchased from over 20 small-scale farmers (each of these small-scale farmers plants 1-2 hectares of sorghum). Sorghum grains can be stored for as long as 9 - 12 months before milling.

Market

The company's main customers are large local beer production enterprises. The company has a plan to scale up its operations. The estimated annual market potential exceeds 500 tons; should the company be able of supply milled sorghum consistently throughout the year, the order from brewery companies would significantly increase. The owner even sees the possibility for exporting.

Challenge

The primary challenge is the acquisition of machinery. The milling capacity of the current machine (bought at 45,000 ZMW) is 800 kg/hour. The company plans to purchase a new integrated Chinese made machine (costing USD 220,000) to automate the cleaning, soaking, drying and milling processes and thereby improving efficiency and minimizing the risk of contamination.

3-1-5 Cooking Oil

The local demand for cooking oil is around 120,000 tons per year.¹⁰⁰ Annual consumption per capita increased 35% over 10 years; from 4.9 kg in 2009 to 6.6 kg in 2019.¹⁰¹ The import volumes of palm and soybean oil were 50,000-80,000 tons and 30,000-40,000 tons per year respectively; consumption largely relies on imported products. With the export volume totaling less than 1 ton per year, import substitution should be a short-term goal for Zambian cooking oil.

In Zambia, soybean is the primary oilseed, accounting for 60% of all domestic cooking oil production. Other sources include cotton seed (19%), sunflower seed (15%) and other oilseeds such as groundnuts (6%).¹⁰²

⁹⁹ <https://oec.world/en/profile/bilateral-product/beer/reporter/zmb> (accessed on 26 Jan 2024)

¹⁰⁰ <http://zam.co.zm/upscaling-local-content-in-the-edible-oils-sector/>

¹⁰¹ Data in 2009:

https://www.google.com/search?q=6.6%2F4.9&oq=6.6%2F4.9&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIGCAEQBhhA0gEIMTI3OWowajmoAgCwAgA&sourceid=chrome&ie=UTF-8

Data in 2019 is calculated by the Survey Team. Population in 2019 was 18.38 million.

<https://www.statista.com/statistics/457707/total-population-of-zambia/>

¹⁰² <http://zam.co.zm/upscaling-local-content-in-the-edible-oils-sector/>

(1) Soybean

Zambia is largely self-sufficient in soybean production. The climate in Zambia is largely favorable to soybean production since the crop requires moderate amounts of rainfall.¹⁰³ Soybean is cultivated mainly in the Eastern, Central and Northern Provinces.¹⁰⁴ Areas planting soybean in Zambia rose substantially from 38,948 hectares in 2008 to 231,630 hectares in 2017.¹⁰⁵ The local soybean production volume stood at around 300,000 tons in 2020.¹⁰⁶

(2) Cotton Seed

Zambia produced 45,000 tons of cotton seed in 2019. However, due to climate change and the COVID-19 pandemic, the sector experienced a significant decline in cotton seed production in 2021, resulting in only around 24,000 tons of production. The low yield of cotton seed attained by cotton farmers is also an issue. The Cotton Board of Zambia and the International Trade Centre (ITC) seek to double the yield of at least 50,000 smallholder cotton farmers in Zambia by 2024.¹⁰⁷

(3) Sunflower Seeds

The production volume of sunflower seeds has increased over previous years from 34,000 tons in 2019 to 50,000 tons in 2020.¹⁰⁸ According to the interviews the Survey Team conducted, several large enterprises have started an out-grower scheme with the support of donors, such as EU-Enterprise Zambia Challenge Fund, to supply sunflower seeds to farmers as a crop loan.¹⁰⁹ Some farmers are processing sunflower seeds into cooking oil by themselves to increase income, supported by a Green Innovation Centre project implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).¹¹⁰

(4) Palm Oil¹¹¹

Zampalm Limited was incorporated in 2008 by Zambeef to develop the first commercial oil palm plantation and oil mill in Zambia for producing crude palm oil. IDC acquired a 90% stake in 2017 with a 10% share remaining with Zambeef. The oil palm plantation is located in the Muchinga Province with a total of 3,864 hectares under cultivation. An additional 1,100 hectares of land is used for an out-grower scheme managed by Oil Palm Out-Growers Company (OPOC). Crude palm oil is

¹⁰³ Siamabele, B. (2019). "Soya Bean Production in Zambia: Opportunities and Challenges." *American Journal of Agricultural and Biological Sciences*.

¹⁰⁴ Ibid.

¹⁰⁵ <https://www.ceicdata.com/en/zambia/agricultural-planted-area/area-planted-soya-bean>

¹⁰⁶ <https://www.tridge.com/intelligences/soybean/ZM>

¹⁰⁷ <https://intracen.org/news-and-events/news/steering-zambias-cotton-from-survival-to-success>

¹⁰⁸ <https://www.tridge.com/intelligences/sunflower-seed/ZM>

<https://www.selinawamucii.com/insights/prices/zambia/sunflower-seeds/>

¹⁰⁹ EU-Enterprise Zambia Challenge Fund

<https://enterprisezambia.org/>

¹¹⁰ <https://wire.farmradio.fm/farmer-stories/zambia-farmer-boosts-income-by-processing-oil-from-sunflower/>

¹¹¹ <http://zampalm.co.zm/> (accessed on 26 January 2024)

used to produce cooking oil, margarines and ice cream. In 2022, 3,900 tons of crude palm oil was produced, which was equivalent to 5% to 8% of imported crude palm oil.¹¹²

Box 7: The Largest Cooking Oil Production Company in Zambia

Overview

Founded in 2009 by an Indian Zambian, the company produces cooking oil from soybean, sunflower seeds and cotton seed. The company is the largest processor of cooking oil in Zambia, holding a 40% domestic market share.

Raw materials are purchased from farmers and aggregators (district farmers' associations). The company collaborates with donors to undertake an out-grower scheme with smallholder farmers, providing seed and technical training to them. EU has supported the promotion of the out-grower scheme for sunflower seeds.

Market

Currently, the company supplies only to domestic markets, delivering over 5,000 tons of cooking oil monthly.

Challenge

A limited supply of oil seed is the major challenge to the company in increasing the production of cooking oil.

Box 8: Soybean Processor in Ndola

Overview

The company is a soybean processor that produces soya cake and cooking oil. Soya cake is used for the production of feed stock. The company sources soybean from commercial farmers and aggregators. The company holds a 20% share of the domestic market.

Market

The company supplies soya cake and cooking oil to both domestic and foreign markets. Soya cake is exported to Tanzania, Kenya, Rwanda, Zimbabwe and Namibia, while cooking oil is exported mainly to the DRC.

Challenge

The company is challenged by an insufficient supply of soybean. Though the company has the capacity for crushing 1,000 tons of soybean per year, only 60% of that capacity is currently utilized.

3-1-6 Honey

While honey production has the potential to bring about significant impacts on rural livelihoods in Zambia, it needs to be promoted in a way that ensures sustainable forest management.¹¹³ Honey production in Zambia has shown approximately 1.2% year-on-year growth since 1973, reaching 853 tons in 2021. According to the Ministry of Fisheries and Livestock, Zambia has the potential to produce 20,000 tons of honey annually if production capacities coupled with infrastructure were harnessed.¹¹⁴

The following value chain actors are active in the honey industry:

Beekeepers

Farmers can start beekeeping and honey production once they have received training and beehives which are often provided by private enterprises or NGOs through beekeepers' associations. Traditional hives

¹¹² <https://zambianbusinesstimes.com/palm-oil-trees-venture-viable-with-ready-market-in-zambia-zampalm/> (accessed on 26 January 2024)

¹¹³ According to CFOR (2002), around 66% of Zambia was covered by woodlands and dry forests including rich miombo trees (https://www.cifor.org/publications/pdf_files/livebrief/livebrief0801.pdf).

¹¹⁴ <https://www.farmersweekly.co.za/agri-news/africa/zambia-aims-to-raise-honey-exports-to-the-eu-and-elsewhere/>

are typically made from forest resources such as miombo trees. The average beekeeper manages around 10 beehives and produces 600 grams of honey annually.

Beekeepers' Associations

There are several beekeepers' associations in Zambia.

The Zambia Honey Council (ZHC), established in 2003, serves as a platform for honey producers, processors and buyers to address issues related to the honey sector.¹¹⁵ ZHC operates across three main districts (i.e Kaoma (Western), Kapiri Mposhi (Central) and Kabompo (North-Western) Districts) in Zambia, having organized a total of 4,000 individual honey producers into groups as of 2011.¹¹⁶ Members benefit from training and market linkage activities facilitated by ZHC.

The North Western Beekeepers Association is a community-based producer organization in Kabompo District consisting of 6,500 producers dedicated to honey production who utilize traditional bark hives. The association sells the honey collected from its members to various companies and several smaller buyers.¹¹⁷

Honey Processors and Retail

In order to encourage farmers to begin beekeeping, honey processors often rent beehives to beekeepers for free and purchase honey at a subscription price by which they recover their investment cost. In the Northwestern Province, where beekeeping has been widely practiced, beehives have been created from *mimbo* trees which take as long as 40 years to grow. With a view to mitigating the environmental impact of this practice, some honey processors have begun introducing alternative beehives; one of the processors has shifted to the beehives made of pine trees following the methodology used in Kenya. Pine trees, which can be used for several commercial purposes, mature in only 8-10 years. Some processors have direct contracts with beekeepers, while others have MOUs with organizations, such as NGOs, for honey collection. These processors occasionally visit the beekeepers to observe their work and ensure quality. Some processors also produce bi-products such as marmalade and beeswax.

Relatively simple technology is used for honey production. There are several large honey producers, such as Forest Fruits, Mpundu Wild Honey and Adcoms, that dominate major chain store shelves. Honey is a seasonal product that depends on the flowering of trees, and is susceptible to fluctuations in production. Locally processed honey is distributed informally to individuals or through small shops and supermarkets. Without the capacity to stock honey to ensure a consistent supply, SMEs have difficulties entering and penetrating the market as new suppliers.

¹¹⁵ <https://www.cfa-international.org/NGO%20directory/DFA-765.htm>
https://www.facebook.com/p/Zambia-Honey-Council-100041491586431/?paipv=0&eav=AfZjxsHF-NYIlyYyu0RA1mEL2TZLlqkxDdUrT_b3rA3Q0Gw7Usorkk5ADiXcJYAr4rw&_rdr

¹¹⁶ 3 main districts are: Kaoma, Kapiri Mposhi and Kabompo Districts.

¹¹⁷ https://www.trickleout.net/index.php/directory-pilot/Zambia/_north-western-beekeepers-association

Export

Zambia has been exporting honey to various countries over recent years with an export value of USD 14 million in 2022. The export destinations vary from year to year with primary clients being the UK, United Arab Emirate (UAE) and surrounding African countries.¹¹⁸ According to the Ministry of Fisheries and Livestock, the EU's approval of the Zambia Residue Control Plan in August 2020 qualified Zambia as a non-EU country for exporting honey to EU. This enabled Zambia to earn USD 14.3 million in revenue from international sales of honey in 2022.¹¹⁹

End Consumers

Consumer awareness regarding the advantages of honey for health, particularly organic products that can be used instead of sugar, remains limited.

Box 9: TICBAS Project¹²⁰

TICBAS project, supported by AfDB and implemented by the Ministry of Fisheries and Livestock for the export of Zambian honey to South Africa, aimed to improve the beekeeping sector in Zambia by establishing sanitary and phytosanitary standards as well as providing training for participants in the value chain. With funding of USD 0.4 million received from 2015 to 2017, the project trained 1,371 people, including 33% women, on various aspects of beekeeping and surveillance systems. It also strengthened coordination among different stakeholders and created a platform for the beekeeping sector.

Box 10: Honey Producer in Lusaka

Overview

The company was established in 2018 to collect honey from smallholder beekeepers by promoting environment-friendly beehives. The company consists of 22 full-time employees and 8 part-time employees.

Deforestation has been growing in the Northwestern Province recently due to rapid urbanization and industrialization. The owner attributes the deforestation partly to traditional beekeeping practices that use the trunks of three miombo trees to create one beehive. Given that a Miombo tree takes 40 years to mature, this practice is not sustainable. Inspired by a practice in Kenya, the owner advocates for beehives made of pine trees that can be produced sustainably (though the company is not the first player in Zambia using this type of beehive). Compared to the miombo tree, pine trees mature in 8-10 years and can be grown for commercial purposes.

The company won the Seed Climate Adaptational Award in 2022 for promoting awareness of forest conservation practices and has also been featured in Forbes magazine. The owner also mentioned that the beehive business can have a positive impact on women in rural areas who start beekeeping, letting them gain financial independence and a stronger voice in their households.

Business Model

The company rents beehives to beekeepers for free, while purchasing the honey at a subscription price later to cover its investment. Before the company rents out the beehives, it holds training sessions and selects those beekeepers who show commitment during the training. The company also sends an extension officer who works with the beekeepers to motivate and guide them in hive maintenance every day. At present, the owner rents 5,025 beehives to a total of around 500 households.

¹¹⁸ World Integrated Trade Solution

<https://wits.worldbank.org/trade/comtrade/en/country/ZMB/year/2019/tradeflow/Exports/partner/ALL/product/040900>

¹¹⁹ <https://www.farmersweekly.co.za/agri-news/africa/zambia-aims-to-raise-honey-exports-to-the-eu-and-elsewhere/>

¹²⁰ (2020) AfDB_ Sweet spot African Development Bank supports Zambian honey exports to South Africa

<https://www.afdb.org/en/success-stories/sweet-spot-african-development-bank-supports-zambian-honey-exports-south-africa-39888>

Market

The company produces 300 tons of honey per year, which is packed into 500-gram glass jars for export. Its market share in Zambia jumped to 6% in 2021 from 0.63% in 2020. This was achieved without any marketing activities but solely through its high quality. The owner has developed SOPs to ensure products traceability, which is important for exporting.

The company exports its honey to Botswana, Namibia and soon to Mauritius. The current export volume is around 20,000 units per year, which is larger than its domestic sales. The owner is interested in tapping into European markets, such as Germany and the UK, where Zambian honey has a good reputation. The company also intends to expand production to other regions and is seeking investors interested in impact investing, as the interest rate of banks is too high and the owner does not have collateral. The owner also mentioned that scaling up the business could help reduce production costs.

Challenge

One challenge the company faces is raising public awareness about crystallization. The owner mentioned that organic honey crystallizes when the temperature drops due to the natural properties of pollen, while many consumers are unaware of this fact.

3-1-7 Livestock

The livestock sector in Zambia is an important component of the agricultural sector, contributing 42% of the agricultural sector GDP and 50% of employment in rural areas.¹²¹ Livestock farmers in Zambia are mainly smallholders who usually operate on a subsistent basis. The livestock processing business in Zambia is dominated by large commercial farms that produce a wide range of products such as meat, dairy products, poultry products, leather products and animal feed.¹²² Apart from mechanically deboned chicken, Zambia is more or less self-sufficient in the above-mentioned livestock products.

(1) Cattle

(a) Meat (Beef)

Cattle population in Zambia saw a significant increase from 2.2 million head in 2012 to 3.7 million head in 2017 with half of them raised in Southern and Central Provinces.¹²³ The Zambian beef market is currently segmented into two types of meat: standard beef produced by smallholder farmers and choice beef produced primarily by commercial farmers.¹²⁴

Smallholder Farmers

Smallholder farmers play a dominant role in cattle production, owning approximately 80% of the Zambian cattle population. Over 80% of livestock farmers own fewer than 10 cattle with less than 10% owning more than 20 cattle.¹²⁵ Some of them keep animals as a means of savings that should be

¹²¹ Odubote, I.K. (2022) 'Characterization of production systems and management practices of the cattle population in Zambia,' *Tropical Animal Health and Production*, 54, pp. 216. <https://doi.org/10.1007/s11250-022-03213-8>

¹²² Sikamwaya, K., & Zhao, Y. (2020). 'An Analysis of the Beef Production Industry and Marketing in Zambia.' *South African Journal of Science and Sustainable Environment*, 8(3), 46-62. Article Number: SAJSSE.62484.

¹²³ Ibid. Lubungu, M., Sitko, N. J., & Hichaambwa, M. (2015). 'Analysis of Beef Value Chain in Zambia: Challenges and Opportunities of Linking Smallholders to Markets.' Indaba Agricultural Policy Research Institute (IAPRI).

¹²⁴ Sikamwaya, K., & Zhao, Y. (2020). 'An Analysis of the Beef Production Industry and Marketing in Zambia.' *South African Journal of Science and Sustainable Environment*, 8(3), 46-62. Article Number: SAJSSE.62484.

¹²⁵ Lubungu, M., Sitko, N. J., & Hichaambwa, M. (2015). 'Analysis of Beef Value Chain in Zambia: Challenges and Opportunities of Linking Smallholders to Markets.' Indaba Agricultural Policy Research Institute (IAPRI).

monetized when the need arises.¹²⁶ Smallholder farmers often lack knowledge on livestock management including animal nutrition and disease prevention. They do not feed their cattle well, which results in the majority of Zambian cattle weighing only 300-400 kg in contrast to 450-700 kg in neighbor countries.¹²⁷ Intermediaries in Zambia collect cattle from farmers scattered across a wide geographical range and bring them to the market. Cattle from smallholder farmers are usually slaughtered in small-scale abattoirs.¹²⁸ These abattoirs cannot expand their scale due to a shortage of cold storage facilities, resulting in a situation where cattle dealers are divided into groups for which specific days are allocated for animal slaughtering.¹²⁹

Commercial Farmers

Commercial farms, such as Zambeef, usually source cattle from smallholder farmers instead of rearing them on their own. Feedlots that operate in commercial farm areas aim to fatten the cattle bought from smallholder farmers for about 90 days until the cattle's weight exceeds 400 kg.¹³⁰ Commercial farms have their own cold chains as well as abattoirs that can slaughter hundreds of animals per day. For instance, Zambeef owns five beef abattoirs with a total capacity to slaughter 230,000 cattle per annum as well as five feedlots located across the country with a standing capacity of 16,000 head.¹³¹ The beef produced by commercial farms is delivered to consumers via small butcheries and retail shops.¹³² For example, Zambeef operates 223 retail outlets that directly provide meat to consumers.¹³³ Most domestically produced beef is consumed within the country. In 2021, Zambia exported USD 0.5 million in "Bovine Meat", mainly directed to regional countries such as the DRC and Tanzania.¹³⁴ Imports for bovine meat were negligible.

¹²⁶ Sikamwaya, K., & Zhao, Y. (2020). 'An Analysis of the Beef Production Industry and Marketing in Zambia.' *South African Journal of Science and Sustainable Environment*, 8(3), 46-62. Article Number: SAJSSE.62484.

¹²⁷ Interview with Zambeef (25 October 2023)

¹²⁸ Sikamwaya, K., & Zhao, Y. (2020). 'An Analysis of the Beef Production Industry and Marketing in Zambia.' *South African Journal of Science and Sustainable Environment*, 8(3), 46-62. Article Number: SAJSSE.62484.

¹²⁹ Ibid.

¹³⁰ Zambeef <https://zambeefplc.com/local-farmers-benefit-from-zambeefs-value-chain/>,

Lubungu, M., Sitko, N. J., & Hichaambwa, M. (2015). 'Analysis of Beef Value Chain in Zambia: Challenges and Opportunities of Linking Smallholders to Markets.' Indaba Agricultural Policy Research Institute (IAPRI).

¹³¹ Interview with Zambeef (25 October 2023)

¹³² Lubungu, M., Sitko, N. J., & Hichaambwa, M. (2015). 'Analysis of Beef Value Chain in Zambia: Challenges and Opportunities of Linking Smallholders to Markets.' Indaba Agricultural Policy Research Institute (IAPRI).

¹³³ Interview with Zambeef (25 October 2023)

¹³⁴ OEC (Observatory of Economic Complexity)
<https://oec.world/en/profile/bilateral-product/bovine-meat/reporter/zmb>

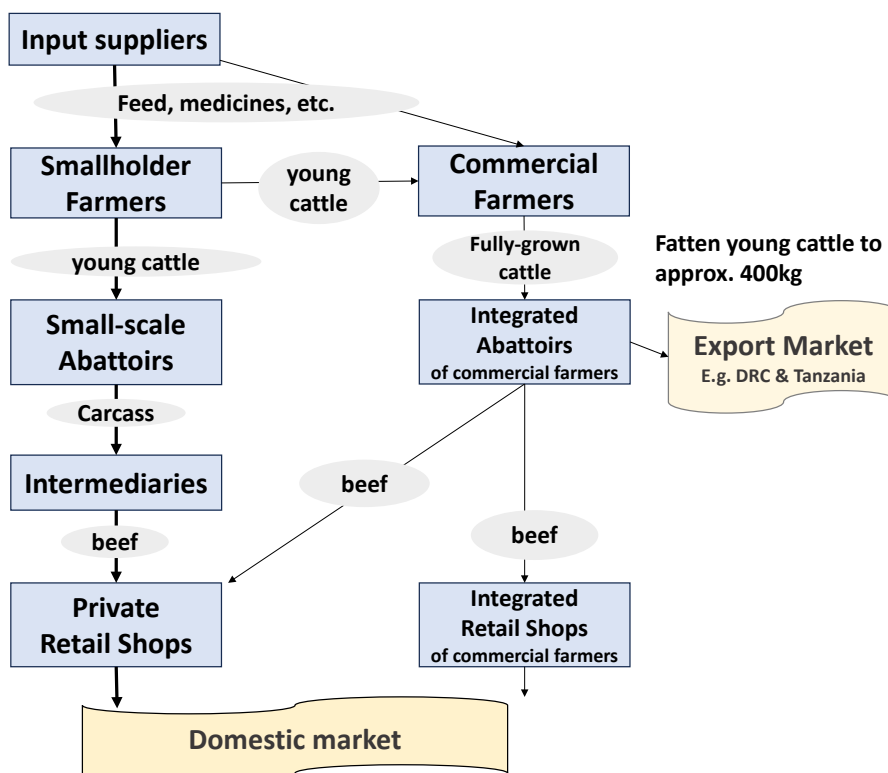


Figure 12: Value Chain of Beef

Source: Compiled by the Survey Team based on Lubungu, M., Sitko, N. J., & Hichaambwa, M. (2015)

(b) Milk and Dairy Products

Milk and dairy product consumption is growing fast in Zambia. With liquid milk consumption in Zambia in 2021 estimated at around 28 liters per person,¹³⁵ total liquid milk consumption amounted to 560 million liters per year. In 2010, total milk production in Zambia was estimated to be around 215 million liters with the figure having doubled to 453 million liters by 2019.¹³⁶ From these figures, Zambia can be said to be more or less self-sufficient in liquid milk.

Farmers

Smallholder dairy farmers account for 72% of total milk production.¹³⁷ The number of cattle-rearing households was estimated at 0.15 million in 2019 with a total of 1.6 million cows in 2018.¹³⁸ According to the Dairy Association of Zambia (DAZ), the dairy industry is located mainly in the Southern, Lusaka,

¹³⁵ (2021) Zambia Dairy Transformation Programme (ZDTP)

<https://www.mfat.govt.nz/assets/Aid-Prog-docs/Evaluations/2021/MFAT-Management-Response-Zambia-Dairy-Transformation-Programme.pdf>

¹³⁶ Mumba, C., Samui, K. L., Pandey, G. S., Hang’ombe, B. M., Simuunza, M., Tembo, G., & Muliokela, S. W. (2011) Economic analysis of the viability of smallholder dairy farming in Zambia &

Notenbaert, A.M.O.; Sikacey, N. (2021). Heat stress on dairy productivity: Policy recommendations for the dairy value chain in Zambia.

¹³⁷ Notenbaert, A.M.O.; Sikacey, N. (2021). Heat stress on dairy productivity: Policy recommendations for the dairy value chain in Zambia.

