ZAMBIA

Country Economic Transformation Outlook (CETO) 2025

Prepared in collaboration by

Margret Mbewe, Mbewe Kalikeka, Joseph Phiri, Ignatius Masilokwa, Thomas Mwimba, Mwape Mungu, Katongo Chileshe, James Mulenga
Zambia Institute for Policy Analysis and Research

Hellen Sakala, Brenda Chongo Chanda, Richmond Commodore
African Center for Economic Transformation

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1. INTRODUCTION

1.1. Background

Since Zambia gained independence in 1964, its economy has been characterized by periods of expansion that coincided with high international prices of primary commodities, and periods of contraction and of external shocks such as declining copper prices and adverse weather conditions. Overall, Zambia has seen decades of declining living standards arising from poor management of the government-owned copper mines, falling export revenues, failure to diversify the economy from mining, weak macro-economic management, rising foreign debt, and recurrent fiscal crises (IDA & IMF, 2002). This was compounded by the austerity measures under the structural adjustment programs (SAPs) that did not bring growth and progress on the external debt front, resulting in structural failure of the economy. However, between 2000 and 2005, there was a period of renewed growth from 3.9 percent to 7.2 percent (World Bank, 2024).

Zambia recorded impressive economic growth during the 2000s, through policy and structural reforms. The government implemented the Poverty Reduction Strategy Paper (PRSP), emphasized the continuation of cautious macroeconomic policies and poverty reduction through a combination of growth-promoting activities in key economic sectors. There was a particular emphasis on rural-based activities along with supporting infrastructure, improved access and quality in the provision of social services and improved governance (IDA & IMF, 2002). Additionally, the country implemented a three-year IMF Poverty Reduction and Growth Facility program, which was based on strong fiscal adjustment envisaged outlined in the 2004 Budget and modest growth of reserve money (IMF, 2004). Having met most of the key quantitative benchmarks and observed most of the structural benchmarks, supported by world-wide advocacy for debt relief for the most highly indebted poor countries, Zambia met the requirements for reaching the HIPC completion point, which saw cancellation of over $6.6 billion worth of debt (World Bank, 2017).

Despite registering growth rates after the HIPC and the Multilateral Debt Relief Initiative programs and attaining middle-income status in 2010, the Zambian economy showed its lack of resilience as it recorded slower economic growth following the downturn in the global commodity market that heavily impacted the price of its major exports from 2014. Real gross domestic product (GDP) declined from 10.3 percent in 2010 to 1.4 percent in 2019, largely on account of domestic and external shocks including climate shocks, fiscal mismanagement, high debt levels and high debt-servicing costs, among many other factors. In addition, GDP per capita contracted by 0.3 percent in 2015 which was the first contraction since the 2.9 percent contraction in 1998 (WB, 2023). Therefore, by the time the COVID-19 pandemic struck, the country was already vulnerable to both internal and external shocks. It fell into a recession and growth was recorded at -2.8 percent in 2020. In addition, Zambia became the first African country in the COVID-19 era to default on its Eurobond debt after the government missed a coupon payment of $42.5 million on its 2024 Eurobond, triggering a cross-default across all its outstanding dollar bonds.

In a bid to turn the tide, the government had embarked on a series of structural and economic reforms in 2022 in the wake of the COVID-19 pandemic. It introduced strategic economic reforms including securing an extended credit facility (ECF) with the International Monetary Fund (IMF), along

with external debt restructuring. However, sustained economic growth remains elusive and has featured a lack of inclusiveness, failure to improve living standards and reduce unemployment vulnerabilities. The country is still grappling with persistent socio-economic challenges such as unemployment, poverty, inequality, low educational outcomes, and inadequate access to social services, as outlined in the 8th National Development Plan (8NDP). Despite making marginal gains in the Human Development Index, with its score increasing from 0.583 in 2015 to 0.588 in 2017, the score declined to 0.584 in 2020 and further to 0.565 in 2021.

To generate better jobs and achieve sustained and inclusive growth, Zambia must enhance productivity and accelerate economic transformation. This study seeks to identify the challenges and opportunities within Zambia's economic transformation journey and also to validate the findings of the 2023 African Transformation Index (ATI) report. Additionally, the study also takes a gender-sensitive approach to Zambia's economic transformation journey. Among the objectives of undertaking this Country Economic Transformation Outlook (CETO) for Zambia is to assist policymakers in formulating policy for building resilience against shocks, increasing the pace of diversification, improving export competitiveness, speeding up the adoption of technology, making labor more productive, identifying new opportunities in non-extractive sectors for sustainable growth, and improving human well-being.

1.2. Objectives

The general objective of the CETO is to support economic transformation at the country level by:

- Undertaking a comprehensive diagnostic of a country's economic transformation progress and challenges at the micro-level using the Growth with DEPTH model.
- Mainstreaming gender into the research, analysis and recommendations.
- Exploring potentially key sectors through which the CETO could enhance economic transformation.
- Engaging country governments and national think-tanks in this process, using the DEPTH approach with a view to promoting continuity in policy dialogue and effective uptake in national development planning and policies for manufacturing, tourism and the digital economy.

1.3. Methodology and analytical framework

The analytical framework used for the CETO is ACET's "Growth with DEPTH" framework, which recognizes that real economic transformation happens when growth is underpinned by economic diversification, increased export competitiveness, increased productivity, technology upgrading and improvement in overall human well-being. Thus, to ensure sustainable growth, countries need to vigorously promote economic transformation by diversifying their production and exports, become more competitive in international markets; increase the productivity of all resource inputs, especially labor; and upgrade technologies used in production. At the same time, they must ensure that growth leads to tangible improvements in human well-being by providing more productive jobs, higher incomes, economic empowerment for women, and greater equality. This approach ensures that the assessment of economic progress goes beyond traditional indicators such as GDP growth, instead emphasizing the quality of growth and its sustainability. ACET's DEPTH framework and methodology

offer a robust, holistic approach to understanding the dynamics of economic transformation, incorporating elements such as green growth and regional integration to identify opportunities and challenges in the Zambian context.

Beyond applying this framework in analyzing the broader Zambian macroeconomy, the CETO examines the priority sectors selected in Zambia's 8th National Development Plan (8NDP). These are: agro-processing, light manufacturing, tourism, and the digital economy. These sectors were selected through a consultation with key national stakeholders including the Ministry of Finance and National Planning (MoFNP). They are expected to not only foster economic growth but also enhance human well-being.

The study was conducted in four phases:

1. **Comprehensive desk reviews**. In order to assess the current landscape of economic transformation in Zambia, a desk review of past and current socioeconomic literature was conducted, relying heavily on program documents by the government and development partners. These documents included national development plans, annual economic reports and policy and regulatory documents. There was also a review of statistical data from official sources such as the Zambia Statistics Agency (ZamStats) and other reliable external sources such as the World Bank and IMF. The desk review included a diagnostic of the country's progress and challenges regarding economic transformation at a macro level using trend analyses of economic growth and transformation during the review period of 2000 to 2022. The desk review also adopted qualitative and descriptive analysis for policy analysis and recommendations.

2. **Stakeholder mapping, consultations and analysis**. To address the data gaps identified during the desk review process, the CETO team conducted primary data collection through key informant interviews (KIIs), questionnaires, and focus group discussions (FGDs). This required a thorough stakeholder mapping exercise. The stakeholder mapping involved a rigorous scoping and consultative process that identified key stakeholders to be engaged in the study. These included government ministries, private sector players and associations, academia, research institutions, Parliament, regulatory bodies, and development partners. This strategic approach to stakeholder engagement was critical in shaping the data collection plan, ensuring a comprehensive and well-rounded understanding of the economic transformation policy issues.

   The key informant interviews were conducted in five towns (Lusaka, Ndola, Kitwe, Luanshya and Chisamba) to complement the desk review and evaluate current policy directions and gaps in delivering economic transformation in the thematic areas. The discussions probed the challenges and opportunities within the thematic sectors, with a primary focus on economic transformation. To avoid conflicts of interest, participants were organized into groups based on their respective institutions, ensuring balanced and open dialogue. Following the consultations, the CETO team conducted data analysis of the stakeholder responses and included it in the final report.

3. **Stakeholder engagement to validate findings and finalize the report.** The findings of the CETO were thoroughly discussed during a multi-stakeholder validation workshop. This workshop brought together key participants from government ministries, private sector

entities, civil society organizations, and academia. Their input and perspectives were instrumental in ensuring that the analysis accurately reflected Zambia's economic transformation realities. Through collaborative dialogue, the participants examined Zambia's performance on the transformation index and explored the policy recommendations provided, aligning them with national development priorities and sectoral needs.

Beyond exploring the gender dimension of the economic transformation at both the macro and thematic levels, the study benchmarked Zambia's economic strategies against those of other countries with similar economic structures to identify best practices and areas for improvement. The study also included synopses of proposed interventions, particularly in job-rich sectors such as tourism, to enhance Zambia's economic growth.

1.4. Organization of the study

The report is structured as follows:

- Chapter 1 provides an overview, briefly highlighting the background, problem, and methodology of the study.
- Chapter 2 assesses Zambia's development trajectory and transformation policies, with a thorough review of economic performance and policy frameworks.
- Chapter 3 focuses on the intersection of gender and economic transformation, examining how economic policies impact gender disparities.
- Chapter 4 analyzes selected thematic areas, identifying both challenges and opportunities in Zambia's economic landscape.
- Chapter 5 discusses Zambia's transformation outlook, emerging opportunities, and lessons learned.

2. ASSESSMENT OF ZAMBIA'S DEVELOPMENT TRAJECTORY AND GENDER MAINSTREAMING

2.1. Macroeconomic performance

Zambia's real GDP during 2000-2010, supported by debt relief, increased production of primary commodities, and favorable global copper prices translated into significant increases in income per capita. Since independence in 1964, Zambia's growth performance has been marked by economic volatility, with continuous shocks and policy changes that brought only modest achievements. In addition, the economy was characterized by periods of expansion that coincided with surges in international prices of primary commodities, and contraction in periods of external shocks such as declining copper prices and adverse weather conditions including floods and droughts.

However, between 2000 and 2010, Zambia experienced remarkable growth acceleration, driven mainly by the mining sector and elevated copper prices on the world market. Reaching Completion Point under the Heavily Indebted Poor Countries (HIPC) Ini tiative in 2005 triggered over $6.6 billion in debt relief for Zambia, which provided more fiscal space to support growth. Real GDP growth thus rose from 3.9 percent in 2000 to 10.3 percent in 2010 at an average rate of 7.1 per annum (WB, 2023). In 1994, Zambia's GDP per capita at constant 2015 $ was $764.6, only 64 percent of GDP per capita at independence valued at $1,199.4 (WB, 2023). However, by 2011, it had reached $1,208.5.

The government adopted an expansionary fiscal stance that was supported by external borrowing. In 2011, Zambia was reclassified by the World Bank from a low-income to a lower middle-income country. This was largely based on impressive economic and GDP per capita growth with the backbone of increased agricultural and mining output combined with the rise in global commodity prices and increased foreign direct investment (FDI) into the mining sector. As a result, the country became eligible for commercial borrowing, and the government issued a total of $3 billion worth of Eurobonds between 2012 and 2015 as it embarked on an expansionary fiscal policy. In addition, the government borrowed from other commercial sources, and this pushed up the debt levels significantly, from 20.8 percent of GDP (or $4.9 billion) in 2011 to 85.7 percent of GDP ($20.4 billion) in 2019 (MoFNP, 2024).

Despite the implementation of expansionary fiscal policies during the 2010s, the economy lacked resilience, leading to unsustainable growth and a significant decline in per capita incomes. Over the past decade, Zambia's real GDP has fallen significantly to 4.1 percent per year, and this was largely due to the lack of economic diversification, domestic and external shocks – including climate – and severe fiscal and external imbalances. In 2015, GDP per capita fell by 0.3 percent, the first contraction since 1998, and this was against the backdrop of the mini-economic crisis faced during this year.

During this period, inflation rose to 21.1 percent, with the kwacha losing over 40.0 percent of its value by 2015. As a result of the rapid depreciation of the kwacha, the country was faced with higher external debt servicing costs and debt stock increased from 3.1 percent of GDP in 2014 to 3.9 percent of GDP in 2015. Further, a fall in electricity generation due to drought, increased fuel costs and low global copper prices were among the factors that affected economic performance. Therefore, growth plunged to 2.9 percent in 2015.

By 2016, Zambia faced significant fiscal imbalances from rising wage bills, subsidies, infrastructure costs, and debt servicing, and by the time the COVID-19 pandemic hit, these policy misalignments and the weak fiscal management had already left the economy vulnerable, with the pandemic exacerbating the problem. Negative market sentiments abroad restricted access to international financing, prompting the government to increase domestic borrowing. Increased domestic borrowing raised lending rates, crowding out private sector borrowing, increasing the ratio of non-performing loans, and leading to closures of micro-finance institutions.

The fiscal deficit, which averaged 5.9 percent on a cash basis in 2016-2017, soared to 12.9 percent of GDP on a commitment basis. Agriculture and energy subsidies rose from 2.0 percent of GDP in 2014 to 3.6 percent in 2016, with costs of the Farmer Input Support Programme (FISP) increasing from 0.9 percent in 2016 to 1.9 percent by 2019 due to challenges in transitioning to the e-voucher system. ZESCO, the national electricity company, accrued $1.56 billion in arrears by 2020, partly due to charging tariffs that did not reflect costs. Meanwhile, government fuel arrears reached $467.30 million, driven by price gaps, inflation, and exchange rate volatility.

With continued challenges in the agriculture sector and electricity supply problems still unresolved, the economy grew by only 1.4 percent by the end of 2020. The fiscal situation was also challenging with the overall deficit having grown to 14.5 percent by the end of 2020. Despite these challenges, economic growth post-COVID pandemic rebounded, showing signs of resilience with GDP growth reaching 3.6 percent in 2021 and further accelerating to 6.2 percent in 2022. The rebound was mainly driven by services sub-sectors such as ICT, education and public administration. However, key primary sectors such as agriculture and industry, including manufacturing and mining in the secondary sector, recorded weak performances.

2.2. Monetary policy and external sector performance

Zambia's inflation-targeting policy has led to interest rate hikes and increased reserve requirements to stabilize prices, but these measures have also raised borrowing costs, underscoring the challenge of balancing inflation control with economic growth. In Zambia, the nominal anchor that guides the tools that the central bank adopts to achieve price stability is inflation targeting, which is set within the 6 to 8 percent range. Between 2000 and 2006, inflation averaged about 18 percent falling to an annual average of 9 percent in 2006. After 2006, inflation trended upwards again driven mainly by high production costs caused by electricity shortages, an unexpected increase in government spending, insufficient maize supply, and the global recession triggered by the global financial crisis (BOZ, 2008). Between 2000 and 2006, inflation averaged about 18 percent falling to an annual average of 9 percent in 2006. After 2006, inflation trended upwards again driven mainly by high production costs caused by electricity shortages, an unexpected increase in government spending, insufficient maize supply, and the global recession triggered by the global financial crisis (BOZ, 2008).

More recently, Zambia’s inflation has been volatile, breaching the country’s 6-8 percent target bound several times with a high of more than 21 percent recorded in 2021. Since the introduction of the monetary policy rate in 2012, the policy rate has been used to respond to inflationary pressures. Since 2022, the Central Bank has consistently increased the policy rate, reaching 11.5 percent by November 2023, from 9.0 percent in November 2022. Additionally, the statutory reserves for commercial banks were raised from 9 percent at the beginning of 2022 to 17 percent in November, 2023. While these measures aimed to reduce inflation and the cost of living, they also increased lending rates, making it more expensive for the private sector to obtain credit and expand their operations. This situation

highlights the ongoing economic challenges in Zambia and emphasizes the need for consistent and effective macroeconomic policies for economic transformation.

Zambia's inflation has been volatile, reducing from 30 percent in 2000 to 5.1 percent in 2012. Zambia experienced high levels of inflation in the early 2000s, with rates consistently above 15%, peaking at 30.1% in 2000. After 2006, inflation trended upwards again driven mainly by high production costs caused by electricity shortages, an unexpected increase in government spending, insufficient maize supply, and the global recession triggered by the global financial crisis (BOZ, 2008). More recently, Zambia's inflation has been volatile, breaching the country's 6-8 percent target bound several times. This trend underscores the ongoing challenges facing Zambia's economy and the need for consistent and effective macroeconomic management policies for economic transformation.

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Due to key structural issues with net export earnings and FDI net flows, Zambia has experienced persistent depreciation of the kwacha since the liberalization of its economy. During the 2000s, the exchange rate remained relatively stable, averaging K4.2/$1, primarily due to rising copper prices, growth in non-traditional exports, and increased capital inflows. However, the kwacha experienced unprecedented depreciation, moving from an average of K4.6/$1 in 2010 to an average of K21.2/$1 in 2020, with sporadic appreciation between 2016 and 2018 due to the increase in net foreign exchange inflows from the mining sector and the demand for government securities from non-resident investors[1].

The depreciation of the kwacha was caused by a number of factors such as instability in the mining fiscal regime and drought-induced electricity imports, as well as external factors like increased debt servicing costs and a decline in international copper prices due to China's economic slowdown. Additionally, during post-COVID-19 economic reforms, operational challenges in the mining sector led to reduced production and subsequently lower foreign income. Other factors included importation of electricity stemming from reduced power supply due to poor rain; and the importation of agriculture

[1] Bank of Zambia (2017) Monetary Policy Committee Statement.

inputs along with health supplies including drugs and medicines. These all contributed to the continued depreciation of the kwacha in view of the heightened demand for foreign currency. High fiscal deficits, falling copper prices, and a sharp rise in external debt servicing costs added to the heightened demand for foreign currency. Between 2021 and 2023, the kwacha had depreciated some more, from K16.6/$1 to K25.7/$1.

Zambia's current account fluctuated from significant deficits driven by declining exports to periods of surplus bolstered by rising non-traditional exports, while gross international reserves faced volatility, peaking at 5.1 months of import cover in 2009 before declining due to external debt obligations and import demands Zambia experienced a deteriorating current account balance between 2000 and 2008 (except for 2006) recording an average deficit of $732.4 million[2]. The deficit in the current account resulted from the deterioration in the trade balance, particularly emanating from lower net merchandise and services exports. However, this balance improved to a surplus between 2009 and 2012 due to higher increases in exports than in imports.

The period 2013 to 2018 reflected a worsening position due to increased imports, especially of electricity, fuel and food commodities to cushion the effects of the droughts and fluctuating commodity prices. The current account improved in 2019 through to 2022 supported by increased non-traditional export earnings, mostly from manufactured products such as copper wire, cane sugar, soaps and active agents, electrical cables as well as agricultural products such as maize.[3]

On the other hand, gross international reserves were on a rising trajectory in the early 2000s, reaching an all-time high of 5.1 months of import cover in 2009. This rise in import cover coincided with the surpluses in Zambia's current account balance after years of deficits. Despite being targeted at 3 months of import cover, reserves fell to an all-time low of 1.8 months of import cover in 2018, on account of external debt service payments, compounded by import demand, without corresponding increases in export earnings. Between 2018 and 2022, reserves recovered to an average of 3 months of import cover (MoFNP, 2022), even if the improvements in 2021 and 2022 were attributed to the suspension of debt repayments to some of Zambia's creditors in expectation of restructuring.

2.3. Fiscal Policy

2.3.1. Revenue

Zambia has experienced significant revenue declines during three major crises, but direct taxes have remained resilient and even increased despite challenges in tax collection. These crises were the global economic crisis in 2009; a national economic downturn in 2016 due to falling copper prices and adverse weather conditions; and the COVID-19 pandemic in 2020. Despite these external shocks, direct taxes demonstrated resilience and acted as a buffer, while indirect taxes performed poorly, contributing significantly to the revenue decline. Tax revenue increased during these downturns, highlighting the potential of direct taxes to support domestic revenue. However, delays in tax assessments and payments, such as income tax refunds taking an average of 52 days in 2020 (compared with the standard 45 days) and VAT refunds averaging 306 days (instead of 30 days), hindered timely collection.[4]

[2] Ministry of Finance and National Planning Annual Economic Report (2010).
[3] Ministry of Finance and National Planning. Economic Reports (2000-2022).
[4] Ministry of Finance and National Planning. (2010). Annual Economic Report.

Income taxes have been a cornerstone of general tax collection. The 2020 Annual Report of the Zambia Revenue Authority (ZRA) shows that income tax collection doubled from K17.9 billion in 2016 to K34.6 billion in 2020 despite increases in the tax-exempt threshold for personal income tax. This trend may indicate the maturity of Zambia's copper mining industry, as countries with higher income tax-to-total tax ratios often have significant mineral production. Corporate income tax performance has benefited from improved international copper prices and the 2019 mining tax regime's non-deductibility of mineral royalties for income tax purposes, although this policy was discontinued in 2022.[5]

Non-tax revenues have been on the rise overall, despite taking up the smallest share of total domestic revenues. In 2009, they grew from 0.7 percent of GDP to 5.1 percent in 2016, though they did not perform as expected in 2017, dropping to 2.5 percent of GDP[6]. The underperformance of non-tax revenues in 2017 was attributed to lower-than-projected collection from the Road Transport and Safety Agency (RTSA), poor recoveries from the Farmer Input Support Programme (FISP), and low proceeds from crop sales.

