POLICY FRAMING PAPER

Unlocking economic prosperity in the Zambian Copperbelt

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This report explores the growth challenges in Zambia's Copperbelt province and provides policy options for developing an economic development strategy for the region.

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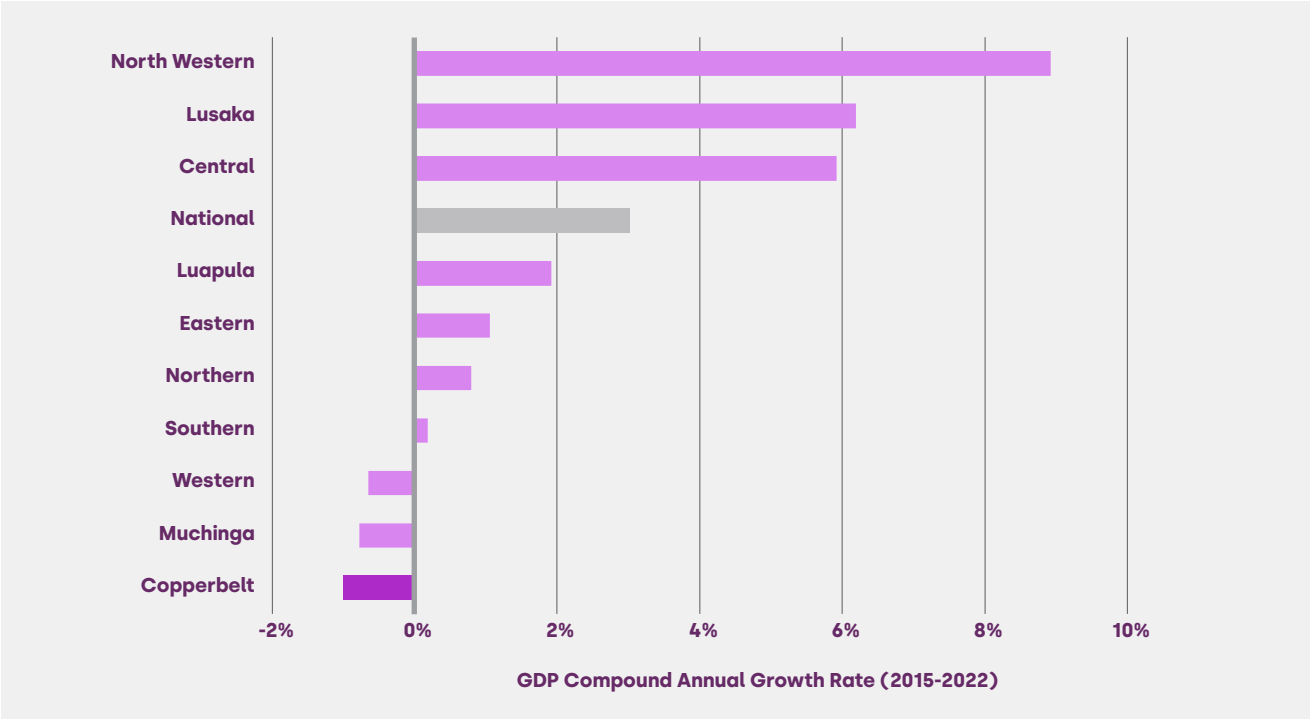
Cover photo: Juliana Oliveira-Cunha

1. Summary & motivation

The Copperbelt province has been the growth engine of Zambia since independence. It was the nation's mining and industrial hub, accounting for all of Zambia's large-scale copper mining in the early 2000s. It continues to account for nearly a quarter of national GDP, and per capita GDP is the 3rd highest in the country.[1] However, from 2015 to 2022, the Copperbelt's economy has contracted, averaging a real GDP growth rate of -1.0% – four percentage points below the national average – ranking lowest out of all provinces. Moreover, over the same period, poverty increased by 17% – seven percentage points above the national average.[2]

Figure 1: Real provincial GDP compound annual growth rates from 2015 to 2022



Note: Real provincial GDP is computed using the GDP deflator from the World Bank (base year 2010) and nominal provincial GDP figures from ZamStats.
Source: ZamStats[3], World Bank[4]

Despite the growth challenges, the Copperbelt harbours significant potential to drive Zambia's economic transformation. The global energy transition has reinvigorated interest in the province's copper mines, and there is potential to increase what the Copperbelt – and Zambia, more generally – get out of their operational mining base. The province also boasts the country's highest urbanisation and education rates, and has infrastructural and geographical advantages, positioning it well to reclaim its status as an industrial hub.

1 ZamStats (2022) 'Provincial GDP Data'.
2 ZamStats (2023) Highlights of the 2022 Poverty Assessment in Zambia.
3 ZamStats (2022) 'Provincial GDP Data'.
4 World Bank (2023) 'GDP deflator - Zambia'.

However, unlocking this potential will be challenging. While Zambia relies heavily on natural resources, especially copper, this reliance is heightened in the Copperbelt, where mining represented nearly 40% of GDP in 2013, and continues to account for one-third of national copper production. While resource rents can contribute to economic growth, overreliance on natural resources creates a myriad of challenges. These include, among others, revenue volatility, rent-seeking, institutional weaknesses and corruption, and the so-called Dutch Disease – where natural resource revenues can hurt other sectors by causing inflation and/or currency appreciation. Consequently, regions with abundant natural resources tend to have unequal patterns of growth, worse development outcomes than their non-resource-rich neighbours, and poor development in non-resource sectors.[5]

Given the substantial challenges and opportunities that the province presents to propel Zambia to middle-income status, the government of Zambia has requested the IGC to summarise key economic trends in the region and outline policy options on how to approach regeneration.

This policy framing paper is therefore divided into three main sections. Firstly, it provides an overview of the Copperbelt province's economy and sheds light on some plausible sources of low growth. Secondly, it sets out a policy toolkit for approaching regional development based on recent cross-country evidence. Thirdly, it outlines a set of research-based policy options that can inform government thinking in further devising an economic development strategy for the province, highlighting where the evidence gaps lie.

The policy recommendations focus on three core areas:

1. Improving mining and the mining value chain opportunities
2. Spurring economic diversification through private sector development
3. Ensuring urbanisation leads to prosperity

However, it is important to clarify that this report does not represent a comprehensive economic development strategy. Instead, it provides a high-level overview of the Copperbelt's economic trends and some preliminary policy considerations – summarised in **Table 1** on the next page – that can launch a broader, longer-term research agenda to further inform decision-making.

5 Natural Resource Governance Institute (2015) The Political and Economic Challenges of Natural Resource Wealth.

Table 1: Summary of policy options to revitalise the Copperbelt economy

Theme	Policy options
Improving mining & mining value chain opportunities	**Geological survey of mineral deposits:** Increase mapping of Zambia's mineral deposits as only 61% of the country has been geologically surveyed.
	Improve mining license transparency and allocation: Consider using the online Mining Cadastre Portal as a tool to improve transparency.
	Taxation regime: Regain investors' trust by keeping the mining tax regime stable and consider addressing issues regarding delayed VAT refunds and differentiated corporate income tax.
	Local content policies: Strengthen local content legislation to improve the linkages between mines and local suppliers.
	Financial instruments and payment terms: Evaluate the government's role in ensuring that local suppliers are paid within the agreed timeframes.
	Competencies of local suppliers: Understand the dimensions across which local suppliers can compete with mine imports and consider reducing incentives for foreign firms in these areas.
Spurring economic diversification through private sector development	**Sectoral focus:** Explore the potential of "industries without smokestacks" to absorb low- and medium-skilled workers in higher-productivity sectors.
	Collateral registries: Address the obstacles that hinder the usage of collateral registries and develop capacity-building and awareness programmes.
	Credit reporting: Improve credit reporting coverage and quality to reduce information asymmetries during the loan application process.
	Financial literacy and management programmes: Develop the financial management skills of SMEs to increase their appeal to potential lenders.
	Energy rationing: Develop an energy rationing strategy to minimise the socio-economic impact of load-shedding.
	SEZ regulatory body: Consider establishing a dedicated body to oversee SEZs to ensure the regulatory environment is more streamlined.
	SEZ incentives: Optimise the non-financial incentive framework offered by SEZs.
	SEZ linkages: Ensure zones are not enclaves by promoting linkages with the local economy.
	SEZs as policy experimentation tool: Consider using SEZs as a policy lab to pilot reforms the government may want to implement in the broader economy.
	SEZ monitoring and evaluation: Implement a robust monitoring and evaluation system to better understand zone performance.
Ensuring urbanisation leads to prosperity	**Urban connectivity and industrial development:** Strengthen urban connectivity through core infrastructure such as transport and housing to support the business environment.
	Land use planning: Leverage proactive land use planning to prepare for orderly urban growth and guide private investment.
	Intermediate systems of land tenure: Leverage strategies such as short-term occupancy certificates to enable ownership to be legally enforced where and as necessary.
	Property rate collection: Leverage digital technologies to strengthen the collection of property rate to help raise municipal revenue.
	Development rights: Consider selling development rights in areas where public investment will raise property values, and use the proceeds to help finance infrastructure.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2. Economic trends in the Copperbelt

KEY MESSAGES:

1. **Slowdown in mining activity:** Despite high copper demand and increasing prices, copper production in the province has decreased by 35% since 2013. As a result, mining and quarrying contributed 52% less to provincial GDP.

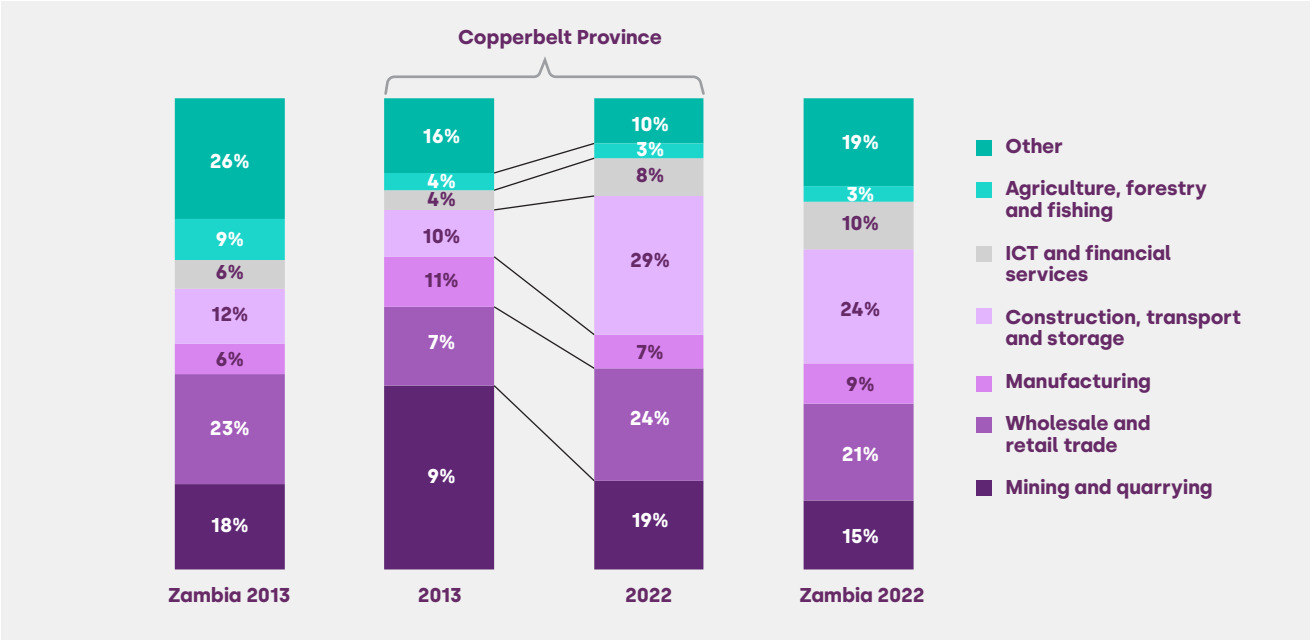
2. **Poor non-mining sector growth:** The province has not been able to diversify away from copper mining by growing its non-mining sectors of the economy. From 2016 to 2022, non-mining real GDP remained stagnant, whereas it has grown 28% in the rest of Zambia over the same timeframe.

3. **Growth-reducing sectoral shifts:** Labour has shifted from historically higher-productivity sectors, such as mining and manufacturing, towards lower-productivity sectors, such as trade and lower-productivity services.

The sectoral composition of the Copperbelt economy has changed substantially over the last ten years. Mining and quarrying is the sector which has shrunk the most, previously accounting for nearly 40% of provincial GDP in 2013, and now representing just 19%. Manufacturing experienced a similar decline, shrinking from 11% to 6% of GDP over the same timeframe.

The sectors that have grown most in the Copperbelt are construction, transport, and storage. The strong performance of transport and storage is unsurprising as the government seeks to position Zambia as a regional transport and logistical hub, and construction sector growth was mainly driven by increased public sector investment in infrastructure.[6]

Figure 2: GDP composition in Zambia and Copperbelt province for 2013 and 2022

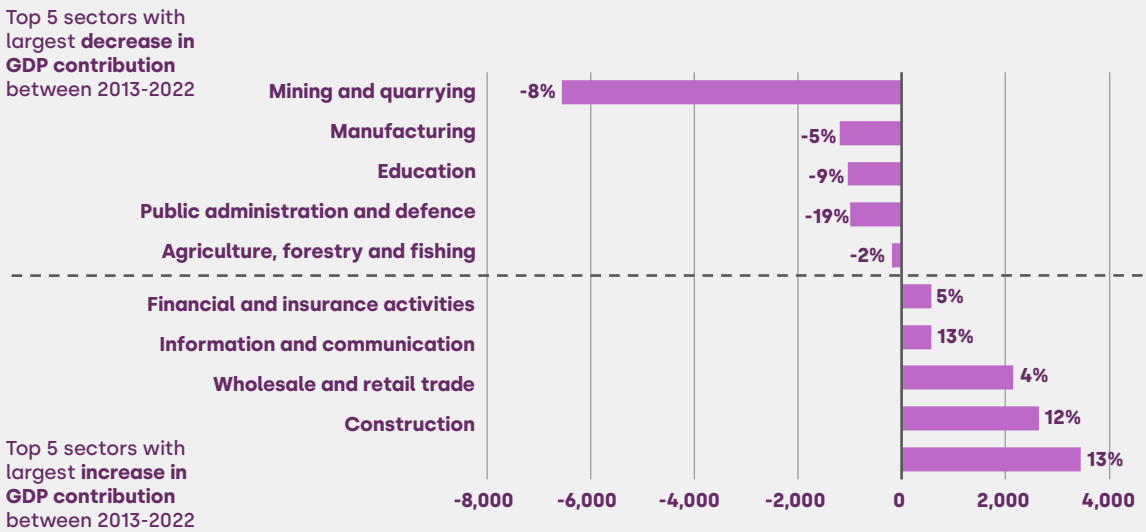


Note: Other includes all sectors which accounted for <2.5% of GDP in 2022 in the Copperbelt. These sectors include: real estate activities; accommodation and food service; professional, scientific; admin; public admin and defence; education; human health and social work; art, entertainment, and recreation; other service.
Source: ZamStats[7]

At first glance, the changing composition of the Copperbelt economy over the last decade could be indicative of effective diversification away from mining and quarrying. However, examining **Figure 3** – which provides an overview of the changes in real GDP by sector – reveals several concerning trends. Firstly, the reduced role of mining and quarrying appears to stem from a substantial contraction in the sector's contribution to provincial real GDP. Between 2013 and 2022, mining and quarrying's contribution fell by over 6 billion Kwacha, representing a 52% decline. Price effects do not appear to play a substantial role in the contraction. Copper production in the province has reduced by 35% since 2013, while market prices for copper have remained high since early 2021.[8,9]

6 Ministry of Finance and National Planning (2022) Eight National Development Plan, 2022 – 2026.
7 ZamStats (2022) 'Provincial GDP Data'.
8 Trading Economics (2023) 'Commodity Market Prices - Copper'.
9 Ministry of Mines (2023) 'Monthly Copper Production by Mine'.

