ZAMBIA DEVELOPMENT AGENCY

Sub-Sector Profile: Iron and Steel

Target Sector under the Industry Strategy: "The Hub of Manufacturing of Engineering Products in the Region"




June 2012

I. OVERVIEW

As a basic industry, the iron and steel sector of the country should efficiently supply finished steel products such as bars and angles used for construction materials, and also flat products used as raw materials for further value addition activities in manufacturing. Since independence, Zambia's economic and industrial structure has been heavily dependent on the extraction and export of copper. For many years the iron and steel sector in Zambia remained undeveloped, and only a small number of foundries supplying mill balls[1], valves and spare parts to the then Zambian Consolidated Copper Mines (ZCCM) existed. These were concentrated mostly on the Copperbelt Province.

However, in the past five years, this sector in Zambia exhibited remarkable progress and development. This is due to the rapidly growing construction and mining industries both in the domestic and regional markets, resulting in increasing demand for various steel products. Many local and foreign investors have set up their manufacturing bases of steel products here in Zambia. A number of corrugated roofing sheet manufacturers have emerged. Several steel fabricators have expanded their businesses. Utilizing metal scrap as raw material, several steel makers producing such hot-rolled products as deformed bars were newly born and have been expanding their operations.

While the recent development of the steel sector in Zambia has been remarkable, there are many opportunities for more investment to catch sharply increasing demands in both the Zambian and the regional markets. The country constantly records trade deficit in the iron and steel products, and therefore; exports of the Zambian-made steel products are to be encouraged. It is required that Zambia increases its ranges of steel products and also increases its integration along the long production (supply) chain of the iron and steel sector.

The Government of Zambia has enacted policies to promote domestic value addition in the manufacturing sector, particularly of the iron and steel sector. The country's "Industry Strategy for Engineering Products: the Hub of Manufacturing of Engineering Products in the Region" formulated in April 2012 selected the iron and steel sector as a target sector for its further development.

With the growing market and supportive government policies, there are exciting investment opportunities in diversifying Zambian made steel products and integrating the production capacities along the long production (supply) chain of the iron and steel sector. Zambia is ready for your ventures in investment and export promotion in the iron and steel sector of the country.

II. RECENT DEVELOPMENT OF THE ZAMBIAN IRON AND STEEL SECTOR

Zambia has experienced dynamic development in steelmaking over the last five years. In 2008 ***Good Time Steel***, the first major steelmaking company in Zambia, set up by Chinese investors started its operation to supply hot-rolled round bars and deformed bars. ***Trade Kings***, a leading confectionery,

[1] "Mill ball" is a cast-iron product, which is used for crashing of copper ores in the copper mining industry.

beverages and detergents company, constructed the largest steel mill installed with the first electric-arc furnace for steelmaking in Zambia, called ***Universal Mining and Chemical Industries Limited (UMCIL)***, and commenced its operation in 2008. Using steel scrap available from the domestic market as raw material, they have been expanding production and exporting steel products to the regional markets. Until then, steel production was limited to mill balls and spare parts in the Copperbelt, serving mining companies, and almost all steel products were imported from South Africa while steel scrap was largely recycled back to South Africa.

A long time before scale-steelmaking started, downstream steel producers made a lot of investments to meet the growing demand of the construction sector. ***Safintra***, a leading galvanizing and cold roll-formers of steel products in east and southern Africa, came to Zambia in 2005 by acquiring a Zambian roofing company. Procuring galvanized and color coated steel sheets from its manufacturing base outside, it processes them into corrugated steel sheets for roofing to meet customers' demand in Lusaka and the Copperbelt. It is estimated that there are over 30 similar cold roll-forming makers of galvanized sheets in Zambia, and 8 of them with a similar size of operation as Safintra.

MM Integrated Steel Mills (MMI) from Tanzania went one step further. It set up a cold rolling mill followed by a continuous galvanizing line (CGL). Importing hot rolled coils from such countries as South Africa, Belgium and India, it has operated its cold rolling, continuous galvanizing and roll-forming facilities since 2011. The company supplies its corrugated steel sheets to the construction sector. For further value addition, it plans to introduce a tubing mill and a color coating line in its manufacturing lines. MMI currently relies on imported goods for all key materials and spare parts, including zinc ingot. Like other steel makers and steel fabrication companies, future operation depends on how much of the materials and spare parts can be domestically procured to reduce costs.

Among many growing sectors, transportation and agriculture sectors are noted in connection with steel fabrication. ***Agrofuel*** is a transportation company with a large fleet of trucks and trailers operating across borders. It acquired a division of the state engineering company and started making truck trailers since 2004. The expertise acquired in this process helps the company meet the requirements for constructing large steel structures for mining companies. ***Saro Agro*** is a farm machinery manufacturing and service company. Importing major, key components like engines and indicators, it is assembling all kinds of farm machines to meet the demands of all types of farmers. It provides maintenance and repair services for products sold through its channel.

Because of large copper mining activities in Zambia, cast iron makers were clustered in the Copperbelt. After the adoption of the economic liberalization policy in 1991, they faced severe competition from imported products from South Africa, China and India. The share of mill ball supply fell to a third of the total consumption at mines in 2011. For their survival, they are either upgrading the quality of products like forged mill balls or relying less on mill ball production by capturing new demand at mines and for other sectors. The leading company is ***SCAW***[2], producing a third of the domestic supply of mill balls.

[2] SCAW is the largest steel foundry and mill ball producer in Zambia, employing around 500 people. It was founded by Anglo American in 1960 to serve the mining company, was nationalized in the 70's and was privatized in mid- 90's. Current owner of the company is the private fund based in South Africa.