The delayed implementation of revenue-raising measures such as the land titling program also contributed to the poor performance. However, non-tax revenue has more than doubled and has become the second largest source of revenue, rising to more than 3.8 percent of GDP in 2022[7]. This significant increase was due to higher-than-program collection from user fines and fees as well as exceptional revenues such as proceeds from sale of crops. Additionally, the reclassification of mineral royalties as a non-tax revenue source instead of a tax-revenue source in 2014, as recommended by the IMF, contributed to the continued dominance of non-tax revenue over grants overtime.

Meanwhile, other non-tax revenues have been growing, bolstered by digitalization reforms. User fees, fines, and charges nearly doubled over the past decade, accounting for 1.3 percent of GDP in 2022 and almost 35 percent of non-tax revenues[8]. This growth has been driven by digitalization initiatives, such as the introduction of the Government Service Bus (GSB)—a consolidated digital platform integrated with an online payment gateway. Additional efforts to eliminate leakages and collect user fees through commercial banks for services like passport issuance, as well as the introduction of road tolls and smart toll payments, have also contributed. However, other sources of non-tax revenue have been inconsistent and disappointing in recent years. For example, dividends fell dramatically from 37.9 percent in 2016 to 0.4 percent in 2017 due to a new policy capping lending to the central government at 15 percent, which drove greater profitability in that year along with valuation gains as the kwacha depreciated[9].

During the last two decades, Zambia’s foreign grant receipts have been on the decline. From 3.8 percent of GDP in 2008, grants declined to 0.8 percent of GDP in 2011, at the time Zambia was classified as a lower middle-income country. With external partners moving their assistance to poorer countries, foreign grants fell drastically to as low as K279.0 million in 2014 from K1.1 billion in 2013, representing only 0.17 percent of GDP, down from the 0.8 percent recorded in 2013[10]. This was due

[5] Ministry of Finance and National Planning. (2022). Fiscal Table.
[6] Ministry of Finance and National Planning. (2017). Fiscal Table.
[7] Ministry of Finance and National Planning. (2022). Fiscal Table.
[8] Ministry of Finance and National Planning. (2022). Fiscal Table.
[9] Bank of Zambia.
[10] Ministry of Finance and National Planning. (2013). Fiscal Table.

to external partners not providing funds for general budget support[11]. However, grants rose consistently after 2018.

2.3.2. Government expenditure

Government expenditure generally trended upwards before 2005 and began to trend downwards following HIPC completion. In the three years leading up to the COVID-19 crisis, spending growth was primarily driven by acquisitions of physical capital, which more than doubled as a share of total spending, rising from 29 percent to 65 percent[12]. By the time the COVID-19 pandemic struck, expenditures had peaked at more than 30 percent of GDP[13]. This surge in non-financial assets was largely fueled by the government's ambitious road construction program that began in the early 2011s. The program aimed to upgrade 40,454 km of Zambia's 67,671 km core road network, transforming the country into a land-linked economic hub. It initiated three major projects—Link Zambia 8000, Pave Zambia 2000, and Lusaka 400—with the goals of interlinking remote areas, improving transit times, reducing road user costs, creating youth employment opportunities, and fostering inclusive economic growth. Besides road infrastructure, the investment program also focused on information and communications technology, agriculture, water and sanitation, and tourism. Spending on net acquisition of non-financial assets as a share of GDP doubled to an average of 8.3 percent over 2018-2020, compared with pre-2015 levels, placing Zambia ahead of many of its peers[14].

The increase in capital expenditure between 2015 and 2019 saw a dramatic reversal during and after the COVID-19 crisis. Initially, capital spending was cut to create fiscal space for the pandemic response, and in subsequent years, it was reduced further as part of fiscal consolidation efforts. While recurrent spending also increased, it did so at a much slower pace. Nevertheless, recurrent spending has consumed the majority of government resources, averaging around 80.0 percent of total expenditure over the past decade. As a proportion of GDP, Zambia's recurrent spending averaged 20.0 percent during this period, which was more than three times the value of capital investment relative to GDP. This spending included rising public services as well as transfers and other payments towards the Farmer Input Support Programme, the Zambia Revenue Authority, and some grant-aided institutions.

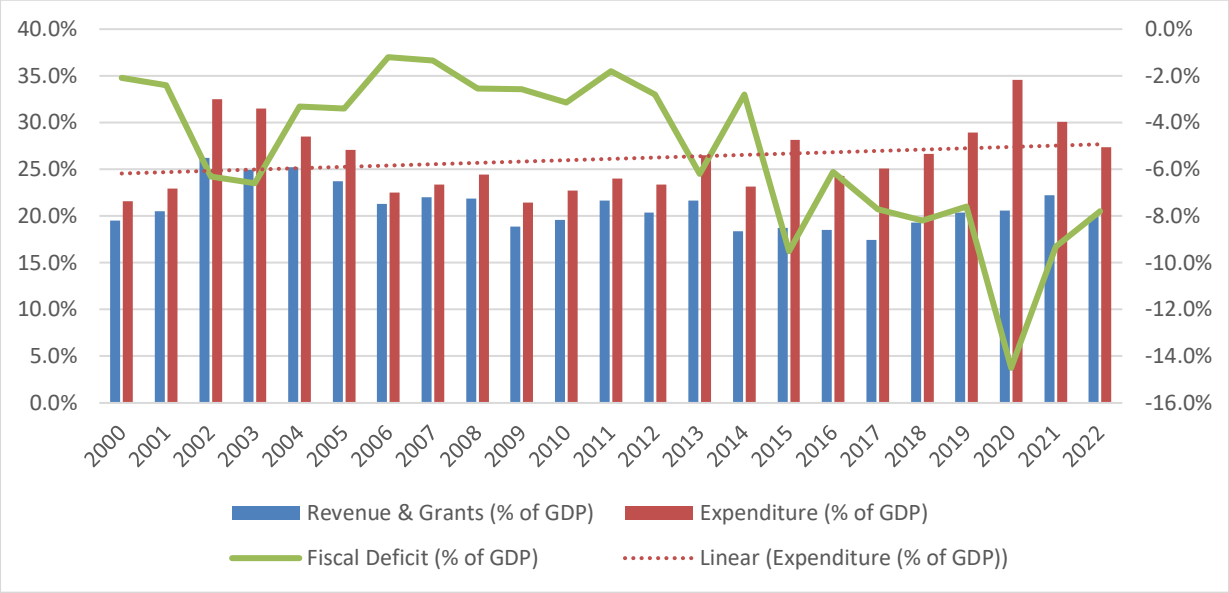
Public sector wages and salaries saw some decline in the period leading up to 2019, but remained a significant component of recurrent expenditure. By 2014, spending on salaries and wages reached 9.2 percent of GDP[15]. However, the government implemented a wage and hiring freeze over the next two years, aiming to control the growth of the public sector wage bill and keep spending below 8 percent of GDP. As a result, the wage bill averaged 7.7 percent of GDP in the three years prior to the COVID-19 pandemic, with its share of total spending decreasing from 47 percent to 40 percent. This decline helped offset the rapid increase in interest payments on debt-financed infrastructure projects. Although the nominal wage bill increased again in response to the COVID-19 crisis, its share of total spending dropped to a 10-year low of 32.4 percent in 2021[16]. It rebounded in 2022 as a result of the recruitment drive launched by the government in the education and health sectors. Despite this, the public wage bill was 7.5 percent of GDP in 2022[17].

[11] Ministry of Finance (2014). Economic Reports.
[12] Ministry of Finance and National Planning. (2020). Annual Economic Report.
[13] Calculated from the Ministry of Finance and National Planning. (2019-2021). Fiscal Tables.
[14] Ministry of Finance and National Planning. (2019). Fiscal Tables.
[15] Ministry of Finance and National Planning. (2014). Annual Economic Report.
[16] Ministry of Finance and National Planning. (2021). Annual Economic Report.
[17] Ministry of Finance and National Planning. (2022). Annual Economic Report.

2.3.3. Fiscal deficit and financing

Zambia's expansionary fiscal policy stance over the past decade led to increased expenditures that were not coupled with an increase in domestic revenue. The fiscal deficit increased from 1.8 percent of GDP in 2011 to a striking 11.7 percent of GDP in 2019, which was well above the prescribed 2.5 percent of GDP[18]. In 2020, the fiscal deficit widened to 14.5 percent, which was mainly attributed to the COVID-19 pandemic, as shown in Figure 1. The widening fiscal deficit during the past decade led to Zambia's stock of public debt increasing from 20.8 percent of GDP (or $4.9 billion) in 2011 to 85.7 percent of GDP ($20.4 billion) in 2019 and 117.8 percent of GDP ($23.5 billion) in 2020.

Figure 1: Revenue, Expenditure and Fiscal Deficits, 2000-2022 (% of GDP)



Source: Ministry of Finance and National planning.(2000 -2022). Annual Economic Reports

The stock of public and publicly guaranteed debt had continued to balloon. With the underlying spending pressures over the past decade, Zambia's stock of public and publicly guaranteed debt stock increased from 20.8 percent of GDP (or $4.9 billion) in 2011 to 85.7 percent of GDP ($20.4 billion) in 2019 and 117.8 percent of GDP ($23.5 billion) in 2020[19]. Despite the rise in the stock of debt, the government continued to borrow, and by end-December 2022, total public debt stood at $33.4 billion, or more than 120.0 percent of GDP.

To bring down the debt to sustainable levels, the government engaged actively with all external private creditors on the need for debt restructuring. On 13th November 2020, Zambia become the first African country in the COVID-19 period to default on its Eurobond debt after the government missed a coupon payment of $42.5 million on its 2024 Eurobond triggering a cross-default across all its outstanding dollar bonds. As a result, by the end of December 2020, debt service payments fell to $639.7 million against a budget of over $1.5 billion. Furthermore, the country skipped a $56.1 million coupon payment on 30 January 2021 on the 2027 Eurobond, and a $20 million payment on its 2022 Eurobond in March 2021. This led Zambia to apply in February 2021 to the G20 Common Framework

[18] Ministry of Finance and National Planning.
[19] Ministry of Finance and National Planning. (2011-2020). Annual Economic Report.

for debt treatment beyond the Debt Service Suspension Initiative (DSSI). In this regard, an official creditors' committee was formed in June 2022.

As a central component for getting financing assurances from the official creditors' committee, Zambia applied for an extended credit facility (ECF) from the International Monetary Fund, which received IMF Executive Board approval in August 2022. The approval was granted for a 38-month program with $1.33 billion support. An augmentation of $385.7 million launched to the Executive Board was also approved in June 2024 mainly to support Zambia's response to external imbalances experienced because of the El Niño weather that led to a drought, negatively affecting key economic sectors such as energy and agriculture. In June 2023, Zambia's official creditors agreed on a debt treatment plan under the G20 Common Framework involving a $6.3 billion restructuring of central government debt, including ZESCO's debt. The agreement followed the financing assurances provided in June 2022 and featured a two-stage approach linked to Zambia's debt-carrying capacity.

The base scenario included interest rates capped at 2.5 percent, a three-year grace period (2023-2025), and a maturity extension exceeding 12 years, while the upside scenario involved shorter maturities and higher interest rates. Bilateral discussions on specific terms are still ongoing. For Eurobond holders, a March 2024 agreement restructured $3.8 billion of debt, with a nominal $340 million haircut, resulting in two new bonds: Bond A ($1.7 billion) and Bond B ($1.35 billion). Bond A has no grace period, with interest rates up to 5.75 percent (2024-2031) and 7.5 percent (2031-2033), while Bond B offers a 27-year grace period for amortization. (2031-2033), while Bond B offers a 27-year grace period for amortization[20].

2.4. National Development Plans and the economic, political and institutional framework

Zambia's history with long-term national development planning stems from the independence era of the 1960s. From then through to the 1990s, Zambia started implementing medium-term national development plans (NDPs), with the overall goal of improving the socio-economic conditions and livelihoods of citizens (ZIPAR, 2020). By the mid-2000s, Zambia launched Vision 2030, a long-term development blueprint. Its objective was to transform the country into a "prosperous middle-income nation by 2030" (Government of the Republic of Zambia, 2006). Vision 2030 envisions Zambians living in a strong and dynamic middle-income industrial nation that provides opportunities for improving the well-being of all, while embodying the values of socio-economic justice, democracy, and respect for human rights.

Zambia's NDPs have generally aimed for a strategic shift towards economic diversification and industrialization to drive sustainable growth, reduce poverty, and improve living standards, but much remains to be achieved. Since attaining independence in 1964, Zambia has launched several national planning documents.[21] The fourth NDP was launched in 1989 but was later abandoned in 1991 in preference for an open market system. The Fifth NDP (2006-2010) mainly focused on agricultural development as the engine of income expansion in the economy (Government of the Republic of Zambia, 2006). During the period 2010 to 2022, the government put increasing emphasis on growth

[20] Ministry of Finance and National Planning Press Release (June 2024).

[21] Transitional Development Plan (1964-1965); First National Development Plan (1966-1971); Second National Development Plan (1972-1976); Third National Development Plan (1979-1983); Fourth National Development Plan (1989-1993); Transitional National Development Plan (2002-2005)/ PRSP; Fifth National Development Plan (2006-2010); Sixth National Development Plan (2011-2015); Revised Sixth National Development Plan (2013- 2016); Seventh National Development Plan (2017-2021).

sectors, as it aimed to diversify the economy. The Sixth National Development Plan, 2011-2015 (SNDP) and its revised version 2013-2016 (R-SNDP) and the Seventh National Development Plan (7NDP) covering the period 2017-2021 promoted economic diversification and industrialization, especially in the labor-intensive sectors like agriculture, tourism, manufacturing, and construction.

The current Eighth National Development Plan (8NDP) covering the period 2022 to 2026 aims to improve living standards, reduce poverty, and promote economic transformation and job creation. Its primary interventions are in agriculture, tourism, mining, and manufacturing sectors, including promotion of investments in information and communication technology. lTable 1 below summarises the national development plans, starting from the Fifth National Development Plan. A detailed version of the analysis is in the annex. The following are key insights from the analysis:

1. Zambia's NDPs have mostly targeted high growth but have often fallen short due to unanticipated external shocks and internal issues, with notable successes in the Fifth NDP but setbacks during the Sixth NDP and 7NDP. Thus, the country's growth prospects over the past two decades have been highly sensitive to global factors, such as commodity prices and the COVID-19 pandemic, which exposed vulnerabilities in Zambia's mining-dependent economy. Building resilience against shocks through diversification is key to reducing Zambia's economic vulnerability.
2. Rising debt and debt management challenges have been a recurrent theme in the development story of Zambia. High debt levels highlighted the importance of responsible fiscal policies. It is therefore not surprising that the 8NDP is focusing on prudent debt management to address these challenges.
3. Progress has been hindered by consistent implementation issues due to governance challenges, political repression and corruption. Greater inclusion of diverse stakeholders such as civil society is vital for ensuring accountability and accurate reflection of public needs in policy decisions. Additionally, political repression and governance challenges hampered economic growth and development during the 7NDP.
4. Perhaps one of the major positive highlights of development planning in Zambia has been the broad alignment with Vision 2030 goals, which reflects a shared commitment to economic transformation. Notwithstanding, achieving durable consensus remains essential as the implementation of some development plans and policies have been truncated in the past following a change in administration. The need for a continuing, unified political and societal consensus on Vision 2030 is crucial for effective implementation.
5. A shift toward inclusive, people-centered growth is evident in the 6NDP and 8NDP, targeting disparities in wealth and opportunity and seeking to boost rural development and job creation.

Table 1: Summary review of Zambia's national development plans since 2006

Plans	Period	Theme	Objectives	Key highlights and performance
Fifth National Development Plan (FNDP)	2006-2010	Broad-based wealth and job creation through citizenry	1. Accelerate pro-poor economic growth to at least 7% 2. Achieve and sustain single-digit inflation	Economic growth averaged 6.4%, exceeding the 6% target. Major sectors: agriculture, mining, construction, transport, communication. Inflation was 7.9% in 2010, close to the 8% target.

		participation and technological advancement	3. Achieve financial and exchange rate stability 4. Sustain a viable current account position 5. Reduce domestic debt to sustainable levels Other policies: Maintain macroeconomic stability, improve budget execution, strengthen fiscal accountability, and expenditure controls	Political stability under President Levy P. Mwanawasa; emphasis on fighting corruption; 2006 Constitutional review process.
Sixth National Development Plan (SNDP)	2011 - 2016	People-centered economic growth and development	1. Promote employment and job creation through targeted investments 2. Promote rural development and support infrastructure 3. Enhance human development 4. Accelerate infrastructure development Other objectives: Achieve real GDP growth rates above 7%, promote economic diversification, sustain single-digit inflation, and increase international reserves.	Characterized by debt accumulation due to aggressive infrastructure spending. Major projects: Link Zambia 8000, Pave Zambia 2000, energy projects. Economic growth averaged 4.6%, with a low of 2.9% in 2015. High debt levels and lack of prudent fiscal management.
Seventh National Development Plan (7NDP)	2017 - 2021	Accelerating development efforts towards Vision 2030 without leaving anyone behind	1. Achieve average annual real GDP growth rate above 5% 2. Sustain single-digit inflation 3. Increase international reserves to at least 4 months of import cover 4. Raise domestic revenue to over 18% of GDP 5. Contain domestic borrowing to less than 2% of GDP 6. Reduce budget deficit to less than 3% of GDP.	Economic growth averaged 2%, with significant debt challenges. The COVID-19 pandemic led to a contraction of 2.8% and default on foreign debt obligations. Governance issues and repression of civil liberties noted during President Edgar Lungu's administration.
Eighth National Development Plan (8NDP)	2022 - 2026	Socio-economic transformation for improved livelihoods	1. Achieve annual real GDP growth rate of at least 4.5% by 2026 2. Reduce fiscal deficit to 3.6% of GDP	Signs of recovery with GDP growth rates of 5.2% (2022) and 5.8% (2023). High inflation driven by fuel prices and external shocks. Notable legislative progress in public debt management and

			3. Maintain annual domestic revenue-to-GDP ratio of at least 21%	human rights. Positive economic recovery prospects despite drought impact.
			4. Keep domestic borrowing under 4.7% of GDP	
			5. Reduce domestic arrears and curb new arrears	
			6. Maintain inflation within 6%-8% target range.	

2.5. Zambia's gender-related legal, policy and institutional framework

Zambia's commitment to ensure gender equality in the economic sphere has been shaped by a combination of global and continental conventions and policy ratifications primarily developed in the wake of the Fourth World Conference on Women held in Beijing in 1995. The conference culminated in the adoption of the landmark Beijing Declaration and Platform for Action, which was ratified by all attending United Nations member states including Zambia. The Declaration set forth a comprehensive agenda for women's empowerment and gender equality, influencing Zambia to align its national policies with international standards.

In addition to the Beijing Platform for Action, there are other landmark global and regional agreements that Zambia has adopted, ratified, and domesticated that contributed to the crucial groundwork for the framework on gender equality in Zambia. These came into being before and after the Beijing conference. Examples are the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW; 1981), the SADC Protocol on Gender and Development (2008), and the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (the Maputo Protocol; 2005), the Sustainable Development Goals (SDGs) of 2015, which emphasize the need for gender equality (Goal 5) as a prerequisite for sustainable development, as well as the African Union's Agenda 2063, which underscores the regional commitment to gender- responsive economic transformation.

At national level, Zambia's commitment to gender equality is reflected in the roll out of the National Gender Policy, Vision 2030 and the successive National Development Plans. The 2018 National Trade Policy of Zambia in turn represents a step toward enhancing gender equality in economic participation by acknowledging gender disparities in economic opportunities. The first National Gender Policy was formulated in 2000 and amended in 2014 with the specific aim of achieving gender equity and equality and the full participation of both women and men in the development process (GRZ 223: 10).

However, progress has been slow leading to the government launching the 2023 National Gender Policy aimed at accelerating the attainment of gender equity and equality (GRZ 2023: 10). The Policy is expected to "strengthen the coordination of an integrated and multi-sectoral approach in the implementation of gender programs across all sectors. Additionally, the country's commitment to gender equality is reflected in Vision 2030 and the successive NDPs, the most recent of which is the 8th National Development Plan (2022 to 2026). These strategic documents aim to create an inclusive society where both women and men can contribute to and benefit from national development

equally. Nonetheless, challenges remain in translating these frameworks into tangible outcomes for all women and girls across the country.

The 2018 National Trade Policy of Zambia aims to improve the economic environment by promoting value-added exports and improving the overall competitiveness of Zambian goods and services. However, the policy's engagement with gender issues is notably limited. Gender is mentioned only three times throughout the document, and this lack of detailed gender-focused strategies means that the policy falls short in addressing the unique barriers faced by women, such as unequal access to resources, technology, and finance.

Table 2 below summarizes Zambian legislation directly related to gender. This includes the Gender Equity and Equality Act, No. 22 (2015); the Anti-Gender-Based Violence Act, No. 1 (2011); the Employment Code Act No. 3 (2019); the Industrial and Labour Relations Act (1993 and 2008); and the Citizens' Economic Empowerment Act, No. 9 of 2006. Other legal provisions that can be indirectly linked to gender equality include the Children's Code Act, No. 12 of 2022, which addresses the rights and welfare of children, and the Penal Code (Amendment) No. 1 of 2012.