Figure 3: Top five sectors with the largest increase and decrease in provincial GDP contribution between 2013 and 2022



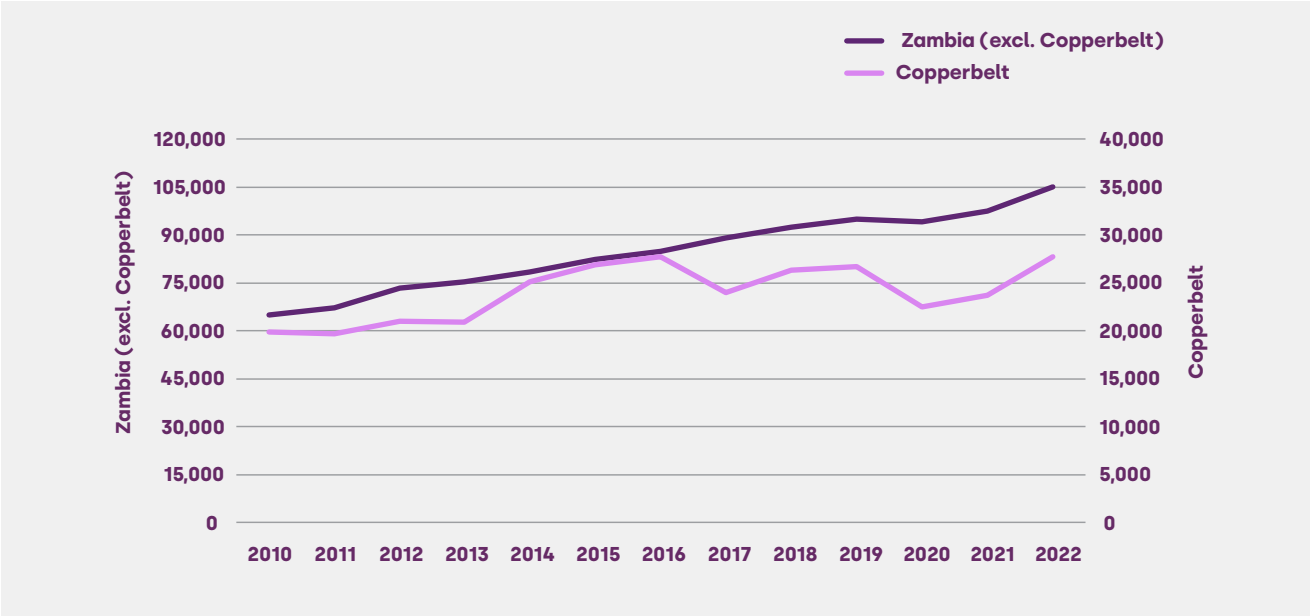
Note: Real GDP figures are in Kwacha, millions. The diagram includes the average annual real GDP growth rate between 2013 and 2022 by sector at the end of each bar.
Source: ZamStats[10], World Bank[11]

Beyond mining, the 8th National Development Plan stresses the importance of manufacturing and agriculture as priority sectors for the government's economic transformation and growth agenda. However, as **Figure 3** illustrates, the performance of these sectors in the Copperbelt has been poor. The decline in manufacturing could stem from the downturn in mining activities. However, this effect is expected to be small as 83% of copper in Zambia is exported as unrefined copper, and only 10% of mine inputs are from manufacturers based in Zambia.[12,13]

More broadly, non-mining sectors have struggled to grow in the Copperbelt over the last decade, unlike the country as a whole. **Figure 4** underscores this concerning trend: from 2016 to 2022, non-mining real GDP has stagnated in the Copperbelt, while it grew 28% in the rest of Zambia.

10 ZamStats (2022) 'Provincial GDP Data'.
11 World Bank (2023) 'GDP deflator - Zambia'.
12 Trading Economics (2023) 'Commodity Market Prices - Copper'.
13 AGS (2021) 'Needs and Challenges in the Zambian Mining Supply Chain'.

Figure 4: Non-mining real GDP in Zambia (excl. Copperbelt) and the Copperbelt



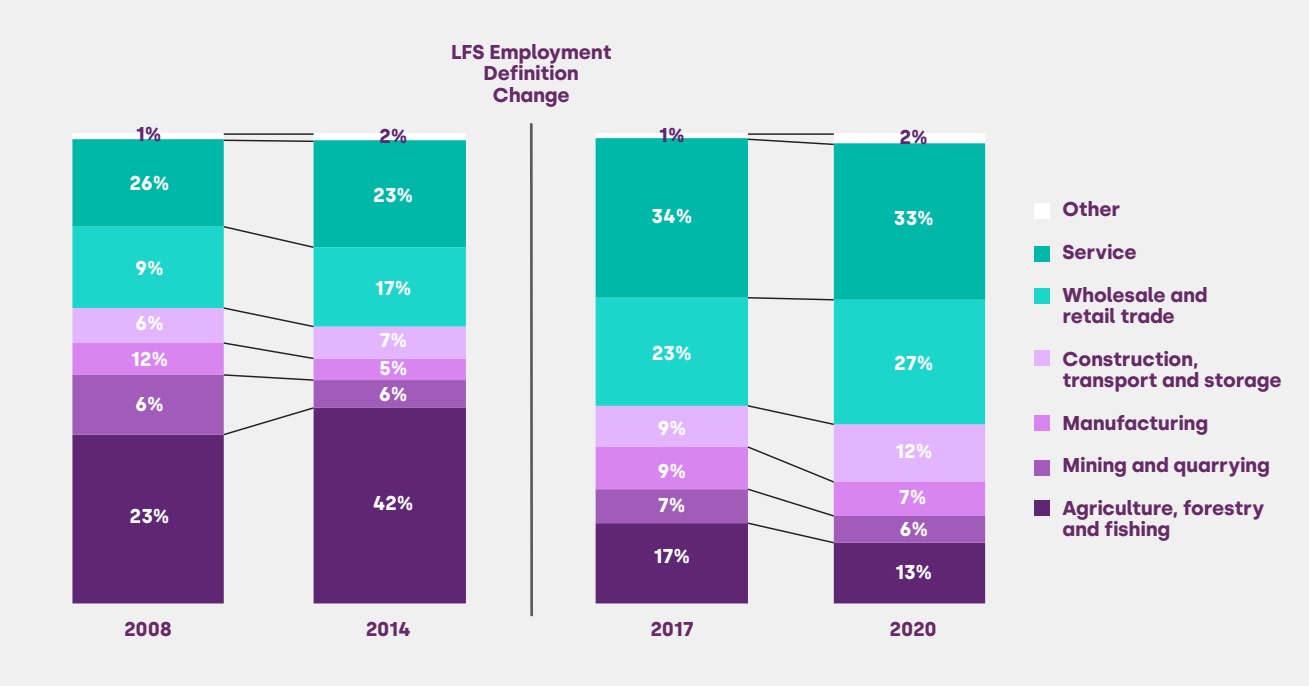
Notes: Real provincial GDP (Kwacha, millions) is computed using the GDP deflator from the World Bank (base year 2010) and nominal provincial GDP figures from ZamStats.
Source: ZamStats[14], World Bank[15]

Examining employment data over time is challenging due to a change in the Zambian labour force survey (LFS) methodology. Since 2017, the LFS has used revised international standards which narrow the definition of employment to work performed for pay or profit.[16,17] In other words, own-use production of goods is now captured as work rather than employment. Within the Zambian LFS questionnaire, own-use production is solely considered in the context of foodstuff production – in turn, exclusively impacting the measurement of agriculture employment.[18] The methodological changes make comparing unemployment rates before and after 2017 impossible. However, since 2017, the unemployment rate in the Copperbelt has been stable at around 13% and within one percentage point of the national average every year.[19]

Figure 5 shows the changes in employment shares by sector, separated by survey methodology. A naïve analysis would incorrectly conclude that the employment share in agriculture reduced by 25% between 2014 and 2017.

14 ZamStats (2022) 'Provincial GDP Data'.
15 World Bank (2023) 'GDP deflator - Zambia'.
16 ZamStats and Ministry of Labour (2018) Labour Force Survey Report 2017.
17 Gaddis, I. et al. (2023) 'Who Is Employed? Evidence from Sub-Saharan Africa on Redefining Employment', Journal of African Economies, 32(2), pp. 151–174.
18 ZamStats and Ministry of Labour (2017) '2017 LFS Questionnaire'.
19 ZamStats and Ministry of Labour (2021) Labour Force Surveys

Figure 5: Composition of employment by sector in Copperbelt from 2008 to 2020



Source: ZamStats[20]

However, since the change in survey methodology exclusively affects the definition of agriculture employment, agriculture can be excluded to examine how employment has shifted between sectors since 2008. The remainder of this section explores whether sectoral employment shifts have been growth-enhancing or growth-reducing.

Productivity is the ultimate engine of economic growth and development. While many factors have short-term impacts on economic growth, in the long run, the ability of an economy to improve its productivity fundamentally determines its growth and prosperity.[21] Productivity improvements enable economies to produce more with less, leading to higher efficiency, better use of resources, and ultimately, an improved standard of living for the population.

Labour productivity growth can be realised across two dimensions.

1. Productivity growth can occur within sectors through capital accumulation, technological change, and reallocation of resources.
2. Productivity growth can occur between sectors through a sectoral change in the economy. Growth-enhancing sectoral changes involve labour moving from low-productivity to high-productivity sectors.[22]

20 ZamStats and Ministry of Labour (2021) Labour Force Survey Metadata

21 Krugman, P.R. (1998) The age of diminished expectations: US economic policy in the 1990s. 3. ed., 3. print. Cambridge, Mass.: MIT Press.

22 McMillan, M., Rodrik, D. and Verduzco-Gallo, Í. (2014) 'Globalization, Structural Change, and Productivity Growth, with an Update on Africa', World Development, 63, pp. 11–32.

To assess the role of sectoral transformation in the economic growth of the Copperbelt, we adapted the analytical framework developed by McMillan et al. (2014).[23] **Figure 6** shows the correlation between sector productivity and the change in total employment share by sector between 2008 and 2020. The analysis should be interpreted cautiously, as it is a correlation and does not consider factors such as migration that may affect employment shares. Nevertheless, the trendline can provide insight into whether the sectoral transformation has been growth-enhancing or growth-reducing.

The trendline for the Copperbelt is downward sloping, implying that sectoral transformation in the province has been growth-reducing. In line with GDP trends, where mining and manufacturing saw the most substantial contractions, employment reduced most in these two highly productive sectors and has been absorbed by relatively lower productivity activities, such as trade and lower-productivity services.

However, this outcome may not be inherently negative. Although it indicates growth-reducing sectoral changes, some sectors with increased employment shares – such as education and construction – indirectly contribute substantially to economic growth.

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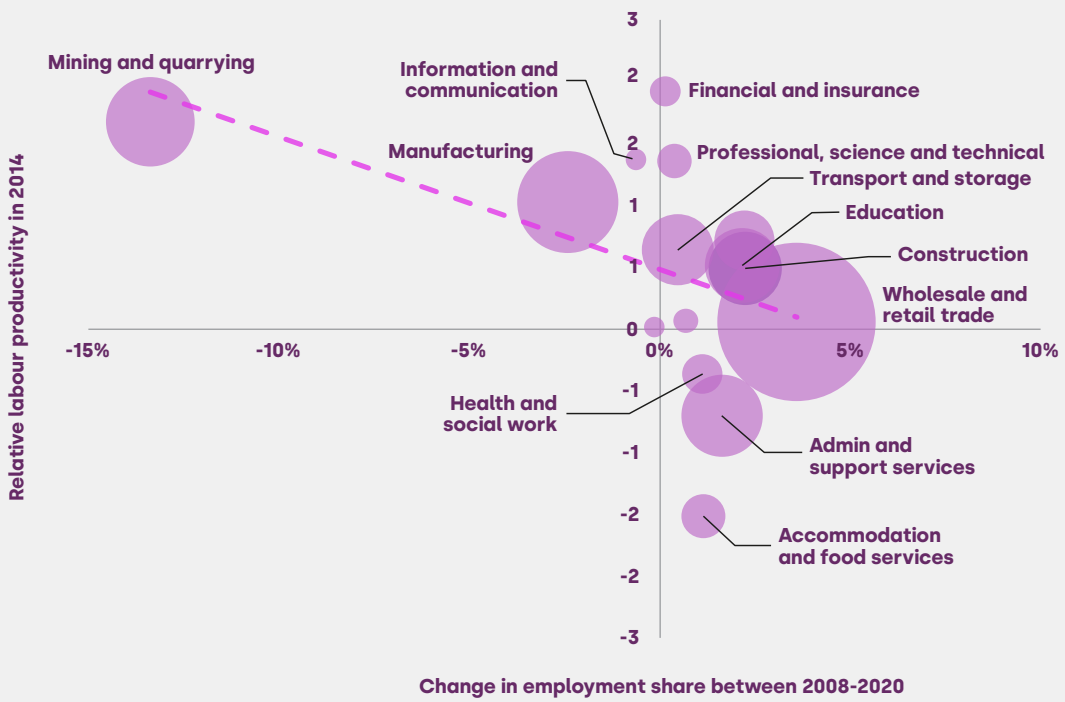
23 McMillan, M., Rodrik, D. and Verduzco-Gallo, Í. (2014) 'Globalization, Structural Change, and Productivity Growth, with an Update on Africa'.

