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# Leveraging Chinese FDI For Diversified Growth In Zambia

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# ACRONYMS AND ABBREVIATIONS

CADF	China Africa Development Fund
CEC	Copperbelt Energy Corporation
CEEC	Citizens Economic Empowerment Commission
CET	Common External Tariff
COMESA	Common Market for Eastern and Southern Africa
CRN	Core Road Network
CU	Customs Union
EAC	East African Community
EAPP	East African Power Pool
EITI	Extractive Industries Transparency Initiative
FDI	Foreign Direct Investment
FTA	Free-Trade Agreement
GDP	Gross Domestic Product
IDC	Industrial Development Corporation
IFC	International Finance Corporation
IMF	International Monetary Fund
MFEZ	Multi-Facility Economic Zones
OECD	Organisation for Economic Co-operation and Development
OSBP	One-Stop Border Post
PPP	Public-Private Partnership
PRP	Zambia Power Rehabilitation Programme
PSDRP	Private Sector Development Reform Programme
RDA	Road Development Agency
SADC	Southern African Development Community
SAPP	Southern African Power Pool
SARS	South African Revenue Services
SEZ	Special Economic Zones
SME	Small and Medium Enterprise
SSA	Sub-Saharan Africa
TAZAMA	Tanzania Zambia Mafuta
TAZARA	Tanzania-Zambia Railway Authority
TIWB	Tax Inspectors Without Borders Program
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
USD	United States Dollar
WAEMU	West African Economic and Monetary Union
ZCCZ	Zambia-China Cooperation Zone
ZDA	Zambia Development Agency
ZESCO	Zambia Electricity Supply Corporation
ZILMIS	Zambia Integrated Land Management and Information System
ZMW	Zambian Kwacha
ZRA	Zambia Revenue Authority

# EXECUTIVE SUMMARY

**This report examines how Zambia can leverage the benefits and mitigate the risks of Chinese Foreign Direct Investment (FDI) to support its objective of diversified growth.**

**Section 1** offers context for this objective by summarizing Zambia's current macroeconomic and political situation. It explains the importance of diversification to Zambia's future growth, briefly summarizes the current state of Chinese FDI in Sub-Saharan Africa (SSA), and argues that Chinese FDI could help Zambia diversify its economy.

**Section 2** focuses on five areas in which Chinese FDI can be leveraged for diversified growth. It analyzes four Zambian sectors – energy, transport, agriculture, and manufacturing – and an important inter-sectoral goal: improving the business environment. Each of the five areas contains a discussion of the relevant context, an analysis of policy challenges, and recommendations. Highlighted recommendations for the Government of the Republic of Zambia include:

- **Energy** – Work towards fully cost-reflective electricity tariffs, continue developing links to electricity export markets, and focus on attracting solar energy investments.
- **Transport** – Improve government capacity to manage public-private partnerships (PPPs), attract FDI through PPP frameworks, and expedite construction of tolling infrastructure on priority routes.
- **Manufacturing and Special Economic Zones (SEZs)** – Apply lessons learned from Chambishi and other successful Chinese-led SEZs in SSA to the Lusaka East and Lusaka South SEZs, and establish an interministerial SEZ taskforce to facilitate coordination between relevant Zambian ministries, host governments, and prospective investors.
- **Agriculture** – Diagnose reasons for faltering farm block investment, connect farm blocks to infrastructure one at a time, and formulate a clear actionable strategy to generate domestic business linkages to farm blocks.
- **Business environment** – Reduce the time and costs of land registration, and set consistent and stable tax policies.

**Section 3** examines four risks associated with increased Chinese FDI – business cycle synchronization, crowding out of domestic small and medium enterprises (SMEs), tax avoidance, and labor market distortions. In each case, we again analyze the relevant context and policy challenges, then offer recommendations to mitigate these risks. Highlighted recommendations include:

- **Business cycle synchronization** – Channel more investment to market-seeking rather than resource-seeking FDI, and build policy buffers to manage external shocks.
- **Crowding out of Domestic SMEs** – Incent vertical spillovers, identify barriers to forming partnerships and technology transfer, and ease capital constraints on SMEs.
- **Tax Avoidance and Evasion** – Prioritize spending on tax monitoring and evaluation, and engage the South African Revenue Services or OECD Tax Inspectors without Borders to share best practices and improve tax administration capacity.
- **Changing labor relations** – Monitor wage and productivity levels in Zambia's formal sector, and invest in technology and human capital to improve labor productivity.

# SECTION 1: INTRODUCTION AND BACKGROUND

## [1.1] Introduction

### [1.1.1] Objective

This report examines how Zambia can leverage the benefits and mitigate the risks of Chinese Foreign Direct Investment (FDI) to support its long-standing objective of diversified growth. This comes at a key inflection point, as China is stepping up its economic engagement with and investment in sub-Saharan Africa (SSA), and Zambia is requiring increased investment in order to finance a long-term diversified growth strategy.

FDI flows are the most stable form of foreign investments because, unlike portfolio investments, FDI involves equity ownership by foreign investors. In 1997-1998, for example, when Asian countries faced significant portfolio investment outflows, FDI flows remained resilient throughout and even after the crisis.<sup>1</sup> Furthermore, because FDI is not a form of borrowing from another sovereign country, FDI flows increase Zambia's physical and human capital accumulation without exacerbating the country's debt ratios. Debt remains a source of concern, as Zambia's total external debt has increased in recent periods, from 15.3% of Gross Domestic Product (GDP) in 2011 to 23.9% in 2014; its total public debt increased from 20.6% to 35.1% of GDP over the same period.<sup>2</sup>

On the other hand, a surge in Chinese FDI in the coming years would introduce a range of risks to Zambia's development and macroeconomic stability, which authorities will have to carefully manage. In this report, we will assess both opportunities and risks, and offer recommendations to increase Chinese FDI into Zambia's priority sectors that leverage these investments for diversified growth while simultaneously mitigating the associated risks.

### [1.1.2] Zambia's Macroeconomic and Political Context

This report and its recommendations acknowledge the current economic and political uncertainty in Zambia. Zambia has increasingly been confronted by macroeconomic vulnerabilities, with large fiscal imbalances, declining copper prices, a depreciating exchange rate, and worsening inflation. The Zambian kwacha (ZMW) depreciated from 6.0 ZMW to 1 United States Dollar (USD) in January 2015 to a low of 14.1 ZMW/USD on November 10, 2015. Though it had recently recovered to 10.9 ZMW/USD as of December 9, 2015<sup>3</sup>, the currency remains susceptible to substantial volatility.<sup>4</sup> Figure 1.1 Recent Trends in the Zambian Economy offers a graphical representation of recent macroeconomic trends in Zambia.

**Increasing macroeconomic vulnerabilities and power crises have decelerated growth in the last years.** The latest data show that the annual inflation rate has more than doubled in the second half of 2015, from 7 percent in June to 19.5 percent in October.<sup>5</sup> A collapse in copper prices, driven in part by lower Chinese demand for raw materials, has reduced output economy-wide. Government revenues are declining at a time when increased outlays and support from the central government may soon be needed. The country's current water shortage and a resultant shortfall in power generation have triggered load-shedding across Zambia, further exacerbating the economic situation. In November 2015, IMF staff publicly concluded,

<sup>1</sup> Loungani, P. & Razin, A. (2001, June).

<sup>2</sup> International Monetary Fund. (2015, May 5). Zambia: Staff report.

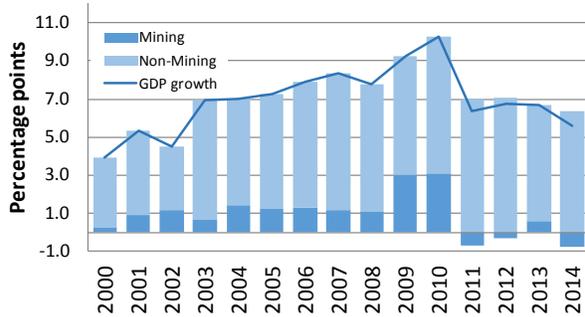
<sup>3</sup> Bank of Zambia. (Web). Historical series of exchange rates.

<sup>4</sup> International Monetary Fund. (2015, June 16). 2015 Article IV consultation.

<sup>5</sup> Zambia Central Statistical Office. (2015).

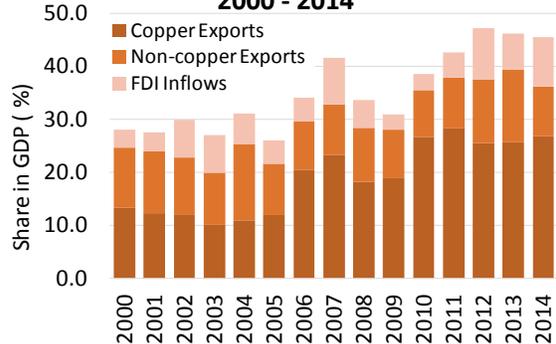
Figure 1.1 Recent Trends in the Zambian Economy

Drivers of Zambia's GDP Growth: 2000 - 2014



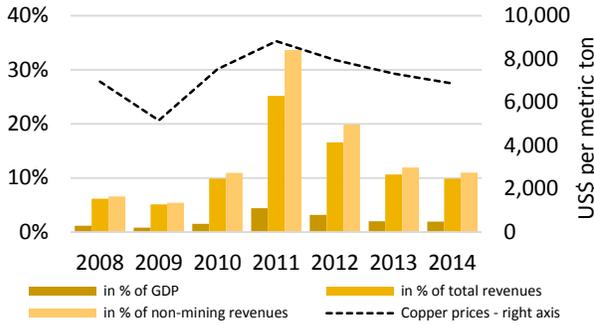
Source: Central Statistical Office of Zambia

Zambia's Exports and FDI Inflows: 2000 - 2014



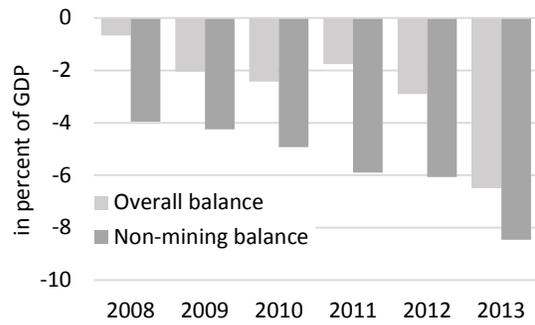
Source: UN Comtrade Database and UNCTAD

Zambia's Mining Revenues: 2008 - 2014



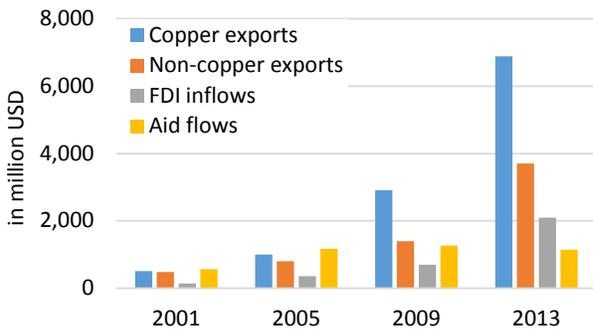
Source: IMF Article IV 2012 and 2015 Staff Reports; IMF Primary Commodity Prices Database

Zambia's Fiscal Balance: 2008 - 2014



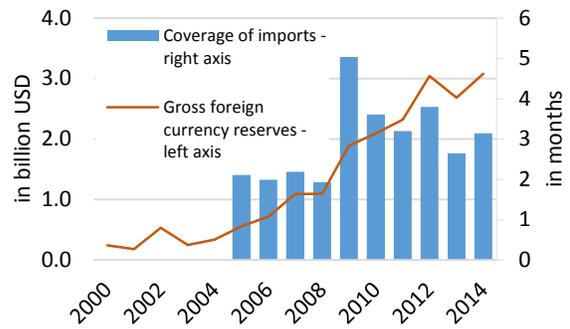
Source: World Economic Outlook and IMF Article IV 2012 and 2015 Staff Reports

Zambia's Major Foreign Currency Inflows



Source: UN Comtrade Database and World Bank Indicators

Zambia's Foreign Currency Reserves: 2000 - 2014



Source: World DataBank

“monetary policy has been appropriately tightened to counter the pressures on the exchange rate and rising inflation, but success will depend on complementary tightening of fiscal policy.”<sup>6</sup>

**At the same time, Zambia faces substantial political uncertainty.** With a change in administration in June 2015 and general elections scheduled for 2016, long-term planning within various government agencies is difficult. Fiscal consolidation, comprehensive reforms and durable national policy changes are all politically challenging to implement in the near term. The government faces political constraints to confronting Zambia’s urgent economic challenges.

**This report primarily addresses the medium to long-term challenges facing Zambia.** This report will not offer solutions to the country’s immediate macroeconomic challenges, though the country’s currency and inflation challenges must be addressed before policies aimed at long-term diversified growth can be implemented. However, if Zambia can stabilize its exchange rate and fiscal deficit, and progressively restore market confidence, we believe that Chinese FDI strategically directed for diversification can put the Zambian economy on sounder footing – increasing economic growth, and improving resilience against future macroeconomic instability.

## [1.2] Diversification: A Central Zambian Priority

**The government of Zambia has stated the goal of reducing its dependence on mining and pursuing a strategy of diversification, with investment and growth in other priority sectors.** Following over \$10 billion in mining FDI and a tripling of copper output since 2000, in the past three years mining has accounted for approximately 70% of Zambia’s exports and 10% of its GDP. Mining tax and royalty revenue has accounted for between 10 and 16% of all government revenues (typically about 3.0% of GDP).<sup>7,8</sup> As a consequence, Zambia’s economy is currently overexposed to volatile copper prices – as is apparent from the recent downturn in copper prices and, concurrently, the rapid depreciation of the kwacha.

**For decades, economic diversification has been prominent in Zambia’s economic plans.** As early as the First National Development Plan (1966-1970), both the need to diversify away from copper, as well as the growth of other sectors such as agriculture and manufacturing, have been emphasized.<sup>9</sup> Today, the President and ministers have called for a renewed focus on diversification. In an October 2015 speech before the National Assembly, Finance Minister Chikwanda promised to “accelerate the diversification of the economy, particularly towards tourism, energy, agriculture and agro-processing.”<sup>10</sup> In interviews in Lusaka across numerous agencies, Zambian authorities emphasized the importance of diversification to Zambia’s economic future.

For the purpose of this report, diversification means an effort to target investment in and modernization of priority non-mining sectors that have hitherto been underdeveloped – in particular agriculture, manufacturing, energy, transport and infrastructure. A successful diversification strategy would stimulate growth and create jobs in these core sectors.

<sup>6</sup> International Monetary Fund. (2015, November 20). End-of-mission press release.

<sup>7</sup> International Monetary Fund. (2015, June 16). 2015 Article IV consultation.

<sup>8</sup> International Monetary Fund. (2015, June 16). Zambia: Selected issues.

<sup>9</sup> Zambia Office of National Development and Planning. (1966).

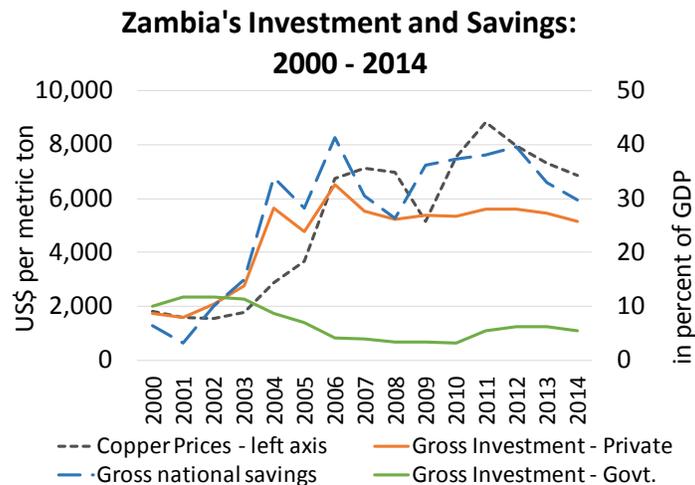
<sup>10</sup> Chikwanda, A. B. (2015, October 9).

## [1.3] The Case for Chinese FDI in Zambia

### [1.3.1] Current State of Domestic Investment in Zambia

Domestic savings are increasing; however, with Zambia's current fiscal deficit, it is unrealistic to expect domestic capital to meet all funding demands. To pursue and implement a successful diversification strategy, Zambia needs additional resources. Foreign capital can help fill this gap and alleviate pressures on the domestic financial market. Given that the latter is small and government debt is increasing, real interest rates have increased and availability of credit to the private sector has been constrained.

Figure 1.2: Zambia's Investments and Savings



Source: Africa Development Indicators, World Bank and IMF Primary Commodity Prices

**Zambia's sizable natural resource endowment presents an opportunity for economic growth and development but has not produced higher domestic investment.** The potentially large economic rent from mineral extraction could be used to address the human capital and infrastructure deficits that prevent diversification. However, despite the fact that copper has accounted for a significant share of exports in Zambia since the early 1990s, realizing that opportunity of greater levels of domestic investment has been challenging. This can be attributed to two main factors.

- (1) **Sub-optimal return from copper extraction.** Countries rich in natural resources can reinvest the income from resource extraction and development to into other forms of capital to ensure the total national stock of capital does not decline.<sup>11,12</sup> The Hartwick rule is a simple rule-of-thumb that analyzes this – in effect, whether a country uses natural resources in a sustainable manner.<sup>13,14</sup> Based on the Hartwick rule, empirical evidence suggests that until recently, Zambia's use of copper resources was unsustainable. Boos and Holm-Müller estimated Zambia's genuine savings rate from 1970 to 2012; it has generally been negative, averaging -2.6%.<sup>15</sup> Since 2008, the genuine savings rate has been positive; maintaining this positive rate is key for achieving greater levels of domestic investment and ensuring that its copper resources are depleted in a way that preserves Zambian's welfare in the long run. Details of this analysis can be found in Box 1.

<sup>11</sup> Hamilton, K. & World Bank. (2006).

<sup>12</sup> Zambia Office of National Development and Planning. (1966).

<sup>13</sup> Hartwick, J. M. (1977, December).

<sup>14</sup> Solow, R. (1986).

<sup>15</sup> Boos, A., & Holm-Müller, K. (2015).

(2) **Insufficient policy buffers to mitigate the boom-bust cycles that result from the inherent volatility in commodity prices and resulting resource revenues.** Sharp fluctuations in commodity prices often lead to procyclical economic policies, which give rise to greater macroeconomic volatility.<sup>16</sup> This is often a major driver of the “resource curse,” in which, paradoxically, resource-rich countries fail to grow as fast as those that do not enjoy the same resource wealth.<sup>17</sup> Zambia’s dependence on copper for foreign exchange and economic activity heightens the need for policy buffers to neutralize the potentially adverse effects of commodity price volatility on the economic cycle.

Countries comparable to Zambia often struggle to increase savings during boom times due to the urgent expenditure demands on the government. While there are some increases in total savings in Zambia following high copper prices, only a small part is transformed into investment and it is usually driven by the private sector (Figure 1.2). The boom-bust cycle is reflected in Zambia’s overall fiscal balance, which deteriorated in the past three years as mining revenues shrank following the downward trend in copper prices. In the meantime, the non-mining balance has worsened since 2008, and in 2013 was -10% of GDP (See Figure 1.1 above). This reaffirms that fiscal policy has been mainly procyclical in the most recent years.

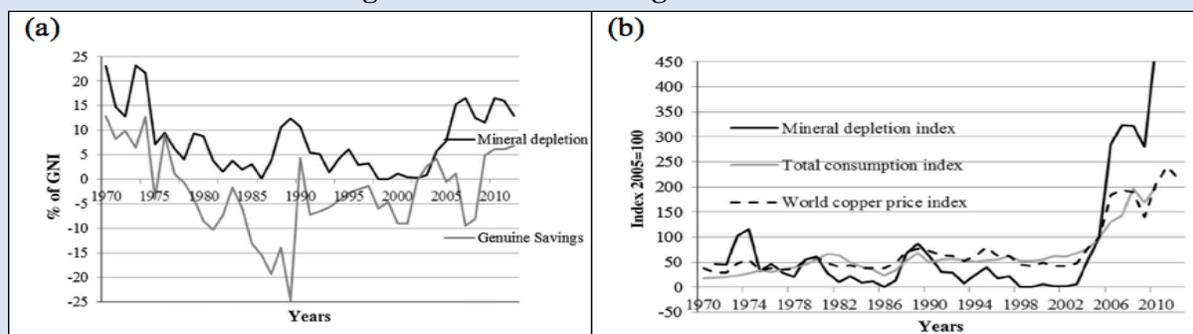
### **Box 1: The Hartwick Rule and Zambia’s Use of Copper Resources**

According to the Hartwick rule, a country's use of natural resources is sustainable if its genuine savings rate – net national savings rate, plus investment on capital, minus natural resource depletion rate – is greater than or equal to zero. A negative genuine saving rate implies that a country's natural resource depletion rate exceeds its savings and capital investment, causing its total wealth to decline.

Figure 1.3a shows Zambia's genuine savings rate from 1970 to 2012. Its average over that period is -2.6%, and it has been volatile, in large part due to fluctuations in the copper price, which affects copper rents.<sup>1</sup> In Zambia these account for an average of 95% of total depletion -reaching an average of USD 2.5 to 3 billion annually from 2000 onwards.<sup>1</sup> The close correlation between movements in genuine savings and mineral depletion estimates suggests that when copper prices increased, Zambian government was unable to effectively capitalize the increase in rents to boost investments in physical capital and natural savings rate.

The government of Zambia could increase the genuine savings rate through fiscal consolidation. This proved to be a challenging task – as seen from Figure 1.3b, when copper rent (mineral depletion) increases, Zambia's total consumption also increases accordingly. Genuine savings rate can also be improved through investments in human and physical capital, an area in which Chinese FDI becomes particularly pertinent.

**Figure 1.3: Genuine Savings Rate of Zambia**



Source: Boos and Holm-Müller (2015)

<sup>16</sup> Singh, A. (2006, August 7).

<sup>17</sup> Frankel, J. A. (2010, March).

**A well-defined fiscal framework can help Zambia better manage its medium-term budget planning to address investment needs. It will also help strengthen Zambia’s resilience to macroeconomic shocks, whether driven by copper prices or otherwise.**<sup>18</sup> The framework may include an advisory fiscal council that will be responsible for forecasting revenues, managing expenditures and setting suitable targets. Such an institutional setup will provide the needed distance between the political decision making process and the recommended policies made by independent as well as government experts. The use of fiscal rules within this framework may be considered in the future to anchor the short to medium term path of fiscal policy.