Table 2: Specific gender laws in Zambia

Summary of directly gender-related laws in Zambia
The Gender Equity and Equality Act, No. 22 (2015) mandates gender mainstreaming across all sectors, economic policies and programs, and establishes the Gender Equity and Equality Commission for monitoring and enforcement. Nonetheless, the Act's implementation and enforcement have been inconsistent due to shortfalls in institutional capacity and resource allocation. Cultural and societal norms further undermine the Act's practical effectiveness, limiting its progress towards achieving gender equality in economic transformation.
Anti-Gender-Based Violence Act, No. 1 (2011) provides comprehensive measures to prevent and respond to gender-based violence, including protection orders and support services for survivors. Despite these strengths, the Act does not explicitly require companies to implement measures against workplace sexual exploitation and other forms of discrimination and gender-based violence. Mandating such measures would enhance the Act's effectiveness in protecting women across all economic spheres.
The Employment Code Act No. 3 (2019), which is arguably one of the strongest pieces on legislation regarding gender equality in the region, establishes fair labor practices, including provisions for non-discrimination and equal pay for equal work, and provides maternity and paternity leave, promoting gender equality in the workplace. While the Act has significantly curbed sexual harassment issues and facilitated access to maternity leave, a notable challenge remains with paternity leave. Additionally, while the Act sets a high standard for gender equality in formal sector workplaces, its impact is considerably diluted by the exclusion of informal sector workers.
The Industrial and Labour Relations Act – Chapter 269 protects workers' rights to organize and bargain collectively, supporting advocacy for gender-specific workplace issues. Yet, it does not specifically address gender disparities in labor relations or ensure that women's voices are equally represented in labor unions, thereby limiting its effectiveness in promoting gender equality in labor relations.
The Citizens Economic Empowerment Act, No. 9 of 2006 promotes broad based economic empowerment, including specific provisions for the empowerment of women, and provides financial and technical support for marginalized groups to participate in the economy. Despite these intentions, implementation has been uneven, with limited access to resources and support for women, particularly in rural areas, thus undermining the Act's potential contribution to achieving economic gender equality.

While Zambia has made notable progress in establishing progressive policies and legal frameworks to promote gender equality in economic transformation, three key issues emerge: (i) gaps in implementation that undermine effectiveness; (ii) poor engagement with the national economic transformation framework; and (iii) lack of effective monitoring mechanisms.

There are significant gaps in implementation that can undermine policy effectiveness. The presence of comprehensive policies, laws, and institutional frameworks signifies commitment to gender equality at the national level. However, the practical application of these measures often falls short, particularly for informal sector workers and marginalized groups, who continue to face barriers that limit their economic participation and benefits.

- Many of the policies focus primarily on inclusion but do not fully engage with the components of the DEPTH framework—Diversification, Export Competitiveness, Productivity, Technology Upgrading, and Human Well-being. For example, there is a need for targeted equity measures within the export sector to ensure that women and marginalized groups benefit from diversification efforts. Similarly, policies should address gender disparities in productivity enhancement, technological advancement, and human well-being by incorporating gender-specific indicators and monitoring mechanisms. These mechanisms can identify imbalances, guide policy adjustments, and ensure that all components of the DEPTH framework are equitably applied.

- There is a lack of effective monitoring mechanisms on gender in economic transformation that results in limited guidance and oversight, potentially allowing imbalances to go unnoticed. While women are currently disadvantaged, but there are concerns among key players that equity measures supporting women could swing the pendulum to one side, creating an inverse situation where men face disadvantages. The absence of robust monitoring could mean that future disparities might affect men as well and go unnoticed. Such oversights can lead to unintended consequences that foster resentment or undermine the movement's effectiveness – sending the wrong message that the gender equality movement is solely about benefiting women when on the contrary, it aims to create a more inclusive and equitable society for all.

Zambia has demonstrated commitment to addressing gender inequality by establishing institutional frameworks that have evolved over time, but these institutional frameworks evolve with change in government regimes (GRZ 2019; OXFAM 2022). Under the United National Independence Party, gender issues were managed by a Division under the National Commission for National Planning with close links to the party's Women's League (JICA 2016). When the Movement for Multiparty Democracy took over in 1991 the Division was moved to the Cabinet Office and renamed the Gender in Development Division (GIDD). The Patriotic Front government set up the of Ministry of Gender (MoG) in 2012, which took GIDD from the Cabinet Office and merged it with the Department of Child Development from the Ministry of Community Development, Mother and Child Health backed by Government Gazette No. 183 of 22nd March 2012. The establishment of the Ministry was an affirmative action to promote gender-related issues in development (Phiri and Mwaanga, 2020). Nonetheless, when the United Party for National Development came into government in 2021, it downgraded the Ministry of Gender to the Gender in Development Division under the Office of the President to oversee implementation of the national gender equality agenda.

The oscillation between institutional frameworks in Zambia has undermined the prioritization and progress of gender equality, pushing it to the periphery of governmental focus and detaching it from community engagement. Since 2012, structural changes, including the establishment of the Ministry

of Gender, initially aimed at implementing key gender-related policies and collaborating with actors like the United Nations Development Programme. This collaboration resulted in initiatives such as the 2018-2022 Advancement of Gender Equity and Equality program, which built technical capacity to reduce gender inequalities across social, economic, and political spheres. However, the Ministry of Gender faced a number of challenges such as poor financing and a limited presence at provincial and district level. Rather than dealing with these challenges, the government downsized the ministry to a division under the Office of the President in 2021.

Taken at face value, this move appears progressive as policy directives are expected to be considered as top priority given the authority and influence of the Office of the President. However, this move sends a practical message that gender issues are at the periphery of government priorities. Moreover, gender issues now appear detached from the people as there is limited interaction between the people and the Office of the President, given the sensitive nature of the office's operations. This is based on the argument that gender issues are social issues that should be managed by an institution that frequently interacts with communities.

2.6. Role of regional economic cooperation and integration

As a landlocked country in Southern Africa, Zambia's recognizes that regional integration is central to its economic development. It therefore remains highly committed to the agendas of the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA), and the African Continental Free Trade Area (AfCFTA) by promoting free trade, attracting investment, and fostering job creation, industrialization, and growth. Surrounded by eight neighboring countries, it is strategically placed to develop many collaborative ventures promoting regional integration and cooperation.

Zambia is a longstanding member of SADC and COMESA and in February 2021, submitted the instruments of its ratification of the AfCFTA agreement to the African Union Commission and became the 36th AU member to fully accede to the agreement. In both SADC and COMESA, Zambia is fully implementing the free trade area stage of regional integration at 100 percent liberalizations (MCTI, 2016). According to the Africa Regional Integration 2019 Index, within the SADC region, Zambia is the most integrated in trade and free movement of people and the least in terms of infrastructural integration.

On the continental level, Zambia fares better on trade integration than on macroeconomic integration and free movement of persons. According to the Tralac Intra-African Trade and Tariff Profile for Zambia,in 2022, about 30 percent of Zambia's intra-African trade was with African countries that are not members of COMESA and SADC, such as Equatorial Guinea. Equatorial Guinea's trade with Zambia stood at ninety nine percent of Zambia's trade with African countries outside COMESA and SADC. By promoting intra-African trade and reducing trade barriers, Zambia can attract more foreign direct investment and expand its export markets as well as diversify its economy. This is expected to contribute to job creation, enhance industrialization, and boost overall economic growth.

Zambia benefits from regional protocols but faces challenges from asymmetric economic shocks, conflicting policies, and limited diversification, with AfCFTA offering potential for broader African trade and resilience against global shocks, although local firms need to be well-informed of market conditions and a quota system to protect small and medium enterprises. The relatively large and asymmetric shocks that member countries encounter include terms of trade and exchange rate

shocks, low domestic demand in some countries, low product diversification and overlapping organizational memberships with conflicting policies. The growth of AfCTA will expand Zambia's trade with African countries beyond COMESA and SADC.

Additionally, as global shocks continue to occur, with African countries being least resilient, the importance of AfCFTA as a hedge against external economic shocks and its facilitation of a diversified and competitive export market through the provision of a continental value chain cannot be overemphasized. However, the CETO study undertaken to gauge the readiness of Zambian firms for the AfCFTA concluded that most firms were not aware of this initiative. However, most acknowledged that the initiative would prompt Zambian industries to become more competitive. Respondents emphasized that there should be a quota system imposed on products that were produced locally, especially to protect small and medium firms.

3. ZAMBIA'S ECONOMIC TRANSFORMATION THROUGH A GENDER LENS

Zambia's Vision 2030 aims to transform the economy from its reliance on copper towards a more diversified base, focusing on agriculture and manufacturing, particularly agro-processing industries. This strategic shift has been central to national development plans for the past two decades. However, there has been limited structural change in the economy, both in terms of sectoral composition and export diversification. This chapter assesses Zambia's economic transformation efforts using the DEPTH framework, which covers diversification, export competitiveness, productivity, technological upgrading, and human well-being. This assessment utilizes the African Transformation Index (ATI), which benchmarks Zambia's performance against 30 other African nations in these critical areas of economic transformation and applies a gender perspective.

3.1. Gender and economic transformation in Zambia

Gender refers to individuals' social identities as men, women, boys, and girls, and the roles, responsibilities, expected behavior, and power relations that are socially and culturally constructed for these identities. Within the economic sphere, the construction of gender can influence access to resources, opportunities, and decision-making power, leaving some individuals advantaged and others disadvantaged. In Zambia, this disparity is particularly evident, with women frequently encountering systemic barriers that limit their economic participation and opportunities (GRZ, 2023). According to the Global Gender Gap Report of 2022, Zambia's gender gap index had improved to 0.723[22] (imparity=0,parity=1) from a score of 0.635 recorded in 2006[23]. Indicating about 27 percent gender gap that still remains to be closed.

Likewise, the economic participation and opportunity improved from a score of 0.6023 in 2006 to a score of 0.803 in 2022 above the global average of 0.603 or 60.3 percent in 2022. Political empowerment, however, remained low from a score of 0.1354 in 2006 to a slight improvement of 0.173 in 2022 below the global average of 0.22. In Zambia, Such inequality is evident in the political sphere where women have been underrepresented in Parliament. In the period from 1991 to 2021, the proportion of women in Parliament ranged between 6.7 percent and 16.7 percent, demonstrating negligible gender diversity in decision-making positions (Alliance for Financial Inclusion, 2023).

Gender inequality has significant negative implications for economic transformation as women's exclusion from certain sectors and barriers to entrepreneurship prevent the economy from fully capitalizing on the innovative potential of a diverse workforce (GRZ, 2023; Seers 1969; Boserup, 1970; Kazandjian et al., 2016; Bertay, Dordevic and Sever, 2024). According to research by the IMF, gender inequality is negatively associated with export diversification (Kazandjian et al., 2016; Bertay, Dordevic and Sever, 2024).

Gender-based constraints such as limited access to education and vocational training for women, reduce the overall skill level of the workforce, diminishing a country's competitive edge in the global

[22] Global Gender Gap Report 2022.
[23] Global Gender Gap Report 2006.

market. Additionally, traditional gender norms relating to the femininity and masculinity of certain roles lead to occupational segregation. As a result, a notable pool of individuals with skills in certain fields remain unrecognized, undertrained, and subsequently underutilized. This serves as a barrier to labor productivity. Progress in all these areas translates into enhanced well-being for all. There is, therefore, a strong justification for Zambia and any country to have a strong policy framework on gender equality in economic transformation (GRZ, 2023; Seers 1969; Boserup, 1970; Kazandjian et al., 2016; Bertay, Dordevic and Sever, 2024).

3.2. Economic transformation with a gender lens

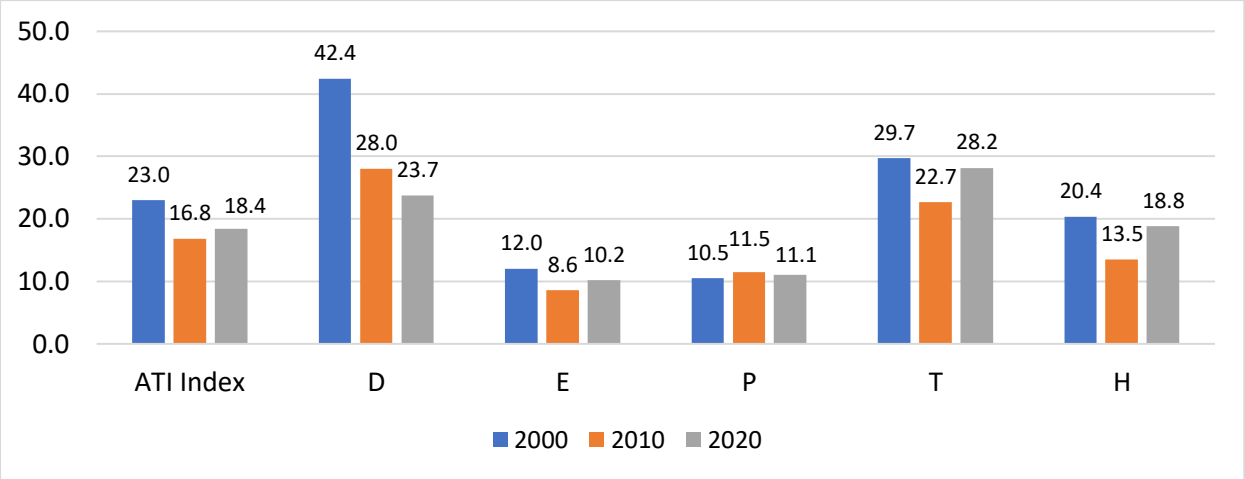
Zambia's economic growth over the past two decades has not translated into sustained economic transformation, as evidenced by a notable decline in its transformation performance and lack of resilience. From early 2000s, driven by a favorable macroeconomic environment and a copper boom, economic growth accelerated at an average of 7.7 percent per year and recorded 7.6 percent in 2010 (Annual Economic Report, 2010). However, this growth was heavily reliant on the mining sector with limited spillover effects on other sectors of the economy despite national plans emphasizing diversification and industrialization over the period.

When the mining sector began to decline after 2010, Zambia saw a brief improvement in its transformation index, but this was short-lived as the overall economic conditions continued to deteriorate primarily due to the plunge in commodity prices. The decline in the mining sector exposed the weaknesses in Zambia's economic structure, leading to a drop in its transformation scores in the African Transformation Index (ATI) from 23 (out of 100) in 2000 to 18.4 in 2020, placing it well below the overall African average (30.3).

Figure 2 highlights the unsustainability of Zambia's growth model and the lack of progress in key transformation dimensions. Similarly, the country's economic transformation scores in the Bertelsmann Stiftung's Transformation Index (BTI) have also seen persistent declines since peaking at 5.39 (on a scale of 10) in 2014. The country has struggled across most of the DEPTH dimensions—diversification, export competitiveness, technological upgrading, and human well-being—except for productivity, where it has shown some resilience.

Gender barriers hinder Zambia's economic transformation by limiting workforce innovation and competitiveness. Deep-rooted cultural practices contribute to women's exclusion from certain sectors and act as a barrier to their participation in entrepreneurship, thereby preventing the economy from fully capitalizing on the innovative potential of a diverse workforce. It is noted that Zambia has limited gender mainstreaming, with most sectors paying little attention to gender policy. The challenges women face includes underrepresentation in the labor force; low participation in science, technology and innovation; limited access to education; lack of access to finance and other resources as well as a range of cultural barriers and stereotypes.

Figure 2: Zambia DEPTH over time in the ATI dimensions. 2000, 2010, 2020



Source: ACET Dashboard Statistic

3.2.1. Diversification

Zambia's National Development Plans (NDPs) have consistently promoted mining, agriculture, manufacturing and tourism as drivers of growth. However, diversification away from the mining sector has not been actualized. According to UNDP (2016), the Zambian economy has not undergone significant structural transformation, as it remains dominated by the mining sector. The shifts in the composition of output and labor in the economy have not contributed to positive structural transformation (Chitonge, 2016). For example, the shift in labor away from the agricultural sector has not led to growth in the manufacturing sector, mainly because of the limited forward and backward linkages between the two sectors. The services sector has shown growth, but this growth is concentrated in the informal wholesale, retail, and trade sub-sector, characterized by low-paying and predominantly precarious jobs (UNDP, 2016).

Zambia's lack of economic diversification is seen in low agricultural value addition and a shrinking manufacturing sector, despite the ICT sector emerging as a key growth driver. Zambia's efforts to diversify its production and export base have been a central focus since independence, with the 8th National Development Plan (8NDP) emphasizing this strategy to bolster economic resilience and growth. Despite these intentions, Zambia's economy has remained heavily reliant on copper exports, which consistently make up over 70 percent of total exports. Although the 7NDP aimed for a 40 percent share of non-traditional exports in total export earnings, actual progress has been limited, reflecting the persistent challenges in moving away from dependence on copper.

On the diversification dimension of the ATI, the country slid from a score of 42.4 (on a scale of 100) in 2000 to 23.7 in 2020, falling behind most of its regional peers. Value addition in the agricultural sector has remained low, the contribution of manufacturing to GDP has shrunk while strong growth in the services sector has been concentrated in low-paying and predominantly informal wholesale, retail, and trade jobs. In recent times, information, communications and technology (ICT) has been the most resilient sub-sector, contributing over 60 percent of GDP growth by 2022 (MoFNP, 2023). The agriculture sector on the other hand, although remaining a priority sector and employing more than 60 percent of Zambia's population, has been prone to shocks and has significantly underperformed.

High dependence on primary exports persists, highlighting deep-rooted structural challenges such as the concentration of infrastructure in mining areas at the expense of other sub-sectors, and high dependence on climate-threatened hydropower systems. Table 3 presents Zambia's top five exports over the 2000-2021 period, with mining exports consistently dominant over non-traditional exports (NTEs). Additionally, in stark contrast to the 2000s when South Africa and Switzerland were on top, China has emerged as the largest trading partner and trading relationships have diversified to include countries like India, the United Arab Emirates, and the Democratic Republic of the Congo (DRC). This reflects the efforts to broaden export markets and reduce dependence on a few partners.

Meanwhile, Zambia's economy is still heavily reliant on copper, gold, and precious stones, which constitute nearly 80 percent of its total exports, contrary to the 7NDP, which targeted a 40 percent share of non-traditional exports in total export earnings for the period 2017 to 2021. There has also been a decline in the relative share of non-mining sub-sectors as a percentage of exports. For example, travel and tourism's share of total exports has dropped from 9.69 percent in 2000 to 7.5 percent in 2022, highlighting the ongoing challenge of achieving economic diversification (Havard, 2022). Additionally, energy and power pose significant challenges to production. More than 80 percent of total national electricity production comes from hydro-generation thus climate change, exemplified by the recent severe, El Niño-induced drought, has led to a substantial reduction in electricity generation from the Kariba Dam. This led to the government's revision of growth forecasts for 2024 from the 4.7 percent projected last year to 2.3 percent at the beginning of the year and then to 1.2 percent projected at the beginning of the fourth quarter of 2024 in light of the prolonged power outages.

Table 3: Zambia's top 12 exports, 2000 and 2021

2000			2022		
Name	**Gross exports** ($ million)	**Share (%)**	**Name**	**Gross exports** ($ million)	**Share (%)**
Refined copper and copper alloys	215	31.28	Unrefined copper	2760	24.95
Cobalt	87.5	12.75	Refined copper and copper alloys	1210	10.95
Travel and tourism	66.5	9.69	Travel and tourism	829	7.5
Transport	42.6	6.21	Sulphur and crude	202	1.83
Sugarcane and sucrose	24.8	3.61	Ferroalloys	199	1.8
Copper plates, sheets and strip	17.6	2.57	Electrical energy	192	1.74
Other live plants	16.3	2.37	Copper ore	140	1.27
Cotton yarn	15.4	2.25	Precious stones	110	1
Copper ore	14.9	2.17	Waters, flavored or sweetened	105	0.95
Unmanufactured tobacco	13.2	1.92	Cements	104	0.94
Cobalt ore	11.8	1.72	Nickel ore	99.2	0.9
Unrefined vopper	9.97	1.45	Sulfuric acid	89	0.81

Source: The Atlas of Economic Complexity

The slow pace of diversification can be attributed to limited value addition, as many of the country's exports remain raw or minimally processed; weak sectoral linkages, particularly between agriculture, mining, and manufacturing; and poor infrastructure, especially in rural areas. There is also the uneven distribution of land between state and customary tenure that has constrained the development of other sectors, particularly agriculture, which could have contributed to a more diversified export base.