Figure 6: Correlation between sector productivity in 2014 and change in employment share between 2008 and 2020



Notes:
1. Relative labour productivity is computed as the natural log of the value added-labour ratio of each industry divided by the economy-wide labour productivity ratio. A positive ratio indicates that the industry's productivity is higher than the total productivity of the economy. A negative ratio indicates the opposite.
2. Relative industry productivity is calculated for 2014 as this is the first year for both value-add and employment share by industry are available for the Copperbelt province.
3. The pink dotted line is a linear trendline.
4. The bubble size represents the share of employment in 2020.

Source: ZamStats[24,25]

It should be acknowledged, however, that the omission of agriculture is significant. National estimates indicate that the employment share in agriculture has reduced by ten percentage points since 2008, and agriculture is the sector with the lowest productivity.[26] This suggests that labour has been released from the low-productivity agriculture sector towards relatively higher-productivity sectors, such as trade, construction, and services (albeit low-productivity services).

24 ZamStats and Ministry of Labour (2021) Labour Force Survey Metadata
25 ZamStats (2022) 'Provincial GDP Data'.
26 World Bank (2023) 'Employment in agriculture (modelled ILO estimate) - Zambia'.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3. Regional development policy toolkit

KEY MESSAGES

1. Place-based policies can be motivated by either equity or efficiency concerns. Identifying the motivation for the spatial intervention is essential, as it involves differing trade-offs that must be considered in the policy design stage.

2. While place-based interventions directly target a particular region, they may unintentionally affect other areas, potentially leading to firm and worker behaviour that is not beneficial for the national economy as a whole. For instance, spatially targeted incentives may discourage migration to more productive areas or encourage firms to relocate purely to benefit from the incentives.

3. Effective place-based interventions leverage local strengths, require coordination at local and national levels, undergo rigorous evaluation and monitoring, and avoid zero-sum competition between regions.

It is helpful to delineate between spatially-targeted interventions, such as place-based policies, and place-neutral ones.[27,28]

- Place-based policies – including infrastructure investments, special economic zones, treatment of lagging regions, and local economic development policies – explicitly target a geographic area for some form of special treatment.
- Place-neutral policies are person-focused and do not have an explicit consideration for a region.

Given this paper's spatial focus on the Copperbelt province, it may be natural to conclude that policies should be similarly spatially targeted. However, substantial economic trade-offs and design considerations must be considered when undertaking place-based interventions.

The following sections outline the economic reasoning behind place-based policies, their associated challenges, and key principles the government should consider while formulating a regional development plan for the Copperbelt.

Economic justifications for place-based policies

As with any government intervention, place-based policies can pursue two possible broad objectives: equity and efficiency.

Equity: Place-based policies frequently aim to stimulate employment and income growth in economically disadvantaged regions or areas hit by significant economic shocks.[29] One potential justification for this is that certain policies may be more effective in economically distressed regions compared to already successful areas.[30]

Efficiency: Place-based programmes with an efficiency rationale seek to remedy important localised market failures, resulting in a stronger economy overall. Key efficiency motivations include:

- ***Agglomeration economies:*** The spatial proximity of firms and workers has been shown to generate benefits, including increased efficiency, productivity, and innovation. However, first-mover challenges – where firms and people are hesitant to invest in or relocate to areas when future development is uncertain – and difficulties with coordination between stakeholders may hinder the development of such economic clusters. Place-based policies, such as SEZs, can attract investment in a designated area when the SEZ regulator acts as a planner and eases regulatory, infrastructural, and financial constraints – thereby kick-starting the development of new areas that benefit from agglomeration economies.[31]

27 Duranton, G. and Venables, A. (2019) 'Place-Based Policies: principles and developing country applications'.

28 Barca, F., McCann, P. and Rodríguez-Pose, A. (2012) 'The Case for Regional Development Intervention: Place-based vs Place-neutral Approaches', Journal of Regional Science, 52(1), pp. 134–152.

29 Moretti, E. (2022) 'Place-based policies and geographical inequalities', The IFS Deaton Review.

30 Bartik, T. (2020) 'Using place-based jobs policies to help distressed communities', Journal of Economic Perspectives, 34(3).

31 Duranton, G. and Venables, A. (2019) 'Place-Based Policies: principles and developing country applications'.

- ***Public goods:*** Certain goods – such as infrastructure and public amenities – are productive yet underprovided by the private sector, motivating the need for government intervention.[32]
- ***Efficient use of fixed infrastructure:*** Since infrastructure is fixed and costly, there is a rationale for ensuring policy focuses on job creation in places where it is already built.[33]
- ***Other localised market failures:*** Localised market failures can include barriers to growth in areas such as access to finance, lack of public infrastructure, or skills systems that are not well linked to the local business base. These provide a rationale for focusing policy on specific places.

Design considerations of place-based policies

While these economic justifications are strong, place-based policies have potential downsides.

One of the core problems with place-based policies is the potential to alter migration patterns that would otherwise be economically beneficial. Place-based incentives may discourage migration out of disadvantaged areas or, at its extreme, promote in-migration into depressed regions.[34] For example, at a national level, out-migration to Lusaka or the North Western province in search for better job opportunities, particularly in times of economic stagnation in the Copperbelt, may allow workers to be better off (i.e. employed, or with a higher salary) than if they had stayed. Place-based policies should not be used with the aim of growing all regions at the same rate, as spatial inequality generates important incentives for workers to migrate where they are most productive.[35]

Another common problem is the displacement of firms, often from one side of a boundary to another. This is particularly likely when highly localised place-based incentives may encourage firms to move short distances, for example, from one side of a provincial boundary to another. Moreover, deadweight – where policies benefit firms but do not change behaviour – can also be a major issue. For instance, in SEZs, deadweight may occur if firms receive tax benefits but act the same as without the tax incentives. Nothing changes for the economy despite the tax foregone.[36]

Finally, place-based policies can take the form of infrastructure projects that require substantial investment. However, without adequate information to appraise the potential investment, more place- and/or sector-specific policies may be at higher risk of being white elephants — investment projects that are more costly to maintain than they are worth, leading to financial losses.[37] In

32 Moretti, E. (2022) 'Place-based policies and geographical inequalities', The IFS Deaton Review.

33 Bartik, T. (2020) 'Using place-based jobs policies to help distressed communities', Journal of Economic Perspectives, 34(3).

34 Austin, B., Glaeser, E. and Summers, L. (2018) 'Saving the Heartland: Place-Based Policies in 21st Century America', Brookings Papers on Economic Activity.

35 Barca, F., McCann, P. and Rodríguez-Pose, A. (2012) 'The Case for Regional Development Intervention: Place-based vs Place-neutral Approaches', Journal of Regional Science, 52(1).

36 Overman, H. (2022) Investment Zones, deadweight, and displacement. What Works Centre for Local Economic Growth.

37 Robinson, J.A. and Torvik, R. (2005) 'White elephants', Journal of Public Economics, 89(2–3), pp. 197–210.

poor information environments, remaining place- and/or sector-neutral may be beneficial.

However, several essential policies for economic development – such as transport infrastructure – are intrinsically place-based. Moreover, applying a uniform approach to national development can be ineffective, especially considering the significant structural differences across different regions in Zambia. Place-based policies aren't necessarily about providing stimulus to struggling areas; instead, they involve customising policies to suit local needs to improve overall social welfare.[38]

Since the effectiveness of place-based policies is highly context-dependent, a generalised list of place-based policy recommendations is unfeasible. Nevertheless, there are a handful of guiding principles, grounded on cross-country evidence, that policymakers could consider. Policy options specific to the Copperbelt are discussed in the upcoming policy considerations section.

Guiding principles of place-based policies

1. **Smart and related specialisation:** New economic structures are rarely initiated from scratch, particularly in contexts of limited financial resources. Effective regional development programmes should exploit local competencies, comparative advantages, and regional specialisations. These initiatives should aim to enhance and sustain these existing foundations.[39]
2. **Strive for win-win potentials:** Place-based policies should strive for a win-win outcome. In other words, they should not be static income redistributions or zero-sum policies, such as competition between regions on tax breaks. Instead, they should focus on investments with long-term payoffs – such as infrastructure and skills development.[40]
3. **Coordination between actors at the local level:** Effective place-based policy allows for the tailoring at a local level. Policies need to be considered locally, as they require the input of various local actors, including firms, workers, and government-funded institutions. A typical result of non-place-based policy is either the duplication of policies or a policy that does not suit local needs.[41]
4. **Capacity building and monitoring of local institutions:** The effectiveness of place-based policies, as with any public policy, is inherently linked to the quality of the institutions governing them. Local governments should have the capacity to manage and implement such policies effectively. For instance, having local control over resources, through fiscal decentralisation, is an important feature of empowered local institutions. Higher levels of government need to monitor the use of public funds – for instance through randomised audits – to ensure they are used effectively. However, striking a balance is key: it involves guaranteeing high-quality

38 Austin, B., Glaeser, E. and Summers, L. (2018) 'Saving the Heartland: Place-Based Policies in 21st Century America', Brookings Papers on Economic Activity.

39 Suedekum, J. (2021) 'Productivity policy for places – inclusive productivity'.

40 Suedekum, J. (2021) 'Productivity policy for places – inclusive productivity'.

41 Suedekum, J. (2021) 'Productivity policy for places – inclusive productivity'.

public expenditure while avoiding the creation of a "culture of mistrust" with excessive checks and controls.

5. **Performance evaluation:** Although essential, performance monitoring of spatial interventions is often underused in public service delivery. Monitoring and measuring the success of place-based policies is inherently tricky as these interventions typically have important direct and indirect impacts. Despite these measurement challenges, policies must be established with explicit objectives, particularly concerning their direct effects. Ensuring adequate benchmarking and measurement is vital for assessing policy initiatives against their intended consequences.[42]

42 Rainnie, A., Beer, A. and Rafferty, M. (2019) Effectiveness of place-based transition packages.

4. Policy considerations

To revitalise the Copperbelt province, addressing the challenges hindering growth in key sectors and exploring untapped economic opportunities will be vital. This subsection provides an overview of the challenges and policy recommendations relating to:

1. Improving mining and mining value chain opportunities
2. Spurring economic diversification through private sector development
3. Ensuring urbanisation leads to prosperity

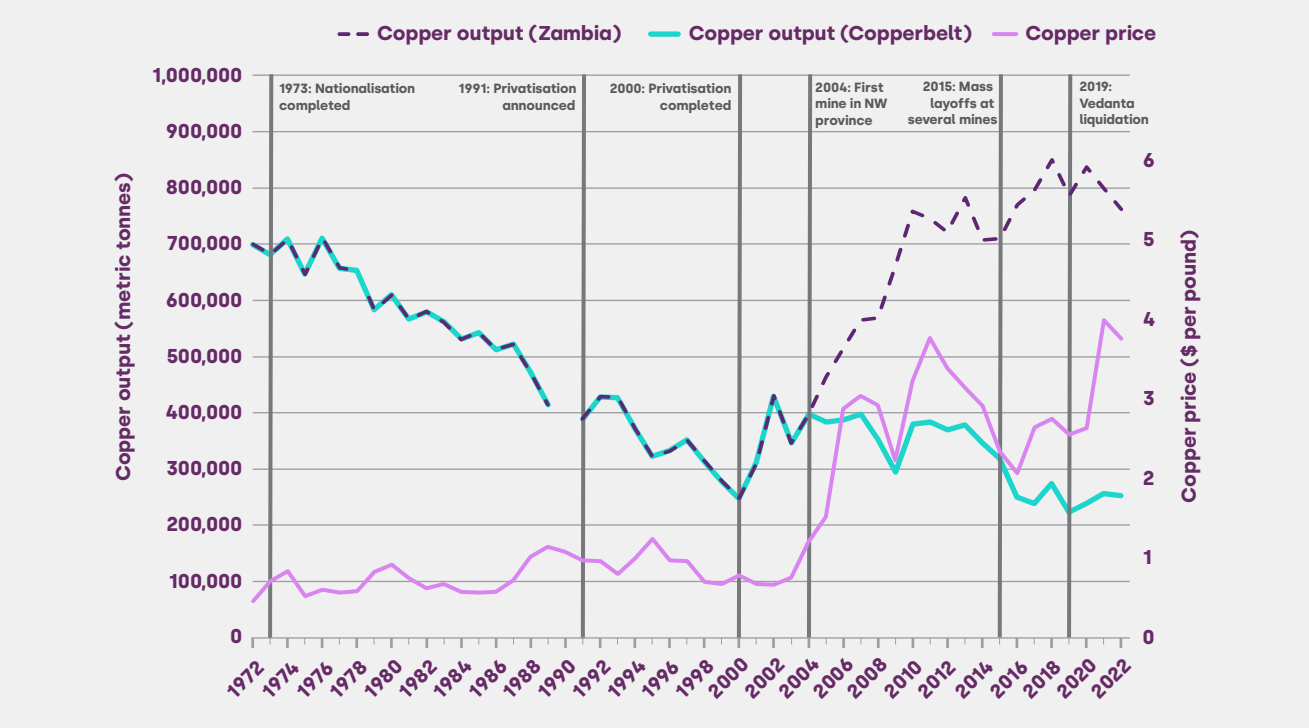
4.1. Improving mining & mining value chain opportunities

To capitalise on the anticipated energy transition, which has already resulted in a renewed interest in the Copperbelt's mines, it will be imperative that the government maximises the benefit from such resource extractions. To do this, it is essential to focus on increasing gross national product (GNP) from the entire mining value chain. Mining GNP can be increased by increasing mining output or, perhaps more importantly, improving what the Copperbelt and Zambia get from their operational mining base.

Increasing mining output

Copper mining in Zambia has undergone significant ownership changes since independence. **Figure 7** presents a timeline of key events and copper production. Initially in private hands post-independence, the mines moved to state ownership in 1973. By 1982, the government consolidated these into the Zambia Consolidated Copper Mines (ZCCM). However, challenges such as falling copper prices, outdated equipment, and operational inefficiencies led to a decline in production. This combined with political pressures eventually spurred a shift back to privatisation in 2000.[43]

Figure 7: Copper output in Zambia and Copperbelt province, copper prices, and key mining events



Source: Authors' construction based on EITI, USGS, and Ministry of Mines data.[44,45,46]

During the privatised era, the two large-scale copper mining regions in Zambia – the Copperbelt and North Western provinces – have fared differently. In the North Western province, since the first mine was opened in 2004, substantial greenfield investments in open-pit mines have enabled efficient processing of large volumes of low-grade copper at relatively low cost.[47] The Copperbelt province, which accounted for all of Zambia's large-scale copper mines pre-2004, has not seen the same growth due to a lack of competitiveness and operational challenges. Despite an initial surge in production post-privatisation, copper output in the Copperbelt has been declining, especially since 2014.

