

National Productive Capacities Gap Assessment

• ZAMBIA



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UNCTAD has long been advancing conceptual and analytical frameworks on productive capacities centred policies and strategies, as well as international support measures (ISMS) in favour of the most vulnerable and weaker economies. UNCTAD has also developed a global multidimensional Productive Capacities Index (PCI) and has been assisting member States with National Productive Capacities Gap Assessments (NPCGAs). These offer unique insights into the performance of the economies of structurally weak and vulnerable economies based on the PCI, empirical research and the countries' development visions and plans. They help in the identification of each country's comparative advantages and binding constraints to economic development, as well as mapping intervention strategies.

This NPCGA for Zambia was prepared, under the overall guidance of Paul Akiwumi, Director, Division for Africa, Least Developed Countries and Special Programmes of UNCTAD, by a team led by Mussie Delelegn, Officer-in-Charge, Productive Capacities and Sustainable Development Branch, consisting of Andrzej Bolesta (Economic Affairs Officer), Sonia Bouali (Individual Contractor), Berklee Morganto (Individual Contractor), Johanna Silvander (Programme Management Officer) and Benedetta Simonini (Intern), as well as Moritz Meier-Ewert, Economic Affairs Officer, Trade and Poverty Branch. Substantive comments were provided by Lisa Borgatti, Junior Davis, Stefanie Garry, Patrick Osakwe and Rolf Traeger. Chukwuka Onyekwena provided consultancy services and prepared scoping background study.

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Executive summary

Zambia belongs to the least developed countries' (LDCs) and landlocked developing countries' (LLDCs) groups. The country has made modest socioeconomic progress in some areas, but still exhibits many of the challenges afflicting LDCs in general. Zambia's economy remains significantly dependent on the mining and export of copper. The high dependence on extractives has left the economy vulnerable to fluctuations in the copper price for most of its post-colonial history, and highly exposed to external shocks such as the COVID-19 pandemic. Zambia's economy is furthermore characterized by weak productive capacities and lack of structural economic transformation.

UNCTAD prepares National Productive Capacities Gap Assessments (NPCGA) to provide support to graduating LDCs following the inclusion of the Productive Capacities Index (PCI) in the graduation monitoring process by the UN Committee for Development Policy (CDP)¹ and UN General Assembly resolutions requesting UN entities to provide support to graduating LDCs in view of developing their smooth transition strategies². The PCI provides the statistical foundations for NPCGA analyses, relying on eight categories³ to measure different elements of productive capacities. The PCI together with a closer examination of micro and macroeconomic fundamentals of the country as well as an assessment of visions and development plans form the basis of the NPCGA for Zambia. The NPCGA closely examines Zambia's socioeconomic challenges, opportunities, and prospects. It identifies comparative advantages of the country and key binding constraints to socioeconomic development. It recommends a series of pragmatic and forward-looking policy actions at domestic level together with international support measures (ISMs) aimed at fostering productive capacities and achieving structural economic transformation. The ultimate objective of NPCGA is to enable Zambia to graduate with momentum from the LDC category and to realize its ambition to become a prosperous middle-income nation by 2030.

I. Introduction



1.1 Why do Productive Capacities matter for Zambia's development?

The concept of productive capacities was developed by the United Nations Conference on Trade and Development (UNCTAD) in 2006 and is broadly defined as the productive resources, entrepreneurial capabilities and production linkages that together determine a country's ability to produce goods and services that will help it grow and develop. Productive resources refer to natural and human resources as well as financial and physical capital. Entrepreneurial capabilities encompass both core and technological competencies. Finally, production linkages include information exchange, resource flows and backwards and forward linkages along the whole value chain. These interrelated elements together make up a country's productive capacities which enable inclusive economic growth and development.¹

Addressing the phenomenon of “jobless growth”: The need for the concept arose following the experience of the jobless growth of the early 2000s when many least developed countries (LDCs), including Zambia, experienced rapid growth that did not translate into job creation, significant poverty reduction and overall socioeconomic progress. The same growth spurt also did not enable most developing countries to diversify exports, enhance capital accumulation, and foster economy-wide productive capacities and structural transformation. Many of them remain dependent on exports of a small number of primary commodities, rendering them vulnerable to external shocks such as the COVID-19 pandemic. Moreover, growth has often been limited to the natural resources sector, leading to increases in inequality, limited employment opportunities for the growing youth population, and lack of progress in human development.

The quest for sustained and inclusive growth for graduation with momentum: Building the basis for sustainable and inclusive growth in LDCs requires them to foster economy-wide productive capacities. This enables to kick-start the process of structural transformation which conceptually refers to the movement of factors of production from lower to higher value-added activities and sectors. This in turn enables the diversification of the economy, reducing overdependence on primary commodities exports, and building resilience to shocks. Without fostering productive capacities, it is unlikely that many LDCs will be able to sustainably graduate and achieve the SDGs by the 2030 target year. This also applies to Zambia, which has met two of the three graduation criteria in 2021.

1. See: https://unctad.org/system/files/official-document/ldc2006_en.pdf.

Breaking the lower-middle income trap and building economic resilience: Economic diversification is key not only for staving off the impact of negative external shocks but also to help countries break low- and middle-income traps. For Zambia to ensure that it achieves graduation with momentum and avoids the “middle income trap” it should, therefore, focus its development priorities on building productive capacities by addressing gaps and limitations identified in the present National Productive Capacities Gap Assessment (NPCGA).

To operationalize the concept of productive capacities in the context of development policies, UNCTAD developed the Productive Capacities Index (PCI), which relies on eight categories² to measure different elements of productive capacities. The PCI together with a bird's eye view of micro and macroeconomic fundamentals of the country form the basis of the NPCGA for Zambia. The NPCGA closely examines Zambia's socioeconomic challenges, opportunities, and prospects. It identifies comparative advantages of the country and key binding constraints to socioeconomic development. It recommends a series of policy actions at domestic level together with international support measures (ISMs) aimed at fostering productive capacities and achieving structural economic transformation. The ultimate objective of NPCGA is to support Zambia's sustainable graduation from the LDC category and to realize its ambition to become a prosperous middle-income nation by 2030.³ The NPCGA and its policy recommendations should, therefore, be carefully considered in the formulation and implementation of domestic policies and in the design of ISMs in favour of Zambia.

1.2 An overview of Zambia's economy: Challenges, opportunities, and prospects for graduation with momentum

Zambia is an LDC which has made modest socioeconomic progress in some areas, but still exhibits many of the challenges afflicting LDCs. The Zambian economy remains significantly dependent on the mining and export of copper, with ores and metals accounting for 71% of its exports in 2019. Zambia's copper mining contributes more than 2% to global production. The country is Africa's largest producer of copper and cobalt, and globally the seventh largest copper producer and the third largest producer of cobalt.⁴ It is home to Africa's largest known copper reserves, which account for 6% of the world's reserves. The high dependence on extractives has left the economy vulnerable to fluctuations in the price for most of its post-colonial history. The COVID-19 pandemic in 2020 caused the price of copper to fall sharply, leading to a significant loss in export revenue for Zambia and

2. The eight categories of the PCI include natural capital, human capital, energy, ICT, structural transformation, transport, private sector, and institutions. These categories are in turn benchmarked through the use of 46 indicators. Details on PCI are available at: <https://unctad.org/topic/least-developed-countries/productive-capacities-index>

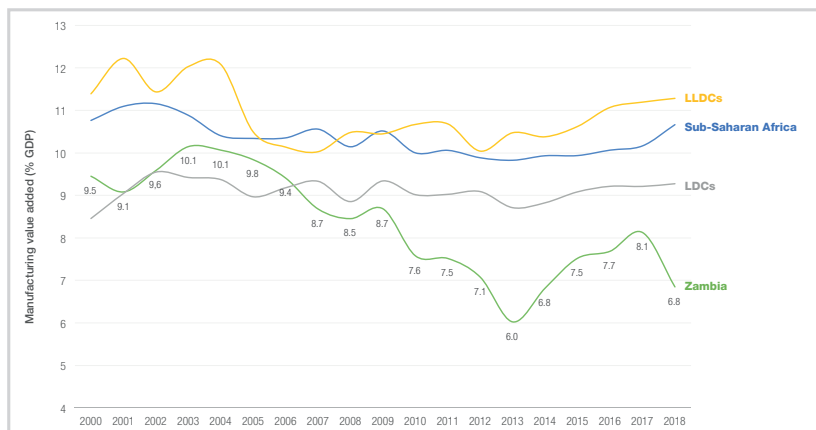
3. Republic of Zambia: “Vision 2030”, December 2006 (available at: https://www.nor.gov.zm/?wpfb_dl=44)

4. UNCTAD, 2021. Facilitating the Participation of Landlocked Developing Countries in Commodity Value Chains available at: <https://www.sdgfund.org/facilitating-participation-landlocked-developing-countries-commodity-value-chains>

precipitating the country's default on its external debt in November 2020. Moreover, like many of its LDC-peers, Zambia's agriculture sector consists largely of smallholder farmers cultivating staple crops and suffering from low productivity.⁵ In 2019, the sector accounted for 49.6% of employment,⁶ but only 3% of the country's Gross Domestic Product (GDP), down from 9% in 2010.⁷

A further challenge facing Zambia relates to premature deindustrialization. The largest shares of GDP and employment in Zambia's economy originate from the jobs sector which is characterised by informality and low-skills jobs, followed by industry. However, manufacturing value-added (MVA) as percentage of GDP has continued to decline (Figure 1). What is more worrying is that the decline in Zambia's MVA is faster than the contraction seen in LDCs, LLDCs and sub-Saharan Africa (SSA). This is despite the fact that Zambia has important manufacturing sectors such as wood and paper products (at a combined 30% of total production), chemicals, rubbers and plastics (at 28%), and food, beverages and tobacco (at 18%).⁸ Some of these are higher value-added sectors (e.g. chemicals) which have export potential that can be harnessed through targeted policies.

Figure 1: Manufacturing value added as a share of GDP (per cent)



Source: World Development Indicators, World Bank 2022

The precipitous decline in Zambia's manufacturing value added in GDP shows the challenges facing the country in kick-starting structural transformation, value addition and economic diversification through industrialization. Zambia holds potential in labour-intensive manufacturing such as agri-food, leather and leather products. Yet, Zambia's industrialization is further hindered by a weak energy sector where the dominant hydropower infrastructure does not

5. US Foreign Agricultural Service United States Embassy in South Africa. 2015. Zambia Agricultural Economic Fact Sheet (available at: https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Agricultural%20Economic%20Fact%20Sheet_Pretoria_Zambia_10-5-2015.pdf).

6. World Bank. 2021. Employment in agriculture (% of total employment) (modelled ILO estimate) – Zambia (available at: <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=ZM>) 2018.

7. World Bank. 2019. World Development Indicators: Structure of output (available at: <http://wdi.worldbank.org/table/4.2>).

8. Central Statistical Office – Zambia Data Portal. 2017. Index of Industrial Production, January 2017 (available at: <https://zambia.opendataforafrica.org/oqqjgnf/index-of-industrial-production-january-2017>).

meet domestic needs, including those of industry. The mining sector alone accounts for 50% of domestic energy demand. In addition, the country struggles to provide access to electricity for its population, especially in rural areas. Overall, only 43% of Zambians have access to electricity (2019).⁹ This also hinders progress in areas such as ICT and eCommerce development. As a landlocked country, Zambia also faces high transportation costs and weak export competitiveness, which are further exacerbated by a limited transportation network and inefficient trade logistics. In 2018, the logistic performance index recorded a value of 2.5 for Zambia, in the middle of the performance scale.¹⁰ While Zambia's performance dropped significantly in 2010, it has been on an increasing trend since, as of 2016 recovering its previous peak in 2007, surpassing sub-Saharan African average and reaching the level of lower middle income countries' average. To address the issue of limited transportation networks, the National Transport Policy of the Republic of Zambia aims at creating an intermodal transport system that would provide for interlinkages among the four modes of transport (rail, road, air and water) and ultimately transform Zambia into a regional transport hub.¹¹ Moreover, there is a high prevalence of micro, small and medium enterprises in the economy with informality being common, especially among young workers. In 2019, 71.8% of those employed in Zambia worked in the informal sector.¹² As a result, there is high underemployment and incidence of poverty with the country facing a higher aggregate level of labour underutilization than its Sub-Saharan neighbours.