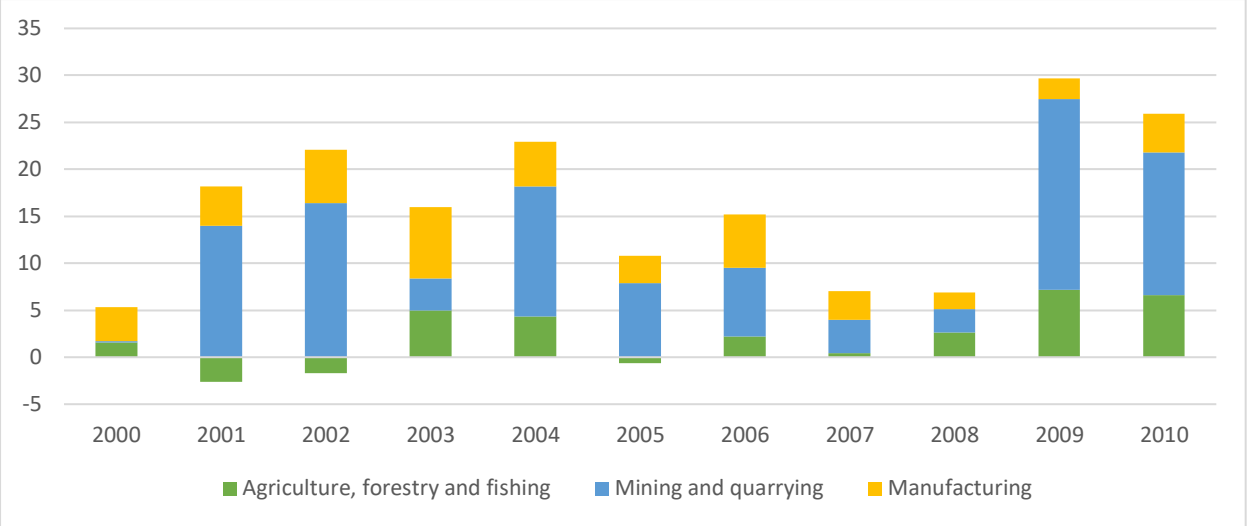
Major initiatives such as the development of multi-facility economic zones and industrial parks intended to promote manufacturing and export growth have had mixed impacts. Significant challenges, including inadequate infrastructure, poor access roads, weak linkages with local firms, and delays in service delivery have affected the expected pace of economic diversification. Consequently, the expansion of value-added activities and diversification of exports has been slow. The concentration of exports in a few commodities and services underscores the need for more effective policies and infrastructure development to achieve meaningful economic transformation and reduce reliance on the volatile mining sector. **Error! Reference source not found.** and **Error! Reference source not found.** shows sectoral contributions to GDP from 2000 to 2010 and from 2011 to 2022.

In Zambia, the lack of diversification beyond the mining sector has significantly exacerbated gender disparities, particularly in economic activities where women are predominantly involved, such as agriculture and the broader informal sector. Women face substantial barriers, including limited access to land, credit, and markets, which restrict their ability to engage in and benefit from diversified economic opportunities. Given that women constitute over 50 percent of the population (World Bank, 2024), these shortcomings have a far-reaching impact on overall economic development and productivity. This represents a missed opportunity for much-needed diverse participation in economic transformation, which has been associated with significant gains in South Africa, Eswatini, Botswana, and Namibia—countries that rank higher on the African Transformation Index.

The mining sector remains crucial to Zambia's exports and reflects the gender inequality that is prevalent in the country. While Zambia seems not to be doing well in non-traditional exports, the mining sector has been crucial to the country's foreign exchange export earnings, foreign direct investment (FDI), gross domestic product (GDP), and private job creation. As an economic backbone, the extractive industry provides opportunities for wealth creation, which is critical for poverty eradication and, eventually, economic growth. Notwithstanding this, gender inequality is prevalent in the mining sector and there is only marginal effort to observe gender-related policies.

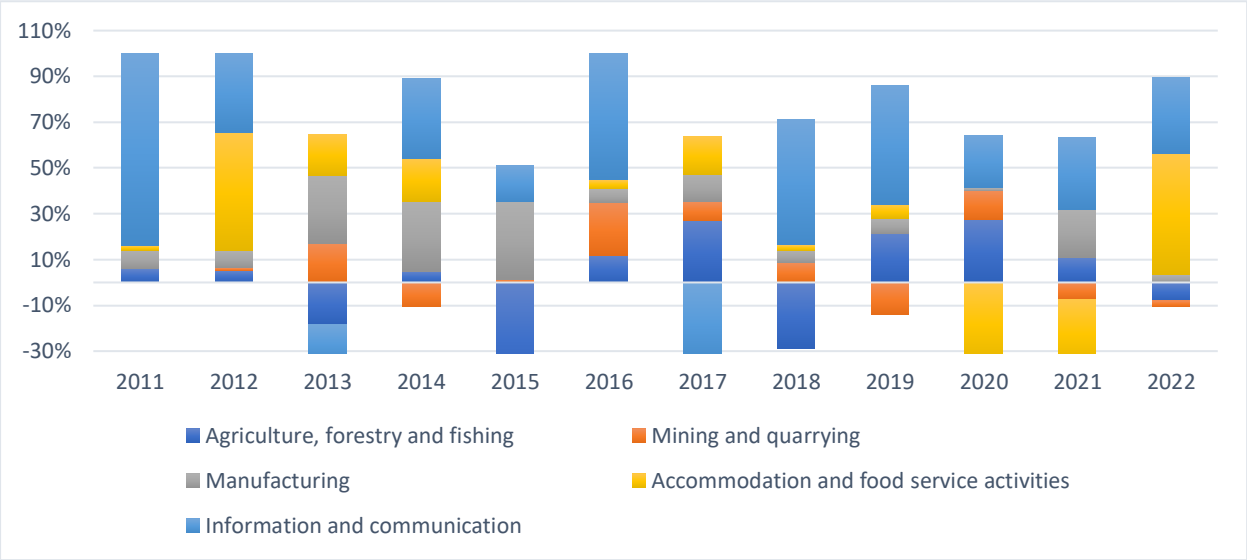
The mining industry creates and reproduces gender inequalities resulting from gendered divisions of labor (Evans, 2014). As a result, significant gendered implications for access to and control over mining resources and benefits have emerged. In the artisanal and small-scale mining (ASM) sub-sector, women tend to earn less than men because they do not have the same opportunities in terms of access, control and benefits. Inadequate technical skills, the expense of securing mining rights and related fees, restricted access to funding, exploitative mineral pricing, and unfavorable cultural norms and beliefs all have a detrimental impact on women (Action Aid, 2015). These problems are mutually reinforcing in that different causes converge to affect women differently depending on their socio-economic standing.

Figure 3: Key sectoral contributions to GDP at 1994 constant prices, 2000-2010 (%)



Source: Annual economic reports, MoFNP 2000-2010

Figure 4: Key sectoral contributions to GDP at 2010 constant prices, 2011-2022 (%)



Source: Annual economic reports, MoFNP 2000-2010

According to a World Bank Enterprise Survey, women are better represented in ownership, but that representation has been declining over the last two decades. In 2007, 39.6 percent of firms in the manufacturing sector had female participation in ownership, slightly higher than the services sector at 36.9 percent However, this percentage in manufacturing declined to 34.4 percent in 2013 and further to 32.9 percent in 2019, while the services sector saw an increase to 46.1 percent in 2013 and remained relatively high at 39.5 percent in 2019. The overall average across all years for manufacturing was 36.3 percent, lower than the services sector's 40.7 percent. This disparity indicates that the manufacturing sector may be more challenging for female entrepreneurs, necessitating targeted policies and support mechanisms to promote and sustain female ownership.

Nonetheless, during interviews conducted for the CETO study, the overwhelming sentiment opposed this notion, with most respondents saying gender movements had led to incentives for women such as funding. One of the barriers in ownership is that the process involved in registering SMEs and the

formal paperwork required for operation in addition to the tax requirements end up making some women unable to afford to formalize their businesses. Where they do manage to formalize, remaining sustainably compliant becomes a huge challenge. This is true mostly for those who do not have adequate education or are financially illiterate, of which the majority are women. Regarding difficulties in formalization of micro and small enterprises, "(t)the most significant barrier is that registration includes registering with at least four regulatory bodies, which many WMSMEs find difficult to comply with. Failure to formalize operations through registration further inhibits access to formal finance" (Alliance for Financial Inclusion 2023: 9).

Additionally, the World Bank (2023: 12) asserts that "female participation in commerce, trade and industry remains relatively low. Women have inadequate knowledge on the full business spectrum and associated processes and procedures, and this hinders their effective engagement in the economic sphere." Further, women are generally disadvantaged in financial services and borrow primarily from the informal sector which has high interest rates**.** Meaning, there is a barrier to investing in new, diversified areas. Where financing is available, lack of collateral becomes a huge challenge for women. As noted by Hapompwe, Siwale and Muleya (2021), "Agro-financing empowerment for women is only given to those that own land. According to the findings, very few women own land and it is only those with land that are benefiting from the program."

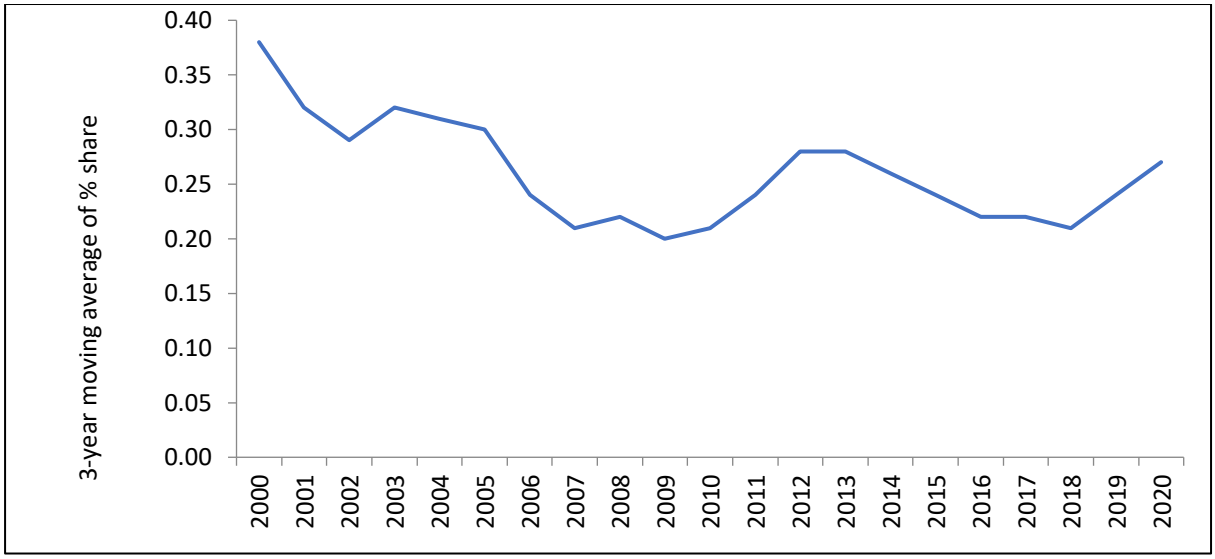
Despite these challenges, the Jesuit Centre for Theological Reflection (JCTR, 2019) states that initiatives to promote financial inclusion have resulted in more women accessing financial services and participating in economic activities. Their participation in savings clubs, microfinance initiatives, and other financial programs contributes to higher household income and stability. In emerging economies such as Zambia, women are 20 percent less likely than men to have a formal financial institution account and 17 percent less likely to borrow officially (PMRC, 2020).

3.2.1. Export competitiveness

Despite various policy reforms and strategies, Zambia remains regionally and globally uncompetitive, largely due to high production costs, heavy reliance on copper exports, and economic vulnerabilities. The country's export competitiveness has deteriorated, falling from a score of 12 (out of 100) in 2000 to 10.2 (out of 100) in 2020, reflecting a decline in its ability to compete in global markets. It is crucial to address the constraints that hinder the growth of Zambia's export competitiveness. Several factors contribute to Zambia's low export competitiveness; they are categorized as behind-the-border, at-the-border, and beyond-the-border impediments. Behind-the-border issues include poor infrastructure, energy shortages, high labor costs, and regulatory hurdles. At-the-border challenges involve delays in border procedures, documentation compliance, and other logistical inefficiencies. Beyond-the-border obstacles are the range of difficulties in accessing and competing in foreign markets.

Figure 5 shows Zambia's share of non-extractive exports in GDP.

Figure 5: Share of non-extractive exports in GDP, 2000-2020 (%)



Source: ATI 2023

While Zambia has implemented policies such as the 2018 National Trade Policy and export strategies to promote value-added goods, improve border efficiency, and enhance product quality, gender-based challenges still hinder women entrepreneurs' competitiveness and the policy lacks initiatives to address specific barriers women face in securing finance, technology, and broader market opportunities. Prevailing challenges include insufficient funding for regulatory bodies, inadequate infrastructure, and the high cost of exporting. As a result, Zambia continues to struggle in global competitiveness rankings, demonstrating the need for more robust interventions to bolster its export performance and diversify its economic base. In addition, systemic gender-based challenges also hinder women entrepreneurs' competitiveness due to limited access to resources and the absence of targeted policy measures. This is a nationwide problem in general, but from a gender perspective, it presents even greater challenges for women entrepreneurs.

Women in Zambia often face compounded difficulties in becoming competitive due to systemic underrepresentation and barriers to accessing key resources and opportunities. For instance, while women-owned enterprises are receiving more funding, there are pipeline challenges that cannot be addressed in a day, and a social cultural environment that continues to place women in a challenging position as entrepreneurs. While the 2018 National Trade Policy is beneficial in some respects, it lacks targeted measures for mainstreaming gender and economic transformation in all its dimensions. For example, the policy does not present programs designed to address disparities in access to resources, such as finance and technology, which are crucial for competitiveness with regard to exporting. The risk of perpetuating gender inequalities increases if policies aimed at enhancing competitiveness do not address specific gender-related needs.

Nevertheless, women's involvement in exports related activities is improving, as evidenced by the growing number of firms involved in exports that have women as part-owners. However, there has

been a significant decrease in women majority ownership in these firms. The World Bank Enterprise Survey (2007, 2013 and 2019) suggests that the number of firms involved in exports with women as part-owners is increasing. In 2007, the average proportion of female participation in ownership was 39.8 percent among exporter firms while non-exporter firms had 37 percent. By 2019, the average participation of women in ownership of firms involved in exports increased to 47.7 percent but there was a reduction in non-exporter firms to 41 percent. The firms with majority female ownership among exporter firms averaged 15.6 percent in 2013 while the proportion was 14.5 percent among non-exporter firms. However, the proportion of exporter firms with women majority ownership in 2019 fell significantly to 2.2 percent while the firms with majority women ownership among non-exporter firms increased to 17.4 percent.

While exports offer economic incentives, gender-specific market inefficiencies, structural restrictions and social norms dictating gender division of labor at home and in the market hinder women's capacity to respond to economic incentives including export opportunities. Exports normally broaden the earning capacity of firms as they widen the market. As such, the more export competitive a country is, the more it is likely to benefit from international trade. Similarly, the more women are involved in the export sector, the higher their chances of accessing the benefits that accrue to firms engaging in exports. As such, women's increased employment in exporter firms presents an opportunity for reducing the gender wage gap.

While there is export potential in sectors such as the agriculture sector, women's participation in export operations is limited due to domestic tasks and caregiving responsibilities. Elson (2016) points out that women's domestic responsibilities leave them with little time to take advantage of export and other market opportunities. Similarly, Wold (2014) asserts that female-headed farm families in rural Zambia react unfavourably to rising maize producer prices due to family duties and time restrictions. Women are also restrained by social norms dictating gender divisions of labor at home and in the market, which frequently hinder women from taking on "men's tasks" and vice versa, even when doing so would be economically advantageous. Thus, women tend to be at a disadvantage, relegating them to the periphery of the global export value chain.

Trade tariffs and quotas as well as skill deficits and tax-related challenges provide yet more hurdles to Zambia's exports and the more rigorous export authorization process has disadvantaging implications for women in comparison to men. For instance, in the agricultural sector, commercial farmers who are predominantly men receive the majority of export permits due to the rigorous process involved that generally enables the big firms to obtain most of the permits. To address such concerns, Zambia requires comprehensive measures that not only increase agricultural output for exports but also address underlying structural issues that contribute to gender inequities.

Focusing on agriculture, Hapompwe, Siwale and Muleya (2021) argue that "The government supports gender-sensitive research and extension but in practical terms, government agencies have limited knowledge and evidence of the role played by women in agriculture, and very little data are collected on women's agricultural activities by sub-sector. This fundamental lack of information perpetuates the limited understanding of barriers to women's participation in agriculture and agribusiness." Additionally, the skills required for successful export activities are often lacking among both women and men, but the gap is more pronounced for women due to lower levels of education and training opportunities. Addressing these skill deficits without gender-specific strategies risks exacerbating existing inequalities. For instance, while efforts to improve skills and competencies are underway, there may be inadequate measures to ensure that women benefit equally from training programs and

capacity-building initiatives. Issues such as the handling of taxes, as noted in the CETO study, highlight another area where gender-sensitive measures are crucial. The current practice of charging taxes with promises of reimbursement upon application can open doors to corruption and sexual exploitation, disproportionately affecting women who may have less access to information and resources to navigate these bureaucratic processes.

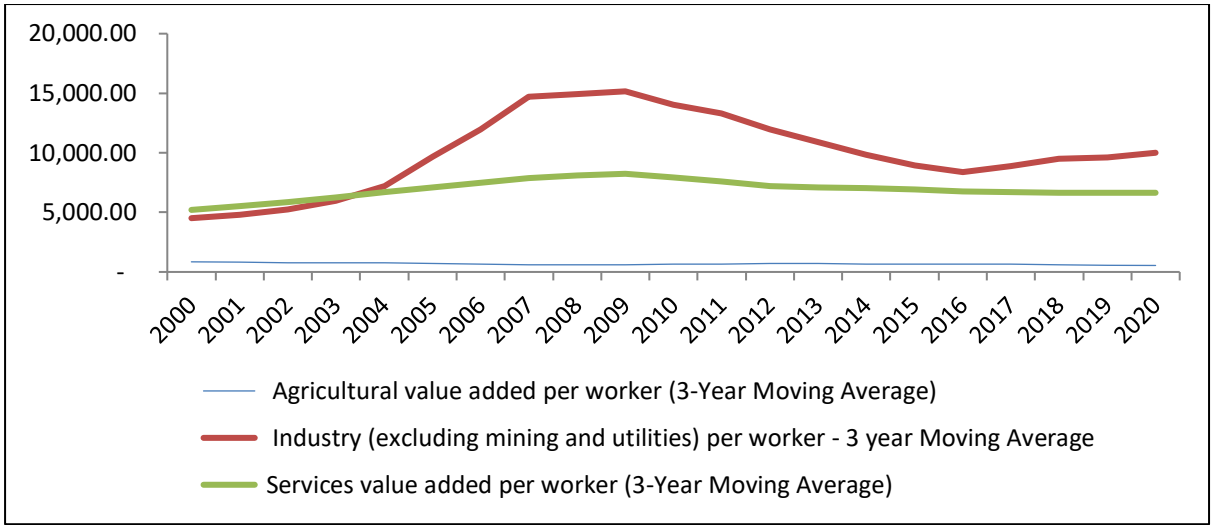
3.2.2. Productivity Increases

Despite being the most improved dimension under the ATI for the country, productivity growth in Zambia's economy has been weaker than the average in Sub-Saharan African (SSA) countries across various sectors, particularly agricultural productivity.[24] In agriculture, forestry, and fishing, Zambia's productivity per worker decreased by 58 percent from 2000 to 2022, while SSA saw a 72 percent increase over the same period (World Bank, 2023). In the services sector, Zambia experienced a 71 percent rise in productivity between 2000 and 2010, followed by a 28 percent decline to $6,628.54 by 2020. Manufacturing and construction productivity initially grew by 25 percent from $14,535.30 in 2000 to $18,176.88 in 2009 but then fell by 30 percent to $12,722.64 by 2017. In 2021, Zambia's overall productivity as measured by the output per person hour was at $4.55/person hour, below the SADC average of $9.18/person hour.

Zambia's productivity is low, especially in labor-intensive sectors such as agriculture and manufacturing. Key issues include limited investment in modern technologies and widespread skills gaps, especially in ICT and manufacturing, which limit productivity growth. In agriculture, the dominance of subsistence farming, climate risks, low technological adoption, and limited access to resources further reduce productivity, with women bearing the brunt of these challenges. Additionally, capital constraints hinder the ability of businesses to upgrade equipment and adopt modern technologies, posing a particular barrier to women entrepreneurs seeking to grow their enterprises. While the National Productivity Policy (NPP) in 2020 marked the first dedicated effort to enhance productivity across the economy since independence, efforts to improve the low technological uptake (which the policy identified as a major barrier to productivity) through foreign direct investment in the manufacturing sector has been limited by weak absorptive capacity, insufficient research and development (R&D), and skills shortages.

Figure 6: Value added per worker in agriculture, industry and services, 2000-2020 ($)

[24] Measured by Agriculture, forestry, and fishing, value added per worker (constant 2015 $).



Source: MOFNP Annual Economic Reports

Zambia's productivity growth over the period from 2000 was largely driven by labor shifts from agriculture to services, while within-sector productivity gains were surprisingly negative, particularly in agriculture, highlighting a critical weakness in sector-specific growth. A recent study by the World Bank (2024) found Zambia's modest labor productivity growth from 2001 to 2019 was largely driven by the reallocation of workers from agriculture to higher-productivity sectors, particularly services, which contributed positively to overall economic growth. The shift of employment from agriculture, where employment dropped by over 10 percentage points, to services and industry boosted productivity. However, within-sector productivity gains were negligible or even negative, particularly in agriculture, contributing to productivity declines. Strong employment growth in Zambia contrasted with weak within-sector productivity, a rare occurrence in Sub-Saharan Africa, where inter-sectoral shifts typically drive most productivity gains.