43 Sikamo, J. (2016) 'Copper mining in Zambia - history and future', Journal of the Southern African Institute of Mining and Metallurgy

44 EITI (2023) EITI Zambia Country Report.

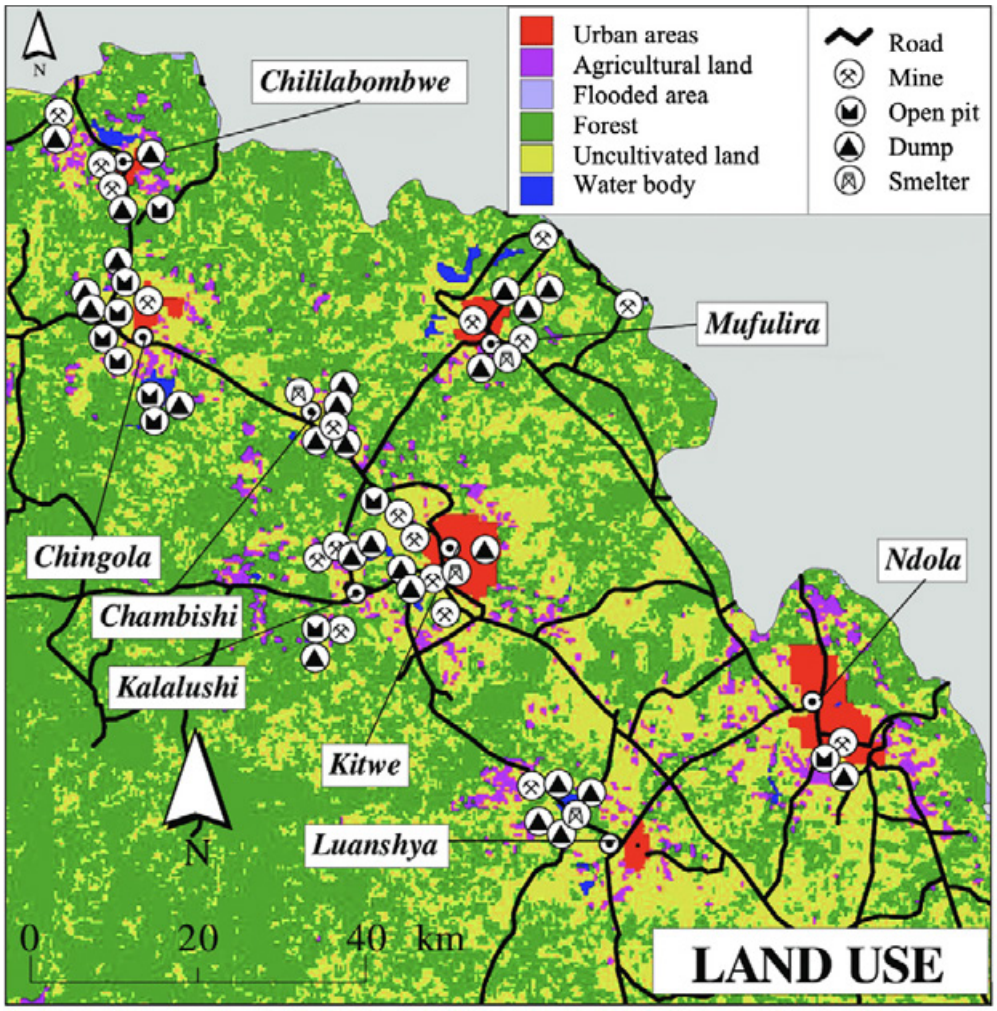
45 USGS (2019) 'Minerals Yearbook - Middle East and Africa'.

46 Ministry of Mines (2023) 'Monthly Copper Production by Mine'.

47 Sikamo, J. (2016) 'Copper mining in Zambia - history and future', Journal of the Southern African Institute of Mining and Metallurgy

Figure 8 below provides a geographical overview of the mines, dumps, and smelters in the Copperbelt that were active in 2009. Most of the mines are located near what have now become urban centres. While the map is dated, it still provides a valuable spatial overview of the principal mining hubs in the Copperbelt. That said, mining activity has reduced near Luanshya, Ndola, and Kalalushi as several mines and shafts have closed due to depleted copper reserves, contributing to the reduced copper output in the Copperbelt.[48,49,50]

Figure 8: Map of mines, dumps, and smelters active in 2009 in the Copperbelt province



Source: Kříbek, De Vivo and Davies (2014)[51]

In addition to lower copper reserves, numerous other factors have limited mining potential in the Copperbelt. Based on stakeholder interviews and a literature review, **Table 2** elaborates on the broader challenges of Zambia's mining sector, including unique issues encountered by mines in the Copperbelt region.

48 Chansa, D. (2020) 'Chibuluma to go on care and maintenance'.

49 Lusaka Times (2010) 'Bwana Mkubwa mine to close'.

50 Lusaka Times (2022) 'No miner will lose their job when operations at Baluba underground shaft is shut down'.

51 Kříbek, B., De Vivo, B. and Davies, T. (2014) 'Special Issue: Impacts of mining and mineral processing on the environment and human health in Africa', Journal of Geochemical Exploration, 144.

Niels Mulder

Table 2: Summary of challenges faced by the mining sector in Zambia and in the Copperbelt province

	Challenge	Elaboration
National challenges	**Price volatility**	Copper prices, dictated by global markets, exhibit considerable volatility. In the past decade, prices have fluctuated between $3,000 and $10,000 per metric tonne.[52] Although the current price surge offers significant opportunities, the volatility exposes Zambia to shocks outside its control that affect its most substantial revenue-generating sector.
	Mining taxation regime	Since privatisation, the government has adjusted the taxation regime every 18 months on average to find the appropriate tax level.[53] However, the lack of a stable taxation regime has frequently been cited as a significant deterrent to investment in Zambian mines. Despite recent efforts by the government to create a more stable tax environment, there remain taxation issues regarding delayed VAT refunds and differentiated corporate income tax rates across sectors.[54]
	Mining investment attractiveness	According to the 2022 Fraser Institute Survey, Zambia ranks 58th out of 62 countries in terms of mining investment attractiveness. Zambia ranks particularly poorly across the following dimensions: legal system, taxation regime, quality of infrastructure, and trade barriers.[55]
	License transparency and removals	Zambia's current mining licensing regime has been criticised for a lack of transparency. It has also been cited that licenses have been incorrectly removed from Zambian firms and sold to foreign entities.[56,57] Industry representatives have commented that licenses in Zambia are being treated as commodities rather than resources.
Provincial challenges	**Cost of copper production in the Copperbelt**	Copper production costs are generally higher in underground mines than in open-pit mines.[58] This disproportionately affects the Copperbelt province since most of its mines are underground. By comparison, all the large-scale copper mines in the North Western province are open-pit mines. That said, although ore grades in the Copperbelt have declined, they remain higher than those in the North Western province.[59]
	Government involvement and financial capacity	The government is heavily involved in operating the two largest mines in the Copperbelt province: Konkola Copper Mines and Mopani Copper Mines. This has led to several operational challenges, as the government has insufficient liquidity to run the mines efficiently. Hence, the mines are operating far below capacity.[60]
	Complex historical relationship	The mines in the Copperbelt, and the associated communities, experienced the impact of the industry's privatisation in 2000. Under ZCCM ownership, social welfare, and housing provision were substantial, which reduced following privatisation. While this is not, per se, an obstacle to the future growth of the mining industry in the Copperbelt, it may be a source of social challenges.

52 Trading Economics (2023) 'Commodity Market Prices - Copper'.

53 Kalikeka, M. and Nsenduluka, M. (2023) Taxing Zambia's Mining Sector for the Energy Transition: Opportunities and Challenges. Tax Justice Network Africa and Publish What You Pay Zambia.

54 Kalikeka, M. and Nsenduluka, M. (2023) Taxing Zambia's Mining Sector for the Energy Transition: Opportunities and Challenges. Tax Justice Network Africa and Publish What You Pay Zambia.

55 Mejia, J. and Aliakbari, E. (2022) Fraser Institute Annual Survey of Mining Companies 2022.

56 Mfula, C. (2022) 'Zambia to cap number of mining licences issued to single firms'.

57 EITI (2020) Zambia Extractive Industry Transparency Initiative.

58 Lwizi, G. (2020) 'Interrogate Mopani cost of production vs current copper prices', Zambian Business Times.

59 Cotterill, J. (2023) 'Zambia's plan to dig its way out of debt with a copper revival'.

60 Makungu, C. (2024) 'Konkola Copper Mines Prepares for Resumed Operations'.

Despite these hurdles, the ongoing global energy transition offers the Copperbelt a remarkable opportunity for regional revitalisation. Copper is required for nearly all clean energy generation and storage technologies.[61] By 2040, copper demand is projected to triple and remain persistently high due to its widespread need.[62] This surge in global copper demand has already led to increased copper prices, creating immediate opportunities for the Copperbelt's more costly underground mines.

The anticipated copper boom has spurred significant investment commitments in the province's two largest mines. Vedanta, the owner of Konkola Copper Mines (KCM), has pledged a $1 billion investment over five years, in addition to $250 million for local creditors, $20 million for community projects, and a 20% increase in worker salaries.[63] Mopani Copper Mines (MCM), acquired by ZCCM from Glencore in 2021 through a $1.5 billion debt-financed deal, is set to welcome a new equity partner. Abu Dhabi-based International Resources Holdings (IRH) plans to purchase a stake in MCM, investing funds for short-term working capital and completing mine development to unlock MCM's long-term potential. While the potential production capacity remains unclear, some preliminary estimates have suggested that these two investments could increase copper production by 550,000 metric tons, tripling the Copperbelt's output.[64,65]

Policy options to improve mining output

- **Geological survey of mineral deposits:** Only 61% of the country has been geologically surveyed.[66] The current mapping of Zambia's mineral deposits has been carried out using an above-ground survey, where minerals that outcrop – seen from the above-ground geology – are assessed.[67] The Ministry of Mines and Minerals Development (MMMD) could consider investing more in exploration and a new mapping of Zambia's mineral deposits. This could significantly improve the government and investors' understanding of the available minerals.
- I**mprove mining license transparency:** Since December 2023, MMMD has digitised the mining license application process.[68] As digitisation continues, the MMMD could aim to improve the systematic disclosure of licenses, including updating the online Mining Cadastre Portal to improve public transparency. Moreover, by overlaying exploration data, MMMD could leverage the online mining license system to gain deeper insights into mining potential and activity. This system can be the foundation for a digitalisation strategy linking resources with licenses, activity, tax, and environmental and community impact.[69]

61 Hund, K. et al. (2020) Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition. World Bank.

62 IEA (2022) Mineral requirements for clean energy transitions.

63 Mfula, C. and Njini, F. (2023) 'Zambia agrees to hand disputed copper assets back to India's Vedanta'.

64 Mufla, C. (2023) 'Zambia selects UAE's IHC unit as new partner in Mopani Copper Mines'.

65 Chapeshamano, N. (2023) 'Zambia Revives Copperbelt with $1.1 Billion Mopani Deal', Business News Zambia Newspaper.

66 PWC (2023) Zambia 2023 Mining Report.

67 Mining for Zambia (2022) Mapping the minerals of the future.

68 Ministry of Mines and Mineral Development (2023) Transition From Manual to Online Application of Mining Licenses Under the Mining Cadastre System.

69 Werker, E. (2023) A strategy for resource-led development in Zambia.

- **Stable and effective taxation regime:** While the current government has made strides to stabilise the mining taxation regime, given Zambia's volatile mining taxation history, it will take time to regain investors' trust.[70] Moreover, the instability in mining taxation policy seems to signal constrained capacity in the revenue administration's ability to collect revenue effectively. The shift to an increased reliance on mineral royalty rather than profit-based taxation reiterates these concerns. Mineral royalties are much easier to collect and require less effort than a profit-based tax system that requires more sophisticated audit skills to verify mining firms' reported profits.[71] Given the importance of mining taxation to Zambia's budget, this area requires further research.

Enhancing mining value chain opportunities

Since privatisation, mining has become an enclave activity with few linkages to the rest of the economy. Currently, both the upstream and downstream mining supply chains are dominated by foreign firms.[72,73]

In 2021, Zambia exported $7.67B of copper and articles thereof. However, $6.33B of exports were raw (unrefined) copper, accounting for 83% of total copper exports.[74] While the government is keen to encourage the mineral value-addition sector, several substantial challenges exist. An investigation conducted by the World Bank concluded that the local availability of copper does not provide Zambia with any substantial comparative advantage in copper fabrication. Proximity to consumer markets is a key factor for the copper fabrication industry.[75] Hence, domestic and regional demand for copper products would need to grow substantially before any sizable expansion in copper fabrication becomes commercially viable in Zambia.[76]

In terms of the upstream mining supply chain, mines consumed $2.38B of goods and services in 2017. While over 80% are said to be sourced 'locally', only 10.6% are locally manufactured goods and services provided by resident firms. Most 'locally procured' goods and services are imported to a foreign-owned firm with a local presence. Moreover, only 2.5% of goods and services consumed by mines are procured from Zambian-owned businesses.[77,78]

70 Baskaran, G. and Pearson, W. (2023) Tripling Zambia's copper production: A way out of the debt crisis.

71 Siwale, T. and Chibuye, B. (2019) Mining taxation policy in Zambia: The tyranny of indecision.

72 African Development Bank Group (2022) Study of the Economic Diversification and Productivity Improvement in Zambia.

73 Adam, C., Collier, P. and Gondwe, M. (eds) (2014) Zambia: building prosperity from resource wealth.

74 Trading Economics (2023) 'Commodity Market Prices - Copper'.

75 World Bank and International Bank for Reconstruction and Development (2011) What is the Potential for More Copper Fabrication in Zambia?

76 Sutton, J. and Langmead, G. (2013) An Enterprise Map of Zambia. International Growth Centre.

77 A firm is classified as "Zambian-owned" if over 50% of the ownership is Zambian.

78 AGS (2021) Needs and Challenges in the Zambian Mining Supply Chain.

Table 3 below summarises the various challenges hindering the expansion of upstream mining supply chains.