Domestic steel producers are estimated to have produced around 98,000 tons of finished steel products in 2011. The domestic steel production came to account for around 50% of the total apparent steel consumption of 192,000 tons in Zambia[3]. As is shown in the Table in Annex, 14,900 tons of long steel products were exported in 2010 from a negligible level in 2006, which kept imports of the same products lines from increasing substantially. Over the same period, however, imports of other lines of products increased substantially: from 44,500 tons to 56,300 tons for flat steel products; and from 13,700 tons to 23,200 tons for tube and pipes. These imports more than offset the trade surplus contributed by the emerged domestic manufacturers. Zambia is still in a substantial deficit position in steel products trade. In other words, further development of domestic steel producers can find huge business opportunities to increase volume and upgrade lines of their products. Although they have been growing fast, their lines of products are limited to long steel products and corrugated galvanized sheets, which still far from satisfy the needs of major contractors. There are neither hot rolled coils/sheets nor tube production facilities in Zambia[4].

As emerging steel makers expanded their production, it has been getting harder for them to find steel scrap at a reasonable price for steel makers. It is clear that steel scrap alone will not be able to sustain Zambian steelmaking, as its economy grows further. Envisaging this situation, UMCIL is planning to start iron making based on a Direct Reduced Iron (DRI) process, utilizing iron ores supplied by its own iron mines. There are many iron ore deposits in Zambia. Given the unique feature of landlocked country, Zambian iron ore mines have not developed so far. Similar types of DRI iron making will provide a good solution for the availability of iron to steelmaking in Zambia.

Company Profile-1: Universal Mining and Chemical Industries Ltd (UMCIL)

Universal Mining and Chemical Industries Ltd (UMCIL) in Kafue is the largest steel maker in Zambia. Its operations started in 2008; since then, it has been producing long steel products such as deformed bars and round bars. The company has a 30t electric-arc furnace, 3-strand billet continuous caster and 2 lines of hot rolling mills for long products. Utilizing steel scrap as a raw material, the company has a steel production capacity of 10,000 tonnes per month. UMCIL'S products have been certified by the South African Bureau of Standards (SABS) and have been exported to regional markets. For a long-term sustainability of the steelmaking operations, UMCIL is constructing an iron making plant with DRI technology. DRI will be produced using domestic iron reserves from the Sanje Hills located about 50 km west of Lusaka. The company has around 700 employees.

(Photo: Kafue Steel Plant, from UMCIL's website, retrieved in 2012)

[3] It should be noted that Zambia has had a large scale of indirect steel imports in such forms as steel fabricated structures, containers and vessels in the mining sector, construction and mining machineries, cars and trucks and electric appliances. It is roughly estimated that the import volume reaches to around 200,000 tons per year, which reduces the self-sufficiency rate to be around 25% in real term.

[4] In 2011, ***Technical Engineering Company (TEC) Limited***, a foreign direct investment by Lebanese investors, established a tubing and section mill in Lusaka, which imports hot-rolled coils to produce welded tubes and sections.

III. WHY INVEST IN THE ZAMBIAN IRON AND STEEL SECTOR?

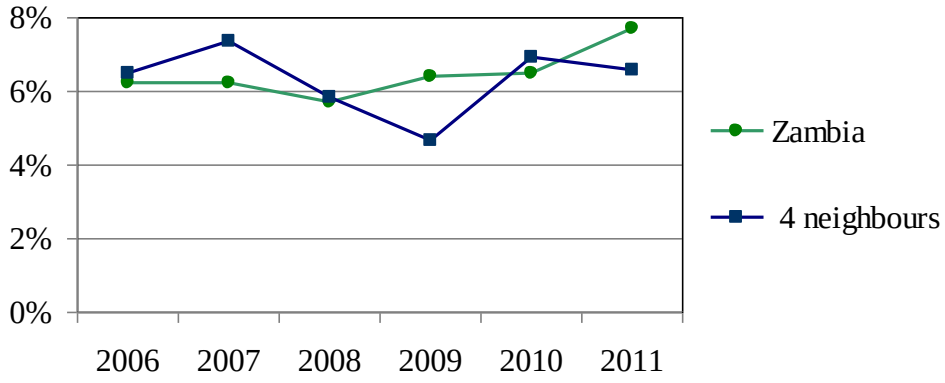
Six main reasons to invest in the Zambian Iron and Steel Sector are:

1. Growing domestic and regional demand for steel products;
2. Under-developed sector with a high growth potential;
3. Abundant resources of iron ore and coal;
4. Preferential market access to wide markets;
5. Favourable business environment; and
6. Attractive incentives.

Point 1. Growing domestic and regional demand for steel products

The steady population rise and the economic growth in Zambia and its surrounding countries have increased demand for steel products. Zambia has the population of around 13 million with GDP of $17 billion. From 2006 to 2011, Zambia's GDP recorded average annual growth of more than 6% and those of the neighboring countries also grew at similarly high rates. The combined population of six neighboring countries[5] (i.e. DRC, Malawi, Mozambique, Zimbabwe, Angola and Tanzania) is 184 million with the combined GDP of $137 billion. Zambia has an advantage of serving as an access point to this huge, growing market.

GDP Growth in Zambia and Selected Neighboring Countries (2006-2011)



Source: "Industry Strategy for Engineering Products", Ministry of Commerce, Trade and Industry (2012)

The construction and mining sectors are major consumers of the steel products. Assuming that per capita steel consumption will increase as per capita income increases, the volume of steel consumption for Zambia and the neighboring countries is forecast to increase over the next five years. As shown below, steel demand in Zambia is expected to increase from around 200,000 tonnes in 2011 to around 300,000 tonnes in 2016 at an average annual growth of 12%. In the regional market, the demand is estimated to increase from 1.6 million tonnes in 2011 to 2.2 million tonnes in 2016. The total market size including Zambia is expected to reach 2.5 million tonnes in 2016, which is over 8 times of the Zambian market.

[5] Here, Botswana and Namibia are not included since they have been in a customs union with South Africa since 1969.