Women's underrepresentation in Zambia's labor force, particularly in formal employment, limits their access to stable, productive jobs, thereby constraining overall economic productivity and potential growth. According to the Zambia Statistics Agency (ZamStats) 2021 Labour Force Survey, women are underrepresented in the labor force compared with men. The survey also found that male labor force participation was higher than that of females, at 59.8 percent versus 40.2 percent, respectively. Furthermore, with formal employment estimated at 26.8 percent and informal employment estimated at 73.2 percent, males accounted for 68.9 percent and females for 31.1 percent in formal employment, respectively, while 57.5 percent of males and 42.5 percent of females were informally employed.

Females tend to be more involved and productive in traditionally "feminine" or lower-ranking roles, highlighting persistent gender segregation in the labor market, where women are underrepresented in higher-paying, male-dominated industries like technology and heavy manufacturing. The World Bank (2022) reports that as with trends observed globally, the female share of employment in senior and middle-management positions in Zambia remains significantly low. In 2022, only 36.5 percent of these positions were held by women (WB, 2024). By under-utilizing female talent, especially in senior and decision-making roles, the manufacturing sector is missing out on a critical driver of economic performance and growth. Women bring unique perspectives and skills that can enhance problem-solving and drive competitiveness in manufacturing. The concentration underscores persistent gender

segregation in the labor market, where women are underrepresented in higher-paying, male-dominated industries like technology and heavy manufacturing. This segregation limits women's economic opportunities and contributions to the broader economy.

Addressing these disparities requires policies that encourage women's entry into a wider range of industries. This includes providing targeted education and training programs, improving access to capital, and fostering a more inclusive work environment that promotes gender diversity at all levels. Achieving this balance is crucial. That notwithstanding, it is worth highlighting that the concentration of women in the traditionally “feminine” areas (such as food and beverages and textiles) may be positive, as it reflects the commercialization of sectors that were once confined to the domestic sphere. This presents an opportunity to expand and invest further in these fields, thereby enhancing Zambia's economic transformation agenda. By capitalizing on women's productivity in these sectors, Zambia can drive economic growth and diversification, promoting a more inclusive and robust economic landscape.

A critical factor limiting women's labor productivity in Zambia is the negligible investment in women's health, particularly in family planning services, compounded by a patriarchal society that creates an uneven playing field for women in terms of employment conditions and economic rewards. The lack of access to family planning resources severely restricts women's ability to plan the number and timing of their pregnancies, which in turn impacts their overall health and economic participation (PMRC, 2020). When women are unable to plan their pregnancies, they often face significant disruptions to their careers and economic activities. The strain of balancing multiple roles—such as caregiving, household responsibilities, and employment—can lead to increased absenteeism, reduced productivity, and limited career advancement. This situation not only hinders women's economic contributions but also perpetuates gender inequalities in the labor market.

Additionally, in Zambia, the patriarchal society creates an uneven playing field between men and women in terms of employment conditions and economic rewards. Women often must adjust the type and amount of work they engage in to accommodate family responsibilities, leading to reduced labor productivity (PMRC 2020). This imbalance is compounded by unequal gender relations, which perpetuate disparities in the economic benefits derived from sectors such as mining. According to Mungu (2017), cultural norms and practices dictate gender roles and influence the distribution of rewards across the economy. These entrenched beliefs not only limit women’s economic opportunities but also constrain their potential contributions to the labor market, thereby impacting overall productivity. Addressing these gender-based inequalities is crucial for enhancing labor productivity and achieving more equitable economic growth.

3.2.3. Technology upgrading

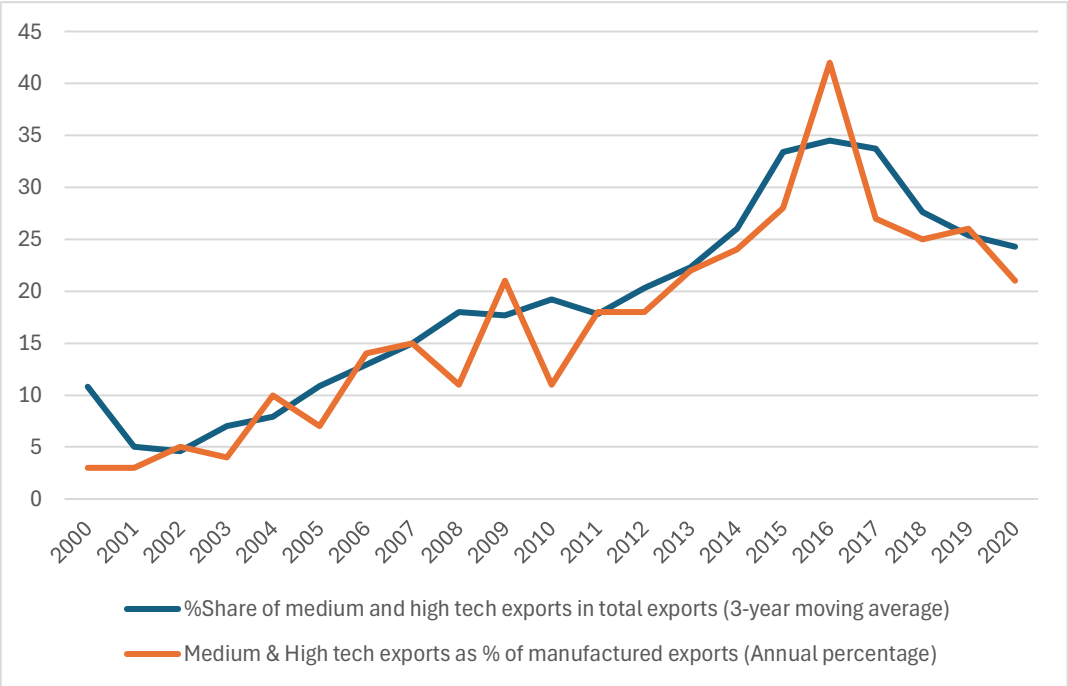
Zambia's Eighth National Development Plan highlights the importance of ICT and science in driving digital transformation and industrial modernization. A key strategy within this framework is the Industrial Upgrading and Modernization Programme, which aims to foster innovation, enhance technological capabilities, and facilitate the transfer of appropriate technologies to local industries. However, significant challenges remain in realizing these goals, particularly in areas such as digital entrepreneurship, education, skills development, and securing funding.

Technological advancement is concentrated in the ICT sector, particularly fintech and mobile solutions, while agriculture and manufacturing lag, limiting broader economic potential. Zambia has made strides in the use of digital technology with significant progress in digital infrastructure, digital

financial services, and digital platforms. However, the country lagged in digital skills which affect the use of digital technologies as well as the development of digital entrepreneurship. Meanwhile, the share of medium- and high-technology products in exports increased significantly from 3 percent in 2000 to 42 percent in 2016, it then dropped to 29 percent in 2021, indicating an industrial base that is still less sophisticated and reliant on medium-technology goods (Figure 7).

Zambia still lags behind the Sub-Saharan Africa (SSA) average with respect to this indicator. Zambia's manufactured exports by technology intensity are dominated by medium technology (rubber and plastics products, other non-metallic mineral products, basic metals, ships and boats, other manufacturing except medical and dental instruments, and repair and installation of machinery and equipment). High- and low-technology exports were consistently low over the period of assessment. Challenges to technological advancement include limited access to modern technology—especially for women in rural areas—weak innovation ecosystems, inadequate digital infrastructure, and a substantial deficit in STEM-related digital skills. These barriers hinder the adoption of new technologies, ultimately impacting productivity and the quality of Zambian exports. Addressing these challenges is critical for enabling Zambia to enhance its technological capabilities and compete more effectively in global markets.

Figure 7: Share of medium- and high-technology products in total exports, 2000-2021 (%)

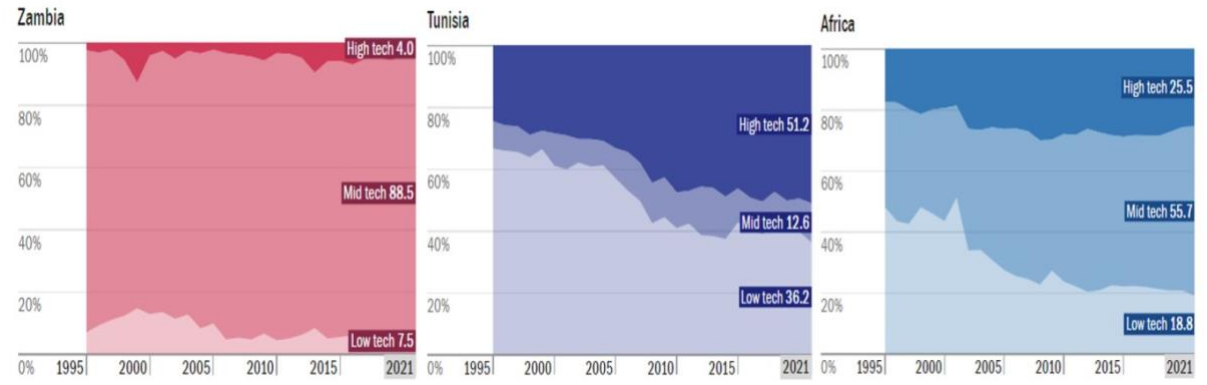


Source: CIP | UNIDO Statistics Portal (Competitive Industrial Performance Indexes)

While Zambia has made strides in digital technology infrastructure and services, there is a significant shortfall in digital skills, particularly in STEM (science, technology, engineering, and mathematics). This skills gap hampers the uptake of new technologies and affects the quality and quantity of

manufactured products. As a result, the sophistication of Zambia's exports remains low, with only a small percentage consisting of medium- and high-technology goods (Figure 8).

Figure 8: Level of technological intensity of Zambia's manufactured exports. 1995-2021



Source: UNIDO Industrial Analytics Platform, 2024

Addressing these challenges is critical for Zambia to enhance its technological capabilities and compete more effectively in global markets. One of the major challenges is the delay in adapting the education curriculum to meet the needs of industry. An effort to correct the mismatch between the supply of labor and the demand for labor would include offering enhanced entrepreneurial courses in the universities to promote job creation. Another challenge is the shortage of relevant skills, especially in STEM and ICT-related professions, which is likely to constrain Zambia's labor productivity in the medium and long term.

Despite recent growth in female-led start-ups and supportive government initiatives, women's participation in Zambia's technology sector remains significantly lower than that of men. There are current efforts in education and policy aiming to narrow the gender gap and boost women's contributions, particularly in ICT. Our findings suggest that women's participation in Zambia's technology sector remains low compared to that of men, despite recent growth in female-led start-ups and small tech businesses. Government initiatives have been instrumental in boosting female representation in science, technology, and innovation (STI). Policies such as scholarships for women in STEM fields, gender-sensitive curricula, and incentives for female teachers aim to close the gap.

3.2.4. Human well-being

Despite some improvements in education and health care, Zambia's human development indicators have stagnated, poverty remains widespread, and the country's performance is below the Sub-Saharan Africa (SSA) average across several metrics. Zambia made slight progress in the Human Development Index (HDI), improving from 0.583 in 2015 to 0.588 in 2017. However, this progress stalled, with the HDI dropping to 0.584 in 2020 and further declining to 0.565 in 2021. The share of waged and salaried females in Zambia increased significantly from 9.39 percent in 2000 to 17.25 percent in 2020, nearly doubling over two decades. The ratio of formal employment in the total labor force rose from 16.20 percent in 2000 to 24.80 percent in 2020, indicating improved formal employment opportunities.

However, the Gini coefficient, which measures income inequality, increased from 45.60 in 2000 to 57.10 in 2020, reflecting a significant rise in income inequality in Zambia. By 2022, approximately 60 percent of the population was living on less than $1.90 a day, highlighting the severe poverty challenges despite progress in formal employment. High rates of malnutrition, particularly stunting among children, persist alongside relatively high child mortality, despite various interventions aimed at improvement. Income inequality remains a significant issue, with Zambia experiencing one of the highest levels of income disparity globally, primarily driven by differences in wage income, access to resources, and employment opportunities.

The ATI's human well-being[25] indicator broadly shows performance below the SSA average. Between 2000 and 2020, Zambia's gross national income (GNI)per capita increased by approximately 222.86 percent while Sub-Saharan Africa's GNI per capita increased by about 126.05 percent from 2000 to 2020, indicating substantial economic growth (Figure 9). In terms of maternal health, Zambia has achieved a substantial decline in maternal mortality rates over the past two decades, largely due to improvements in assisted births and health care infrastructure.

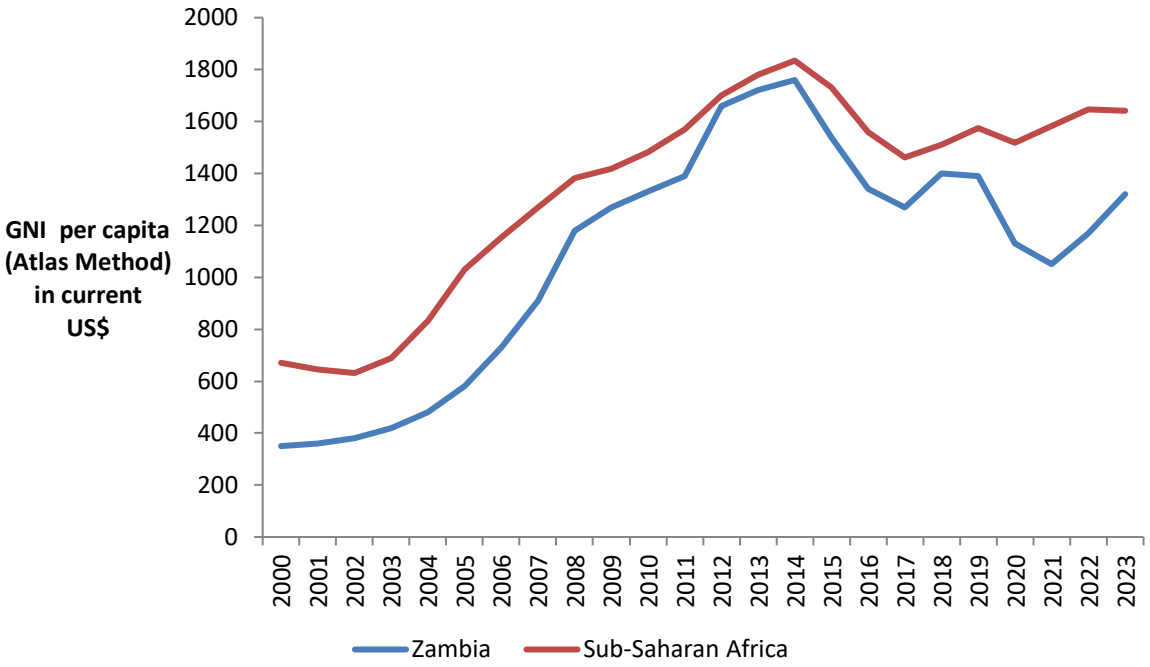
Zambia has made notable progress in reducing infant and under-5 mortality rates; both indicators show significant declines over recent years and Zambia has been above the SADC average since 2001. Zambia's child mortality rate has improved over the years due to advancements in health care services, increased vaccination coverage, and better nutrition. Furthermore, enhanced disease prevention and treatment, such as improved malaria management and access to clean water and sanitation, have also played crucial roles. Public health education and targeted initiatives by both the government and non-governmental organizations have contributed significantly to these positive outcomes. However, malnutrition remains a critical issue, with persistent high rates of stunting among children, despite various interventions. Further efforts are required to meet the Sustainable Development Goals (SDGs) targets for reducing under-5 mortality by 2030.

Generally, life expectancy has also improved significantly, surpassing the SSA average, driven by economic growth, advances in medicine, and lower disease incidence. Between 2000 and 2022, life expectancy for women in Zambia improved and remained higher than that of their male counterparts. This trend can be attributed to women's lower susceptibility to cardiovascular conditions and respiratory infections, which are more prevalent among men, as well as lower engagement in high-risk behavior such as excessive alcohol consumption and smoking. Notably, by 2008, life expectancy for Zambian women had surpassed the Southern African Development Community (SADC) average, and by 2010, Zambia's overall life expectancy also exceeded the SADC average (Source: GNI per capita, Atlas method (current $) - Zambia | Data

Figure 10). However, in 2020, the COVID-19 pandemic caused a decline in life expectancy for both genders. Despite this setback, life expectancy began to rebound in 2021, 2022 and 2023.

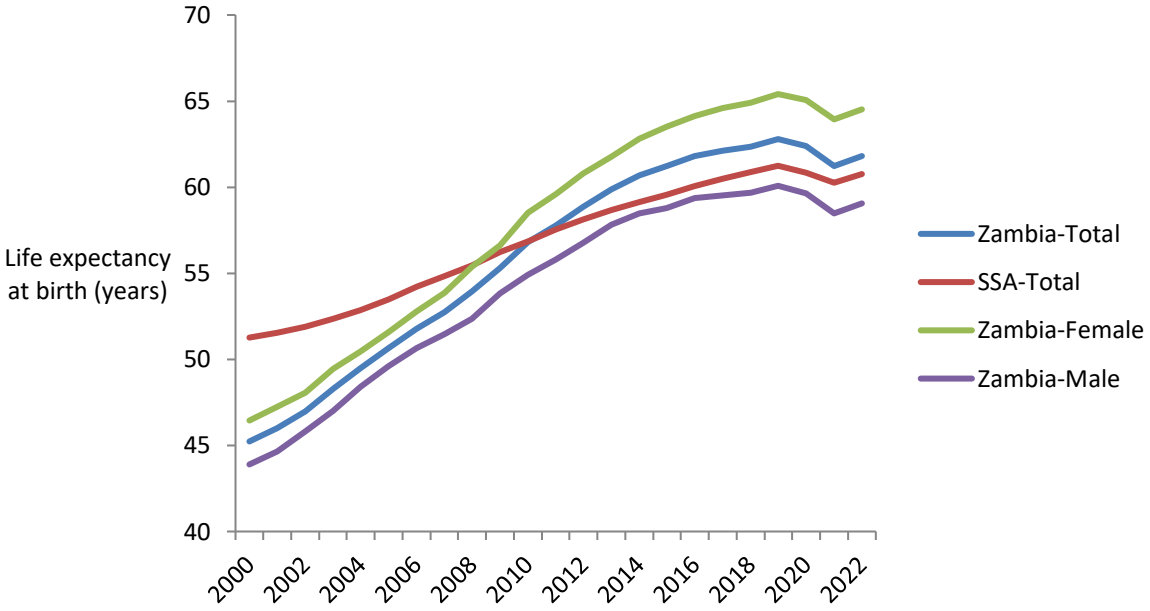
Figure 9: GNI per capita, Zambia and Sub Saharan Africa, 2000-2022 (current $)

[25] Measured by per capita income, inequality, formal employment and formal female employment in total female.



Source: *GNI per capita, Atlas method (current $) - Zambia | Data*

Figure 10: Life expectancy trends: Zambia and Sub-Saharan Africa, 2000-2022



Source: *GNI per capita, Atlas method (current $) - Zambia | Data*

Zambia's education sector shows mixed results in terms of access, quality, and equity, despite significant policy efforts aligned with the national Vision 2030 and the SDGs. The country has made substantial progress in increasing access to universal primary education, with participation rates rising in recent years due to policies like free basic education. In terms of quality, improvements have been noted, but issues like high teacher-pupil ratios, limited instructional hours, and a shortage of qualified teachers continue to undermine educational outcomes. These quality concerns are exacerbated by inadequate budget allocations, which hinder the sector's ability to meet its targets. The pupil-teacher ratio remains particularly problematic at primary school level, posing a significant challenge to delivering quality education.

Additionally, there is a notable mismatch between university courses offered and the needs of industry. Therefore, enhanced coordination is needed between the Ministry of Education and the Ministry of Labour and Social Security to gauge what is needed in the labor market and adapt university courses accordingly. On the equity front, Zambia has made strides in gender parity at primary education level, achieving equal enrolment rates for boys and girls. However, disparities remain, particularly in higher grades and across different regions, with many vulnerable children still out of school. Despite areas of progress, the education sector continues to struggle with significant gaps that need to be addressed to achieve the broader goals of access, quality, and equity.

The impact of economic transformation on human well-being is intricately linked to addressing gender disparities, yet Zambia is not fully capitalizing on this opportunity due to significant barriers faced by women in the labor market. While the labor force participation rate for men declined from 45.1 percent to 44 percent between 2018 and 2021, women saw an increase from 26 percent to 28.7 percent during the same period[26]. Despite this progress, substantial gender gaps remain. Women generally earn 28 percent less than men on average, which is close to the regional wage gap for Sub-Saharan Africa of 30 percent (Nsokolo, 2017; UN Women, 2021). The data from the CETO fieldwork indicate that women are still underrepresented in higher-paying sectors such as agro/light manufacturing and hold only about 10 percent of CEO positions compared to 90 percent for men. According to the World Bank's Enterprise Survey data, Zambia is one of the lowest-ranking countries in the COMESA region for female representation at top managerial positions and the lowest in Southern Africa with a mere 7.2 percent female representation in top management positions as of 2019.

This phenomenon has persisted notwithstanding the various policy, legislative and institutional mechanisms in place for promoting gender equity in Zambia. Enhanced female participation in leadership can drive innovation, improve decision-making, and enhance product quality. Additionally, it can lead to more effective strategies for addressing gender disparities and promoting inclusive economic growth. Women are more likely to be unpaid family workers in farming activities, reflecting broader challenges in balancing productive work with childcare responsibilities (Rodgers, 2016). However, the dynamics are changing, with typical wages for females increasing in jobs such as technicians, associate professionals and plant and machine operators, where they now earn more than their male counterparts.