Table 3: Summary of the key obstacles to upstream mining supply chains

Obstacle	Elaboration
Poor local content legislation and enforcement	The current Mines and Minerals Development Act of 2015 mandates mining license holders to give preference to locally manufactured goods and services provided by Zambian citizens.[79] However, in November 2020, the Ministry of Mines and Mineral Development acknowledged that the current legislation has several major gaps. The key weaknesses include: (1) a poorly defined definition of 'local' (2) a lack of targets or parameters for procurement of local goods and services (3) a poor definition of "local", and (4) loopholes for mines and mining contractors.[80]
Access to finance and delayed payments	According to the World Bank Enterprise Survey, access to finance is Zambia's most substantial obstacle to firm growth.[81] This constraint was reiterated in nearly all stakeholder interviews. Moreover, the lack of working capital was highlighted as mines typically do not pay up-front, and several suppliers mentioned that payments were frequently delayed. Hence, local SMEs are often restricted to smaller contracts, whereas foreign-owned entities get larger opportunities.[82]
Discriminatory practices	Based on an African Development Bank (AfDB) investigation, Zambian suppliers cited various discriminatory practices. The suppliers interviewed by AfDB stated that mines provide favourable business terms to foreign 'Tier 1' contractors, including duty-free imports, advance payments, and credit lines. By contrast, Zambian subcontractors pay duty on their imports, frequently receive delayed payments from mines, and pay statutory payments that foreign firms are not subject to.[83]
Transparency gaps	Transparency in the tender process is frequently described as weak and opaque.[84] According to a local Chamber of Commerce, the mines' annual local procurement plans are not made available with enough detail for suppliers to plan their courses of action. In turn, suppliers frequently become general dealers, which is not attractive to mines interested in specialised skills and services.[85]
Skill gaps	Based on insights from local suppliers, industry representatives, and previous reports, it has been repeatedly cited that there is a misalignment between educational curricula and industry needs. Several local stakeholders reiterated that university curricula are too academic, leaving students with few practical skills. Moreover, vocational training has been criticised for focusing too much on business courses rather than developing technical skills. As a result, there are substantial technical skill gaps, including, among others, welding, boilers and furnace makers, foundry skills, and quality assurance training.[86]

79 Government of Zambia (2015) Mines and Minerals Development Act 2015.
80 AGS (2021) Needs and Challenges in the Zambian Mining Supply Chain.
81 World Bank (2019) 'World Bank Enterprise Survey 2019'.
82 AGS (2021) Needs and Challenges in the Zambian Mining Supply Chain.
83 African Development Bank Group (2019) Analysis of Input Goods and Services in Zambia's Mining Industry.
84 African Development Bank Group (2019) Analysis of Input Goods and Services in Zambia's Mining Industry.
85 AGS (2021) Needs and Challenges in the Zambian Mining Supply Chain.
86 AGS (2021) Needs and Challenges in the Zambian Mining Supply Chain.

Policy options to improve mining value chain

- **Local content policies:** Strengthening local content legislation presents a substantial opportunity to develop the upstream mining supply chain. According to the African Development Bank, the Zambian import displacement opportunity is estimated at around $1 billion annually for goods alone.[87] While there is a sizeable body of research on how to approach local content legislation in Zambia, implementation has been a hurdle.
- **Financial instruments and payment terms:** Given that access to finance is the most substantial obstacle to firm growth in Zambia, there is a need for further research and policy action to improve the financial capacity of SMEs. The forthcoming section on private sector development explores policy options to improve access to finance for SMEs. However, in the short run, the government could evaluate its role in ensuring that local suppliers are paid within the agreed timeframes by mines.
- **Understanding competencies of local suppliers and improving competitive environment:** While it may be challenging to balance the tensions between friendliness to foreign investors and consideration for local firms, the government needs to better understand the dimensions across which local suppliers can compete with goods imported by mines. Some products and services – such as steel balls, mill liners, steel assembly components, and recycling of tyres – were mentioned as 'low-hanging fruits': opportunity areas with potential for local manufacturing and service provision.[88] In these areas, the government could consider reducing the incentives to foreign firms to provide a fairer competitive environment, stimulating local suppliers.

4.2. Spurring economic diversification through private sector development

Since Zambia's first National Development Plan in 1966, economic diversification has been a priority for the government. On a national level, Zambia's diversification record has been relatively strong when compared to other resource-rich countries in sub-Saharan Africa.[89]

However, on a provincial level, the Copperbelt province has struggled to achieve the same diversification trajectory. While mining and quarrying reduced as a share of GDP from 39% to 19% from 2013 to 2022, this has not been accompanied by an increase in non-mining sectors of the economy. Despite the province's numerous comparative advantages in addition to mining, from 2016 to 2022, non-mining real GDP remained stagnant, whereas it grew 28% in the rest of Zambia.

87 African Development Bank Group (2022) Study of the Economic Diversification and Productivity Improvement in Zambia.

88 AGS (2021) Needs and Challenges in the Zambian Mining Supply Chain.

89 Ross, M. and Werker, E. (2024) 'Diversification in resource-rich Africa, 1999–2019'.

Some of the key comparative advantages of the Copperbelt include:

1. **Urbanisation:** According to the 2022 Census, the Copperbelt province has the highest urbanisation rates in the country.[90] Urbanisation provides the clearest path from poverty to prosperity when density is well-managed. Cities facilitate a higher-quality match between jobs and workers' skills, greater specialisation, higher levels of human capital, and knowledge spillovers.
2. **Education & labour force:** Despite notable skill gaps and calls from various stakeholders for a comprehensive revision of the educational curriculum, the Copperbelt has a relatively skilled workforce. The province has the highest educational attainment rates in Zambia, with 76% of its population completing secondary education and 25% post-secondary.[91]
3. **Industrial hub & linkages:** The Copperbelt boasts a sizeable local market and is relatively well-connected to neighbouring regional markets. This is particularly advantageous given Zambia's hub and spoke road network. Regions located south of the Copperbelt must navigate through Lusaka's challenging road conditions to access Angola and the Democratic Republic of Congo (DRC).[92] This geographic positioning places the Copperbelt in an advantageous position to emerge as a central hub for industrial activities and regional trade. This presents a largely untapped opportunity, especially considering Zambia's landlocked geography.

Poor growth in the Copperbelt's non-mining sectors, in conjunction with the province's comparative advantages, underscores the urgency of concentrating efforts on supporting diversification unrelated to mining in the province.

BOX 1: PAST DIVERSIFICATION EFFORTS IN THE COPPERBELT

Efforts to diversify the Copperbelt economy have been initiated in the past but have yet to be successful. In 2002, responding to a request by the government, the Economics Association of Zambia (EAZ) and the World Bank led a conference on diversification in the Copperbelt. A key push factor for the 2002 Conference was the collapse of the copper mining industry following depressed copper prices, resulting in the exit of Anglo-American Corporation from Zambia. However, the recommendations from the conference did not receive follow-up action. Some observers have speculated that the reduced focus on diversifying the economy was due to the rising copper prices in the following years.[93]

90 ZamStats (2022) 2022 Census of Population and Housing.

91 Isbell, T. and Dryding, D. (2019) Zambians see progress on education despite persistent inequalities. Afrobarometer.

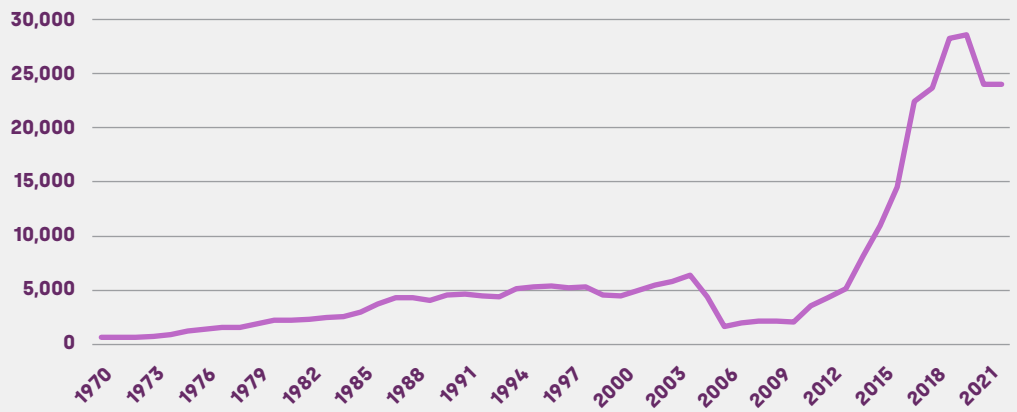
92 Logistics Cluster (2022) Zambia Road Network.

93 Kapena and Haabazoka (2016) 'Diversifying Zambia's Copperbelt economy with post-copper era in mind: lessons from the case study of the Black Country in England (UK)'s West Midlands', International Journal of Applied Research.

Nevertheless, past diversification efforts provide important learnings. The global energy transition and anticipated rise in copper demand present significant opportunities for the mines in the Copperbelt over the next decade. However, the growth struggles of the past decade highlight the importance of not ignoring non-mining sectors of the economy. If the Copperbelt seeks stable economic growth, it is vital to focus on diversification efforts, even during times of strong copper performance.

To achieve economic diversification in the Copperbelt, the private sector must play a pivotal role. Since 2012, Zambia's external debt stocks have ballooned. In 2022, debt servicing obligations accounted for 45.5% of the total budget and approximately 70% of domestic revenue, constraining revenue mobilisation to drive the diversification agenda.[94]

Figure 9: Zambia's external debt stock



Note: External debt stock is in current US$, millions.
Source: World Bank[95]

Given the fiscal status of Zambia, the Copperbelt's economic diversification strategy must be anchored on establishing and strengthening the enabling conditions for private sector development. The following subsections provide policy options and focus areas that the government could consider when setting out its diversification agenda for the Copperbelt province.

94 African Development Bank Group (2022) Study of the Economic Diversification and Productivity Improvement in Zambia.

95 World Bank (2024) 'External debt stocks, total (DOD, current US$) - Zambia'.

Identifying the sectors with potential

The 8th National Development Plan has identified mining, agriculture, manufacturing, and tourism as the priority sectors to lead the economic growth and transformation.[96] The former three are relevant for the Copperbelt, with President Hakainde Hichilema stressing the importance of agriculture to drive diversification in the province.[97] However, beyond these core sectors, cross-country and Zambia-specific studies highlight the potential in so-called "industries without smokestacks" (IWOSS) to engage low- and medium-skilled workers in productive activities. The following section discusses the opportunities and challenges of these sectors in the Copperbelt province.

Agriculture

The importance of the agricultural sector in Zambia cannot be understated, with some estimates suggesting that 80% of Zambia's population depends on agricultural-related livelihoods.[98] However, agriculture in the Copperbelt – and Zambia more generally – is underutilised, with only 15% of Zambia's arable land currently being cultivated. Moreover, productivity in Zambia is far below its potential. Currently, maise yields are approximately 2.4 tonnes per hectare, 10 tonnes below the yields feasible under ideal conditions. This yield gap of 10 tonnes per hectare is one of the largest in Southern Africa. Several nationwide challenges hinder agricultural productivity, including inefficient government policies, the impacts of climate change, market inefficiencies, limited access to credit, inadequate road infrastructure, and low adoption rates of modern agricultural technologies.[99] While the government attempts to address underutilisation by allocating commercial farm blocks of 100,000 hectares in each province, more must be done to address the various nationwide productivity challenges.

Manufacturing

The Zambian government continues to prioritise manufacturing as part of its development strategy. However, it has struggled to increase manufacturing value-added, which has hovered at or below 10% of GDP for the last three decades.[100]

Fierce global competition, labour-saving manufacturing technologies, and Zambia's landlocked geography pose substantial hurdles to Zambia growing a manufacturing sector that also meets its employment generation needs.[101] However, Zambia has sizeable internal and neighbouring markets that provide potential for regional trade. Many products are tradable in regional markets but not readily supplied by global markets due to transport costs or differences in regional tastes.[102] Hence, this can give local manufacturers

96 Ministry of Finance and National Planning (2022) Eight National Development Plan, 2022 - 2026.
97 Lusaka Times (2020) 'Copperbelt Province urgently needs diversification to agriculture-HH'.
98 Ministry of Agriculture and Livestock (2013) Zambia National Agriculture Investment Plan (NAIP) 2014-2018.
99 Teschemacher, C. et al. (2023) What constrains agricultural productivity in Zambia? International Growth Centre.
100 World Bank (2023) 'Value added (% of GDP) by industry'.
101 Hallward-Driemeier, M. and Nayyar, G. (2017) Trouble in the Making? The Future of Manufacturing-Led Development. World Bank.
102 Collier, P. (2016) African urbanisation: An analytic policy guide. International Growth Centre.

a large locational and knowledge-based advantage.[103] Improving the connectivity for this group of regionally tradable products offers considerable scope for enhancing productivity.[104]

BOX 2: CASE STUDY – RWANDA'S LIGHT MANUFACTURING GROWTH

Landlocked Rwanda provides an example of successfully diversifying exports while raising the value of traditional commodity exports. Regional markets have played a vital role in sustaining Rwanda's diversification efforts, with light manufacturing exports increasing fourfold since 2006.[105] The key actions that are likely to have contributed to the considerable rise in the trade of regional goods were:

1. Its accession to the East African Community (EAC) in 2009.
2. Investments in connectivity to key ports in Kenya and Tanzania.
3. The government's promotion of light manufacturing sectors – such as apparel and leather, mechanical appliances, and beverages – through non-financial incentives in its SEZs.[106,107]

Industries without smokestacks

While there remains scope for manufacturing, changing technologies and shifting globalisation patterns call into question the feasibility of a manufacturing-led development strategy, as East Asian countries experienced from 1970 to 2000. Rodrik (2016) refers to this phenomenon as "premature deindustrialisation", a trend observed across sub-Saharan African countries.[108]

Early "deindustrialisation" may harm development as manufacturing has features that make it instrumental to growth.

- Firstly, unlike other sectors, manufacturing tends to be a technologically dynamic sector exhibiting labour productivity convergence.[109]
- Secondly, manufacturing has traditionally absorbed significant unskilled labour, which sets it apart from other high-productivity sectors such as mining or finance.

103 Newfarmer, R.S., Tarp, F. and Page, J. (eds) (2018) Industries without smokestacks: industrialization in Africa reconsidered. Oxford, United Kingdom: Oxford University Press (WIDER studies in development economics).