¹³⁸ Phiri, B.S.J., Sakumona, M., Hang’ombe, B.M., Fetsch, A., Schaarschmidt, S. (2021). "The traditional dairy value chain in Zambia and potential risk factors to microbiological food safety." Food Control, Volume 124, June 2021, 107885.

Central and Copperbelt Provinces. Average milk production per head is around 5.2 liters per day, though the figure significantly varies based on factors such as breeds and feeding conditions.¹³⁹ Commercial farm cows usually produce as much as 30 liters per day, while the traditional cattle breeds of smallholder dairy farmers produce only 1-3 liters per day.¹⁴⁰ ¹⁴¹ According to DAZ, dairy farmers face multiple challenges such as limited access to milk collection centers (explained in the next section), due to a shortage of facilities, poor rural road conditions, the prevalence of animal diseases, a lack of technicians and facilities for artificial insemination, and insufficient feedstocks in June and July.

Milk Collection Centers (MCCs)

A total of 89 MCCs are operating within Zambia and are typically managed by local dairy farmer cooperatives that play a crucial role in the dairy supply chain. MCCs test and store the milk collected from traditional and smallholder farmers. The milk is then transported to commercial processors where it is processed for distribution to the general public. One significant issue MCCs face is the farmers' limited access to MCCs as mentioned above. The rainy season exacerbates this problem, making the maintaining of quality more difficult.¹⁴²

Retailers & Consumers

Liquid milk consumption in 2021 in Zambia was estimated at around 28 liters per person.¹⁴³ Apart from milk, large enterprises, such as Zambeef produce a wide range of value-added dairy products including yogurt, drinking yogurt, cheese, butter and milk-based juices. Dairy products are mainly sold through big retailers such as Shoprite.¹⁴⁴ The export value of "Milk and cream, concentrated or containing added sugar or other sweetening matter" reached USD 9.7 million (4 million tons) in 2022 with a consistent increase over recent years. The main trading partners are South Africa and Equatorial Guinea. This trend strongly indicates a substantial growth potential for processed milk products in Zambia.¹⁴⁵ Imports of the same category of product are also increasing; it reached USD 23.2 million (5 million tons) in 2022, reflecting individual consumer preferences.¹⁴⁶

¹³⁹ (2021) Zambia Dairy Transformation Programme (ZDTP)
<https://www.mfat.govt.nz/assets/Aid-Prog-docs/Evaluations/2021/MFAT-Management-Response-Zambia-Dairy-Transformation-Programme.pdf>

¹⁴⁰ Phiri, B.S.J., Sakumona, M., Hang'ombe, B.M., Fetsch, A., Schaarschmidt, S. (2021). "The traditional dairy value chain in Zambia and potential risk factors to microbiological food safety." Food Control, Volume 124, June 2021, 107885. & Interview with Zambeef (25 October 2023)

¹⁴¹ Kalundu Dairy Farm, which is part of Zammilk, is the largest dairy farm in Zambia. Zammilk is a subsidiary of Zambeef, one of the largest agro-businesses enterprises in Zambia.

¹⁴² Interview with DAZ (5 October 2023)

¹⁴³ (2021) Zambia Dairy Transformation Programme (ZDTP)
<https://www.mfat.govt.nz/assets/Aid-Prog-docs/Evaluations/2021/MFAT-Management-Response-Zambia-Dairy-Transformation-Programme.pdf>

¹⁴⁴ Interview with Zambeef (25 October 2023)

¹⁴⁵ Trend Economy <https://trendeconomy.com/data/h2/Zambia/0402>

¹⁴⁶ COMTRADE

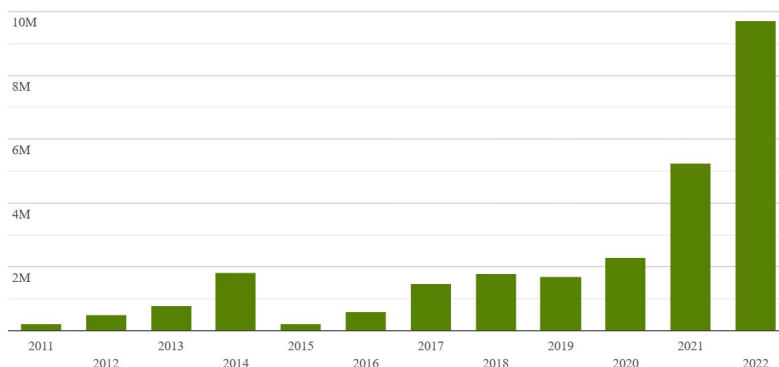


Figure 13: Annual Export Value of “Milk and Cream, Concentrated or Containing Added Sugar or Other Sweetening Matter”
 Unit : USD
 Source: FAOSTAT

Box 11: Dairy Association of Zambia

Overview

The Dairy Association of Zambia was established in 2012 as a consortium of producers and processors in the dairy industry. The association encompasses 6,800 members, including major players such as Zammilk under Zambeef.

Services

The association provides a range of services to members, including lobbying against milk importation, offering dairy farming training, and connecting members with financial resources and markets. It also supports SMEs in setting up cooperatives and provides milk tanks to such producers.

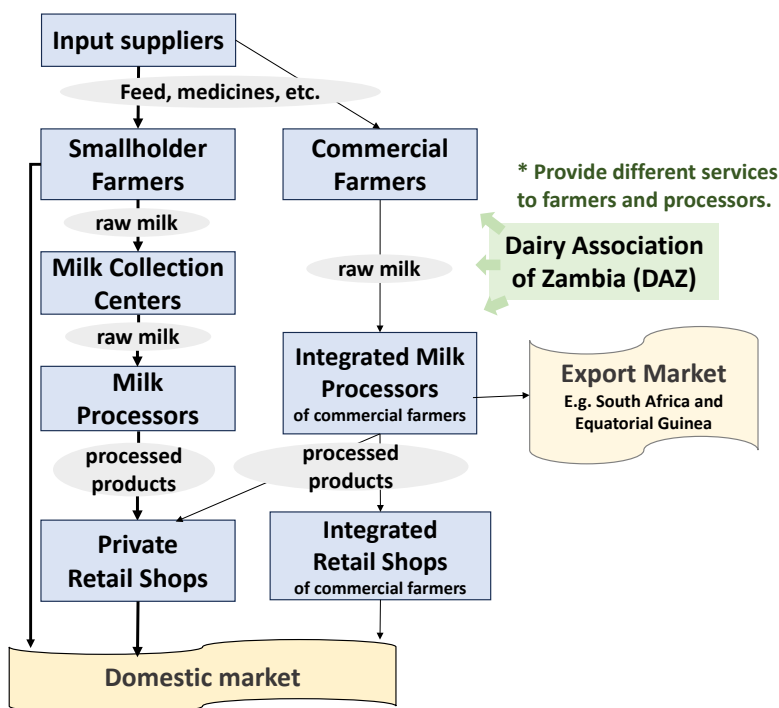


Figure 14: Value Chain of Milk and Dairy Products

Source: Compiled by the Survey Team based on (2021) The traditional dairy value chain in Zambia and potential risk factors to microbiological food safety

(c) Poultry

The poultry industry predominates the livestock sector in Zambia, accounting for half of the country's total meat consumption. Domestic demand for poultry per capita increased from 7.5 kg in 2013 to 9.2 kg in 2018.¹⁴⁷ The rapid growth in demand has stimulated investment and competition by local and multinational firms to the benefit of consumers.¹⁴⁸ Though growing rapidly, the poultry industry in Zambia is not free of its challenges. First, farmers usually lack financing for expansion as commercial bank interest rates are prohibitive. Moreover, frequent power failures negatively impact local businesses. Lastly, limited technologies prevent the production of high-quality products, which also affects export potential.¹⁴⁹

Farmers

The poultry industry value chain begins with hatcheries producing 1-day-chicks. The production of both village and broiler chickens is carried out by farmers, including out-growers;¹⁵⁰ smallholder farmers represent 90% of the production market.¹⁵¹ In 2018, a total of 15 million village chickens, 6 million broilers and 1 million layers were available for consumption or processing in Zambia.¹⁵²

Processors

Processors, represented by restaurants and fast-food outlets, are mostly engaged in the processing of broiler chickens. One of the largest chicken processors in Zambia interviewed by the Survey Team mentioned that the company sourced around 60-70% of its raw materials (chickens) from its own farms with the remaining 30% being sourced externally.

Poultry processing in Zambia still has room for growth. Out of all poultry production, approximately 65% of birds are sold live; only 35% are commercially processed mainly due to challenges associated with small scale production, such as high input costs, limited providers of breeding stock and power failures.¹⁵³

Retail and Trade

In Zambia, processed chicken is mainly sold at large supermarkets and restaurants. The government presently prohibits the importation of broilers, allowing only mechanically deboned chicken to be

¹⁴⁷ Muleya, F., Duma, Z., Chituta, K., Banda, K., & Mwansa, M. (2021) Developing Value Chains with Local Content Utilisation

& <https://www.thepoultrysite.com/news/2013/01/demand-for-chickens-still-high>

¹⁴⁸ Samboko, P. C., Zulu-Mbata, O., & Chapoto, A. (2018). Analysis of the Animal Feed to Poultry Value Chain in Zambia. *Development Southern Africa*, 351-368.

¹⁴⁹ Interview with Poultry Association of Zambia (28 September 2023)

¹⁵⁰ Ibid.

¹⁵¹ Muleya, F., Duma, Z., Chituta, K., Banda, K., & Mwansa, M. (2021) Developing Value Chains with Local Content Utilisation

¹⁵² Ibid.

¹⁵³ Ibid.

brought into Zambia.¹⁵⁴ In 2020, Zambia imported frozen chicken cuts worth approximately USD 21 million as the top processed food import in the country.¹⁵⁵ Very small quantities of frozen chicken and sausages are exported.¹⁵⁶

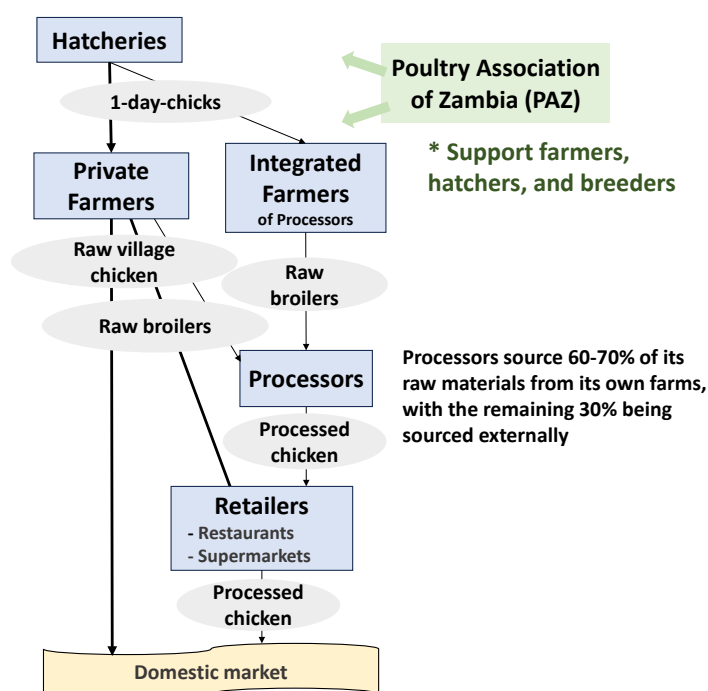
Box 12: Poultry Association of Zambia

The Poultry Association of Zambia (PAZ) was established 23 years ago under the Zambia National Farmers' Union (ZNFU). PAZ is comprised of poultry farmers, hatchers and breeders. Membership is categorized based on the number of chickens owned by the member, ranging from small scale farmers with 1-1000 chickens to corporate farmers with over 100,000 chickens. Currently, PAZ has more than 30,000 members. The association provides a wide range of services to members, including training, lobbying on behalf of farmers and creating markets.

Box 13: Enterprise in Poultry Industry in Chipata

Established in 2006, the company engages not only in poultry production but also in other industries such as printing, cooking oil and feed production. Its distribution network includes local markets in Chipata (including Shoprite and SPAR) and 8 outlets in other districts. The company engages in SMEs' capacity building for producing items that meet chain store qualifications.

The company currently imports 1-day-old chicks to sell to farmers. To ensure a stable supply of 1-day-old chicks in Eastern Province, the company plans to establish a hatchery for imported eggs by the end of 2023. The company is exploring ways to add value to the poultry industry by connecting farmers with potential buyers such as Shoprite, and processing chickens into sausages or dressed chicken to increase their shelf life. This initiative involves collaboration with 200 farmers.



¹⁵⁴ Samboko, P. C., Zulu-Mbata, O., & Chapoto, A. (2018). Analysis of the Animal Feed to Poultry Value Chain in Zambia. Development Southern Africa, 351-368

¹⁵⁵ Muleya, F., Duma, Z., Chituta, K., Banda, K., & Mwansa, M. (2021) Developing Value Chains with Local Content Utilisation

¹⁵⁶ Ibid.

3-1-8 Changing Trade Structure of Food-Processing Sub-Sector

Table 28 shows the major export items of the food and food-processing sub-sector in terms of value. All six major export items recorded remarkable increases in exports over the past 20 years. Their total export value in 2022 was USD 686 million, which is much larger than their total import value in the same year: USD 172 million. The trade surplus of USD 514 million for these items in 2022 against USD 35.4 million deficit in 2003 resulted from increased manufacturing activities in the food-processing sub-sector in Zambia.

Table 28: Major Export Items in the Food and Food-Processing Sub-Sector (USD million)

Items / Year	2003	2012	2022	Share (Rank) in 2022*	%change** (2012- 2022)
Beverages, spirits and vinegar (HS 22)	0.3	5.0	159.5	4.5% (7 th)	+41.5%
Tobacco and manufactured tobacco (HS 24)	22.4	156.6	135.7	3.8% (8 th)	-1.4%
Sugars and sugar confectionary (HS 17)	34.0	144.4	119.6	3.4% (11 th)	-1.9%
of which, sugar confectionary (HS 1704)	2.1	17.5	42.7		+9.3%
Cereals (HS 10)	6.8	418.9	113.9	3.2% (12 th)	-12.2%
Products of the milling industry; malt, starches, inulin, wheat gluten (HS 11)	5.4	36.2	90.4	2.5% (15 th)	+9.6%
Dairy produce; birds' eggs; natural honey; edible products of animal origin (HS 04)	2.2	8.2	66.9	1.9% (17 th)	+23.4%
Total of the above six items	71.0	769.2	686.1		-1.1%

*: The share is calculated by the use of “total export value – copper export value” as a denominator. (Copper is the top exporting item occupying 70% of the total exports.) Figures in (), “Rank”, show the ranking of the item in terms of the Zambian export value, HS code 2-digit basis.

** : Yearly average growth rate (%)

Source: COMTRADE

“Beverages, spirits and vinegar” (HS 22), the largest export item in the food and food-processing sub-sector, recorded a remarkable increase from substantively zero in 2003 to USD 160 million in 2022; becoming Zambia’s 7th largest item in terms of export value. Its average annual growth rate was 41.5% between 2012 and 2022. “Waters, including mineral waters and aerated waters, containing added sugar or other sweetening matter or flavored and other non-alcoholic beverages, not including fruit or vegetable juices” (HS 2202) accounted for 94% of the value in this category in 2022. Large-scale investments by both Zambian and foreign investors in the country, including those in MFEZ, have contributed to the rapid growth in manufacturing for water and sweet beverages. Almost all beverage exports go to the regional market, particularly to the DRC (more than 80%, see Figure 20). These figures suggest that large-scale investors who are aiming to meet the increasing demand in processed foods in the region have been choosing Zambia as a regional hub for manufacturing and have constructed their facilities there over the last 10 years.

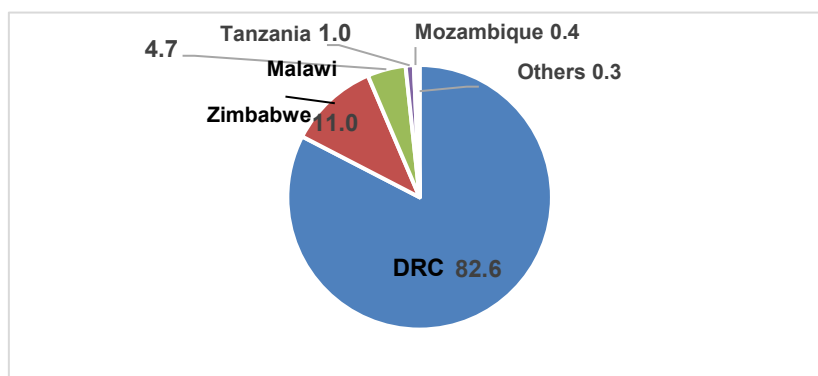


Figure 16: Export Destinations of the Zambian Beverage Export in 2022

(share: %, HS 2202)

Source: COMTRADE

“Sugar and sugar confectionaries”, Zambian traditional processed foods for export, showed a modest decline in export value over the past decade; it should be noted that the structure of exports has been changing. The export value of raw sugar, a low value-added product, “cane or beet sugar and chemically pure sucrose, in solid form” (HS 1701) declined from USD 124 million in 2012 to USD 74 million in 2022. Much higher value-added products, “sugar confectionary (not containing cocoa, including white chocolate)” (HS 1704), increased from USD 17.5 million in 2012 to USD 42.7 million in 2022. Destinations for Zambian sugar were solely regional markets: the DRC (67% in 2021), South Africa (12%), Kenya (8%) and Zimbabwe (4%).

The export values of “cereals” (HS 10) and of “products of the milling industry” (HS 11) showed noticeable difference. While the export value for cereals declined by 12.2% per year on average between 2012 and 2022, that for the products of the milling industry marked a yearly average increase of 9.6%. With “Maize or corn” (HS 1005) representing almost all of the exported cereals, which head mainly to the countries in the region such as Zimbabwe (54% share in 2021), Namibia (10%), South Africa (10%) and Tanzania (10%), their export volume peaked in 2012 at 726 million tons and then declined to 261 million tons in 2022. Regarding the products of the milling industry, the DRC accounted for more than 95% of the Zambian export value in both 2021 and 2022.

The export value of “dairy product” (HS 04) increased by more than 8 times from 2012 to 2022 with a yearly average growth rate of 23.4%. The increase was largely led by processed dairy products, “buttermilk, curdled milk and cream, yogurt, kephir and other fermented or acidified milk and cream, whether or not concentrated or containing added sugar or other sweetening matter or flavored or containing added fruit, nuts or cocoa” (HS 0403), which increased from USD 0.2 million in 2012 to USD 41.1 million in 2022. Their major export destinations in 2021 were regional markets in Africa such as the DRC (73.0%), Mozambique (12.4%) and Zimbabwe (5.4%) with limited exports to countries in other regions such as Norway, the UK, Canada and China. These figures indicate that with the manufacturing capacity of dairy products strengthened over the past decade, Zambia is now an export center for the processed dairy products to the regional market.

3-1-9 Conclusion

Zambia has a massive irrigation potential, estimated at 430,000 hectares, of which only 100,000 hectares is developed and mostly by large scale commercial enterprises. Zambia's 1.5 million smallholder farmers, who produce 80 percent of the domestic food supply, are extremely vulnerable to climate stresses and shocks as they depend on rainfed agriculture. Other issues faced by smallholder farmers include low grain productivity and low income as a result of limited access to high-quality inputs, financial services, post-harvest storages, technologies, markets and information.¹⁵⁷

Both maize and wheat are important staple foods from a food security perspective given the fact that (i) the country has achieved more or less self-sufficiency with these products; (ii) prices for these as international commodities are susceptible to significant fluctuations; and (iii) increases in production would require heavy irrigation infrastructure investment. As such it would not be cost-effective to invest in an expansion of their production. Instead, a diversification of smallholder farmers' income sources could increase and stabilize their income. To this end, the strengthening of linkages between breweries (as presented in Box 5 and Box 6) and farmers (including smallholders) in cassava and sorghum production, which are not dependent on heavy irrigation, could be beneficial for both parties.

The bottleneck for most food processing industry growth is the limited availability of raw materials. Out-grower schemes for sunflower seeds and soybean should be promoted in the interest of cooking oil production while an increase in cotton seed production would be more difficult due to the necessary access to abundant water. The processing of honey and peanuts, which can also be promoted through an out-grower scheme, does not require heavy equipment investments since the technology is not complicated. Financing and BDS (product development, production and quality management, marketing, packaging, etc.) support should be provided to farmers' groups and MSMEs to promote honey and peanut products, while support for out-grower scheme expansion could also be provided to larger companies.

An expansion of medium to large sized dairy farms (commercial farms) would be a prerequisite for the growth of the Zambian dairy industry since economies of scale cannot be achieved through an MCC model in which small amounts of milk are collected from individual smallholder farmers (though the MCC model is important to their income). Given the availability of domestically produced feed, which is one of the Zambia's advantages, the provision of financing to commercial dairy farms could boost the production of raw material (fresh milk), leading to the growth of dairy product processing companies.

Apart from consumption at the village level that does not require formal distribution channels, the major constraint on the growth of Zambian beef industry is financing for cattle breeders; due to immediate cash needs, breeders tend to sell immature cattle. Should long-term financing be available to smallholder

¹⁵⁷ UNDP (2013) Zambia Agriculture Investment Opportunities Brief

cattle breeders, they would be able to fully fatten and mature their cattle, increasing their income with more meat being delivered to distributors.

In Zambia, 35% of chickens are processed commercially. In order to promote further import substitution for frozen chicken cuts; the financing of chicken farm expansion, rationalizing of feed distribution to reduce input costs, and strengthening of breeding stock providers are needed.

3-2 Wood and Wood Products

This sector presents a large business potential. Zambia is one of the most forested countries in Africa with approximately 67% (approximately 50 million hectares) of its land surface covered by forests, including high value wood trees such as teak, mahogany, rosewood and pine.¹⁵⁸ ¹⁵⁹ The formal and informal forestry sectors account for around 5% of Zambia's GDP and USD 1.4 billion.¹⁶⁰

Within the country, there are two major companies engaged in large-scale wood logging, including wood like Rosewood, Teak, Mukwa, Pine and Eucalyptus, in addition to numerous smaller-scale logging operators. Due to variances in raw materials and processing techniques, there are a range of businesses catering to different market demands, spanning from low-cost, low-quality products to high-end, high-quality ones.

As is reported in the World Bank's Light Manufacturing in Zambia Report of 2013, there are several challenges for the country's wood processing industry. First, outdated wood processing equipment hinders the production of modern-standard wood products. Secondly, SMEs tend to produce low-quality products with low efficiency due to inadequate skills, poor product design and the absence of vocational schools focusing on wood processing. Lastly, high transportation costs (around USD 4.25 per kilometer per ton) due to poor road infrastructure increase the cost of locally produced wood products.¹⁶¹

In addition to these issues, the sector also faces challenges related to the unreliability of raw material supplies and cash flow. To ensure the availability of high-quality materials and enhance customer satisfaction (including meeting delivery deadlines), businesses have to secure a specific area of concession or maintain a certain amount of wood in stock. Adequate funding is crucial in this regard.