Projected Steel Consumption in Zambia and the Region (Finished Steel Base)

	Total Consumption			Per Capita Consumption	
	2011 (1,000 tonnes)	**2016** (1,000 tonnes)	**% increase** (annual)	**2011** (kg/person)	**2016** (kg/person)
Zambia	**199**	**302**	**12.0%**	**14.7**	**19.2**
4 Neighbours*	917	1,154	4.7%	7.7	8.5
6 Neighbours**	1,644	2,195	6.0%	8.3	9.6
Total	**1,843**	**2,497**	**6.3%**	**9.3**	**10.9**

* DRC, Malawi, Mozambique, Zimbabwe
** 4 neighbours + Angola, Tanzania
Source: "Industry Strategy for Engineering Products," Ministry of Commerce, Trade and Industry (2012)

With the entrance of new steel producing companies and the production expansion by existing one, the iron and steel sector has rapidly grown in Zambia. Furthermore, export of steel products is estimated to have increased over eightfold from $2 million in 2006 to $17 million in 2010.

Company Profile 2: MM Integrated Steel Mills (MMI)

MM Integrated Steel Mills (MMI), wholly owned by MM Integrated Steel of Tanzania, started its operation in January 2011. MMI has an annual production capacity of 40,000 metric tons of cold-rolled, galvanized and corrugated steel sheets, and currently produces around 2,000 tons of steel products per month. Some of the galvanized sheets are exported to Malawi, DRC and Zimbabwe.

Major raw materials are hot-rolled coils that are currently being imported from countries, such as Belgium and South Africa. MMI also imports zinc ingot for its galvanizing operation. To expand its product line, MMI is implementing the construction of a steel tubing mill, which is expected to be in operation by the end of 2012. It employs over 300 people.

Point 2. Under-developed sector with a high growth potential

Despite the increasing demand for steel products, the range of steel products made in Zambia is still limited. Steel producers in Zambias only supply long steel products such as deformed and round bars, sections and angles, and corrugated sheets for roofing; this is far from satisfying the needs of major consumers, especially ones in the mining and construction sectors. There are no steel sheet production facilities in Zambia, so consumers and even steel makers themselves have to import finished and semi-finished flat steel products.

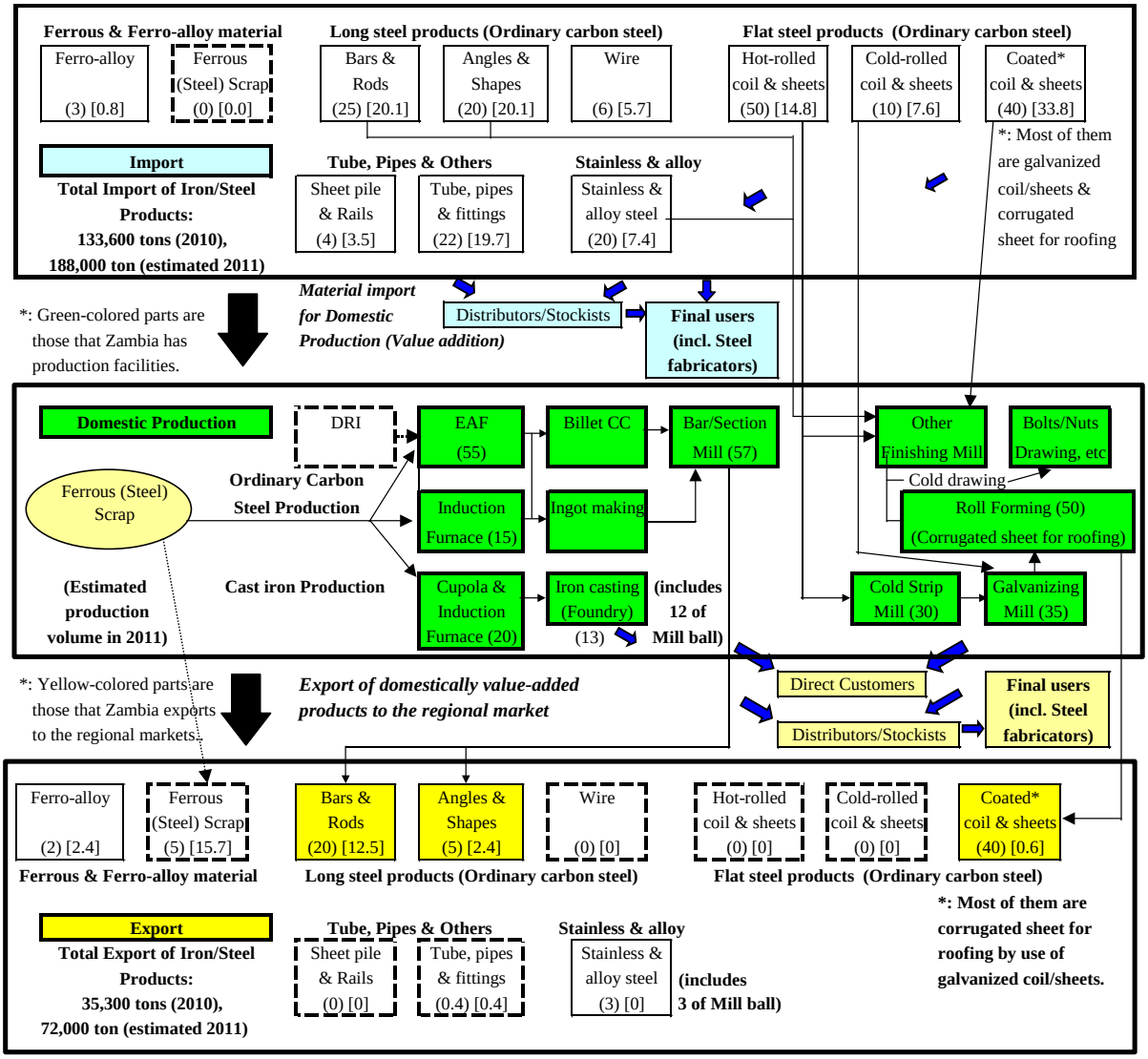
Zambia is still in a substantial deficit position in steel product trade. In other words, there are great business opportunities in the further development of domestic steel producers to increase volume and upgrade their product lines.