### **Box 2: Recent Developments in Fiscal Frameworks**

Over the past decade, fiscal frameworks witnessed changes aimed at better equipping countries to respond to fiscal imbalances accumulated in the 2000s or during the Great Recession.<sup>1</sup> These changes mainly relate to what is called the “new generation” of fiscal rules.

The new generation of fiscal rules is designed to allow countries to adopt the rule best suited to their economic and institutional circumstances. This takes into account the degree of dependency on resource revenues, resource reserves and horizon, as well as the country’s credit constraints and investment needs. This flexibility in the design makes rules more sustainable and hence more credible. For example, capital expenditure is often excluded from the targeted fiscal aggregates<sup>1</sup> in low income countries to accommodate their limited capital stock and need for large infrastructure. In the meantime, the use of well-specified escape clauses is on the rise, providing flexibility in dealing with rare events such as a recession or a significant shock to economic activity (Brazil, Colombia, Peru, Mexico and Jamaica). See Table 1.1 for country examples of triggers for escape clauses.

Fiscal rules are generally complex and thus strengthening institutional capacity is a major prerequisite for implementation. Fiscal councils were adopted recently in some emerging economies (Chile, Kenya, Mexico and South Africa)<sup>1</sup> to address challenges associated with fiscal rules, including reviewing and monitoring government’s fiscal policies, developing budgetary projections and offering policy options. While in general these councils were established to encourage sound fiscal policies through an independent advisory role, their independence and responsibilities vary between countries depending on their legal, political, and institutional setup.

**Table 1.1: Fiscal Rules with Escape Clauses**

Country and Date	Natural disaster	Economic recession	Banking system bailout, guarantee schemes	Change in government	Change in budget coverage	Other events outside govt. control	Voting mechanism defined	Transition path defined
Brazil (since 2000)	X	X	-	-	-	-	X	-
Colombia (since 2011)	-	X	-	-	-	X	-	-
Germany (since 2010)	X	X	-	-	-	X	X	X
Jamaica (since 2010)	X	X	-	-	-	X	-	-
Mauritius (since 2008)	X	X	-	-	-	X	-	-
Mexico (since 2006)	-	X	-	-	-	-	-	-
Panama (since 2008)	X	X	-	-	-	X	-	X
Peru (since 2000)	X	X	-	-	-	X	-	X
Romania (since 2010)	-	X	-	X	X	X	-	X
Slovakia (since 2012)	X	X	X	-	-	X	-	-
Spain (since 2002)	X	X	-	-	-	X	X	X
Switzerland (since 2003)	X	X	-	-	-	X	X	X
EU member states	-	X	-	-	-	-	-	X
area/euro area (since 2005)	-	-	-	-	-	-	-	-
WAEMU <sup>1</sup> (since 2000)	-	X	-	-	-	-	-	-

*Source: Schachtel, A., Kinda, T., Budina, N., & Weber, A. (2012, July).*

<sup>18</sup> For more information on fiscal frameworks for resource-rich countries refer to International Monetary Fund (2012, August 24).

While the design and implementation of fiscal rules can be challenging, several resource rich countries, including Botswana, Chile and Norway, have successfully implemented fiscal rules (See Table 1.2 for examples on fiscal rules in resource rich countries). Zambia can draw parallels from these examples and adapt them to its own capacity and constraints.

Furthermore, there is a new generation of fiscal rules that may offer Zambia the needed flexibility to accommodate its pressing investment expenditures while helping it lower the currently high fiscal deficit. It may also enhance the credibility of Zambia’s recently announced fiscal consolidation plans. More details on the recent developments in fiscal frameworks are discussed in Box 2.

**Monetary policy can also help create buffers against external shocks.** The Bank of Zambia has been accumulating reserves to meet debt payments and import demand. Zambia’s international reserves have been at record levels between 2012 and 2014 (See Figure 1.1 above). However, the import coverage<sup>19</sup> is just above 3 months of prospective imports, which is below that of many comparable countries. Since Zambia began to raise capital in the Eurobonds market, these reserves are further insufficient to meet the more demanding Greenspan-Guidotti rule, which requires country’s reserve to meet prospective imports and all other forms of short-term external debt. Accumulating greater stock of international reserves during good economic times is therefore crucial, as it provides an additional buffer against external shocks that could otherwise undermine domestic output and consumption.<sup>20</sup> The IMF has projected that in the medium term, the Bank of Zambia will have an opportunity to accumulate reserves, due to projected increase in copper exports and resolution of uncertainties around mining tax policies. This is likely to attract more FDI to improve overall balance of payment surplus.<sup>21</sup>

**Table 1.2: Fiscal Rules in Resource-Rich Emerging and Low-Income Countries**

Country	Number of Rules	Type of Rule(s)	Year of Adoption	Legal Basis	Coverage Exceptions	Supporting Institutional Arrangements	Escape Clauses
Botswana	1	Expenditure	2003	Statutory	No	No	No
Cameroon	2	Budget Balance; Debt	2002	Constitutional	Investment	No	No
Chad	2	Budget Balance; Debt	2002	Constitutional	Investment	No	No
Chile	1	Budget Balance	2001	Statutory	No	Independent body sets budget assumptions	No
Colombia	2	Expenditure; Budget Balance	2000; 2011	Statutory	No	Fiscal responsibility laws	Yes
Congo	2	Budget Balance; Debt	2002	Constitutional	Investment	No	No
Gabon	2	Budget Balance; Debt	2002	Constitutional	Investment	No	No
Nigeria	1	Budget Balance	2007	Statutory	No	Fiscal responsibility laws	No
Peru	1	Budget Balance	2000	Statutory	No	Fiscal responsibility laws and independent body sets budget assumptions	Yes

*Source: IMF Fiscal Rules Dataset 1985 – 2014 (2015, May)*

<sup>19</sup> For more treatment on import coverage ratio, see for example: International Monetary Fund. (2011, February 14).

<sup>20</sup> See for example Jeanne, O., & Rancière, R. (2008, February).

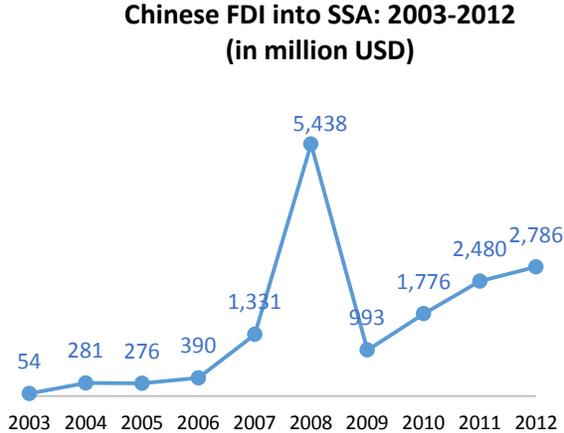
<sup>21</sup> International Monetary Fund. (2015, June 16). 2015 Article IV consultation.

**[1.3.2] Trends in Chinese FDI in Zambia and SSA**

Considering the limited role that currently scarce domestic investment can play in financing Zambia’s diversification, foreign capital will be essential for financing the infrastructure and large-scale modernizations required for a successful diversification strategy in Zambia. FDI into Zambia has the potential to increase both physical and human capital accumulation, but currently lacks the domestic resource required to do so. Physical capital accumulates when firms from source countries invest in buildings, machines, and tools that increase production of domestic goods. Human capital accumulates when managerial know-how and skills are transferred from source country to host country, through employee training, efficient organization and manufacturing structure.

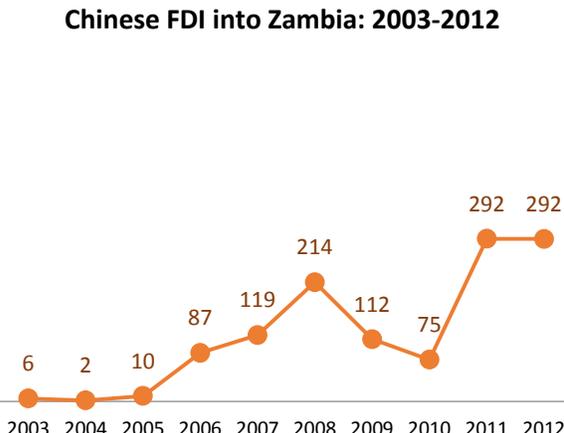
Chinese FDI, though still a relatively small share of foreign investment in both Zambia and SSA more broadly, has increased rapidly. While most FDI in SSA in general and Zambia in particular is from North America, Europe, and Australia, Chinese FDI in SSA (and Zambia) is increasing. It is difficult to estimate the precise volume, nature, and geographic distribution of FDI in SSA due to a number of intrinsic data weaknesses, including inconsistencies between different data sources and a risk of systematic estimation errors.<sup>22</sup> However, with that caveat in mind, China’s share of the FDI stock in Africa was approximately 3.2% in 2012 by conservative estimates.<sup>23</sup> As a flow, China’s investments are approximately 4.4% of the total flows into the continent.<sup>24</sup> Chinese FDI into SSA has increased rapidly in the past decade (See Figure 1.4 below), while Chinese FDI flows into Zambia have also been on an upward trajectory (See Figure 1.5 below).

**Figure 1.4: FDI from China to SSA by Year**



Source: UNCTAD World Investment Report 2014

**Figure 1.5: FDI from China to Zambia by Year**



Source: UNCTAD World Investment Report 2014

Despite China’s economic slowdown, significant Chinese investment into SSA (including Zambia) appears likely to continue, based on formal Chinese investment pledges and its strategic interests in partnership with African countries. While the current economic slowdown in China has led to an 84% decline in its investment into Africa in the first half of 2015 (from \$3.54 billion to \$568 million<sup>25</sup>), China has also reaffirmed its commitment to Africa, pledging to invest \$60 billion there over the next three years.<sup>26</sup> As foremost China-in-Africa expert Deborah Brautigam makes clear, Chinese policymakers consider Africa a key strategic target for increased engagement. This was most clearly emphasized in November 2006, when 48 African states, including Zambia, gathered in Beijing’s Great Hall to welcome President Hu Jintao’s speech

<sup>22</sup> Mlachila, M., and Takebe, M. (2012).  
<sup>23</sup> United Nations Conference on Trade and Development. (2014). World Investment Report 2014.  
<sup>24</sup> Ibid.  
<sup>25</sup> Klasa, A. (2015, October 21).  
<sup>26</sup> McGroarty, P. (2015, December 4).

on strategic partnership. Three years after the summit, China doubled its pledge for aid, established an investment fund and "built a hundred rural schools and thirty hospitals" across the continent.<sup>27</sup> A similar pledge for investment was made during President Xi Jinping's visit to the Forum on China-Africa Corporation in Johannesburg in December 2015.<sup>28</sup>

**There is a monetary explanation for China's motivation to direct significant amounts of its investments outward into destinations such as Africa.** China continues to run a current account surplus of billions of US dollars per year, recently around 2% of its GDP.<sup>29</sup> In the past, to maintain the upward pressure on the renminbi, the Chinese government actively sterilized dollar inflows. As a result, China's foreign currency reserve ballooned; it is currently \$3.6 trillion, the largest in the world.<sup>30</sup> Consequently, the Chinese government faces serious pressure to diversify its foreign currency investments away from low-yielding U.S. treasury bills. China has been actively diversifying in several ways – notably by establishing a sovereign wealth fund (the CIC) and, relevant to the Zambian context, encouraging its large state-owned enterprises to invest in or partner with foreign companies.<sup>31</sup> As long as China continues to accumulate large reserves, it likely will continue to channel large volumes of outward investment into destinations such as Africa.

### **[1.3.3] Leveraging Chinese FDI for Zambian Diversification: A Sector-by-Sector Analysis**

**Zambia needs foreign capital to catalyze diversification, while China is seeking destinations and projects that will generate profits.** The intersection of these two trends may constitute a viable Zambian growth strategy, provided the country can both attract Chinese FDI and ensure that the domestic economy benefits from the investments.

**While limited data precludes a systematic understanding of how countries can attract FDI that is specifically Chinese, Chinese FDI appears to behave in similar ways to FDI from other sources.** Wu and Chen argued that in the 1980s, the majority of Chinese enterprises involved in transnational operations were under government control and the enterprises were used to serve the political and diplomatic motivations of the Chinese government. After 1991, a greater number of Chinese enterprises began to go overseas to search for higher profits.<sup>32</sup> A 2007 examination of Chinese Ministry of Commerce data (up to 2001) concurred with Wu and Chen, and also argued that the determinants of Chinese FDI have varied over time.<sup>33</sup> It found that Chinese companies were more likely (relative to non-Chinese investors) to invest in countries with greater political risk in the 1980s, but that from the early 1990s, there was no correlation between political risk and Chinese outward FDI. In 2015, Chen, Dollar and Tang examined firm level data (number of deals made rather than their monetary value) and found that over the last decade, Chinese FDI is similar to investment from the global North. They also find that China's investments in SSA are uncorrelated with a measure of property rights and rule of law, whereas traditional investment favors countries that have a better governance climate.<sup>34</sup>

**There is some evidence that Chinese FDI is less sensitive to short-term risks, and may be more optimal as a funding source for large-scale long-term projects.** Kaplinsky argues that there are important distinctions between Chinese and Northern FDI.<sup>35</sup> Northern firms are primarily funded by stock markets and as shareholder-owned entities tend to be risk averse and concerned primarily with short-term profit. Chinese state-owned enterprises (SOEs), on the other hand, have access to subsidized long-term capital and are likely

<sup>27</sup> For more treatment on China's strategic interest in Africa, see Brautigam, D. *The Dragon's Gift*, Chapter 1

<sup>28</sup> McGroarty, P. (2015, December 4).

<sup>29</sup> World Bank. (2015). World development indicators.

<sup>30</sup> State Administration of Foreign Exchange. (2015, November 30).

<sup>31</sup> See, for example, the Angola Mode in Foster et al. (2009) or the Beijing Consensus in Mckinnon (2010)

<sup>32</sup> Wu, H. and Chen, C. (2001).

<sup>33</sup> Buckley, P., et al. (2007).

<sup>34</sup> Chen, W., Dollar, D., & Tang, H. (2015, August).

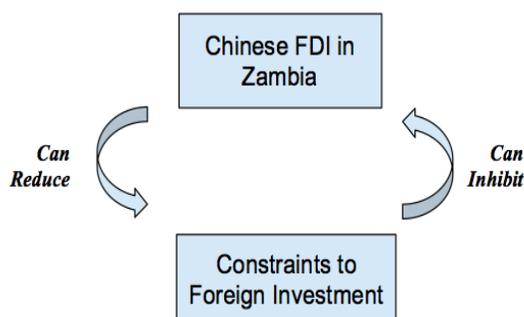
<sup>35</sup> Kaplinsky et al (2009).

to be less risk averse and more focused on long-term returns. Kaplinsky also highlights that the average costs of large infrastructure projects run by Chinese firms are 20 to 30 percent lower than those run by Northern, South African, or Brazilian competitors. Moreover, the Export-Import Bank of China is generally willing to provide a line of credit, often at subsidized rates, to the host government.

**Long time horizons, lower risk aversion, access to cheaper lines of credit, and lower project costs could make Chinese FDI particularly attractive for Zambia as an external source of financing to drive diversification.** While the fundamental characteristics of Chinese FDI may shift over time, this report focuses on how the Zambian government can leverage the benefits and mitigate the risks associated with Chinese FDI in its current form. However, many recommendations will also apply to other types of FDI and other types of foreign investments.

**FDI (including Chinese FDI) is endogenous – it can both affect and be affected by internal Zambian policies.** For example, the lack of sufficient energy infrastructure may deter investment in Zambia. At the same time, investment could help build more energy infrastructure. Chinese FDI and Zambian diversification thus represent a classic “chicken and egg” problem of two-way causality, represented in Figure 1.6. The diagram illustrates both constraints and opportunities – a cycle that can be either vicious or virtuous depending on how it is managed. Chinese FDI flows, properly channeled, can help build a more diversified Zambian economy. This, in turn, can help remove constraints and inhibitions to foreign investment, bringing in more Chinese FDI and ultimately accelerating Zambian growth. This report targets both arcs of the causal loop. Some recommendations specifically focus on constraints to investment, with an eye toward loosening these constraints in order to increase FDI flows. Other recommendations examine how FDI can most effectively facilitate diversification, erode these constraints, and help Zambia grow.

**Figure 1.6: Chicken and Egg Dilemma**



**The report proceeds as follows.** Section 2 focuses on six approaches to leverage Chinese FDI for diversified growth. It analyzes four Zambian sectors – energy, transport, agriculture, and manufacturing – and focuses on two important intersectoral goals: increasing exports through improved regional integration, and building a better business environment. Section 3 examines four risks inherent to Chinese FDI – business cycle synchronization, crowding out of local SMEs, tax avoidance, and labor market distortions. Each focal area includes a discussion of the relevant context, current policy challenges, and specific recommendations.

## SECTION 2: LEVERAGING CHINESE FDI FOR DIVERSIFIED GROWTH

This section discusses six factors that will enable Zambia to leverage Chinese FDI for diversified growth. The first four factors are sectoral strengthening – in the energy, transport, agriculture, and manufacturing sectors – and the latter two factors are a stronger business environment within Zambia, and better external integration of Zambia’s economy with regional markets in order to increase exports. Improvements in Zambia’s energy and transport infrastructure, as well as refinements to its business environment, are key for attracting investment and fostering growth in agriculture and manufacturing, as well as improving access to and linkages with external markets. These six factors, while they do not comprise an exhaustive or comprehensive development strategy, collectively represent greatest opportunities for change enabling Zambia to leverage Chinese FDI toward diversified growth.

### [2.1] Energy

#### [2.1.1] Context

**Improved energy (especially electricity) infrastructure can help Zambia attract additional FDI.**

Research shows that adequate and reliable electricity supply is a critical component for economic growth, and that poor electricity infrastructure is a barrier to investment. Currently in Zambia, only 3% of rural households and 45% of urban households have electricity.<sup>36</sup> A 2010 World Bank study showed that the most significant infrastructure element negatively impacting enterprise productivity in low-income African countries, including Zambia, was poor quality electricity supply. In Zambia specifically, the study found that more than 60% of firms surveyed considered the electricity supply a severe or very severe constraint on firm productivity. The study concluded: “in a world where governments compete to attract more FDI inflows through a variety of investment and tax incentives and other policy preferences, the availability of good quality physical infrastructure could also increase the inflow of FDI by subsidizing the cost of total investment by foreign investors and thus raising the rate of return.”<sup>37</sup> Reliable electricity supply is crucial for the investment climate.

**Recent load shedding highlights Zambia’s need for additional electrical generation capacity.** Nearly 95% of Zambia’s electricity comes from large-scale (>20 megawatt(MW)) hydropower, with the balance from diesel generators and mini-hydro schemes.<sup>38</sup> This heavy dependence on hydropower exposes it to seasonal water level variations that have recently resulted in load shedding, at considerable cost to the population and future investment prospects. Despite having 40% of the water in the Southern African Development Community (SADC), in October 2015 Zambia had a domestic electricity deficit of 1015 MW compared to installed capacity of 2,200 MW.<sup>39</sup> This has heavily affected the economy, reducing corporate productivity and income, and resulted in layoffs and mine shutdowns. Lower output shrinks the tax base and the scope for public expenditures.<sup>40</sup> At a microeconomic level, the depreciated kwacha has made imported diesel fuel for backup generation more expensive, and deforestation may increase as citizens revert to wood fuel at home. Zambia needs additional electricity.

<sup>36</sup> Lyalabi, S. (2015).

<sup>37</sup> Escribano, A., Guasch, J. L., & Pena, J. (2010, January).

<sup>38</sup> Energy Regulation Board. (2014). Energy sector report 2014.

<sup>39</sup> Republic of Zambia. (2015). Opportunities in the energy sector.

<sup>40</sup> *Zambian Economist*. (2015, July 28).

**Zambia’s hydropower is susceptible to the effects of climate change, highlighting the need for efficient water management and a more diversified electricity supply.** Climate change will increase land temperatures and water scarcity in southern Africa,<sup>41</sup> and as a result could have significant negative impacts on Zambia’s electricity generation capacity if it remains dependent on hydropower. Zambia can mitigate this risk by establishing efficient water management procedures (through technical measures at the generation stage, and through demand management via higher tariffs or other measures). The country can also do much to address the power issue by diversifying its electricity supply. Current installations of coal-generated electricity do reduce dependence on hydropower. However, they also contribute further to climate change, and would be susceptible to cost increases under a global carbon pricing scenario.

**Foreign investment is required for expanding and diversifying the electricity supply.** Currently, Zambia only derives 14% of its energy from electricity; over 70% is from wood fuel, 12% is from petroleum, and the balance is from coal and other sources.<sup>42</sup> The widespread use of wood fuel, primarily by households, is the result of low electrification rates. For Zambia to reach its goal of electrifying 91% of urban households and 51% of rural households by 2030, external financing will be required. The Zambia Country Plan released in 2010 at the “Financing Sustainable Electrification: Africa Dialogues” conference cited levying of cost-reflective tariffs and mobilization of financial resources as the key actions required for implementation.<sup>43</sup> Given Zambia’s current fiscal constraints, which are greater now than in 2010, it will need to harness foreign investment to expand electrification. What the country plan stated then is even more true now: “The government of Zambia has put in place a conducive environment to enhance sustainable financing of the rural electrification projects in Zambia. What we need is investors to come and exploit our clean energy potential!”<sup>44</sup>

## **[2.1.2] Policy Challenges and Current Momentum**

**Low power tariffs resulted in chronic underinvestment in electricity, but authorities are now making tariffs more cost-reflective.** Prior to 2007, no power plants had been built in Zambia for 30 years.<sup>45</sup> Most sources suggest that this was largely due to subsidized electricity tariffs that failed to recover costs and therefore did not attract private investment.<sup>46</sup> A 2011 World Bank study noted that Zambia’s average effective power tariff of 3 US cents per kilowatt-hour (kWh) failed to even recover operating costs, and its special arrangement to sell electricity to mining companies through the Copperbelt Energy Corporation (CEC) at 2 cents/kWh recovers even less. The study calculated a conservative annual electricity subsidy to mining companies of \$30 million.<sup>47</sup> A 2013 IMF study showed that out of 28 countries in SSA, Zambia’s electricity cost recovery ranked 25<sup>th</sup> (electricity tariffs only recovered 45% of costs; see Figure 2.1 below), and its electricity-related quasi-fiscal deficits ranked 4<sup>th</sup> highest as a percent of GDP (at about 3.3%).<sup>48</sup> In recent years, the Zambia Electricity Supply Corporation (ZESCO) has started “revealing its true costs” and has moved to raise tariffs from a weighted average of 5 cents/kWh in 2012 to 13 cents/kWh in 2015.<sup>49</sup> In December 2015, average tariffs increased from 6.02 cents/kWh to 10.35 cents/kWh, but they do not apply to mining.<sup>50</sup>

<sup>41</sup> Southern African Development Community. (2015).