Weak and vulnerable growth and lack of economy-wide productive capacities have had a detrimental impact on Zambia's poverty reduction efforts. In 2015, 54.4% of the population was living below the national poverty line. People living in rural areas made up 76.6% of those living in poverty while 23.4% lived in urban areas.¹³ According to the World Bank, estimates, extreme poverty (US\$ 1.90 per person per day) in the country increased from 43% in 1998 to 52% in 2002; and from 62% in 2006 to 65.8% in 2010, before declining again to 58.7% in 2015. The World Bank, that Zambia is one of the countries with the highest levels of poverty and inequality in the world.

1.3 Progress towards graduation from the LDC category and the challenges ahead

Despite high levels of poverty and inequality, Zambia has achieved some socioeconomic progress. Between 2000 and 2014, the annual real gross domestic product (GDP) growth rate averaged 6.8%, while slowing down to 3.1% per annum between 2015 and 2019.¹⁴ Persistent drought, low

9. World Bank. 2019. Access to Electricity (% of population) (available at: <https://data.worldbank.org/indicator/EG.ELC.ACCTS.ZS>).

10. World Bank. 2019. Logistics performance index: Quality of trade and transport-related infrastructure (1=low to 5=high) – Zambia (available at: <https://data.worldbank.org/indicator/LP.LPI.INFR.XQ?locations=ZM>).

11. National Transport Policy. 2019. Republic of Zambia, Ministry of Transport and Commerce (available at: https://www.moh.gov.zm/?wpfb_dl=48)

12. ILOstat. 2021. Statistics on the informal economy, Zambia

(based on 2019 Labour Force Survey) (available at: <https://ilostat.ilo.org/topics/informality/>).

13. Republic of Zambia Central Statistical Office. 2015. 2015 Living Conditions Monitoring Survey Report. Available at: https://rise.esmap.org/data/files/library/zambia/Documents/Clean%20Cooking/Zambia_LCMS%202015.pdf

14. World Bank. 2020. GDP growth (annual %) – Zambia (available at: <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2020&locations=ZM&start=2014>).

agricultural output and the fall in the global commodity price of copper have contributed to the decrease in the latest GDP growth rate.

Nevertheless, Zambia has succeeded in increasing its human capital score, including average health-adjusted life-expectancy in recent years. Consequently, Zambia met the criteria for graduation from the LDC category for the first time in February 2021 at the triennial review of the Committee for Development Policy (CDP). Graduation from the LDC category is determined by the progress of countries towards the threshold levels of at least two of the three criteria.¹⁵ Zambia has recorded a Gross National Income (GNI) above the threshold for graduation since 2012, and in 2019 its GNI per capita was US\$ 1,305 against the graduation threshold of US\$ 1,222. Since 2002, Zambia has also demonstrated consistent improvement in the Human Asset Index (HAI) and crossed the threshold for graduation (66) in 2021 with a score of 67.1.¹⁶ In the Economic and Environmental Vulnerability Index (EVI) category, Zambia's performance has remained at around 40, while the threshold for graduation is 32 or below.¹⁷

As Zambia is approaching graduation from the LDC category, it has to navigate a series of challenges. Zambia's economy has been hit hard by the COVID-19 pandemic. In 2020, real GDP contracted by an estimated 4.9%.¹⁸ Zambia's services sector was hit hard as tourism was decimated worldwide by severely restricted international travel. A World Bank Survey of households in Zambia found that 71% of respondents in the tourism sector had experienced job losses.¹⁹ Moreover, capacity utilization in manufacturing firms fell from 70% in 2019 to 51% in 2020. More severe declines were observed in small and large firms compared to medium-sized firms. Exporting firms also had larger declines than non-exporters as did firms with top managers who were female.²⁰

The COVID crisis arrived when Zambia was already struggling with unsustainable external debt. Debt including arrears reached 78% of GDP at the end of 2018. After the pandemic hit, the situation deteriorated rapidly and in November of 2020 Zambia defaulted on its debt.²¹ This means that, although COVID-19 adversely impacted all countries and economies, the impact on the most vulnerable and structurally weaker countries such as

15. The threshold of Gross national income per capita (of US\$ 1222), Human Assets Index (66 or above) and Economic and Environmental Vulnerability index (32 or lower) during the 2021 review.

16. UN Department of Economic and Social Affairs. 2021. Least Developed Country Category; Zambia Profile (available at: <https://www.un.org/development/desa/dpad/least-developed-country-category-zambia.html>).

17. UN Department of Economic and Social Affairs. 2021. LDC Data (available at: <https://www.un.org/development/desa/dpad/least-developed-country-category/ldc-data-retrieval.html>).

18. African Development Bank. 2021. African Economic Outlook 2021 (available at: <https://www.afdb.org/en/documents/african-economic-outlook-2021>).

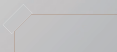
19. World Bank. 2020. Monitoring COVID-19 Impacts on Households in Zambia, Report No.1: Results from a high-frequency phone survey of households (available at: <https://openknowledge.worldbank.org/handle/10986/34459>).

20. UNCTAD. 2021. COVID-19 and the Challenge of Developing Productive Capacities in Zambia (available at: https://unctad.org/system/files/official-document/ser-tp-2021d6_en.pdf).

21. Geopolitical Monitor. 2020. Situation Report – Zambia Becomes First Post-COVID Debt Default (available at: <https://www.geopoliticalmonitor.com/zambia-becomes-first-post-covid-debt-default/>).

Zambia was devastating. The persistent vulnerability of LDCs is rooted in their weak productive capacities and the lack of structural transformation. Hence, post-COVID-19 development policies and strategies need to be designed to overcome these handicaps and systemic limitations. The following section provides an assessment of Zambia's productive capacities gaps and limitations, using the Productive Capacities Index.

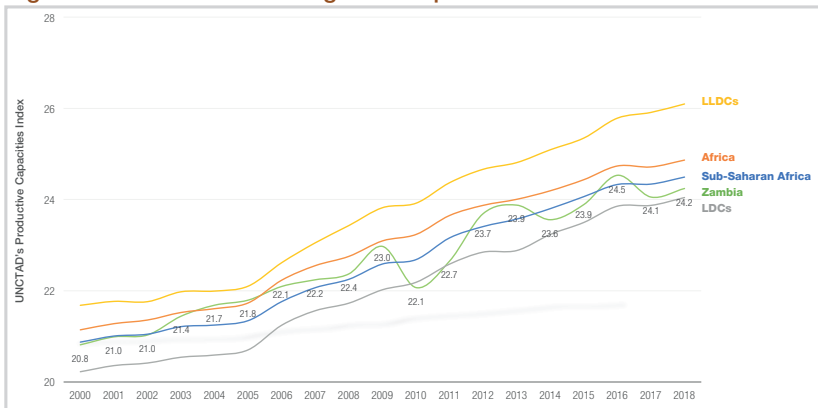
II. National Productive Capacities Gap Assessment through the PCI



2.1 Overview of Zambia's PCI scores in the last two decades

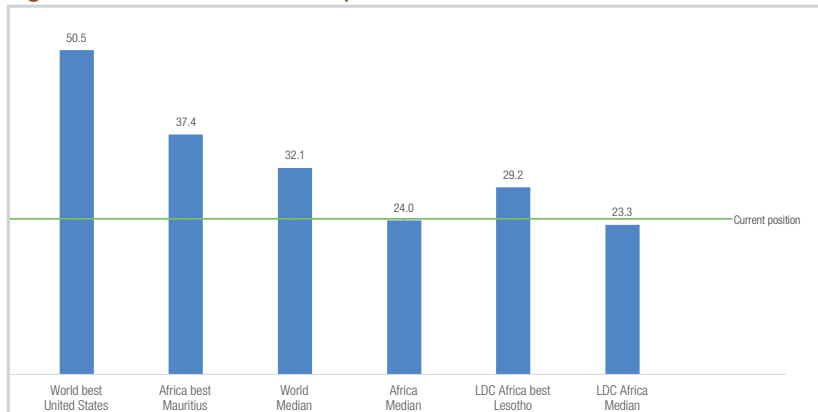
Zambia's performance in the PCI of UNCTAD was very low, with a score of 24.24 on the composite index in 2018. This score is on par with the median score for LDCs (24.04) but lower than that of the LLDCs (26.09) in the same year two groups to which Zambia belongs. Moreover, it is below the African and world's best by 13.15 and 26.27 points, respectively. Zambia's relatively poor ranking is further reflected in its global position (162nd out of 193 countries and economies) and average continental position (25th). At current rates of improvement, it will take 37 years for Zambia to reach the average level of PCI performance seen in other developing countries.

Figure 2: Zambia's PCI change in comparison



Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

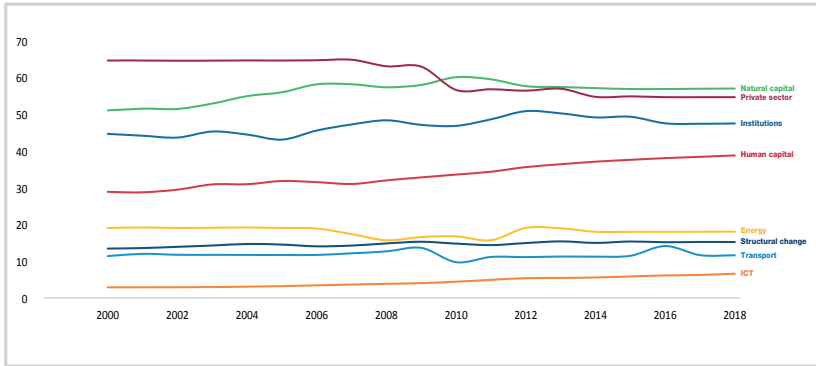
Figure 3: Zambia's PCI in comparison



Source: Underlying data are available at <https://pci.unctad.org>.

Zambia's performance in each of the eight categories over time can be seen in Figure 4, and it shows the characteristics of economies with high natural capital. In these economies, even robust economic growth does not always translate into job creation and poverty reduction, rendering sustained and inclusive development more difficult to achieve.

Figure 4: Performance and change of Zambia's PCI across eight categories



Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

2.2 Analysis of the PCI by category and the assessment of binding constraints

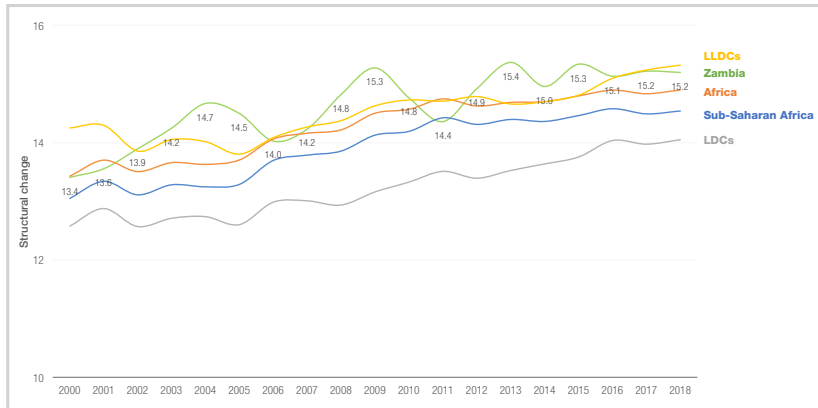
2.2.1 Structural change

Zambia's economy has shown some structural shifts over the years with industry and services sector contributing the lion's share of the country's GDP. This trend is consistent across countries of SSA where a historically dominant share of agriculture in GDP has been declining over time. The structural change category of the productive capacities has not been showing qualitative or structural transformation in their economies. Despite shifts in GDP composition, the structural change category of the African continent has consistently been low particularly when compared to the performance of other developing continent and advanced developing countries. Within Africa, Zambia's scores in structural change component show some volatility, but mostly the country has performed above its peers in the region and countries at similar stages of development for the period 2000-2018 (Figure 5).

Indicator-level analysis for this category shows that Zambia's gross fixed capital formation (GFCF) as a percentage of GDP decreased starting in 2003 and stayed at around 30% until increasing to around 47% in 2015. The industrial ratio of Zambia has also remained high, starting at 74.47 in 2000 and increasing to 93.03 in 2018.