Zambia seems to have a great business potential in the domain of carbon credits; Zambia's forests have a total value of USD 3.7 billion as a means of offsetting carbon emissions, according to Tandem, a consulting company involved in the AGS program.¹⁶²

The following value chain actors are active in the wood and wood processing industry:

¹⁵⁸ Mulenga Mwansa (2021) Value Addition to Wood Products

¹⁵⁹ Muleya, F., Duma, Z., Chituta, K., Banda, K., & Mwansa, M. (2021) Developing Value Chains With Local Content Utilisation

¹⁶⁰ Tandem (2023) Zambia Forestry Opportunities summary (presentation materials on 21 November 2023)

¹⁶¹ World Bank (2013) Light Manufacturing in Zambia

¹⁶² Tandem (2023) Zambia Forestry Opportunities summary (presentation materials on 21 November 2023)

Trees

The wood industry value chain begins with the trees in forests, which serve as raw materials. Zambia has a comparative advantage in growing trees for wood since the country is home to high value wood trees such as teak, mahogany, rosewood and pine.¹⁶³

Deforestation in Zambia poses a significant challenge with an estimated annual rate ranging from 250,000 to 300,000 hectares with some logging operators being unaware of this issue. The primary factors causing this include agricultural expansion (both commercial and subsistence), a high dependence on wood fuel for energy needs (charcoal and firewood), unsustainable wood extraction practices (both legal and illegal) as well as infrastructure development such as mining and other major infrastructure projects. The Zambian government has adopted a landscape approach in its National Strategy to address these different causes, improve local livelihoods and prevent resource conflicts by coordinating sectoral investments for integrated and holistic management.¹⁶⁴

Forest companies

Forest companies supply sawmillers with raw materials and timber. ZAFFICO, Zambia's largest government-owned forestry company, manages approximately 60,000 hectares of pine, eucalyptus and gmelina plantations in different provinces.¹⁶⁵

The Ministry of Agriculture is responsible for issuing licenses for cutting trees. Sometimes, wood may also come from neighboring countries with some being imported illegally.¹⁶⁶

Sawmillers

Sawmillers procure raw materials from either forest companies or local logging enterprises. Some sawmillers apply proper treatment to the timber to increase its life three times longer than untreated timber. Their main products are planks and particle board, with some also producing simple furniture such as doors.

Furniture Manufacturers

According to Tandem, Zambia's local furniture market will reach approximately USD 160 million by 2030.¹⁶⁷ Furniture manufacturers usually obtain processed timber from local sawmillers or from surrounding countries such as South Africa, Zimbabwe or Malawi. Their main products, such as office furniture and home furniture, are sold to individuals or corporate customers within the country. A small proportion is also sold to the government as public procurement.

Furniture production has experienced steady growth, driven primarily by two factors. First, demand for

¹⁶³ World Bank (2013) Light Manufacturing in Zambia

¹⁶⁴ (2017) National Investment Plan to Reduce Deforestation and Forest Degradation (2018-2022)

¹⁶⁵ Interview with a wood processing company in Ndola (19 September 2023)

¹⁶⁶ Ibid.

¹⁶⁷ Tandem (2023) Zambia Forestry Opportunities summary (presentation materials on 21 November 2023)

construction, such as schools, factories, stores and residential buildings, within the country has been growing fast as of late. Second, there is increased economic activity financed through the Constituency Development Fund (CDF), which is also contributing to an increased demand for furniture. Finally, free education introduced by the current administration has led to an increased demand for school furniture (desks and chairs).

Furniture Cooperative

There are furniture cooperatives in Zambia that seek to support small-sized furniture manufacturers, serving a broad customer base as well as addressing financial and operational challenges in the furniture-making business.

One such cooperative is the Nakadoli Multi-purpose Furniture Cooperative, located in Kitwe and consisting of 140 members. Each of its members has his/her own workshop, producing different furniture such as dining sets, beds, sofas, wardrobes and coffee tables. All their raw materials are locally sourced. The cooperative assists members in negotiating business arrangements and purchasing raw materials at discounted prices. The cooperative collects furniture from each member and sells the products at a collective market. The cooperative ensures that quality standards for the furniture to maintain its reputation, particularly for high-priced wood products. Additionally, the cooperative provides warranties to customers who purchase from its members.

Consumers

Consumers visit showrooms or factories where they can buy ready-made furniture or order customized furniture. Nowadays, many customers prioritize quality; they do not hesitate to wait several months to receive the finished product. Customers are often requested to pay a 50- 60% deposit for custom-made furniture.¹⁶⁸

Box 14: Support Institutions

The Community-Based Forest Management Program is a flagship program of USAID, aiming to reduce emissions from deforestation and forest degradation, alleviate poverty and conserve biodiversity values in the Luangwa Valle. The program has improved the management of 7.48 million hectares of forest. The income generated from this program supports community conservation and management of 550,000 hectares.¹⁶⁹

Box 15: Wood Processing Enterprise in Kitwe

Overview

The company is owned by an Indian Zambian. The company has approximately 40 employees in Kitwe and 5 employees in the logging area. The company advertises its products through social media.

Market

The company sells some pine and eucalyptus wood mainly in winter though pine is often in short supply. Pine is preferred for making high-quality furniture, since eucalyptus can crack easily if not handled carefully. The company also sells doors and various types of furniture. Customers appreciate the high quality of the company's products.

Challenges

¹⁶⁸ Interview with a wood processing company in Livingstone (2 October 2023)

¹⁶⁹ [Community-Based Forest Management Program, Zambia - Tetra Tech](#)

The company is financially stable but faces payment challenges. Mining companies have been taken over by the government or have faced financial problems, delaying or defaulting on their payments to wood suppliers. The owner stresses the importance of government intervention to solve this issue. Additionally, the owner mentioned that investment in machines and drying facilities is indispensable to the wood industry to supplying quality products.

According to the owner, the wood industry currently relies on pine, eucalyptus and hardwood. Pine and eucalyptus face scarcity issues since the government has been slow in replanting trees. Hardwood, including rosewood, teak and mukwa, is preferred for furniture but has uncertain availability and lifespan.

Box 16: Furniture Manufacturer in Chipata

Overview

The owner started the business from his home in 2016. He built his skills through observation and YouTube videos as he found that vocational schools were not up-to-date with modern furniture-making techniques. The company now employs nine full-time workers and four temporary workers; all trained by the owner.

Wood for the furniture is sourced locally inside Chipata while other accessories are sourced from Lusaka. The company outsources logging to farmers and then saws the logs on its own. The company provides both home and office furniture, such as sofas, beds, desks, tables and kitchen cabinets, all accompanied by a 6-month guarantee for clients. Its major customers are individuals, notably civil servants, resulting in household sofas and beds being the company's main products. The company offers different prices for the products of different quality levels based on the customer's budget.

The company advertises its products on social media; mainly on Facebook.

Challenges

Due to the company not having its own vehicle and its workshop being located in the industrial area of Chipata, transportation costs are higher than other companies for delivering products to customers.

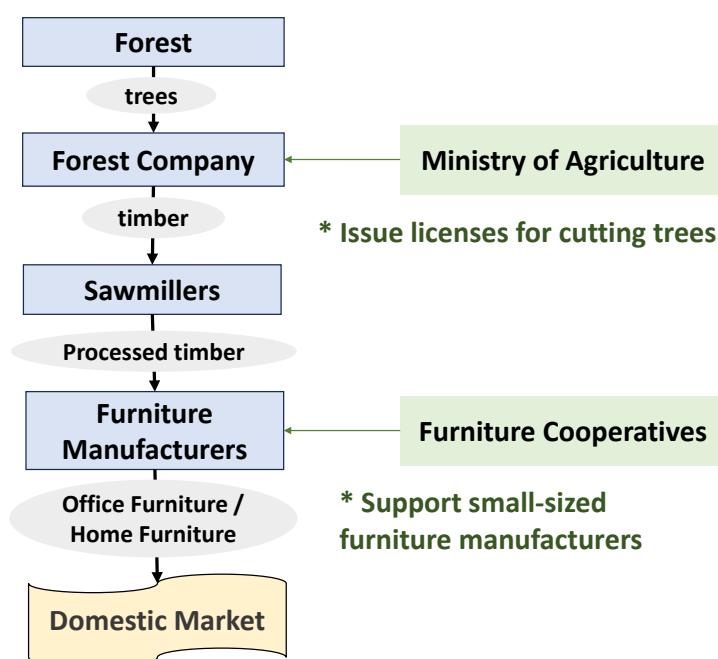


Figure 17: Value Chain of Wood Industry

Source: Survey Team

Conclusion

Despite the increasing demand for wood furniture, a lack of access to financing remains the major constraint on the Zambian wood and wood product industry. In order to respond to immediate customer demand, sawmillers and furniture manufacturers need capital to secure certain stocks of timber. Moreover, customers' upfront payments usually cover only a small portion of the order; the manufacturers thus need a large amount of working capital since full payment is only received upon delivery. Furniture manufacturers' lack of working capital results in lost order opportunities. Their inability to meet demand prevents the industry from realizing growth opportunities. Although obsolete processing equipment and facilities are problematic, the working capital issue should first be addressed in order for stability in sales to be achieved.

3-3 Leather and Leather Products

This sub-sector in Zambia includes intermediate products such as wet blue and tanned hides/skins, along with a limited range of finished leather products such as footwear, handbags and belts.¹⁷⁰ As mentioned in "3-1-7 Livestock", cattle populations have increased over recent years. The increase in the cattle population could be translated into a high growth potential for Zambia's leather industry should all hides/skins be transformed into finished products domestically, which should contribute to job creation, poverty reduction and a substantial increase in foreign currency savings.¹⁷¹ However, this has not been realized due to various factors that hamper the industry's growth.

The biggest challenge to this sub-sector is in the procurement of raw materials, which can be attributed to two main factors. First, many farmers put a mark on their animals, which significantly reduces the hide/skin area available for tanning (sometimes more than 50%). Second, a substantial quantity of raw hides/skins are exported either legally or illegally to Nigeria, where they are used for human consumption. Since exporters to Nigeria offer higher prices than those proposed by domestic skin/hide traders, the latter are obliged to either move away from price competition or spend more money than they usually do, leading to a considerable increase in the price of raw materials for the domestic leather industry. This situation has resulted in decreased sales as well as the closure of most tanneries and leather product manufacturers in Zambia with the few enterprises having survived providing only high-quality tanned leather and/or leather products.

In this report, the leather value chain is presented in three stages: livestock rearing, tanning of hides/skins and manufacturing of leather products (See 3-1-7 Livestock for details on livestock rearing).

Tanneries

During the late 20th century Zambia had five tanneries with a total capacity of 1,700 hides/skins per day. Due to a shortage of hides/skins, only two tanneries (Zamleather Ltd¹⁷² and Pan African Leather Ltd)

¹⁷⁰ Zambia Report Leather Value Chain (2021)

¹⁷¹ World Bank (2013) Light Manufacturing in Zambia

¹⁷² Zamleather Ltd is a subsidiary of Zambeef Products PLC, one of the largest agro-business enterprise in Zambia.

are currently in operation, running at an approximately 80% and 30% capacity utilization respectively.¹⁷³ These two tanneries source cattle hides/skins from butcheries and farmers across the country or from Zambeef's abattoirs. Treated with chemicals to prevent decomposition, hides and skins are turned into wet blue. Various methods are then used to tan the hides/skins, making them suitable for different end products.

Leather Manufacturers and Export

Using imported leather accessories, leather manufacturers produce a wide range of products including footwear, bags, belts and accessories. Having difficulties competing with foreign-made fashion shoes, footwear enterprises in Zambia are mostly focused on standardized products, such as safety boots for mining companies and hardware stores, security boots for security companies and school shoes for individual customers.

With the export volume of final products in Zambia being negligible, entrepreneurs who import tanned leather and manufacture high-quality leather products to sell domestically and internationally are emerging (refer to Box 19).

Box 17: Tannery in Kabwe

Overview

The company, led by a leather technologist CEO, began operations in 2018 with an investment from a TATA company in Tanzania. This was not TATA's first venture in the region, as the company had previously acquired a state-owned factory in Zambia in 1991, which was later sold to a third party due to difficulties in sourcing hides. The company is currently one of only two tanneries in Zambia, which sources raw cattle hides/skins from butcheries and farmers across the country. These raw materials are processed into leather. The company's leather products range from shoes (mostly school and safety shoes) to sofas, belts, jackets and wallets. The company has 70 employees.

Market

In order to foster the development of leather processors in Zambia, the company imports accessories and sells them to domestic SMEs. The company supports small-scale enterprises by supplying them with raw/tanned leather and small stitching-machines. Domestically, the company has stores in Lusaka, Ndola, Kabwe and Livingstone for final leather products. Internationally, it supplies tanned hides/skins to Zimbabwe, DR Congo, Botswana and Tanzania.

Challenges

There is a shortage of hides/skins in Zambia since a significant portion of hides and skins are being exported (either legally or illegally) to Nigeria to be used for human consumption. This has considerably constrained domestic leather production, resulting in an operating rate of only 25-30% of the enterprise's production capacity. The lack of government policies to protect the industry has led to other tanneries shutting down. Markings on livestock skins by farmers significantly affect the recovery rate of hides/skins, resulting in a yield of only 30%. Since most accessories are imported and Zambia is a land-locked country, the company faces high transportation costs. The importation of cheap shoes also threatens domestic production. There is also a lack of skills (especially stitching) among workers due to a lack of specialized training centers.

¹⁷³ Zambia Leather Value Chain Strategy (2016-2025)

Box 18: Footwear Manufacturer in Ndola

Overview

This enterprise has produced leather shoes since its establishment in 1967. The company produces mostly safety/security boots and school shoes in a factory in Ndola. The company currently produces 150 pairs of shoes per day; safety/security shoes are produced daily while others are produced on demand. Accessories are imported.

Market

The company currently serves only the local market (mines, security companies, hardware stores and individuals) through an outlet in Lusaka. The company also occasionally receives orders for safety boots from a quasi-government body.

Challenges

The major challenge is declining sales, which can be attributed to an influx of cheaper imported shoes. Cash-flow issues also impact the business as a result of credit sales and delayed payments from customers.

Box 19: Hand-made Leather Product Manufacturer in Lusaka

Overview

Founded in 2020, this micro-enterprise is dedicated to manufacturing hand-made leather products. The owner, who learned leather product manufacturing through YouTube videos and online courses, primarily uses imported raw materials and tools due to their suitability for hand-made products. The company specializes in creating customized products such as belts, wallets, bags, purses, handbags and key holders. These items typically take 2-3 days to complete. The owner is principally working by himself though occasionally employing part-time workers.

Market

The enterprise caters to both local and international markets. For international sales, it utilizes Afrikrea,¹⁷⁴ an online platform for trading African fashion, art and handicrafts. Additionally, the enterprise advertises its products on Instagram. The customers are required to make upfront payments of at least 50%.

Challenges

The company's limited production capacity constrains the volume of orders it can accept. There is also a lack of institutions that teach leather craft in the area. Furthermore, the quality and variety of domestic leather are not adequate for the desired products. As a result, the company uses only imported materials, exposing itself to shipping costs and exchange rate fluctuations.

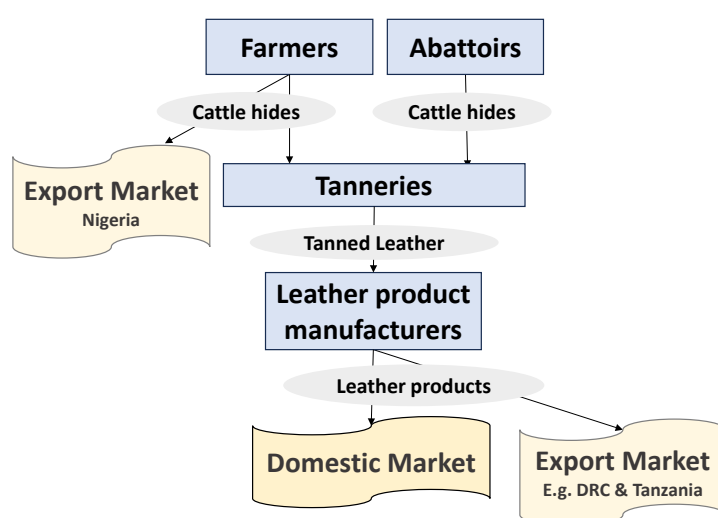


Figure 18: Value Chain of Leather Industry

Source: Survey Team

¹⁷⁴ <https://www.afrikrea.com/en>

Conclusion

As stated above, the most immediate challenge to the Zambian leather industry is a shortage of raw materials (i.e., hides and skins). This is caused mainly by exports to Nigeria as human consumed leather and the presumably low prices offered by Zambian tanneries because of the low quality of skins and hides due to branding. Should a proper mechanism, along with sensitization to farmers, be introduced in which higher prices are offered for high quality hides and skins without brands, it is highly likely that ear-tags will become the norm, replacing branding. This will lead to a revival of tanneries in Zambia, contributing to a revival of the Zambian leather industry as a whole. Though the equipment and facilities owned by the tanneries are outdated, the raw material issue must be addressed first.

3-4 Textiles

Despite being the third largest producer of cotton seed in Southern Africa with 50,594 metric tons produced in 2020, the textile sector in Zambia has not been able to tap this potential due to a collapsed domestic cotton value chain. Textiles were once one of the largest manufacturing sectors in Zambia accounting for approximately 18% of Manufacturing Value Added (MVA) in 1980.¹⁷⁵ At that time, the number of textile manufacturers (including spinning mills) exceeded 140 with nearly 25,000 local people employed in the industry.¹⁷⁶ The Zambian textile sector started to shrink in the 1990s with an increased influx of cheap foreign products triggered by the elimination of tariffs on foreign products under the SAP.¹⁷⁷ According to ZAM's study conducted in 2021,¹⁷⁸ the number of textile manufacturers shrank to 50 by the late 1990s and then to 12 by the end of 2018.¹⁷⁹

The Zambian textile market is highly dominated by imported finished products and raw materials; the World Bank's data shows textile and clothes import amounts to be approximately 7 times larger than exports in 2021.¹⁸⁰ The same trend has been observed over the past five years. South Africa and China are the two major sources of textiles and clothes, accounting for nearly 60% of Zambian textile product imports. According to several textile manufacturers in Zambia, imported textiles and clothes are far more competitive than Zambian products in price and thus are often chosen even for public procurements for school and hospital uniforms.

An increasing population in Zambia is contributing to a steady growth of the domestic textile market. In order to tap market opportunities and create new employment, the Zambian government aims to revamp the domestic textile industry by attracting foreign investment in textile companies that ceased operation in the 2000s. The 7NDP defined the potential of the textile sector as follows: "Zambia's textile industry has the capacity to contribute significantly to the economic development of the country, if well

¹⁷⁵ The Competition & Consumer Protection Commission (2019) "Zambia textile value chain study final report"

¹⁷⁶ The World Bank (2013) "Light Manufacturing in Zambia: Job Creation and Prosperity in a Resource-Based Economy"

¹⁷⁷ The Competition & Consumer Protection Commission (2019) "Zambia textile value chain study final report"

¹⁷⁸ Zambia Association of Manufacturers (2021) "Developing Value Chains with Local Content Utilisation"

¹⁷⁹ No official data is available on the current number of textile companies including spinners

¹⁸⁰ https://wits.worldbank.org/CountryProfile/en/Country/ZMB/Year/LTST/TradeFlow/Export/Partner/by-country/Product/50-63_TextCloth

harnessed. Being labor intensive, it has the potential to greatly contribute to employment and wealth creation at all stages of its value chain. According to the industrialization and job creation strategy, the textile industry is capable of creating 4,100 new jobs in the next five years. Development of the textiles industry beginning with the revival of Mulungushi Textiles will provide a ready market for cotton growers, especially in Eastern, Central and Southern Provinces.” Despite the government’s policy objectives, Zambia has not succeeded in attracting large-scale foreign investment into the spinning and weaving sectors; the upstream value chain. Revitalization of the textile industry has yet to be realized.

The following is an overview of the textile sector’s value chain.

Cotton Production and Ginning

Zambia has seen a significant decrease in cotton production over the past 10 years. The production amount declined by nearly 80% from 113,032 metric tons in 2014 to 22,638 metric tons in 2021.¹⁸¹ Fluctuating (lower) cotton prices were the major driver for cotton farmers choosing transition from cotton production to other crops such as maize and soybean.¹⁸² The decline in the production volume was also attributed to factors such as cotton farmers’ lack of proper crop management skills as well as poor input quality. This is a major challenge to ginneries in Zambia which provide contracted cotton farmers with input financing (loans) and extension services and then purchase their products.¹⁸³ A number of ginning companies in Zambia have shut down; only 10 ginneries are currently in operation.¹⁸⁴ Cotton seed is processed into cotton lint by ginneries and then almost all of it is exported to other countries such as South Africa, China and India without any further value addition due to higher cotton lint prices on the international market than the domestic market. As a result, Zambian spinners face shortages in raw materials (cotton lint and cotton fibers) as shown in the below section.

Spinning and Weaving

The absence of domestic spinning and weaving companies is the biggest barrier to the Zambian textile industry. Almost all domestic spinners, including the 6 major textile companies engaging in activities from cotton spinning to weaving, were closed after failing to compete with cheap imported products.¹⁸⁵ Only a small number of companies are in operation, most of which specialize in the production of products such as acrylic yarn and knitwear made of acrylic yarn.

The competitiveness of Zambian spinning and weaving companies is low. Due to a shortage of cotton lint and cotton fibers in the domestic market, these companies must import raw materials (mainly synthetic fibers) from countries, such as India, Thailand, Egypt and Turkey, resulting in high production cost. According to one of the spinning companies, supply management and financing are challenging

¹⁸¹ the Cotton Borad of Zambia (2021) “Country Report 2021”

¹⁸² Zambia Association of Manufacturers (2021) “Developing Value Chains with Local Content Utilization”

¹⁸³ UNCTAD (2016) “Cotton and Its By-Products in Zambia”

¹⁸⁴ The Competition and Consumer Protection Commission (2019) “Zambia Textiles Value Chain Study Final Report”

¹⁸⁵ The textile companies are: Swarp Spinning, Mukuba Textiles, StarflexTextiles, Excel Textiles, Mulungushi Textiles and Kafue Textiles.

for spinning companies; it takes nearly 4 months for imported materials to arrive from the above-mentioned countries to the company through Dar es Salaam. The majority of imported acrylic yarn is supplied to local manufacturers while the rest is re-exported to neighboring countries such as Botswana, Malawi and Zimbabwe. Weaving companies in Zambia face more or less the same challenges as those encountered by spinning companies. Almost all the raw materials that Zambian weaving companies use are imported from foreign countries. Most of these weaving companies specialize in the production of niche products such as school uniforms and jerseys, public institution uniforms and clothes for mining workers.

Box 20: Capacity Development for Manufacturing Artisan Textiles

ITC has worked with the Handloom Textiles Association of Zambia (HATTAZ) to train women groups across the country in weaving, business knowledge and market access through the framework of the “ACP Business Friendly” program.¹⁸⁶ The program supports cotton farmers in Zambia in transforming cotton into yarn for hand-woven item production. It also fosters communities of local farmers, spinners and weavers to be able to collectively improve their livelihoods.

A total of 25 farmers have been trained in hand yarn spinning and 15 in advanced weaving with the goal of passing the knowledge onto their respective communities to scale the impacts. Weaving and spinning packages, including handloom machines, reeds, spinning wheels and yarn, have been allocated to each farmers’ group. Members of the initiative have been engaged to regularly participate in trade shows, international fairs and local district shows to improve their visibility and market access.

Figure 19 provides an overview of the textile sector’s value chain and main actors.