104 Collier, P. (2016) African urbanisation: An analytic policy guide. International Growth Centre

105 Brenton, P., Gillson, I. and Sauvé, P. (2019) Economic Diversification: Lessons from Practice. World Bank.

106 Brenton, P., Gillson, I. and Sauvé, P. (2019) Economic Diversification: Lessons from Practice. World Bank.

107 Newfarmer, R.S., Tarp, F. and Page, J. (eds) (2018) Industries without smokestacks: industrialization in Africa reconsidered. Oxford, United Kingdom: Oxford University Press (WIDER studies in development economics).

108 Rodrik, D. (2016) Premature Deindustrialization. Available at: **https://doi.org/10.3386/w20935**.

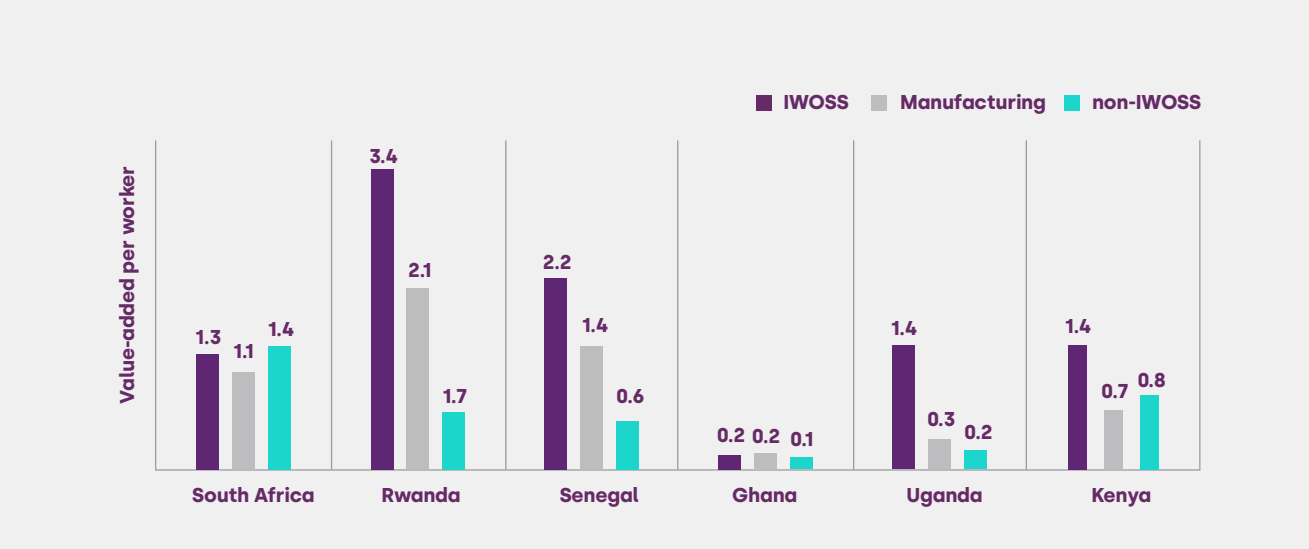
109 Rodrik, D. (2013) 'Unconditional Convergence in Manufacturing*', The Quarterly Journal of Economics [Preprint].

- Thirdly, manufacturing is a tradable sector, implying that demand can remain strong independent of domestic conditions.

Collectively, these features make manufacturing the quintessential escalator for developing economies.[110]

However, the challenges of growing manufacturing underscore the need to explore alternative industries that can drive employment growth. These alternatives should be capable of hiring many low-skilled workers, enhancing their productivity and incomes, and leveraging domestic strengths to increase production and exports. This concept is encapsulated in "industries without smokestacks" (IWOSS). Research conducted by the IGC in the context of Zambia identified the following sectors as having the most potential in Zambia: agro-processing, horticulture and floriculture, tourism, financial and business services, and ICT services.[111] Cross-country evidence on value-addition per worker underscores the potential of these IWOSS sectors:

Figure 10: Cross-country comparison of value-added per worker in IWOSS, manufacturing, and non-IWOSS sectors



Source: Coulibaly and Page (2021)[112]

While manufacturing should not be overlooked, policymakers should broaden their view and explore additional higher-productivity industries where low- and medium-skilled labour can enter.

110 Rodrik, D. (2014) 'The Past, Present, and Future of Economic Growth', in Allen, F. et al.,.

111 Rajaram et al. (2020) Addressing Africa's Youth Unemployment through Industries without Smokestacks (IWSS). IGC.

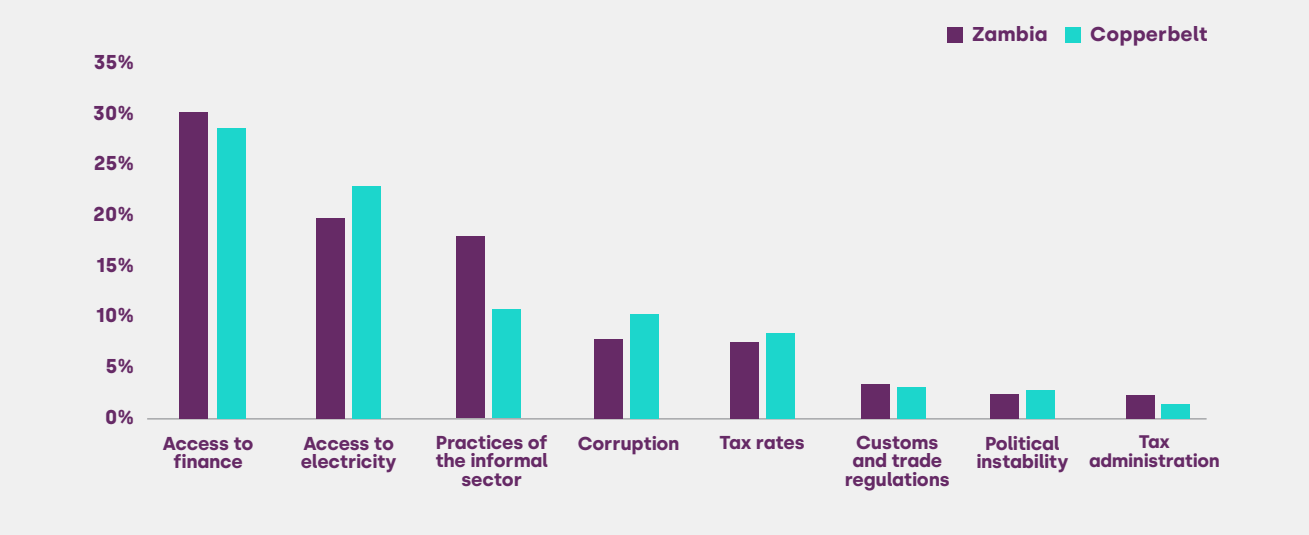
112 Coulibaly, B. and Page, J. (2021) Addressing Africa youth unemployment through industries without smokestacks A synthesis on prospects, constraints, and policies.

Understanding and addressing the obstacles to firm growth

Small and medium-sized enterprises (SMEs) account for 70% of GDP and 88% of employment in Zambia.[113] As such, addressing constraints to SME growth should be at the centre of the government's efforts to grow the economy and improve the livelihoods of its citizens. However, given limited resources, the government must understand which obstacles require the most urgent policy action.

Based on the World Bank Enterprise survey, over half of the firms in the Copperbelt cite access to finance and electricity as the primary barrier to firm growth.

Figure 11: Biggest obstacles to firm growth in Zambia and Copperbelt



Note: The underlying data comes from the 2019 World Bank Enterprise Survey. Respondent firms were asked to answer what their biggest obstacle to firm growth is. Data source: World Bank.
Source: World Bank[114]

It should be noted, however, that the World Bank Enterprise Survey does not cover several key industries, including agriculture, mining, education, and utilities. As such, there is a need for broader diagnostic exercises and research to understand the core issues facing firm growth. That said, preliminary findings from an IGC survey in Kitwe reaffirm that access to finance and electricity are significant obstacles to firm growth in the city.[115]

The remainder of this section will focus on (1) understanding the issues around the two main constraints to firm growth in the Copperbelt, access to finance and electricity, and (2) discussing some preliminary policy options for the government to consider.

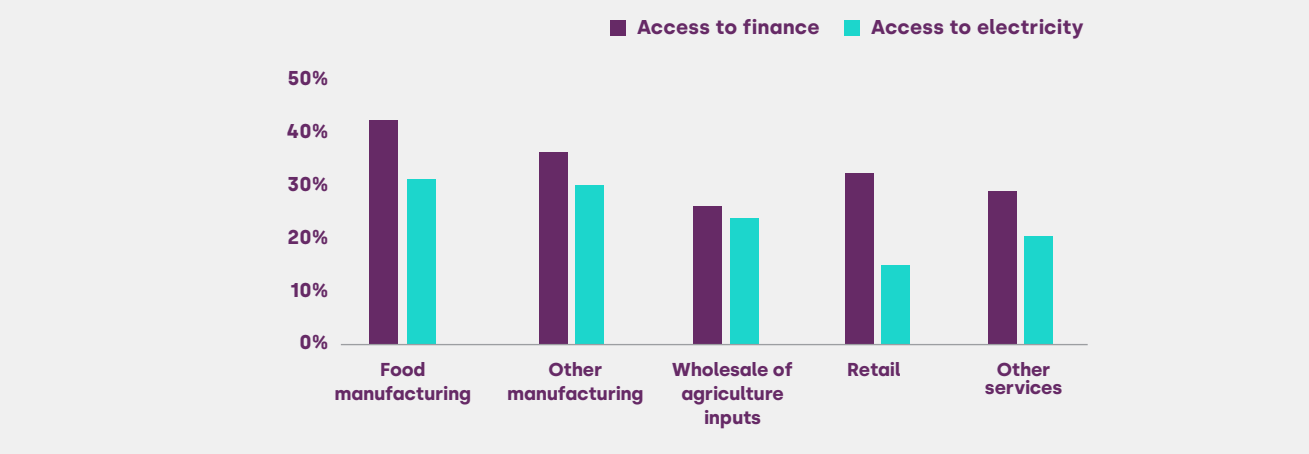
113 Chilembo, T. (2021) 'A Study of the Factors Affecting Small and Medium Enterprises (SMEs) Access to Finance. A Case of Lusaka Based SMEs', American Journal of Industrial and Business Management.

114 World Bank (2019) 'World Bank Enterprise Survey 2019'.

115 Swanson, N. (forthcoming) 'Firms Survey - Kitwe, Zambia'.

As **Figure 12** highlights, access to finance was the most frequently cited barrier to firm growth by all sectors. This underscores the need for policy to improve access to finance across the board.

Figure 12: Proportion of firms citing access to finance and electricity as the biggest obstacle, by industry



Source: World Bank[116]

In Zambia, 89% of business investments are financed using internal funds. Two primary factors explain the low use of credit:

- On the borrower side, the main reason firms do not apply for credit, other than not needing a loan, is because interest rates are prohibitively high.[117]
- On the lender side, insufficient collateral is the primary reason for rejecting a loan request.[118]

Addressing these two challenges will be pivotal to increasing access to finance.

In terms of electricity, the sector is heavily weather-dependent, as 85% of its electricity is derived from hydropower. Changing rainfall patterns, linked to the effects of climate change, have disrupted the energy supply, resulting in frequent load-shedding, and the effects are anticipated to worsen.[119] Although the cost of electricity in Zambia is one of the lowest in the world – ranking 6th cheapest in Africa – tariffs have been below operating costs, hindering much-needed investment.[120,121]

Moreover, mines in the nation consume over 50% of all power generated. This has a substantial knock-on effect on other energy-intensive industries, such as manufacturing.[122] Concerningly, access to electricity in manufacturing has

116 World Bank (2019) 'World Bank Enterprise Survey 2019'.

117 World Bank (2019) 'World Bank Enterprise Survey 2019'.

118 Chilembo, T. (2021) 'A Study of the Factors Affecting Small and Medium Enterprises (SMEs) Access to Finance. A Case of Lusaka Based SMEs', American Journal of Industrial and Business Management.

119 Tobin, W. and Sparkman, M. (2023) Country spotlight: Unlocking a high-energy future for Zambia. Atlantic Council.

120 World Population Review (2024) 'Cost of Electricity by Country 2023'.

121 IMF (2023) Zambia: Selected Issues 2023.

122 Bridle, R. (2018) Not a Case of Either/Or: How government and mines in Zambia can save money through energy efficiency.

worsened between 2013 and 2019. As **Table 4** below summarises, the number and length of outages have increased, resulting in a greater estimated loss and a higher share of costly generator power.[123]

Table 4: Change in access to electricity in manufacturing between 2013 and 2019

	Experienced power outage (%)	Number of outages (monthly)	Length of outage (hours)	Estimated loses (% sales)	Share of power from generator (%)
2013	82%	7.1	3.6	14%	15%
2019	86%	15.6	7.2	25%	29%

Source: World Bank[124]

Policy options to improve access to finance and electricity

- **Increase collateral registry usage:** In developing economies, nearly 80% of firms' capital stock consists of movable assets. Smaller firms, in particular, are less likely to have access to fixed assets such as land or buildings.[125] Moreover, in Zambia, it is estimated that nearly 80% of the land is not registered, limiting its ability to be used as collateral.[126] Collateral registry systems allow small businesses to register their moveable assets as collateral to secure a loan. Cross-country evidence has shown that the introduction and improvement of collateral registries results in a statistically significant increase in credit availability and improved terms.[127] In 2017, the International Finance Corporation (IFC) and the Government of Zambia collaborated to launch a collateral registry. However, since its launch, the registry has had low usage and diminishing performance. There is substantial scope to improve the functioning and use of collateral registries in Zambia by (1) lowering fees, (2) connecting different registry systems, (3) improving enforcement to decrease risk on financial institutions, and (4) develop capacity building and awareness programs.[128]

123 Lusaka Times (2023) 'Manufacturing industry bemoans effects of load shedding'.

124 World Bank (2013) 'World Bank Enterprise Survey 2013'; World Bank (2019) 'World Bank Enterprise Survey 2019'.

125 Love, I., Peria, M.S.M. and Singh, S. (2016) Collateral Registries for Movable Assets: Does Their Introduction Spur Firms' Access to Bank Finance? World Bank and IMF.

126 Tembo, E., Minango, J. and Sommerville, M. (2018) Zambia's National Land Titling Programme – Challenges and Opportunities.

127 Love, I., Peria, M.S.M. and Singh, S. (2016) Collateral Registries for Movable Assets: Does Their Introduction Spur Firms' Access to Bank Finance? World Bank and IMF.