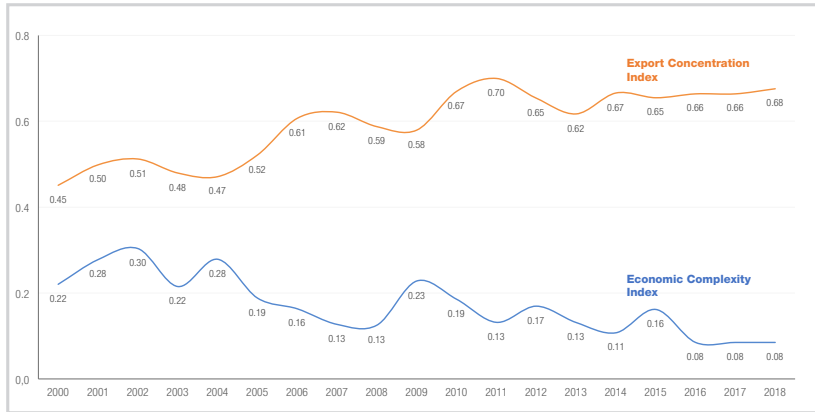
However, closer examination of the indicators reveals that the GFCF is largely driven by investments in the mining sector, whereas the industrial ratio of the country is due to the increasing servicification of Zambia's economy. Consequently, despite increases in GFCF and industrial ratio, Zambia's manufacturing value added in GDP has continued to decline (Figure 5). Thus, the total PCI value on structural transformation may be overstating the actual performance of Zambia in this area.

Figure 5: Structural change



Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

Despite longstanding policy priorities to diversify exports, Figure 6 shows that the export concentration index is increasing. This suggests that Zambia's dependence on copper is becoming more significant, not less. Additionally, the economic complexity index is decreasing, indicating that diversification strategies have not yielded more diverse and unique Zambian products. Zambia's weak performance on the two important indicators show the lack of transformation in its economy.

Figure 6: Change in structural transformation indicators

Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

Key binding constraints to structural change

The most pervasive binding constraints to Zambia's structural economic transformation are the lack of export diversification and value addition as well as the inability to increase economic complexity. Zambia has faced significant difficulties with economic diversification over the years, despite its longstanding prioritization in national policies. This made the country's economy dependent on extractive resources, rendering it vulnerable to shocks, and making growth less inclusive. The lack of diversification has also prevented Zambia from harnessing trade and investment opportunities from improved market access or bilateral investment agreements with development and trade partners.

Another constraint to Zambia's transformation efforts relates to the country's inability to take advantage of bilateral and regional investment and trade opportunities. In Zambia, seven bilateral investment treaties are currently in force while eight more have been signed but are not in force. These bilateral agreements often provide economic opportunities, which Zambia is unable to fully take advantage of, due to its lack of economic diversification and structural transformation. Harnessing these opportunities would require policies and measures to direct Foreign Direct Investment (FDI) to sectors outside of the mining sector and capture such resources in manufacturing and value addition. While Zambia has not finalized its Economic Partnership Agreement (EPA) negotiations with the EU,²² the Cotonou Agreement²³ (and soon its successor)²⁴ provides the basis for its trade and partnership

22. See: https://ec.europa.eu/trade/policy/countries-and-regions/negotiations-and-agreements/#_on-hold.

23. Partnership agreement 2000/483/EC between the members of the African, Caribbean and Pacific Group of States of the one part, and the European Community and its Member States, of the other part, signed in Cotonou on 23 June 2000 (OJ L 317, 15.12.2000, pp. 3-353).

24. Partnership Agreement between [The European Union/ The European Union and its Member States], of the one part, and Members of the Organisation of African, Caribbean and Pacific States, of the other part (negotiated and initial text, available at: https://ec.europa.eu/international-partnerships/system/files/negotiated-agreement-text-initialled-by-eu-oacps-chief-negotiators-20210415_en.pdf

relations with the EU. As an LDC, Zambia benefits from duty free quota free market access under the EU's Everything But Arms (EBA) initiative. However, Zambia was only able to utilize 70.6% of the preferences available due to supply side constraints,²⁵ as well as high trade costs for Zambian producers and non-trade barriers such as EU phytosanitary measures. By 2013, EU exports to Zambia had increased seven times from their 2003 level, while Zambia's exports to the EU declined from US\$ 472 million to US\$ 325.5 million in the same period. In 2020, Zambia's exports to the EU amounted to approximately US\$ 275 million while EU exports to Zambia reached US\$ 310 million.²⁶

Regional and global value chains have grown considerably over the last few decades with some countries, notably East Asian economies, benefitting from integrating within them. Regional and global value chains offer opportunities for developing economies to acquire new technology and attract FDI, but they also involve challenges. Often, the highest value-added activities (e.g. research and development (R&D) activities) remain concentrated in the high-income home countries of trans-national corporations (TNC). Additionally, many TNCs import intermediate components to the countries that engage in creating the final product, limiting the possibilities for technological knowledge transfer and the establishment of full productive activities in host countries.

In Zambia, regional demand has grown significantly on the back of FDI in the mining sector that has its value chain extending well beyond the country's borders. Imports of mining capital equipment have been particularly high in Zambia, with more than US\$ 600 million worth of imports annually between 2011 and 2014, largely originating from South Africa and increasingly from China.²⁷ With a view to diversifying the economy and benefitting from regional integration opportunities, ten value chains have been identified in the SADC agro-processing cluster where Zambia has potential for value chain enhancement, including soya, sugar, meat products, cassava, dairy products, fish, horticulture, wildlife, forestry and other foods and drinks.²⁸

To ensure that FDI and participation in regional and global value chains results in knowledge and technology transfer to Zambian firms, Zambia needs to put in place proactive policies to strengthen productive capacities, such as support to targeted high-value added sectors or processing steps, combined with economy-wide policies to strengthen education and technical skills, create an enabling environment for the private sector, build relevant infrastructure (e.g. irrigation for agricultural specializations, and electricity infrastructure for manufacturing), and build strong regulatory institutions.²⁹ Further, one of

25. See: <https://gsp.unctad.org/utilization/reporter=918;partner=894>.

26. See: https://webgate.ec.europa.eu/isdb_results/factsheets/country/details_zambia_en.pdf.

27. UNCTAD, 2021. TRANSFORMING SOUTHERN AFRICA Harnessing Regional Value Chains and Industrial Policy for Development (available at: https://unctad.org/system/files/official-document/gdsecidc2021d1_en.pdf).

28. Ibid.

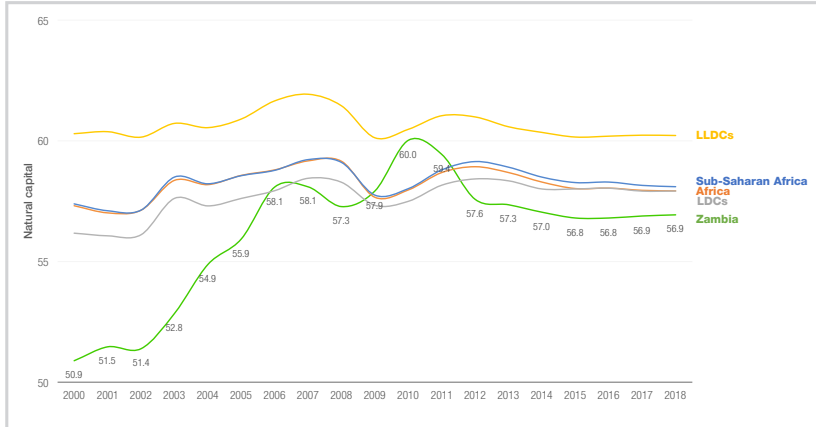
29. UNCTAD. 2015. Facilitating the Participation of Landlocked Developing Countries in Commodity Value Chains (available at: https://unctad.org/system/files/official-document/aldc2015d2_en.pdf).

Zambia's main policy measures to facilitate participation and upgrading in global value chains is to develop industrial parks and multi-facility economic zones. These zones are expected to have well-developed communications and transportation networks in order to overcome infrastructure bottlenecks, thus attracting FDI that can spur industrial development.³⁰ Zambia should also work to strengthen the backward and forward linkages between its key economic sectors on the one hand and domestic and FDI firms, on the other hand.

2.2.2 Natural capital

As is the case for most LDCs and LLDCs in Africa, the score on the natural capital category of the PCI is relatively high for Zambia. However, after reaching a peak around 2009, the score has declined slightly to a level below Zambia's peers in the region and at similar stages of development (Figure 7). The relative decline is the result of the collapse of the commodities price during the 2008-2009 financial and economic crisis, as well as a reduction in the production of copper. Several mining companies cancelled their contractual obligations during the economic crisis of 2008-2009, leading to the closure of several mines in Zambia.

Figure 7: Natural capital



Source: Lines representing country groups represent the median of these groups - Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

With a score of 56.93 in 2018, Zambia ranks 32nd in Africa and 54th in the world in this category. The preponderate share of natural capital in the PCI indicates Zambia's commodity dependence and exposure to risks and uncertainties. However, if fully and sustainably harnessed, high natural capital holds potential for improved productive capacities and structural

30. Text to n. 26.

transformation. For instance, natural resources rent can boost investments in human capital formation and financing infrastructure, including energy and ICTs.

For Zambia, most indicators in this category remained stable over time. The only one that exhibits volatility similar to the overall category is the total natural resources rent as a percentage of GDP. This reflects the dependence of Zambian natural capital on copper extraction and its related price fluctuations. It also suggests that policies regarding natural capital management have not taken into account more diverse sources of natural capital. For instance, harnessing the potential in agriculture helps countries not only to reduce their vulnerability to shocks but also to kick start the process of structural transformation in sector.

Key binding constraints to harness natural capital

The key constraints to harnessing the potential of natural capital in Zambia relate to (i) the lack of incentives and supporting infrastructure in the agriculture sector; (ii) weak policy formulation and implementation; and (iii) low productivity of factors of production such as labour.

Zambia enjoys ample land area that exhibits potential for agricultural production, but is not being used as farmland because of a lack of irrigation. The lack of progress in the development of agriculture and other sources of natural capital (e.g. aquaculture) also indicates a need for strengthened capacity-building in policy formulation and implementation. There is a further need to improve productivity in agriculture and mining, and to strengthen linkages with downstream industries, such as light industry processing, and agro-processing. Improvement in the business environment will have the greatest impact on micro, small and medium-sized enterprises (MSMEs). They are a major source of productivity growth and job creation, and a potential source of regional production networks. Additionally, resources could be devoted to the production of livestock and livestock related products such as milk and leather. These products can obtain a higher price than other agricultural products such as maize which could improve overall productivity.³¹

Adoption of sustainable livestock management practices through pilot projects have shown promising results, including restoration of ecosystems, improved forage, enhanced carbon sequestration, increased soil fertility and water absorption, leading to healthier livestock and better productivity.³²

31. UNCTAD. 2016. Zambia Trade Policy Framework – Harnessing the potential for trade and sustainable growth in Zambia (available at: https://unctad.org/system/files/official-document/ditctncd2015d4_en.pdf).

32. See: <https://www.solidaridadnetwork.org/story/sustainable-livestock-management-improves-livelihoods-and-landscapes-in-zambia/>

The increasing demand for organic livestock particularly in developed economies creates opportunities for countries such as Zambia to supply to high-end markets. Carefully designed public policies are required as a greater transition towards organic agriculture is possible, helping to achieve important environmental and health benefits,³³ and offer higher value products. Zambia has the largest wild collection and beekeeping areas in Africa and second largest in the world,³⁴ with an endowment of 3.2 million hectares. The organic agricultural land takes up a total of 207 hectares at present.³⁵ While the share of organic farming land is still very small, the trend is growing and wild land is available to facilitate the expansion. Currently, the main organic products cultivated (wild harvesting: honey, mushrooms, indigenous tree seed oil; commercial: export vegetables, herbs, spices, medical plants, groundnuts, sesame, green manures, soy beans and maize) are destined to the European market.³⁶ However, irrespective of the available land, its administration is often complicated, with a most areas falling under customary arrangements.³⁷ This requires specific attention to be paid to women's access to land, including adoption of effective measures to facilitate lowly represented groups' right to acquire and control this asset.

Building linkages to the local tourism industry can further strengthen demand for local agricultural products. There is also a need to further reform the Farmer Income Support Pack (FISP) System to improve the targeting, and better align incentives for farmers.

Zambia also has unexploited mineral resources potential that has been well documented, but not conclusively linked to industrial processes yet. Industrial minerals and materials can reduce the over-dependence on base metal mining and help to create jobs. Necessary resources and institutions for related R&D should be put in place to sustainably harness Zambia's other industrial minerals potential beyond copper and cobalt.³⁸ In the process, linkages to the local economy need to be carefully considered and contractually affirmed to avoid a plateau-type of foreign investment that is typical of extractives sector.