<sup>42</sup> Muzeya, L. (2015, July 24).

<sup>43</sup> Energy Regulation Board. (2010, April). Zambia country action plan.

<sup>44</sup> Ibid.

<sup>45</sup> United Nations Industrial Development Organization, & International Centre on Small Hydro Power. (2013).

<sup>46</sup> International Renewable Energy Agency. (2013).

<sup>47</sup> World Bank. (2011, December 1). Power tariffs.

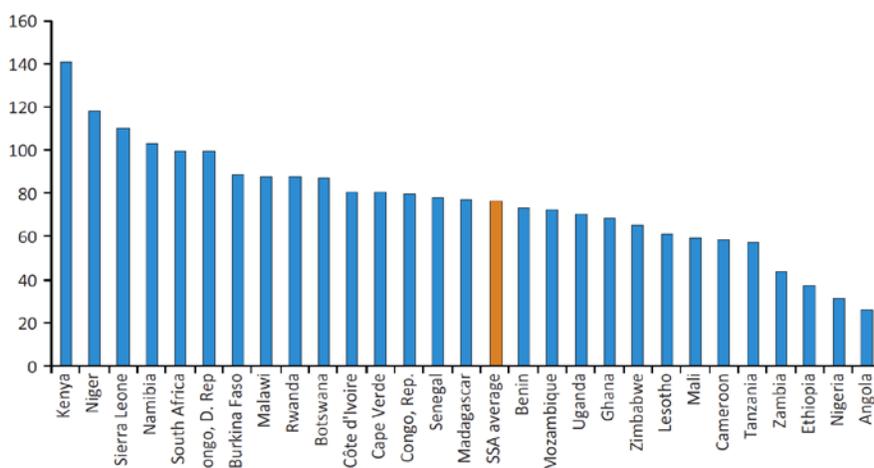
<sup>48</sup> Alleyne, T., & Hussain, M. (2013, August 12).

<sup>49</sup> International Renewable Energy Agency. (2013).

<sup>50</sup> Energy Regulation Board. (2015). Statement on electricity tariff adjustments.

**Figure 2.1: Electricity Tariff Cost-recovery in SSA**

Average Tariffs as a Percent of Average Historical Costs



Zambia is fourth from right, at approximately 45% cost recovery.

Source: IMF: Alleyne, T., & Hussain, M. (2013, August 12) and World Bank (2011, December 1).

**Government-planned tariff increases have coincided with more power sector investment – with substantial Chinese participation.** With the planned increase in electricity tariffs, energy investment has picked up. The Zambia Power Rehabilitation Programme (PRP), which included rehabilitation of the three major hydro stations (Kafue Gorge, Kariba North Bank, and Victoria Falls) as well as the entire Kariba North Bank Extension, has steadily increased generation since 2010. ZESCO estimates that over the next five years, \$3.7 billion will be spent on new power projects in Zambia.<sup>51</sup> Recent electricity generation investments in Zambia, and their funding sources, are shown in Table 2.1 below. Efforts to increase tariffs are attracting the foreign investment necessary for expanding and diversifying Zambia’s electricity supply. While ZESCO will own most new generation capacity, China has taken the lead on both the construction and the financing arrangements in most of the recent generation infrastructure.

**Table 2.1: Recent and Planned Large (>50 MW) Power Projects in Zambia**

Project	Type	Size	Cost \$US million	Year Online	Ownership	Builder	External Financing
Kariba North Bank Extension	Hydro	360 MW	\$430	2012	ZESCO	Sinohydro (China)	China Exim Bank; Development Bank of Southern Africa (DBSA)
Maamba thermal Plant	Coal	300 MW	\$830	2015 (?)	MCL PPA 100% to ZESCO; O&M by Nava Bharat (Singapore) 65%; ZCCM-IH 35%	SEPCO (China)	Bank of China; Industrial and Commercial Bank of China; Sinosure; DBSA; Standard Chartered; Barclays
Itezhi-tezhi	Hydro	120 MW	\$275	2016 (?)	ZESCO, TATA (India)	Sinohydro (China)	African Development Bank; DBSA; Dutch Development Bank; Propaco (France)
"Scaling Solar"	Solar	100 MW	Under tender	2016-17 (?)	Zambia Industrial Development Corporation (IDC)	Under tender	IFC/World Bank
Kafue Gorge Lower	Hydro	750 MW	\$1,940	2017 (?)	ZESCO	Sinohydro (China)	China Exim Bank
EMCO thermal plant	Coal	600 MW	\$690	2019 (?)	EMCO Limited (India) PPA 100% to ZESCO	EMCO Limited (India)	EMCO/Vedanta Resources (India)

Source: Zambia Energy Regulation Board; International Finance Corporation; Sinohydro.

<sup>51</sup> Energy Regulation Board. (2015). Statement on electricity tariff adjustments.

**Power export and diversification through solar present further opportunities to attract Chinese investment and expertise.** Increased connectedness to East African Power Pool (EAPP) and the need for the Southern African Power Pool (SAPP) to diversify away from coal, both present Zambia with opportunities for exporting electricity regionally. With significant additional hydropower planned to come online before 2020, Zambia may be able to position itself as the top regional source of renewable electricity. Further opportunities exist in solar. The International Finance Corporation (IFC), in cooperation with Zambia's Industrial Development Corporation (IDC), is currently accepting tenders for building and financing two 50 MW solar projects.<sup>52</sup> Yet Zambia's linkages with China's solar industry appear to be far less developed than linkages with its hydropower industry. China has four of the top six solar cell manufacturers in the world (by output), and between 2005 and 2013 made 28 outward FDI investments in solar totaling \$27.5 billion – much of it at low cost from The Export-Import Bank of China (China Exim Bank) and China Development Bank. Yet as of 2013 the only African countries to receive Chinese solar FDI were South Africa and Kenya.<sup>53</sup> Zambia's solar potential, and its need to diversify its energy sector, suggest large upside potential for both Zambia and China through Chinese solar investment.

### [2.1.3] Recommendations

Diversified long-term growth in Zambia will require an expanded and more consistent power supply, which should in turn attract further foreign investment. Construction and financing arrangements, particularly from China, represent one part of a strategy Zambia is already deploying to meet these objectives. We recommend the following in the medium-term to improve the state of the Zambian electricity sector in order to attract investment to drive long-term diversified growth.

- **Achieve fully cost-reflective tariffs.** Government intentions to raise tariffs have been instrumental in attracting recent private investments in the power sector. Investment is needed to increase the reliability and sufficiency of the power supply, which requires financial incentives only present if tariffs cover the cost of service. The tariff increase from 6.02 to 10.35 cents/kWh in December 2015 indicates the authorities' recognition of this fact. Cost-reflective tariffs can substantially improve the fiscal sustainability of the electric sector's public power generation, transmission, and distribution. They should also create more fiscal space for government spending in other areas.<sup>54</sup>
- **Continue developing links to electricity export markets.** Zambia has significant electricity generation potential, as reflected in recent investments. Particularly because of Zambia's relatively low generation costs in hydropower, it is very cost-competitive compared to electricity in the surrounding regional markets (SAPP and EAPP). Exporting electricity could earn the government valuable revenue, further strengthen regional ties, and diversify the economy from mining. Engaging Chinese engineering and construction expertise, as well as financing, could catalyze this effort and further solidify links between the two countries. Additionally, the value of Zambia's renewable electricity could increase substantially with imposition of a global carbon price, as this would make Zambia's hydro (and solar, in the future) increasingly attractive in comparison with traditional coal-dominated electricity in the SADC.
- **Focus on attracting solar energy investments.** Recent investments in hydro, coal, and to a lesser extent solar represent substantial progress toward meeting Zambia's power requirements, and the addition of non-hydro electricity generation should improve the sector's resilience to fluctuation in water levels, and climate change more generally. Yet coal-generated electricity comes with the tradeoff of contributing further to climate change through emissions. This poses the risks of electricity either becoming more expensive with a carbon price, or transferring extra environmental costs to society without a carbon price. With Zambian demand for electricity rising and increasing participation in electricity investments coming from China, Zambia should leverage existing investment relationships to

<sup>52</sup> International Finance Corporation. (2015). Scaling solar initiative.

<sup>53</sup> Bai, J., Polycarp, C., Tan, X., & Zhao, Y. (2013, April).

<sup>54</sup> International Monetary Fund. (2015, June 16). 2015 Article IV consultation.

capitalize on Chinese world-leading experience in solar power generation. With more cost-reflective electricity tariffs, improved links to export markets, and increased solar energy investments from China, Zambia could position itself as southern and eastern Africa’s leading renewable energy exporter.

## [2.2] Transportation Infrastructure, Access, and Regional Integration

### [2.2.1] Context

Zambia's location provides the country with the opportunity to become a transit hub, linking domestic markets in Central, Eastern, and Southern Africa. Zambia’s primary economic center, Lusaka, is more than 1,400 km from the nearest port.<sup>55</sup> The country therefore faces significant barriers constraining market access and international trade. Burdensome checkpoints and regulations and poor infrastructure further contribute to significant transport and trade costs.<sup>56</sup> Yet Zambia shares borders with eight other countries, making it critical for regional transit within a potential market of 230 million people (Table 2.2).<sup>57,58</sup> All of Zambia's neighbors, except Tanzania, are relatively open economies with higher trade as percent of GDP compared to the average for SSA countries. Access to larger regional economies would make Zambia more attractive to market-seeking FDI.<sup>59</sup> Zambia's strategy to market itself as an active exporter to these economies could draw FDI into the country, and potentially aid in the country's progress toward diversifying its economy away from copper dependence.

**Table 2.2: Comparison of Zambia to Regional Economies**

Zambia is home to a neighboring region of 230 million population and relatively open economies

Country	Population (million)	GDP per capita (Current US\$)	Trade % of GDP
Zambia	15.7	1,722	79
Democratic Republic of Congo (DRC)	74.9	440	72
Tanzania	51.8	949	49
Malawi	16.7	255	102
Mozambique	27.2	602	66
Zimbabwe	15.2	896	82
Botswana	2.2	7,123	93
Namibia	2.4	5,589	103
Angola	24.2	5,424	101
<b>SSA Average</b>	<b>10.4</b>	<b>1,774</b>	<b>61.8</b>
Total (excl SSA Average)	230.4	-	-

*Source: World Development Index, World Bank (2014)*

**Zambia faces challenges to regional integration due to inadequate transportation networks.** In Zambia, for certain commodities, costs of transport can add up to almost 60% of the total costs.<sup>60</sup> Tradable goods are transported in Zambia via roads (71% of tradable goods), rail (24%) and the Tanzania Zambia Mafuta (TAZAMA) oil pipeline (5%).<sup>61</sup> As of 2014, Zambia had a network of nearly 68,000 km of public roads, of which 60% were classified as the Core Road Network (CRN).<sup>62</sup> Figure 2.2a shows the breakdown of

<sup>55</sup> Giersing, B., Kunaka, C., & Raballand, G. (2008, January).

<sup>56</sup> According to the “Trade and transport facilitation audit” report done on Zambia by Meeuws (NEA Transport research and training, submitted to the World Bank), the cost of transport is so high that it contributes to almost 60% of the cost of certain commodities.

<sup>57</sup> Lusaka Interviews. (2015, November). Emphasized repeatedly in personal interviews with officials and experts.

<sup>58</sup> Calculated from data obtained via World Development Index, World Bank. (2014).

<sup>59</sup> For more detailed treatment on how market size attracts market-seeking FDI, see for example, Jaumotte, F. (2004, November).

<sup>60</sup> Meeuws, R. (2004).

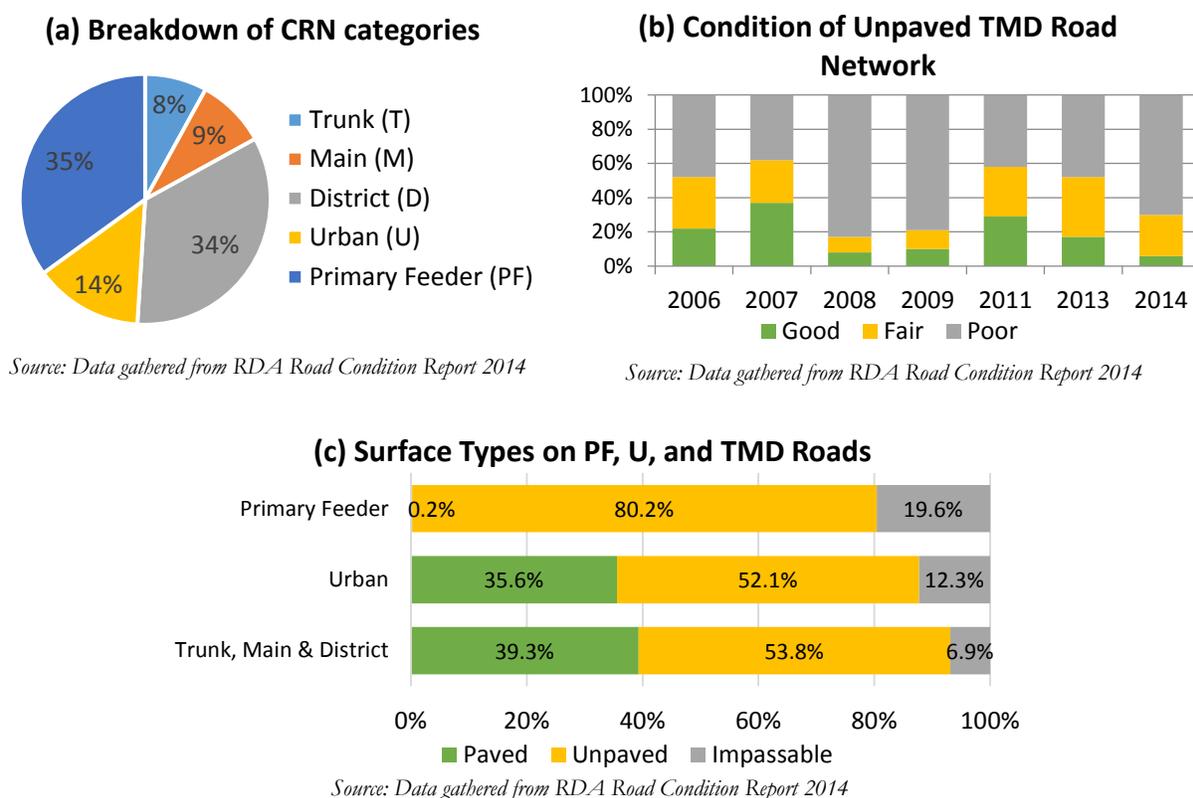
<sup>61</sup> Giersing, B., Kunaka, C., & Raballand, G. (2008, January).

<sup>62</sup> Defined as the “bare minimum network that Zambia requires to be maintained continuously and on a sustainable basis in order to realize its social and economic potential”. See Road Development Agency. (2014).

the CRN.<sup>63</sup> A majority of roads in every category are still unpaved (Figure 2.2c) and the overall quality of unpaved roads has deteriorated since 2011 (Figure 2.2b). For primary feeder roads especially, a 2013 road condition survey of the CRN indicates that 72% of these roads are in poor condition.<sup>64</sup> Many primary feeder roads are important connections to the government’s new farm-block initiatives,<sup>65</sup> and facilitate the transport of produce from farm sites to marketing centers.<sup>66</sup> The state of Zambia’s railways has also deteriorated, due to “poor track condition, lack of locomotive and wagon availability, and low operating capital.”<sup>67</sup> The Minister of Transport, Works, Supply & Communications noted recently that the collapse of Zambia’s railways over the years has “led to most of the heavy loads meant traditionally to be conveyed by rail being conveyed by roads,” thereby adding “tremendous stress” to the CRN and overall road maintenance cost.<sup>68</sup>

**High non-tariff barriers such as procedural delays at borders also raise trading costs in Zambia and present a challenge to regional integration.** In particular, for exports out of the country, it takes approximately 136 hours and 130 hours respectively to comply with border and documentary compliances, compared to average time taken for other SSA countries at 108 and 160 hours respectively.<sup>69</sup>

Figure 2.2: Transport condition in Zambia



<sup>63</sup> Trunk roads function as international highways. District roads connect districts. Main roads connect trunk and district roads (Zambia Institute for Policy Analysis & Research, 2014). Rural feeder roads link agricultural fields to the local markets, and then to the main trunk road (Kingombe, 2009).

<sup>64</sup> Road Development Agency. (2015, January 16). Road maintenance strategy 2014-2024.

<sup>65</sup> Farm blocks are analyzed in much more depth in Section 4 of the report, below.

<sup>66</sup> Road Development Agency. (2015, January 16). Road maintenance strategy 2014-2024.

<sup>67</sup> Zambia Development Agency (2015, July). Infrastructure sector profile.

<sup>68</sup> Mukanga, Y. (2013).

<sup>69</sup> Zambia is ahead of DRC (187), Tanzania (180) and Angola (181). World Bank (2015). *Doing business historical data sets*.

**Road maintenance has been underfunded in Zambia.** Most Zambian roads were built shortly after independence and have received very little maintenance since,<sup>70</sup> as funding allocation to maintenance has fallen significantly short of target levels. It is estimated that at least USD 721 million is needed annually (2012-2016) for maintaining the CRN. However, only 21% of this was allocated in 2014.<sup>71</sup> Delayed maintenance quickly increases future repair costs and user costs. The South African National Road Agency estimates that repair costs after three years of neglect are six times higher than maintenance costs; after five years, this figure rises to 18 times.<sup>72</sup> Roads that are not promptly maintained also become increasingly difficult for drivers to use, and sharply increase fuel and car maintenance costs over time.<sup>73</sup>

**There has been significant Chinese involvement in transport infrastructure in Zambia.** Out of the total 23 work contracts<sup>74</sup> to date for *Link Zambia 8,000*<sup>75</sup>, 16 are contracted to Chinese companies.<sup>76</sup> *Lusaka 400*<sup>77</sup> is 85% financed by a China Exim Bank loan.<sup>78</sup> The Tanzania-Zambia Railway Authority (TAZARA) also recently received four new locomotives and 18 wagons from a Chinese firm to improve service.<sup>79</sup> China's expertise in transport infrastructure, combined with access to funding from Chinese state-owned banks, has made it a key player in Zambia's transport sector.

## [2.2.2] Policy Challenges and Current Momentum

**Having recognized that the constraints of Zambia's transport sector and procedural delays at borders inhibit business activities, the Zambian government has increased funding in transport and launched several key initiatives.** Funding to the road sector has increased from 1.5 trillion kwacha in 2010 to 4.2 trillion kwacha in 2012.<sup>80</sup> The government has launched *Link Zambia 8,000*, *Pave Zambia 2,000*, and *Lusaka 400*, three separate initiatives with a total estimated cost of 36.8 billion kwacha (~USD 3.4 billion). There is also significant investment underway to construct more railways. Last year, the government announced that the state-owned Zambia Railways will build five new lines to connect mining provinces to regional trade corridors,<sup>81</sup> including the 580 km North West Rail project linking Angola to Zambia's Northwest and Copperbelt regions.<sup>82</sup> To reduce border delays, the government of Zambia established the One-Stop Border Post (OSBP) across the Chirundu border into Zimbabwe in 2009. This has reduced the average crossing time for a truck from five days to six minutes.<sup>83</sup>

**The Zambian government started to explore Public-Private-Partnerships (PPPs) as a potential mechanism for infrastructure financing.** To close Zambia's annual infrastructure funding gap of \$500 million,<sup>84</sup> the Parliament in 1999 passed the PPP Act No. 14, providing the basic legal framework for PPPs, which mobilize private sector financing to support public infrastructure development. The types and details of PPPs differ significantly depending on specific sectors and projects. However, the core idea of PPP emphasizes long-term partnership and risk transfer between public and private sector, and a shift from input-based to output-based payment scheme. The shift to an output-based scheme means the client specifies

<sup>70</sup> Road Development Agency. (2015, January 16). Road maintenance strategy 2014-2024.

<sup>71</sup> Ibid.

<sup>72</sup> South African National Road Agency Ltd. (2004).

<sup>73</sup> Burningham S. and Stankevich N (2005, June). 1231943010251/TRN4\_Road\_Maintenance.pdf

<sup>74</sup> Contract types of the biggest size in terms of value. Mostly, these are upgrading, pavement, and realignment projects. The other types of contracts include: "engineering design and preparation of tender documents" and "other road projects." "Other road projects" include rehabilitation of roads, periodic maintenance, bridge and weighbridge construction, construction of toll plazas, and ancillary road works including road signs, road marking and other necessary road furniture.

<sup>75</sup> "Link Zambia 8,000" is a main government-initiated road construction and rehabilitation project, with an estimated cost of K31.42 billion. (RDA, Zambia)

<sup>76</sup> Data gathered from the latest update of "Link Zambia 8,000" contracts released by RDA on February 6<sup>th</sup>, 2015. Road Development Agency. (2015, February 6). Link Zambia 8000 road project update.

<sup>77</sup> "Lusaka 400" is a government-initiated road rehabilitation project in Lusaka, with an estimated cost of K3.8 billion. (RDA, Zambia)

<sup>78</sup> National Road Fund Agency. (2015). Lusaka 400.

<sup>79</sup> Zambia Invest. (2015, November 26).

<sup>80</sup> Road Development Agency. (2012, December). 2013 Road sector annual work plan.

<sup>81</sup> Bariyo N. (2014, July 16).

<sup>82</sup> Tancott, G. (2015, January 26).

<sup>83</sup> Zimbabwe Ministry of Industry and Commerce. (2011, January 31).