The Zambian labor market exhibits significant gender-based segmentation, with women disproportionately concentrated in low-paying services. The overall labor market distribution underlines the perspective that the division of work and general labor market participation are highly gendered in terms of the expected responsibilities of men and women. Women are concentrated in

[26] Annual Labour Force Survey Report 2018 and 2022.

activities that are less productive and less lucrative and are concentrated in service-related activities, which are less payable. Women dominate in activities of households as employers (68 percent); other services (51 percent); human health and social work activities (56 percent); real estate (65 percent); accommodation and food services (72 percent); and wholesale and retail trade, including repair of motor vehicles and motorcycles (56 percent) (MoLSS, 2021). These are service-related activities that are low-paying compared with other sectors. Services and sales workers, where women are concentrated, earned between K2,042 and K2,600 monthly in 2020 and 2022, respectively. This highlights how women participate and consequently benefit disproportionately less from their contribution to the Zambian economy.

Educational disparities and industry imbalances explain the low female labor participation rates. Education is an essential predictor of entry into and effective participation in the job market. Analysis of gender-disaggregated educational attainment data from the national Labour Force Survey (2021) reveals a persistent gender disparity in the labor force. As of 2021, there were more males than females employed at all levels of educational attainment. Males have greater educational attainment than females at all levels of schooling for a variety of reasons. This educational gap is largely influenced by cultural and traditional norms that restrict women's access to education and empowerment opportunities. Consequently, lower educational attainment among women is a significant factor contributing to their lower participation in the labor market.

The distribution of men and women across different industries and institutions highlights ongoing gender disparities. Men are predominantly employed in more productive and economically advantageous sectors, while women are concentrated in lower-skilled and less technical roles. This suggests a need for improved access to training and technical skills development for women to enhance their representation in more skilled and lucrative sectors.

The labor force participation rate reveals significant gender disparities across different sectors, with distinct variations in the roles and types of work performed by men and women. The labor force participation rate shows variations in how men and women participate across institutional sectors and the kind of work and roles they play. Between 2007 and 2019, the proportion of female permanent full-time workers in exporter firms in Zambia increased by 14.4 percentage points, from 9.7 percent to 24.1 percent (World Bank, 2019). This trend indicates a growing contribution of women to export competitiveness. However, non-exporter firms consistently maintain higher average proportions of female workers compared with exporter firms, suggesting that exporter firms still lag behind in gender representation.

While a few labor policies and laws have improved workplace conditions for women, its overall impact is limited by challenges such as inconsistent paternity leave uptake and the exclusion of informal sector workers. Recent legislation, such as the Employment Code Act No. 3 (2019), has made significant strides in improving conditions for women in the workplace. According to our fieldwork, 95 percent of firms surveyed now offer maternity leave, and 65 percent have adopted specific sexual harassment policies beyond the basic requirements.

Challenges persist, however, particularly regarding paternity leave. Although the Act includes provisions for paternity leave, its uptake is inconsistent, often due to cultural norms that discourage men from utilizing this benefit. Additionally, while the Employment Code Act No. 3 (2019) sets a commendable standard for gender equality in the formal sector, its impact is diminished by the exclusion of informal sector workers. A substantial portion of Zambia's workforce, especially in the manufacturing industry, operates within the informal sector and lacks access to these protections. This

gap limits the Act's ability to drive widespread change and highlights the need for broader legislative reforms to include informal sector workers in gender equality initiatives.

4. CASE STUDY OF CETO THEMATIC AREAS: SECTORAL DEPTH FRAMEWORK ANALYSIS, CHALLENGES, AND OPPORTUNITIES

Beyond applying this framework in analyzing Zambia's macroeconomy, the CETO took a deep dive into selected priority sectors identified in Zambia's 8NDP: agro-processing, light manufacturing, tourism, and the digital economy. These sectors, which were selected through a consultation with key national stakeholders including the Ministry rof Finance, are expected to not only foster economic growth but also enhance human well-being.

To this end, the CETO study aligns with Zambia's 8NDP and Vision 2030, which envisions transforming the country into a prosperous middle-income economy. This chapter provides an in-depth diagnostic of these themes using the DEPTH framework through a gender lens, identifying both challenges and opportunities for transformation within each key non-extractive sector.

4.1. Light manufacturing analysis

The term light manufacturing is generally used to describe the type of industries that are relatively less capital-intensive (and more labor-intensive) and produce small and lightweight products using moderate amounts of partially processed materials. These industries use partially processed materials to produce items of relatively high value for end-users or intermediates for use by other industries. Technically, these industries include all firms in the agro-processing sector, but for the purposes of this paper, the focus is on other non-agro-processing firms that have also attracted attention in the country. They include textiles, clothing and leather; wood and wood products; paper and paper products, and other products. The other products include chemicals, polythene products, alloys, lubrication products, industrial gases and lighting systems. These sub-sectors have been identified as the strategic anchor industries in Zambia's National Industrial Policy (2017), which aims to stimulate and encourage value addition to primary commodities as a means of increasing national export earnings and creating employment opportunities. The goal is ultimately to transform the Zambian economy into a diversified and competitive industrialized economy that is well integrated into the international trading system.

The Zambian government has identified manufacturing as a key sector championing the country's growth and transformation agenda in its five-year development plans, supported by policies and regulations to promote the growth and competitiveness of the manufacturing and trade sectors. These efforts are reflected in several key policies, such as the Consumer Protection Act (2010), which aims to enhance competition, and the Business Regulatory Act (2014), designed to streamline business licensing processes. Additionally, the Investment, Trade, and Business Development Act (2022) seeks to drive trade and economic diversification, while updates to the Companies Act (2017) and Standards Act (2017) focus on promoting entrepreneurship, ensuring product quality, and enhancing sector competitiveness. Support for light manufacturing has also been emphasized in various strategic documents, including the Sixth National Development Plan (6NDP; 2011-2015), the National Industrial Policy (2018), the ongoing Eighth National Development Plan (8NDP), the 2022 National Export

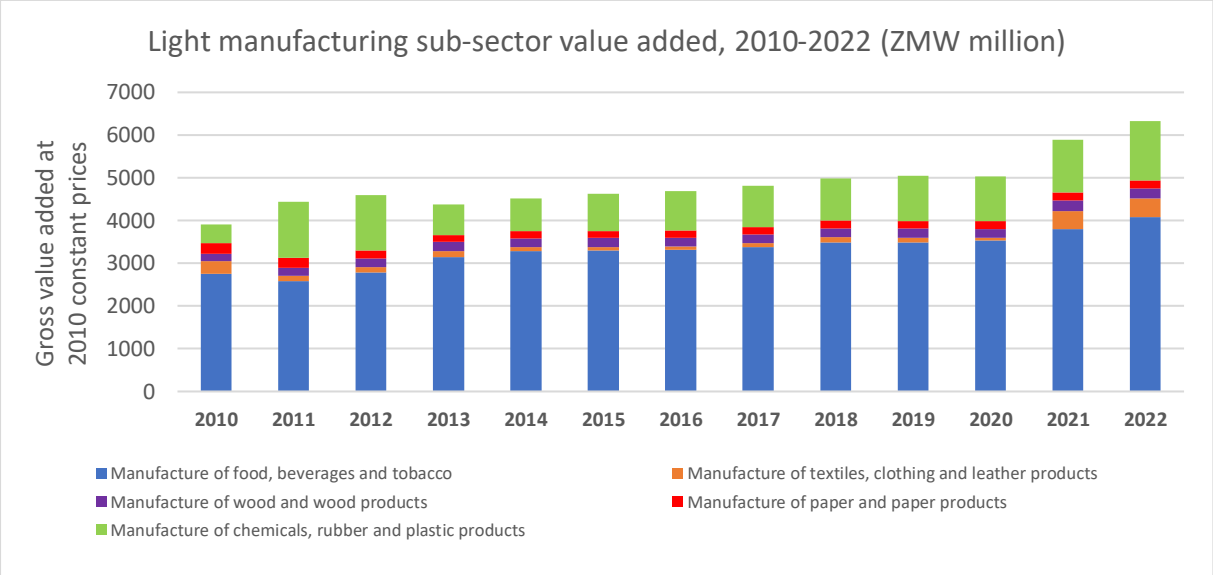
Strategy, and the 2023 Micro, Small and Medium Enterprise (MSME) Development Policy. These policies signify a concerted effort by the government to foster growth in the light manufacturing sector to capitalize on its potential for economic development and diversification.

Zambia's light manufacturing sector experienced notable growth between 2007 and 2017, particularly in wood and paper-related products, while facing challenges such as declining output in textiles, clothing, and leather. Using the index of industrial production that measures the performance of various industrial sub-sectors, the wood and paper-related sub-sectors showed consistent growth from over 150 tonnes in 2007 to over 250 tonnes in 2017, driven by factors such as effective resource management and increasing demand. Despite experiencing a temporary setback between 2012 and 2016 due to supply-side shocks, there is potential for future growth in the industry according to long-term trends (COMESA, 2021). On the other hand, the textile industry's performance declined owing to various challenges including poor input quality, scale inefficiencies, and intense competition from second-hand clothes and cheaper textile products from Asia and South Africa (UNDP, 2016).

4.1.1. Diversification in light manufacturing

Zambia's light manufacturing sector produces a diverse range of goods, though most products are designed for general use without specific gender considerations, except in the textile sub-sector, which includes tailored suits for pregnant women. Despite the small size of the economy, Zambia produces a wide range of light manufactured goods (World Bank, 2013). The CETO study that captured several firms in the light manufacturing sector reviewed a wide range of products including poly bags, ferro-silicon and silicon manganese, acrylic yarn, carbon brushes, lime, nylon brushes and brooms, industrial gases, multipurpose disinfectants and high- and low-density mattresses. When asked if there were any gender considerations in the design of their products, most respondents said they did not have any gender considerations as the products were meant for the general public. However, the textile sub-sector reported tailored suits made for pregnant women.

Figure 11: Performance of light manufacturing sub-sectors, 2010-2022 (ZMW million)



Source: ZamStats

The textile and apparel sub-sector has lost vibrancy over time owing to constraints in trade logistics, worker skills, input costs and second-hand goods that flood Zambia's market. The sub-sector, which once hosted about 140 companies employing more than 25,000 Zambians in the early 1980s, shrank to fewer than 50 companies in 2002 (Koyi, 2006). Since then, the sector has barely recovered and has been characterized by the use of obsolete machinery, shortage of skilled workers, low working capital and lack of competitive inputs. Women, who make up a significant portion of the workforce in global textile industries, are particularly impacted by the sector's challenges in Zambia. As of 2012, the sector consisted of 12 medium and large firms producing niche products for schools and industry uniforms and employing 1,500 people, 75 percent of them being men[27].

Industries feeding into this sub-sector are equally weak, with cotton gin spinning being a major missing link meriting the exportation of all ginned output, while yarn and apparel is imported (World Bank, 2013). The sub-sector's current export market size totals $52.89 million with the top three export markets being Switzerland, South Africa and Singapore. The import market size totals $136.17 million, importing largely from South Africa, China and India (Textile info media, n.d.). The sector's potential lies in gains in productivity and targeted production of apparel to boost exports thereby fostering backward linkages that add value to raw materials. Despite this, the sector faces various constraints including poor trade logistics, low worker skills, and high import costs due to the absence of competitive input industries.

The wood sub-sector faces inefficiencies, constraining its growth and contribution to economic transformation. According to the (World Bank, 2013), the wood and wood products sub-sector has a high domestic market and also exports raw products mostly to the Democratic Republic of Congo while importing processed products from China. As of 2013, the domestic market was reported to consume 70 percent of the processed wood, mainly in the construction industry, while the rest was exported. There were about 600 formal sector firms and 3,000 informal firms, employing about 47, 000 people, mostly men. Thus, gender inclusion in this sector remains limited, which impacts the sector's overall capacity to innovate and grow.

As of 2013, over 90 percent of the registered firms were categorized as small and medium enterprises, but they produced only about 10 percent of wood exports, mostly of low quality, while a few formal firms exported high-value products. The sub-sector has comparative advantage for wood products in view of the country's forest endowment of approximately 54.6 million hectares. However, domestic resource cost ratios remain high, and the country's competitive position therefore remains weak. Other constraints include low labor productivity, low-capacity utilization, high cost of wood, poor managerial and worker skills, outdated technology, weak supply chains and market segmentation.

Zambia's leather sub-sector has strong potential for boosting exports and the livestock industry but faces challenges due to high costs, outdated technology, and limited worker skills. As of 2013, there were eight firms operating in the sub-sector, six of which produced footwear (Dinh, 2013). The sector was estimated to employ about 2,000 people in mainly informal small enterprises. The output was reported to be limited to industrial safety and military boots, school shoes, sandals, bags, belts and footballs. The sector has potential for more leather products for both the domestic and regional markets fostered by labor cost advantage, cattle industry expansion, improved animal skin preparation and duty-free leather product inputs. However, constraints remain as leather production

[27] World Bank (2017). Light Manufacturing in Zambia

is less competitive owing to poor trade logistics and high input costs, low technology and limited worker skills.

4.1.2. Export competitiveness in light manufacturing

Although Zambia's light manufacturing sector has potential for economic transformation, Zambia has not fully exploited its latent comparative advantage in resource-based light manufacturing industries. Zambia in the past produced a wide range of manufactured goods owing to the state-led industrialization of the 1980s that created many large firms demanding industrial products. In recent times, demand has grown for light manufacturing in the country. For most light manufacturing products, a portion of them is exported after the first stage of value addition. Although part of the output is processed locally, this is done using outdated technology that results in products of inferior quality compared with imported products. Therefore, most light manufacturing goods cannot compete in global markets and with imports in domestic markets[28].

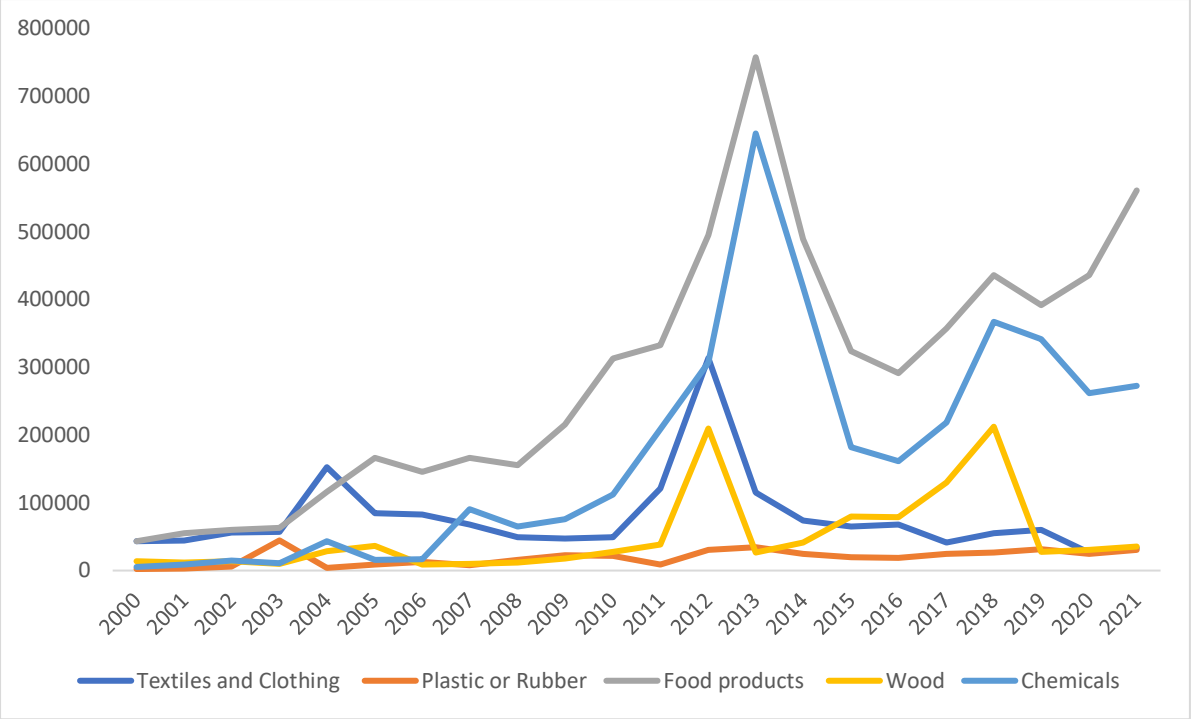
Zambia has not fully taken advantage of some of its privileges such as duty- and quota-free access to the main developed country markets for almost all its manufactured products under the European Union's Everything but Arms Initiative, among other initiatives, mainly due to supply-side constraints. For example, input costs represent more than 70 percent of total production costs in Zambian light manufacturing. The other important constraints are poor trade logistics and poor access to skills, equipment, finance, and industrial land.

Zambia's export market competitiveness in light manufacturing has declined significantly over the period 2005 to 2021. Despite the addition of 16 new products to its export portfolio between 2005 and 2020, Zambia's non-extractive exports make up a negligible portion of the global market, with more than one-third consisting of unprocessed commodities (ACET, 2023). Specifically, declines in the volume of output for the textile and clothing sub-sectors were observed between 2010 and 2021, as depicted in Figure 12 **Error! Reference source not found.**below. However, the share of textiles and clothing in total goods exports has been rising over the same period. In contrast, the share of plastics and rubber, food products, wood, and chemicals has remained constant between 2010 and 2021, despite fluctuations in their output volumes during this period.

Consultations during the fieldwork for this study suggest that firms in Zambia's light manufacturing sub-sector primarily compete on price rather than quality, driven by domestic consumers' preference for affordability. Over three-quarters of the firms surveyed reported exporting less than 20 percent of their output, with the majority of products serving the local market. Key barriers to export competitiveness include high transportation costs, limited access to market information, and stringent foreign standards. Ideally, the Zambia Export Processing Zone Authority, established in 2003 to enhance light manufacturing, could have addressed industry challenges but failed due to vagueness of mandate and insufficient provision for investment-related disputes. This ultimately undermined the prospects of the sector before the Authority was amalgamated with other bodies in 2006-2007 with the establishment of the Zambia Development Agency and the multifacility economic zones.

Figure 12: Exports of light manufacturing products, 2000-2021 ($ 000)

[28] World Bank (2017). Light Manufacturing in Zambia.



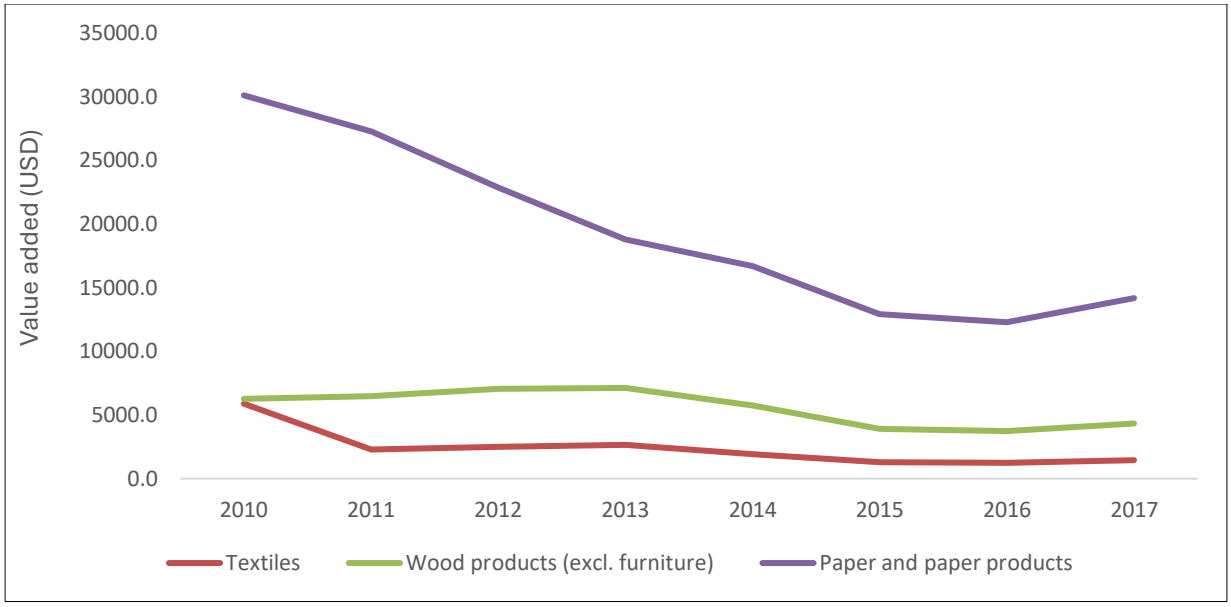
Source: Author analysis using WITS data and author's calculation adapted from Bank of Zambia data

4.1.3. Productivity in light manufacturing

Productivity in Zambia's light manufacturing sector has declined over the years, with notable reductions in the paper and textiles industries, while the wood industry experienced fluctuations, highlighting a challenging environment where labor costs consistently accounted for about 23 percent of firms' annual variable costs. Given the generally acceptable and common benchmark that labor costs can typically represent between 20 percent to 30 percent of a company's total costs, the firms interviewed had a fair allocation towards labor costs. Productivity in the paper and paper products category has been on a downward trend, declining from $30,130.1 per person in 2010 to $12,908.8 in 2015 before improving slightly to $14,188.8 per person in 2017, as depicted in **Error! Reference source not found.**. Similarly, the textile industry has also experienced a reduction in productivity, dropping from $5,890.9 per person in 2010 to $1,307.3 in 2015 and picking up slightly to $1,436.6 in 2017. On the other hand, the wood industry recorded an increase in productivity from $6,260.3 in 2010 to $7,132.2 in 2014 before declining to $4,317.4 in 2017.