2.2.3 Human capital

Although Zambia's performance in the human capital component of the PCI was low around 2007, since then improvement has been steady, reaching within 0.3 points of the median performance of Africa by 2018 (Figure 8). Between 2000 and 2018, Zambia's score for the human capital component

33. Barbieri et al. 2021. Global option space for organic agriculture is delimited by nitrogen availability (Springer Nature, nature food).

34. After Finland.

35. FAO, 2021. The World of Organic Agriculture 2021 (available at: <https://www.fao.org/fileadmin/documents/shop/1150-organic-world-2021.pdf>)

36. International Trade Centre. 2021. Country Profile Zambia (available at: <https://intracen.org/our-work/countries-and-regions/africa/zambia>)

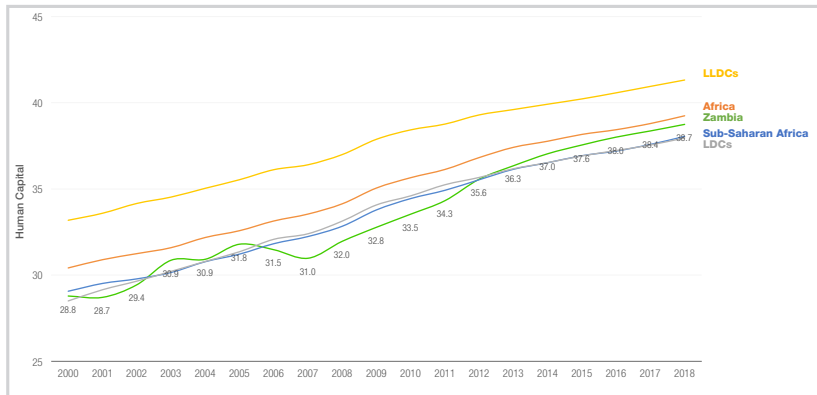
37. See: https://sustainabledevelopment.un.org/content/documents/dsd/dsd_aofw_ni/ni_pdfs/NationalReports/zambia/Land.pdf

38. Kolala & Dokowe. 2021. Economic potential of industrial minerals in Zambia - A review (available at: <https://www.sciencedirect.com/science/article/abs/pii/S0301420721000143>)

increased by about 35%. Health adjusted life expectancy shows a steady increase, expected years of schooling have remained stable at around 12.5 years, and the fertility rate has decreased slightly. The indicators for R&D professionals per million people and for R&D expenditure as a percentage of GDP are both affected by sparse data.

This performance reflects the positive effects of the investment that Zambia has made in the health and education of its people. Between 2001 and 2015, central government budgetary expenditure in education was an average of 3.24% of GDP and expenditure in health was an average of 5.14% of GDP, reaching almost the SSA averages for government expenditure in both categories.³⁹ This has also led to the improved HAI (Human Assets Index) of Zambia, which enabled the country to meet the graduation criteria at the 2021 review of the CDP.

Figure 8: Human capital



Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

With a score of 38.75 in 2018 Zambia ranks 27th in Africa and 162nd in the world in this category. The performance of Zambia in the indicator of expected years of schooling is high but sparse data makes it unclear if this is impacting R&D the way it has the potential to. Despite the high performance of Zambia in human capital category of the PCI, its performance in key indicators with huge impact on structural transformation such as the share of R&D personnel, number of scientists and technical experts are still low. The situation requires putting in place the right mix of policies and strategies discussed in section three of the NPCGA.

The human capital component of productive capacities is particularly crucial, as it allows for important linkages to other aspects of productive capacities.

39. World Bank, 2015. Government expenditure on education (% GDP) – Zambia (available at: <https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?end=2015&locations=ZM&start=2000>).

Some of the ways those linkages are realized is through R&D, as well as employment. For example, underutilization of the labour force can impede the application of skills to public and private sector activities. Lack of R&D reduces opportunities for higher value-added production or local adaptation of products.

Key binding constraints to human capital formation

While Zambia has achieved improvements in the human capital component of productive capacities, further progress is held back by a number of constraints. These are: (i) low quality of education; (ii) labour underutilization; and (iii) challenges in increasing the proportion of researchers and technicians.

Zambia has maintained the average expected years of schooling, but the quality of education continues to be a challenge. According to UNICEF, the country's targets have not yet been met. For instance, the target of an average score of 40% in language and mathematics was not reached in either Grade 5 or Grade 9. The share of children passing the Grade 9 and Grade 12 examinations continues to be low, at 55.3% and 64.8% respectively, with girls' achievements falling behind that of boys.⁴⁰

Zambia also has higher rates of labour underutilization than both the lower-middle income country group and the sub-Saharan African region.⁴¹ In rural areas, time-related underemployment is more prevalent while in urban areas restricted access to the labour force is more of a problem.⁴² This suggests that different policies are needed to absorb Zambian labour at its full capacity into activities in rural versus urban settings. For example, in rural settings, diversifying activities to include agricultural extension services could create opportunities for people to fill time-related gaps while in urban settings, access to child-care or active labour market policies may be more impactful.

Zambia's human capital indicators in R&D remain weak. The government has recognized the importance of supporting R&D professionals and activities and has dedicated a particular development outcome to it in the Seventh National Development Plan.⁴³ However, in the first year of implementation, many of the concrete goals enumerated under this pillar had not been met. More progress in supporting technology related R&D for energy and transport would help create the positive feedback cycle that is so integral to holistic structural transformation and productive capacities development.

40. UNICEF. 2019. Zambia (available at: <https://www.unicef.org/zambia/education>)

41. ILOstat. 2020. Labour underutilization indicators – LU1, LU2, LU3 & LU4 – ILO Modelled Estimates % annual (available at: https://www.ilo.org/shinyapps/bulkexplorer18/?lang=en&segment=indicator&id=LUU_2LU4_SEX_AGE_RT_A).

42. ILO. 2020. World Employment and Social Outlook - Trends

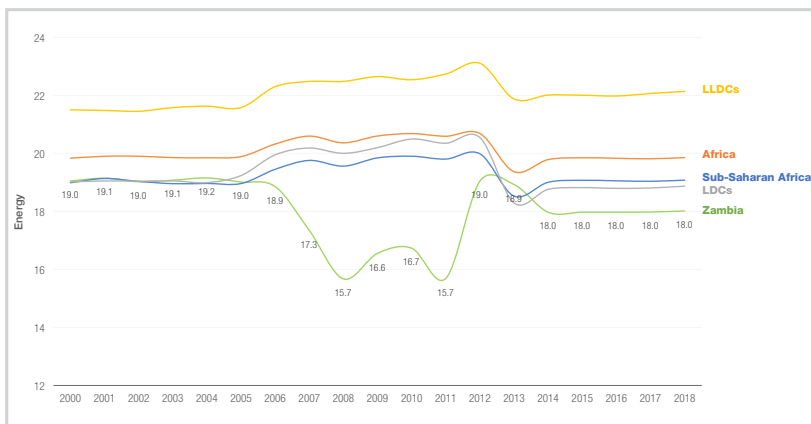
2020 (available at: <https://www.ilo.org/global/research/global-reports/weso/2020/lang-en/index.htm>)

43. Ministry of Development Planning, 2017. Seventh National Development Plan 2017-2021 (available at: https://www.mcti.gov.zm/?wpfb_dl=34)

2.2.4 Energy

Zambia's performance in the energy component is low compared to countries in the region and other countries at similar stages of development (Figure 9). It also experiences some volatility over time mainly due to increases in transmission and distribution losses as a percentage of primary supply. Bottlenecks such as growing government debt, continued market-based reforms, and the creditworthiness of energy offtakers have also been identified.⁴⁴

Figure 9: Energy



Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

Overall, only 29.18% of the population in Zambia had access to electricity in 2018, and this was the result of slow, but steady improvement from 16.70% in 2000. Like in many other LDCs, there is a wide inequality of energy services in rural and urban areas in Zambia.⁴⁵ This reflects the country's struggle to connect most of its population to electricity but suggests that progress, however slow, has been made.

Key binding constraints to the energy sector development

Zambia faces a number of constraints in the energy sector. These are: (i) excessive reliance on hydropower, (ii) inadequate inter-agency coordination, (iii) gaps in rural electrification, and (iv) issues in achieving appropriate energy pricing.

44. USAID. 2018. Power Africa – Zambia Country Factsheet (available at: https://www.usaid.gov/sites/default/files/documents/1860/Zambia_-_November_2018_Country_Fact_Sheet.pdf).

45. UNCTAD. 2017. The Least Developed Countries Report 2017: Transformational Energy Access (available at:

<https://static1.squarespace.com/static/609a53264723031eccc12e99/t/60ed4dee4182611181b4e7bc/1626164746091/Integration-of-Variable-Renewable-Energy-Sources-in-the-National-Electric-System-of-Zambia.pdf>).

Hydropower accounted for 85% of installed capacity in Zambia in 2019⁴⁶. In the context of climate change, this has become a vulnerability as increasingly unpredictable rainfall frequency and volume can affect the energy supply. Zambia has the potential to generate all the energy it needs, however with its current infrastructure and exploitation of energy sources the sector has not been able to keep up with demand. Zambia experienced electricity supply rationing to all consumers in 2015 when demand stood at 1,949 Mega Watt (MW) and the sector was only able to produce 1,281 MW.⁴⁷ Demand for energy is also increasing in Zambia at an average of 6% annually. The largest consumer of electricity at 51.1% is the mining sector.⁴⁸ Additionally, upgrading the mining sector to higher value-added activities is an energy intensive endeavour requiring reliable energy availability.⁴⁹ With rising electricity demand and insufficiency of energy generated through hydroelectric dams in recent years, Zambia decided to enhance electricity generation through fossil sources (coal, diesel, and heavy fuel oil). As demand grows, pressure for increasing capacity through fossil channels mounts. Greener and less costly win-win solutions to address these issues would be to increase mines' energy efficiency and/or to adopt self-generation through renewable sources such as solar energy. Such measures by companies could be supported by public policies to provide an additional impetus.⁵⁰ Technologies are available for mines to reduce their electricity consumption, environmental impact and cost.⁵¹ Development partners have a key role to play in facilitating access to new technologies to improve energy efficiency for the benefit of environment and productive capacities development.

Taking advantage of the significant potential in renewables other than hydropower, such as solar and wind energy, can help diversify the energy supply, increasing resilience and capacity. The share of installed capacity attributed to solar energy increased to 3% in 2019.⁵² There is potential to increase variable renewable energy sources (wind and solar) installed capacity to 34% in mid- and long-term scenarios exploiting interconnections and power trading on the competitive market.

Zambia's energy sector is regulated by the Energy Regulation Board (ERB) although many other government entities are involved in its decision making. However, collaboration across agencies is limited, leading to a lengthy licensing process and increased costs for private sector investors. The Rural Electrification Authority was established in 2003 to provide energy

46. RES4Africa Foundation & the Enel Foundation. 2019. Integration of Variable Renewable Energy Sources in the National Electric System of Zambia (available at: <https://static1.squarespace.com/static/609a53264723031eccc12e99/t/60ed4dee4182611181b4e7bc/1626164746091/Integration-of-Variable-Renewable-Energy-Sources-in-the-National-Electric-System-of-Zambia.pdf>).

47. Text to n 42.

48. Ministry of Energy. 2019. National Energy Policy 2019

49. UNIDO. 2020. Zambia Industrial Diagnostic Study 2020 (available at: https://www.unido.org/sites/default/files/files/2020-10/PCP_Zambia_Industrial%20Diagnostic_Study_2020.pdf

50. International Institute for Sustainable Development (IISD), 2018. Not a Case of Either/Or: How government and mines in Zambia can save money through energy efficiency (available at: <https://www.iisd.org/articles/zambia-mines-energy>).

51. ABB. Technologies to reduce energy consumption and emissions in mining operations (available at: <https://new.abb.com/process-automation/world-environment-day-2020/mine-of-the-future-technologies-to-make-mining-sustainable>).

52. Energy Regulation Board. 2019. Energy Sector Report (available at: <https://www.erb.org.zm/wp-content/uploads/files/esr2019.pdf>).

infrastructure in rural areas but it struggles with inadequate funding, lack of participation of the private sector and the lack of a mechanism to coordinate players in rural electrification – specifically off-grid providers.