<sup>84</sup> World Bank. (2010). Zambia's infrastructure: A continental perspective.

performance or service delivery indicators (e.g. no pothole remaining open for a specified period of time), as opposed to traditional input-based indicators (e.g. number of potholes patched). One key aim is to build in a better incentive mechanism to motivate more attention to maintenance.<sup>85</sup>

**Constraints on government capacity have limited PPP uptake, and PPP is not a panacea for public procurement problems.** The uptake of the PPP endeavor remains limited due to several constraints. Firstly, PPP processes can be cumbersome, with complex financing arrangements, many stakeholders, and extensive legal requirements. Most ministries do not have officials who have the time and skills to fully manage the long PPP project cycle, and the government has not developed any detailed guidelines or manuals to help them. Secondly, the complexity of PPP contributes to high procurement costs, which can reach 5-10% of the capital cost for large projects and do not fall proportionately for small projects.<sup>86</sup> Therefore, the cost effectiveness of PPPs compared to traditional loans need to be carefully evaluated for each project. Finally, ill-justified charges on users could result in public complaints and loss of political support.<sup>87</sup>

**Entering the COMESA-EAC-SADC Tripartite Free-Trade Agreement (FTA) and customs unions (CUs) is likely to be beneficial for further regional integration.** The Zambian authorities' continuous trade liberalization effort has allowed the country to meet both the Common Market for Eastern and Southern Africa (COMESA) and Southern African Development Community (SADC) FTA duty and tariff demands.<sup>88</sup> Today, Zambia is a member of both FTAs. This privileged position allows Zambia to expand duty free trade to countries both north and south of its borders. An agreement to form a Tripartite FTA between COMESA, SADC, and the East African Community (EAC) was signed in 2005 with an overarching objective to harmonize and coordinate various regional integration programs among its members. The Tripartite FTA would potentially be the largest FTA in Africa, and when officially established, would provide Zambia with a significant expansion in trade. In addition, both SADC and COMESA have developed plans to further integrate member countries in a customs union. COMESA member states signed the agreement in 2009<sup>89</sup> and SADC's target was to establish customs union in 2013, but the plan is currently delayed.<sup>90</sup>

### [2.2.3] Recommendations

As with the energy sector, FDI into the transport sector would help improve the sector and facilitate regional integration, creating an enabling environment for attracting more FDI into other sectors. Having recognized the critical role transport plays in the Zambian economy, we recommend the following:

- **Source more financing to the transport sector by attracting Chinese (and other) FDI under PPP frameworks, with tolling and long-term output-based contracts.** Chinese companies already play a major role in Zambia's transportation sector, but they mainly work through engineering contracts. The Zambian government could take advantage of PPPs with tolling arrangements to attract longer-term Chinese FDI. In particular, the Zambian government should deepen the shift from an input-based to an output-based payment structure that depends on performance or service indicators (such as road usage and road conditions), to better incentivize timely and proper maintenance. The impact of road tolling needs to be carefully evaluated in terms of operational costs in proportion to tolling revenues and break-even traffic levels, depending on the specific location and type of roads. In the short term, for roads that pass the economic and social assessment of tolling, the government can expedite construction of toll plazas to use toll revenues as an additional source of financing for maintenance.
- **Improve government capacity to manage PPPs.** As the lead for Zambian government's PPP initiatives, the coordinating unit at the Zambia Development Agency (ZDA) could develop a set of

<sup>85</sup> World Bank. (2009). Toolkit for public-private partnerships.

<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

<sup>88</sup> World Trade Organization. (2009, June 22). Trade policy review.

<sup>89</sup> Common Market for Eastern and Southern Africa. (Web).

<sup>90</sup> Southern African Development Community. (Web). Customs Union.

standard process guidelines, bidding documents templates, and practical manuals to be made available for all contracting authorities. ZDA could consider submitting funding requests to development agencies to ask for technical assistance from public procurement and PPP specialists. These specialists could be seconded to ZDA and contracting authorities to provide training for the details of PPP financing and project management.

- **When considering integration into COMESA or SADC customs union, ensure that the eventual common external tariff (CET) framework is not prohibitive towards imports of materials necessary to build infrastructure and a manufacturing base for exports.** Both member states of COMESA and SADC committees have agreed to move to deeper integration into customs unions. At minimum, members of a customs union have to adopt a CET against any goods imported from non-member states. Because one country by definition can only have one CET, the Zambian government would eventually have to decide whether to maintain membership in the SADC or the COMESA customs union.<sup>91</sup> A CET framework conducive to material and capital imports would ensure the country has access to the necessary resources for building the infrastructure required to attract manufacturing-based Chinese FDI.

## [2.3] Manufacturing and Special Economic Zones

### [2.3.1] Context

**Manufacturing is a relatively small segment of Zambia’s overall economy.** Manufacturing accounts for roughly 11% of the country’s GDP, based on the latest figures available from ZDA. According to the ZDA, the country’s most important manufactured products by far are food and beverages, which account for nearly two thirds of all manufacturing, followed by textiles, leather, wood products, paper products, and chemicals and plastic products.<sup>92</sup>

**Special Economic Zones (SEZs) are aimed at attracting investments to expand the economy into other sectors including manufacturing.** The World Bank defines SEZs as “geographically delimited areas administered by a single body, offering certain incentives... to businesses, which physically locate within the zone.”<sup>93</sup> Zambia introduced Multi-Facility Economic Zones (MFEZs) under the ZDA Act No. 11 of 2006 intended to be a combination of free trade zones, export processing zones and industrial parks.

**Chinese-led SEZs across Africa have primarily focused on manufacturing, except in Zambia.** China has become an active leader in the establishment of SEZs abroad, in large part to establish attractive destinations for outgoing Chinese investment and trade.<sup>94</sup> In 2006 and 2007, as part of an Africa-wide initiative to increase Chinese engagement on the continent, the Chinese government officially announced seven Chinese-led SEZs in Africa: two in Nigeria, and one each in Egypt, Ethiopia, Mauritius, Zambia and Algeria.<sup>95</sup> The primary Chinese-led SEZ in Zambia, Chambishi, is located in the Copperbelt, and has led to a second Chinese-led “subzone,” neighboring the Lusaka airport. The primary focus in the Chambishi SEZ is copper extraction and mineral processing, but nearly every other major Chinese-led African SEZ focuses instead on manufacturing and construction. Given this orientation towards manufacturing, Chinese FDI holds promise for bring manufacturing investments into Zambia.

**Chinese-led SEZs in Egypt, Nigeria and Ethiopia appear promising in terms of attracting investment and generating employment.** The Chinese SEZ in Egypt, neighboring the Suez Canal, is a

<sup>91</sup> Edwards, L., & Lawrence, R. (2012).

<sup>92</sup> Zambia Development Agency. (2014, August).

<sup>93</sup> Akinci, G., & Crittle, James. (2008, April).

<sup>94</sup> Brautigam, D., & Tang, X. (2014, November 1).

<sup>95</sup> Chen, W., Dollar, D., & Tang, H. (2015, August).

particularly successful case of a Chinese SEZ in Africa. Two zones in Nigeria – the Lekki Free Trade Zone and the Ogun-Guandong Free Trade Zone, each designated just seven years ago<sup>96</sup> – have together attracted more than 70 firms,<sup>97</sup> and an Ethiopian SEZ has drawn 12 firms.<sup>98</sup>

**Table 2.3: Highlighted Chinese-led SEZs in Africa**

SEZ	Zone Constr. Investment (\$ million)	No. of Companies Signed	No. of Companies in Operation	Company Commitments to Invest (\$ million)	Company Actual Investment (\$ million)	Approx. no. of Chinese Workers	Approx. no. of African Workers
Egypt TEDA	93.42	58	38	610	357.6	N/A	Nearly 2000
Zambia Chambishi	170	45	26	1300	322	1372	Over 8000
Nigeria Lekki	82.5	30	8	700	76	N/A	300
Mauritius Jinfei	38.31	5	0	N/A	N/A	N/A	N/A
Nigeria Ogun	23.7	40	19	150	58.28	200-300	4250
Ethiopia Eastern	88.9	25	10	192.4	159.2	390	4975

*Source: Tang, X. (2015, July 10)*

**Despite difficulties in assessing success, several factors appear to contribute to job-creation in Chinese-led African SEZs.** Given SEZs have not been around for long, it is difficult to conclusively assess their success. One recent examination of SEZs in Africa pointed out that many SEZs have failed because of poor management, design, maintenance, and limited promotion.<sup>99</sup> However, a few common themes across promising Chinese-led African SEZs suggest some facilitating factors:

- **Strong political and financial backing by host and sponsor governments.** In Egypt, the China Africa Development Fund (CADF) invested extensively in the Egypt Suez Cooperation Zone and at the same time, the Egyptian government passed legislation supporting the zone’s development.<sup>100</sup> In Nigeria, the CADF is the second biggest shareholder in Nigeria’s Lekki SEZ.<sup>101</sup> Developers in Ethiopia’s zone were able to get a loan from the Export-Import Bank of China.<sup>102</sup>
- **Management experience with SEZs.** Egypt and China both contracted TEDA Investment Holdings, described as “the developer of one of China’s top-performing SEZs.”<sup>103</sup> China has invited officials from across Africa to attend workshops on SEZ management best practices, in an effort to build capacity and accelerate knowledge-transfer for a range of African governments looking to enhance their SEZ outcomes.
- **Infrastructure support by host country.** Across Africa, SEZ success is likely correlated with infrastructure support by the host country. In Egypt, for instance, “the Egyptian government provided power lines and other infrastructure up to the border of the Suez zone,”<sup>104</sup> and the SEZ there benefits from its co-location with Egypt’s new deep water Sokhna port.<sup>105</sup> In Nigeria, successful zones stand to

<sup>96</sup> Nigeria Export Processing Zones Authority. (2015).

<sup>97</sup> Zeng, D. Z. (2015, April).

<sup>98</sup> Ibid.

<sup>99</sup> Barton, S. (2014).

<sup>100</sup> Brautigam, D., & Tang, X. (2011, March).

<sup>101</sup> Zeng, D. Z. (2015, April).

<sup>102</sup> Brautigam, D., & Tang, X. (2014, November 1).

<sup>103</sup> Brautigam, D., & Tang, X. (2011, March).

<sup>104</sup> Ibid.

<sup>105</sup> Zeng, D. Z. (2015, April).

benefit from the Apapa Port, Lagos airport, and Lekki Port, while the Ethiopian zone is strategically positioned along a central highway towards Port of Djibouti.<sup>106</sup>

- **Clear and consistent legal framework and management structure.** Unsurprisingly, SEZs seem to benefit from tax, regulatory and other policy consistency over time, creating a predictable climate for prospective investors. One study of Nigeria’s SEZs found that an inconsistent legal and regulatory framework had clearly discouraged further investment in many of that country’s zones.<sup>107</sup> In addition, a management structure that mixes buy-in from domestic stakeholder industries with a clear controlling interest from a manager with previous experience running an SEZ – as was the case in Egypt – looks like a promising combination.
- **A focus on domestic labor.** A number of successful Chinese-led SEZs in Africa are drawing substantial investment from Chinese and other firms, but maintain rigorous safeguards on the mix of foreign and domestic labor in those zones. In the Egyptian zone, only one work permit is allowed for every nine employed Egyptians, and at present only about 5% of the local workforce in the Zone is Chinese.<sup>108</sup> This example suggests that a focus on domestic employment in these zones is not incompatible with attracting FDI.

### [2.3.2] Policy Problems and Current Momentum

**Zambian SEZs aim to draw foreign investment through several strategies, with a focus on favorable tax and trade policy.** Zambia permits duty-free imports of both supplies and capital equipment for all foreign investors operating in its SEZs,<sup>109</sup> exempting them from a 25% customs duty. They are also exempt from paying Zambia’s 16.5% value added tax. To qualify for these benefits, firms must invest at least \$500,000 in the zone.<sup>110</sup>

**Chambishi SEZ has successfully attracted mining-related Chinese FDI.** Chambishi hosts 20-30 producing factories.<sup>111</sup> In 2012, it was “singled out by the Chinese government as the zone with the “best development, fastest progress, most standard management and most beautiful environment” among all the 19 approved overseas cooperation zones.”<sup>112</sup> The zone has benefited from close collaboration with the ZDA, as well as seminars and training trips to visit successful zones in China.<sup>113</sup> It has followed many of the best practices outlined above, including infrastructure, support from both the sponsor and host governments, relatively consistent regulations since 2006 (with some exceptions), and management familiarity with SEZ best practices. However, the zone focuses on mining and minerals processing, and not non-copper manufacturing, which would help Zambia’s diversification.

**Outside the Copperbelt, Zambia’s other SEZs have been slow in operationalizing, including those focused on manufacturing.** Lusaka East (also called the Zambia-China Cooperation Zone, or ZCCZ), the Chinese subzone to the Chambishi enterprise located by the Lusaka airport, was established in 2009.<sup>114</sup> By late 2012 it was still in “very early stages of development with only ground clearing and road building complete.”<sup>115</sup> In late 2015, it had still not attracted any substantial investment. The Lusaka South zone (not Chinese-led) was initiated nearly a decade ago but to date, only two relatively small foreign firms have

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<sup>106</sup> Ibid.

<sup>107</sup> Ibid.

<sup>108</sup> Ibid.

<sup>109</sup> Kragelund, P. (2009).

<sup>110</sup> Brautigam, D., & Tang, X. (2014, November 1).

<sup>111</sup> Chen, W., Dollar, D., & Tang, H. (2015, August).

<sup>112</sup> Brautigam, D., & Tang, X. (2014, November 1).

<sup>113</sup> Ibid.

<sup>114</sup> Alves, A. C. (2011, December).

<sup>115</sup> Barton, S. (2014).

invested in it.<sup>116</sup> It is not clear why these zones have drawn in much less investment – in part, it could be that they are newer than the Chambishi zone.

**Table 2.4: Special Economic Zones in Zambia**

Zone	Launch Year	Developer	Developer's Country	Zone Focus
Chambishi (MFEZ)	2006	China Nonferrous Metals Corporation	China	Mineral Processing
Lusaka East (MFEZ)	2009	China Nonferrous Metals Corporation	China	Light manufacturing activities and services
Lusaka South (MFEZ)	2010	Japanese International Cooperation Agency and the Malaysian Kulip Hi-Tech Park	Japan and Malaysia	Hi-tech industries, research and development
Lumwana (MFEZ)	2010			Light and heavy industries
Roma (industrial park)	2010	Interspan Sales Corporation	South Africa	Light industries and retail park
Sub Saharan Gemstone Exchange (industrial park)	2010			Gemstone related business and mineral processing business

*Source: Ministry of Commerce, Trade and Industry of Zambia; OECD Investment Policy Review of Zambia.*

**Zambia has struggled to create adequate forward and backward linkages between its SEZs (as well as other forms of FDI) and the local economy. This is in part of a function of the capacity of domestic industry.** As is the case more broadly in Africa, Tang writes, “currently, the biggest obstacle to the Chinese zones in Africa maximizing their impacts is the lack of local linkages.” A study notes that, in the case of MFEZ investments and other instances of foreign investment, the Zambian government “has not requested foreign investors to link up with local producers...Even though Chinese companies indeed wanted to work closely with local companies...they would need to supervise sub-contractors very closely to meet even the minimum standards required.”<sup>117</sup>

### [2.3.3] Recommendations

As part of a broader strategy of diversification, we recommend the Zambian government develop their SEZ strategy to diversify and draw additional FDI into the manufacturing sector, including that from China.

- **Establish a Zambian SEZ taskforce to articulate and implement a Zambian manufacturing SEZ strategy.** We recommend that the Zambian government establish a taskforce to formulate a unified SEZ strategy, with representation from all government departments with a stake in the issue. This taskforce could liaise with the sponsor government, prospective investors, and other African countries that have successfully drawn manufacturing FDI into their SEZs, in order to formulate recommendations to revise and restructure the Lusaka East and South SEZs as necessary in order to accelerate foreign manufacturing investment.
- **Improve Zambia manufacturing SEZs based on other successful SEZs.** As described above, some common factors contributed to the success of Chinese-led SEZs in Africa. Zambia’s own Chambishi zone also exhibits success factors. These best practices could increase manufacturing investments in SEZs by actively engaging with sponsor governments and private investors to ensure strong political and financial backing, and by seeking out experienced managers to improve functioning of the SEZs. Zambia is well positioned to utilize its own human capital, using its experience in the Copperbelt to help other zones succeed.

<sup>116</sup> Personal interviews with Zambian Officials, Lusaka. (2015).

<sup>117</sup> Kragelund, P. (2009).

- **Commit to long-term legal, regulatory, tax and other policies** in these SEZs, enabling prospective investors to plan. If possible, all political parties should jointly commit to these conditions, reducing the perceived risk to investors from future electoral swings.

## [2.4] Agriculture and Farm Blocks

### [2.4.1] Context

**Given the potential for increased agricultural output and the importance of agriculture to the Zambian labor force, the government is prioritizing agriculture as a means of driving diversified growth.** Agricultural output is far below what is possible. According to the ZDA, 58% of Zambia’s land area has medium to high agricultural potential, but only 14% of agricultural land is currently in use.<sup>118</sup> Agriculture represents roughly 20% of total Zambian GDP and 10% of its total exports,<sup>119</sup> yet it employs over 70% of Zambia’s population.<sup>120</sup> The great majority engages in subsistence farming, accounting for 60% of Zambia’s population that continues to live at or below the poverty line.<sup>121</sup> In interviews in Lusaka, Zambians repeatedly mentioned agriculture as a promising area of focus for diversification.

**China’s involvement in agriculture in Zambia has evolved over time from large SOEs to private farms.** Since the early 1990s, Chinese agricultural investments have flowed into Zambia. Some have been large-scale Chinese investments with sizes above 500 hectares. The largest is Jonken Farm, owned and operated by China National Agricultural Development Group Corporation. However, since the late 2000s, investors have shifted to include entrepreneurial private individuals and firms. As of 2015, there are only two Chinese state-owned farms in Zambia but approximately 30 private Chinese farms. The more recent, smaller investors are diverse and independent.<sup>122</sup>

**Chinese investment in agriculture remains fairly limited, with limited spillovers.** Agriculture is not a priority for the Chinese government compared to mining and construction. The earlier era of Chinese state-owned farms hired a moderate level of Zambian labor. In the SinoZam Friendship Farm, for instance, 130 Zambians were employed and only 4 Chinese nationals.<sup>123</sup> Data is difficult to obtain, but reports suggest that the recent wave of Chinese farmers, in contrast, are self-reliant and produce at a small scale. Most do not have background in farming and learn the art in Zambia,<sup>124</sup> thus not bringing in as much potential for technological transfer as their larger-scale counterparts.

### [2.4.2] Policy Challenges and Current Momentum

**The farm block program is a major initiative at the center of the Zambian government’s current strategy to modernize and increase investment in its agricultural sector.** As early as 2006, the Zambian government designated land for the farm blocks, setting aside at least 100,000 hectares in nine out of Zambia’s 10 provinces.<sup>125</sup> Each block was designed to have “at least one core large-scale farm (core venture) of 10,000 hectares,” to be complemented by many commercial farms of 1,000 to 5,000 hectares and smallholdings – farms of 30 to 300 hectares preferably under out-grower arrangements.<sup>126</sup> The Oakland Institute, a think tank with agricultural development expertise, writes, “a farming block is envisaged to be a

<sup>118</sup> Zambia Development Agency. (2014). Agriculture sector leaflet.

<sup>119</sup> Ibid.

<sup>120</sup> World Bank. (2014). Zambia profile.

<sup>121</sup> World Bank Databank. (2015). World development indicators.

<sup>122</sup> Chatelard, S. F., & Chu, J. M. (2015, January).

<sup>123</sup> Hairong, Y., & Sautman, B. (2010).

<sup>124</sup> Chatelard, S. F., & Chu, J. M. (2015, January).

<sup>125</sup> United Nations Conference on Trade and Development. (2011, March 31).

<sup>126</sup> Zambia Development Agency. (2011). Agriculture, livestock and fisheries sector profile.

large agricultural area where basic infrastructure for agriculture such as feeder roads, electricity, water for irrigation and communication facilities are provided. To justify the large expense involved in infrastructure development in the farm block, the area involved must be sufficiently large so as to achieve economies of scale.”<sup>127</sup>

**The Zambian government hopes the farm block initiative will attract FDI, including from China, to drive growth in the agricultural sector.** With so much underutilized arable land, and exports so low relative to the allocated labor force, increasing cash crop production bears potential for foreign investment. A key purpose of the Zambian government farm block initiative, based on interviews in Lusaka, is to jumpstart agricultural FDI, harnessing foreign capital to accelerate the government’s diversification strategy. Zambia hopes that in the coming years, FDI in these farm blocks could accelerate the Zambian agricultural sector, boost employment and increase cash crop exports.

**However, the farm block initiative has been delayed due to planning issues and low levels of investor interest.** With plans for farm blocks established as early as 2003, the program has yet to see results. The 155,000 hectare Nansanga farm block in Central province, the first block to be tendered on the open market, saw a lackluster response from investors. The Oakland Institute noted that “the first farm block venture of Nansanga has been plagued by planning problems, delays in infrastructure development, controversies over displacement, and lower than expected interest from investors, with just two firms submitting final bids on the core venture/commercial farms” and that at Nansanga “there appears to have been little detailed planning or consultation with impacted stakeholders or communities.”<sup>128</sup>

**The remaining Zambian farm blocks have likewise experienced repeated delays particularly in infrastructure development.** Limited access to infrastructure, such as transport and electricity, has been one of the most salient constraints faced by the agricultural sector. Inadequate irrigation has resulted in a heavy reliance on rain-fed agriculture.<sup>129</sup> Poor storage facilities have resulted in post-harvest wastage.<sup>130</sup> The Luena and Luswishi farm blocks are still undergoing construction. A European Union report on electrification noted that in the electrification project for farm blocks, the project implementation is experiencing serious delays, with issues on contracting and cost estimates.<sup>131</sup> In 2014, a government report noted that 353 medium and smallholder plots were allocated to Zambian citizens, but were mostly inactive because they were relying on an out-grower scheme with a core venture investor. The core investor that won the tender withdrew its plans before negotiations were completed.<sup>132</sup> With the current energy crisis, there will likely be more delays in developing infrastructure around farm blocks.

**There are also concerns that the farm blocks may not benefit Zambia at large, warranting policy interventions to ensure positive spillovers.** Some researchers have criticized the farm block initiative. Some have also expressed concern that schemes to increase agricultural FDI may prove extremely beneficial to outside investors, without creating a policy framework allowing the host country to adequately leverage the investment into agricultural modernization. Making this argument in a 2009 OECD paper, David Hallam expresses concern that “these benefits will not flow if investment results in the creation of an enclave of advanced agriculture in a dualistic system with traditional smallholder agriculture and which smallholders cannot emulate. The necessary conditions for positive spillover benefits may often not be present in which case policy interventions are needed to create them.”<sup>133</sup>

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<sup>127</sup> The Oakland Institute. (2011).

<sup>128</sup> Ibid.

<sup>129</sup> Dinh, H. T. (2013, June).

<sup>130</sup> Ngosa, S. (2013, June 28).

<sup>131</sup> Cleary, S., & Karhammar, R. (2013, July).

<sup>132</sup> Committee on Government Assurances. (2014, September 24).