Company Profile 3: Safintra Zambia Limited

Safintra Zambia is a subsidiary of the SAFAL group that makes roofing sheets operation in eastern and southern Africa with its headquarters in Mauritius. Safintra is currently the biggest manufacturer of corrugated sheets in Zambia. Almost all the sheets produced are sold locally from its offices in Lusaka and Kitwe. Safintra sources galvanized coils from group companies in Africa, and employs around 100 people.

(Photos from Safintra Zambia's website, retrieved in 2012)

The Material Flow of Iron/Steel Products in Zambia (Figures in 1,000 tons, Year [2011], [2010])



Source: "Industry Strategy for Engineering Products", Ministry of Commerce, Trade and Industry (2012)

Company Profile 4: Agrofuel Investments Ltd

Incorporated in 1981, Agrofuel is a transportation company with a large fleet of trucks and trailers operating across borders. The company expanded its operation in 2004 after acquiring machinery from then Lusaka Engineering Company (LENCO) Limited. Then, it started manufacturing trailers, fuel tanks, truck bodies, water bowsers and sugar cane haulers, as well as various building accessories such as windows and door flames. Agrofuel produces around 25 trailers, 1,000 door flames, 500 window frames every month and sell them in the domestic markets. It consumes around 3,500 metric tons of steel annually. The company imports most of steel products such as plates and hot rolled and cold-rolled sheets as their raw materials used in production, mainly from South Africa. A limited volume of materials is sourced domestically.

Notes on soft infrastructure and environmental issue

In Zambia there are two major universities such as the University of Zambia (UNZA) and the Copperbelt University, which educate and supply engineers and technical staff for the manufacturing sectors. There are also several technical colleges that develop human resources with technical and vocational skills and knowledge. The Zambia Bureau of Standards (ZABS) under the Ministry of Commerce, Trade and Industry stipulates standards and regulations for manufacturing products, including steel.

While the iron and steel sector has been rapidly growing in Zambia, issues of energy saving and environmental protection have become very important. Zambia needs further discussion, planning, development and implementation of necessary technology as well as of those for transparent and effective regulatory framework on energy saving and environmental control measures in relation to the iron and steel production in order to develop a competitive and efficient iron and steel sector of the country. Contributions by foreign direct investment (FDIs) and technical assistance in these fields are expected and encouraged to increase.

Point 3. Undeveloped, but abundant reserve of iron ore and coal

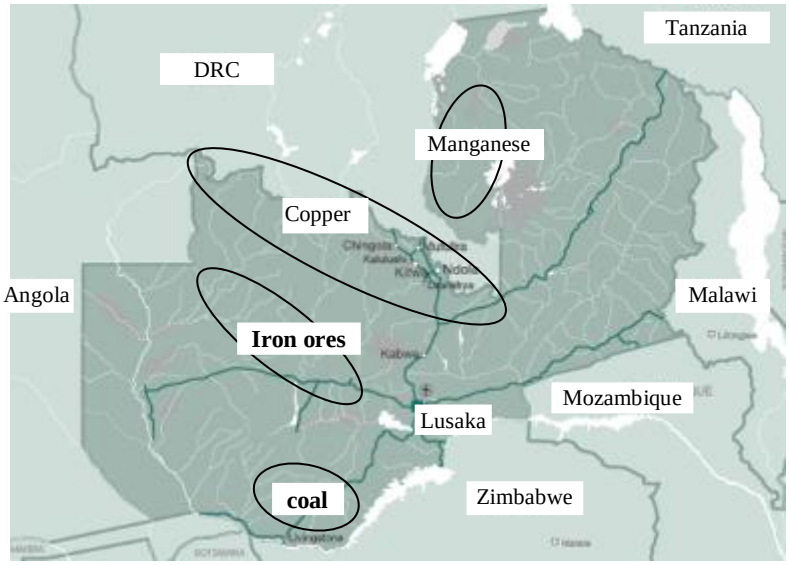
Currently steel scrap is the only source of raw material for steelmaking in Zambia. The volume of steel scrap domestically available is insufficient to sustain the increasing production of steelmaking in Zambia. As an alternative source of raw material, Zambia has huge reserves of iron ores, which can be used to produce steel products using the Direct Reduced Iron (DRI) technology.

The DRI technology is suited for a country like Zambia that has rich deposits of iron ores and coal. It enables iron making on a smaller scale without requiring a huge investment in a blast furnace. DRI is suitable for producing flat steel products that become intermediate materials for many different kinds of manufacturing such as metal fabrication, machine building and transport equipment manufacturing. When the feasibility of DRI production in Zambia becomes clearer, investment opportunities in the iron and steel sector in Zambia will enormously increase in all stages of the long production (supply) chains of the sector from upstream to downstream.

Iron ores and coal in Zambia

Iron Ores: In Zambia substantial resources of iron have been identified, occurring primarily as sedimentary ironstones in the lower-Katanga Mine Series, successions of central and western Zambia. Total resources of more than 900 Mt with iron content of more than 50% have been provisionally estimated, with some individual deposits up to 200 Mt in size.

Coal: Currently there are two coal mines in Zambia; Maamba Collieries Ltd (MCL) and Collum coal mines. MCL, located in Sinazongwe district, is the largest coal mine in Zambia with an estimated coal reserve of 65 million tonnes. Nava Bharat (Singapore) pvt Ltd acquired 65% equity stake of the mine in 2010, with the remaining 35% owned by the government through the Zambia Consolidated Copper Mines-Investment Holdings (ZCCM-IH). It produces around 360,000 metric tonnes/year of coal that is sold to copper smelters and other industries in Zambia with some exports to other neighboring countries. Collum coal mines also located in Sinazongwe district is a Chinese owned mine and has production capacity of around 120,000 metric tonnes per annum.