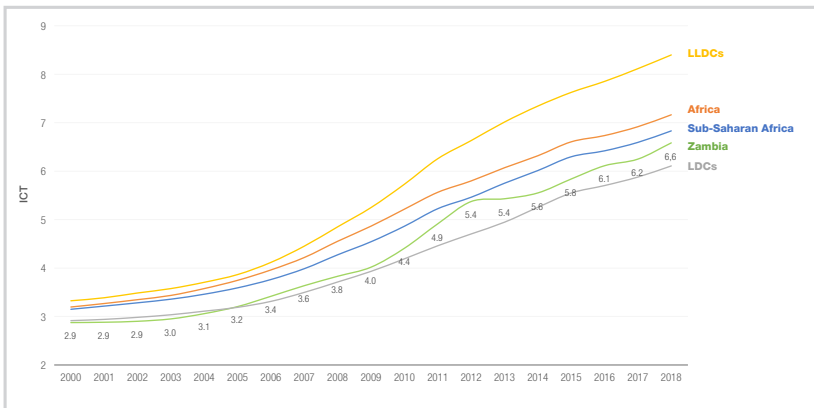
There has been little improvement in rural electrification, with only 4.4% of rural household connected to the grid in 2019 and 7.4% connected to solar home systems.⁵³ Solar-based mini-grids can be a helpful development in electrification of rural areas as long as they are accompanied by appropriate planning such as consistent technical standards and protocols for grid interconnection. This is essential to allow them to eventually be integrated into larger networks, promoting transformational energy access.⁵⁴

Zambia also has some of the lowest energy tariffs in the region – so low that they are not cost reflective. This impedes private sector investment. A revision of the tariff scheme was undertaken in 2019. These changes, as well as changes to the legal framework of the ERB, are expected to improve conditions for private investment and allow for more effective oversight of the development of the sector.⁵⁵

2.2.5 Information and Communication Technologies

For the ICT component, a positive trend can be observed in Zambia even though the scores are below the sub-Saharan African and continental African median (Figure 10). The trend shows improvement at a pace similar to that of comparable countries.

Figure 10: Information and Communication Technologies



Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

53. Text to n 47.

55. Text to n 47.

54. Text to n 44.

Zambia's score of 6.58 places it at a rank of 25th in Africa and 161st in the world. This relatively better ranking in Africa reflects the challenges of ICT development on the continent. Zambia's improvements in this category have been driven by the increased number of mobile subscriptions per 100 people as well as a slightly slower increase in the number of internet users as a percentage of the population. Other indicators such as the number of fixed broadband subscriptions per 100 people, the number of fixed lines per 100 people and the number of secure internet servers per million in population have all improved but at a relatively slow rate.

Key binding constraints to the ICT sector's development

The key constraints to progress in the ICT category of productive capacities in Zambia are: (i) insufficient electricity access; (ii) lack of ICT skills; and (iii) lack of infrastructure needed to foster e-commerce.

Zambia's progress on ICT continues to be held back by lack of reliable electricity access. While the country has made a lot of progress in laying fiber-optic lines, data connectivity is relatively unreliable because of fiber cuts, electricity grid failure and maintenance issues. A 2018 national survey on the access and usage of ICTs indicated a link between ICT access and access to electricity. The uneven distribution of energy between rural and urban areas is a binding constraint in the widespread adoption of ICT solutions throughout the country.

There is a pronounced lack of ICT skills throughout the population in Zambia. In a survey conducted in 2018, over 70% of individuals stated that their main reason for not accessing the internet was a lack of knowledge about how to use it.⁵⁶ At the national level, only 6.8% of individuals reported that they knew how to use a computer. This skill gap also has a gender dimension with many more men possessing the skills to access and use computers and the internet than women. Furthermore, the digital gap between rural and urban areas is significant: while 14.7% of urban households own a computer, only 2.7% of rural households possess such ICT hardware. Similarly, while 11.8% of individuals in urban areas know how to use a computer, only 2.8% of rural habitants do.

The lack of digital skills development in Zambia is related to the quality of education. The results from the Human capital category show that Zambians are expected to have 12.5 years of schooling, but that the quality of education is low and participation rates drop soon after primary level. This

56. Zambia Information and Communications Technology Authority (ZICTA). 2018. 2018 National Survey on Access and Usage of Information and Communication Technologies

by households and individuals in Zambia (available at: <https://www.scribd.com/document/547839710/Zicta-Ict-Survey-2018>).

suggests that to reach the most people, ICT skills need to be integrated into the curriculum in primary school. However, the quality of instruction can be constrained by connectivity issues and limited digital infrastructure in schools.⁵⁷ In Zambia, 61% of primary schools and 17% of secondary schools do not have access to electricity.

ICT skills among teachers can also be a constraint to the effective integration of ICT in an educational context. To respond to this knowledge gap, the UNESCO ICT Competence Framework for Teachers has been adapted to the Zambian context to create a framework for ICT skills development of educators. However, this adaptation has not yet been implemented in a sustained way.⁵⁸ In the context of technical and vocational educational policies and programmes, ICT skills are a clear priority. But there is also a need to strengthen the link between digital skills and entrepreneurship skills.

The use of ICT for eCommerce is taking off. There is a high adoption rate of digital financial services, mostly for sending and receiving money.⁵⁹ Other important sectors for eCommerce development in Zambia are food delivery services and tourism related services such as transportation (taxi apps). However, one logistical constraint in these services is that many residences in Zambia do not have formal addresses. Since 2014, the Zambia Information and Communications Technology Authority (ZICTA) has implemented a physical addressing programme that has installed more than 60,000 street names and house number signs. The programme was planned to be continued from 2019 to 2023, but as of 2018 the funding for that period was not secured.⁶⁰

2.2.6 Transport

In the transport category Zambia has mostly performed below its peers at similar stages of development and others in the region since a dip in performance in 2010 (Figure 11). At 11.59, Zambia's score in this category rank it at 33rd in Africa and 170th in the world. The changes in Zambia's transport score reflect the performance of the indicator of kilometers roads per 100 sq. kilometers of land.

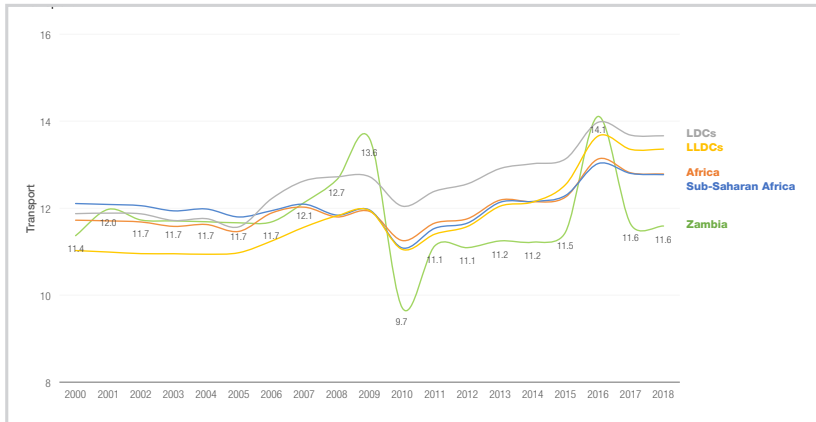
57. ILO. 2021. Digitalization in Teaching and Education in the United Republic of Tanzania (available at: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/publication/wcms_783673.pdf).

58. UNESCO. 2018. UNESCO ICT Competency Framework for Teachers (available at: <https://unesdoc.unesco.org/ark:/48223/pf0000265721>).

59. Zambia Information and Communications Technology Authority (ZICTA), 2018. 2018 National Survey on Access and

Usage of Information and Communication Technologies by households and individuals in Zambia (available at: <https://www.scribd.com/document/547839710/Zicta-ict-Survey-2018>).

60. 2018. UNCTAD. Republic of Zambia Rapid eTrade Readiness Assessment (available at: https://unctad.org/system/files/official-document/dt18ict2018d10_en.pdf).

Figure 11: Transport

Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

Most transport in Zambia, both freight and passenger transport, happens by road. To respond to this need, the Seventh National Development Plan has achieved solid progress with its plan to improve Zambia's road system. In 2018, 168 km of road was surfaced which exceeded the 146 km target. Significant progress was also made in the expansion and modernization of Kenneth Kaunda International Airport Terminal and the new Copperbelt International Airport.⁶¹ Both of these developments should lead to improvements in Zambia's performance in their related indicators. However, the improvements are not substantial in relation to the data sets and measurements used to assess this category of the PCI. For example, road density per 100 square kilometers and air-passengers as percentage of population undermine the overall performance. While the first indicator requires a huge jump, the growth rate in the second one needs to surpass the growth rate in population. Otherwise, modest improvements cannot be duly captured in the scores of the category. Zambia's data for roads per 100 square kilometers is also affected by sparse data.

Key binding constraints to the transport sector development

Zambia faces three principal constraints on the development of the transport category of productive capacities: (i) high fuel prices; (ii) outdated rail infrastructure, and (iii) inadequate trade facilitation measures.

Following the removal of subsidies in 2013, fuel prices in Zambia are among

61. 7th NDP Implementation Plan 2017-2021 (https://zambia.unfpa.org/sites/default/files/pub-pdf/Final%207NDP%20Implementation%20Plan%20-%209%20April_2018.pdf).

the highest in the region, second only to South Africa. Because all of Zambia's petroleum is imported, the price of fuel is sensitive to fluctuations in the international price and the exchange rate of the Zambian kwacha. This has led to interest in using biofuels for the Zambian transport sector. So far, the sector is still underdeveloped. To address the situation, the Ministry of Energy and the Ministry of Finance have established a Biofuels Technical Committee that will implement a National Biofuels Program.⁶²

One area of transport that has fallen behind is the country's rail infrastructure. Existing rail lines do not allow for trains to move fast enough to meet the needs of freight customers. The average train speed is 40km per hour which is much slower than road transport. Infrastructure that supports trains that can move at least 80km per hour will be needed for the rail sector to be competitive with road transport.⁶³ One way to improve the competitiveness of the rail sector in Zambia is to break up the sector by separating infrastructure development from maintenance and service operations. This "unbundling" of rail transport activities can facilitate private sector participation through equipment and track leasing, infrastructure construction and maintenance and the private operations of trains. Public-private partnerships can also be a helpful way to gain financing for this sector given Zambia's constrained fiscal space.⁶⁴

Regional agreements such as the Southern African Development Community (SADC) and the African Continental Free Trade Area (AfCFTA) encourage creating more harmonized and comprehensive rail networks in Africa for both passenger and freight. This prioritization means that there is the political will for the movement of goods and services to be more streamlined within these areas along train routes. This can be an area where trade can be facilitated as infrastructure is updated.

Zambia has implemented a series of trade facilitation initiatives to improve competitiveness. These include the establishment of one stop border posts (OSBP) that combine entry and exit procedures into a shared space for national border processing to reduce transit costs, while maintaining commitments to public safety and revenue collection. An OECD analysis of other measures of trade facilitation found that Zambia performs well in information availability, involving the trade community, appeals procedures, and automated formalities. Areas that could be improved include internal border agency cooperation, governance and impartiality, and procedure and documentation formalities.

62. Energy Regulation Board. 2019. Energy Sector Report (available at: <https://www.erb.org.zm/wp-content/uploads/files/esr2019.pdf>).

63. Policy Monitoring and Research Centre. 2019. Analysis of Zambia Railway Sector: Structural deficiencies and the way forward (available at: <https://www.researchgate.net/>

[publication/334465926_ANALYSIS_OF_ZAMBIA_RAILWAY_SECTOR_-_STRUCTURAL_DEFICIENCIES_THE_WAY_FORWARD](https://www.researchgate.net/publication/334465926_ANALYSIS_OF_ZAMBIA_RAILWAY_SECTOR_-_STRUCTURAL_DEFICIENCIES_THE_WAY_FORWARD)).

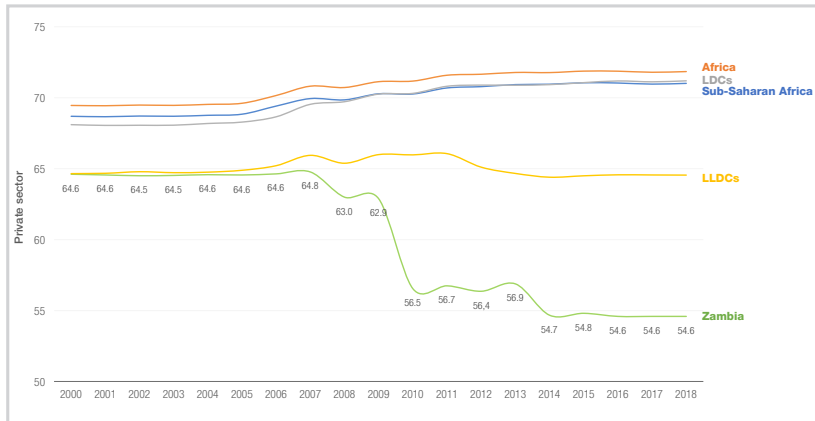
64. Ibid

Developing a coherent logistics strategy with the definition of a core logistics network and strengthening the logistic plan to integrate into potential regional supply chains is crucial to facilitate Zambia's trade and increase the benefits derived from trade agreements.