<sup>133</sup> Hallam, D. (2009, December).

### [2.4.3] Recommendations

The Zambian government believes that diversified growth involves a more vibrant agricultural sector that is able to attract FDI, including from China. In order to realize the vision driving the farm block initiative, we recommend the following strategic approach to attract foreign investment to farm blocks, and to maximize benefit to Zambian farmers.

- **Conduct a thorough evaluation of Nansanga, and identify how to improve going forward.** Given the delays in program implementation, an evaluation of Nansanga could shed light on the reasons behind the low level of interest from foreign investors. Delays in infrastructure development should also be investigated to avoid problems experienced in other farm blocks. The results should help guide the ministries involved in determining factors that would attract increased foreign investment.
- **Consider following through with investments in access roads, irrigation and other infrastructure upgrades one farm block at a time.** Without the full range of infrastructure and investment ecosystem in place, the farm blocks will not be able to function as intended, as experienced in Nansanga. Given budget constraints, previous challenges in infrastructure construction, and the current energy crisis, the government should consider focusing its resources on developing one farm block at a time. In this process, the government should examine the cost-benefit of establishing the infrastructure for each farm block. The government may find that it is more beneficial to ensure full development of fewer farm blocks than partial development of all blocks, although they will have to consider the political ramifications of preferring some provinces to others.
- **If the government does continue to proceed with the farm block strategy, pursue a plan that more clearly addresses ongoing critiques over domestic linkages.** Given the need for increased investment in and modernization of the agriculture sector as part of a comprehensive diversification strategy, we believe the farm block strategy is worth pursuing further, especially in the absence of viable alternative financing options. But the Zambian government should articulate a clearer strategy to ensure that foreign acquisition of farm block land will yield benefits for small farmers, increase local employment, and modernize the domestic agriculture sector. This entails a strategic approach to identifying investors and agricultural outputs that have potential for forward linkages instead of having a free-for-all scheme.
- **Track foreign investments and create clear and consistent policies to maximize benefits for the local economy.** First, the government should track foreign investments in agriculture, particularly the emergent group of private Chinese farmers, to guide its policy analysis. As part of a strategy of ensuring forward and backward linkages between outside investors and domestic agricultural producers, the government should promulgate consistent requirements that are clear and predictable to foreign investors.

## [2.5] Business Environment

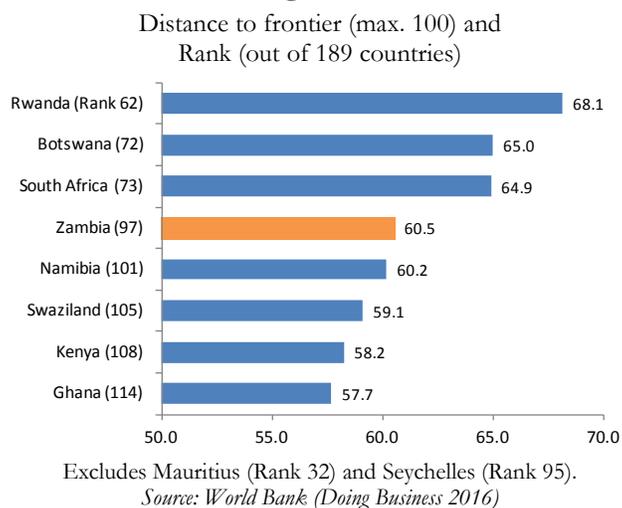
### [2.5.1] Context

**Over the last decade, Zambia has undertaken significant steps to improve its business environment.** Since 2005, the Private Sector Development Reform Programme (PSDRP) has promoted initiatives to reduce the cost of doing business, such as the establishment of the One Stop Shop for business registration; the establishment of electronic business licenses registry (e-registry); and the elimination of 93 out of 170 licenses to start and operate a business.<sup>134</sup> As a result of these measures, the number of days to start a business has

<sup>134</sup> Private Sector Development Reform Programme. (2013, March).

reduced from 35 days in 2005 to 7.5 days in 2015<sup>135</sup>. In addition, ZDA Act No. 11 in 2006 established new investment policies, such as the right to repatriate 100% of net profits and investment incentives by amount and sector.<sup>136</sup> The creation of the ZDA in 2007 centralized investment promotion and facilitation, by merging five statutory bodies related to investment.

**Figure 2.3: Top 8 SSA Countries with the Highest Ease of Doing Business**



Compared to other countries in the region, Zambia has lower costs of starting a business, lower taxes and is more open to foreign ownership of companies, which attract foreign investors. The PSDRP reforms have contributed to make Zambia the country in SSA with the highest ease to start a business, according to the *Doing Business 2016*. Zambia also ranks second highest in SSA in the ease of paying taxes, since it has low tax rates.<sup>137</sup> However, the inconsistency of tax related policies and the lack of transparency in the issuance of tax incentives remain challenges.<sup>138</sup> In addition, Zambia, Ghana and Rwanda are among the countries in SSA that are fully open to foreign ownership of companies in different economic sectors, according to the *Investing Across Borders Index*.<sup>139</sup> However, in October 2015, the Zambian government introduced Reservation Schemes that limit foreign ownership in four sectors to promote domestic investment, which is discussed in section 3.2.

**Despite improvements in business environment, Zambia's high costs for accessing land and enforcing contracts are obstacles to attracting foreign investment.** The World Bank's Enterprise Survey showed that investors identify access to land as one of the main obstacles for investment in Zambia.<sup>140</sup> Registration of property in Zambia costs 13.5% of the property value and takes 45 days, higher than in neighbor countries such as Zimbabwe (7.6%, 36 days) and Mozambique (5.3%, 40 days).<sup>141</sup> Moreover, Zambia lags behind in the ease of enforcing contracts and resolving disputes. According to Ahlquist and Prakash (2009),<sup>142</sup> FDI to developing countries is associated with lower contract enforcement costs. The number of days required to resolve a dispute in Zambia is 611 days, higher than in neighbor countries such as

<sup>135</sup> World Bank. (2015). *Doing business historical data sets*.

<sup>136</sup> Zambia Development Agency. (2012). Zambia's investor guide.

<sup>137</sup> World Bank. (2015). *Doing business 2016*.

<sup>138</sup> International Monetary Fund. (2015, June 16). Zambia: Selected issues.

<sup>139</sup> World Bank Group. (2010). *Investing across borders*.

<sup>140</sup> World Bank Group. (2013). *Enterprise surveys*.

<sup>141</sup> World Bank (2015). *Doing business 2016 data sets*.

<sup>142</sup> Ahlquist, J., & Prakash, A. (2010, June).

Malawi (432 days), ma (460 days) and Tanzania (515 days).<sup>143</sup> Others factors such as limited access to electricity and high costs of trading across borders also represent obstacles for investment.

**Table 2.5: Business Environment Indicators in which Zambia Has Performed Well**

Country	Time to Start a Business Number of days	Total Tax Rate % of profits	Foreign Equity Ownership Index 100=Full foreign ownership
Angola	36	21.7	89
Botswana	48	25.1	
DRC	11	54.6	94
Ghana	14	32.7	100
Kenya	26	37.1	93
Malawi	38	34.5	
Mozambique	19	36.1	92
Namibia	66	21.3	
Rwanda	5.5	33.0	100
South Africa	46	28.8	88
Tanzania	26	43.9	96
<b>Zambia</b>	<b>7.5</b>	<b>18.6</b>	<b>100</b>
Zimbabwe	90	32.8	
<b>SSA average</b>	<b>26.8</b>	<b>46.5</b>	<b>94</b>

*Source: World Bank (Doing Business 2016; Investing Across Borders 2012).*

**Investors face lengthy procedures to acquire customary land, which represents most of the land in Zambia.** Title (or state) land comprises 6% of Zambia’s land and is zoned into residential, commercial or industrial use; the remaining 94% is customary land, and is under the jurisdiction of traditional chiefs. Title land can be leased for up to 99 years (plus renewals); obtaining the 99-year lease typically takes 2 to 3 years.<sup>144</sup> Customary land can be converted to title land, but this requires investors to negotiate with traditional chiefs and seek approvals from District Council and the Director of National Parks and Wildlife.<sup>145</sup> In addition, there is no consistent treatment of investors since traditional chiefs often allocate land to investors arbitrarily.<sup>146</sup>

**Despite tax incentives to promote investments, inconsistent tax policies and the high costs of meeting some requirements to receive tax incentives could discourage investment.** The ZDA Act of 2006 establishes a wide range of incentives for investments above \$500,000 in MFEZs or in a priority sectors<sup>147</sup>. These include tax-free dividends, profits and import duties in the first 5 years. However, investors seek stability and predictability in polices perhaps more than tax incentives themselves. In recent years, there have been tax policy inconsistencies. In 2013 the government tightened the enforcement of documentation requirements on Value-Added Tax (VAT) refunds, but then in 2015 the requirements were eased.<sup>148</sup> In addition, the issuance of tax incentives involves a long process with four separate government institutions approving tax incentives: ZDA, Ministry of Finance and National Planning, Ministry of Commerce, Trade and Industry, and Zambia Revenue Authority (ZRA).<sup>149</sup> According to the OECD, the incentives are “costly to administer and invite corrupt practices on the part of the tax administration officials with power to grant

<sup>143</sup> World Bank. (2015). *Doing business 2016 data sets*.

<sup>144</sup> United States Agency for International Development. (2010).

<sup>145</sup> Zambia Development Agency. (2012). *Zambia’s investor guide*.

<sup>146</sup> The Oakland Institute. (2011).

<sup>147</sup> Zambia Development Agency. (2012). *Zambia’s investor guide*.

<sup>148</sup> International Monetary Fund. (2015, June 16). *Zambia: Selected issues*.

<sup>149</sup> Policy Monitoring and Research Centre. (2014, November).

or deny them. The process of registering with the ZDA to obtain investment in certain priority sectors can be a lengthy bureaucratic process, thus costly for both the administration and the investor.<sup>150</sup>

**Table 2.6: Business Environment Indicators in which Zambia Needs to Improve**

Country	Cost of Registering Property % of property value	Time to Resolve Dispute Number of days
Angola	2.9	1,296
Botswana	12.0	625
DRC	9.5	610
Ghana	1.1	710
Kenya	4.2	465
Malawi	1.8	432
Mozambique	5.3	950
Namibia	13.7	460
Rwanda	0.1	230
South Africa	6.4	600
Tanzania	4.4	515
<b>Zambia</b>	<b>13.5</b>	<b>611</b>
Zimbabwe	7.6	410
<b>SSA average</b>	<b>8.3</b>	<b>653</b>

*Source: World Bank (Doing Business 2016).*

## [2.5.2] Policy Challenges and Current Momentum

**In order to promote investment, the Government of Zambia has established areas where investors can have ready access to land.** These include farm blocks, MFEZs, and industrial parks, all of which are intended to promote investment in agriculture and manufacturing. In addition, the government has established land banks, which set aside land for different investment purposes. Currently, there are nine farm blocks, four MFEZs and two industrial parks. The challenges of MFEZs and farms blocks in attracting FDI are discussed in sections 2.3 and 2.4, respectively.

**Measures to improve land information systems and reduce the centralization of land registration procedures would reduce time and costs of investor land acquisition, but property transfer taxes remain high compared to other SSA countries.** Given that most of the land in Zambia has not been surveyed and mapped, and where this has been done records are usually outdated, in 2014 the government launched the Zambia Integrated Land Management and Information System (ZILMIS). This system aims to improve certainty of land location and its ownership, and support the processing and issuance of new leases and title deeds. The system was refined and rolled out to different provinces in 2015 in expectation of expanding further.<sup>151</sup> In addition, the Ministry of Lands has opened regional and provincial offices in an effort to decentralize the registration procedures and ease land acquisition for investors.<sup>152</sup> According to the Doing Business 2016, registration of property in Zambia costs 13.5% of the property value, above the SSA average of 8.3%. One of the factors that influence this cost is the property transfer tax, which in 2016 will be reduced to 5% of sales value from 10% in 2014-2015.<sup>153</sup> Nevertheless, this tax continues to be higher than Zambia's neighbors: Tanzania (0.15%), Malawi (1.5%), South Africa (1.7%) and DRC (3.0%).

**The tightening in the documentation requirements on VAT refunds is a recent example of policy inconsistency that increased both the cost of obtaining refunds for investors and the cost of**

<sup>150</sup> Organisation for Economic Cooperation and Development. (2011). Investment policy review of Zambia.

<sup>151</sup> National Assembly of Zambia. (2014, November 25).

<sup>152</sup> United Nations. National report: Zambia.

<sup>153</sup> Zambia Revenue Authority. (2015). Budget 2016.

**administration for the government.** In 2013 the government started requiring proof of payment into the domestic bank account of exporters, and enforced the requirement of proof from the importing country's customs authority. The process was complicated because the ownership of goods, such as mining products, change multiple times before reaching their final destination. As a consequence, the outstanding VAT refunds claims increased from 1% of GDP in 2013 to 3% in 2014, and the government has not resolved these claims. In February 2015 the documentation requirements were eased and now exporters are allowed to provide documentation from the country of transit instead of final destination. The IMF compared VAT refunds documentation requirements in other commodity exporters and found that no country in the sample required proof from the importing country's custom authority, or proof of payment into the domestic bank account of the exporter.<sup>154</sup>

### **[2.5.3] Recommendations**

The Government of Zambia has made great progress towards improving the business environment in Zambia, but further gains could be made, particularly in the realm of access to land and tax policy consistency. We recommend the following:

- **Continue the efforts to reduce time and costs of land registration and explore further improvements.** The launch of ZILMIS and the opening of decentralized offices of the Ministry of Land contribute to reduce the costs of acquiring land and therefore, help to attract more investment. However, other costs such as the property transfer tax are still high compared to other countries in SSA. The government should undertake a cost-benefit analysis of land related taxes, and establish if there is space for further reductions, without compromising fiscal sustainability.
- **Establish consistent tax related policies that contribute to a stable and predictable investment environment.** According to the OECD, large-scale investors seek stability and predictability.<sup>155</sup> When determining new tax-related regulations, the implementation costs to investors and the administrative costs to public institutions must both be carefully weighed against the likely benefits of the new regulations.

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<sup>154</sup> International Monetary Fund. (2015, June 16). Zambia: Selected issues.

<sup>155</sup> Organisation for Economic Cooperation and Development. (2011).

## SECTION 3: MANAGING RISKS OF CHINESE FDI

This section examines the risks to Zambia associated with increasing flows of Chinese FDI, and recommends policies that can most effectively mitigate these risks. Relevant risks include business cycle synchronization, crowding out of local small and medium enterprises, tax avoidance and evasion, and changing labor relations.

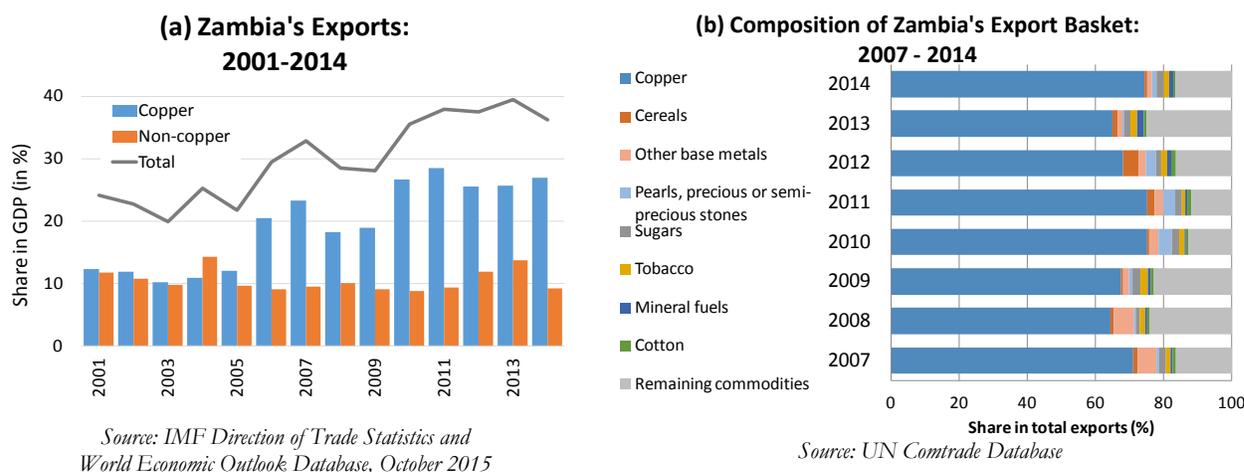
### [3.1] Business Cycle Synchronization

#### [3.1.1] Context

While Chinese FDI represents an opportunity for Zambia to augment the government's diversification efforts, a high dependence on Chinese FDI might increase the degree of synchronization between the two countries' business cycles. This increased interconnectedness may benefit Zambia during good times but it increases Zambia's vulnerability to negative fallouts from a slowdown in China. The risk is amplified by the potential increase in trade ties between the two countries as a result of higher resource-seeking Chinese FDI in Zambia.

While Zambia's exports have rapidly picked up in the last decade, the country has become more dependent on copper and a few trading partners, leaving it vulnerable to destabilizing effects. Zambia's exports increased almost tenfold between 2001 and 2014, which boosted exports as a share of GDP from 23% in the early 2000s to around 38% in the recent years (Figure 3.1a). The impressive expansion in exports was driven by the sustained boom in commodity prices, particularly copper, which accounted for more than 70% of the country's exports between 2010 and 2014 up from an average share of 50% in the first half of the 2000s (Figure 3.1b).<sup>156</sup> This increased reliance on one commodity for export earnings has heightened the country's dependence on copper for foreign currency proceeds. As of 2013, foreign currency proceeds from copper exports rivaled those from non-copper exports, total FDI inflows and total aid inflows combined.<sup>157</sup> Furthermore, for the last five years, more than 70% of Zambia's exports went to only three countries – Switzerland, China and South Africa (Figure 3.2a). This concentration in trade partners further exacerbates the country's export concentration risks.

Figure 3.1: Zambia's Exports Remain Dominated by Copper

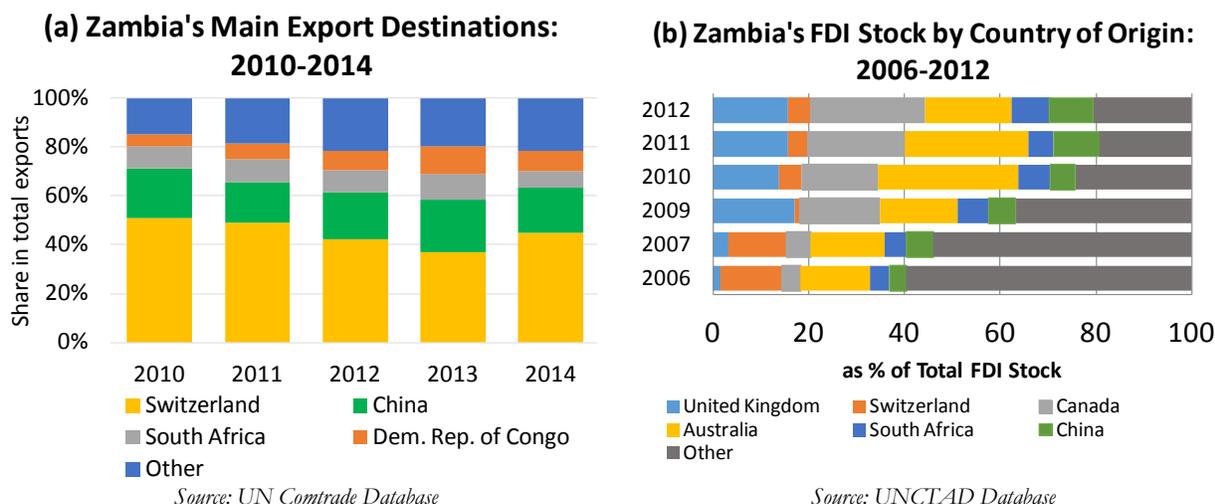


<sup>156</sup> Data obtained from the UN Comtrade Database.

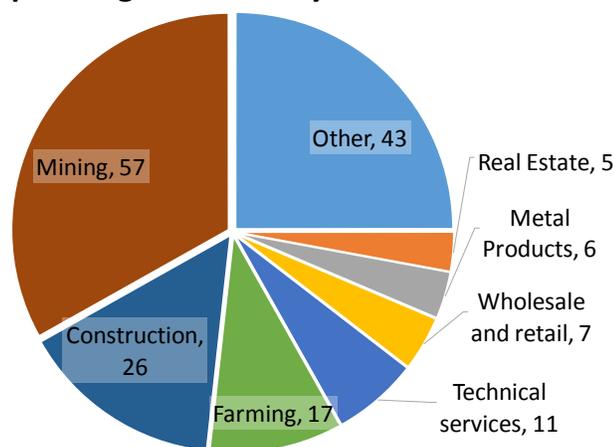
<sup>157</sup> Based on authors' calculations using data from UN Comtrade Database and World Bank DataBank.

The recent strengthening of trade and investment ties with China has helped Zambia diversify its economic partners. The relationship between the two countries, however, is dominated by copper, which erodes the benefits from this diversification. China has become a relatively significant player in the Zambian economy in the past 10 to 15 years. China is Zambia's second top export destination, receiving around 20% of exports between 2010 and 2014, and is the origin of more than 9 percent of Zambia's FDI stock as of 2012 (Figure 3.2a and Figure 3.2b). Despite this promising picture, the relationship between the two countries is dominated by copper. Copper constitutes more than 90 percent of exports to China and while we have no detailed breakdown of Chinese FDI by sector, data compiled by Marukawa, Ito, and Zhang (2014) shows that out of the 172 Chinese companies operating in Zambia, 57 are engaged in the mining sector (Figure 3.2c).

Figure 3.2: Economic Ties between Zambia and China



(c) Number of Chinese Companies Operating in Zambia by Sector: 2013



Source: Ito, A., Marukawa, T., & Zhang, Y. (2014, March).

**The effects of a downturn in China could propagate to Zambia through two main channels: international commodity prices and lower demand for Zambian exports from China.** Given that China is responsible for 45 percent of total global copper demand, a slowdown in economic activity in China is expected to weigh heavily on international prices of copper.<sup>158</sup> This is likely to lead to a contraction in Zambia's export revenues even if demand for copper from all other trading partners is still robust due to the lower prices. This decline in revenues will be amplified by lower demand from China as appetite for investment falls with the slowdown in economic activity. The direct and indirect effects of different shocks in China on SSA countries, are assessed in a recent IMF paper which shows that the impact on individual countries will largely vary by whether the country is a commodity exporter or importer and the relative size of its external sector among other factors. The impact of a lower potential output in China is estimated to have much larger negative repercussions for economic activity in commodity exporters, such as Zambia, due to the adverse effects of this shock on global commodity prices (See Box 3).