Output per worker in Zambian firms has been primarily constrained by the prevalent poor work ethic, alongside inadequate STEM skills and a preference among youths for employment over entrepreneurship. Output per worker among the firms interviewed was generally hampered by the often-poor attitude towards work. Most respondents highlighted that a poor attitude towards work was a general occurrence in the Zambian work culture, with many youths preferring to work for someone rather than themselves. Among the respondents, other factors that limited the productivity of firms were a lack of STEM skills among employees, poor entrepreneurship, shortcomings in analytical and problem-solving skills, and creativity.

Figure 13: Output per worker in light manufacturing, 2010-2017 ($)



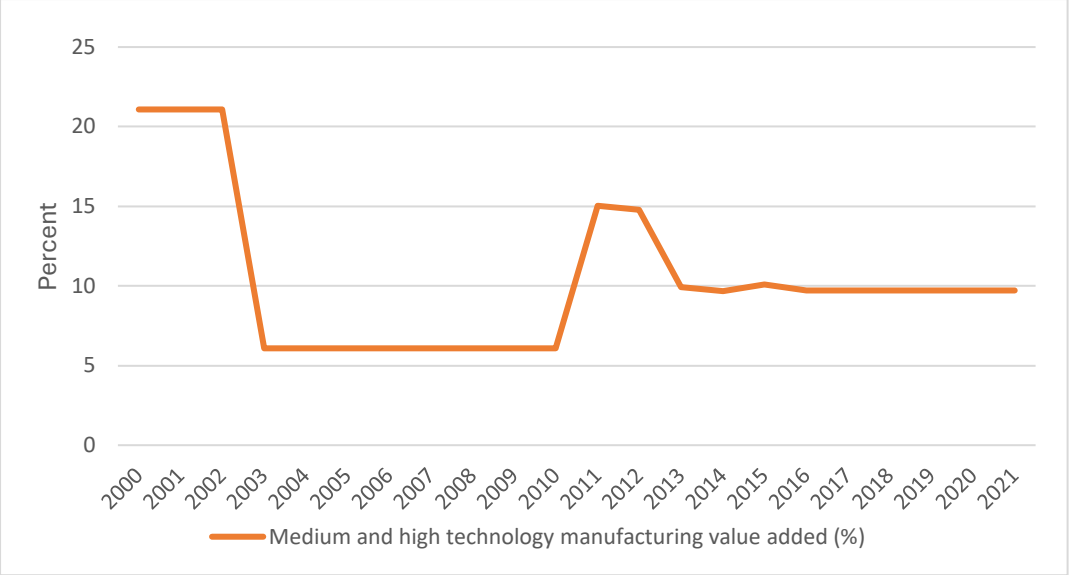
Source: UNCTAD

4.1.4. Technology upgrading in light manufacturing

Between 2000 and 2020, Zambia's light manufacturing sector has seen an overall decline in terms of the utilization of technology. From about 21 percent in 2000, the level fell to about 6 percent in 2003 followed by an improvement to about 15 percent in 2010-2012 before falling to a constant of about 10 percent as shown in Figure 14 below. This general decline in the use of medium and high technology underscores the need for increased investment in the sector so as to facilitate value addition, thereby increasing quality and export competitiveness.

Zambia's poor performance in technology upgrading in the light manufacturing sector is largely attributed to high technology costs, financing issues, and cumbersome import taxes and border clearance, with operational technologies being the most adopted, while a lack of local expertise in advanced technology remains a significant challenge. Evidence from the field survey shows that the biggest barrier to technology upgrading was high technology costs, followed by the cost of finance and access to finance. Other challenges included high import taxes and complications with clearance at borders. The most prominent technology adopted by the interviewed respondents was operational technology such as company websites and company email, followed by mobile technology, apps, social media, and digital marketing tools. The least used technology was blockchain technology. One of the respondents noted that there was a lack of local expertise in working with advanced technology.

Figure 14: Proportion of medium- and high-technology manufacturing value added (%)



Source: World Development Indicators

4.1.5. Human well-being in light manufacturing

Between 2010 and 2017, the textiles sector witnessed an increase of employees from 10,417 to 13,667. Similarly, the number of employees in "wearing apparel, fur" category of the UNIDO classification rose from 6,090 to 7,989 (UNIDO, 2024). Other sub-sectors showing job growth were wood products (excluding furniture) and furniture manufacturing (not elsewhere classified), with employee numbers increasing from 5,637 to 7,396 and 3,707 to 4,864 respectively. The paper and paper products sub-sectors also saw growth in employment, with employee numbers increasing from 907 to 1,190 and from 1,697 to 2,226 respectively.

With regard to shares of employment in the manufacturing sector, the food and beverages sub-sector had the highest share, accounting for 30.4 percent of total manufacturing employment. According to the (businesswire, 2022), Zambia's high population growth rate drives the high demand for food and jobs in this sector are due to new stores, acquisitions, e-commerce, and expanded distribution channels. The employment share of textiles and wearing apparel, including fur, stood at 11.3 percent and 6.6 percent respectively, with wood products (excluding furniture) and furniture manufacturing (not elsewhere classified) contributing 6.1 percent and 4.0 percent respectively. Tobacco products and paper and paper products had lower shares at 1.0 percent and 1.8 percent respectively.

The wood products (excluding furniture) and furniture manufacturing (not elsewhere classified) also experienced workforce expansion, with employee numbers increasing from 5,637 to 7,396 and 3,707 to 4,864, respectively. The paper and paper products sectors also saw growth in employment, with employee numbers increasing from 907 to 1,190 and from 1,697 to 2,226 respectively. Broadly, this growth in employee numbers points to the potential the sub-sector has in job creation for Zambia.

With regard to social security services among the firms interviewed in the CETO survey, nearly all respondents provided social security services that registered their workers with the National Pensions Scheme. Additionally, all respondents acknowledged the importance of a safe working environment

and hence provided their employees with protective equipment. One complaint raised by some employers in the sector was the requirement in Zambia's Employment Code to offer paid leave to employees. This was raised as an unfair arrangement for the employer as the employer would lose out company resources to pay someone whose services were not being received. Most employers recommended the need to have this requirement revisited if the growth of the sector were to be realized. Other deficits observed were the absence of a union representation for the workers and a clearly outlined sexual protocol, with most respondents having a sexual harassment clause in their employment contracts with no standalone sexual protocol.

4.2. Recommendations for light manufacturing

	Short- and medium-term recommendations	Long-term recommendations
Diversification	• Enhance access to financial services under Citizens' Economic Empowerment Commission (CEEC) by engaging mobile service providers to assist with dissemination of the procedure and requirements. • Streamline CEEC and CDF access requirements specific to the demographic area (need based by capacity and technical know-how) in the seven (7) major languages and use of quota allocation of funds specifically channeled towards light manufacturing firms with targeted initiatives to support women-owned businesses. • Establish a national digital platform that provides real-time market information, including pricing, demand trends, and export opportunities by use of service providers through short message service (sms). • Simplify procedures for business licensing with Councils, PACRAand ZRA by creating one stop shops for business regulators for enhanced compliance and support services.. • Zero taxes on solar equipment for firms in registered light manufacturing sector to reduce the cost of equipment, with a focus on supporting women-led businesses in accessing these incentives.	• Promote partnerships with financial institutions, ensuring that these products are accessible to women-owned businesses. • Encourage financial institutions to offer long-term, low-interest financing options tailored to the needs of light manufacturing firms, facilitating investments in diversification, including specific support for women entrepreneurs and gender-sensitive lending practices. • Implement credit guarantee schemes to reduce the risk for lenders, making it easier for businesses to secure financing. Ensure that women-led businesses are equally represented in these schemes. • Implement policies aimed at reducing exchange rate volatility by progressively moving towards a mandatory use of the domestic currency in domestic business transactions in a phased-out manner • Ensure targeted support towards light manufacturing firms by encouraging the financial lending institutions to design tailor made products with low interest rates to support diversification and

		value addition towards the export market for enhanced forex inflows.
Export competitiveness	• Reduce taxes on imports of raw materials, used in light manufacturing thereby reducing input costs of production. • Sensitize and offer vigorous training programs to help businesses utilize market information effectively and develop strategies for entering new markets and diversifying their product offerings with particular attention to women led businesses that may face higher barriers. • Promote value addition of products in light manufacturing beyond raw materials and introduce incentives (such as export tax waivers) so as to make products more competitive in global marketswith gender-sensitive approaches to address the unique challenges faced by women in business. • Streamline customs procedures to reduce delays and costs associated with exporting goods at the border, ensuring that support is accessible to both female- and male-owned businesses.	• Work on aligning local product standards with international requirements to ease restrictions and improve competitiveness, with support systems in place to assist women-owned businesses in meeting these standards
Productivity increases	• Launch gender-inclusive extensive training programs in STEM to equip the future workforce with the necessary skills to operate advanced digital systems. • Update educational curricula to include more practical, hands-on training that aligns with the needs of the light manufacturing industry, incorporating gender-sensitive	• Strengthen STEM education and vocational training to close the skills gap, with targeted initiatives to encourage female participation and address gender disparities in technical fields. • Foster partnerships between educational institutions and the light manufacturing sector to align curricula with industry needs, incorporating gender-

	approaches to ensure equal educational opportunities for all. • Foster collaborations between international firms and the light manufacturing sector for active learning through experience and practice with equipment/tools.	sensitive approaches to ensure equal opportunities for both women and men.
Technology upgrading	• Offer grants and financial incentives to firms investing in technological upgrades, with specific programs designed to support women-owned businesses and encourage gender diversity in technology adoption. • Implement tax relief programs specifically for the purchase of advanced technology and equipment, ensuring that these benefits are equally accessible to women- and men-owned enterprises. • Foster collaboration between universities and industry to drive innovation and technology transfer, with a focus on encouraging female participation in these collaborative efforts. • Provide training programs to help businesses adopt and effectively use new technologies, including initiatives aimed at reducing the gender gap in technical skills and knowledge. • Reduce tax on imports of high-tech equipment.	• Encourage technology parks and innovation hubs to provide a conducive environment for technology-based firms. • Invest in digital infrastructure, including high-speed internet and reliable power supply, to support technology adoption.
Human well-being	• Create and distribute a standalone document outlining clear sexual harassment policies and procedures. • Ensure that all employees are provided with appropriate protective equipment	• Promote the formation of worker unions and advocate for policies that require companies to offer paid leave, ensuring that these policies address the specific needs of both female and male workers. • Ensuring gender specific needs are catered for in the industry with special attention to gender-specific protective equipment and ensuring equitable access to safety resources for all workers.

4.3. Agro-processing

Agro-processing[29] is a vital component of Zambia's manufacturing sector, with strong backward linkages to agriculture and forward connections to various food and beverage industries. As noted by (Chigumira, 2019), agro-processing is the largest contributor to manufacturing in several SADC member states, particularly Zambia and South Africa. The sub-sector benefits from significant government support and private sector investment due to its role in enhancing value addition across the agricultural value chain and driving forward linkages in food processing. This critical role underscores the sector's importance as a key driver of Zambia's economic transformation, as it not only enhances industrial output but also contributes to food security and export diversification.

Along with many African countries, Zambian has recognized the importance of the agro-processing sub-sector for employment creation, value addition and economic diversification and this is reflected in a number of strategic policy documents. The growing demand for food, influenced by population growth, urbanization, climate change, and rising incomes highlights the potential of agro-processing to catalyze effective structural transformation (World Bank, 2018). This is seen in Zambia's key development frameworks such as the 5th to 8th National Development Plan, Vision 2030, the National Industrial Policy (2018), and the National Agriculture Policy (2012-2030). The government supports agro-processing through various policies and strategies as it is recognized as a critical component of the manufacturing sector and a key driver of the growth of the sector.

The objectives outlined in the 2018 Zambia National Export Strategy (NEST) for the agro-processing sector, particularly the processed foods sub-sector, include enhancing product diversification for exports, encouraging investment in the sector, and improving the quality, branding, and packaging of products (GRZ, 2018). The actions proposed by the Strategy include implementing zero-rating import taxes on critical inputs to reduce production costs, enhancing the capacity of industry players to meet international standards and market demand, and promoting product diversity. Other actions involve fostering stronger linkages among sector participants both domestically and regionally through initiatives such as joint ventures and partnerships, supporting investment in the sub-sector to facilitate value addition, and conducting regular market surveys in existing and potential markets to ascertain consumer preferences and statutory requirements.

Despite its potential, the agro-processing sector faces several challenges that hamper its contribution to economic growth and transformation. These include inadequate raw material supplies, limited access to appropriate technology, the inability of locally processed products to compete with imports, energy shortages such as load-shedding, low viability of existing enterprises, and restricted access to credit (ZDA, 2019). Addressing these constraints will require coordinated efforts from both the government and the private sector to improve the sector's resilience and competitiveness.

4.3.1. Diversification in agro-processing

Agro-processing is a critical component of the manufacturing sector in Zambia and broadly remains the largest component of the sector. According to (Chitonge, 2024), the agro-processing share in manufacturing value added (MVA) peaked at 84 percent between 2000 and 2005, but declined thereafter, although it has still accounted for about 40 percent of MVA since 2015. A major component of the agro-processing industries is the food, beverage and tobacco sub-sector. Its share of total agro-

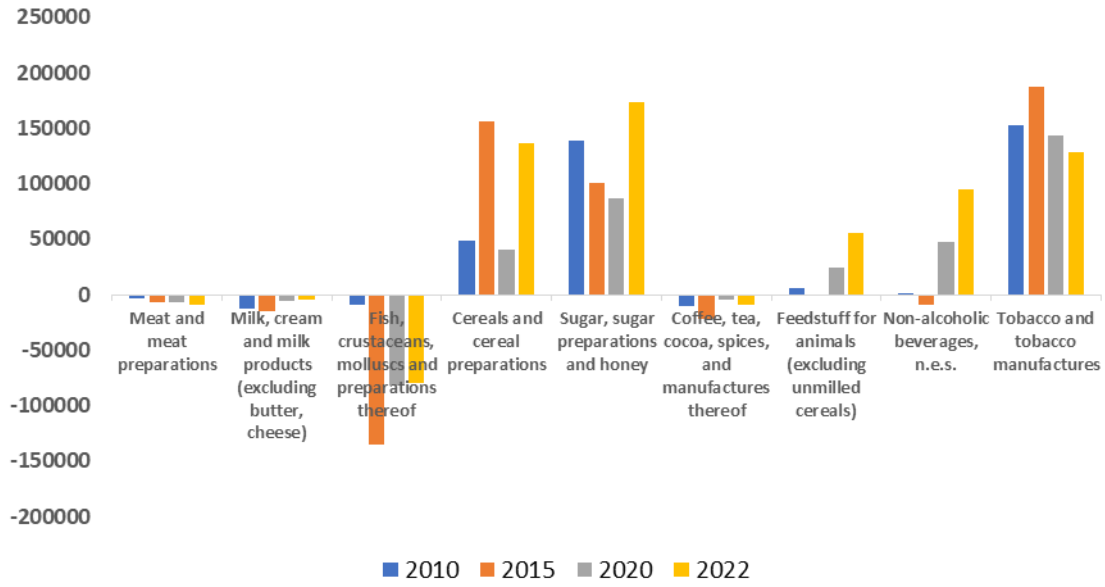
[29] Agro-processing can be defined from a broader angle as a manufacturing sub-sector that adds value to primary materials and intermediate goods produced by the agricultural, fisheries, and forestry sectors (FAO, 1997). More narrowly, it referes to the food-processing and beverage manufacturing sub-sectors.

processing value added has been rising from 2010, peaking at 90 percent of the total value added for agro-processing between 2014 to 2017 before declining to 80 percent in 2020 (Chitonge, 2024).

The food processing segment within agro-processing remains the fastest-growing manufacturing sub-sector, presenting significant investment opportunities. Areas of high potential, such as peanut butter production, cashew nut processing, cassava processing, grain milling, edible oil production, and fruit and meat processing, are expected to not only boost national food security but also create employment and generate export earnings (ZDA, 2019). This shift from primary exports to value-added goods could drive Zambia's broader economic diversification and industrialization efforts.

The trade balances for the specified product categories between 2010 and 2022 show diverse trends, with several sectors demonstrating notable trade surpluses (Figure 15). Cereals and cereal preparations, sugar-related products, feed for animals, and non-alcoholic beverages show growth in the trade surplus. On the other hand, Zambia is a net importer of fish and related products, meat and meat preparations, and milk and milk products. Despite a decrease in the deficit, the trade balance for coffee, tea, cocoa, spices, and related manufactures shows a positive shift.

Figure 15: Trade balance of processed food sub-sectors, 2010-2022 ($ 000)



N.E.S. stands for 'Not Elsewhere Specified,' meaning the product does not fall under any other specific subcategory.

Source: UNCTAD Statistics

Zambia's agro-processing sector produces a diverse range of products. These include alcoholic beverages like gin, whiskey, vodka, and energy drinks, as well as food products such as mealie meal, maize grits, juices, snacks, biscuits, flour, and feedstock. Other items produced include mineral water, ginger drinks, tea powder, ice cream, milk, soya coffee, porridge, sugar, molasses, kombucha, sauces, jams, spreads, and a variety of animal and honey products**.** This demonstrates the potential of the sector.

However, several challenges hinder the ability of businesses in agro-processing to expand their product offerings. Notably, among the firms interviewed more than half had introduced at least one new product or recipe within the last five years, showcasing the sector's potential for innovation and diversification. Key barriers to expanding their product range included high fuel and technology costs, limited access to finance, insufficient market information, and restrictive policy environments. Specific policy-related challenges mentioned were delays in VAT refunds, a high number of required business licenses, burdensome excise duties, and a volatile exchange rate, all of which complicated business planning and growth.

Regarding gender considerations, most firms interviewed in the Zambian agro-processing sector indicated that they did not account for gender differences in the production of goods, as their products were produced for consumption regardless of gender. However, integrating gender considerations into both the production process and the design of products can have substantial benefits, including tapping into diverse market segments, increasing sales, and improving overall business performance.

Globally, companies have recognized that addressing gender in product design and marketing strategies can be a key driver of growth. By recognizing the critical role women play in local economies and adapting their business practices to support them, renowned brands such as Coca-Cola, Dove and Unilever have expanded their market reach, increased brand loyalty, and boosted sales, especially in regions where women drive purchasing decisions.

4.3.2. Export competitiveness in agro-processing

Zambia's export profile is dominated by primary products, but resilience and growth in agro-processing (food, beverages, tobacco) signal promise for the sector. From 2005 to 2021, the performance of Zambia's manufacturing sub-sectors has been varied. While the agro-processing sector—particularly in food, beverages, and tobacco—has shown notable growth, other manufacturing sub-sectors have experienced declines (

Table 4). Specifically, the textile, apparel, and leather industries; wood and wood products (including furniture); paper and paper products; and printing and publishing have all seen reductions in their export and import volumes. The expansion of food, beverages, and tobacco manufacturing indicates that Zambia has competitive strengths in these areas, which could be harnessed to foster broader industrial growth and diversification.

Conversely, the decline in several other manufacturing sub-sectors signals underlying challenges. The reduced performance in textiles, apparel, leather, and related industries points to structural weaknesses that may be affecting their competitiveness and growth potential. Addressing these issues is crucial for enhancing the overall health of Zambia's manufacturing sector. Strengthening these weaker areas through technological upgrades, improved infrastructure, and supportive policies could help achieve a more balanced and resilient manufacturing sector, contributing to Zambia's overall economic transformation.

Table 4: Growth in exports of agro-processing manufactured goods, 2005-2021 (%)

	Exports			Imports		
	2005-2009	**2010-2014**	**2015-2021**	**2005-2009**	**2010-2014**	**2015-2021**
Textiles, wearing apparel and leather industries	-34.46	-2.62	-5.37	-20.14	16.59	18.99
Wood and wood products, including furniture	-36.24	-21.33	-14.45	55.37	13.62	10.85
Paper and paper products, printing and publishing	-2.34	-15.38	-23.50	13.71	5.23	9.82
Food, beverages and tobacco	21.85	19.37	7.64	-24.33	10.33	2.69

Source: Author analysis using WITS data (2005-2021)

Zambia's agro-processing industries benefit from a comparative advantage in various processed foods. Key areas of strength include cereals, milling products, soy products, animal feed, tobacco, non-alcoholic beverages, sugar, and confectioneries. This is illustrated by the Revealed Comparative Advantage (RCA) index, which provides insights into Zambia's productive competitiveness (Jones, 2023). Table 5 shows the RCA trends for agro-processed products from 2015 to 2022. Significant growth in the RCA has been observed for products such as other cereal meals and flour, indicating a

strengthening competitive position in these categories. However, the RCA for unmanufactured tobacco has declined, suggesting challenges in maintaining export competitiveness for this product.