2.2.7 Private sector

The most worrying trend of Zambia's PCI analysis is the evolution in its private sector category. Scores began on the low side compared to the region and countries in similar stages of development and continue decreasing (Figure 12). Zambia's private sector development category score hit an all-time high in 2007 at 64.76. By 2018 this category declined 15.7% from its 2007 peak.

Figure 12: Private sector



Source: UNCTAD (2021) based on the Productive Capacities Index. Underlying data are available at <https://pci.unctad.org>.

It is Zambia's worst relative ranking in both Africa (51st) and the world (185th). An analysis of the indicators for this category show that all indicators are trending upwards, except two: the cost to import and export a container as well as access to finance. These indicators are driving the performance of the whole category down despite marked improvements in time to start a business and domestic credit to private sector as a percentage of GDP. Improvement in domestic credit in Zambia has not yet impacted the country's bank lending interest rate, which stood at 9.5% in 2020 against 7% in Mauritius and 5.5% in Botswana in the same year.⁶⁵ As in most countries in SSA, collateral requirements for private sector lending undermine access to credit.

65. World Bank Data on Lending Interest Rates

Key binding constraints to private sector development

The key binding constraints to Zambia's performance in the private sector category are: (i) rising transport costs for container trade; (ii) access to finance; (iii) inability to foster linkages; and (iv) a large informal sector.

A key challenge to Zambia's private sector development are the rising costs to export and import a container. Zambia's landlocked position creates a binding constraint on how much these costs can be brought down, thus raising operational costs for private sector actors. However, a number of ongoing and needed improvements have been discussed in the transport category. Notably, some logistical reforms have been undertaken to face such issues. Significant time and cost savings have been, for instance, achieved through the establishment of a one-stop border post in Chirundu at the Zambia-Zimbabwe border. Adoption of an e-Government solution (a non-invasive inspection scanner for pre-clearance) has reduced the average time spent by a truck at the border from seven - nine days to about three - four hours, as well as a sevenfold increase in the number of trucks passing through the border. The private sector saved an average of US\$ 20 million per month as a result of these improvements. This is thanks to shorter passage times, as well as a more than 100% increase in trade tax collection on the Zambian side of Chirundu from an average of US\$ 10 million a month in 2009 to US\$ 20.3 million in 2012. Time saving has been valued at US\$ 600,000 per day, and the benefit is shared widely by border actors but also producers and consumers.⁶⁶

Another important constraint to private sector development is access to finance. Improving access to finance has been a policy priority for a long time in Zambia, and the PCI suggests that improvement is happening in a general sense. However, high collateral requirements and high interest rates make loans consistently more accessible to larger firms while excluding MSMEs.⁶⁷ And the credit that is available is prohibitively expensive with commercial banks reporting nominal interest rates up to 40% and microfinancing institutions reporting rates up to 70%.⁶⁸ In addition, collateral requirements for financing are typically focused on fixed property such as land and buildings, even though many MSMEs do not have these kinds of immovable property to put up as collateral.

The private sector in Zambia is also constrained by the lack of linkages between large firms and MSMEs, or between local firms and foreign investors. Fostering stronger linkages could strengthen the transfer of technologies and skills and create stronger incentives for formalization.

66. OECD/WTO. 2015. Aid for Trade at a Glance 2015: Reducing trade costs for inclusive, sustainable growth (available at: https://www.wto.org/english/res_e/booksp_e/aid4trade15_chap5_e.pdf).

67. UNIDO. 2020. Industrial Diagnostic Study Zambia 2020 (available at: https://www.unido.org/sites/default/files/files/2020-10/PCP%20Zambia_Industrial%20Diagnostic%20Study%202020.pdf).

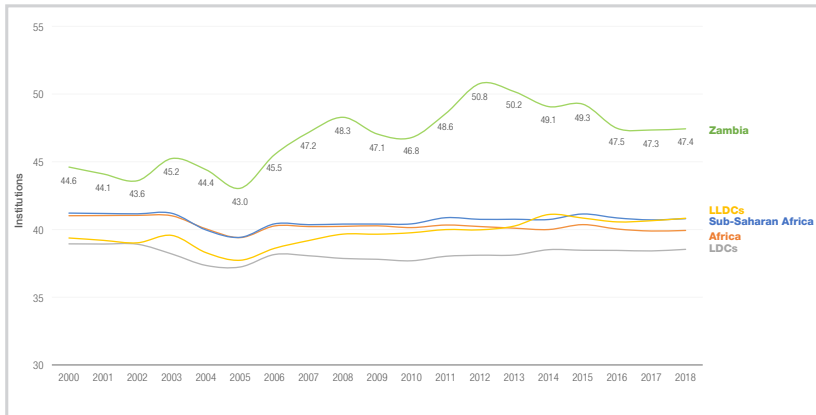
68. Ministry of Finance. 2017. National Financial Inclusion Strategy 2017-2022 (available at: <https://www.boz.zm/National-Financial-Inclusion-Strategy-2017-2022.pdf>).

A further constraint relates to informality. Informal activity in Zambia is significant in every sector of the economy, with an estimated 72% of workers working informally.⁶⁹ ILO studies affirm that the formality of an enterprise is also determined by the number of workers in an enterprise: the smaller the enterprise, the more likely it is to employ informal workers.⁷⁰ Informal economic activity can create a difficult competitive environment for formal sector firms because informal operations do not adhere to regulatory standards or pay taxes. Informal firms also tend to stay small and be less productive, limiting their ability to contribute to general productive capacities development. Therefore, the Zambian government should consider specific incentives for informal actors to formalize.

2.2.8 Institutions

One category where Zambia performs well above its peers is in institutions (Figure 13). The peace and political stability of Zambia allow for a strong showing in this category. With a score of 47.44 in 2018, Zambia ranks 14th in Africa, its best position in Africa across all categories. However, this indicates the poor capacities of African countries in building strong institutions and not necessarily the strength of institutions in Zambia. On the worldwide level this score ranks 118th.

Figure 13: Institutions



Source: UNCTAD (2021) based on the Productive Capacities Index.

69. Text to n°12

70. Enterprises whose number of workers was between 1 to 4, had an exceedingly large number of workers employed informally, whereas those whose number of workers was more than 4 had gradually employed fewer informal workers in rural and urban areas alike. Specifically, enterprises with 1 to 4 workers had rates of informality of 99.4% in rural areas and 96.7% in urban areas. Those with 5 to 25 workers had rates

of informality of 94.7% and 68.4% in rural and urban areas, respectively. Enterprises with more than 24 workers had 58.3% of their workers being informally employed in rural and 37.2% in urban areas. (ILO, 2018. Informality and poverty in Zambia, Findings from the 2015 Living Conditions and Monitoring Survey) available at: https://www.ilo.org/wcmsp5/groups/public/---africa/---ro-abidjan/---ilo-lusaka/documents/publication/wcms_697953.pdf).

A breakdown of indicators reveals that the second highest indicator is voice and accountability. This is mirrored in the extensive consultative processes that the government outlines in its various development initiatives. However, not all Zambian institutions are as good about this aspect. Export and import firms have struggled with the lack of transparency and ability to weigh in on changing trade regulations, although trade facilitation initiatives have established more opportunities for consultations in recent years.⁷¹ There is also a lack of voice and accountability within Zambian financial institutions, particularly when it comes to financing for MSMEs. Both, the rule of law and control of corruption indicators have improved but are still negative. These have a knock-on effect on the two lowest indicators: regulatory quality and government effectiveness. All of these indicators interact in a synergistic way with the private sector. Foreign and domestic investors alike gain confidence from a level playing field and clear expectations from governmental institutions. In Zambia, the domestic credit to private sector has been increasingly declining in the last years, recording 15.2% of GDP in 2020.⁷² Therefore, stagnant performance in Zambia's private sector development category can be linked to low performance in institutions. Although improvement is taking place in transparency, accountability and corruption in the public sector, scoring 2.5 in 2020, the scores for other indicators are low.⁷³ As such, while Zambia performs well in the institutions component of the PCI compared to its African peers, the performance in many of the indicators still requires the attention of policy makers.

Key binding constraints to the development of institutions

The key constraints facing Zambia's performance in this area are: (i) economic governance challenges; (ii) gaps in transparency and inter-Ministerial coordination; and (iii) administration of land.

Zambia ranks 117th out of 180 on Transparency International's Corruption Perceptions Index with a score of 33 out of 100 (the average for Sub-Saharan Africa is 32). A strong legal framework, law enforcement branches and an independent and effective court system are necessary to address this problem. Another mechanism to counter corruption is the strengthening of auditing agencies and improving financial management. This includes closing international loopholes to impede the laundering and hiding of proceeds from looted state assets.⁷⁴

71. Ministry of Commerce, Trade and Industry 2019. Multiyear Expert Meeting on transport, trade logistics and trade facilitation, Seventh session – Zambia's update on WTO Trade Facilitation Agreement Implementation. Available at: https://unctad.org/system/files/non-official-document/cimem7p04_Kayula%20Siame_en.pdf

72. World Bank, 2020. Domestic credit to private sector (% of GDP) – Zambia (available at: <https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS?locations=ZM>).

73. World Bank, 2020. CPIA transparency, accountability, and corruption in the public sector rating (1=low to 6=high) – Zambia (available at: <https://data.worldbank.org/indicator/IQ.CPA.TRAN.XQ?locations=ZM>).

74. Transparency International. 2016. How to Stop Corruption – 5 Key Ingredients. Available at: <https://www.transparency.org/en/news/how-to-stop-corruption-5-key-ingredients>

Strong institutions are particularly important in economies focused on the export of mined materials. Zambia can draw useful policy lessons from the experiences of successful countries such as Botswana⁷⁵ in fostering vibrant and dynamic institutions. Strong regulatory oversight and clear fiscal policies for foreign companies, particularly those operating in the export-oriented mining sector are needed to curb the threat of capital flight and illicit financial flows.⁷⁶

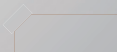
Another important function of institutions for productive capacities development is enforcing respect for property rights and the rule of law. In Zambia, administration of land is often complicated, as 94% of land is under the legal authority of traditional chiefs, and access to land is particularly difficult for women as many cultural norms and practices in Zambia reject the idea that women can acquire and control land in their own right. The government has recognized the need for more effective land administration and drafted a new National Land Policy, which highlights facilitating land ownership for Zambians and regulating ownership for non-Zambians as well as promoting the inclusion of women, youth, people with disabilities, and other marginalized populations in the land market. The successful application of this policy will depend on effective collaboration between local and national institutions, and between national ministries.

75. Botswana is an example of a mineral export dependent economy that has developed institutions to channel its natural wealth into productive capacities development. Botswana established a Public Service Debt Management Fund and a Revenue Stabilization Fund to save a substantial amount of

revenue during boom cycles to cushion the economic blow of bust cycles.

76. UNCTAD, 2020. Economic Development in Africa Report: Tackling Illicit Financial Flows for Sustainable Development in Africa.

III. The Way Forward: Policy Conclusions and Recommendations



Zambia's National Productive Capacities Gap Assessment (NPCGA) shows that the country lags behind developing countries in all measures of the productive capacities, except natural capital category. The country's overall performance in the composite PCI is slightly better than the average for LDCs. However, it is lower than Africa's regional average and by far lower than the region's top performers. Zambia's weak performance in energy (electricity), ICT, structural change, private sector, and transport categories is particularly worrying.

The performance of Zambia in the PCI should be seriously taken in the assessment of the country's progress towards graduation from the LDC category. Zambia's progress thus far has been in two of the three graduation criteria: GNI per capita and Human Assets Index (HAI). The biggest challenge is to make progress towards the third LDC graduation criterion Economic and Environmental Vulnerability Index (EVI). Zambia's lack of progress in EVI is the cause and consequence of its weak economy-wide productive capacities, lack of structural transformation and excessive socioeconomic vulnerability to negative external shocks. Addressing these complex challenges calls for formulating and implementing "new generation" policies and strategies as well as revamping ISMs that place the fostering of productive capacities and structural transformation at the centre. At the domestic level, this requires reorienting policy interventions from traditional, short-term, and project-based towards holistic, long-term and "programme-based" approaches to development. Such a paradigm shift should be complemented by new ISMs that include transfer of technology, building R&D institutions, rebalancing Official Development Assistance (ODA) resources between productive and economic sectors and expanding market access to value-added exports in goods and services. New generation policies and ISMs are key to address persistent socioeconomic vulnerability facing Zambia, make its eventual graduation from the LDC category irreversible and put the country on the path of inclusive growth and sustainable development. In this context, the following recommendations should be considered both by Zambia's policymakers and its development and trade partners. Further proposed actions are contained in the matrix which forms an annex to the NPCGA.