### **Box 3: Spillovers from China into Sub-Saharan Africa**

The magnitude of economic spillovers on SSA from an external shock from China is assessed in a recent IMF paper.<sup>159</sup> The authors employ a multi-country general equilibrium model, which is a module of the Flexible System of Global Models, to capture both direct and indirect channels through which a shock in China can be transmitted to its economic partners in SSA.<sup>160</sup> On the one hand, the direct channel involves the impact from a shock in China on individual SSA countries through their bilateral trade, FDI and financial flows. On the other hand, the indirect channel captures the impact from a shock in China on individual SSA countries through the effect of such a shock on world economic activity, international commodity prices, and global interest.

The paper examines the impact of three different shocks on SSA countries. These are: (i) lower potential output in China that is mistaken for a temporary downturn, (ii) structural reforms in China that are put in place to increase potential output, and (iii) a relocation of basic manufacturing processes to SSA from China. Model-based simulations show that:

- The first shock will have both direct and indirect effects on SSA countries, which will depend on whether the country is commodity exporter or importer. The overall impact of a 1.6 percent permanent decline in global real GDP is almost neutral on commodity importers as they benefit from lower international commodity prices while commodity exporters face a decline of 0.5 percent of real GDP.
- The set of reforms assumed in the second shock will cause a temporary slowdown in economic activity in China of about 1 percent but will increase output by 25 percent in the long-term. As a result, demand for commodities and hence their prices will rise markedly, which will benefit commodity exporters by about 1 percent of real GDP.
- The third shock that might be driven by rising labor costs in China would have minimal impact on the world economy but will have significant ramifications for SSA countries. In the assumed scenario, economic activity in SSA countries will rise by about 4 percent after 10 years of the shock.

### **[3.1.2] Policy Challenges and Current Momentum**

**Further strengthening of the economic links between Zambia and China through higher FDI inflows raises the question of how much of the growth dynamics in China can spillover into Zambia, or rather how exposed Zambia will be to a downturn in China.** In order to get a sense of the situation, it is useful to study the current level of synchronization between the two countries. Figure 3.3 shows the

<sup>158</sup> International Monetary Fund. (2011, April). World economic outlook.

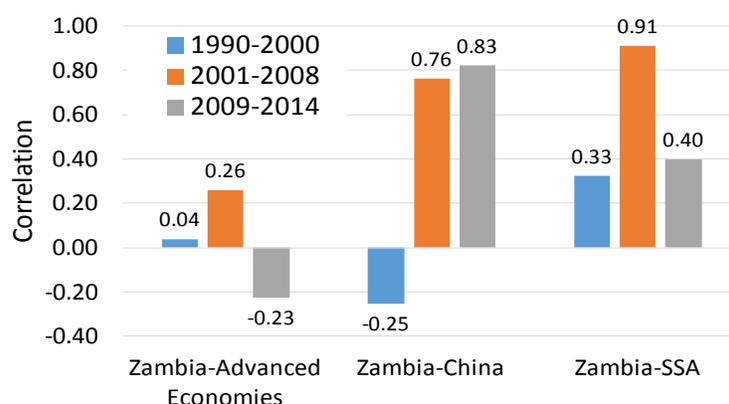
<sup>159</sup> Anderson, D., Drummond, P., Kriljenko, J., & Muir, D. (2015, October 6).

<sup>160</sup> The Flexible System of Global Models was developed at the IMF Research Department.

correlation between Zambia’s growth rate and that of its main economic partners, namely advanced economies, China and other SSA countries, between 1990 and 2014.<sup>161</sup> It is clear that starting in 2001 Zambia became more integrated with the world economy, moving in tandem with global growth patterns. The link was strongest with its regional partners in SSA, but China was following close behind with a correlation of 0.76 between 2001 and 2008. In the past six years, the picture changed completely as Zambia’s business cycle decoupled from that of advanced economies and grew even stronger with China. While this recent development sheltered Zambia from the brunt of the financial crisis, the current degree of synchronization with China’s economy implies a significantly high level of transmission of business cycle dynamics from China, which highlights Zambia’s heightened vulnerability to downturns in the Chinese economy.

**Figure 3.3: Increased Synchronization between Zambia and China**

**Synchronization of Zambia's GDP Growth with its Main Economic Partners: 1990 - 2014**

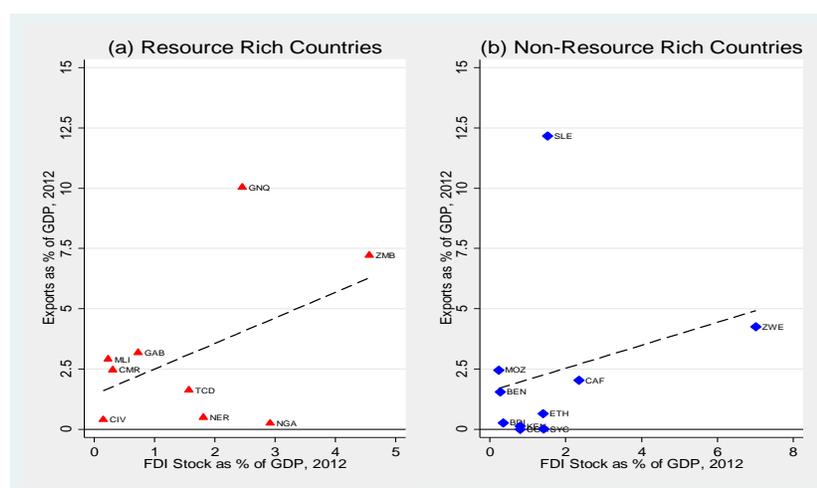


*Source: Authors' calculations and World Economic Outlook Database*

**The degree to which increased FDI flows strengthen business cycle synchronization depends on how much exports to China are correlated with Chinese FDI.** While FDI flows might be positively correlated with exports, aggregate statistical evidence for SSA countries shows that the link is stronger for resource-rich countries (Figure 3.4). This might be due to the resource-seeking nature of FDI flows to these countries. Resource-seeking FDI, as described by Dunning (1993), aims at investing abroad to obtain resources not available in the home country, particularly raw materials. In that sense, the investing firm is relocating the first part of the production chain to the host country and hence this type of FDI usually involves exporting raw materials or intermediate goods back to the firm’s home country for further processing. In Zambia, most FDI in the mining sector is resource-seeking and likely to be correlated with exports to the home country. If this is the case, an increase in FDI inflows from a specific country will lead to higher exports to that country, which in turn will deepen the business cycle synchronization between that country and Zambia. While data showing this relationship between China and Zambia are not available, the survey on “Foreign Private Investment and Investor Perceptions in Zambia” prepared by the Balance of Payments Statistical Committee provides detailed information on 129 majority-owned foreign affiliates (MOFAs) in Zambia. The survey shows that more than 70 percent of sales made by Chinese entities in Zambia in 2013 were in the form of exports back to China. Less than one percent is exported elsewhere and the remaining 28 percent is sold domestically. A similar pattern was observed in 2012 and 2011 when 81 percent and 85 percent respectively of sales made by Chinese entities were exported back to China. Thus, despite data scarcity, it appears that Chinese FDI in Zambia tends to produce exports back to China, which further strengthens bilateral trade and business cycle synchronization.

<sup>161</sup> Based on authors’ calculations using data from the World Economic Outlook Database.

Figure 3.4: Exports to China and Chinese FDI Stock in SSA Countries, 2012



Source: Data obtained from UNCTAD Database and IMF Direction of Trade Statistics

### [3.1.3] Recommendations

If Zambia succeeds in increasing and sustaining Chinese FDI inflows beyond recent levels, the challenge will be to reap the benefits for diversification while avoiding dependence on Chinese business cycles. In seeking to attract more FDI from China, Zambia must avoid substituting dependence on one commodity for dependence on one commodity and one trading partner. Thus, we recommend the following:

- **Zambia should channel more investment to market-seeking FDI rather than resource-seeking FDI.** In order to lower Zambia's current high synchronization with China's business cycle and mitigate further risks from increasing trade interconnectedness, Zambia should diversify its exports through leveraging more market-seeking FDI from China. This type of FDI is usually driven by the investing company's desire to expand to new markets and establish itself in the host country to serve the local as well as the regional markets. Admittedly, this type of FDI is much harder to attract since human capital, business environment and market size are all factors that influence the decision of potential investors. Hence, there is more reason for national policy measures focused on diversification and building resilience to external shocks to include boosting infrastructure, increasing regional integration, investing in education and maintaining a business friendly environment in order to attract more market-seeking FDI.
- **Build policy buffers to help manage external shocks during the process of diversification.** The Zambian authorities will need to pay heed to the risks of increased business cycle synchronization with China and build policy buffers accordingly to mitigate the risks of external shocks. These measures may include:
  - **The adoption of fiscal rules** to accumulate buffers during economic upswings and periods of high copper prices. While a commitment to a set of rules might be challenging for Zambia given its pressing expenditure needs, the rules can be designed in a way that is more lax at the beginning to ensure that they are not breached and then they can be gradually updated to their optimal levels. Fiscal rules can be complemented by a fiscal council that will provide an independent assessment of fiscal plans, forecasts of copper revenues and estimates of necessary savings. The use of such bodies to support fiscal rules has been on the rise for the past decade.<sup>162</sup>

<sup>162</sup> Debrun, X., Kinda, T., Curristine, T., Eyraud L., Harris, J., & Seiwald, J. (2013, July 16).

- **The adoption of a rule-based mechanism** by which the Bank of Zambia could build up reserves during good times to act as a hedge against negative external shocks. Given Zambia's reliance on imports to provide essential goods and its recent issuances of Eurobonds, it needs to ensure its ability to meet demand for foreign currency during times of adverse shocks in order to smooth consumption and meet its debt obligations.

## [3.2] Crowding Out of Domestic Small and Medium Enterprises

### [3.2.1] Context

**The large number of small and medium Chinese investments in Zambia raises the perception that Chinese small and medium enterprises (SMEs) are crowding out local SMEs.** Most of the well-documented Chinese direct investments in Zambia are large investments, particularly in mining.<sup>163</sup> However, many authors agree that there is a large number of investors outside of this sector, typically private small and medium enterprises.<sup>164</sup> Based on data from China's Ministry of Commerce, small and medium-sized Chinese firms in Africa have relatively few investments in the natural resource sectors; instead, 60% are in services and a significant number are in manufacturing.<sup>165</sup> This trend coincides with the Chinese government promoting overseas SMEs through the Small-Medium Enterprises International Market Development Fund.<sup>166</sup> Accordingly, there is a strong perceived risk within Zambia of private Chinese SMEs crowding out domestic SMEs, given the potential access to better technology and funding of the former.

**Despite the potential for technology spillovers, evidence of such spillovers is scarce, reducing the beneficial effects of FDI.** One of the main reasons to attract FDI is its potential to deliver positive spillovers to the local economy. This benefit usually includes the diffusion of knowledge from foreign to domestic firms.<sup>167</sup> A study investigating technology spillovers in manufacturing firms in Zambia suggests that horizontal spillovers (those within the same industry among similar firms) are not happening. It argues "FDI substitutes, rather than complements, capital formation and productivity of local firms in the sector." Adverse competition effects likely obstruct technology transfer: foreign firms seeking to increase market share and profits protect technical knowledge from spreading.<sup>168</sup> As a result, the presence of foreign firms appears detrimental to domestic firms they are in competition with, at least in the manufacturing sector. On the positive side, the study finds some positive vertical spillovers through backward and forward linkages, that is, through using output from or producing inputs for other industries.

### [3.2.2] Policy Challenges and Current Momentum

**The Zambian government recently implemented a policy intended to protect domestic firms from the risk of crowding out by Chinese SMEs.** The negative perception of Chinese firms crowding out domestic SMEs has warranted government attention. In October 2015, the government approved the introduction of Reservation Schemes under the Citizens Economic Empowerment Act. The policy identified four sectors, poultry, block making, quarrying, and domestic haulage, where Zambian ownership is being promoted. The specific provisions vary by sector, but in general the Act prohibits the entry of fully foreign-owned firms in these markets and encourages joint ventures between foreign and domestic investors for any future investments. The policy allows existing firms to continue operations, except in poultry, which is

<sup>163</sup> fDi Markets. (2015).

<sup>164</sup> Mlachila, M. (2015).

<sup>165</sup> Chen, W., Dollar, D., & Tang, H. (2015, August).

<sup>166</sup> People's Republic of China. (2002, June 29).

<sup>167</sup> Farole, T., & Winkler, D. (2014).

<sup>168</sup> Bwalya, S. M. (2006, December).

perhaps the most controversial sector. In this sector, existing foreign owned enterprises are prohibited from selling live birds in markets but are still allowed to produce and sell to wholesale buyers.<sup>169</sup>

**Restricting entry of foreign firms may further prevent technology transfer, which has already proven difficult.** The reservation schemes may help SMEs ward off direct competition in the short run, but may bear unintended consequences in the long term. In other countries, limits on foreign ownership have created a perverse effect of reducing investors' incentives to ensure success of the business. Technology owners are often unwilling to share the technology unless they are able to maintain control.<sup>170</sup> In Zambia's case, this policy may discourage foreign investors from bringing better technologies to the country. For example, in poultry, most domestic smallholder farmers rely on backyard growing with low levels of technology – manual feeding, simple water bowls, and heating using coal or wood.<sup>171</sup> Without better technologies, SMEs in this sector may struggle to remain competitive, especially for export.

**The government is encouraging partnerships and joint ventures between foreign and domestic firms, but success remains elusive.** A World Bank report states that across empirical studies on structures of foreign ownership, the results tend to favor more positive spillover effects of joint ventures than fully foreign-owned firms.<sup>172</sup> The Zambian government established the Citizens Economic Empowerment Commission (CEEC) in 2006 to promote partnerships and joint ventures between foreign investors and domestic firms. However, there has been limited success in encouraging partnerships. Based on data from the ZDA, only 16 out of the 330 investment certificates issued in Lusaka to Chinese nationals had Zambian partners between 2007 to the first quarter of 2015.<sup>173</sup> This may reflect procedural difficulties or reluctance from foreign, though the reasons why are not well-documented.

**The low levels of technology transfer and formation of joint ventures may reflect other challenges in gaining positive spillover effects, such as absorptive capacity.** The reasons for low technology transfer and partnerships are not clear, but one possible reason may be that the absorptive capacity of local firms and workers may not be sufficient to take advantage of learning from foreign firms. Absorptive capacity is the firm's ability to internalize new knowledge and improve productivity, which is then determined by skills and training of workers. As observed in other SSA countries, absorptive capacity is one of the most important factors in determining spillovers.<sup>174</sup>

**Zambian SMEs are at a further disadvantage to Chinese enterprises due to constrained access to finance.** In a 2013 survey by the World Bank, Zambian firms ranked access to finance as the greatest obstacle to a good business environment. Fewer than 10% of firms had bank loans or lines of credit, far below the average for low-income countries and SSA countries, where over 20% of firms had access to credit.<sup>175</sup> At the same time, Chinese private investors are able to access loans at below-market rates through the Bank of China. While the bank does not explicitly give preferential rates to Chinese nationals, they consider collateral from overseas, which lowers a borrower's risk profile. Many local small players do not have collateral and thus are unable to borrow at low rates. This exacerbates the risk of Zambian SMEs being crowded out since the lower cost structure for Chinese enterprises, along with better technology, could enable them to sell products at lower prices than their Zambian counterparts.

**While the government is implementing programs to improve access to finance, large government borrowing has kept interest rates prohibitively high for SMEs.** The government has made extensive efforts in improving access to finance. It is implementing programs to strengthen the Credit Reference Bureau, expand bank branches and agent banking in rural areas, and improve credit culture. It is also

<sup>169</sup> Ministry of Commerce Trade and Industry. (2015, November 6).

<sup>170</sup> Gregory, N. F., Wagle, D. M., & Weigel, D. R. (1997, September).

<sup>171</sup> Agriprofocus Zambia. (2015, July).

<sup>172</sup> Farole, T., & Winkler, D. (2014).

<sup>173</sup> Mutale, C. (2015).

<sup>174</sup> Farole, T., & Winkler, D. (2014).

<sup>175</sup> International Finance Corporation, & World Bank. (2013).

introducing a unified collateral registry system, agency banking guidelines, and an Insolvency Bill, which will also help alleviate credit constraints.<sup>176</sup> However, one critical issue is that borrowing costs are often too high for SMEs to be profitable. The most recent IMF staff report noted that large government borrowing has increased domestic interest rates substantially and that the government should limit recourse to domestic finance to avoid absorbing private credit, given the limited size of the financial market.<sup>177</sup>

### [3.2.3] Recommendations

For Zambia to balance the need to attract Chinese FDI with the risk of crowding out local SMEs, we recommend the following:

- **Pursue reservation schemes but complement them with ways to enhance vertical spillovers.** Given the strong negative perception the Zambian public has of Chinese SMEs, having a reservation policy is politically reasonable. While the policy is intended to protect domestic SMEs from direct competition, it does not set them up for greater productivity. In this case, the government should look into opportunities to create or enhance linkages between foreign firms and domestic SMEs. This entails identifying gaps in the value chain where foreign firms can enter. Some evidence of positive vertical spillovers through backward and forward linkages in manufacturing in Zambia<sup>178</sup> suggests that there is potential for improving productivity of domestic SMEs. It is also more politically palatable to encourage FDI into areas that are complementary to domestic investment rather than in direct competition.
- **Identify barriers to forming partnerships and technology transfer.** Crowding out of domestic SMEs can be prevented if partnerships between foreign and local firms are established and are suitable for technology transfer. However, partnerships and technology transfer have remained elusive in the case of Zambia. The CEEC can investigate why it is difficult to form partnerships and why technology transfer has been limited and develop an appropriate response.
- **Ease capital constraints for SMEs.** Improving access to finance for SMEs is critical in ensuring that domestic players are able to compete with Chinese private businesses that can borrow at lower rates. The high local lending rate could remain a significant challenge while fiscal deficits widen and local government borrowing persists at a high level. The government can explore innovative financing models that employ instruments other than traditional loans. This may include accepting non-traditional forms of security such as receivables and warehouse receipts. For farmers, financing can also be linked to the value chain, where capital is provided as farm inputs and repayments are tied to sales after harvest.

## [3.3] Tax Avoidance

### [3.3.1] Context

**Multiple tax avoidance practices threaten Zambia's endeavors to leverage Chinese FDI for diversified growth.** SSA countries mobilize less than 17% of their gross domestic product in tax revenues, as tax evasion remains a major source of illicit financial flows from the region.<sup>179</sup> One threat to Zambia's quest to leverage Chinese FDI for diversified growth includes the possibility that increased FDI may not lead to a corresponding increase in the tax revenue collected by the ZRA. Apart from the reduction in government revenue, these taxable revenues generated by foreign firms may not even be reinvested into the economy if

<sup>176</sup> International Monetary Fund. (2015, June 16). 2015 Article IV consultation.

<sup>177</sup> Ibid.

<sup>178</sup> Bwalya, S. M. (2006, December).

<sup>179</sup> Organisation for Economic Cooperation and Development. (2014).

they are repatriated abroad. Foreign firms may avoid paying their tax liabilities using any of the following strategies:

- **Tilted Transfer Pricing – the foreign parent firm charges the domestic subsidiary inflated purchase prices to reduce domestic profits.** According to the ZDA Act of 2006, which offers a wide range of incentives in the form of allowances, exemptions and concessions to companies, a transfer price must match either what the seller would charge an independent customer or what the buyer would pay to an independent supplier (the so-called “arms-length rule”). Transfer mispricing enables the effective transfer of profits from the domestic subsidiary to the foreign parent firm to avoid paying taxes.
- **Royalties – a high ‘royalty fee’ charged by the foreign parent firm to the domestic subsidiary for the usage of the parent company’s trademarks and copyrights.** As per the ZDA Act of 2006, Zambia does not consider royalty fees to the parent company as profit transfers and thus, they lie outside the purview of the ZRA.
- **Leading payments – leading payments require domestic subsidiaries to make an advance payment to parent foreign firms if the domestic currency is expected to depreciate.** This is particularly relevant in the wake of the falling kwacha. Thus, the transfer occurs with a favorable exchange rate for the parent foreign firm.
- **Tax evasion – companies may simply not pay the ZRA their fair share of the tax burden altogether.** Typically, tax evasion schemes would involve a foreign firm misrepresenting their income to the ZRA in a bid to avoid paying their taxes.

Mining companies in Zambia have come under heavy scrutiny from the government recently for allegedly using such strategies to reduce their tax burden.<sup>180</sup> With FDI flows moving into more diverse sectors, it would be reasonable to expect that these strategies could be used there as well.

### [3.3.2] Policy Challenges and Current Momentum

**Concerned with tax evasion from mining companies and the inability of the ZRA to monitor operating profits, Zambia made a significant change to its mining fiscal regime in January 2015.**<sup>181</sup> The ZRA scrapped corporate tax and raised the royalty rate from 6% to 20% for open pit mines and from 6% to 8% for underground operations. The move met with an immediate and significant backlash from mining companies. First Quantum Minerals delayed investment projects worth \$2.5 billion in Zambia due to uncertainty in the fiscal regime. Glencore halted \$800 million worth of copper projects in the country. After a six-month standoff, Zambia decided to drop the hike in mining royalties and return to a tax system based on operating profit. The government set the mining royalties for both open and underground mines at 9%, reduced corporate income tax rates to 30%, and set a 15% variable profits tax. This system relies heavily on the ZRA’s ability to monitor foreign firms.<sup>182</sup>

**Though the standoff has been abated, withheld VAT refunds continue to be a point of contention.** ZRA authorities are unwilling to provide tax refunds to foreign exporters without import certificates from destination countries. Exporting companies maintain that it is impossible to provide certificates because third parties trade their commodities. According to data from Chamber of Mines of Zambia, VAT refunds of approximately \$800 million are owed to the mining sector in Zambia. Withheld VAT refunds and the uncertainty with regards to tax policy remain a source of anxiety for foreign investors.

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<sup>180</sup> England, A. (2015, April 20).

<sup>181</sup> United States Department of State. (2015, June).

<sup>182</sup> Jamasmie, C. (2015, June 24).