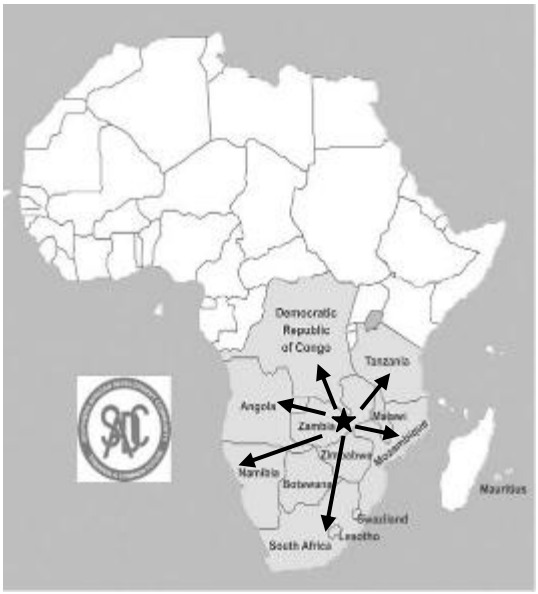


Point 4. Preferential Market Access to Wide Markets

Being a member of the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC), Zambia has an access to 25 national markets and enjoys benefits from their preferential tariff schemes. The combined market of COMESA and SADC is a population of 580 million people and with the GDP of US$ 870 billion.

Given the current Regional Integration agenda under both COMESA and SADC, and in particular the tripartite FTA between the two blocs and the East African Economic Community (EAC), it can be anticipated that intra-regional trade will be enhanced both through intra-industry as well as inter-industry trade. According to the African Union, the three Regional Economic Communities have an estimated combined population representing 57% of Africa's population and 58% of its GDP.

In addition, as a least developed country (LDC), Zambia enjoys preferential market access treatment for a large number of industrial product markets through the Generalized System of Preferences (GSP), the United States' African Growth and Opportunity Act (AGOA) and the EU's Everything But Arms (EBA) Initiatives. Furthermore, it has duty free quota and free market access to Canada, India, China, Japan and Australia.

COMESA	SADC
	

Total Population: 580 million* **Total GDP: US$ 870 billion***

* Including Zambia

Access to <u>25</u> national markets:

Angola, Botswana, Burundi, Comoros, Djibouti, DRC, Egypt, Eritrea, Ethiopia, Kenya, Lesotho, Libya, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, South Africa, Sudan, Swaziland, Tanzania, Uganda, and Zimbabwe.

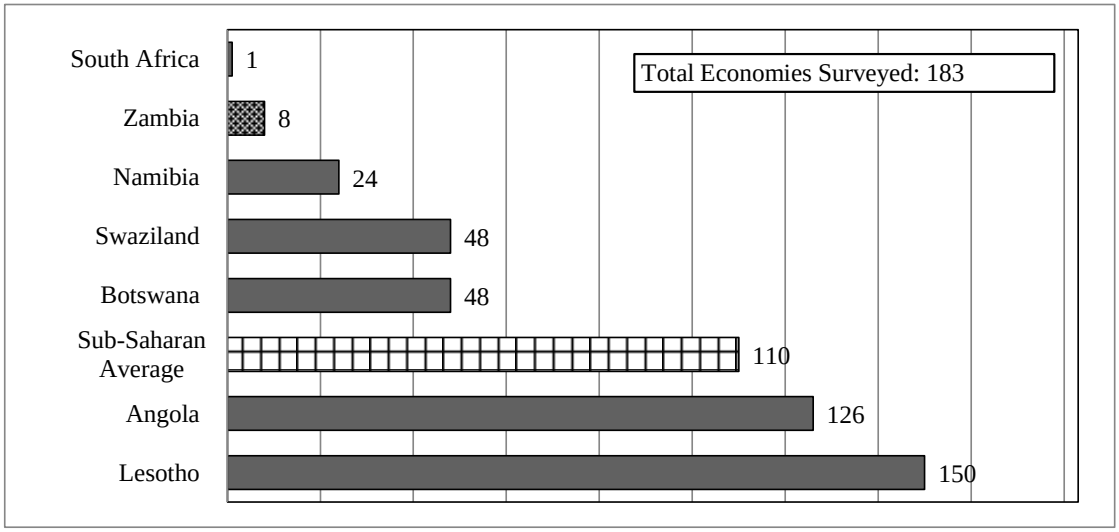
Point 5. Favourable Business Environment

(1) Access to finance

In the 2012 Doing Business Report, Zambia ranked the eighth among 183 economies on "the ease of getting credit." It scored 9 out of 10 on the strength of legal rights index, which checks the protection of rights of borrowers and lenders though collateral laws and protection of secured creditor's rights through bankruptcy laws. It also scored 5 out of 6 in the depth of credit information index, which checks scope and accessibility of credit information distributed by public credit registries and private credit bureaus.

In recent years, Zambia improved access to credit information by making it mandatory for banks and non-bank financial institutions registered with the Bank of Zambia to use credit reference reports and provide data to the credit bureau.

Ease of Getting Credit Raking



Source: Doing Business 2012, World Bank and International Finance Corporation

(2) Labour

Zambia offers competitive labour costs. The average monthly salaries are as follows; US$ 2,500 for management workers; US$ 1,400 for fresh graduates, US$ 1,000 for technical workers, US$ 200 for level graduates and US$ 150 for unskilled or manual labour.

(3) Power

At US$0.03–US$0.04 per kWh, Zambia has some of the lowest power tariffs in Africa. Its power tariffs fall below the typical price range of US$0.05–US$0.10 per kWh among developing countries.

(4) Water

The iron and steel sector requires steady water supply. Zambia has annual rainfall of 1,000mm and rich water resources both open and underground (30% of fresh water in SADC Region!). The renewable water resource per capita is estimated at about 8,700m^3 per year, well above the average for Sub-Saharan Africa (7,000 m^3 per capita/year) and the global average (8,210m^3 per capita/year). In Zambia the non-residential tariff is US$ 0.59 per m^3 and the residential tariff is US$ 0.48 per m^3.