3.1 Policies and strategies at the national level

1. **Prioritize productive capacities for structural transformation:** Zambia needs to prioritize developing new productive capacities, while simultaneously utilizing and maintaining existing ones which should be carefully se-

quenced both in timeframe, prioritization, and resources allocation. That is, while the medium- to long-term priority should be to build new productive capacities, in the short term, the focus should be on how to maintain and utilize existing capacities. This also means that the country's macroeconomic, industrial, agricultural and infrastructure policies should be geared towards the development of productive capacities and effective utilization of existing ones. For instance, Zambia's above-average performance in natural and human capital as well as institutions should enable the country to maintain and effectively harness them for developing new capacities and capabilities by focusing on sectors of comparative advantages as well as addressing gaps and limitations identified in the current NPCGA. For instance, better human capital and institutions are key to foster entrepreneurship, embrace ICTs in production and innovation as well as effectively harness natural capital.

2. Harness the potential of natural capital: Zambia has comparative advantages (revealed and latent) in agriculture and mining sectors which can serve as a springboard for the country's efforts to build productive capacities and kick-start structural transformation. Zambia needs to diversify agricultural production and carefully identify specific agricultural sub-sectors or products that can help to kick start agro-processing and foster forward and backward linkages between agriculture, agro-industry, and the services sectors of the country.

- Zambia could invest rents from extractive resources (mining) in improving agricultural productivity, enhancing integrated rural development, and maximizing the sector's employment intensity to absorb skilled and semi-skilled labour force. Supporting irrigation systems and enhancing rural infrastructure such as electrification are key in enhancing agricultural productivity and generating on-and off-farm employment opportunities in rural areas.
- Agriculture can also be a source for raw materials that can be used in food processing and other labour intensive manufacturing, before being exported. Promoting linkages by facilitating the supply of local produce to restaurants and hotels by local small-scale producers can on the one hand help Zambia to provide an authentic culinary experience and highlight the unique products that the country can offer and on the other hand provide new opportunities for MSMEs and structural transformation.
- Zambia should expand R&D and agriculture extension services, subsidizing agricultural production and productivity, enhancing the role of the pri-

vate sector as well as facilitating integration into regional and international markets as well as local, regional, and global value chains. The governance of agricultural global value chains can be buyer-driven, with large retailers placing high demands on suppliers to meet stringent standards. Thus, enhancing agricultural extension services and developing stronger certification and marketing services, including through the introduction of geographical indications, is essential to increase the value of Zambian products. Agricultural transformation can be facilitated through increasing productivity by supporting further development of R&D tailored to the African context and enhanced public agricultural research capacity. Specifically, Zambia should establish partnerships with research institutes, academic, domestic, and foreign companies to identify, develop, and promote potential products, from nutraceuticals to farming goods.

- Access of the poor and women to productive assets such as land and capital is vital for addressing poverty and inequality in the country as well as productivity in agriculture. Currently, access to land is particularly difficult for women as many cultural norms and practices in Zambia reject the idea that women can acquire, control and use land for production and investment purposes.
- To alleviate the over-dependence on base metal mining, Zambia's unexploited industrial minerals and materials potential should also be further explored, with resources allocated to R&D and other necessary facilities. In the process, linkages to the local economy need to be carefully considered and contractually affirmed to avoid plateau-type of investments that are typical of extractives sector.

3. Strengthen human capital: Zambia's human capital PCI score is better than the median for LDCs and SSA, reflecting progress in education and health resulting from targeted investment to social sectors. These also brought about the improvements in the Human Assets Index (HAI) of Zambia. However, there are serious gaps and limitations in this category as well that must be effectively addressed to further boost the human capital formation in Zambia. Addressing these requires improving the education sector by enhancing the quality of basic education, enhancing technical and vocational training and aligning it with labour market needs, fostering R&D facilities, and retaining local talent. Currently, there are high rates of labour underutilization and informal employment, especially among young workers. Skills training programmes and active labour market policies would be crucial to help young people integrate into decent jobs in the formal economy and build up their scientific, technical and research capabilities.

4. Boost employment and enhance labour productivity: It is critically important for Zambia to enhance the employment intensity of growth. In this regard:

- Policymakers need to support the generation of jobs outside of the mining sector, particularly in labour-intensive production processes.
- Sectors such as agro-processing, as well as labour-intensive manufacturing and services sectors have the potential to generate jobs, contribute to poverty reduction, enhance enterprise development, and facilitate productive transformation.
- With the aim to enhance employment opportunities linked to productive capacity development, there is a need to establish public private sector dialogue, as well as engage national (vocational and other) training and education providers in the joint effort in view of meeting market demands with an appropriately trained labour force and aligning training offer to the needs of the priority sectors.

5. Facilitate technological upgrading, conducive to legal and policy frameworks and linkages for the manufacturing sector: Zambia's weak and declining manufacturing value added in GDP is a matter of concern and is a sign of premature deindustrialization of the country. In parallel with enhancing production and productivity of agriculture, Zambia needs to foster industrialization and technological upgrading to build productive capacities and accelerate structural transformation. In this regard, it is vital for the Government to formulate coherent industrial, trade and other sectoral policies with the aim to foster production linkages between economic sectors and between firms—large and small, domestic and foreign. This should include the creation of an enabling environment for business, entrepreneurship, and investment. Government's provision of incentives for domestic firms needs to target firms that innovate and upgrade their productive capacities, create jobs, and expand linkages and productivity.

6. Promote a mix of renewable energy sources to improve electricity supply, in particular in rural areas: Industrialization, particularly manufacturing, requires affordable and sustainable electricity supply. Zambia's performance in the energy category of the productive capacities index is among the lowest even compared to African average performance. The country's electricity sector development is particularly constrained by the lack of economic viability for extending the grid to remote areas and a mismatch between

energy generation capacity and demand. There are significant opportunities to address these issues through installing a mix of variable renewable energy sources (hydro, solar, wind, geothermal). These can add significant capacity, and mini-grid options (hydro and solar) are innovative ways to bring electricity to rural areas. Regional integration will also contribute to more energy reliability, an important constraint on several other categories such as manufacturing and value adding, economic diversification, job creation, ICT and private sector development.

7. Intensify support to private sector development as a priority: The performance of Zambia in the PCI shows glaring difficulties facing the private sector. Key challenges include the dominance micro-entreprises of informal, small and microenterprises; intermittent electricity, poor transport connectivity and logistics; and most importantly limited access to finance, especially due to high interest rates and collateral requirements by local banks. Addressing these will require effective measures to strengthen infrastructure from enhancing road and ICT connectivity and improving electricity supply and cost, to ensuring greater access to credit and business development services. To address obstacles facing women entrepreneurs, a combination of skills training and management training would be advisable, with links to finance, business development services, mentoring and incubators. Further, there should be greater facilitation of networking amongst trainers to ensure more coordination and relevance of training for women entrepreneurs. Regarding access to finance and resources, banks tend to be reluctant to give loans to MSMEs, and to women entrepreneurs in particular. There is a need to promote women friendly banks in Zambia. Moreover, banks should offer a broader choice of loan terms, collateral requirements, interest rates, and repayment terms to various groups of the MSME market, notably women entrepreneurs.

8. Harness natural capital rents to promote structural change: Zambia's relatively higher natural capital component in its PCI can have a transformational impact on the country's economy if the rents are effectively harnessed for investment in infrastructure, production transformation and value-addition. However, currently, the high natural capital component combined with other structural impediments discussed in the NPCGA, entrench dependence on export of primary commodities. These challenges are reflected in Zambia's low structural change category in PCI, declining manufacturing value added in GDP, and preponderate share of commodities in the country's export earnings.

To address this, and in view of the increasing importance of the commodities sector in Zambia's economy, policies and strategies of the country should redefine long-term visions that link the commodity sector to its national development strategies.

Further, Zambia can also kick-start the process of structural transformation in its services sector, which has become dominant in the country's economy in terms of share of GDP and employment. A shift from low-skill and low-technology services sector toward knowledge and skills intensive higher value services, such as financial services, insurance, ICT and manufacturing related services is critically important for structural transformation.

Structural change and value addition should be viewed as key to capital accumulation, development of new activities, employment, and further diversification of the economy away from traditional sectors, thereby intensifying structural transformation.

9. Leverage domestic and foreign direct investment for transport infrastructure development: Over the years, Zambia has made a lot of progress in upgrading the country's road infrastructure. However, transport cost continues to be high in Zambia due both to its landlocked position and weak trade logistics as well as the high cost of fuel. There is significant opportunity to take more advantage of rail networks, especially regionally although there are constraints related to the existing rail infrastructure and the organization of the rail sector in Zambia. Zambia needs to address its gap in transport infrastructure financing by leveraging domestic and foreign direct investment, regional infrastructure projects and through public private partnership (PPP).

10. Invest in technology, know-how and innovation: Zambia's application of technology and use of ICT is limited. ICT development is constrained by unreliable energy supply and lack of ICT skills. Despite the challenges, the use of ICTs is improving but still low, especially in rural areas. E-payments are already widespread among mobile phone users, and there are programmes providing updated market prices on agricultural products to farmers. But there are further opportunities to develop e-commerce, which is currently mostly concentrated in urban centres such as Lusaka. Other areas that require the intervention and facilitation of the Government of Zambia include fostering regional collaboration for technological learning, taking full advantage of regional integration opportunities, especially in R&D and ICT, and enhancing the formalization of its informal sector to facilitate "opportunity-driven" entrepreneurship rather than "necessity-based" entrepreneurship.

11. Foster capital formation and promote investments (domestic and foreign): To support capital formation in Zambia, enhancing public and private investment in productive sectors of the economy, capturing rents from natural capital in financing infrastructure, with a focus on energy and ICT, and improving access to finance for MSMEs and strategic manufacturing sectors are key areas that require urgent action.

Fostering linkages between FDI and domestic productive capacities development is also an important facet to be considered. Continued efforts are also needed to address the lag in R&D while continuously improving the human capital category of the country. In attracting FDI, the Government of Zambia needs to target investments in sectors where Zambia has a comparative advantage (away from mining sectors) and negotiate the terms and conditions to facilitate transfer of technology and foster production linkages with the domestic private sector. For instance, joint venture arrangements can promote the integration of domestic firms into global value chains. Further strategies include incentives for domestic productive investments such as tax holidays in exchange for local procurement, technology transfer and R&D, as well as import tariff exemptions for machinery and inputs. These kinds of incentives should have a sunset clause to avoid rent seeking.

Supplier development incentives are another way to improve domestic production capabilities and foster linkages between foreign and domestic firms where incentives can target foreign investors and firms who actively facilitate transfer of technology, know-how among domestic suppliers, and add value to export products.

12. Strengthen institutions with enhanced transparency and more effective use of new technologies: Zambia has demonstrated impressive results in institutions category of the PCI, performing high especially when compared to sub-Saharan Africa and other LDCs. This suggests that Zambia has better capacities to formulate and implement effective policies than most countries in SSA. However, economic mismanagement and unclarity (lack of transparency) around trade regulations, which create uncertainty for the private sector, remain problematic and require further actions.

As part of modernizing institutions and enhancing their operational efficiency, Zambia needs to embrace new technologies and modern trade logistics. For instance, trade facilitation efforts, when fully implemented, have the potential to address both issues, especially through the digitalization of customs data.

A lot of progress has been made with an e-Government strategy which is designed to increase transparency and decrease public sector costs, although this is constrained by the limited ICT penetration in rural areas due to infrastructure and energy challenges. There is significant potential for government-to-government communication to be streamlined and improved. This would have positive impacts on the speed, cost, and effectiveness of interacting with public agencies for both firms and citizens.

Zambia is encouraged to continue its performance in the institutions category of the PCI by enhancing dialogue, collaboration, and communication between the private and public sectors as well as by improving institutional coordination through cross-departmental initiatives, joint performance targets, and better information sharing.