**The ZRA is constrained by a lack of monitoring capacity.** Currently, the ZRA has approximately 1,500 staff, one third of whom work in the Customs Division. So, Zambia has only 0.09 tax staff members available for every 1000 people, well below the world average of 0.82. Without sufficient staff numbers or adequate training, properly taxing foreign multinational corporations will remain challenging. Though the ZRA has developed a Transfer Pricing Practice note, specialized auditing expertise continues to remain in short supply in ZRA.<sup>183</sup> Additionally, Fjeldstad & Heggstad (2011) point out that there is a dearth of research capacity in the tax administration to assist in identifying relevant challenges and providing policy recommendations. Thus, the ZRA requires further technical assistance particularly within areas such as specialized audit functions of foreign taxpayers.

**Competing tax incentives among SADC countries to attract foreign investors may depress revenues for everyone in the region.** Revisions to the ZDA Act have provided generous incentives to foreign investors for five years from the time that the license is granted to the firm, including tax holidays. Other SADC countries are also providing generous incentives in order to lure foreign investors to their countries. With such competition within SADC countries, there is a risk of a race to the bottom, as countries within the region attempt to out-compete each other in providing overly generous tax incentives to foreign firms. Attempts at harmonization of tax policy began in 2002 when the SADC countries released the Memorandum of Understanding on Cooperation in Taxation and Related Matters. Moreover, member states agreed to collaborate on tax incentives that encourage investment rather than act as a mere vehicle of tax minimization. SADC also aims to create transparency throughout Southern Africa that harmonizes policies to prevent investment barriers and create a Model Tax Agreement that serves as a common policy for interactions with international investors. However, these agreements continue to remain in the draft stage.

### [3.3.3] Recommendations

Zambia needs effective mechanisms and institutional infrastructure in place to ensure that actual revenues and profits are being reported. We recommend the following:

- **Increase budgetary allocation to the ZRA for monitoring and evaluation.** Currently, the ZRA does not have the manpower or the budget to effectively police foreign firms and ensure that they are playing by the rules. An increase in their budget would enable the ZRA to hire more staff and be more efficient in their role. It is likely that expenditures on more staff would more than pay for itself through the increased tax revenues they are able to collect.
- **Enter the South African Revenue Services (SARS) training program, which shares best practices from SSA's premier tax agency.** Currently, SARS provides support to a number of countries through training programs and tax workshops. An increased level of cooperation between the two agencies would support the transfer of skills from SARS to the ZRA. With an improvement in the quality and consistency of audits and the transfer of knowledge from SARS to ZRA authorities, Zambia could expect greater revenues and taxpayers could expect greater certainty.
- **Participate in the OECD Tax Inspectors Without Borders Program (TIWB).** The TIWB initiative enables the transfer of tax audit knowledge and skills from currently serving or recently retired tax officials to tax administrators in developing countries. TIWB tax experts are deployed to work directly with local tax officials and support local firms on audits. The TIWB technical assistants specialize in international tax matters and taxation policy of foreign firms and may be particularly beneficial for Zambia. Participation in the TIWB could support more effective enforcement and mitigate the risk of tax avoidance and evasion.

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<sup>183</sup> Fjeldstad, O., & Heggstad, K. (2011).

- **Work towards a stable and harmonized tax rate across the SADC.** Signing the model tax agreement that has been a subject of discussion since 2002 and ensuring that information regarding taxation is shared and made widely available on the SADC Tax Database and Information Portal will help encourage useful tax harmonization between SADC countries.
- **Encourage Extractive Industries Transparency Initiative (EITI) membership for mining companies listed in Zambia.** Effective implementation of EITI will support disclosure of information on tax payments, licenses, contracts, production and other key elements from foreign mining firms. All mining companies in Zambia are expected to be members of the EITI, but there is some doubt about how widely this occurs in practice. Such transparency (which would be openly accessible to all citizens of Zambia on the EITI website) fosters public debate regarding the management of the country's resource wealth and greater accountability from foreign mining firms.

## [3.4] Changing Labor Competitiveness

### [3.4.1] Context

**Zambia's comparatively high wages and low labor productivity relative to its African counterparts may inhibit efforts to attract Chinese FDI.** Inflation and recent public sector wage increases have made Zambian wages higher than those in other low-income SSA countries. According to the World Economic Forum's 2015-2016 Global Competitiveness Report, Zambia's ranks 97th of 140 countries for pay and productivity, and 134<sup>th</sup> of 140 countries for redundancy costs.<sup>184</sup> While Zambia has a large labor force, low skill levels and training relative to the high wages may inhibit investment attraction. In the wood products industry, for example, a Chinese worker can produce 3-6 chairs per day, whereas a Zambian worker produces on average 0.2 to 0.6 chairs per day. Adjusting for levels of productivity, the total labor costs per chair in Zambia were found to be four times higher than those in China.<sup>185</sup> Thus, Zambia may face difficulty attracting FDI into sectors where China's labor costs are cheaper.

**Attracting more Chinese FDI could further increase high wages across Zambia.** While attracting FDI from more productive Chinese firms could generate positive spillovers on Zambian worker productivity, it is also possible – to the extent that Chinese firms might pay higher wages to attract the best talent – that Chinese investments could further increase the upward pressure on wages already being experienced in Zambia. Despite Zambia's comparatively friendly business environment, rising wages would further erode Zambia's competitiveness in terms of labor costs and productivity.

### [3.4.2] Policy Challenges and Current Momentum

**The Zambian government has recently raised public sector salaries.** The lowest public sector wage is about \$6,500 per year; this is 4.5 times GDP per capita and 2.5 times the private sector minimum wage.<sup>186</sup> These minimum wage policies are hindering FDI attraction and job creation.<sup>187</sup> In order to help balance the overrun 2013 budget, the government did not provide salary increases for public workers for 2014 and 2015.<sup>188</sup> After a two-year freeze on wages, the Zambian government has announced increased salaries for public sector workers beginning in 2016.<sup>189</sup> Upward pressure on private sector wages due to increases in public sector wages may put added pressure on Zambia's labor market competitiveness, potentially discouraging new Chinese FDI.

<sup>184</sup> Schwab, K. (Ed.). (2015).

<sup>185</sup> Dinh, H.T. (2013, June).

<sup>186</sup> International Monetary Fund. (2014, January 9). Zambia: 2013 Article IV consultation.

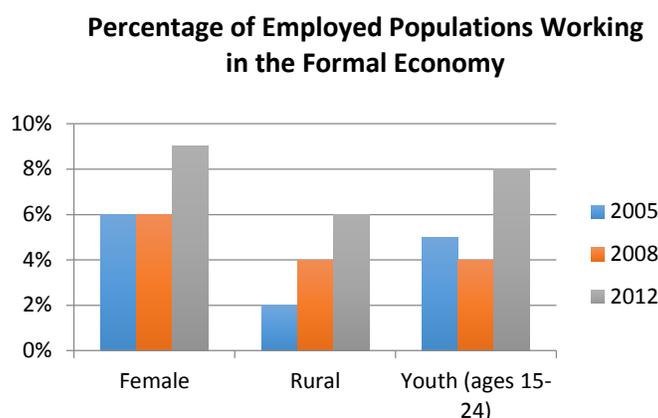
<sup>187</sup> Jang, B. (2015).

<sup>188</sup> International Monetary Fund. (2015, June 16). 2015 Article IV consultation.

<sup>189</sup> Lusaka Times. (2015, August 31).

**Zambia’s Decent Work Program 2013-2016, based upon improving gainful employment for all Zambians, was developed to work towards Zambia’s National Development Agenda.** As the second round of Zambia’s Decent Work Program, the third priority is to create “more and better employment opportunities.”<sup>190</sup> The Zambian government has focused on promoting formal employment within small and medium enterprises (SMEs) for rural populations, youth, women, and people with disabilities. Figure 3.5 shows the small changes in formal employment rates for youth, women, and rural populations. Less than 10% of all employed women, youth and rural Zambians work in the formal economy. While some gains have been made in increasing formal employment, the majority of the population remains in the informal sector, earning lower wages.<sup>191</sup> One study found that Zambian workers in small and medium unregistered enterprises earned, on average, one-fourth those working in median formal manufacturing firms in 2008.<sup>192</sup>

**Figure 3.5: Percentage of Employed Populations Working in the Formal Economy**



*Source: Zambia Labour Force Surveys – 2005, 2008, 2012*

**Zambia must balance restricting wage growth with the need for higher wages that can provide for basic levels of consumption.** Restricting wage growth in the formal economy may increase Zambia’s competitiveness in the labor market, but it is likely that suppressed wages will lead to decreased consumption and purchasing power since consumption is a function of income.<sup>193</sup> With more than half of the employed population living in a household below the poverty line, wage levels are insufficient to afford basic amenities, such as drinking water, basic health, and clean energy.<sup>194</sup> However, excessive wage growth that exceeds levels of productivity can also negatively impact Zambian workers. As profit margins decrease due to higher real wages, foreign employers are more likely to lay off workers and move their facilities to a more competitive location.<sup>195</sup>

### [3.4.3] Recommendations

In order to remain competitive and attract Chinese FDI in the medium and long-term, Zambia must maintain competitive labor productivity while balancing the need for adequate wages. We recommend the following:

- **Monitor wage and productivity levels within Zambia’s formal sector.** Rising minimum wages and high labor costs can potentially decrease Zambia’s wage competitiveness, deterring Chinese

<sup>190</sup> International Labour Organization, & Zambia Ministry of Labour and Social Security. (2013).

<sup>191</sup> Dinh, H.T. (2013, June).

<sup>192</sup> Clarke, G. G., & Dinh, H.T. (2012, August).

<sup>193</sup> World Bank. (2003). Measuring living standards.

<sup>194</sup> International Labour Organization, & Zambia Ministry of Labour and Social Security. (2013).

<sup>195</sup> Klein, N. (2012, April 1).

foreign investors who are looking for profitable investment environments. While suppressing wage levels can negatively impact welfare, allowing wages to inflate can harm Zambia's business environment. As a step toward ensuring wage and productivity levels are aligned, the Zambian government can continue to collect data on those levels.

- **Increase labor productivity through investments in technology and human capital.** Labor productivity is a factor of technology, worker skills, management ability, and organizational structure. According to the 2012 Labour Force Survey, only 6.8 percent of the 7.8 million people employed in Zambia had received skill training of any kind. Of those 6.8 percent who received training, only 38.2 percent were in the rural areas.<sup>196</sup> In the long-term, investments into human capital (such as on-the-job training programs for both rural and urban populations) and technology can help make Zambia a more regionally competitive foreign investment destination.

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<sup>196</sup> Zambia Central Statistical Office. (2013).

# BIBLIOGRAPHY

- Agriprofocus Zambia. (2015, July). Market study – Poultry investment opportunities in the Zambian poultry sector (and in the Katanga Region of the DR Congo). Retrieved from [http://agriprofocus.com/upload/Final\\_Market\\_Study\\_of\\_Poultry\\_Sector\\_in\\_Zambia\\_\(for\\_publication\)1445864268.pdf](http://agriprofocus.com/upload/Final_Market_Study_of_Poultry_Sector_in_Zambia_(for_publication)1445864268.pdf)
- Ahlquist, J., & Prakash, A. (2010, June). FDI and the costs of contract enforcement in developing countries. *Policy Sciences*, 43(2), 181–200.
- Akinci, G., & Crittle, James. (2008, April). Special economic zones: Performance, lessons learned, and implications for zone development. *World Bank Group, Foreign Investment Advisory Service*. Retrieved from <http://documents.worldbank.org/curated/en/2008/04/9915888/special-economic-zone-performance-lessons-learned-implication-zone-development>
- Alleyne, T., & Hussain, M. (2013, August 12). Energy subsidy reform in Sub-Saharan Africa: Experiences and lessons. *International Monetary Fund African Departmental Paper No. 13/2*. Retrieved from <https://www.imf.org/external/pubs/ft/dp/2013/afr1302.pdf>
- Alves, A. C. (2011, December). The Zambia–China cooperation zone at a crossroads: What now? Retrieved from [http://www.saiia.org.za/doc\\_view/191-the-zambia-china-cooperation-zone-at-a-crossroads-what-now](http://www.saiia.org.za/doc_view/191-the-zambia-china-cooperation-zone-at-a-crossroads-what-now)
- Anderson, D., Drummond, P., Kriljenko, J., & Muir, D. (2015, October 6). Spillovers from China onto Sub-Saharan Africa: Insights from the flexible system of global models (FSGM). Retrieved from <https://www.imf.org/external/pubs/cat/longres.aspx?sk=43332.0>
- Bai, J., Polycarp, C., Tan, X., & Zhao, Y. (2013, April). China’s overseas investment in the wind and solar industries: Trends and drivers. *World Resources Institute Working Paper*. Retrieved from [http://www.wri.org/sites/default/files/pdf/chinas\\_overseas\\_investments\\_in\\_wind\\_and\\_solar\\_trends\\_and\\_drivers.pdf](http://www.wri.org/sites/default/files/pdf/chinas_overseas_investments_in_wind_and_solar_trends_and_drivers.pdf)
- Bank of Zambia. (2015, November 3). Monetary Policy Committee statement. Retrieved from [http://www.boz.zm/publishing/speeches/MPC\\_Statement\\_Nov\\_2015-v2.pdf](http://www.boz.zm/publishing/speeches/MPC_Statement_Nov_2015-v2.pdf)
- Bank of Zambia. (Web). Historical series of exchange rates between ZMK against other currencies. Retrieved from [http://www.boz.zm/\(S\(r10t3a55bilh2aiqnvn3iwil\)\)/ExRatesHistoricalSeries.aspx](http://www.boz.zm/(S(r10t3a55bilh2aiqnvn3iwil))/ExRatesHistoricalSeries.aspx)
- Bariyo N. (2014, July 16). Zambia plans five new railway lines to boost trade and cut costs. *The Wall Street Journal*. Retrieved from <http://blogs.wsj.com/frontiers/2014/07/16/zambia-plans-five-new-railway-lines-to-boost-trade-and-cut-costs/>
- Barton, S. (2014). Sino-substitution: Chinese foreign direct investment in Zambia. *Journal of Chinese Economic and Foreign Trade Studies*, 7(2), 90-109.
- Boos, A., & Holm-Müller, K. (2015). The Zambian resource curse and its influence on genuine savings as an indicator for “weak” sustainable development. *Environment, Development and Sustainability*, 1-39. <http://dx.doi.org/10.1007/s10668-015-9667-5>
- Brautigam, D. (2009). *The dragon’s gift: The real story of China in Africa*. Oxford; New York: Oxford University Press.
- Brautigam, D., & Tang, X. (2014, November 1). Going global in groups: China’s special economic zones overseas. *World Development*, 63, 78-91. <http://dx.doi.org/10.1016/j.worlddev.2013.10.010>
- Brautigam, D., & Tang X. (2011, March). African Shenzhen: China’s special economic zones in Africa. *Journal of Modern African Studies*, 49, 27–54. <http://dx.doi.org/10.1017/S0022278X10000649>
- Buckley, P., et al. (2007). The determinants of Chinese outward foreign direct investment. *Journal of International Business Studies*, 38, 499-518.
- Burningham S. and Stankevich N (2005, June). Why road maintenance is important and how to get it done. *World Bank Transport Note No. TRN-4*. Retrieved from <http://siteresources.worldbank.org/INTTRANSPORT/Resources/336291-1227561426235/5611053->

- Bwalya, S. M. (2006, December). Foreign direct investment and technology spillovers: Evidence from panel data analysis of manufacturing firms in Zambia. *Journal of Development Economics*, 81(2), 514-526.  
<http://dx.doi.org/10.1016/j.jdeveco.2005.06.011>
- Chatelard, S. F., & Chu, J. M. (2015, January). Chinese agricultural engagements in Zambia: A grassroots analysis. *China-Africa Research Initiative at Johns Hopkins University Policy Brief No. 4*. Retrieved from  
<https://saiscari.files.wordpress.com/2014/10/sais-cari-brief-4-january-2015.pdf>
- Chen, W., Dollar, D., & Tang, H. (2015, August). Why is China investing in Africa? Evidence from the firm level. Retrieved from <http://www.brookings.edu/research/papers/2015/08/why-is-china-investing-in-africa>
- Chikwanda, A. B. (2015, October 9). 2016 Budget address by Minister of Finance to the National Assembly. *Zambia National Broadcasting Corporation*. Retrieved from <http://www.znbc.co.zm/?p=23121>
- Clarke, G. G., & Dinh, H. T. (2012, August). Performance of manufacturing firms in Africa: An empirical analysis. *The World Bank*. <http://dx.doi.org/10.1596/978-0-8213-9632-2>
- Cleary, S., & Karhammar, R. (2013, July). Mid-term review rural electrification infrastructure and small projects. *Delegation of the European Union*. Retrieved from  
[http://ec.europa.eu/delegations/zambia/documents/projects/mtr\\_final\\_report\\_rea\\_10\\_en.pdf](http://ec.europa.eu/delegations/zambia/documents/projects/mtr_final_report_rea_10_en.pdf)
- Committee on Government Assurances. (2014, September 24). Report of the Committee on Government Assurances for the fourth session of the eleventh national assembly appointed on Wednesday, 24<sup>th</sup> September, 2014. *National Assembly of Zambia*. Retrieved from  
[http://www.parliament.gov.zm/sites/default/files/documents/committee\\_reports/REPORT%20OF%20THE%20COMMITTEE%20ON%20GOV%20ASSURANCES%20FOR%20THE%204TH%20SESSION%20OF%20THE%2011TH%20NA%20-%20JUNE%202015.pdf](http://www.parliament.gov.zm/sites/default/files/documents/committee_reports/REPORT%20OF%20THE%20COMMITTEE%20ON%20GOV%20ASSURANCES%20FOR%20THE%204TH%20SESSION%20OF%20THE%2011TH%20NA%20-%20JUNE%202015.pdf)
- Common Market for Eastern and Southern Africa. (Web). Brief on the COMESA Customs Union. Retrieved from  
[http://programmes.comesa.int/index.php?option=com\\_content&view=article&id=90&Itemid=142](http://programmes.comesa.int/index.php?option=com_content&view=article&id=90&Itemid=142)
- Debrun, X., Kinda, T., Curristine, T., Eyraud L., Harris, J., & Seiwald, J. (2013, July 16). The functions and impact of fiscal councils. *International Monetary Fund*. Retrieved from  
<https://www.imf.org/external/np/pp/eng/2013/071613.pdf>
- Dinh, H. T. (2013, June). *Light Manufacturing in Zambia: Job Creation and Prosperity in a Resource-Based Economy*. Washington, DC: World Bank. <http://dx.doi.org/10.1596/978-0-8213-9935-4>
- Dunning, J. H. (1993). *Multinational Enterprises and the Global Economy*. Reading, MA: Addison-Wesley.
- Edwards, L., & Lawrence, R. (2012). Zambian regional integration policy challenges. *International Growth Centre Working Paper*. Retrieved from <http://www.theigc.org/wp-content/uploads/2015/02/Edwards-Lawrence-2012-Working-Paper.pdf>
- Energy Regulation Board. (2015). Statement on electricity tariff adjustments [Press Statement]. Retrieved from  
<http://www.erb.org.zm/press/statements/STATEMENT%20ON%20ELECTRICITY%20TARIFF%20ADJUSTMENTS%20-%202.12.2015.pdf>
- Energy Regulation Board. (2014). Energy sector report 2014. Retrieved from  
<http://www.erb.org.zm/reports/EnergySectorReport2014.pdf>
- Energy Regulation Board. (2010, April). Zambia country action plan [PowerPoint slides]. Retrieved from  
<http://www.globalelectricity.org/upload/File/Projects/Financing%20Electrification%20HCB%20-%20Nairobi/Zambia.pdf>
- England, A. (2015, April 20). Zambia proposes friendlier mining tax regime after protests. *Financial Times*. Retrieved from <http://www.ft.com/intl/cms/s/0/37580714-e773-11e4-8ebb-00144feab7de.html#axzz3tshWiMZM>
- Escribano, A., Guasch, J. L., & Pena, J. (2010, January). Assessing the impact of infrastructure quality on firm productivity in Africa: Cross-country comparisons based on investment climate surveys from 1999 to 2005. *World Bank Policy Research Working Paper 5191*. Retrieved from <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-5191>
- Farole, T., & Winkler, D. (2014). Making foreign direct investment work for Sub-Saharan Africa: Local spillovers and competitiveness in global value chains. *The World Bank*.
- fDi Markets. (2015). *Zambia fdi project list* [Data file]. Retrieved from <http://www.fdimarkets.com>

- Fjeldstad, O., & Heggstad, K. (2011). The tax systems in Mozambique, Tanzania and Zambia: Capacity and constraints. *Chr. Michelsen Institute Report 2011:3*. Retrieved from <http://www.cmi.no/publications/file/4045-taxation-mozambique-tanzania-zambia.pdf>
- Foster, V., et al. (2009). Building bridges: China's growing role as infrastructure financier for sub-Saharan Africa. *Trends and Policy Options 5*. The World Bank and Public-Private Infrastructure Advisory Faculty. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/2614/480910PUB0Buil101OFFICIAL0USE00NLY1.pdf?sequence=1>
- Frankel, J. A. (2010, March). The natural resource curse: A survey. *National Bureau of Economic Research*. Retrieved from <http://www.nber.org/papers/w15836>
- Giersing, B., Kunaka, C., & Raballand, G. (2008, January). The impact of regional liberalization and harmonization in road transport services – A focus on Zambia and lessons for landlocked countries. *The World Bank*. <http://dx.doi.org/10.1596/1813-9450-4482>
- Gregory, N. F., Wagle, D. M., & Weigel, D. R. (1997, September). Foreign direct investment. *International Finance Corporation*. <http://dx.doi.org/10.1596/0-8213-4050-6>
- Hairong, Y., & Sautman, B. (2010). Chinese farms in Zambia: From socialist to “agro-imperialist” engagement? *African and Asian Studies*, 9(3), 307-333. <http://dx.doi.org/10.1163/156921010X515987>
- Hallam, D. (2009, December). Foreign investment in developing country agriculture – Issues, policy implications and international response. *OECD Global Forum on International Investment*. Retrieved from <http://www.oecd.org/investment/globalforum/44231828.pdf>
- Hamilton, K., & World Bank. (2006). *Where is the wealth of nations? : Measuring capital for the 21<sup>st</sup> century*. Washington, D.C.: The World Bank.
- Hartwick, J. M. (1977, December). Intergenerational equity and the investing of rents from exhaustible resources. *American Economic Review* 67(5), 972–74.
- International Finance Corporation. (2015). Scaling solar initiative. Retrieved from [http://www.ifc.org/wps/wcm/connect/Industry\\_EXT\\_Content/IFC\\_External\\_Corporate\\_Site/Industries/Infrastructure/Power/Scaling+Solar](http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Infrastructure/Power/Scaling+Solar)
- International Finance Corporation & World Bank. (2013). Enterprise survey: Zambia country profile 2013. Retrieved from <https://www.enterprisesurveys.org/~media/GIAWB/EnterpriseSurveys/Documents/Profiles/English/zambia-2013.pdf>
- International Labour Organization, & Zambia Ministry of Labour and Social Security. (2013). *Zambia Decent Work Country Programme 2013-2016*. Retrieved from <http://www.ilo.org/public/english/bureau/program/dwcp/download/zambia.pdf>
- International Monetary Fund. (2015, November 20). End-of-mission press release. *Press Release No. 15/531*. Retrieved from <https://www.imf.org/external/np/sec/pr/2015/pr15531.htm>
- International Monetary Fund. (2015, June 16). 2015 Article IV consultation – Press release; staff report; and statement by the executive director for Zambia. *IMF Country Report No 15/152*. Retrieved from <https://www.imf.org/external/pubs/ft/scr/2015/cr15152.pdf>
- International Monetary Fund. (2015, June 16). Zambia: Selected issues. *IMF Country Report No. 15/153*. Retrieved from <https://www.imf.org/external/pubs/ft/scr/2015/cr15153.pdf>
- International Monetary Fund. (2015, May 5). Zambia: Staff report for the 2015 Article IV consultation – Debt sustainability analysis. Retrieved from <https://www.imf.org/external/pubs/ft/dsa/pdf/2015/dsacr15152.pdf>
- International Monetary Fund. (2015, May). Fiscal rules dataset 1985 – 2014. Retrieved from <http://www.imf.org/external/datamapper/FiscalRules/matrix/matrix.htm>
- International Monetary Fund. (2014, January 9). Zambia: 2013 Article IV consultation. *IMF Country Report No14/5*. Retrieved from <https://www.imf.org/external/pubs/ft/scr/2014/cr1405.pdf>
- International Monetary Fund. (2012, August 24). Macroeconomic policy frameworks for resource-rich developing countries. Retrieved from <https://www.imf.org/external/np/pp/eng/2012/082412.pdf>
- International Monetary Fund. (2011, April). World economic outlook. Retrieved from <https://www.imf.org/external/pubs/ft/weo/2011/01/>