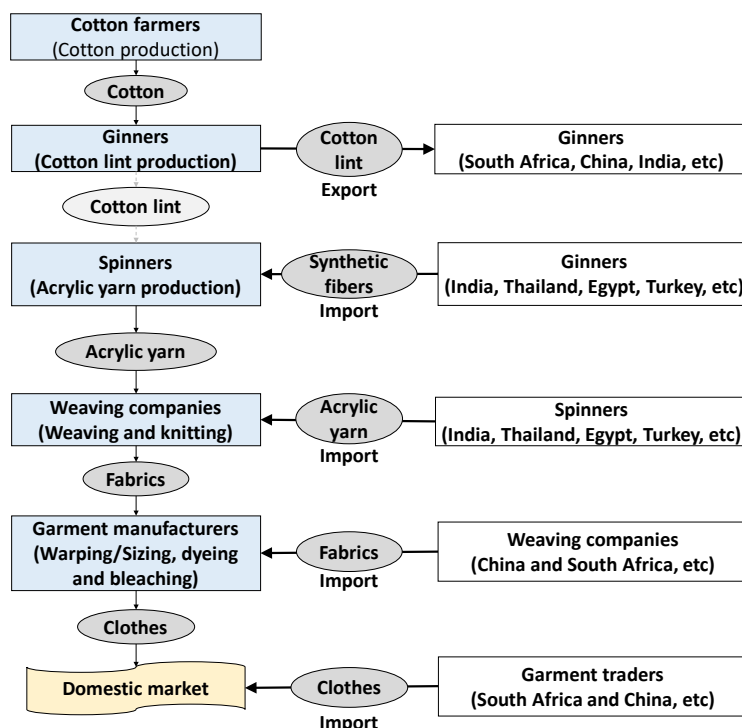


Figure 19: Value Chain of the Textile Sector

Source: Survey Team

¹⁸⁶ “ACP Business-Friendly: Supporting value chains through inclusive policies, investment promotion and alliances” (ACP BF) is an Intra-ACP action funded by the European Union (EU) and the OACPS (Organization of African, Caribbean and Pacific States). ACP BF is scheduled to run from 2019 to 2024. (Source: ICT website, <https://intracen.org/news-and-events/news/spinning-cotton-into-gold-zambia-scales-up-handloom-textiles>)

Conclusion

Although the Zambian textile industry contributed significantly to the country's economy and employment in the past, this value chain collapsed during the 1990s and 2000s due to an influx of cheap foreign products. Currently, the Zambian textile market is heavily dominated by imported, finished products and raw materials. Due to the low capacity of domestic spinning and weaving companies, Zambian garment manufacturers are highly dependent on raw materials (fabrics) imported from South Africa and China. The resulting high production costs have contributed to a loss in these enterprises' competitiveness, leading to cheap foreign products flooding the Zambian market, even for public procurements. Most Zambian garment manufacturers only produce niche products, such as school uniforms and jerseys, public institution uniforms and mining workers' clothes, on a small-scale basis.

3-5 Metals and Non-Metallic Minerals

Including copper, Zambia has a broad range of mineral resources available for mining, beneficiation and processing. In rural areas the gem and jewelry sector has a high potential for job creation. Cement and sulfur, processed from non-metallic minerals, have represented major export products for Zambia over recent years. These products' current status and growth opportunities are discussed below.

Gems and Jewelry

The gem and jewelry sector, representing 1% of Zambia's export value, employs approximately 60,000 workers in Zambia.¹⁸⁷ Zambia has abundant deposits of gemstones such as amethyst, emerald, quartz, beryl, aquamarine with the first two being the most produced gemstones in Zambia. Zambia is said to be the world's second largest producer of amethysts and emeralds.¹⁸⁸ The main market for Zambian gemstones includes China, Hong Kong, India, Singapore and the USA. According to World Bank data, Zambia was the 8th largest exporter of gemstones in the world.¹⁸⁹

The production of gemstones in Zambia is led by a few large mining companies backed by the Zambian government; more than half of Zambian emeralds are produced in the Kagem Emerald Mine¹⁹⁰ whereas 90% of Zambian amethysts are produced in the Kariba Minerals Mine.¹⁹¹ These large mining companies process extracted gemstones (washing, sorting, grading, cutting and polishing) through their own facilities and export finished products through traders. The rest of gemstone production (mining) is conducted by numerous small-scale miners most of whom belong to associations. These miners are engaged in mining activities at mines allocated by the Zambian government under its initiative to formalize small-scale miner mining activities. For instance, the Association of Zambian Women in

¹⁸⁷ The Policy Monitoring and Research Centre (2023) "Ownership of Artisanal and Small-Scale Mining Rights in Zambia"

¹⁸⁸ Gemfields (2022) "Global Emerald & Ruby Supply: Analyzing Market Data"

¹⁸⁹ <https://wits.worldbank.org/trade/comtrade/en/country/ZMB/year/2021/tradeflow/Exports/partner/ALL/product/710310>

¹⁹⁰ Kagem Emerald Mine is the joint venture between Gemfields (a British mining company) and the Zambian government with 75% of the company's share held by Gemfields and the rest held by the Zambian government.

¹⁹¹ The majority of Kariba Minerals Mine's share is held by ZCCM Investment holdings (a company owned by Industrial Development Corporation).

Mining (AZWIM), which has nearly 1,500 members (small-scale miners), was granted access to 10% of the Black Mountain (a rich mine in Kitwe).¹⁹²

The biggest challenges for these small-scale miners are limited access to financing and a lack of processing skills. Most small-scale miners in Zambia are unable to add value to gemstones due to their limited access to training opportunities. Training centers (in collaboration with associations), such as the gemstone processing and lapidary center in Ndola, are conducting some training courses to teach basic processing skills; the Zambian government should expand the small-scale miners' access to training opportunities in such centers.

Another challenge to the Zambian mining industry is a lack of processing equipment and machinery. Most small-scale miners as well as gem processing enterprises cannot afford equipment and machinery due to a lack of capital. As such, these miners and enterprises rely on gemstone processing centers for processing their gemstones; however, machine availability is limited since it is also used for training students.¹⁹³ One of the gemstone processing companies that the JICA Survey Team interviewed faced difficulties satisfying various customers' needs since different cutting machines were required. A finance scheme aimed at supporting the purchase of machinery and equipment for small-scale miners is necessary.

Box 21: Promoting Zambia's ASM sector: the ACP-EU Development Minerals Programme¹⁹⁴

In collaboration with the Ministry of Mines and Minerals Development (MMDP), United Nations Development Programme (UNDP) has been engaged in the promotion of Zambia's Artisanal and Small-Scale Mining (ASM) sector through the "ACP-EU Development Minerals Programme" initiative.

The ASM sector in Zambia has transformed minerals, such as quartz, silica, river sand and granulite, into a variety of industrially valuable commodities, such as bricks for construction and gemstones for jewelry. The sector faces several challenges. The primary issue is the lack of efficient, affordable and safe tools for miners. Miners have been using basic and manual tools like picks, hammers, shovels and improvised sieves for breaking boulders, crushing rocks and transporting products. These tools are either hazardous, not portable, too expensive or highly manual, leading to injury, negative health effects and low efficiency. Another challenge is limited market access. Without direct access to buyers, most small-scale miners are obliged to rely on middlemen, which often lowers their earnings. Moreover, without knowing the availability of locally developed minerals in Zambia, buyers tend to opt for imported products.

UNDP confirmed the potential for local fabrication and innovation through discussions with several institutions, such as the Northern Technical College, the Gemstone Processing and Lapidary Training Centre and Chipata Trades Training Institutes. By making their equipment, such as lathe and Computerized Numerical Control (CNC) machines, available to small-scale miners and also by conducting training, these institutions provided the ASM sector with opportunities for creating prototypes and final products. During the course of these interventions, the potential for developing digital marketing solutions for the Zambian SM sector was discussed with a consideration of their ability to enable cooperatives to reach out to markets across the country and beyond without a dependence on middlemen.

The next step would be to develop a strategy to engage these innovators and provide them with the necessary resources and networks. This approach aims to address the direct needs of miners and cooperatives, fostering a more efficient and sustainable ASM sector.

¹⁹² Ministry of Mines and Minerals Development (2020) "Zambia Export Diversification Strategy For Gold and Gemstones"

¹⁹³ The Policy Monitoring and Research Centre (2023) "Ownership of Artisanal and small-scale mining rights in Zambia"

¹⁹⁴ UNDP (2022) Delving into the rich field of Artisanal Small-Scale Mining and Development Minerals [https://www.undp.org/zambia/stories/delving-rich-field-artisanal-small-scale-mining-and-development-minerals#:~:text=UNDP%20has%20been%20working%20collaboratively,the%20European%20Union%20\(EU\).](https://www.undp.org/zambia/stories/delving-rich-field-artisanal-small-scale-mining-and-development-minerals#:~:text=UNDP%20has%20been%20working%20collaboratively,the%20European%20Union%20(EU).)

Figure 20 sets out the main actors and value chain for the gem and jewelry sector.

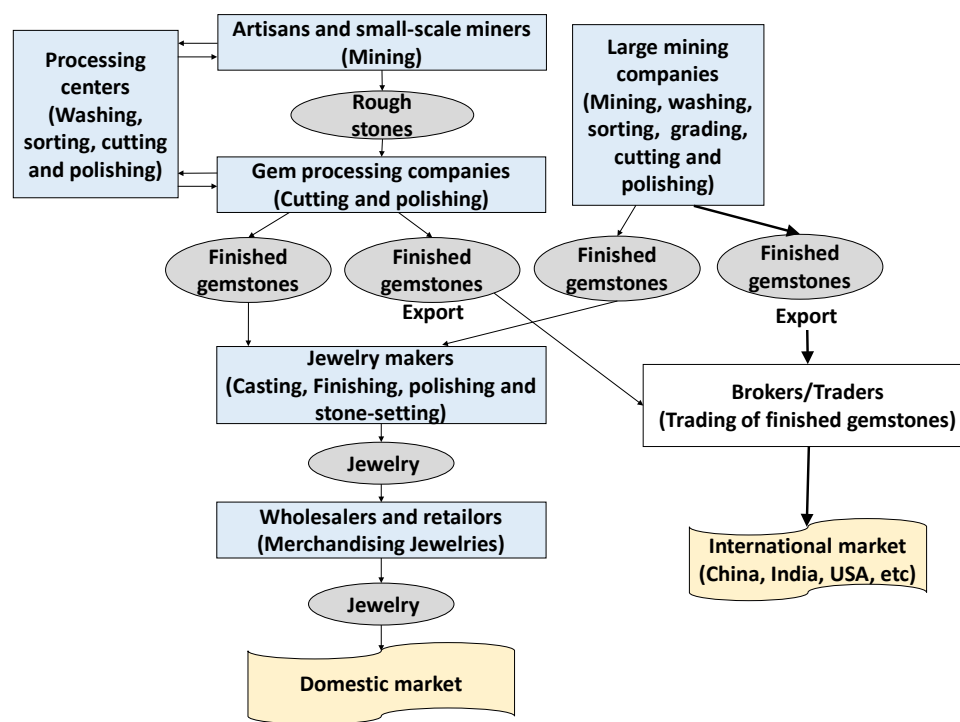


Figure 20: Value Chain of the Gem and Jewelry Sector

Source: Survey Team

Cement

Zambia is known for its rich mineral resources including limestone. Over the past 20 years, the cement manufacturing sector in Zambia has rapidly developed by leveraging local resources. The cement production in Zambia is dominated by a few cement manufacturers. In 2021, more than 90% of cement production (2.5 million tons) was conducted by three major cement manufacturers: Chilanga Cement (owned by a Chinese cement company), Dangote Cement (a Zambian subsidiary of a Nigerian cement company) and Zambezi Portland Cement (a Zambian company).¹⁹⁵ These manufacturers were engaged in the entire cement manufacturing process from limestone mining to the production of cement in their integrated cement plants located near limestone deposits in the northern part of Zambia.

The cement companies' business is targeted mainly towards the domestic market. Demand is apparently growing driven by increasing public infrastructure projects and housing construction demand. Triggered by this increasing demand, foreign investors, mainly from China, have also increased production capacities in Zambia. As a result, competition in the domestic market has become severe, pushing major cement companies toward exporting to neighboring countries, specifically the DRC, Zimbabwe, Malawi and Burundi.¹⁹⁶ According to World Trade Organization (WTO)/ITC data, Zambia's export of cement

¹⁹⁵ Dangote Cement Plc (2021) "Annual Report and Accounts 2021"

¹⁹⁶ Chilanga Cement Plc (2021) "Annual Report 2021"

has increased by 36% on average annually from 0.52 million tons in 2018 to 1.261 million tons in 2021. Export volume shares by destination were 41% for the DRC, 28% for Zimbabwe, 18% for Malawi and 14% for Burundi in 2021. Taking advantage of economies of scale with its large production capacity, the Zambian cement sub-sector is becoming a regional production hub, supplying cement to surrounding countries.

Blockmaking is one of the most vibrant businesses which provides income generation opportunities to numerous small-scale businesses in Zambia. One of the challenges for these small-scale block makers is the low quality of their products which does not meet the standards required by major construction projects. These block makers rely on inefficient methods and outdated techniques as well as machinery that has been used for decades. Most of them cannot afford blockmaking machines due to a lack of capital.

Figure 21 provides the overview of the cement sector’s value chain and main actors.

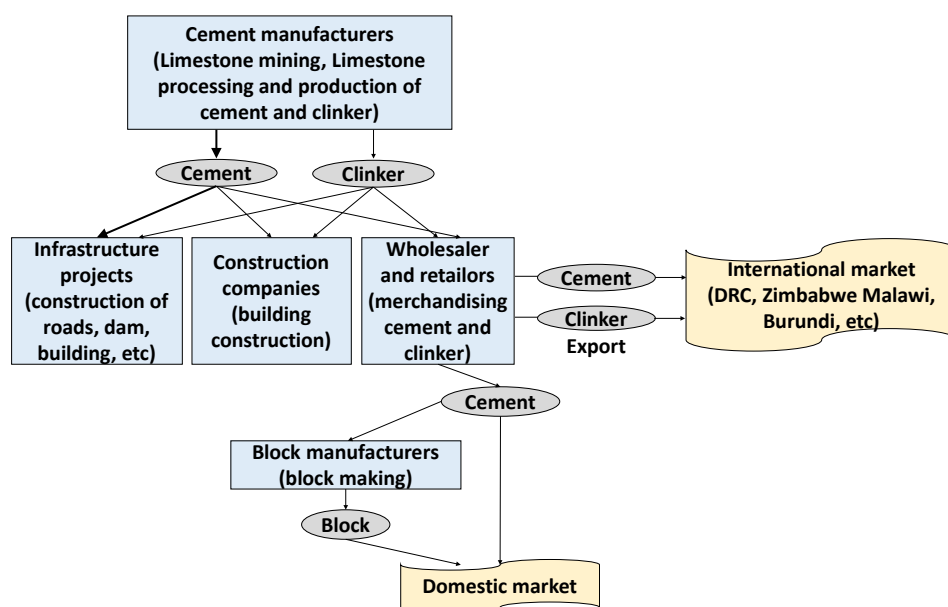


Figure 21: Value Chain of the Cement Sector

Source: Survey Team

Sulfur

Sulfur, known as brimstone, is a yellowish-black non-metallic element used in the production of fertilizers, rubber vulcanization, dyes and other industrial chemicals. Zambia is a major producer of sulfur with exports accounting for a significant portion of the country’s trade (see Table 29). Sulfur is also used in the copper and cobalt extracting process of ore mines in Zambia and the DRC. Mines typically use 3.5 to 4.5 tons of sulfuric acid for each ton of copper produced.¹⁹⁷ The DRC has increased its dependence on imported sulfur and sulfuric acid, particularly from Zambia, due to rapidly increasing mining activities over the past 10 years. Zambia is also a country with high sulfur consumption,

¹⁹⁷ Reuters (2020) “Sulfur squeeze spells trouble for Congo’s copper and cobalt miners”

importing around 600,000 tons of sulfur of all kinds (HS 2503) in 2022; mainly from South Africa and the UAE.

Many copper-ore processing (smelting and refining) plants are equipped with acid plants where sulfuric acid is manufactured as a by-product (recovery production). As a major copper mining and processing country, Zambia produces around 2 million tons of sulfuric acid annually. The large volume of exports and imports of sulfur and sulfuric acid has created a large demand for truck transportation, which places a heavy burden on traffic and road infrastructure. Over recent years, much attention has been paid to sulfur due to increasing technology development expectations for the mass production of lithium-sulfur batteries and solid-state batteries for electric vehicle (EV). Sulfur remains important to the manufacturing industry in Zambia with the country continuing to be a large-scale consumer and producer.

Table 29: Zambia's Trade in Sulfur

	Item / Year	2012	2022	Share in total trade value (% , 2022)*
Export	Sulfur of all kinds (HS 2503)	23	463	8.5%
	of which, to DRC	22	463	-
	Sulfuric acid (Oleum) (HS 2807)	348	753	3.7%
	of which, to DRC	336	753	
	Total (HS 2503 + HS 2807)	359	1,216	12.2%
Import	Sulfur of all kinds (HS 2503)	154	601	6.6%
	of which, from South Africa	43	309	-
	Sulfuric acid (Oleum) (HS 2807)	6	0	0%
	of which, from South Africa	6	0	
	Total (HS 2503 + HS 2807)	160	601	6.6 %

Source: WTO/ITC data

Conclusion

Despite Zambia's abundant mineral resources, most small-scale miners remain poor due to limited access to financing and a lack of processing equipment and skills. The strengthening of small-miners' production and marketing capacities would have a large impact on their income and employment opportunities, leading to gem and jewelry sector growth. Both financial and technical support, including the strengthening of cooperatives' organizational and managerial capacity, would be needed.

Demand for non-metallic minerals such as cement and sulfur has been strong, reflecting increasing mining and construction activities in Zambia and the DRC. Product quality, environmental protection measures and labor safety in the manufacturing operation are the key to the sustainable development of this growing sub-sector. Blockmaking is one of the most vibrant businesses that provides income generation opportunities to numerous small-scale businesses in Zambia. However, their inefficient and outdated techniques and machinery result in low quality products that do not meet the standards required by major construction projects. Both financial and technical support, including awareness raising and skill development for operational practices, to improve quality, environmental protection and labor safety, would be needed.

3-6 Engineering

MCTI formulated an “Industry Strategy for Engineering Products” in 2012 with assistance from JICA. The strategy subtitled “Hub for Engineering Products in the Region” was focused on iron and steel fabrication and copper fabrication as target sub-sectors. The iron and steel sub-sector supplies finished steel products such as bars and angles to be used as construction materials as well as flat products to be used as raw materials for further value addition activities. The sub-sector also includes the metal fabrication of steel products, which are mainly conducted by MSMEs. The copper fabrication sub-sector manufactures products such as copper rod, copper cable and wires, and other copper-based products.

Zambia has the potential to develop resource-based, metal-related manufacturing sub-sectors by utilizing the country’s rich mineral resources. Both target sub-sectors have grown over the past 10 years as described below. Given that demand for basic and fabricated metals has continuously increased and will continue to do so in the future in both the domestic market and the southern African regional market, Zambia has the comparative advantage necessary to become a hub for the manufacturing of iron and steel products as well as for copper fabrication products in the region (see Box 22).

Iron and Steel

Many steel companies emerged in Zambia in the 2000s. United Mining and Chemical Industries Limited (UMCIL, also known as Kafue Steel) and Good Time Steel (GTS), a Chinese capital company, are two major manufacturers using melting furnaces to produce both crude steel (intermediate material, placed at upstream in the long steel industry value chain), and finished long steel products using hot-rolling processes.¹⁹⁸

UMCIL belongs to Trade King Group; the predominant Zambian conglomerate. The company located in Kafue City, south of Lusaka, began its steel making operations in 2008. Equipped with the country’s only electric-arc furnace and large-scale continuous casting machine, UMCIL has expanded its activities in the steel industry value chain. By obtaining both ZABS and South African Bureau of Standards (SABS) certifications and producing high-quality steel products, the company has achieved import substitution in the domestic steel market, which was once dominated by imported products. UMCIL currently has an annual steel production capacity of around 220,000 tons. Approximately 70% of sales are from the domestic market with the rest being exported to countries in the region. The company has started upward integration to penetrate the iron ore mining, beneficiation and iron making business using direct reduced iron (DRI) technology. With the use of domestically sourced iron ore from the UMCIL’s own mines and DRI equipment brought from China, the company puts around 2,500 ton of produced DRI (sponge iron) every month (around 25% input ratio of raw material) into its electric-arc furnace as a substitute for steel scrap, a common raw material for steel making. UMCIL plans to increase the DRI

¹⁹⁸ Finished steel products are categorized into two groups: long products such as bars and sections, mainly for construction use, and flat products such as hot-rolled sheet, cold-rolled sheet and galvanized sheet both for construction and manufacturing sectors’ demands.

input ratio to 50% (around 5,000 tons every month) by the end of 2023. This will enable the company to produce high-quality crude steel at a lower cost by utilizing domestic iron ore resources that have been attracting attention for many years but were not previously exploited. The employment at the company increased from 200 staff to over 1,500 today. The increased production of high-quality steel has also contributed to improvements in the competitiveness of manufacturing companies in steel fabrication and assembly which are comprised of MSMEs.

GTS constructed its plant on the outskirts of the Lusaka Industrial Area in 2005. The company produces and sells round bars and other construction steel products by melting, refining, casting and hot rolling using steel scrap as raw materials. Its market is both the domestic construction sector and clients in the region, such as the DRC and Zimbabwe. The current export ratio is approximately 50%. GTS has expanded its branches to Kitwe in the Copperbelt Province, and Kashumbarza in the DRC, resulting in an increase in its workforce from 50 to over 1,400 employees at present. While current production volume is around 9,000 tons of steel monthly, the company plans to double its production capacity in the future (i.e., an annual production capacity of around 200-250 thousand tons). GTS holds certificates from both ZABS and SABS. One of its challenges is a constant shortage of raw materials (steel scrap). GTS currently sources 90% of its steel scrap from within Zambia while the remaining 10% is sourced from the DRC. GTS plans to source the Zambian produced DRI from UMCIL as a substitute for steel scrap. The company has also diversified its business into construction engineering as well as coal mining and the coal-fired power generation business. GTS has expanded its site with a plan to develop a GTS Industrial Zone on 30 ha of land in the Lusaka West area (adjacent to its existing steel plant). GTS was also engaged in the construction engineering of the Jiangxi MFEZ in the Central Province and the CEEC industrial yards in Kafue (located within LS MFEZ). These engineering services included the designing of factory buildings, the production of steel products to be used as raw materials, and steel fabrication and construction at the sites. Both MFEZs have six standardized factory buildings designated for MSME use.

The iron and steel sub-sector value chain is presented in Figure 22. In addition to the expanding crude steel and hot-rolled long steel producers, such as UMCIL and GTS, there is another medium-scale steel producer from Tanzania operating a cold rolling mill along with a continuous galvanizing line. The company imports hot rolled sheets (coils) mainly from South Africa and India to produce cold rolled sheets, the major intermediate materials for further processing of flat steel products for construction use. Producer numbers and production capacities for the roll forming of corrugated sheets for roofing have increased, stimulated by continuously increasing demand from construction. These companies use imported galvanized sheets as raw materials for many purposes. Since the construction of crude steel production and hot rolling facilities for flat steel products entail large investment costs and integrated technology, it is not realistic to expect Zambia to invest in flat steel production facilities in the near term. Due to the increasing demands for flat steel sheet products for construction and steel fabricators, their import volume in Zambia will continue to rise in the future.

A wide range of steel fabricators have been emerging in Zambia, scattered across the country. These include many MSMEs manufacturing window frames and metal furniture, as well as agricultural equipment fabricators (and dealers) and medium-scale steel fabricators that produce tanks and heavy structures for engineering use. With Zambian-made long steel products of acceptable quality having become increasingly available, these fabricators have shifted their raw materials from imported products to domestic ones. One of the challenges for small-scale fabricators is a difficulty in procuring quality-assured products from the domestic steel market. According to MSME fabricators assembling window frames and steel furniture, some small-scale steel producers and dealers provide low quality products in terms of their dimensional accuracy and bending strength. Many steel-related entrepreneurs point out problems in the monitoring and enforcement of the Zambian steel market quality assurance system, the resolution of which is crucial to the further development of the Zambian iron and steel industry.¹⁹⁹

Due to the large copper mining activities, cast iron manufacturers were clustered in Copperbelt, supplying mill balls and spare parts to the copper mines.²⁰⁰ Though these traditional foundries have faced severe competition from products imported from South Africa, China and India; they have somehow survived but without further growth prospects. More than 10,000 employees are estimated to be working in the iron and steel sub-sector, making this sub-sector the largest segment of the engineering products sector.²⁰¹ The iron and steel industry can have large scale multiplier effects on industrial development in terms of value addition and employment generation. Combined with the industries serving this sector, the economic impacts of iron and steel sector development are tremendous.