Point 6. Attractive Incentives

The government has identified “Iron and Steel Sector” as one of the priority sectors among engineering products, and is providing necessary incentives and environment to ensure the growth of the sector. The following are some of the generous incentives that the Government provides to the iron and steel sector.

(1) ZDA Incentives

Investments in Zambia are regulated by the Zambia Development Agency Act No. 11 of 2006 (ZDA Act 2006). ZDA offers a wide range of incentives in the form of tax incentives, non-fiscal incentives, exemptions and concessions for companies. The Act provides for investment thresholds that investors have to meet to qualify for fiscal and non-fiscal incentives. There are five categories of investors who can be considered under the ZDA.

(a) **Investors who invest not less than US$ 10 million:** in an identified sector or product. This category of investors may apply for additional incentives other than those they might already qualify for under the ZDA.

(b) **Investors who invest not less than US$500,000 in the Multi Facility Economic Zones (MFEZ) and/ or in a sector or product considered as a priority sector or product**. This category of investors are entitled to the following special incentives, in addition to the general incentives:

- 0% tax rate on dividends for five years from year of first declaration of dividends;
- 0% tax on profit for 5 years from the first year profits are made; for years 6 to 8, only 50% of profits are taxable; and for 9& 10, only 75 % of profits are taxable;
- 0% import duty rate on raw materials, capital goods, machinery including trucks and specialized motor vehicles for five years, and
- Deferment of VAT on machinery and equipment including trucks and specialized motor vehicles.

(c) **Investors qualifying as micro or small enterprises under the ZDA Act**; aside from the applicable general incentives, the following additional benefits are provided:

- For an enterprise in an urban area the income shall be exempt from tax for the first three years;
- For an enterprise in a rural area the income shall be exempt from tax for the first five years.

(d) **Investors who invest less than $500,000 in a sector or product provided for as a priority sector or product**; these investors are only entitled to general incentives

(e) **Investors who invest any amount in a sector or product not considered a priority sector or product**; these investors are **only** entitled to general incentives provided under the various pieces of registration.

(2) General Incentives Applicable to the Iron and Steel Sector

(a) **Corporate tax:**

- Income earned by companies in the first year of listing on the Lusaka Stock exchange qualifies for a 2% discount. Companies with more than one third of their shareholding in the hands of Zambians qualify for a 7% discount.
- Corporation tax at 15% on income from non-traditional exports

(b) **Wear and Tear**:

- **Implements, machinery and plant** used for manufacturing quality for wear and tear allowance of 50% of the cost per year in the first two years.
- **Building** used for manufacturing qualify for wear and tear allowance of 10 % of cost in first year and 5% of the cost per year in subsequent years

(c) **Carry forward losses**: non-traditional exports- 5 years

(d) **Value Added Tax (VAT):**

- Relief for VAT registered enterprises on imports eligible capital goods (VAT deferment)
- Zero rate of export of taxable products;
- Relief of VAT on transfer of business as a going concern;
- Equal treatment of services for VAT-reserve VAT
- Cash accounting for specialized associations e.g. association of building and civil engineering contractors;
- VAT relief on input tax paid for purchases made by registered suppliers;
- Input tax claim for three months prior to VAT registration for businesses that have already commenced trading, and
- Reduction VAT rate for investors in tax free zones.

(e) **Capital allowance**

- Plant and machinery: 25%
- Non-commercial vehicles: 20%
- Industrial buildings: 5%
- Commercial building: 2%
- Improvement allowance under the ZDA Act: 100%
- Lease plant, machinery and implements: 50%

(f) **Initial allowance**: Initial allowance of 10% on capital expenditure incurred on the construction or **improvement** of an industrial building is deductible.

(g) **Foreign exchange losses** of a capital nature incurred on borrowings used for the building and construction of an **industrial** or commercial building are tax deductible.

(3) Tax

Tax	Rate	Explanation
Corporate tax	35%	General rate
	15%	On income from non-traditional exports
Personal income tax	0%	On income from zero (0) to K 800,000
	25%	On income from K800,001 to K 1,335,000
	30%	On income from K 1,335,001 to K 4,100,000
	35%	On income above K 4,100,000
VAT	16%	VAT is generally levied at 16%.

Tax	Rate	Explanation
Import duties	Varies (0-40%)	Import duties are charged on specific items and the duty varies between 0-40 %.
Withholding tax	15%	The following are charged a withholding tax of 15% • Interest, dividends, royalties, rent income and management and consultancy fees, • Payments to non-residents entertainers and sports persons; • Payment to non-resident contractors; and • Commission paid to non-employees

IV. INVESTMENT OPPORTUNITIES

The following segments have been identified as important missing links in supply chains of the iron and steel sector in Zambia. By filling in these missing gaps, the Zambian Government is expecting synergetic effects with a technological and human resources base and regional market penetration already established to some extent in other segments of the iron and steel sector.

(a) Production of DRI (Direct Reduced Iron)

As described earlier, Zambia has an abundance of iron ore and coal that are yet to be exploited. Thus there is great potential to produce iron and steel using DRI technology. When Zambia succeeds in producing DRI in an efficient manner, it will bring about a revolutionary impact to the economic and industrial development of Zambia. As the economy grows, it is a natural step to produce steel by utilizing scrap collected in domestic market. The neighboring countries, other than the ones with seaports and resources, which may attract blast furnace investments from foreign investors, will constantly face the similar problem, shortages in steel scrap. Therefore, if Zambia succeeds in establishing large capacities of DRI production, DRI will become a strategically important export item to the region.

(b) Integrated EAF (Electric-Arc Furnace) Steelmaking connected with DRI production

When Zambia succeeds in producing DRI in an efficient manner, integrated steelmaking using Electric Arc Furnace (EAF) and following downstream facilities becomes very feasible. Due to the nature of the landlocked country, Zambia constantly suffers from “high transportation cost,” even for importing steel products. Therefore, when the integrated production capacity of bulky and heavy products such as steel is established inside the landlocked country, high transportation cost can be converted into a “strength” against competitors from abroad for the country’s iron and steel sector.