- International Monetary Fund. (2011, February 14). Assessing reserve adequacy. Retrieved from <https://www.imf.org/external/np/pp/eng/2011/021411b.pdf>
- International Renewable Energy Agency. (2013). Zambia: Renewables readiness assessment 2013. Retrieved from [http://www.irena.org/documentdownloads/publications/rra\\_zambia.pdf](http://www.irena.org/documentdownloads/publications/rra_zambia.pdf)
- Ito, A., Marukawa, T., & Zhang, Y. (2014, March). China's outward foreign direct investment data. *ISS Contemporary Chinese Research Series No. 15*. Retrieved from [http://web.iss.u-tokyo.ac.jp/kyoten/research/ISS\\_China\\_series\\_No.15.pdf](http://web.iss.u-tokyo.ac.jp/kyoten/research/ISS_China_series_No.15.pdf)
- Jamasmie, C. (2015, June 24). Zambia to slash royalties, reinstate mining tax. *Mining.com*. Retrieved from <http://www.mining.com/zambia-to-slash-royalties-reinstate-mining-tax/>
- Jang, B. (2015). Foreign direct investment in Zambia [Powerpoint slides].
- Jaumotte, F. (2004, November). Foreign direct investment and regional trade agreements: The market size effect revisited. *International Monetary Fund*. Retrieved from <https://www.imf.org/external/pubs/ft/wp/2004/wp04206.pdf>
- Jeanne, O., & Rancière, R. (2008, February). The optimal level of international reserves for emerging market countries: A new formula and some applications. *CEPR Discussion Papers 6723*. Retrieved from [http://www.cepr.org/active/publications/discussion\\_papers/dp.php?dpno=6723](http://www.cepr.org/active/publications/discussion_papers/dp.php?dpno=6723)
- Kaplinsky et al (2009). Chinese FDI in Sub-Saharan Africa: Engaging with large dragons. *European Journal of Development Research 21*, 551–569.
- Kingombe, C. (2009). Rural growth and poverty reduction through feeder road rehabilitation in Chipata & Lundazi districts of Zambia's Eastern Province, 1996-2005. *Center for Environmental Policy, Imperial College London & University of London*. Retrieved from [http://www.academia.edu/1227843/Rural\\_Growth\\_and\\_Poverty\\_Reduction\\_through\\_Feeder\\_Road\\_Rehabilitation\\_in\\_Chipata\\_and\\_Lundazi\\_Districts\\_of\\_Zambia\\_s\\_Eastern\\_Province\\_1996-2005](http://www.academia.edu/1227843/Rural_Growth_and_Poverty_Reduction_through_Feeder_Road_Rehabilitation_in_Chipata_and_Lundazi_Districts_of_Zambia_s_Eastern_Province_1996-2005)
- Klasa, A. (2015, October 21). Chinese investment in Africa plunges 84%. *Financial Times*. Retrieved from <http://www.ft.com/intl/cms/s/3/10648918-773b-11e5-a95a-27d368e1ddf7.html#axzz3xGPBXf4d>
- Klein, N. (2012, April 1). Real wage, labor productivity, and employment trends in South Africa: A closer look. *International Monetary Fund Working Paper No. 12/92*. Retrieved from <https://www.imf.org/external/pubs/ft/wp/2012/wp1292.pdf>
- Kragelund, P. (2009). Part of the disease or part of the cure? Chinese investments in the Zambian mining and construction sectors." *European Journal of Development Research 21*, 644–661. <http://dx.doi.org/10.1057/ejdr.2009.23>
- Loungani, P. & Razin, A. (2001, June). How beneficial is foreign direct investment for developing countries?. *Finance and Development 38*(2). Retrieved from <http://www.imf.org/external/pubs/ft/fandd/2001/06/loungani.htm>
- Lusaka Times. (2015, August 31). Government to increase salaries of public service workers. *Lusaka Times*. Retrieved from <https://www.lusakatimes.com/2015/08/31/government-to-increase-salaries-of-public-service-workers/>
- Lyalabi, S. (2015). REAs experience in implementing rural electrification projects [PowerPoint Slides]. *Rural Electrification Authority, Zambia*. Retrieved from [http://siteresources.worldbank.org/EXTAFRREGTOPENERGY/Resources/717305-1327690230600/8397692-1327691245128/Implementing\\_REAs\\_ZAMBIA.pdf](http://siteresources.worldbank.org/EXTAFRREGTOPENERGY/Resources/717305-1327690230600/8397692-1327691245128/Implementing_REAs_ZAMBIA.pdf)
- McGroarty, P. (2015, December 4). China's Xi pledges \$60 billion for Africa development over three years. *Wall Street Journal*. Retrieved from <http://www.wsj.com/articles/chinas-xi-pledges-60-billion-for-africa-development-over-three-years-1449224028>
- McKinnon, R. I. (2010). China in Africa: The Washington Consensus versus the Beijing Consensus. *International Finance 13*, 495-506. doi: 10.1111/j.1468-2362.2010.01270.x
- Meeuws, R. (2004). Zambia - Trade and transport facilitation audit. *NEA Transport research and training*. Retrieved from [https://tis.sadc.int/files/9713/2644/8955/Zambia\\_Transport\\_Sector\\_Study\\_WBank\\_2004.PDF](https://tis.sadc.int/files/9713/2644/8955/Zambia_Transport_Sector_Study_WBank_2004.PDF)
- Ministry of Commerce Trade and Industry. (2015, November 6). Government implements reservation schemes for citizens. *Republic of Zambia*. Retrieved from: <http://www.mcti.gov.zm/index.php/media/latest-news/103-government-implements-reservation-schemes-for-citizens>
- Mlachila, M. (2015). Tracking China's outward FDI to Africa: Still "mission impossible"?

- Mlachila, M., and Takebe, M. (2012). FDI from BRICs to LICs: The Case of Chinese FDI in Africa. *Journal of Asian Business*, 25(1).
- Mukanga, Y. (2013). Subject: Enactment of SI No. 73 of 2013, tolling regulation 2013.[Press Statement]. *Ministry of Transport, Works, Supply & Communications*. Retrieved from [http://www.rda.org.zm/index.php/acts/doc\\_download/149-enactment-of-si-no-73-of-2013-tolling-regulation-2013](http://www.rda.org.zm/index.php/acts/doc_download/149-enactment-of-si-no-73-of-2013-tolling-regulation-2013)
- Mutale, Chanda. (2015.) Chinese investments in Africa’s SME sector: A case study of Zambia. *Lund University Publications*. Retrieved from <https://lup.lub.lu.se/student-papers/search/publication/7868680>
- Muzeya, L. (2015, July 24). Energy policy in Zambia [PowerPoint Slides] *Ministry of Mines, Energy, and Water Development Zambia*. Retrieved from [http://www.grips.ac.jp/teacher/oono/hp/course/student\\_slides/2015/lufunda\\_energy.pdf](http://www.grips.ac.jp/teacher/oono/hp/course/student_slides/2015/lufunda_energy.pdf)
- National Assembly of Zambia. (2014, November 25). Parliamentary debates for the fourth session of the eleventh assembly. Retrieved from <http://www.parliament.gov.zm/node/509>
- National Road Fund Agency. (2015). Link Zambia 8000. Retrieved from [www.nrfa.org.zm/link-zambia-8000/](http://www.nrfa.org.zm/link-zambia-8000/)
- National Road Fund Agency. (2015). Lusaka 400. Retrieved from [www.nrfa.org.zm/lusaka-400/](http://www.nrfa.org.zm/lusaka-400/)
- Ngosa, S. (2013, June 28). The shocking truth about food wastage in Zambia: Part 1. *The Best of Zambia*. Retrieved from <http://thebestofzambia.com/blog/the-shocking-truth-about-food-wastage-in-zambia-part-1/>
- Nigeria Export Processing Zones Authority. (2015). Free zones. Retrieved from <http://www.nepza.gov.ng/freezones.asp>
- Organisation for Economic Cooperation and Development. (2014). Illicit financial flows from developing countries: Measuring OECD responses. Retrieved from [http://www.oecd.org/corruption/Illicit\\_Financial\\_Flows\\_from\\_Developing\\_Countries.pdf](http://www.oecd.org/corruption/Illicit_Financial_Flows_from_Developing_Countries.pdf)
- Organisation for Economic Cooperation and Development. (2011). Investment policy review of Zambia: Advancing investment policy reform. Retrieved from <http://www.oecd.org/investment/investmentfordevelopment/48720875.pdf>
- People’s Republic of China. (2002, June 29). Law of the People’s Republic of China on promotion of small and medium-sized enterprises. *China.org.cn*. Retrieved from <http://www.china.org.cn/english/government/207325.htm>
- Policy Monitoring and Research Centre. (2014, November). The role of efficient tax incentives in enhancing investment. Retrieved from [http://www.pmrzambia.com/wp-content/uploads/2015/06/The-Role-of-Efficient-PMRC-Taxation-Series\\_Tax-Incentives-in-Enhancing-Investment.pdf](http://www.pmrzambia.com/wp-content/uploads/2015/06/The-Role-of-Efficient-PMRC-Taxation-Series_Tax-Incentives-in-Enhancing-Investment.pdf)
- Private Sector Development Reform Programme. (2013, March). Statement on business environment reform in Zambia. Retrieved from <http://www.psdzambia.org>
- Republic of Zambia. (2015). Opportunities in the energy sector in Zambia [PowerPoint Slides]. Retrieved from <https://www.giz.de/fachexpertise/downloads/pep2015-en-ssa-iv-pv-membe.pdf>
- Road Development Agency. (2015, February 6). Link Zambia 8000 road project update. Retrieved from <http://www.rda.org.zm/index.php/link-zambia-8000-project>
- Road Development Agency. (2015, January 16). Road maintenance strategy 2014-2024. Retrieved from [http://www.rda.org.zm/index.php/pavedroads/doc\\_download/323-road-maintenance-strategy-2014-2024](http://www.rda.org.zm/index.php/pavedroads/doc_download/323-road-maintenance-strategy-2014-2024)
- Road Development Agency. (2014). 2014 Road condition report. Retrieved from [http://www.rda.org.zm/index.php/registered-contractors/doc\\_details/354-2014-road-condition-report](http://www.rda.org.zm/index.php/registered-contractors/doc_details/354-2014-road-condition-report)
- Road Development Agency. (2013). Annual report 2013. Retrieved from [http://www.rda.org.zm/index.php/programmes/doc\\_download/321-rda-annual-report-2013](http://www.rda.org.zm/index.php/programmes/doc_download/321-rda-annual-report-2013)
- Road Development Agency. (2012). Road Development Agency strategic plan 2012 – 2016. Retrieved from [http://www.rda.org.zm/index.php/pavedroads/doc\\_download/322-rda-strategic-plan-2012-2016](http://www.rda.org.zm/index.php/pavedroads/doc_download/322-rda-strategic-plan-2012-2016)
- Road Development Agency. (2012, December). 2013 Road sector annual work plan. Retrieved from [http://www.rda.org.zm/index.php/acts/doc\\_download/61-annual-workplan-2013](http://www.rda.org.zm/index.php/acts/doc_download/61-annual-workplan-2013)
- Schaechter, A., Kinda, T., Budina, N., & Weber, A. (2012, July). Fiscal rules in response to the crisis—Toward the “next-generation” rules: A new dataset. *International Monetary Fund*. Retrieved from <https://www.imf.org/external/pubs/ft/wp/2012/wp12187.pdf>
- Schwab, K. (Ed.). (2015). The global competitiveness report 2015-2016. *World Economic Forum*. Retrieved from [http://www3.weforum.org/docs/gcr/2015-2016/Global\\_Competitiveness\\_Report\\_2015-2016.pdf](http://www3.weforum.org/docs/gcr/2015-2016/Global_Competitiveness_Report_2015-2016.pdf)

- Singh, A. (2006, August 7). Macroeconomic volatility: The policy lessons from Latin America. *International Monetary Fund Working Paper 06/166*. Retrieved from <https://www.imf.org/external/pubs/ft/wp/2006/wp06166.pdf>
- Solow, R. (1986). On the intergenerational allocation of natural resources. *Scandinavian Journal of Economics* 88 (1), 141–49.
- South African National Road Agency Ltd. (2004). Annual report 2004: sustainability report. Retrieved from <http://sanral.ensight-cdn.com/content/sanralAR04.pdf>
- Southern African Development Community. (2015). Climate change adaptation. Retrieved from <http://www.sadc.int/themes/meteorology-climate/climate-change-adaptation/>
- Southern African Development Community. (Web). Customs Union. Retrieved from <http://www.sadc.int/about-sadc/integration-milestones/customs-union/>
- State Administration of Foreign Exchange. (2015, November 30). Forex reserves. *People's Republic of China*. Retrieved from <http://www.safe.gov.cn/wps/portal/english/Data/Forex>
- Tancott, G. (2015, January 26). Huge investment for North West Rail project. *Transport World Africa*. Retrieved from <http://www.transportworldafrica.co.za/2015/01/26/huge-investment-for-north-west-rail-project/>
- Tang, X. (2015, July 10). How do Chinese ‘special economic zones’ support economic transformation in Africa?. *Supporting Economic Transformation*. Retrieved from <http://set.odi.org/wp-content/uploads/2015/07/How-Chinese-SEZs-support-economic-transformation-in-Africa.pdf>
- The Balance of Payments Statistical Committee of the Government of the Republic of Zambia. (2014). Foreign private investment and investor perceptions in Zambia. Retrieved from <http://www.boz.zm/PrivateCapital2014/ForeignPrivateInvestmentReport2014.pdf>
- The Oakland Institute. (2011). Understanding land investment in Africa - Country report: Zambia. Retrieved from [http://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/OI\\_country\\_report\\_zambia.pdf](http://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/OI_country_report_zambia.pdf)
- United Nations. National report: Zambia. Retrieved from [http://www.un.org/esa/dsd/dsd\\_aofw\\_ni/ni\\_pdfs/NationalReports/zambia/Land.pdf](http://www.un.org/esa/dsd/dsd_aofw_ni/ni_pdfs/NationalReports/zambia/Land.pdf)
- United Nations Conference on Trade and Development. (2014). World Investment Report 2014. Retrieved from <http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=937>
- United Nations Conference on Trade and Development. (2011, March 31). An investment guide to Zambia: Opportunities and conditions. *United Nations*. Retrieved from [http://unctad.org/en/Docs/diaepcb201008\\_en.pdf](http://unctad.org/en/Docs/diaepcb201008_en.pdf)
- United Nations Industrial Development Organization, & International Centre on Small HydroPower. (2013). World small hydropower development report: Zambia. Retrieved from [http://www.smallhydroworld.org/fileadmin/user\\_upload/pdf/Africa\\_Eastern/WSHPDR\\_2013\\_Zambia.pdf](http://www.smallhydroworld.org/fileadmin/user_upload/pdf/Africa_Eastern/WSHPDR_2013_Zambia.pdf)
- United States Agency for International Development. (2010). Zambia: Land tenure and property rights profile. Retrieved from [http://www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID\\_Land\\_Tenure\\_Zambia\\_Profile.pdf](http://www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Zambia_Profile.pdf)
- United States Department of State. (2015, June). Zambia investment climate statement. Retrieved from <http://www.state.gov/documents/organization/242010.pdf>
- World Bank. (2015). Doing business 2016: Economy profile 2016 - Zambia. Retrieved from [http://www.doingbusiness.org/data/exploreeconomies/zambia/~media/giawb/doing%20business/documents/profiles/country/ZMB.pdf](http://www.doingbusiness.org/data/exploreeconomies/zambia/~/media/giawb/doing%20business/documents/profiles/country/ZMB.pdf)
- World Bank. (2015). *Doing business historical data sets* [Data File]. Retrieved from <http://www.doingbusiness.org/custom-query>
- World Bank. (2015). World development indicators. Retrieved from <http://data.worldbank.org/data-catalog/world-development-indicators>
- World Bank. (2014). Zambia profile. Retrieved from <http://www.worldbank.org/en/country/zambia/overview>
- World Bank. (2011, December 1). Power tariffs: Caught between cost recovery and affordability. *Policy Research Working Paper 5904*. Retrieved from <http://documents.worldbank.org/curated/en/2011/12/15536521/power-tariffs-caught-between-cost-recovery-affordability>
- World Bank. (2010). Zambia’s Infrastructure: A continental perspective. Africa Infrastructure Country Diagnostic Country Report.
- World Bank. (2009). Toolkit for public-private partnerships in roads & highways.

- World Bank. (2003). Measuring living standards: Household consumption and wealth indices. *Quantitative Techniques for Health Equity Analysis – Technical Note #4*. Retrieved from [http://siteresources.worldbank.org/INTPAH/Resources/Publications/Quantitative-Techniques/health\\_eq\\_tn04.pdf](http://siteresources.worldbank.org/INTPAH/Resources/Publications/Quantitative-Techniques/health_eq_tn04.pdf)
- World Bank Databank. (2015). World development indicators: Zambia. Retrieved from: <http://data.worldbank.org/country/zambia>
- World Bank Group. (2013). Enterprise surveys: Zambia. Retrieved from <https://www.enterprisesurveys.org/data/exploreeconomies/2013/zambia>
- World Bank Group. (2010). Investing across borders. Retrieved from <http://iab.worldbank.org/~media/FDPKM/IAB/Documents/IAB-report.pdf>
- World Trade Organization. (2009, June 22). Trade policy review. *Trade Policy Review Body*. Retrieved from [https://www.wto.org/english/tratop\\_e/tpr\\_e/s219-00\\_e.doc](https://www.wto.org/english/tratop_e/tpr_e/s219-00_e.doc)
- Wu, H., and Chen, C. (2001). An assessment of outward foreign direct investment from China's transitional economy. *Europe-Asia Studies*, 53(8), 1235-1254.
- Zambia Central Statistical Office. (2015). Retrieved from <http://www.zamstats.gov.zm/#>
- Zambia Central Statistical Office. (2013). *Zambia Labour Force Survey Report 2012*. Lusaka: Labour Statistics Branch, Central Statistical Office.
- Zambia Development Agency. (2015, July). Infrastructure sector profile. Retrieved from <http://www.zda.org.zm/?q=content/infrastructure>
- Zambia Development Agency. (2014). Agriculture sector leaflet. Retrieved from <http://www.zda.org.zm/?q=content/agriculture>
- Zambia Development Agency. (2014, August). Manufacturing sector. Retrieved from <http://www.zda.org.zm/?q=content/manufacturing-sector>
- Zambia Development Agency. (2014, January 29). Public-private-partnerships in infrastructure development in Zambia. Retrieved from <http://www.zda.org.zm/?q=download/file/fid/60>
- Zambia Development Agency. (2012). Zambia's investor guide. <http://images.mofcom.gov.cn/zm/accessory/201209/1347391687778.pdf>
- Zambia Development Agency. (2011). Agriculture, livestock and fisheries sector profile. Retrieved from <http://www.zda.org.zm/?q=download/file/fid/49>
- Zambia Institute for Policy Analysis & Research. (2014). Optimization study for core road network planning to link Zambia. *Working Paper No. 19*. Retrieved from <https://www.africaportal.org/dspace/articles/optimization-study-core-road-network-planning-link-zambia>
- Zambia Invest. (2015, November 26). Tanzania-Zambia railway Tazara receives 4 new locomotives and 18 wagons from China to improve service. *Zambia-Invest*. Retrieved from <http://www.zambia-invest.com/transport/tazara-receives-4-new-locomotives-and-18-wagons>
- Zambia Office of National Development and Planning. (1966). *First national development plan, 1966-1970*. Lusaka.
- Zambia Revenue Authority. (2015). Budget 2016: Overview of tax changes. Retrieve from [https://www.zra.org.zm/commonView.htm?ACTION\\_TYPE=showForms&RELEASE\\_TYPE=BUG](https://www.zra.org.zm/commonView.htm?ACTION_TYPE=showForms&RELEASE_TYPE=BUG)
- Zambian Economist. (2015, July 28). Zambia's electricity crisis. Retrieved from <http://www.zambian-economist.com/2015/07/zambias-electricity-crisis.html>
- Zeng, D. Z. (2015, April). Global experiences with special economic zones: Focus on China and Africa. *World Bank Group Policy Research Working Paper 7240*. Retrieved from <https://www.openknowledge.worldbank.org/bitstream/handle/10986/21854/WPS7240.pdf?sequence=2>
- Zimbabwe Ministry of Industry and Commerce. (2011, January 31). Chirundu one stop border post: A regional trade facilitation programme. Retrieved from <http://www.oecd.org/aidfortrade/47750237.pdf>



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