¹⁹⁹ Based on the interviews by the JICA Survey Team, September/October, 2023

²⁰⁰ "Mill Ball" is a spherical mining-related product manufactured by casting molten steel. During the copper beneficiation process, mill balls are placed in a crusher together with copper ore which then rotates the mill balls to crush the ore to extract high copper content ore. Until the mid-2000s, Zambia's steel industry had a structure comprised only of casting companies that manufactured mill balls and small maintenance parts to support the mining industry concentrated in the Copperbelt.

²⁰¹ There are no employment statistics for the subsectors of the manufacturing industry. Based on the literature review and interviews with relevant companies in Zambia, the JICA Survey Team estimates that approximately 20,000 workers are employed in the engineering subsector, mainly in the fields of copper processing and plastic-related products (the share of the iron and steel subsector is estimated to be approximately 50%).

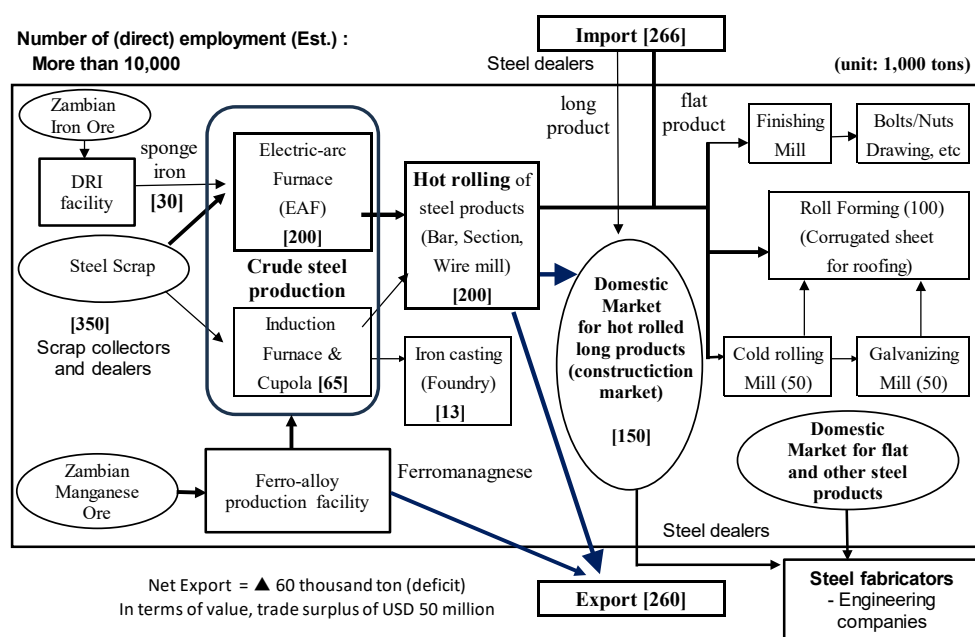


Figure 22: Value Chain of the Iron and Steel Industry

Source: Survey Team

According to the WTO/ITC’s trade statistics, the export value of iron and steel products from Zambia (only basic materials, excluding steel processed and assembled products), which became significant from the mid-2000s, was USD 54.8 million in 2012. By 2022, it had increased to USD 329 million (a six time increase over 10 years) accounting for 2.8% of Zambia’s total export value.²⁰² During this period, the import value of steel products remained between USD 200 million and 300 million annually. While the trade deficit for iron and steel products was USD 164 million in 2012, the sector recorded a trade surplus of USD 34 million in 2022. Iron and steel has transitioned to a “trade surplus” manufacturing sub-sector, accounting for 1.3% of export earnings (see Table 30).

Table 30: Trends in Zambia’s Trade in Steel Products (USD million)

Year	2003	2012	2022	Average annual growth rate (2012-2022)
Total export value	1,019	9,639	11,689	1.9%
of which, iron and steel products (HS72)	3	55	329	19.6%
Total import value	1,627	8,783	9,048	0.3%
of which, iron and steel products (HS72)	46	219	295	3.0%
Export earnings (export value – import value)	▲608	856	2,641	Increase of USD 1,785 million
of which, iron and steel products (HS72)	▲43	▲164	34	Increase USD of 198 million

Source: WTO/ITC Trade Map

Among the exported steel products, hot rolled bars and rods had the highest volume, accounting for around 70% of total steel export volume. Almost all the destinations for these products have been countries in the region (see Figure 23).

²⁰² Source: Based on the data for HS code “72” of WTO/ITC Trade Map data.

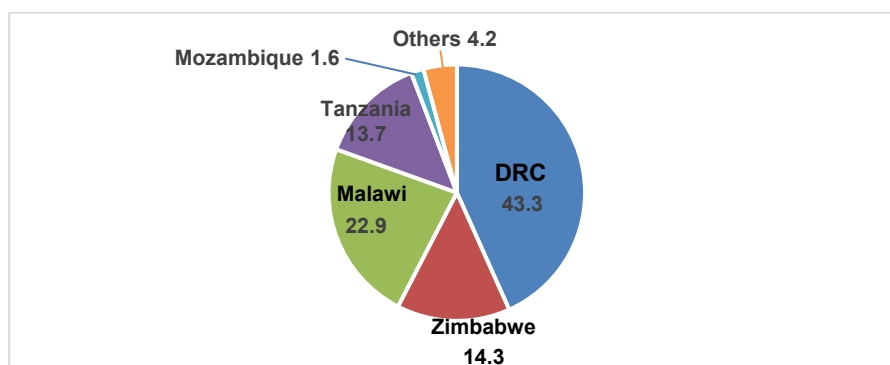


Figure 23: Export Destinations of the Zambian Steel Bar Export in 2021 (share: %)

Source: WTO/ITC Trade Map

Over the past 10 years, ferro-alloy production and exports have also increased in Zambia. As an important sub-material for steel making process, ferro-manganese beneficiated from manganese ore is widely used in the iron and steel industries of the world. Over recent years, the importance of manganese has been increasing as it is one of the basic materials for EV battery manufacturing. Ore mining and the production of ferro-manganese in Zambia are conducted mainly in the Central Province. Assuming that both steel making in Zambia and EV battery production in the world continues to grow, the sustainable production of ferro-alloys and crude steel using environmental-friendly technologies will continue to be an important issue for the further development of the Zambian iron and steel industry. So will be the improvements in quality and labor safety.

In order for the Zambia's steel and steel-related industries to be developed as a leading manufacturing sector in the country's economy; not only individual companies' continuous efforts but also their concerted efforts to work together are important. Relevant stakeholders, including companies from steel production, raw material procurement, transportation, steel product processing and distribution, and support industries, should have a platform for sharing information and discussing different issues such as the promotion of technological improvement and the industry's competitiveness. In other words, an "industry federation" for the steel and metal processing sector needs to be formed to address various management and industrial technology issues, such as market research, product development, quality improvement, environmental consideration and labor safety, which would lead to the strengthening of the sector's competitiveness. The role of the federation as a platform for exchanging information and opinions as well as developing industrial human resources in respective fields would be critical to the sustainable development of steel-related industries. Such steel-related industry federations have been formed not only in developed countries, such as Japan, the United States and European countries, but also in middle-income industrialized countries in Asia, and Central and Latin America. These federations play an important role in improving the industry's competitiveness in their respective

countries. A global industry association has also been formed for the iron and steel sector and contributes to the dissemination of knowledge among members from different countries.²⁰³

Box 22: Demand and Supply of Steel and Steel Fabricated Products in Southern African Region

Past experiences in many countries across the world have shown that the demand for steel in a country will increase proportional with or exponentially to population growth and per capita GDP. According to import statistics, there has been an increase in demand (increased imports) for steel products and steel fabricated products in the southern African region, including Zambia, over recent years. Excluding South Africa, which is the largest producer and consumer of steel-related products in the region, and Angola, which shows unique movements in steel trade due to the influence of oil resource development; the import volume of steel products (HS72) in the region recorded an average annual growth rate of 5.6% between 2012 and 2022. The import volume of fabricated steel products (HS73) also increased at an average annual rate of 6.3% (see Table 31).

Table 31: Steel Demand in Southern African Region (Trends in Import Volume)

Country Region total	Import of Steel Products (HS72)			Import of Steel Fabricated Products (HS73)		
	2012 (1,000 t)	2022 (1,000 t)	Annual average growth rate (%)	2012 (1,000 t)	2022 (1,000 t)	Annual average growth rate (%)
Zambia	146	266	6.2%	143	74	-6.4%
Zimbabwe	106	166	4.6%	57	123	8.0%
DRC	89	326	13.9%	160	434	10.5%
Mozambique	293	340	1.5%	103	2,049	34.9%
Tanzania	499	866	5.7%	120	234	6.9%
Malawi	53	97	6.2%	23	36	4.6%
Namibia	82	133	5.0%	133	111	-1.8%
Botswana	68	108	4.7%	80	88	1.0%
Total above	1,336	2,302	5.6%	2,751	5,083	6.3%

Source: WTO/ITC Trade Map

In Zambia, imports of fabricated steel products declined by an average of 6.4% per year from 2012 through 2022. This was apparently due to import substitution caused by an increase in domestic steel product supply capacity. Furthermore, Zambia achieved the largest export volume of steel products among the eight countries listed above in 2022 (Figure 24).

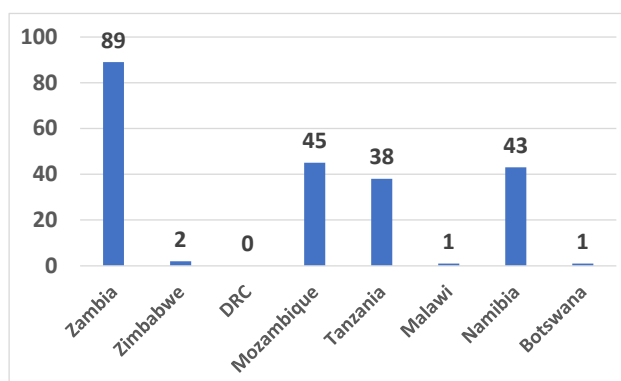


Figure 24: Export Volume of Steel Products (HS72) in Southern African Countries (2022)
(1,000 ton: except pig iron and steel scrap that is used as raw material for steel production)

Source: WTO/ITC Trade Map

In light of this, Zambia is currently considered to have an advantage over surrounding countries in its manufacturing and supply capacity (export capacity) for steel and steel fabricated products.

²⁰³ World Steel Association (<https://worldsteel.org/>). Established in 1967 as the International Iron and Steel Institute (IISI), reorganized as the current World Steel in 2008, headquartered in Brussels, Belgium.

It is desirable for the industry federation to include not only a wide range of private companies but also academic institutions and government agencies responsible for formulating and implementing policies related to the metal and metal processing sector. With the participation of MCTI, MSMED, ZDA, ZABS, Zambia Environmental Management Agency (ZEMA) and the University of Zambia, the federation is expected to function as a public-private partnership (PPP) platform for facilitating dialogue on various issues including capacity building (training, etc.). The industrial federation can also work as a support recipient for development partners. In Zambia, there is already an initiative to establish a steel-related industry federation.²⁰⁴ Major steel companies and MCTI are expected to proceed with discussions and coordination for establishing the industry federation while also defining its activities.

Copper and Copper Fabrication

Zambia has endeavored to grow its copper fabrication industry over the years. The country's copper exports have shifted from ore to copper products in the upstream segment of the value chain, such as unrefined copper (copper anode) and refined copper (copper cathode).²⁰⁵

Table 32: Zambia's Copper Export in 2022

Product	Value (USD million)	Volume (1,000 t)
Copper ore and concentrate (HS 2603)	109	43
Copper, unrefined; copper anode for electrolytic refining (HS7402)	6,156	680
Copper, refined and copper alloys, unwrought (copper cathode, HS7403)	1,893	217
Total	8,158	940

Source: Compiled by the Survey Team with data from WTO/ITC.

Production of copper anode and cathode in Zambia is linked to and affected by the activities of multinational mining companies (MNCs) operating mines and processing/refining plants in the DRC and Zambia (so-called "copper belt" area). Unlike Chile and Peru, the top two copper exporting countries in the world, Zambia and the DRC produce and export copper anode and cathode instead of exporting copper ore and concentrate.²⁰⁶ The geographical location of the copper belt, more than 1,000 km away from deep sea ports on the African continental coast, has encouraged MNCs to invest in and operate processing and refining plants of copper ore near their mines, which has contributed to a reduction in transportation costs. The combined volume of copper anode and cathode exported by Zambia and the DRC reached 2.8 million tons in 2022, accounting for 24% of the products' global trade.²⁰⁷

²⁰⁴ Based on the interview with UMCIL

²⁰⁵ In general, copper anode contains around 99% copper content, while copper cathode does 99.9% of the same.

²⁰⁶ In general, exported copper ore and concentrate have around 30% of copper content. In 2022 Chile and Peru exported 11.5 million tons and 6.7 million tons of copper ore and concentrate, respectively, which are equivalent to around 3.5 million tons and 2 million tons of net copper, respectively.

²⁰⁷ Refining and export of copper is also conducted in advanced countries such as Japan. Japan exported 676 thousand tons of refined copper in 2022, mainly to Asian countries such as China, Taipei, Chinese, Thailand and India, while the country imported 5.2 million tons of copper ores and concentrates from such countries as Chile, Indonesia, Australia, Peru and Canada. Japan produces and supplies refined copper as a raw material for further processing and fabrication of finished copper products

In 2022, Zambia was estimated to produce around 1 million tons of copper,²⁰⁸ 95% of which was exported in the form of anode and cathode with the remaining volume, only 20,000 tons, being further processed for the domestic market. Metal Fabricators of Zambia Limited (ZAMEFA), a leading cable and wire company operating in southern Africa, was the only domestic user of copper cathode produced in Zambia until a couple of copper cable manufacturers started producing copper rod and finished products in the 2010s.

The total consumption of copper in Zambia was estimated to be around 13,000 tons in 2022.²⁰⁹ Copper cable and wire account for around 65% of total consumption; over 90% of which is sourced from domestic manufacturers. Using scrap metal as raw materials, domestic foundry fabricators produce various types of copper and copper alloy products. All copper sheets and tubes are imported. Overall imported products are estimated to account for around 25% of total copper consumption in Zambia.

The major customers of Zambian copper fabricators are large-scale consumers such as Zambia Electricity Supply Corporation Limited (ZESCO), mining and construction companies, and home builders and general consumers who use electric wiring for both non-residential buildings and residential homes. An increasing volume of copper wire produced by domestic manufacturers is being exported to countries in the region such as South Africa, Botswana and Zimbabwe.

Manufacturers of electric transformers in Zambia also emphasize the diversification potential of the Zambian copper fabrication sub-sector. El Sewedy, a leading cable and wire company in Egypt, has invested in transformer manufacturing by establishing El Sewedy Electric Zambia Limited in 2009 in Ndola.²¹⁰ Supplying Zambian made transformers to the regional market as well as the domestic market, El Sewedy has rapidly expanded its business. The company imports all of its major raw materials, such as copper sheets, since Zambia does not have a copper sheet production facility.

With its limited technical capacity, Zambia's copper processing sector is restricted to copper rod and wire facilities. Zambia also lacks copper tube production facilities. Zambia lacks the capacity for copper alloy manufacturing as well as alloy material production like zinc ingots for brass making. Almost all copper foundry and copper alloy products are imported except for a small volume of domestic products manufactured at foundries using scrap metal. Copper scrap is an important material for foundry companies that process copper alloy materials for mining companies and construction sectors.

both in the manufacturing and construction sectors not only in the domestic market but also to the global market, mainly in Asia, along the well-established global value chains in the region.

²⁰⁸ All figures are expressed in net copper ton, except if otherwise defined.

²⁰⁹ There is no statistics on copper consumption in Zambia at present. Figures presented here are estimated based on the pattern of consumption of comparable countries, desk-top research and discussions with relevant stakeholders in Zambia.

²¹⁰ El Sewedy has 60% of El Sewedy Electric Zambia's total shares and the remaining 40% is owned by ZESCO.

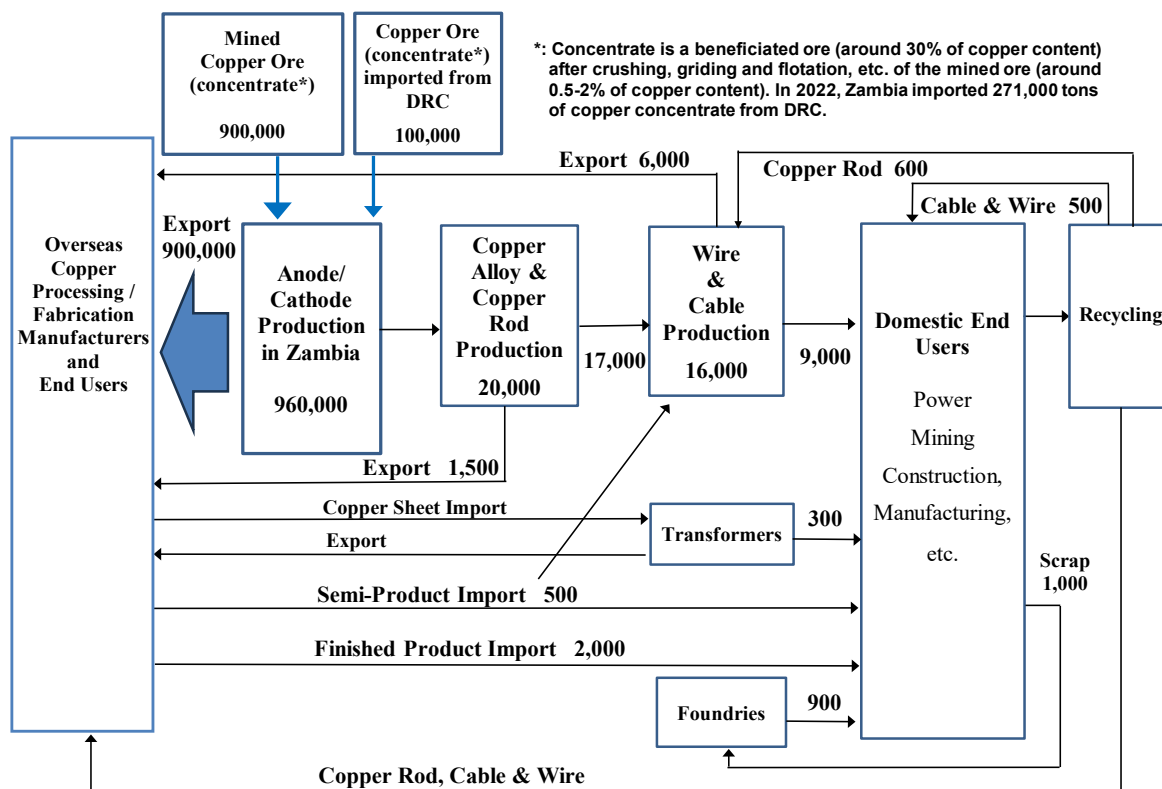


Figure 25: Value Chain of Copper (2022)

Note: All Figures are in metric tons (copper tons).

Source: Survey Team

Processed and assembled products

In Zambia there is no manufacturing industry for high value-added processed or assembled products such as automobiles and electrical machinery. The main reasons for this are limited demand for these products in Zambia and surrounding countries, and a lack of a critical mass of advanced industrial technologies. That said, some companies are spearheading the manufacturing of processed or assembled products in Zambia. For example, a newly emerging Zambian company in Chipata, Eastern Province, that has been engaged in the import and sale of Chinese-made motorcycles and their parts as well as maintenance services, is expanding its sales. In response to the growing demand for agricultural product transportation and motorcycle taxis in rural areas, the company entered into manufacturing using the Complete Knock Down (CKD) method.²¹¹ In other words, the company has moved upstream in the value chain from a mere sales and repair service business to assembly manufacturing. Although the scale of this Zambian entrepreneur's manufacturing business is still small, the owner has a desire to expand the assembly line and even venture into the processing and assembly of steel outer panels for motorcycles in the future with an increased number of units assembled. This example demonstrates the possibility for activities along the manufacturing value chain being expand in the future, particularly in

²¹¹ All parts and components including the engine are packed into many boxes and finally into a single container in the country of production, and is transported to the country where parts and components are assembled locally in the country of consumption.

the processing and assembly field, including metal processing which is technologically relatively easy to start.

In another example, a Japanese construction machinery manufacturer, which invested in Zambia to operate the only “remanufacturing factory” for large construction machinery in Africa, has significantly expanded its production capacity (see Box 23). Through an expansion in the volume and types of remanufacturing services, the company has strengthened its manufacturing capability for steel processing and the assembly of construction machinery attachment parts (replacement parts) in its plants as well as increased the number of skilled workers. This example also demonstrates the high potential for Zambia’s manufacturing industry to grow in the future through metal processing and assembly centered around steel processing. The development of industrial human resources would be required for these technological areas.

Box 23: Growing “Remanufacturing” of Heavy Construction Machinery

Overview

The company began its operations in Lusaka in 2012. The plant is referred to as a “Remanufacturing (REMAN)” plant, since it provides integrated overhauling and maintenance services for heavy mining and construction machinery, as well as some manufacturing work. The company also plays a role of a spare parts distributor. REMAN services require technical expertise in boiler-making (metal fabrication), electrical engineering (heavy current electricity), mechanics, hydraulics and welding. The raw materials used include steel (plates and round bars), electric cables (copper products), hydraulic oil, welding consumables, bearings and seal kits.

The number of parts and components that are remanufactured or supplied by the plant increased from 92 in 2013 to 1,450 in 2022. The company currently employs over 200 Zambian permanent workers as well as contractual workers depending on the production volume. Most employees in the manufacturing department are graduates of vocational training schools who have gone through on-the-job training in the company.

Market

Major customers are mining companies located in Zambia and the DRC. Spare parts are shipped not only to these mining companies but also to customers located in the Middle East, India and some parts of Europe.

Major challenges

Though the company sees increasing demand from mining activities, road construction, rail rehabilitation/construction, and oil pipeline construction between Angola and Zambia; it faces many challenges such as: 1) poor road network conditions; 2) an unstable electricity supply, especially during the rainy season; 3) a limited council/city water supply; 4) a lack of domestic engineering companies with sufficient engineering “know-how”, which forces the company to import many supplies mainly from South Africa; 5) high cross-border duties and frequent delays in border controls; and 6) exchange rate fluctuations that make the company’s foreign exchange management difficult.

Conclusion

Within Zambia’s engineering sector, sub-sectors, such as iron and steel, steel fabrication, copper fabrication and steel-related processing and assembly, are growing. Among them, the iron, steel and steel fabrication sub-sectors have a particularly large potential for growth given the increasing demand for steel and steel-fabricated products in Zambia and surrounding countries. The iron and steel sub-sector is also known to have large multiplier effects for other industrial sectors.²¹² However, in

²¹² Data in Japan shows that the iron and steel sector has brought about high positive economic multiplier effects. The economic multiplier effect coefficient for the iron and steel sector in 2019 was 2.4513, which was higher than the average for the entire

promoting iron and steel businesses, particular attention needs to be paid to environmental controls, energy saving, recycling, and labor safety. Increased awareness and technological upgrading in these areas are key to the sector's sustainable development.