(c) Finishing and fabrication of steel products (galvanizing, cold drawing, profiling and tubing)

Currently, there are not many companies in finishing of the steel products such as galvanizing, cold drawing, profiling and tubing. With the growing domestic and regional markets, investments in the value adding activities such as finishing of steel products will be expected to increase. The growing

domestic and regional markets will also provide good business opportunity for steel fabrication of such products as trailers, tanks and other steel fabricated products.

(d) Supporting industries for the iron and steel sectors

The iron and steel sector requires a wide range of sub-materials and supporting services. However, all the Zambian steel companies rely on imported goods for major sub-materials and spare parts, while they rely on their own internal resources for supporting services such as maintenance and cleaning. Refractory brick, lime, zinc ingot are the examples of necessary sub-materials. There are many opportunities for investments in producing sub-materials and spare parts as well as supporting services for the iron and steel sector in Zambia. These fields are where SMEs (Small- and Medium-scale Enterprises) can find opportunities, which is also expected to form an industrial cluster for supporting the sector.

Experience of Mr. Ashok Sood in Zambia

Managing Director, ClassEcon Roofing Africa Ltd

Mr. Ashok Sood has worked in Africa for more than twelve years, including seven years in Kenya and over five in Zambia. He has also visited many other African countries. He came to Zambia in January 2007 and led to establish Safintra Zambia as Director and Chief Operating Officer. He also spearheaded steel roofing standards-setting efforts in Zambia by sensitizing the stakeholders on the issue right from 2007 onwards and was duly invited by the Zambian Bureau of Standards (ZABS) to serve on the ZABS's Technical Committee which submitted a draft standards document on steel roofing in 2011. He has also been actively involved in many other forums and discussions on the development of the manufacturing sector in the country. In November 2011, he left Safintra to form ClassEcon Roofing Africa Ltd, a business venture owned by investors from the UK.

Based on his personal experiences, the following is what Mr. Ashok described Zambia, in comparison to other African countries he has visited and worked in.

"Zambia is the only African country in Southern Africa, which has the right mixture of a stable socio-political climate, positive economic growth direction and completely free floating currency. There are no mindless exchange controls. This is a great boost for FDI companies who seek reasonable returns for a net value addition to Zambian economy.

"The Zambians are peaceful, positive-minded and literate. It is easy to attain high productivity levels if the teammates manning key positions are taken through well-crafted training and mentoring programmes. This has been achieved at ClassEcon, which makes it a unique FDI company where all key positions are operated by Zambians. Every manager & supervisor here is put through in-house programmes for skill up-gradation"

ZAMBIA ALSO OFFERS….

Additionally Zambia also offers:

- Stable political system;
- A positive and investment friendly environment;
- Investment guarantees and against state nationalization;
- Progressive banking, legal and insurance services of international standards and stock exchange market;
- Free repatriation of profits and dividends;
- Simplified procedures of mineral exports, and
- Good place to work and live-Tropical climate and friendly people. Open-air lifestyle with nature reserves, game parks, rivers, lakes and waterways.

For more information and services tailored to your needs, contact ZDA to guide you through the investment process.

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Zambia Development Agency has recently established as a One-Stop Shop aimed at supporting Investors in obtaining information and processing all regulatory requirements in one place thereby making it easier and quicker to set up or expand their businesses in the country.

Annex Table: Export and import of iron and steel products in Zambia

	Import				Export			Unit Price
	Volume (1,000 ton)		Value (million US$)		Volume (1,000 ton)		Value	Import ($/ton)
Year	2006	2010	2006	2010	2006	2010	2010	2010
Ferro-alloys,ferrous raw materials and semi-finished steel	**1.7**	**0.9**	**1.9**	**1.4**	**5.6**	**18.3**	**3.9**	**1,631**
Ferro-alloys	1.7	0.8	1.7	1.1	1.2	2.4	2.6	1,303
Steel scrap	0.0	0.0	0.0	0.0	4.3	15.7	1.0	-
Long steel products	**44.6**	**45.9**	**38.0**	**52.8**	**0.2**	**14.9**	**10.2**	**1,151**
Bars & Rods	19.5	20.1	15.5	20.4	0.1	12.5	8.6	1,013
Angle, Shapes & Sections	17.6	20.1	16.9	25.5	0.2	2.4	1.6	1,270
Wire	7.6	5.7	5.6	6.9	0.0	0.0	0.0	1,217
Flat steel products	**44.5**	**56.3**	**44.2**	**69.1**	**0.1**	**1.1**	**0.9**	**1,228**
Hot-rolled coils & sheets	16.8	14.9	16.1	18.6	0.0	0.0	0.1	1,249
Cold-rolled coils & sheets	5.6	7.7	7.0	9.4	0.0	0.4	0.2	1,225
Coated coils & sheets	22.1	33.8	21.1	41.2	0.1	0.6	0.6	1,220
Tube, Pipes & Others	**13.7**	**23.2**	**32.5**	**46.4**	**0.6**	**0.4**	**1.5**	**2,003**
Sheet pile & Rails	1.6	3.5	2.0	4.1	0.4	0.1	0.1	1,149
Tube, Pipes & Fittings	12.1	19.7	30.5	42.4	0.2	0.4	1.3	2,156
Stainless & Alloy steel products	**7.3**	**7.4**	**15.9**	**19.6**	**0.3**	**0.5**	**1.9**	**2,652**
Total Steel Products (HS72)	**111.8**	**133.6**	**132.5**	**189.4**	**6.9**	**35.3**	**18.5**	**1,417**
Fabricated steel products (HS 73)	**27.4**	**49.1**	**66.9**	**116.5**	**1.3**	**3.4**	**5.7**	**2,373**
Structures (rods, angle, plates)	11.9	19.2	28.4	47.0	0.3	0.8	0.6	2,444
Cloth, grill, netting & fencning	2.0	2.7	2.6	4.5	0.0	0.1	0.1	1,651
Screws, bolts, nuts, etc.	1.9	4.9	8.4	12.2	0.1	0.1	0.4	2,469
Other articles of iron or steel	11.7	22.2	27.4	52.9	0.9	2.5	4.5	2,379
Grand Total (HS 72 + 73)	**139.2**	**182.7**	**199.4**	**305.9**	**8.1**	**38.7**	**24.1**	**1,674**