3.2 International support and global partnerships

National policies and actions alone are not sufficient to effectively address challenges facing Zambia in fostering productive capacities and structural transformation. Global actions and policies are equally crucial for building productive capacities and accelerating diversification and structural transformation. These should include facilitating FDI flows, bridging the digital and knowledge divide, providing financial resources including through ODA and debt relief, and realigning ISMs to the needs and priorities of Zambia.

The following specific measures and actions can be undertaken at the international level in support of Zambia's efforts to build productive capacities for achieving sustained and inclusive growth. These are also important to ensure a smooth transition of the country and make the graduation of Zambia from the LDC category irreversible.

1. The most significant and urgent help that the international community could offer Zambia in the immediate future is to address the country's external debt burden including through debt cancellation and restructuring. Zambia's debt is held by a diverse array of creditors, including private sector actors and different countries which contributes to the challenge and complexity of reaching a comprehensive debt relief or restructuring deal. According to various sources, Zambia currently has around US\$ 3 billion in outstanding Eurobonds and around the same amount is owed to China and Chinese entities. In this regard, creditor nations, international financial institutions, regional banks, as well as private sector creditors should take concrete measures to ease the country's external debt burden and free resources to invest in productive sectors of the economy.

2. The international community can also assist Zambia in curbing illicit financial flows through a fairer international tax system, greater transparency of cross border financial flows, cutting opportunities for mis-invoicing and transfer pricing as well as supporting capacity building of Zambia's finance and tax authorities. They can also facilitate the return of ill-gotten wealth to the country for investing in production and structural transformation.

3. Zambia's reliance on ODA, including from International Development Association (IDA) funding will remain critically important, including in the post-graduation environment, because Zambia continues to be a low-middle income country. Therefore, it is important to increase the quantity and improve the quality of ODA flows to the country. Special efforts should be made to link ODA to national priorities while rebalancing sectoral allocation with more development aid going to economic sectors of Zambia. Moreover, attention should be paid that aid conditionality must not restrict policy choices and that aid should be provided in the form of grants rather than loans.

4. FDI home countries can assist Zambia in building its negotiating capacities to attract and target FDI outside of the extractive sectors and enhance linkages between foreign investors and the domestic private sector. Support by FDI home countries can further include putting in place appropriate investment insurance or guarantee schemes and exempting actual and potential investors from taxes on profit repatriation. Such measures are also key to harnessing the potential of FDI to upgrade production and facilitate participation in regional and global value chains.

5. International support in infrastructure financing, including in the context of trade facilitation, is urgently needed. This can include expanding transport connectivity, maintaining existing transport infrastructure, boosting electricity supply, and embracing ICTs, which can bring quick results and effective solutions to facilitate trade, foster competitiveness and improve integration to the regional and global market.

6. Zambia also needs improved market access which requires targeted actions to facilitate market entry of the country's non-mineral exports. Market access and entry conditions should also be realigned with sectors and products where Zambia has comparative advantages such as maize, cassava, sorghum and cowpeas, as well as cotton, leather, and leather products. This requires market access granting countries to enable Zambia to fully exploit its preferential access and meet market entry conditions

or requirements such as food safety and quality standards. In view of the strategic importance of service exports to Zambia, trade and development partners of Zambia explore the possibilities of extending market and market entry conditions to the services exports of the country. They also need to pursue trade policies that are conducive to the country's efforts to diversify exports, including value addition and transformation.

Further support of Zambia's trade and development partners can include strengthening the country's efforts to maximize benefits from bilateral, regional and global trade, investment and finance opportunities, including in the context of a possible future accession to the EU Economic Partnership agreement. Advanced developing countries, particularly newly emerging trade and development partners, can also support Zambia by: (i) sharing relevant policy lessons from their successful experiences; (ii) facilitating technology transfer, fostering R&D and innovation; (iii) providing additional resources for the development of productive capacities; and (iv) enhancing their supports that fosters technological learning and improve the country's participation in regional and global commodity value chains.

ANNEX

A. Policy Sequencing Summary Action Table for Productive Capacities Support Processes

| Capital accumulation | | | |
|--|--|--|---|
| Policy Area | Short-term | Medium-term | Long-term |
| Access to financing for MSMEs | Set up consultative bodies to understand SME business models and financing needs | Prioritize lending to SMEs – connect existing business development services to financing | Lower interest rates – Create financing mechanisms through national development funds |
| Connect FDI to domestic production | Create of bankable projects – database to connect Zambian suppliers with Global Value Chains | Performance requirements related to financial incentives (tax breaks for domestic procurement) | Performance requirements related to the training and employment of locals – joint venture requirements |
| Technological progress | | | |
| Policy Area | Short-term | Medium-term | Long-term |
| Develop innovative solutions | Use existing technologies in innovative ways to promote the attractiveness of ICT in rural contexts | Expand e-commerce access to rural areas to create new ways to access markets and promote process innovation | Regional integration of R&D and academia – share funding and highly skilled analysts to develop solutions for the African context |
| Encourage opportunity entrepreneurship | Funds for targeted investment | Entrepreneurship training packages adapted to target population – training + financing for youth, training + mentorship for women etc. | Establish comprehensive social protection floors to promote a growth mindset, rather than a survival mindset |
| Formalize of informal operations | Social dialogue with existing cooperatives and support for the formation of new ones | Streamlined business registration processes and reduced costs – connection to business development services | Expand social security coverage for entrepreneurs and their families |
| Structural change | | | |
| Policy Area | Short-term | Medium-term | Long-term |
| Diversify rural incomes | Balance investment in supporting rural incomes and developing agricultural extension services | Expand tourism and construction activities in rural areas – connect to agriculture | Expand agricultural products in line with domestic and regional demand |
| Regional harmonization | Trade of goods and energy | Transport infrastructure and external trade | Regional development funds |
| Economic diversification | Channel investment to sectors that are ideally high-value added, high-growth and employment intensive. If all 3 are not present aim for 2 out of the 3 | Connect commodity export income to productive development of other sectors through national development funds | Adjust trade policy measures to promote higher value exports to improve their share of the national export portfolio |

B. PCI Category-level Measures Summary Action Table

| Structural Transformation Summary Table | | | |
|---|---|--|--|
| Policy Area | Constraints | Opportunities | Policy Options |
| Harnessing bilateral trade and investment agreements as well as access to regional and global value chains | Lack of domestic manufacturing capacities, low skill level of the labour force, inadequate institutions and infrastructure. | Attracting FDI, technology and skills transfer; greater market access and export diversification. | Wide range of options including targeting support to high value-added sectors; economy-wide efforts to strengthen education, technical skills, infrastructural and institutions. |
| Fostering intersectoral linkages | The dominant extractives sector creates weak linkages to other sectors | Higher value-added manufacturing sectors which create strong backwards and forwards linkages | Define strategic sectors where manufacturing is both higher value-added and employment intensive – support their growth and development through financing and capacity building |
| Ensuring consistent, coherent and holistic policies aimed at addressing structural constraints and enhancing diversification, value addition and structural economic transformation | Dependence on the export of primary commodities and vulnerability to exogenous shocks | High natural capital, better institutions and improved human capital | Improve coherence between trade, industrial and other sectoral policies; and strategies; Prioritize the fostering of industrialization and technological upgrading as key in building productive capacities and accelerating structural transformation. |
| Natural Capital Summary Table | | | |
| Aspect | Constraints | Opportunities | Policy options |
| Strengthening agricultural production | Lack of irrigation infrastructure, and skewed incentives | Development of additional farmland; Higher value agricultural products (cashew nuts, coffee, etc); increased agricultural production | Increased investment in irrigation infrastructure, Reforming the Farmer Input Supporting Programme (FISP), Investment in development of higher-value agricultural products |
| Strengthening demand for local higher-value added agricultural products | Weak linkages to the rest of the economy | Strengthened demand for local higher-value agricultural products | Strengthen linkages between domestic agriculture and the local hospitality industry. Develop agro-processing industries. |
| Human Capital Summary Table | | | |
| Aspect | Constraints | Opportunities | Policy option |
| Quality education | Low percentage of successful education completions | Higher proportion of qualified labour, Higher percentage of researchers and technicians | Targeted measures to strengthen teacher training, and support education quality. |
| Fully engaged labour force | Labour underutilization | Develop human capital through employment | Rural: economic diversification – services Urban: active labour market policies & expanded care services |
| Research and Development | Funding, lack of support for diverse R&D, necessity to increase the proportion of researchers and technicians | Improve energy and transport technology options specific to the Zambian context | Strengthen implementation of R&D chapter in the National Development Plan. Explore regional cooperation to support R&D on energy and transport technology. |

| Energy Summary Table | | | |
|----------------------------|--|---|--|
| Aspect | Constraints | Opportunities | Policy option |
| Rural electrification | Central grid connection is not economically viable | Mini-grids and independent power providers | Provide incentives for mini-grid investment and develop technical framework to ensure interconnection capability in the future |
| Renewable energy | Need to build infrastructure – requires investment | Can meet domestic energy need & possibly export | Support for wind and solar to support dominant hydropower generation |
| Attract private investment | Energy tariffs not reflective of cost | Greater private sector participation in strengthening energy access | Reform tariff scheme Strengthen Energy Regulation Board and streamline regulatory framework. |
| Regional integration | Lack of harmonization of energy trade | Regional support to help fill energy gaps, improved reliability of electricity supply | Energy trading through AECFTA, prioritize community minded regional commitments to shared energy stability |
| ICT Summary Table | | | |
| Aspect | Constraints | Opportunities | Policy option |
| ICT penetration | Energy connection and reliability, cost, access to electricity | Infrastructure now exists | Keep taxes low to keep consumer costs low – public private partnerships to enhance last mile connectivity |
| ICT skills development | Lack of ICT equipment in schools, Lack of ICT trained teachers Limited access to electricity | Professional development and Technical/vocational training | Implement of adapted UNESCO framework for ICT skills into teacher training – connect entrepreneurship and ICT skill development programmes |
| eCommerce | Lack of address infrastructure | ZICTA physical addressing programme | Tax leniency for these types of operations (with sunset clause) Strengthening address infrastructure |

| Transport Summary Table | | | |
|--|--|--|--|
| Policy Area | Constraints | Opportunities | Policy options |
| Fuel Prices | Several factors that affect fuel prices are outside the Zambian government's control | Enhanced regional integration to promote more stable fuel prices; utilization of biocues for Zambian transport | Regional agreements for crude and petroleum products trade |
| Freight by rail | Outdated infrastructure | Strong political will for harmonized rail travel in Africa | Unbundling of rail sector to allow for privatization without heavy vertical investment |
| Trade Facilitation | Lack of effective governance and impartiality Internal border agency cooperation | OSBPs – digital customs interfaces – regional integration promotes harmonizing procedures and standards | NITC to improve consultation with stakeholders and transparency |
| Private Sector Summary Table | | | |
| Policy Area | Constraints | Opportunities | Policy options |
| Access to finance for MSMEs | High collateral requirements and high interest rates | MSMEs prevalence in the Zambian economy means addressing this could have an important impact on the economy as a whole | Consultative forums with government, banks and MSMEs Preferential (temporary) tax breaks for MSMEs to improve profitability |
| Access to finance for strategic manufacturing sectors | Require more financing over longer repayment periods | Strategic linkages to employment and higher-value added manufacturing | Preferential lending facilities for these sectors – to be adjusted as economy develops |
| Linkages between domestic and international firms, and large and small firms | Inadequate skills and capacities among domestic MSMEs | Encourage transfer of technologies and skills | Develop incentives for foreign investors and large domestic firms to create linkages with Zambian MSMEs. |
| Formalization of informal enterprises | Lack of incentives for informal enterprises to formalize | Create targeted incentives for enterprises to formalize | Develop policies aimed not just at promoting MSME growth, but specifically targeting informal enterprises for formalization. |

| Institutions Summary Table | | | |
|---|--|---|--|
| Policy Area | Constraint | Opportunities | Policy options |
| Government effectiveness & regulatory quality | Weak rule of law and corruption outcomes | Level playing field and clear expectations creates confidence and trust | Reform public procurement Strengthen auditing agencies Improve land administration |
| Interagency cooperation | Heavily siloed operations – expensive to communicate between agencies | E-government mechanisms have come online | Create framework for inter-Ministerial and inter-agency cooperation through e-government platforms with clear divisions of responsibility and expectations |
| Revenue stabilization | Commodity export dependence & the volatile price of copper Unsustainable debt | Long term opportunity to channel boom cycles into productive capacities development | Create of national funds to absorb revenue from the extractives sector and channel it into other sectors as needed |