Steel fabrication is conducted not only by medium- to large-scale engineering steel fabricators but also by many MSME manufacturers scattered across the country. Challenges for small-scale fabricators include a difficulty in procuring quality-assured materials from the domestic steel market. Furthermore, inefficient and outdated technologies and machinery result in low quality products that fail to meet market standards. Cluster development through the formulation of an industrial area hosting a number of steel-related companies is recommended as a development approach for this sub-sector. In light of this, an industry federation consisting of steel and metal fabrication related industries needs to be organized so that PPP forums are convened to discuss and plan the promotion of cluster development in the industrial area.

3-7 Pharmaceuticals

The pharmaceuticals market in Zambia was estimated to be around USD 250 million in 2020. Its size then increased to USD 350 million in 2021 and USD 400 million in 2022 due to the impact of COVID-19. Approximately 80% of the market is dominated by products imported from foreign countries.²¹³ According to the Competition and Consumer Protection Commission (CCPC) (2022) and interviews conducted by the Survey Team, Zambia has a total of 167 registered pharmaceutical product wholesalers as well as a few domestic pharmaceutical companies. These pharmaceutical companies import raw materials primarily from India and South Africa to manufacture generic medicines for sale within the country. These companies mostly engage in secondary production, which involves formulating bulk pharmaceuticals into various dosage forms. Their main products include antibiotics, anti-malaria drugs, analgesics/antipyretics, antiprotozoals and antihistamines.²¹⁴

According to Business Monitor International Rebrands (BMI)'s forecast in 2023, Zambia's pharmaceutical industry is expected to grow strongly over the next ten years. This growth is supported by the country's broadly positive economic conditions and the government's ambition to improve healthcare coverage and health outcomes.²¹⁵ Zambia has a well-developed healthcare system, including

industry in Japan; 1.8122. The effect was 1.9744 for beverage and food, 1.7633 for textile, 1.8740 for wood and wood products, and 1.9724 for metal products. The sector that had the highest multiplier effect coefficient was passenger car manufacturing; 2.6995. The multiplier effect coefficient is the total increase in production of all sectors created by an increase of one production unit (demand) in a specific sector. (source: Department of Research and Analysis, Ministry of Economy, Trade and Industry, Japan, 2022))

²¹³ Policy Monitoring and Research Centre (2022). *The Pharmaceutical Manufacturing Industry in Zambia: Challenges and Opportunities*

<https://pmrczambia.com/wp-content/uploads/2022/01/The-Pharmaceutical-Manufacturing-Industry-in-Zambia-.pdf>

²¹⁴ CCPC(2022). *Study of Competition in the Generic Pharmaceutical Industry in Zambia*

<https://www.ccpc.org.zm/media/research/Generic-Pharmaceutical-Industry-Study.pdf>

²¹⁵ BMI (2023) *Zambia Pharmaceuticals Report*

<https://store.fitchsolutions.com/pharmaceuticals-healthcare/zambia-pharmaceuticals-report>

both private and public health sectors that offer specialized medical services. The Ministry of Health (MoH) oversees the nation's healthcare system with multiple government agencies regulating the production, importation, storage, distribution, sale and usage of pharmaceuticals and related substances.²¹⁶ In March 2023, MoH and the COMESA jointly organized the first Zambia-EU Pharmaceutical Manufacturing Forum under the theme of “Strengthening Healthcare through Local Pharmaceutical Manufacturing”. The forum brought together more than 600 participants from over 50 pharmaceutical companies, potential investors, financial institutions, government officials, cooperating partners, diplomatic missions and civil society organizations.²¹⁷

In response to medication shortages of and a lack of products, such as vaccines, in Zambia during the COVID-19 pandemic, the Zambian government launched the “Zambia Pharmaceutical Manufacturing Initiative (ZPMI)” in 2022, aiming to create a conducive environment that promote the manufacturing of pharmaceutical products.²¹⁸ Under the ZPMI, the Zambian government seeks to strengthen partnerships between domestic pharmaceutical manufacturers, international pharmaceutical companies, financial institutions and development agencies. However, a lack of government support for the essential facility investments required to enhance pharmaceutical research and development (R&D), and a shortage of technical expertise and skilled labor among domestic pharmaceutical manufacturers remain as challenges. Moreover, the two pharmaceutical companies the Survey Team visited expressed a serious concern about the government's position on supporting the industry as the Zambia Revenue Authority (ZRA) levies taxes on the raw materials used in pharmaceutical production while exempting imported final pharmaceutical products from import duties and taxes. Remedial actions are expected to exempt pharmaceutical raw materials from import duties so that domestic industries can enjoy fair competition with the final products imported from India and South Africa.

Box 24: Drug Manufacturer in Lusaka

The company was founded by the government 40 years ago and was privatized in 2000. Since then, the company has been owned by Zambians of Indian origin. The company operates two factories (in Lusaka and Kabwe) and employs a total of 200 people.

Raw materials for producing pharmaceutical products are mainly sourced from South Africa and India while packaging materials are sourced domestically. The company mainly produces generic pharmaceuticals (cough syrups and disinfectants) in the Lusaka factory as well as IV fluids in the Kabwe factory. In addition to supplying locally produced products, the company supplies imported finished products. The government is the main customer; the company mainly supplies hospitals through the Zambia Medicines and Medical Supplies Agency (ZAMSA).

The company and the industry face several challenges. First, Zambia Medicines Regulatory Authority (ZAMRA) regulations are considered too strict. The approval process for new products is excessively time-consuming, often taking 6 months to 1 year for product approval. Secondly, the government's support for local

²¹⁶ CCPC(2022). Study of Competition in the Genetic Pharmaceutical Industry in Zambia
<https://www.ccpc.org.zm/media/research/Generic-Pharmaceutical-Industry-Study.pdf>

²¹⁷ Delegation of the European Union to Zambia and COMESA (2023)
https://www.eeas.europa.eu/delegations/zambia/zambia-global-gateway-team-europe-action-our-partnership-towards-local-pharmaceutical-production_en?s=128

²¹⁸ Lusaka Times (2022).
<https://www.lusakatimes.com/2022/10/21/masebo-calls-for-the-strengthening-of-the-local-pharmaceutical-manufacturing-industry/> & <https://www.zamra.co.zm/legislation/>

manufacturing in this sub-sector is not as robust as needed. ZRA imposes high duties on raw materials, encouraging the importation of finished products rather than raw materials. Finally, there is a shortage of specialized labor in the job market. Furthermore, the country's technology levels are relatively low, posing challenges to pharmaceutical manufacturing.

Conclusion

According to the interviews by the Survey Team, the Zambian government does not have a consistent policy for the promotion of pharmaceutical industries. In launching ZPMI in 2022 with the aim to create a conducive environment for promoting pharmaceutical product manufacturing, ZRA now levies taxes on raw materials used for pharmaceuticals production while exempting imported final pharmaceutical products from import duties and taxes. With Zambian pharmaceutical manufacturers heavily dependent on imported raw materials, the above policy leads to a significant loss in their products' competitiveness with imported final products.

3-8 Industrial Technologies

Industrial technologies in the manufacturing sector can be divided into two categories: technologies specific to a respective industry; and management technologies which are common across all industries. The strengthening of both categories of technologies is indispensable to the growth of each industrial sub-sector. Over the previous years, JICA has supported the strengthening of the organizational capacity of a public institution to promote the Kaizen movement, which is one management technology.

This Survey included a preliminary assessment of the industrial technologies in each of the seven manufacturing sub-sectors, through visits to manufacturing companies and several TEVETA institutions. It was observed that the technologies used by many small-scale manufacturers were inefficient and obsolete due to old machinery. As described in Chapter 2, 3 and 4, TEVETA institutions provide only primitive skills training without modern equipment and appropriate management capabilities. In addition, most small-scale manufacturers do not have basic management skills such as business plan formulation, marketing and financial management. As such, the upgrading of management technologies is important for small-scale manufacturers in agro-processing and other light manufacturing enterprises. The provision of effective BDS services, particularly hand-holding mentoring services, in both types of industrial technologies is indispensable to the promotion and growth of promising industries in the manufacturing sub-sectors.

With a view to supporting the upgrading of industrial technologies, several agencies administering and regulating industrial standards and metrology are in operation under MCTI (see Table 33)

Table 33: Technology-Related Statutory Bodies under MCTI

Organization	Major Responsibilities
ZABS ²¹⁹	Develop national industrial standards, accredit conformity to ISO (International Organization for Standardization) standards, and raise awareness (training) with MSMEs on standards issues.
ZCSA	Administer, maintain and ensure compliance with compulsory standards through factory inspections for locally manufactured products and border inspections for imported products.
Zambia Metrology Agency (ZMA)	Promote appropriate measurement theory, techniques, practices and devices for quality control, fair trade, safety, health and consumer protection.

Source: Survey Team

In order to respond to the needs of the manufacturing industry in Zambia, facilities and equipment as well as human resources of both ZABS and ZCSA need to be strengthened. The World Bank's ZATP has recently provided facilities including equipment to ZABS along with some technical assistance; the impact of this intervention needs to be monitored in order to determine the necessity of further assistance.

²¹⁹ ZABS has been assisted by the World Bank's Zambia Agribusiness and Trade Project (ZATP), in which the new testing laboratory facility was constructed with a project cost of USD 3.9 million.

Chapter 4 Business Environment in Zambia

The Zambian government has been improving its business environment through a number of economic reforms over the past 20 years in order to make legislation and institutional systems more open to both local and foreign investors.²²⁰ Several studies on the country's business environment conducted by international institutions, such as the World Bank, indicate that Zambia's business climate is one of the most favorable in the region; Zambia was the fifth highest scorer among Sub-Saharan African countries in the 2020 World Bank's Business Indicators.^{221 222} However, the impact of the government's reforms has been undermined by several factors, such as weak governance, unreliable electricity, poor infrastructure, the high cost of capital, cumbersome administrative procedures, and a lack of skilled labor. The following sections set out major challenges that negatively affect the manufacturing companies' competitiveness.

4-1 Taxation and Incentive System

Since 2005, with the aim of attracting investment and promoting trade, Zambia has carried out a number of tax reforms, including the introduction of fiscal and non-fiscal incentives such as the reduced general corporate income tax rate and the preferential taxation for industries that are strategically important to the growth of Zambia's economy. A summary of the current corporate tax and main business taxes (as of June 2023) in Zambia is shown below.

Table 34: Zambia's Corporate Tax and Business Taxes (as of June 2023)

Type of tax	Source of income	Tax rate
Corporate income tax (CIT)	General corporate income	30%
	Electronic communications networks or service license	35%
	Farming	10%
	Agro-processing	10%
	Agro-processing of corn starch in Multi Facility Economic zone or Industrial Park	0%
	Export of non-traditional products ²²³ from farming and agro-processing	10%
	Export of non-traditional products other than those relating to farming and agro-processing	15%
	Value addition to gemstones through lapidary and jewelry facilities	25%
Value Added Tax (VAT) ²²⁴	The export of goods and services from Zambia are generally zero-rated. However, exports of services rendered physically from a place of business in Zambia would be considered standard-rated supplies of services and would be subject to a 16% VAT rate, regardless of whether the consumer is a non-Zambian resident.	0%
	The supply of standard-rated services to customers in Zambia by a non-Zambian supplier that has not been subject to VAT in the country from which the services are provided will be subject to VAT in Zambia.	16%
	The following industries (or items) are duty-free: productive machinery for agriculture, aquaculture, solar energy, and mining, medicines, pharmaceuticals, veterinary supplies, medical equipment, computer parts, chemicals in bulk, fertilizers, and seeds.	0%

²²⁰ U.S Department of State (2023) "2023 Investment Climate Statements: Zambia"

²²¹ Four countries (Mauritius, Rwanda, Kenya and South Africa) were placed higher than Zambia.

²²² The World Bank (2020) "Economy Profile Zambia - Doing Business 2020"

²²³ Non-traditional products refer to anything produced or manufactured in the Republic, excluding minerals, electricity, services, or cotton lint exported without an export permit from the Minister of Commerce.

²²⁴ <https://taxsummaries.pwc.com/zambia/corporate/other-taxes>

Customs duties ²²⁵	Capital equipment and raw materials	0-5%
	Intermediate goods	15%
	Finished goods	25%

Source: Compiled by the Survey Team based on data from PricewaterhouseCoopers's Worldwide Tax Summaries

The insufficient implementation of these tax policies and schemes has prevented Zambia's manufacturing companies from fully benefitting from these incentives. One example is the unclear administrative procedure for claiming VAT exemptions. According to ZAM, there are a number of cases where manufacturers licensed by ZDA to import capital equipment were not in fact exempted from VAT. The inapplicability of the VAT exemption payment generates enormous costs for these manufactures since most of them are dependent on imported equipment. In order to attract foreign investments, it is imperative that the consistent application of tax rules is ensured and that the procedures are simple.

Another issue is an inefficient customs clearing process at the borders, especially the border with the DRC, which is the Zambia's largest export destination. The long queue of trucks (approximately 1km long) waiting for customs clearance is always present at the border with the DRC. An interview with a truck driver revealed that the customs clearance process on the DRC side had obliged him to wait for about 1 month at the border without any communication from the authority. The burden of high transportation costs is too heavy for manufacturing companies to carry. Although the two governments agreed to solve the issues several times, no improvement has been seen so far. Similar issue exists at the border with Zimbabwe but caused by the Zimbabwe side. Zambia would like to replicate the efficient system adopted at the One-Stop Border Post with Malawi.

4-2 License and Permit

Manufacturing companies in Zambia are troubled by redundant licensing systems. Most licenses and permits are required redundantly by different institutions, resulting in increased production costs for manufacturers. For example, food and beverage manufacturers need to obtain both a "food handler's certificate" issued by local councils and a "food clearance certificate" by MOH. Zambia needs to build a single license system.

Zambian MSMEs' competitiveness is also undermined by an irrational licensing and permit system. One example of this is the fee for product certification by ZCSA: smaller manufacturing enterprises are disadvantaged with significantly higher rates. Those enterprises earning less than ZMW 100 million (MSMEs threshold) are charged a higher rate (0.15%) of factory income whereas those earning ZMW 500 million or more are charged a lower rate (0.05%) of factory income.²²⁶ This is a critical disadvantage for MSMEs, undermining the competitiveness of their products by increasing the cost of production.

²²⁵ U.S. Department of Commerce International Trade Administration (2022) "Zambia - Country Commercial Guide"

²²⁶ Zambia Association of Manufacturers (2022) "Cost of Permits and Licenses – Unbearable for MSMEs"

4-3 Investment Climate

Apart from the challenges stated above, investors and enterprises in Zambia are faced with the following additional challenges:²²⁷

High cost of and limited access to financing: Access to capital in the domestic financial market is restricted by high annual interest rates ranging from 20 % to 37 %. SMEs are required to provide collateral averaging as high as 400 % of the loan value.

High labor costs compared to low labor productivity: Despite low nominal wages, actual labor costs in Zambia are relatively high due to low productivity, strict labor laws, generous benefits for formalized employees, and training costs due to a shortage of skilled labor.²²⁸

Depreciation and volatility of the Zambian Kwacha: Reflecting inflation, the market-determined exchange rate has depreciated precipitously (from ZMW 10 in 2018 to 25 per USD in 2023) despite periodic official interventions. This has led to a loss in the purchasing power of the Zambian Kwacha.

Electricity deficit due to rationing of power: Zambia suffered from its worst power outages in 2015 and 2016, following poor rainfall, low reservoir levels and a complete reliance on hydropower.²²⁹ The situation has improved with Zambian government intensifying efforts to connect new power generation projects to the national grid and because of strong rainfall in 2020/2021.

Infrastructure deficits: An insufficiently developed and maintained network of primary, secondary, and tertiary roads has led to steep transportation costs. For the water supply, many of the industrial districts in the major Zambian towns incur extra expenses in having to build wells to compensate for an unreliable public water supply.

Policy inconsistency and uncertainty: Government policies concerning business and trade often change without prior stakeholder consultation. Government officials' interpretation of regulations affecting businesses is inconsistent and unpredictable. A good indicator of the cost of regulatory uncertainty is the amount of time and money senior management spend on regulations (e.g. tax, customs, labor regulations, licensing, and registration), completing forms and dealings with officials. Market-distorting subsidies and ad hoc changes to trade policy in the agriculture sector have inhibited greater involvement by and growth of private enterprises.

In spite of these challenges, investors are optimistic about the country's long-term potential for economic development, particularly in the fields of renewable energy, agriculture, financial services and the environment. According to the Impact Investment Climate Survey 2022, 82% of investors with

²²⁷ International Organization of Employers (2023) Analysis of the business environment in least developed countries - Zambia

²²⁸ Minimum monthly wage inclusive of different allowances in Zambia ranges from 840 ZMW to 3,151 ZMW depending on the category of the job (source: <https://wageindicator.org/> accessed on 13 Dec 2023)

²²⁹ International Growth Centre (2019) "The cost of power outages to Zambia's manufacturing sector"

existing investments indicated that they would increase their allocations to support their portfolio companies and explore new growth opportunities.²³⁰ A significant improvement in the perception of economic and political stability, and expectations for the new administration in its reforms in legal and regulatory systems as well as its efforts in eradicating corruption are boosting investor confidence.

4-4 Investment Incentives

The Zambian government has been reforming investment incentives aimed at attracting more investors into Zambia. The Zambian government has been continuously giving fiscal and non-fiscal incentives to investments in its priority sectors; namely manufacturing, infrastructure construction, tourism, energy and water. In January 2023, the government adopted the country’s new legal and regulatory framework for investment named the “Investment Trade and Business Development Act No. 18 of 2022” (ITBD Act), under which incentives are also given to investments made in businesses operating in MFEZs (or Industrial Parks) or in rural areas. A summary of the Zambia’s latest investment incentives is shown below.

Table 35: Zambia’s Investment Incentives

Type of incentive	Eligibility of Incentive	Overview of Incentive and Eligible Investors
Fiscal incentive	Investors in any of the priority sectors	0% of import duty on capital equipment and machinery for five years
		Accelerated depreciation on capital equipment and machinery
Non-fiscal incentive	Foreign investors and local investors who invest in any sector or product under the Act is entitled to non-fiscal incentives as follows	Investment guarantees and protection against state nationalization
		Free facilitation for application of immigration permits, secondary licenses and land acquisition
		Facilitation of business and partnership linkages
		Investment advisory on Zambia’s Investment Climate, regulatory regime and investment opportunities
MFEZ incentives	Investors in a MFEZ or Industrial Park (exclusive to the investment in the manufacturing sector)	0% tax for a period of 10 years from the first year of the commencement of works in a MFEZ or Industrial Park
		0% tax on dividends declared on profits made on exports from the first year of commencement of works, for companies in a MFEZ or Industrial Park, for a period of 10 years
		0% tax on profits made on exports from the first year of the commencement of works, for companies in a MFEZ or Industrial Park, for a period of 10 years (only 50 percent of profits to be taxed for years 11 to 13 and; only 75 percent of profits to be taxed for years 14 and 15)

Source: Compiled by the Survey Team based on data from the Guidelines on Facilitation and Registration of Investments in Zambia

Investors are discouraged from investing in Zambia by the high transaction costs attributed to inefficient administrative procedures which require them to consult with many different agencies. According to a World Bank study, it takes approximately 3 to 6 months for investors to complete the whole process.²³¹ Zambia would be able to attract more investment into its MFEZs should these mandatory yet

²³⁰ Written by National Advisory Board for Impact Investing (NABII), PROSPERO/FCDO and CREO-HUB

²³¹ The World Bank (2016) “Multi-facility Economic Zones in Zambia: Progress, Challenges and Possible Interventions”

cumbersome license and permit procedures for investors to benefit from MFEZ incentives be streamlined.

Box 25: EU Technical Assistance to Develop a Regulatory Environment Conducive to Business²³²

As part of the Economic Governance Support Programme (EGSP), which is regional assistance, this EU technical assistance project will begin in 2024 with the aim of improving the regulatory environment for business and investment in Zambia. Project components include the enhancing of policy and regulatory frameworks, the strengthening of regulatory agencies' capacity (such as Business Regulatory Review Agency (BRRA)), the streamlining of the business regulatory framework, and supporting the implementation of climate change and green growth policies.

The project will be implemented by a team of four key experts and several non-key experts; who will provide technical assistance, capacity building, and policy advice to the beneficiary institutions and stakeholders. The contracting authority for the project will be the National Authorizing Officer of the European Development Fund (NAO) within MoFNP. The project will be supervised by MCTI in coordination with the Ministry of Green Economy and Environment (MoGEE).

²³² EU (2023) Technical Assistance to an Inclusive Regulatory Environment Conducive to Business and Investment in Zambia

Chapter 5 Proposed Orientation for JICA Assistance to Promote the Manufacturing Sector in Zambia

In this chapter, the Survey Team made proposals on the candidates for JICA's future projects, based on the survey results described in Chapter 2, 3 and 4, in particular "Conclusions" on respective value chains provided in Chapter 3. The comparative advantages and constraints of JICA's technical and financial assistance are also taken into consideration.

With this Survey focused on the manufacturing sector, details of agriculture projects such as those for increasing the production of crops cannot be provided in the proposals though the limited availability of domestic raw materials is often the major constraint for agro-processing industries.

5-1 Potential JICA Assistance

The following table summarizes the potential JICA assistance in each respective sub-sector as well as cross-sectoral topics based on the Survey Team's findings.