Source: "Industry Strategy for Engineering Products", Ministry of Commerce, Trade and Industry (2012)

Annex: Company List

No.	Company Name	Company Address	Tel	Major Products
A. STEEL MAKING AND HOT ROLLED PRODUCTS				
1	CHI Steel Zambia	Chinika Industrial Area, Lusaka		Deformed, round bars and angles
2	Good Times Steel	Plot 33811, Mungwi Rd, Lusaka	0211 241438	Deformed, flat & round bars, angles lipped channels
3	Hematite Steel Industries	Box 35525, Lusaka	0211 247031	Deformed, round bars and angles
4	Universal Mining & Chemicals Industries Ltd.	Along Kafue Estate Rd	0211 286117/27	Deformed, flat & round bars, angles, lipped channels
B. IRON (METAL) CASTING (FOUNDRIES)				
1	Fox Foundries	Blantyre Road, Kitwe	0977 908888	Cast iron, copper rings and valves
2	Heroes Foundry and Engineering	Plot 183/1, Muzilikazi Rd, Heavy Ind Area, Lusaka	0966 432316	Steel covers, copper bars and aluminium
3	Kushomwa Foundry	Off Kitwe Road, Kalulushi	0955 888980	Mill balls and iron castings
4	Ndola Foundries Ltd	Ndola	0976 636363	Casting of iron, copper and aluminium
5	Non Ferrous Metal Works (Z) Ltd	Industrial Area, Ndola	0212 651603	Railway parts, bolt forging, bronze, brass, copper castings
6	Perway Industries (Z) Ltd	Plot 5056 Natwange Rd, Kitwe	0212 213000	Bolts & nuts, railway turnouts & track accessories
7	Scaw Ltd	Box 20418, Kitwe	0212 213435	Mill balls, cast iron, alloys and angles
8	ZALCO Ltd	Kabwe	0211 237725	Mill balls, cooking pans, angles, round bars
C. COLD ROLLING & GALVANIZING SHEETS (& ROOFING SHEETS)				
1	MM Integrated Steel Mills Ltd	Plot 8643, Chinika Area, Lusaka	0211 287263	Cold rolling, Continuous galvanizing and Cold forming of roofing sheets
D. ROOFING SHEET MANUFACTURING				
1	Aluworks Industries Ltd	Plot 7220 Kachidza Rd, Lusaka	0211 287381	Galvanized roofing sheets, AluZinc roofing sheets
2	Amalgamated Steel Eng Co.	Plot 7195 Mwembeshi Rd, Lusaka	0211 287213	IBR roofing sheets, and door & window frames
3	ClassEcon Roofing Africa Ltd.	Plot 7173 Mukatasha Rd, Lusaka	0211 840164	Roofing sheets
4	Malata Roofing	Plot 8481, Lumumba Road, Light Industrial Area, Lusaka	0211 288101	Roofing sheets, lipped channels
5	Roof Rite ltd	Plot 33304 Katanga Rd, Lusaka	0211 845402	Corrugated steel sheets, palisade fencing
6	Safintra Zambia Ltd	Plot 7234, Mukatasha Rd, Lusaka	0211 288155/6	Aluminum-, zinc-, tin-coated roofing sheets
7	Zambezi Roofing Solutions	Katanga Rd, Lusaka	0211 287812/13	Corrugated roofing sheets
E. STEEL FABRICATION AND TRADING				
1	Agro Fuel Investments Engineering	Plot 8489 Lumumba Rd, Lusaka	0211 287979	Trailer, Fuel Tank, window and door frame
2	Blue Steel	Lumumba Rd, Lusaka		Steel fabrication and trading
3	BSI Steel Zambia	Lumumba Rd, Lusaka	0211 222112	Steel stockists and trading
4	CAMCO	Kafue Road, Makeni, Lusaka		Engineering and agricultural machinery
5	Kamloops Metal Fabricators	Kalingalinga, Lusaka		Window and door frames and other steel fabrication
6	Saro Agro Industrial Ltd	Plot 5284, Buyantashi Rd, Lusaka	0211 241477	Manufacture & fabrication of agricultural equipment
7	Shonga Steel Ltd	Box 30977, Malambo , Lusaka	0211 24788	Iron and steel
8	Sonar International	Mukatasha Rd, Lusaka		Steel stockists and trading
9	Technical Engineering Co Ltd	Stand 12766, Chinika Area, Mumbwa Road, Lusaka	0212 217625	Finishing of lipped channels, round, square and regular tubes
10	Quick Space Zambia Ltd	Lusaka	0212 274993	Trunk boxes and other steel products
11	Yasmeera Investments Ltd	Kafue Road, Makeni, Lusaka	0211 273239	Manufacture and fabrication of steel products
12	KD&M Zambia Ltd	536 David Kaunda Rd, Chingola	0950 020462	School desks
13	J B Metal Fabricators	SEDB Complex, Makeni	0979 169930	Fabricated machinery
14	Muchinga Trust Company	Suite 6, 9th Kulima tower, Katunjila Rd	0977 826103	Window and door frames
15	Makondo Engineering Enterprises	Plot No. 11/11. P.O. Box 355775, Lusaka	0977 431672	Window and door frames
16	Sepat Enterprises	12th floor, Kulima Tower Building	0977 413137	Various fabricated materials
17	Predan Enterprises	Plot No. 2705/120, Mukwa Rd.	0974 394884	Steel fabrication and general dealers
18	Patchi patchi enterprises	Plot No. 9474 SEDB Complex, Makeni	0977 774182	Metal fabrication