128 World Bank (2021) Market Study Report: Movable Asset Based Lending in Zambia Market Study.

- **Improve credit reporting coverage and quality:** Zambia has made strides to improve its credit information system. Since 2008, the credit bureau, TransUnion, requires banks and some non-banks to provide loan information and consult it when providing credit. However, the bureau's coverage is still less than 10% of the population, the quality of its information is suspect, and it lacks clarity on data sources.[129] A cross-country study including lower- and middle-income countries shows that improving credit reporting systems significantly affects the number of firms with access to loans and credit terms (lower interest rates, collateral, and maturity length).[130]
- **Financial literacy and management programmes:** The proportion of individuals in Zambia who are financially literate stands at 23.6%, increasing only to 31.9% in urban areas.[131] Moreover, application complexity was the third most cited reason for not applying for a loan, behind prohibitively high-interest rates and insufficient collateral.[132] Financial literacy programmes can improve the financial management skills of SMEs and increase their appeal to potential lenders.
- **Develop an energy rationing strategy to minimise the socio-economic impact of load-shedding:** Recognising the need to diversify Zambia's energy grid, the government has developed a renewable energy strategy and action plan to improve access to electricity across Zambia from 2022 – 2030. The target is to increase access to electricity to 100% in urban and 51% in rural areas, increasing from 71% and 8%, respectively.[133] However, increased load-shedding may be needed in the short run. Given the widespread impact of outages on the economy and livelihoods, the government should consider devising an electricity rationing strategy to minimise outages' socio-economic impact.

129 US Department of State (2023) 2023 Investment Climate Statements: Zambia.

130 Peria, M.S.M. and Singh, S. (2014) The Impact of Credit Information Sharing Reforms on Firm Financing. World Bank.

131 Bank of Zambia (2020) FinScope Zambia: 2020 Survey.

132 World Bank (2019) 'World Bank Enterprise Survey 2019'.

133 Ministry of Energy (2022) Renewable Energy Strategy and Action Plan.

Re-thinking special economic zones

To attract investment, the Zambian government initiated a strategy in the mid-2000s to create special economic zones. This led to the establishment of four multi-facility special economic zones (MFEZs) and two industrial parks, with more in development. However, the MFEZs have underperformed in terms of growth and job creation. Despite an increase in the level of investment in 2021 compared to 2020, actualised investment was only at 23% and 30%, respectively, versus the pledged levels each year. Moreover, it is difficult to establish whether these investments were brought in due to the MFEZs or if they have simply relocated from elsewhere in the country to benefit from more favourable incentives.[134]

To attract investment in SEZs, the government primarily uses fiscal incentives. Companies operating within MFEZs benefit from (1) zero taxes on profits and dividends for five years and a reduced corporate income tax rate for the next five years, (2) zero-rated imports for raw materials, supplies, machinery, and equipment, and (3) no withholding taxes on management fees.[135] Non-financial incentives include investment guarantees and protection against state nationalisation, and free facilitation for the application of immigration permits, secondary licenses, land titles, and utilities.[136]

While fiscal incentives can play an important role, they are not always decisive in achieving success in SEZs. Research comparing SEZ performance across African countries has shown that financial incentives do not correlate with the outcomes of these zones. Instead, policies aimed at improving the business climate and tackling market failures matter significantly more in explaining zone performance.[137] This perspective is supported by the experiences of companies in Zambia's SEZs. In 2021, a review by the Zambian Development Agency highlighted the major challenges faced by businesses in these zones, which included inadequate infrastructure (like electricity and roads), issues with land ownership, delays in VAT refunds, and obstacles in obtaining licenses and permits.[138]

134 IMF (2023) Zambia: Selected Issues 2023.

135 Embassy of Zambia - Washington D.C. (2024) Incentives for Investors in Zambia.

136 Zambian Development Agency (2024) Investment Incentives.

137 Farole, T. (2011) Special economic zones in Africa: comparing performance and learning from global experiences. World Bank.

138 IMF (2023) Zambia: Selected Issues 2023.

BOX 3: CASE STUDY – KIGALI SPECIAL ECONOMIC ZONE

The Kigali Special Economic Zones provides an example of an SEZ that has succeeded using non-fiscal incentives. The zone opened in 2013, and by 2016, it had already employed around 2% of the country's labour force, accounted for 2.5% of all VAT-reported sales, and catalysed Rwanda's export promotion – making up 5-10% of Rwanda's exports from 2013 to 2016. Moreover, an econometric investigation revealed that firm performance improved when they relocated to the Kigali SEZ. Moving into the zone is associated with a statistically significant increase in sales, value-added per worker and permanent employment.[139]

It should be noted, however, that the firms in Kigali SEZ are not eligible for any tax incentives. Instead, it offers a range of non-fiscal benefits, including:

1. Access to improved infrastructure and utilities (roads, electricity, water and sanitation, and ICT).
2. Improved trade facilitation, both in terms of expedited customs procedures and helping firms apply for tax exemptions related to export industries.
3. A "One-Stop Centre" to streamline various bureaucratic processes to reduce firms' regulatory compliance costs. The main areas the One-Stop Centre aims to streamline are: processes for registration, land titles, environmental impact assessments, construction permits, and certificate of occupancy processes.

Policy options to improve SEZ performance

- **Establishing a dedicated regulatory body to oversee SEZs:** The Zambia Development Agency is responsible for SEZs; however, it also has several other regulatory responsibilities outside the zones. Most countries, except Zambia, have dedicated legislation and regulatory bodies to oversee the implementation of the SEZ regime. The government could explore establishing a dedicated body to oversee SEZs to ensure that the regulatory environment of SEZs is more streamlined and efficient than the national environment.[140]
- **Re-evaluate the incentive framework of SEZs:** Zambia's reliance on fiscal incentives within its SEZs has proven inadequate to attract new investment. Comparative studies indicate that non-fiscal incentives, addressing market failures and regulatory hurdles, are more successful in attracting investment. To enhance the appeal of Zambian SEZs, the government could consider refining the incentive framework that SEZs currently offer.

139 Steenbergen, V. and Javorcik, B. (2017) Analysing the impact of the Kigali Special Economic Zone on firm behaviour. International Growth Centre.

140 Dube, C., Matsika, W. and Chiwunze, G. (2020) Special economic zones in Southern Africa: Is success influenced by design attributes? UNU-WIDER.

- **Encourage linkages between firms inside and outside SEZs:** Evidence from East Asia shows that SEZs with strong linkages to the host economy are most successful.[141] The government could use soft policies, such as on-the-job training or connecting zone investors with local firms through local content legislation, to promote these linkages.[142] Moreover, the locations of the SEZs should be strategic to facilitate local linkages while remaining attractive to investors.
- **Using SEZs as a policy experimentation tool:** The optimal policies for a country's context may be unknown before policies are enacted. SEZs could be used to trial potential policies before making broader reforms. For example, SEZs in China pioneered several key reforms in the country's transition to a market economy, including flexible labour markets, incentive-based pay, and opening capital markets. Moreover, SEZ policy can also act as a smooth transition in settings where political obstacles block reform.[143] It may be easier to focus on reform in a subset of the economy, which can then generate support for broader policy change in the rest of the country.
- **Implement robust monitoring and evaluation (M&E) mechanisms:** There is insufficient periodic M&E of zone performance in Zambia, hampering policy action to improve the zones. Policymakers should set up rigorous monitoring and evaluation (M&E) systems to manage and develop SEZs effectively. This is especially important if SEZs are used as policy experimentation tools.


Niels Mulder

141 Zeng, D.Z. (2021) The Dos and Don'ts of Special Economic Zones. World Bank.

142 Alexianu, M. et al. (2019) Doing Special Economic Zones right: A policy framework. International Growth Centre.

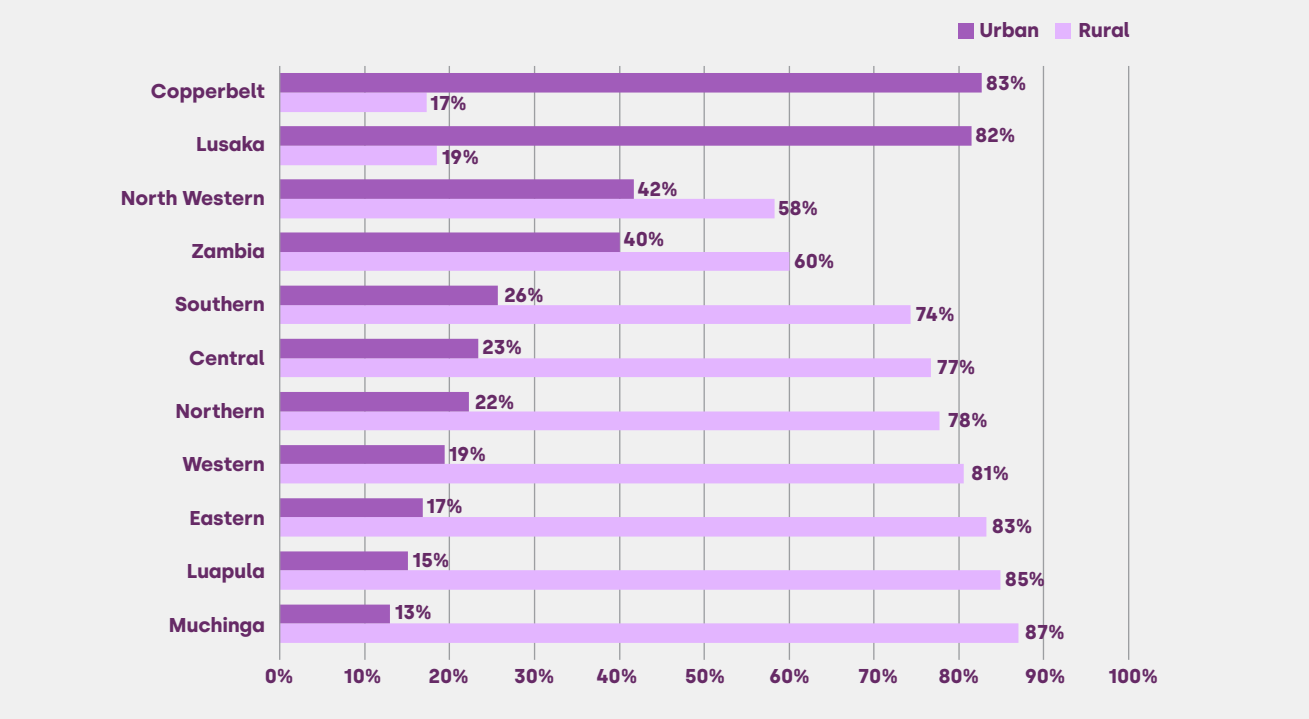
143 Auty, R. (2011) 'Early Reform Zones: Catalysts for Dynamic Market Economies in Africa', Special Economic Zones: Progress, Emerging Challenges, and Future Directions, Farole and Akinci.

4.3. Ensuring urbanisation leads to prosperity

The Copperbelt is Zambia's most urbanised province, with nearly 83% of its population living in cities according to the latest census.[144] This high level of urbanisation represents a key advantage over more rural provinces: it can support economic dynamism, facilitate more diverse and productive labour markets, and lower the per capita cost of providing education, infrastructure, and basic services.

However, the same urban concentration that creates opportunity also intensifies economic, social, and governance pressures. These are visible in persistent urban deprivation: a large share of urban households continues to live in unplanned settlements with limited access to basic services such as safe water and sanitation, and improvements in living standards have been neither sustained nor broad based.[145]

Figure 13: Total population by rural and urban areas (2022)



Source: ZamStats[146]

While these challenges are not unique to the Copperbelt, they are reinforced by the historical drivers of urbanisation in the province, where urban growth originally emerged in response to mining activity. As in many resource-rich regions, the discovery of mineral deposits triggered rapid population growth in areas that were previously weakly integrated into national infrastructure networks and had limited planning capacity.

144 ZamStats (2022) 2022 Census of Population and Housing.

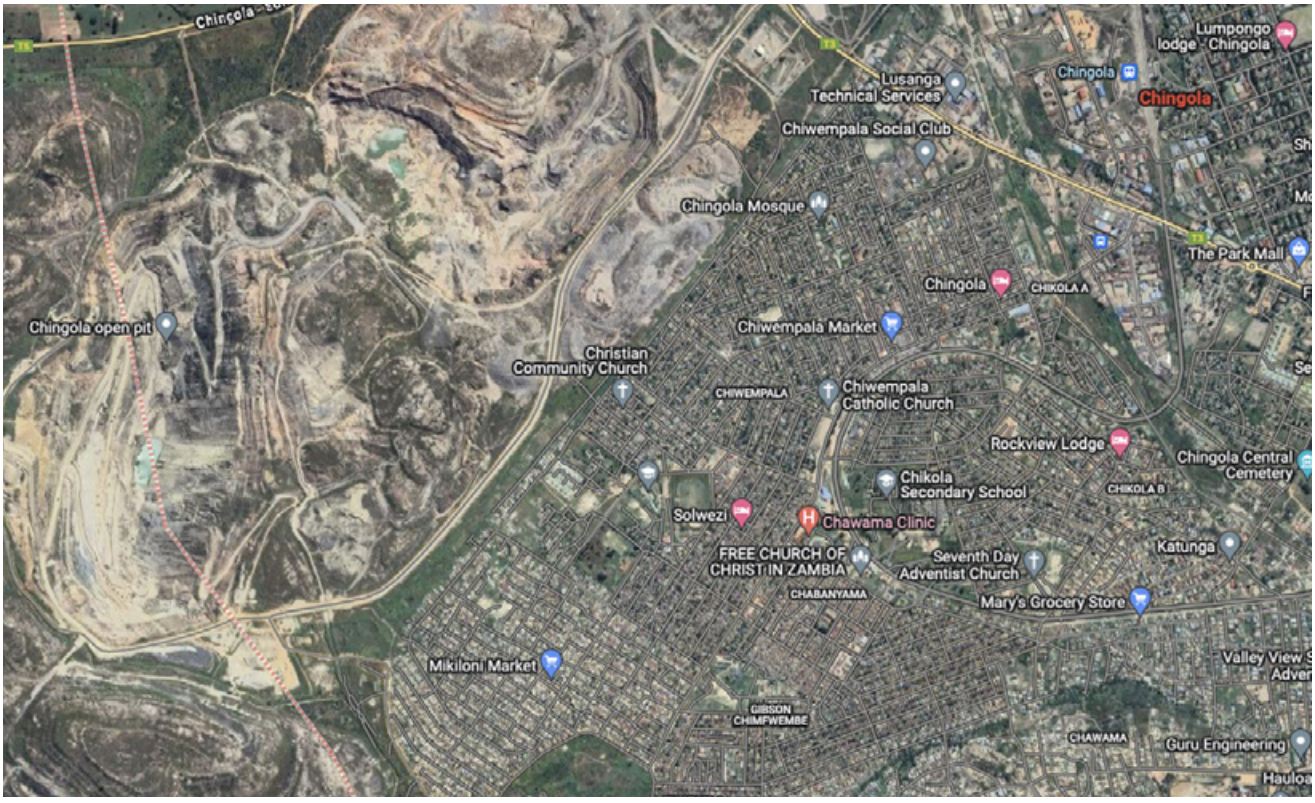
145 UN-Habitat (2023). Zambia Country Brief. **https://unhabitat.org/sites/default/files/2023/07/zambia_country_report_final_en.pdf**

146 ZamStats (2022) 2022 Census of Population and Housing.

Cities expanded largely in response to rising resource incomes and the resulting demand for local non-tradable services.[147]

At the same time, the capital-intensive nature of the mining sector, together with its ownership structure, meant that it generated far fewer local jobs than many migrants moving into the region had hoped for. As a result, a large share of new arrivals entered informal and precarious forms of work, including informal mining.[148] These labour market pressures have also intersected with a lasting environmental legacy: many communities have settled near slug dumps and former industrial sites, exposing residents to significant health and environmental risks.[149]

Figure 14: Satellite view of urban Chingola (right) and the city's open pit mine (left)



Source: Google[150]

Despite historically high rates of in-migration, the Copperbelt has experienced net out-migration in recent years. This shift likely reflects a combination of factors, including the challenges facing the mining sector and the resulting economic stagnation discussed in previous sections, as well as the pull of new mining opportunities in North-Western Province and broader economic opportunities in Lusaka.