Table 36: Potential JICA Assistance

Sub-Sector / Issue	Key Factors	Potential JICA Assistance
Food processing	The food processing industry has a large growth potential due to increasing domestic and international demand. Though there are off-takers and food processing companies that are ready to increase the purchase of domestically produced raw materials, farmers are not able to respond due to a lack of financial and technical means. Diversifying smallholder farmers' income sources could increase and stabilize their income.	By applying Two-Step Loan and Private Sector Investment Finance to the promotion of out-grower systems for cassava, sorghum, sunflower seeds and soybean; linkages between off-takers / food processing companies and farmers could be strengthened, leading to import substitution and sectoral growth. JICA's Two-Step Loan could also include the provision of financing to commercial dairy farms, cattle breeders and chicken farms, which would boost the commercial production of livestock products.
Wood and wood products	Though there are mixed views as to the availability of forest resources in Zambia, the domestic demand for wood furniture is increasing. Sawmill and furniture manufactures' lack of working capital constrains the volume of orders they can accept. Their inability to meet demand prevents the industry from realizing growth opportunities.	JICA's Two-Step Loan for SME financing could include the provision of equipment and working capital to sawmills and wood furniture manufacturers.
Leather and leather products	An increase in cattle population could be translated into high growth potential for Zambia's leather industry should all hides/skins be transformed into finished products domestically, which would contribute to job creation, poverty reduction and a substantial increase in foreign currency savings.	The biggest challenge to this sub-sector is the tanneries' difficulties in procuring raw materials. The current state of hide and skin distribution in Zambia needs to be investigated, based on the results of which remedial measures would need to be developed and implemented.
Textiles	Due to an influx of cheap foreign products, Zambia's textile value chain collapsed, resulting in most Zambian garment manufacturers producing	Due to a lack of comparative advantage, cost-effectiveness cannot be easily achieved through an intervention in Zambia's textile industry. As such,

	only niche products using imported raw materials (fabrics).	this sub-sector would not be prioritized under such circumstances.
Metals and non-metallic minerals	Though Zambia has abundant mineral resources, most small-scale miners remain poor due to limited access to financing and a lack of processing equipment and skills. Strengthening of small-scale miners' production and marketing capacities would have large impacts on the generation of their income and employment opportunities, leading to growth in the gem and jewelry sector. Demand for non-metallic minerals, such as cement and sulfur, has been strong, reflecting increasing mining and construction activities in Zambia and the DRC.	By strengthening BDS provider capacities and involving CEEC's Empowerment Fund, the organizational and managerial capacities of small-scale miner cooperatives could be strengthened with their technical skills developed and access to processing equipment improved. The economic impact of cement and sulfur sub-sector development is limited due to its low value addition and weak linkages with other manufacturing sector value chains. As such, the priority for supporting this sub-sector is deemed to not be high.
Engineering	Within Zambia's engineering sector, the iron and steel and steel fabrication sub-sectors have a particularly large potential for growth, given the increasing demand for steel and steel-fabricated products in Zambia and surrounding countries. In promoting iron and steel businesses, particular attention needs to be paid to environmental controls, energy saving, recycling, and labor safety. Increased awareness and technological upgrading in these areas are key to the sector's sustainable development.	Cluster development through the formulation of an industrial area hosting a number of steel-related companies is the recommended approach for developing this sub-sector together with the provision of financial and technical support. In light of this, an industry federation consisting of steel and metal fabrication related industries would need to be organized in such a way as to facilitate the forming of PPP forums as platforms for discussing and planning the promotion of cluster development in the industrial area.
Pharmaceuticals	The Zambian government does not have a consistent policy for the promotion of domestic pharmaceutical industries. This leads to a significant decline in their products' competitiveness with imported final products.	It is recommended that JICA continues monitoring the Zambian government's policy on the promotion of the pharmaceutical sector.
Business environment	The Zambian government has been improving its business environment through a number of economic reforms over the past 20 years in order to make legislation and institutional systems more open to both local and foreign investors. However, the impact of the government's reforms has been undermined by several factors, such as weak governance, unreliable electricity, poor infrastructure, the high cost of capital, cumbersome administrative procedures, and a lack of skilled labor.	There are initiatives undertaken by the World Bank ZATP 2 and USAID Business Enabling Project to improve the business environment. Moreover, EU's "Technical Assistance to Develop a Regulatory Environment Conducive to Business" is about to launch. Since the effectiveness of these projects is dependent on their target agencies' commitment to reforms, it is recommended that JICA continue monitoring the progress of these projects and identify gaps that could be bridged with JICA resources.
TVET	Training courses and subjects in TEVETA institutions are dependent on traditional, old technologies that are further constrained by obsolete equipment. Should these technologies (facilities, equipment and human resources) be upgraded, it would contribute greatly to the growth of newly emerging manufacturing sub-sectors.	Though some major TEVETA institutions have received assistance from development agencies, positive impacts on the ground have yet to be seen. The strengthening of TEVETA institutions would require full-fledged support in both hardware (equipment) and software (management and technical capacity). Moreover, technologies would need to be continuously upgraded in order for these institutions to respond to the industries' needs. From this perspective, the relevance of JICA assistance should be carefully examined.
Quality improvement	Quality improvement has been an important issue in the promotion of the manufacturing industry. The	The World Bank's ZATP has recently provided equipment to ZABS along with some technical

	strengthening of ZABS and ZCSA's capacity to respond to the specific needs of emerging manufacturing sub-sectors would contribute to the enhancement of their competitiveness.	assistance; the impact of this intervention needs to be monitored in order to determine the need for further assistance in the field of quality assurance. In developing the iron / steel and metal processing cluster in Kafue, specific technical fields to be strengthened in ZABS and ZCSA would need to be identified, and capacity development on a pilot-scale (with the provision of some equipment) could then be implemented when necessary.
MFEZ development	Infrastructure, particularly the supply of industrial water, is insufficient across all MFEZs. Should a sufficient supply of industrial water be ensured, the development of MFEZs would be accelerated and a larger number of enterprises attracted. The adoption of a cluster approach would attract more investment. In particular, promoting cluster development for emerging manufacturing sub-sectors, such as iron / steel and metal processing, would contribute to an increased value addition and employment generation.	Grant aid could be applied to the development of the water supply and distribution system in the LS MFEZ. For the development of the Kafue MFEZ (an iron / steel and metal fabrication special economic zone), grant aid could be applied towards realizing a infrastructure development should a blueprint be developed through the PPP initiative.
BDS	There are a number of BDS providers in Zambia. Though many of them have been trained through donor projects, such as the World Bank's ZATP and Finland's AGS, there remains a large gap between MSME capacity development needs and local BDS provider capacities. Moreover, the major challenges for the Zambian BDS market are a lack of MSMEs willing to pay for the services. Part of this challenge could be resolved by combining BDS and affordable financial services through CEEC.	CEEC manages the Empowerment Fund which is intended to support MSME's investment in physical infrastructure and working capital; however, the fund has not been effectively utilized due to CEEC's limited implementation capacity. Should CEEC's capacity be strengthened through JICA support, investment impacts could be significantly increased, contributing to the growth of hundreds of MSME.

Source: Survey Team

5-2 Candidates for JICA Projects

(1) Application of JICA's Private Sector Investment Finance

JICA's Private Sector Investment Finance (PSIF) scheme, which is a non-sovereign loan, mostly supports financial institutions that extend loans to MSME or agricultural farms, or private investments involving Japanese corporations. Should an appropriate private financial institution be identified that is capable of distributing loans to smallholder farmers while promoting out-grower schemes, PSIF could be applied to the strengthening of agriculture/agro-processing value chains in cassava, sorghum, sunflower seeds or soybean, for which the development potential was discussed in "3-1 Food Processing". The same can be applied to the out-grower schemes for cattle growers, dairy farms and chicken farms.

Private investments in out-grower schemes for the above-mentioned agricultural crops could also be promoted through PSIF if a Japanese investor was involved in the recipient corporation. A precedent for this approach is the investment by ETC group (which is partially owned by a Japanese corporation;

Mitsui & Co., Ltd.) in the development of the soybean value chain in Zambia through a USD 65 million loan agreement signed with JICA in 2021.

Since the development of an out-grower system requires the organizing and training of a large number of smallholder farmers, which is costly and time-consuming, it is preferred that JICA support such initiatives through technical assistance.

(2) Application of JICA' Yen Loans

Contingent on the level of the Zambian government's indebtedness and repayment capacity, JICA Yen Loans, which are a sovereign loan facility, could be used to provide a credit line in Zambia ("Two-Step Loan": TSL), should an apex institution capable of managing the credit line be identified together with participating financial institutions (PFI) with sufficiently sound operations. With the World Bank's ZATP II having begun its search for an apex institution and PFI to implement its agribusiness SME credit line, information on the outcomes and lessons from that effort should be collected when JICA explores the potential for implementing TSL in Zambia.²³³

As indicated in Table 36, prospective TSL recipients could be those directly or indirectly involved in out-grower systems for cassava, sorghum, sunflower seeds and soybean (such as off-takers, agro-processing companies, distributors, agricultural input suppliers, agricultural machine service providers and producers) as well as those involved in livestock value chains centered around commercial dairy farms, cattle breeders and chicken farms. TSL could also be applied to SME financing, enabling sawmills and furniture manufacturers to invest in fixed assets and working capital.

(3) Application of JICA Grant Aid

The strengthening of TEVETA institutions requires full-fledged support in both hardware (equipment) and software (management and technical capacity). Moreover, technologies need to be continuously upgraded in order for these institutions to respond to the industry needs. From these perspectives, the relevance of JICA assistance, particularly grant aid, must be carefully examined.

Should JICA assistance be provided to the development of the iron / steel and metal processing cluster in Kafue (to be discussed later), a provision of equipment to ZABS and ZCSA, such as inspection and test equipment for verifying quality and strength, would contribute to an increase in the competitiveness of relevant industries. However, since the usual scale of JICA grant aid assistance is too large for these entities, a pilot-level of assistance combining equipment provision and technical assistance would be more appropriate.

²³³ Information on the performance of commercial banks may also be collected from IFC that has experiences in supporting several commercial banks in the past, including Stanbic Bank (2019), Zambia National Commercial Bank (ZANACO, 2010), AB Bank (2010) and Finance Bank (1997).

For the development of Kafue MFEZ (an iron / steel and metal fabrication special economic zone), should an infrastructure development blueprint be developed under a PPP initiative, grant aid could be utilized to realize such a plan. Additionally, the use of grant aid to develop a water supply and distribution system for the LS MFEZ would facilitate the promotion of investments in that zone.

(4) Development and implementation of a strategy for the improvement of hide and skin supply

(a) Background

The most imminent challenge to Zambian leather industry is apparently the shortage of raw materials, namely hides and skins. One of the major reasons why most hides and skins are purchased by Nigerians for human consumption could be the low prices offered by intermediaries due to the low quality of skins and hides caused by branding.

(b) Project Objective

A strategy for the improvement of the hide and skin supply system is developed and implemented, which will lead to the revival of tanneries in Zambia, contributing the promotion of the Zambian leather industry as a whole.

(c) Project Duration

One year

(d) Implementing Agencies and Partners

Implementing Agency: the Ministry of Fisheries and Livestock

Partners: Zambia Leather Industries Association (ZALIA) and Tanneries

(e) Project Activities

(i) Examination of the Current Status

Due to the informality in the transaction of raw hides and skins in Zambia, how the actual purchase takes place is not known. Who regularly purchase hides and skins how and where, as well as how they are transported to where, needs to be investigated by directly interviewing the intermediaries. There is also a need to examine the practices of stamping, which seem to be causing the degradation of the quality of hides and skins.

(ii) Development of a Strategy

Based on the findings, a strategy for the improvement of the hide and skin supply system should be developed. In the strategy the mechanism, along with sensitization to farmers, will be proposed in which higher prices can be offered to high quality hides and skins without stamps.

(iii) Introduction of a New Modality for the Empowerment Fund

The strategy will be implemented.

(5) Project for the Improvement of CEEC's Organizational Capacity

Based on the preliminary analysis on CEEC's operation conducted by the Survey Team, the following project is proposed for JICA's technical assistance.

(a) Background

With Zambian banks' lending rate being around 25% in 2023, it is not realistic for Zambian manufacturing enterprises to borrow money from banks for capital investment that requires a long-term repayment period. As discussed in "2-3-5 CEEC", CEEC currently manages the "Empowerment Fund" with the portfolio of 900 million ZMW (approximately USD 35 million) which is intended to support MSME's investment in physical infrastructure and working capital; however, CEEC's limited implementation capacity has caused a large back-log of applications as well as inappropriate selection and monitoring of sub-projects. The moral hazard created on the side of beneficiaries has contributed to the low loan recovery rate (27%), eroding the national budget. Should CEEC's loan assessment procedures be streamlined and its staff's appraisal and monitoring capacity be strengthened, the impact of the investment can be significantly increased, contributing to the growth of hundreds of MSME.

(b) Project Objective

Through the improvement of CEEC's organizational capacity, the quality of the portfolio of the "Empowerment Fund" will be improved, leading to a growth in the MSME sector and an increase in employment.

(c) Project Duration

Three years

(d) Implementing Agencies and Partners

Implementing Agency: CEEC

Partners: MSMED will conduct training for MSME and monitoring of sub-projects in cooperation with CEEC. BDS providers will be contracted by JICA/CEEC for training or consulting to cater to MSME's specific technical needs.

(e) Project Activities

(i) Diagnosis on CEEC's Operations and Preparation of an Action Plan

The large number of accumulated grant requests implies CEEC's weak administrative capacity. This type of backlog often occurs not necessarily due to insufficient human resources but when the administrative workflow is not either well established or followed. Not only CEEC's credit assessment and the modality of BDS provision, but also its overall management regime may need to be examined; hence, a diagnosis to detect troublesome operation areas should be first conducted, based on which an action plan for the improvement of management should be prepared.

(ii) Support for the Implementation of the Action Plan

Support will be provided for the implementation of the actions identified above. Based on the diagnosis on each operation area, appropriate and efficient Standard Operating Procedures (SOPs) will be established through a series of discussions with staff members in respective sections. Whenever necessary, guidelines, rules and regulations will be developed to ensure the application of standardized operations throughout the organization.

(iii) Introduction of a New Modality for the Empowerment Fund

One of the major reasons for the Empowerment Fund's low repayment rate is the SMEs' lack of management and technical capacity to plan and manage the business. In order to address this issue, it is advisable to develop a modality to link the Empowerment Fund and the provision of BDS; for example, receiving training on basic business management can be made mandatory for SMEs in applying for the fund. Part of BDS can be provided directly by CEEC field office staff while the rest, especially the training or consultation to cater to MSME's specific technical needs, can be provided by BDS providers.

Among the commodities discussed in "3-1 Food Processing", the combination of small-scale finance and technical assistance is most needed for the promotion of honey and peanut processing industry; CEEC could provide farmers' groups and MSME with support in finance and BDS (product development, production and quality management, marketing, packaging, etc.) in cooperation with JICA's technical assistance.

(iv) Strengthening of CEEC Staff Members' Capacities

In order to improve the performance of the Empowerment Fund, CEEC staff's knowledge and skills in the areas such as credit management, risk mitigation, monitoring and evaluation (M&E), finance and business development should be strengthened through both class-room training and OJT.

(f) Risks

The success of organizational capacity improvement is dependent on the organization's commitment. Though the Director General has shown his strong commitment to reforms, whether CEEC will be able to improve its portfolio quality without political interference remains to be seen.

(6) Project for the Strengthening of the Capacity of Small-Scale Gemstone Processors

(a) Background

The gem and jewelry sector in Zambia provides jobs to approximately 60,000 people. However, small-scale miners in Zambia who also process gemstones are faced with significant challenges due to a lack of technical skills, limited access to training opportunities, and unaffordability of processing equipment and machinery. The strengthening the financial, technical and organizational capacities of small miners' cooperatives such as AZWIM is one way of addressing these challenges. CEEC can be engaged in this capacity building with its Empowerment Fund used with lending periods and amounts tailored to the specific needs of gemstone miners.

(b) Project Objective

With the provision of technical and financial assistance by JICA and CEEC, small-scale miners' financial and technical capacities are strengthened, leading to an increase in their incomes and employment.

(c) Project Duration

Two years

(d) Implementing Agencies and Partners

Implementing Agency: CEEC

Partners: AZWIM or other cooperatives can partner with the Project for organizing small-scale miners and conducting collective actions. BDS providers can be contracted by JICA for the capacity building of cooperatives and small-scale miners.

(e) Project Activities

(i) Development of a Road Map based on a Diagnosis

Firstly, a diagnosis needs to be conducted to understand the current state of the financial, technical and organizational capacities of the small-scale miners and processors. Market research also needs to be carried out to determine the type of the products that should be produced by these miners and how such products should be promoted to the potential markets. Based on the collected information, a goal as well as a road map for achieving the goal will be developed. CEEC's staff will be involved in these activities so that their capacities for conducting sector diagnosis, collecting market information, evaluating feasibility and establishing a road map will be strengthened.

(ii) Capacity Development

Based on the road map, training will be designed and implemented in which essential technical and business knowledge will be provided to miners. When collective actions would be required for achieving the goal, miners' groups' organizational capacity will also be strengthened. CEEC staff as well as BDS providers can be mobilized in the training through which their capacity as trainers will be strengthened.

(iii) Provision of Loans with a Monitoring System

It is highly likely that the road map will define the necessity of the procurement of machinery and equipment for processing gemstone. To this end, CEEC Empowerment Fund can be utilized. The amounts and conditions for the loans adapted to the needs and repayment capacity of the miners will be determined. A loan monitoring system including continuous advisory services will also be developed to ensure the steady growth of the business, which enables the proper repayment of the loans.

(f) Risks

The cohesion level of cooperatives, which is key to the successful implementation of the project, is unknown at this time.

(7) Assistance in the Development of a Steel and Metal Processing Cluster through Strengthening the Zambia Steel and Metal Processing Federation (ZSMPF)

(a) Background

The growth of steel industry has a large economic and employment multiplier effects on many industries, including other manufacturing sub-sectors. Promoting the development of a sound, quality-oriented and environmental-friendly steel and metal processing industry will certainly contribute to the value addition in the manufacturing industry, which meets the objectives set out in 8NDP.

The development of Kafue MFEZ, a steel and metal processing cluster, has become a common agenda between the public and private sectors for the promotion of the manufacturing industry in Zambia. The government has already allocated approximately 1,800 ha of land for Kafue MFEZ (the iron and steel economic zone) with a view to promoting the development of a cluster of MSMEs related to the steel and metal processing industry²³⁴. For the development of a sound manufacturing subsector, the role of an industry-specific organization involving actors from both private and public sectors as well as the government's strong commitment is indispensable. There is in fact an on-going private sector initiative to establish the ZSMPF in Kafue. The strengthening of the ZSMPF's organizational capacity and the developing of the capacity of relevant actors both in public and

²³⁴ Statutory Instrument No. 12 of 2020, Government of Zambia, February 7, 2020

private sectors with the cooperation by JICA will accelerate the development of a steel and metal processing cluster in Kafue MFEZ.

(b) Project Objective

The capacity of the ZSMPF is enhanced to accelerate the development of a steel and metal processing cluster in Kafue MFEZ.

(c) Project Duration

Three years

(d) Implementing Agency and Partners

Implementing Agency : MCTI

Partner: ZSMPF

(e) Project Activities

(i) Capacity Development of the ZSMPF's Organizational Mechanism

The vision, strategy and functions of the ZSMPF to be established are reviewed. Based on the initial assessment, a strategic plan for the ZSMPF is formulated, in which the organizational structure and the roles and responsibilities of the secretariat and members as well as major activities are defined. Advice and mentoring by the Japanese experts, particularly those of the former officers of the Japan Iron and Steel Federation (JISF), will complement the Zambian efforts.

(ii) Capacity Development of ZSMPF Secretariat and Staff/Engineers of ZSMPF Members

A needs survey for the capacity development of the ZSMPF secretariat and members is conducted. Based on the survey results, a short-term human resource development program is designed. Metallurgy, casting, hot rolling, automatic control, metal processing, energy saving, environmental control measures (CO2 reduction), occupational safety and health, Kaizen and industrial statistics are the examples of the technical fields in the training courses to be designed. Not only classroom lectures but also on-site training in member companies' premises in Kafue and other areas are designed and implemented. Collaboration with CEEC and BDS providers in Kafue area is sought for the provision of training, consulting and mentoring to the program participants. Based on the results of the implemented training and consultations, a medium-term strategic plan for human resource development which is to be implemented by ZSMPF is formulated and shared among the ZSMPF members.

(iii) Support to the Development of Kafue MFEZ

Under MCTI and ZSMPF's initiatives, Kafue MFEZ's existing development plan is reviewed through a PPP platform that includes relevant stakeholders from both the public and private sectors. Based on the review results, an action plan for the development of the Kafue MFEZ, i.e., the promotion of the steel and metal processing cluster in Kafue, will be formulated, which includes infrastructure development and promotional activities to attract potential investors and entrepreneurs that operate in Kafue MFEZ, with a special focus on MSMEs that can function as supporting industries in the cluster.

(f) Risks

The establishment of the ZSMPF, which is currently under discussion among stakeholders, is a prerequisite to project implementation. MCTI's commitment and active participation in the PPP platform to discuss the Kafue MFEZ and the steel and metal processing cluster development plan is also indispensable. Many relevant stakeholders in the public sector in Kafue area must also be involved in the discussion. Close communication and a good understanding by relevant stakeholders will be crucial to ensuring the effectiveness and sustainability of the project.

Annex 1 Organizations Interviewed by the Survey Team

Government bodies (ministries and statutory bodies)

1. Ministry of Commerce, Trade and Industry (MCTI)
2. Ministry of Small and Medium Enterprises Development (MSMED)
3. Ministry of Technology and Science (MoST)
4. Zambia Development Agency (ZDA)
5. Citizens Economic Empowerment Commission (CEEC, Headquarters and Chipata office)
6. Zambia Bureau of Standards (ZABS)
7. Zambia Compulsory Standards Agency (ZCSA)
8. Kaizen Institute of Zambia (KIZ)
9. Public Private Dialogue Forum (PPDF)

Industry associations

10. Zambia Association of Manufacturers (ZAM)
11. Kitwe Chamber of Commerce and Industry
12. Kabwe Chamber of Commerce and Industry
13. Chipata Chamber of Commerce and Industry
14. Livingstone Chamber of Commerce and Industry
15. Poultry Association of Zambia
16. Small-scale Industries Association of Zambia
17. Dairy Association of Zambia
18. Truck Association of Zambia

Companies, cooperatives and NGOs

Food-processing

19. Wuchi Wami
20. Mount Meru Millers Ltd.
21. Metmin Ltd.
22. Invesco Ltd.
23. Welmar Industries Zambia
24. Olives Only
25. Glance Milling
26. Java Foods
27. COMACO Chipata
28. Good Nature Agro
29. Nkamu Agro Marketing
30. Change Zambia Internal
31. Tradeyork Zambia
32. Nalishiba Trading
33. Chonde Women
34. Big Tree Beverages

Wood and wood-processing

35. Sikale Wood Manufacturing
36. Kezy Sofa Center
37. TimberChase Zambia
38. Kitwe Wood and Log Industries
39. Nakadoli Multi-purpose Furniture Cooperative
40. Wood Processing Ltd.
41. Unity Packages Ltd.
42. Wood-related Handcraft Shop
43. Frontyard Furnitures
44. Small-scale wood-processors at Buseko Market
45. Zamwood Furnishers
46. Kudu Crafts

Leather and leather products

47. Copperbelt Shoes Ltd.
48. Pan African Leather Ltd.
49. Tenth Generation Handicraft
50. Zambeef

Textile

51. Gillys Trend Enterprise
52. Caminera Enterprises
53. Sakiza Spinning Ltd.
54. Gloria Knitting Company
55. Martha's textile workshop
56. WayaWaya

Metals and non-metallic Minerals

57. United Gypsums
58. Sable Zinc.
59. Block making
60. Nitminth Grinds
61. Block Selling

Engineering

62. Toyota Zambia (CFAO)
63. Sonar International
64. TCH E-Waste
65. Good Time Steel
66. CFAO Kitwe
67. Non-ferrous Metals Works
68. Renova Enterprises
69. Solid Tech Systems
70. Afritank
71. Chipata Welders Workshop
72. Scrap collection Individual Entrepreneur in Chipata
73. Golph Garage
74. Gotoma Enterprises
75. Dragon Roofing Sheets
76. Work Tech
77. CAMCO
78. Uranus Investment Ltd.
79. ZAMEFA
80. United Mining and Chemical Industries Ltd. (UMCIL)
81. Kasale Engineering
82. Honda Zambia
83. Hitachi Construction Machineries Zambia Ltd.
84. King's Workshop
85. Benson's Metal Fabricator

Pharmaceuticals

86. International Drug Company
87. Pharmanova

TEVETA Institutions

88. Kitwe Vocational Training Center (KVTC)
89. Northern Technical College (NORTEC)
90. Chipata Trades Training Institute (CTTI)
91. Industrial Training Center (ITC)

Business Development Providers (BDS)

92. Business Development Services Providers Association of Zambia
93. Agova
94. Bongo Hive
95. Kudu Consulting

Development partners and project contractors (consultants)

96. African Development Bank (AfDB)
97. United Nations Industrial Development Organization (UNIDO)
98. United Nations Development Programme (UNDP)
99. GIZ
100. European Union Zambia Office

Others

101. LS MFEZ Ltd.

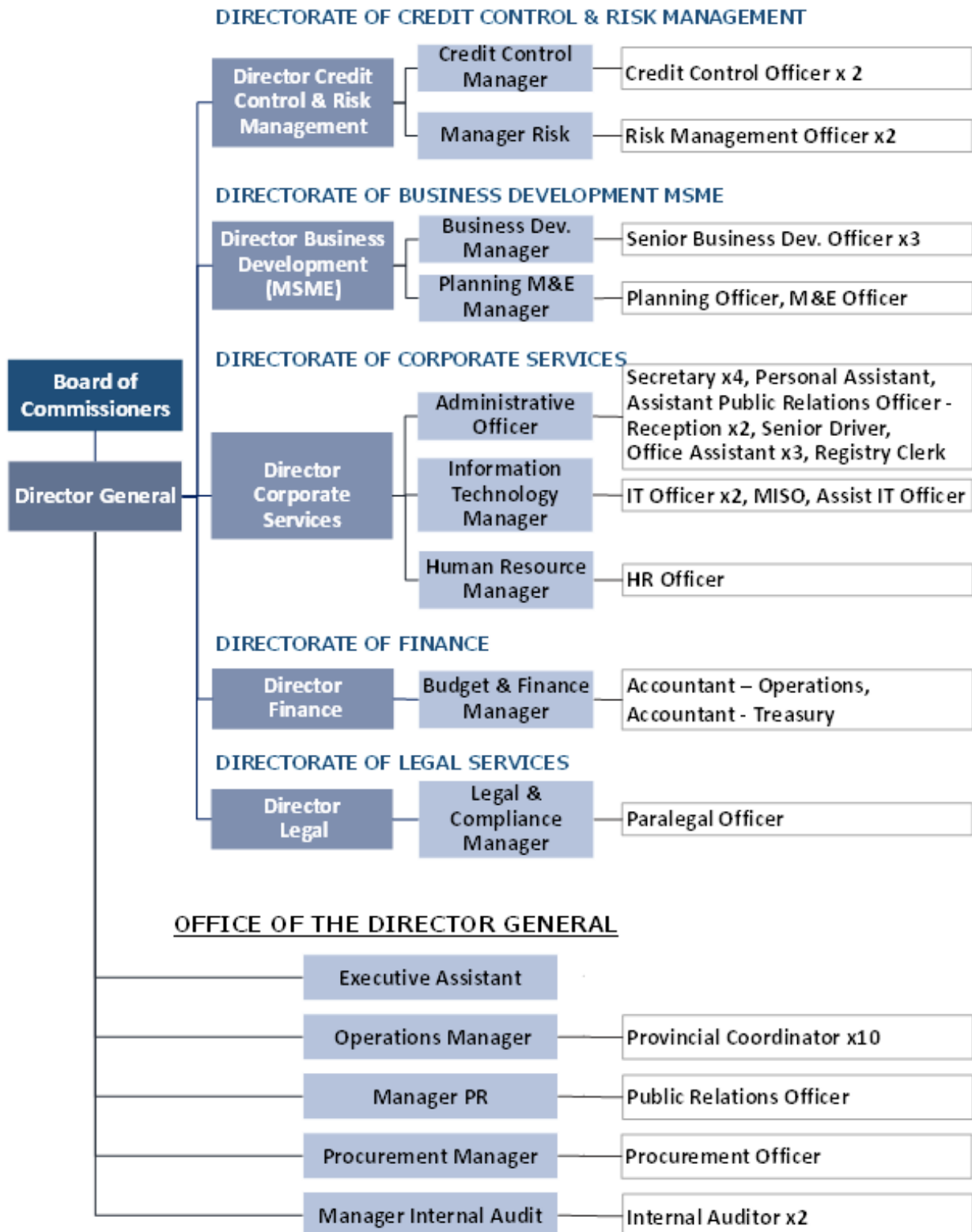
102. Standard Sales (logistics)

103. Customs office at Malawi Border

104. Trade King Homecare Ltd. (in LS MFEZ)

Annex 2 CEEC Organizational Chart

DIRECTOR GENERAL & HEADS OF DEPARTMENT



Annex 3 Donor Projects Related to the Promotion of the Manufacturing Sector in Zambia

Donor	Period	Counterpart	Project title	Cost	Project overview	Target sector
World Bank	2017-2024	MCTI	Zambia Agribusiness and Trade Project (ZATP) ²³⁵	USD 170 M	<ul style="list-style-type: none"> • The project aims to develop market linkages in agribusiness and strengthen the regulatory and institutional framework for agribusiness to diversify Zambia’s sources of inclusive growth. <ul style="list-style-type: none"> ➤ Project interventions have a particular emphasis on improving the ability of emerging farmers and agribusiness MSMEs to sustainably and commercially link into larger markets by structuring support around offtake opportunities that the private sector themselves identify as high potential. • The Project has two components: <ul style="list-style-type: none"> ➤ 1. Market Linkages in agribusiness: enable larger buyers to purchase from Zambian firms and farmers at the quality, quantity, and consistency they need. ➤ 2. Strengthening the regulatory and institutional framework for agribusiness and trade • (a) 101,136 beneficiaries supported so far directly; (b) US\$7.09 million of private capital mobilized; (c) 48 percent of project beneficiaries are women; (d) 57 percent of POs have been able to meet their commercialization agreements with anchor buyers; (e) 3,350 full time equivalent “new jobs created” and indirect or direct jobs supported estimated at 20,000; (f) firms and farmers demonstrated a nearly 50 percent year-on-year increase in average gross sales; (g) demonstrated ‘build back better’ and post COVID resilience model of private sector led growth in Zambia. • Phase 2 is planned in 2023-2028, which retains core ZATP concepts related to BDS and provision of financing to agribusinesses. • Access to finance is limited for agribusiness firms due to the lack of adequate formal financing options, insufficient sector-specific products, high cost and collateral requirements, and inappropriate risk assessment frameworks. 	Agribusiness
World Bank	2023-2028	MCTI	Zambia Agribusiness and Trade Project-II (ZATP-II) ²³⁶	USD 170 M	<ul style="list-style-type: none"> • The project aims to increase access to markets and finance and promote firm growth in Zambia’s Agribusiness sector. The project comprises the following three components. <ul style="list-style-type: none"> ➤ (1) Support Access to Markets and Finance (USD102 million) ➤ (2) Promote Trade and Agribusiness Competitiveness (USD 54 million) ➤ (3) Project Management (USD 14 million) • The first component supports the capacity building of firms and producer organizations (POs) within value chains as well as fostering linkages. It addresses key constraints related to limited access to finance, inadequate integration, weak export orientation, and climate resilience of value chains. “Market Connect” (USD 20 million) is the provision of BDS to viable agribusiness firms and POs. “Productive Alliance” 	Agribusiness

²³⁵ World Bank (2016) “Project Appraisal Document for the Zambia Agribusiness and Trade Project (ZATP)”

²³⁶ World Bank (2023) “Project Appraisal Document for the Zambia Agribusiness and Trade Project-II (ZATP-II)”

					<p>(USD 52 million) is the matching grants to POs (60% of investments) based on business plans. “Line of Credit” (USD 30 million) is for agribusinesses.</p> <ul style="list-style-type: none"> • The second component’s objective is to enable the key stakeholders in Zambia’s agribusiness sector and those benefitting from component 1 to take advantage of improved business enabling environment, trade facilitation, and opportunities emerging from AfCFTA. • Identifying POs for matching grant is challenging due to their weak financing capacity to co-finance the investment. • A lot of efforts would be needed to uplift the capacities of Tier 2 POs. 	
AfDB	2016-2024	Ministry of Agriculture	Cashew Infrastructure Development Project ²³⁷	USD 55.4 M	<ul style="list-style-type: none"> • The project is a stand-alone investment aiming at rejuvenating the cashew industry and enhancement of economic development in Western Province of Zambia. • The Project has 2 main components: <ul style="list-style-type: none"> ➤ (1) Support to Cashew Value Chain (USD 42 million) with 3 sub-components: (i) irrigation infrastructure for cashew nurseries and clone gardens, (ii) cashew plantation rejuvenation and establishment, and (iii) infrastructure for cashew-processing and marketing; ➤ (2) Capacity Building (USD 7 million) with 3 sub-components: (i) training, (ii) technical support, and (iii) matching grant (a total of USD 2 million grants were provided to a total of 12 existing processors) • 6.3 million seedlings were delivered (for 70,375 Ha), which benefitted a total of 59,433 local farmers. • In addition to the establishment/rehabilitation of the infrastructure for cashew farms and provision of cashew seedlings, the government is currently looking for private sector players that invest in a new US\$5 million cashew nut processing facility in the country’s capital Lusaka. • The technical capacities of the processors need to be developed so that they can properly use processing machines procured through the matching grant provided by the project. 	Agriculture
AfDB	2014-2022	Ministry of Education, Science, Vocational Training and Early Education	Support to Science and Technology Education Project (SSTEP) ²³⁸	USD 26 M	<ul style="list-style-type: none"> • SSTEP Project aims to help improve the quality and relevance of skills development levels in Zambia for job creation and youth employability. • The expected outcomes are: (a) improved access to Science and Technology in Technical, Entrepreneurial, Vocational Education and Training (TEVET) and Higher Education (HE); (b) improved quality and relevance of teaching and learning in target institutions; (c) improved quality and relevance of science and technology and entrepreneurship. • The followings are project main components: <ul style="list-style-type: none"> ➤ (1) improve access to Science and Technology Education (STE) through rehabilitation and renovation of facilities including ICT in 5 TEVET institutions ➤ (2) improve quality and relevance of TEVET and HE through training lecturers, reviewing curriculum and procuring equipment and learning materials 	All sectors

²³⁷ AfDB (2015) “Cashew Infrastructure Development Project (CIDP)”

²³⁸ AfDB (2013) “Appraisal Report for Support to Science and Technology Education Project (SSTEP)”

					<ul style="list-style-type: none"> ➤ (3) enhance work-based technical and entrepreneurship skills through the provision of skills and entrepreneurship training for out-of-school youths (approximately 4,000). 	
UNIDO(FAO)	2023-2028	N/A	Agrifood System Transformation Accelerator (ASTA) - Soybean Value Chain Development in Zambia ²³⁹	USD 19.9M	<ul style="list-style-type: none"> • Agrifood System Transformation Accelerator (ASTA) is a global program co-led by UNIDO and FAO. The main support provided by the program is blended finance (equity and loans) aimed at de-risking and attracting private sector investment into the agriculture sector. <ul style="list-style-type: none"> ➤ In Zambia, the program focuses on upgrading and scaling up of the soybean value chain in Central Province and Eastern Province (Central Province has the largest area under soybean cultivation at 322 million hectares followed by the Eastern Province at 229 million hectares). • The program provides cooperatives and processors with processing machines as well as training on skills required for operating processing machines. <ul style="list-style-type: none"> ➤ As a pilot project, the program provided training to several cooperative leaders to impart skills required for utilizing processing machines such as scheduling of threshing operations, collecting revenues, financing, monitoring expenses and record keeping. • The lack of technical capacity of processors to manage and operate a processing plant is a huge barrier to developing the agro-processing sector. <ul style="list-style-type: none"> ➤ The lack of access to affordable initial capital outlay is also challenging for processors. 	Agriculture
UNIDO	2021-2025	MoTS, TEVETA	The Project for Promoting Youth Employment through Construction Equipment Operating Skills Training ²⁴⁰	USD 4.4 M	<ul style="list-style-type: none"> • Funded by the government of Japan, the project aims to professionally qualify Zambian youths to fulfil the human resource demands for skilled construction equipment operators in the construction and mining sectors. <ul style="list-style-type: none"> ➤ The UNIDO’s needs assessment found that there was a high demand for heavy equipment operators, with very few of those currently in the job having received proper training. • The project i) prepares the training curriculum that meet the demands of mining and construction industries, ii) upgrades the infrastructure and equipment of the Kitwe Vocational Training Center (KVTC) and train KVTC trainers, and iii) implements the training for youth at KVTC and supports them in finding a job. <ul style="list-style-type: none"> ➤ Approximately 270 students are planned to be trained. • Hitachi Construction Machinery Zambia contributed to the preparation of the curriculum and training of trainers (ToT) as well as the provision of modern equipment, totaling USD 0.43 million. • Heavy equipment operator training curricula was developed. 	Construction, mining
UNIDO (SIDA and Volvo)	2019-2023	MoTS	Zambian Industrial Training Academy (ZAMITA) Phase 2 ²⁴¹	USD 4.1 M	<ul style="list-style-type: none"> • The project aims to boost the capacity of a major Vocational Training Centre (VTC), the Northern Technical College (NORTEC), to decrease the skills shortage in the transport sector and empower youth in finding employment. 	Transportation, construction, mining

²³⁹ <https://www.times.co.zm/?p=127614>

²⁴⁰ UNIDO (2022) “The Project for Promoting Youth Employment through Construction Equipment Operating Skills Training”

²⁴¹ ZAMITA (2023) “Project Progress Report”

					<ul style="list-style-type: none"> • The project is aimed at i) developing a competency-based qualification framework and modern curriculum, ii) establishing a regional center of excellence by improving NORTEC’s institutional capacity, and iii) providing the training and career service to students. • Volvo’s truck division contributes, by technology transfer, updating the curriculum, supplying the necessary infrastructure and training of the NORTEC staff. • A competency-based qualification framework and modern curriculum related to the transport and heavy equipment sector were established. • Approximately 450 students are planned to be trained. • Technology transfers from NORTEC to other VTCs in Zambia need to be made so that the impact of the project activities is amplified to make a systematic change in the target sector. 	
UNDP	N/A	MCTI	Growing Inclusive Business ²⁴²	N/A	<ul style="list-style-type: none"> • This program is aimed at helping people (especially youth and women) living in peri urban and urban areas of Zambia, through the provision of technical assistance, the injection of risk capital to MSMEs as well as the creation of innovation and business incubation hubs. • The project has 3 main focus areas: <ul style="list-style-type: none"> ➤ (1) Design the national industrial policy and the 7th National Development Plan ➤ (2) Encourage innovation to discover new solutions for industrialization and value addition ➤ (3) Build capacity and nurture talent and institutions (For instance, the project organized trade missions for SMEs to market their products, as well as high-level policy dialogues bringing together industrial players, policymakers and beneficiaries). • The project also conducted monthly innovation dialogues connecting innovators with major industrial players, provided mobile and static testing and certifying equipment to address delays in product certification, and supported a satellite laboratory system in Eastern province for groundnut processing. 	All sectors

²⁴² <https://www.undp.org/zambia/projects/growing-inclusive-business>

UNDP (EU)	2016-2018	Ministry of Mines and Minerals Development	Development Minerals Programme ²⁴³	Euro 13.1 M	<ul style="list-style-type: none"> The program is aimed at supporting sustainable and inclusive development in the industrial minerals, construction materials, dimension stones and semi- precious stones sectors in six countries including Zambia through capacity development of key stakeholders such as regulatory agencies and local governments; private stakeholders including small-scale mining enterprises, construction companies, mining and quarrying associations; as well as training centers, universities, civil society organizations and community groups Training was provided in the following thematic areas of importance to the sector: 1) mine and quarry management; 2) environment, health and safety; 3) entrepreneurship skills; 4) market analysis and investment promotion; 5) geo-data and maps design; 6) community relations and addressing grievances. The biggest challenge in the sector is high informality which brings about issues such as improper occupational health and safety measures and environment management among small-scale mining enterprises. 	Construction, mining
USAID	2022-2027	N/A	Business Enabling Project ²⁴⁴	USD 14 M	<ul style="list-style-type: none"> The aim of the project is to catalyze gender equality and inclusive private sector investment and trade in rural areas by strengthening the Zambian government. <ul style="list-style-type: none"> In order to achieve the aim, the project selects civil society organizations to improve and streamline policies and processes for economically viable and gender-balanced rural enterprises. The target sectors are agriculture, eco-tourism, energy and trade. <ul style="list-style-type: none"> The project has two goals: <ol style="list-style-type: none"> (1) Improve processes and policies that catalyze gender-equitable private investment in the target sectors; and (2) Strengthen decision-making for the Zambian government in policy implementation and formulation through linkages with strengthened civil society organizations and the private sector where women’s interests are equally represented. Zambia’s agriculture policy is unbalanced, favoring maize production. This is a disadvantage to the production of other crops. Other challenges include poor financing for research and development, low mechanization, and lack of utilization of technologies for increasing yields. As of 2022, the project submitted common principles for agriculture sector reform to the Ministry of Agriculture. 	Agriculture, eco-tourism, energy, trade

²⁴³ <https://africanguarantee fund.com/french/development-minerals-driving-infrastructure-construction-and-housing-sectors-in-zambia-through-inclusive-financing/>

²⁴⁴ USAID (2023) “ZAMBIA ECONOMIC DEVELOPMENT FACT SHEET”

USAID	2020-2025	N/A	Enterprise Development and Growth Enhanced ²⁴⁵	USD 14.5 M	<ul style="list-style-type: none"> The Enterprise Development and Growth Enhanced (EDGE) project aims to increase profitability for agricultural small-and-medium sized enterprises (SMEs) in Zambia (Lusaka, Central, and Eastern provinces) by supporting their competitiveness (management, marketing, networking, etc.) and access to finance. <ul style="list-style-type: none"> EDGE also targets innovative financial service providers to develop new products, build capacity to increase agricultural lending, and strengthen their understanding of SMEs. Six priority value chains were selected: poultry, aquaculture, horticulture (annual fruit and vegetables), groundnuts, honey, and animal feed (including soy, sunflower, and maize value chains). EDGE identified 390 SMEs to join the program. Over 20 financial service providers, including seven banks and four microfinance institutions, were identified as possible partners. About six SMEs have been supported to submit proposals for financing from the Entrepreneur Zambia Challenge Fund. EDGE has also worked with the U.S. International Development Finance Corporation (DFC) and Absa Bank Zambia to finalize a new loan guarantee that reduces the risk of finance service providers that lend to SMEs in the agriculture sector. 	Agriculture
USAID	2012-2023	N/A	Development Finance Cooperation (DFC) ²⁴⁶	USD 93 M (guarantee)	<ul style="list-style-type: none"> To increase access to financing for individuals and businesses that may otherwise struggle to qualify, DFC provides loan guarantees to three partner financial institutions: Zambia National Commercial Bank (ZANACO), Standard Chartered Bank, and Madison Financial Services Company. The guarantee backs 50 percent of the loan up to a total of USD 8 million, specifically targeting the agriculture, energy and power sectors. The total loan amount to be guaranteed for each partner financial institution is: <ul style="list-style-type: none"> (1) ZANACO: USD 25 million (mainly in agriculture) (2) Standard Chartered Bank: USD 60 million (for ZESCO, a state-owned power company) Madison Finance Company: USD 8 million (for farmers to purchase renewable energy technologies) The utilization rate is low at only 6.6 percent owing primarily to high interest rates. 	Agriculture
Foreign, Commonwealth & Development Office (FCDO)	2020-2027	N/A	Private Enterprise Programme Zambia (PEPZ) Phase II ²⁴⁷	GBP 85 M	<ul style="list-style-type: none"> PEPZ 2 aims to spur access to finance and investment for Zambian SME by creating more effective routes and mechanisms to deploy UK, international, and Zambian capital. PEPZ 2 focuses on high potential growth sectors– initially the focus was on agriculture, tourism, and supply chain services for the mining sector but the scope was expand into other high-potential sectors such as manufacturing, technology services. The implementing partner is Prospero Zambia, which was established in 2014 as a special purpose vehicle to implement SME investment activities under the PEPZ Phase I. Prospero facilitated investment of £13,000,000 into businesses it supported. 	Agriculture, tourism, mining

²⁴⁵ USAID (2020) “Zambia Enterprise Development and Growth Enhanced (EDGE) Activity PROGRESS REPORT”

²⁴⁶ <https://www.usaid.gov/zambia/speeches/jun-16-2022-usaid-launches-dfcabsa-loan-guaranty-project>

²⁴⁷ FCDO (2022) “Phase 2 annual review (May 2022)”

					<ul style="list-style-type: none"> Prospero has two debt facilities: Prospero Debt Facility (PDF) managed by Business Partners International (BPI) and the International Climate Finance Facility (ICF) disbursed through the Zambia Industrial Commercial Bank (ZICB). By the end of the 2021/22 financial year, from the two facilities, Prospero had invested £1,011,000 to over 50 SMEs which had limited access to finance required for them to boost their business to the next growth stage due to commercial banks' high lending rates and unfavorable terms. 	
FCDO	2013-2022	N/A	Africa Division funding to the Africa Agriculture Development Company (AgDevCo) ²⁴⁸	GBP 152 M	<ul style="list-style-type: none"> AgDevCo is an impact investor in nine African countries (Mozambique, Ghana, Malawi, Zambia, Tanzania, Uganda, Rwanda, Sierra Leone, Kenya) with the aim of contributing to the transformation of African agriculture from subsistence farming to a modern, commercial sector. <ul style="list-style-type: none"> AgDevCo has flexible financial instruments offering debt and/or equity investment alongside technical assistance to build profitable agri-businesses. <ul style="list-style-type: none"> In Zambia, AgDevCo committed investment of USD 11.7 million to 4 companies. Through investment as well as hands-on supports to Saise (potato seed producer), one of AgDevCo's portfolio companies, AgDevCo established the local potato value chain in Northern Zambia which totally relied on imported products.²⁴⁹ In all the nine target countries, cumulative value of investment reached USD 202.5 million as of December 2021. 76% of agribusinesses within AgDevCo's investment portfolio increased EBITDA. 	Agriculture
GIZ	2016-2025	Ministry of Agriculture	Promotion of agricultural finance for agri-based enterprises in rural areas ²⁵⁰	EUR 13.7 M	<ul style="list-style-type: none"> In nine African countries (Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Malawi, Mali, Nigeria, Togo, Zambia), the project aims to provide financial services to agricultural and agri-based enterprises in rural areas that are tailored to their business models. The project also provides training to enterprises in the agriculture sector. It helps these enterprises acquire business management and financial skills. The participating financial institutions (PFIs) in Zambia are AB Bank, ZANACO, Agora Microfinance, Madison Finance, VisionFund, National Service and Credit Bank, and some service and credit cooperatives. In Zambia, 6,500 farmers benefitted 10,000 loans amounting to EUR 5.6 million. Training on financial literacy and management was provided to 18,000 farmers. In all the countries, more than 23,500 small farmers and agri-based rural enterprises (as at 2020) have taken advantage of financial services tailored to their needs and provided by PFIs. Over 29,000 farm managers have improved their business management skills. High-interest rates and lack of collateral as well as limited financial literacy hinder smallholders from borrowing money from financial institutions. The annual interest rate ranges from 30% to as high as 90%, while short-term loans with shorter repayment periods range from 5% to 10% per month. 	Agriculture

²⁴⁸ FCDO (2022) "Programme Completion Review"

²⁴⁹ FCDO (2019) "Case study of the emerging transformational impact of AgDevCo's investment in Saise Farming Enterprises Limited"

²⁵⁰ <https://www.giz.de/en/worldwide/127032.html>

Finland	2018-2023	Ministry of Small and Medium Enterprise Development (MSMED)	Accelerated Growth For SMEs in Zambia (AGS) ²⁵¹	EUR 9 M	<ul style="list-style-type: none"> The project is aimed at strengthening the MSME sector by improving entrepreneurs' business competitiveness, with the support ranging from determining market feasibilities to providing commodity funding for accelerating business growth. The project has 4 focuses: 1) establishing a better business environment in Zambia through revising the existing MSME Development Policy and strengthening BDS capacities; 2) building MSME's readiness for growth through providing training, mentoring and coaching; 3) accelerating MSME's business through various matchmaking activities such as trade missions to Finland and neighboring countries; and 4) identifying new business opportunities and new markets for MSMEs through providing consultancy services. A total of 369 enterprises were supported through training, mentoring, coaching and other activities. The average revenue growth of participating MEMEs was 240 %. The total number of new deals that the participating MEMEs closed with new clients after receiving supports from the project was 1,127. The expansion of AGS's target from small and medium enterprises to micro-enterprises was not successful; training provided by the program could not address the needs of micro-enterprises which are generally not growth-oriented. Given the limited resources of the program, it is more effective to focus on larger companies. 	Agriculture, Forestry, renewable energy, circular economy, mining, education and ICT
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²⁵¹ Finland (2023) "Enhancing Growth and Competitiveness of MSMEs in Zambia - Creating business opportunities through Finnish-Zambian cooperation and partnerships"