147 Kriticos (2019). Urbanisation without structural transformation. International Growth Centre Blog. **https://www.theigc.org/blogs/urbanisation-and-structural-transformation-africa**

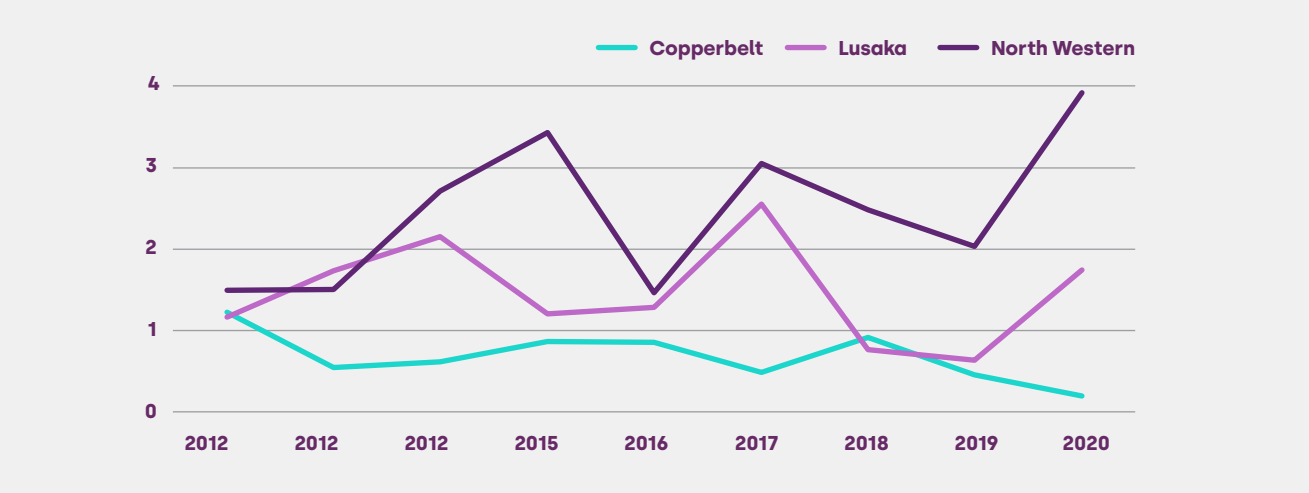
148 Siwale (2019). The current state of artisanal and small-scale mining in Zambia. International Growth Centre Blog. **https://www.theigc.org/blogs/current-state-artisanal-and-small-scale-mining-zambia**

149 Herrera et al (2017). Estimating the Causal Impact of Proximity to Gold and Copper Mines on Respiratory Diseases in Chilean Children: An Application of Targeted Maximum Likelihood Estimation. International Journal of Environmental Research and Public Health.

150 Google (2024). Google Maps – Chingola.

Nonetheless, the Copperbelt, like the country as a whole, is expected to continue urbanising. Zambia's urban population is projected to increase from 9.1 million in 2022 to an estimated 25.6 million by 2050, underscoring the importance of addressing these structural challenges to ensure that future urban growth translates into improved living standards.[151]

Figure 15: In- and out-migration for the Copperbelt, Lusaka, and North Western provinces



Note: A ratio below 1 indicates that out-migration is higher than in-migration.
Source: ZamStats[152]

Leveraging urban policy for industrial development

Urbanisation is not merely a by-product of economic development; it is one of its central drivers. How this process is managed will determine whether the Copperbelt realises its potential as a mining and industrial hub, and whether Zambia succeeds in diversifying its economy and attaining middle-income status in the coming decade.

The importance of urbanisation extends beyond improving liveability. Well-functioning cities create the conditions for private sector growth by strengthening spatial connectivity between workers and firms. This supports input sharing, more effective matching between skills and jobs, and knowledge spillovers that raise productivity. For these reasons, cities are the natural locus of industry, services, and innovation.

Historically, industrial policy has often concentrated on directing support to specific firms or sectors, while paying limited attention to the urban environment in which economic activity takes place. Yet when the broader urban system constrains productivity, the effectiveness of firm- or sector-specific support alone may be limited.

151 Lamson-Hall, P. (2021). Using remote sensing to map and measure informal settlements in Lusaka, Zambia. International Growth Centre.

152 ZamStats and Ministry of Labour (2021) Labour Force Survey Metadata.

Moreover, governments face inherent uncertainty in anticipating which activities will remain competitive under changing global conditions. This uncertainty is particularly pronounced in mining regions, where commodity price volatility and sustainability transitions create substantial unpredictability about future growth paths.

In this context, sector-agnostic investments may offer a resilient basis for economic development. These include "no-regret" investments in public infrastructure and services, from transport to public utilities, that can strengthen productivity and resilience regardless of which firms ultimately drive growth. By improving the underlying economic environment, they help create conditions in which businesses are better positioned to invest and adapt to new market opportunities.

Examples of policy options to support ease of doing business

- **Strengthening urban connectivity through core infrastructure:** Housing and transport provide practical examples of sector-agnostic, "no-regret" investments because they strengthen the underlying functioning of the urban economy. Supporting the provision of affordable, serviced housing in proximity to industrial and mining areas lowers hiring and retention costs for firms while also reducing transport-related costs for households. Even if net out-migration persists, some groups – particularly older or less mobile residents – are likely to remain. Housing investment will therefore continue to generate benefits for those who stay.

Transport infrastructure is another example. On the commuting side, more reliable and affordable public transport expands access to employment opportunities across the urban area. By improving connectivity between firms and workers, it reduces labour market frictions and supports productivity across a wide range of activities.

On the freight side, improved road and rail networks facilitate regional trade irrespective of which sectors drive long-term growth. Stronger connectivity with the DRC and neighbouring markets can enable Copperbelt cities to specialise and integrate into regional value chains under different future economic scenarios.[153]

Harnessing land use planning for productive urbanisation

Urban land is one of a city's most valuable assets, and the regulations that govern it shape how people live, work, and invest. [154] As cities in the Copperbelt expand, pressures on land intensify, increasing the risk of fragmented and under-serviced development. Effective land use planning is therefore central to supporting both liveability and economic performance.

153 Collier (2017). African urbanisation: An analytic policy guide. Oxford Review of Economic Policy.

154 Collier et al (2023). Economics meets urban planning: Developing effective land use plans in fast-growing cities. International Growth Centre.

Yet planning alone is often insufficient to guide urban development. In practice, land use regulations operate within a broader system of land administration, tenure arrangements, and fiscal institutions. Layered ownership claims, overlapping tenure systems, and administrative constraints can make it difficult to allocate and enforce land use rights. These conditions generate uncertainty for investors, raise transaction costs, and limit the ability of land markets to respond to changing economic needs. They also weaken governments' capacity to coordinate infrastructure provision, align development with existing settlement patterns, and mobilise local revenue.[155]

Examples of policy options to prepare for urban growth

- **Guiding urban expansion through forward-looking land use planning:** One of the core benefits of land use planning is the proactive allocation of urban land for roads, water and sanitation, and public spaces. At the same time, cities can use regulatory and fiscal tools to help guide private investment towards more orderly urban growth, including zoning and building regulations that encourage higher-density development in serviced areas, development approvals that require connections to basic infrastructure, and fiscal instruments such as development charges or property taxation that discourage leapfrog expansion. Importantly, plans should be realistic, tailored to local enforcement capacity, and focused on a few achievable goals. In many cases, weak implementation, rather than weak planning, is the most binding constraint.[156]
- **Leveraging intermediate land tenure systems:** As it stands, the administrative complexity resulting from Zambia's dual tenure system generates uncertainty that may discourage long-term private investment. Intermediate forms of land rights, such as occupancy certificates, can strengthen tenure security. These instruments provide legal recognition that encourages households and small firms to invest and can integrate informal areas into planning and taxation systems. However, they are less suitable for high-value urban centres and industrial sites, where secure, legally enforceable land rights are important for reducing investment risk.[157]

Recouping rising land values from public investment and urbanisation

Allocating the finance needed for well-managed urbanisation is essential to ensure that urban growth generates productivity gains. The scale of investment involved means that national governments must place urbanisation at the core of their growth strategies. At the same time, because many of the investments required fall under the responsibility of local governments, decentralisation plays an important role in enabling cities to respond to these needs. Recent decentralisation reforms, including through the Constituency Development Fund, are positive steps. However, these reforms must be matched with stronger local capacity to manage resources, deliver projects, and coordinate investment.

155 Collier et al (2018). Land rights: Unlocking land for urban development. International Growth Centre.

156 Collier et al (2023). Economics meets urban planning: Developing effective land use plans in fast-growing cities. International Growth Centre.

157 Collier et al (2018). Land rights: Unlocking land for urban development. International Growth Centre.

Crucially, urban councils need appropriate mandates and fiscal tools that allow them to recoup part of the land value increases generated by public investment. Local revenue mobilisation is not only a budgetary matter; it also strengthens the social contract by building credible links between taxes raised and local services provided.

Examples of policy options to strengthen own-source revenue

- **Strengthening property rate collection with digital technologies:** Recurrent property tax (or property rate) remains underutilised, despite being the main source of own-source revenue for many Copperbelt councils. There is significant scope to improve the identification and valuation of properties, billing, and sensitisation and compliance. For example, a digital base map of Lusaka created from satellite imagery identified over 256,000 properties compared with about 82,000 on the official valuation roll, revealing many rateable properties outside the tax net.[158] Integrating this information with Geographic Information Systems can make valuation and tax mapping faster and cheaper, and recent efforts under Zambia's National Land Titling Programme are expanding the tax base by bringing occupancy rights in informal areas into formal registers. Using off-the-shelf digital technologies to support these processes can make property tax administration more cost-effective. However, realising these gains will require investing in the hardware, software, and technical skills needed to operate and maintain these systems. It will also require stronger coordination across levels of government to enable data sharing and reduce institutional silos.[159]
- **Using expectations of future land value to help finance today's infrastructure:** Fast-growing cities need roads, public utilities, and other urban infrastructure, yet these investments are costly to fund upfront. One way to bridge this gap is to capture part of the expected increase in the value of development resulting from improved infrastructure – for example, by selling development rights that must be acquired by developers – and use the proceeds to finance the cost of providing those goods or services. This approach treats development rights, such as the right to build at higher density or on specific sites, as assets that can be sold to raise revenue. Cities such as São Paulo in Brazil have used this method to unlock significant funds for infrastructure, but the principle is widely applicable. When developers anticipate that public investment will increase the value of development in a location, cities can harness this willingness to pay for development rights to finance the public good. This creates a market-based way to fund infrastructure in areas where private demand is strong.

158 Kaputula, M., & Oliveira Cunha, J. (2024). Boosting tax revenue of Zambian cities with technology. International Growth Centre.

159 Jibao (2017). Property taxation, capital gains tax, and mining right tax in Zambia: Current performance and options for reform. International Growth Centre.

5. Concluding remarks

The Copperbelt, once the heart of Zambia's economic growth due to its rich copper mines, has experienced a significant economic downturn since 2015, with a real GDP growth rate averaging -1.0% and an increase in poverty levels. While the slowdown in mining activity – due to various internal and external factors – played a substantial role, non-mining sectors in the province have also struggled, stagnating since 2016 while they grew 28% in the rest of the nation. These observations underscored the need for a thorough analysis of the challenges and opportunities of the province.

The Copperbelt stands at a critical juncture. The global energy transition has revived interest in the province's copper mines. However, if the Copperbelt seeks sustainable economic growth, the regional development strategy must also focus on tapping into the potential of non-mining sectors. This paper has identified three initial focus areas for the government to consider while developing a regional development strategy for the province:

- **Improving mining and mining value chain opportunities:** To capitalise on the energy transition, the government should focus on policies to increase mining output and improve what Zambia gets out of its mining operations.
- **Spurring economic diversification through private sector development:** Despite low growth in non-mining sectors, the province's high urbanisation and education rates, along with infrastructural and geographical advantages, position it well to reclaim its status as an industrial hub beyond mining. To achieve this, it will be critical that the government works to address the key obstacles to firm growth and re-think how SEZs are used to promote investment.
- **Ensuring urbanisation leads to prosperity:** The Copperbelt has a substantial urban population, which should be seen as an asset - under the right conditions, firms should want to open up in these urban areas in order to take advantage of the ample supply of labour. This population will also be easier to educate. Taking advantage of this opportunity requires providing the public goods that city dwellers need to live healthy lives in which they can access the benefits of a dense labour market.

It is important to clarify that this report does not represent a comprehensive economic development strategy for the Copperbelt. Instead, it serves as a starting point, offering an overview of key economic trends and initial policy directions for the government to consider. It is intended to spark more detailed research initiatives in specific thematic areas that can guide future decision-making and economic strategy development for the region.

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