Additionally, fluctuations in the RCA for oil seeds and oleaginous fruits reflect market volatility, while cotton has stable comparative advantage. There are also declines in the RCA for sugar, molasses, honey, and non-alcoholic beverages, signaling potential areas for concern and the need for strategic interventions. Maize exhibits fluctuations in its RCA, reflecting variability in performance. On a positive note, efforts towards diversification are apparent, with emerging products like fruit and vegetable juices, soaps, and cleansing preparations gaining comparative advantage.

These trends underscore the competitiveness of Zambia's agro-processing sector, which is influenced by a range of internal and external factors. Addressing the challenges faced by declining sub-sectors and capitalizing on the strengths and emerging opportunities within agro processing will be crucial for Zambia's economic transformation.

Table 5: Revealed comparative advantage of agro-processed products in Zambia, 2015-2022

	Product Label	2015	2016	2017	2018	2019	2020	2021	2022
1	Tobacco, unmanufactured; tobacco refuse	44.2	28	32	30.6	28.1	39.4	33	25.6
2	Other cereal meals and flour	4.8	4.6	17.8	1.9	3.1	13.9	24.8	23.9
3	Hides and skins (except furskins), raw	2.3	2	8.4	5.9	5.7	9.5	5.2	11.3
4	Oil seeds & oleaginous fruits (incl. flour, n.e.s.)	8.8	6.1	6.3	3.1	5.9	8.2	5.1	11.1
5	Cotton	12.4	13.3	6	6.3	7.6	4.3	3.2	6.6
6	Sugar, molasses and honey	7.8	7.5	6.6	6.9	8.6	4.9	3.7	6.1
7	Non-alcoholic beverages, n.e.s.	1.6	2.4	3.3	3.9	3.7	4.3	6.3	6
8	Sugar confectionery	1.8	1.6	2	2.3	3	3.3	4.5	4.7
9	Maize (not including sweet corn), unmilled	17.8	16.3	7.3	3.5	2.6	2.6	2	3.4
10	Soaps, cleansing and polishing preparations	2.1	2	1.7	1.6	1.8	2	2.4	2.4
11	Cereal preparations, flour of fruits or vegetables	0.5	0.4	0.4	0.9	1.1	1.1	1.4	2.1
12	Feeding stuff for animals (no unmilled cereals)	0.9	1	1.7	1.9	1.6	1.2	2.2	1.6
13	Birds' eggs, and eggs' yolks; egg albumin	1.1	1.5	1.7	2.6	1.7	1.3	1.3	1.5
14	Fruit and vegetable juices, unfermented, no spirit	0.3	0.2	0.1	0	0.1	0.6	1.9	1.2
15	Live animals other than animals of division 03	0.4	0.4	0.4	0.5	0.7	0.5	0.8	1
16	Crude vegetable materials, n.e.s.	1.2	0.9	1.1	1.1	1.1	1	1.1	0.5

N.E.S. stands for 'Not Elsewhere Specified,' meaning the product does not fall under any other specific subcategory.
Division 03. Stands for Fish, crustaceans, molluscs and preparations thereof DimSitcRev3Products_Official_Hierarchy)

Source: UNCTAD Statistics

Numerous challenges that limit export competitiveness include high taxes on inputs, which drive up the cost of final products; poor access to information on export markets; and stringent import policies in other countries. Limited financing for marketing export products, high international permit

requirements, upfront payments for shipping, and complex customs regulations imposed by the Zambia Revenue Authority (ZRA) contribute to delays at the border. External factors like supply chain disruptions from wars and conflicts have further exacerbated these challenges. However, the most prominent concerns highlighted were high transport costs, lack of market information, excessive taxes on imports, and strict standards imposed by other countries. Considering these complications, particularly in border processes and trade facilitation, many respondents preferred to export only a small portion of their production—around 16 percent—with others opting to focus entirely on the domestic market.

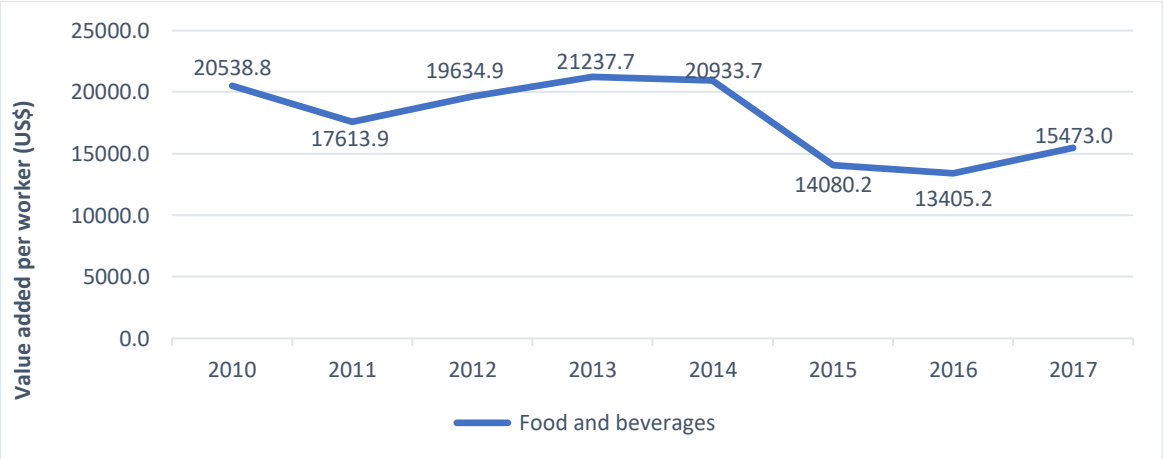
Women-led agro-processing businesses in Zambia face heightened challenges in accessing export markets and finance due to high taxes, stringent permits, and limited market information, which are critical barriers to scaling up and competing internationally. Women-owned enterprises, often smaller in scale, may struggle more, which underscores the need for gender-sensitive trade policies that enhance competitiveness by improving support for female entrepreneurs. For example, studies have shown that women entrepreneurs face greater difficulties accessing finance, which could limit their ability to invest in meeting international standards or expanding export operations.

Countries like Rwanda have addressed some of these gendered challenges by implementing gender-sensitive trade policies, offering specific financing schemes and export promotion programs targeting women-owned businesses. For instance, Rwanda's National Export Strategy includes tailored support for women entrepreneurs, improving their access to both domestic and international markets. Integrating a gender perspective in Zambia's export policies could improve competitiveness by ensuring that women-owned agro-processing businesses have access to the necessary resources, financing, and market information. This could involve creating gender-responsive financial instruments, providing targeted support for women in agro-processing, and addressing the structural barriers that disproportionately affect female entrepreneurs in accessing international markets.

4.3.3. Productivity in agro-processing

Productivity as measured by sectoral value added per worker shows a volatile pattern, with some recovery in recent years. Specifically, the food and beverages sector demonstrated a slight recovery, with the value added per worker increasing from $14,080.2 in 2015 to $15,473.0 in 2017, driven mostly by increased demand arising from population increases.

Figure 16: Agro-processing value added per worker, 2010-2017 ($)



Source: Constructed from UNIDO data

Despite Zambia's strong productivity score in the ATI 2023 report, significant skills gaps in STEM, ICT, and technical expertise among agro-processing workers limit innovation, data-driven decision-making, and labor productivity, impacting sector growth. Findings from the CETO field work showed significant skills gaps in STEM, ICT, and technical expertise among workers in the agro-processing sector. The survey identified various challenges including shortages in STEM, analytical, and creative skills. One beverage firm that had no female in its management reported a very productive and highly skilled labor force with bonuses applied as a reward system.

Poor analytical skills also prevent effective data interpretation for informed decision making, while the deficiency in creativity limits the development of innovative solutions and products. Most workers are inadequately prepared due to an education system that lacks practical, hands-on experience, leading to a workforce that fails to meet industry demands and expectations. These skills shortages reduce efficiency and productivity, affecting firm competitiveness, and making it difficult to adapt to new technologies and market trends, ultimately reducing labor productivity.

4.3.4. Technology upgrading in agro-processing

There is a very strong linkage between agriculture and agro-processing – agricultural output feeds into agro-processing as the main input. The agro-processing sector obtains the majority of its inputs from the agriculture sector and its growth has the potential to boost productivity growth in agriculture. With growing domestic and regional demand for agro-processed foods arising from growing population, abundant inputs and changing consumption patterns, Zambia can exploit the sector's potential to transform its economy.

The sector's productivity is currently being hindered by negative climatic conditions including drought and high temperatures. The sector also has forward linkages to other sectors such as the manufacturing and services, driving growth in downstream activities like packaging, transport, and distribution. According to the Zambia Development Agency (2020,) the growth of agro-processing is driven by the ever-growing population, rapid urbanization, and changing diets among Zambian households leading to rising demand for processed foods. There is also an abundance of raw materials for inputs in the food-processing industries such as maize, wheat, rice, groundnuts, milk and broiler chickens in the region and elsewhere.

Players in the agro-processing sector face significant challenges in technology upgrades, with the majority of firms using operational technology such as company websites and company email, while few adopt automation in their production processes. Technology upgrading is mainly hindered by high costs of technology and limited access to affordable finance to access modern technology. Additionally, skills shortages and the lack of know-how to use of sophisticated ICT hardware and software have hindered the adoption and maintenance of modern digital systems essential for improving efficiency and competitiveness among the firms. Furthermore, a lack the technical expertise required to operate advanced machinery was observed.

4.3.5. Human well-being in agro-processing

According to (UNIDO, 2024), the food and beverages sub-sector had the highest share of total manufacturing employment at 30.4 percent, while the tobacco sub-sector accounted for the smallest share at just 1.0 percent. A number of agro-processing firms interviewed were providing employee

benefits, though significant gaps remained in areas such as labor rights, paid leave, and comprehensive support for informal workers. While all firms offered social security through the National Pension Scheme Authority (NAPSA), and more than three-quarters provided medical insurance, it is essential to note that these benefits are generally available only to formal employees, who make up a minority of the workforce in Zambia. This leaves a large portion of the workforce—especially those in the informal sector—without adequate social protection, underscoring the urgent need for expanded labor protections.

For workers in the informal sector, who form the majority in Zambia's agro-processing industry, there is limited access to crucial benefits such as health insurance, paid leave, or retirement savings. This creates a vulnerable class of workers who are often excluded from safety nets that could improve their job security and well-being. Expanding NAPSA and similar benefits to cover informal workers, as well as creating pathways for these workers to transition into formal employment, could significantly enhance worker protections and overall labor market stability.

Regarding gender considerations, few firms reported that they made deliberate efforts to employ members of marginalized groups, including women and differently abled individuals. The absence of specific recruitment policies and adapted facilities for physically challenged people are obstacles on the road to realizing the full potential of an inclusive workforce.

A striking gender shortcoming that was observed is the absence of paternity leave. Most firms offer maternity leave to women, but the lack of paternity leave for men reinforces traditional gender roles, placing the burden of childcare primarily on women. This imbalance not only perpetuates inequality at home but also in the workplace, where men may face barriers to full productivity in efforts to support their partners in an environment that does not recognize the care contributions of men. Offering paternity leave could reduce the strains that men face in their work-life balance and help to distribute caregiving responsibilities more equitably between men and women, promoting gender equality both at home and in the workplace. Countries such as Sweden have successfully implemented policies that mandate paternity leave, allowing men to take an active role in caregiving without penalizing their careers. This has led to better work-life balance and has positively impacted women's participation in the labour market.

In terms of worker safety, only 13 out of 17 survey firms provided safety and protective equipment. This not only exposes workers to unnecessary risk but also highlights the need for stronger enforcement of occupational safety regulations, particularly for those in hazardous roles, which often include women in informal positions.

Corporate social responsibility was noted in some firms. One company reported distributing by-products to the local community and supporting its employees' academic advancement while maintaining their salaries during studies. Another firm emphasized the health benefits of its products for the general population. However, these efforts often fell short of addressing systemic issues such as labor rights, gender equality, and inclusion of informal workers.

Finally, while 12 out of 17 firms had documented policies on sexual harassment, the lack of such policies in the remaining firms is a concern. This absence of formal mechanisms for reporting and addressing harassment, combined with the lack of unionized labor, leaves many workers, particularly women, vulnerable to exploitation and abuse.

Gender dynamics also play a significant role in shaping the agro-processing sector. While agro-processing is recognized as a crucial area for economic development, women's participation in the sector remains limited, particularly in higher-value roles such as technical or managerial positions. The sector is predominantly male-dominated, and many women are concentrated in lower-skilled, lower-wage positions. This gender gap can inhibit innovation and limit the sector's full potential. As shown in Chapter 4, women are heavily underrepresented in technical roles, which is often attributed to a skills gap that arises from gender disparities in education, particularly in STEM fields. Addressing this issue requires a more gender-inclusive approach to workforce development, ensuring that women have access to the necessary training and resources from an early stage. One respondent noted that simply increasing female participation later in the pipeline will not be effective unless foundational skills are built from the start.

Furthermore, gendered social roles, such as caregiving responsibilities, often limit women's participation in jobs that demand long or irregular working hours. Policies that support work-life balance, such as flexible working hours and family-friendly provisions, would be crucial to ensuring greater inclusion of women in the sector. By integrating gender considerations into strategies for enhancing labor productivity, technology adoption, and investment in agro-processing, Zambia can unlock the full potential of this vital sector for both economic growth and social development.

While firms in the agro-processing sector in Zambia are making strides in offering benefits to formal employees, there is a pressing need to extend protections to the informal sector and address gender inequalities in the workplace. Implementing gender-sensitive policies, such as paternity leave and safety provisions for women and differently abled individuals, alongside expanding social security to informal workers, could enhance both equity and productivity in the sector.

4.4. Recommendations for agro-processing

	Short- and medium-term recommendations	Long-term recommendations
Diversification	• Simplify access to financial products for agro-processing firms, especially those under CEEC and CDF. • Establish centralized information hubs to provide updated market data, trends, and opportunities. • Simplify and expedite procedures for VAT returns with ZRA. • Subsidize 50 percent of fuel costs for firms in registered agro-processing firms to reduce high transport costs.	• Provide financial incentives or grants for technology upgrades to lower the high costs and encourage investment in modern equipment. • Implement macroeconomic policies aimed at reducing exchange rate volatility to provide a more stable business environment.
Export competitiveness	• Provide tax incentives on raw materials and imports essentials for agro-processing products. • Impose exercise duty on the quantity of alcohol in a beverage rather than on the quantity of alcohol produced by a firm.	• Work on aligning local product standards with international requirements to ease restrictions and improve competitiveness.

	• Simplify Customs procedures to reduce delays and costs associated with exporting goods.	
Productivity increases	• Invest in ICT training initiatives to build a workforce capable of handling advanced digital systems. • Incorporate gender-inclusive, practical and hands-on training in educational programs to better prepare students for the workforce. • Encourage continuous professional development and training for employees to keep pace with technological advancements.	• Strengthen STEM education and vocational training to close the skills gap. • Foster partnerships between educational institutions and the agro-processing sector to align curricula with industry needs.
Technology upgrading	• Provide financial assistance or subsidies for the acquisition of advanced technology. • Develop financial products with favorable terms specifically for technology upgrades. • Offer grants and incentives to firms investing in technology that enhances productivity and competitiveness. • Provide training programs to help businesses adopt and effectively use new technologies.	• Encourage collaboration between the government and private sector to fund and support technological advancements.
Human well-being	• Promote unionization and ensure workers receive paid leave and maternity benefits. • Ensure all firms provide necessary safety and protective equipment to their workers. • Make it mandatory for all firms to enforce strict policies against sexual harassment in all firms. • Develop infrastructure and facilities to accommodate employees with physical challenges.	• Encourage all firms to offer comprehensive social security benefits, including medical insurance and retirement plans

4.5. The digital economy

Digitalization has undeniably become a crucial driver of economic growth and transformation worldwide. Countries are increasingly moving away from manual processes—such as tax filing, company registration, advertising, financial transactions, education, commerce, and trade—towards more efficient digital solutions. This transition to digital technologies enhances efficiency and productivity by accelerating processes and streamlining operations. Technologies like robotic process automation and artificial intelligence (AI), including machine learning, have proven to outperform human capabilities in speed and accuracy. Since the early 2000s, the global momentum of digitalization has significantly impacted economic activities, productivity, and other economic outcomes (World Bank, 2016). The digital infrastructure—comprising connectivity, the Internet of Things (IoT), and data repositories—serves as a fundamental foundation for the digital economy (World Bank, 2020).

In Zambia, the ICT sector has gained prominence in the development agenda. Vision 2030 emphasizes the role of digital technologies in all sectors of the economy as essential for social and economic progress. This includes expanding connectivity through fiber optic and high-capacity transmission technologies, increasing phone access per 100 people, and boosting internet access. The 8th National Development Plan (8NDP, 2022-2026) reinforces the integration of digital technologies into business processes to enhance efficiency and productivity. The recently launched National Digital Transformation Strategy (2023-2027) builds on these goals with five strategic pillars: digital infrastructure, digital platforms, digital services, digital literacy and skills, and digital innovation and entrepreneurship. The strategy also identifies digital government, a supportive policy and regulatory environment, and enhanced data security as critical enablers for digital transformation.

Zambia's policy and regulatory frameworks have progressed to support digital transformation. Key legislation includes the Information and Communications Technology Act, the Smart Zambia Electronic Government Master Plan, the Data Protection Act, and the Information and Technology Association of Zambia Act. A conducive policy environment facilitates the adoption of digitalization by both the private and the public sector. The Ministry of Technology and Science oversees the ICT sector, supported by agencies such as the Zambia Information and Communication Technology Authority and the E-Government Division under the Smart Zambia Institute.

Despite the advancements, significant disparities persist between rural and urban areas. Only 83 out of 116 districts have fiber optic presence, leaving rural populations underserved, particularly due to limited access to electricity. Additionally, existing ICT infrastructure remains inadequate and outdated, hindering the application of emerging technologies. The 2022 Gap Analysis done by the Zambia Information and Communications Technology Authority revealed a shortage of 998 communication towers needed to ensure connectivity in underserved areas, despite a total of 3,457 towers. There are also disparities in 2G, 3G, 4G, and 5G coverage, with mobile network operators underinvesting in mobile broadband in rural areas due to low demand and limited digital literacy.

Addressing these gaps will be critical for advancing service accessibility and economic integration, particularly in rural areas. The Zambian government plans to leverage a mix of technologies, such as satellite and fiber connectivity, and establish Digital Transformation Centers in underserved regions to bridge these gaps, according to the 2024 National Budget.

The CETO study underscores the importance of ICT in transforming Zambia's economy, focusing on agritech, fintech, and e-commerce. This aligns with national policies, including Vision 2030, the 8NDP,

and the 2024 National Budget, which recognize the role of technology in enhancing productivity, financial inclusion, and market efficiency. Full adoption of ICT innovation is expected to enhance Zambia's competitiveness, enabling start-ups, small and medium enterprises (SMEs), and marginalized groups—including women—to penetrate markets and gain visibility. The use of electronic processes will also help firms capitalize on market inefficiencies in real-time, promoting broader economic inclusion and growth.

4.5.1. Overview of ICT development in Zambia

The ICT sector has experienced tremendous growth over the years. This is evidenced by the increased number of active mobile cellular subscriptions, internet subscriptions, communication towers and telecommunication sites. The number of active cellular subscriptions has increasedby 32117 percent to 19.8 million in 2022 from 61,578 subscribers in 2000. The number of commercial internet subscriptions has increased by 16397 percent to 86,446 in 2022 from 524 internet subscribers in 2000 (Annual Economic Report, 2003 and ZICTA IPS statistics).

The growth in the number of internet subscriptions has been supported by the growing number of internet service providers. In 2000, ZAMTEL was the only commercial internet service provider (ISP). The other ISPs present in the market, Zamnet and Coppernet, provided data communication links for private networks (Esselaar, 2003). By the end of 2022, there were 19 internet service providers (ZICTA, 2022). The increased participation of service providers in the ICT sector can be attributed to the introduction of the ICT Act No.15 of 2009 and its 2012 regulation, which promotes universal access and competition through universal ICT service provision.

According to the International Telecommunication Union (ITU)[30], the population covered by a mobile-cellular network by 2022 was estimated at 97 percent, while the population covered by at least a 3G mobile network was 95 percent, and the population covered by at least a 4G mobile network was 91 percent. The gross value added of the ICT sub-sector using 2010 constant prices has grown at an average of 23.47 percent to 14,682.01 million in 2022 from 1,587.52 million in 2010 (

The ICT sub-sector, being an enabler of growth, has supported the expansion and productivity growth of other sectors. Notable among them are the financial, agricultural, and commerce and trade sectors through fintech, agritech and e-commerce.

Figure 17). A strong increase in growth rate was observed between 2020 and 2022 following the adoption and increased usage of ICT services for continuity of economic activities in view of the lockdowns, social isolation as well as social distancing restrictions imposed during the COVID-19 pandemic. The sharp increase in value addition observed in 2011 arose from the increase in internet penetration boosted by increased provision of wireless internet services by mobile operators (MoFNP Annual Economic Report, 2011). Additionally, the increased number of telecommunication sites and communication towers in line with the government's policy of increasing coverage to unserved and underserved areas under the SMART Zambia program explained the continuing growth in value addition (MoFNP Annual Economic report, 2017).

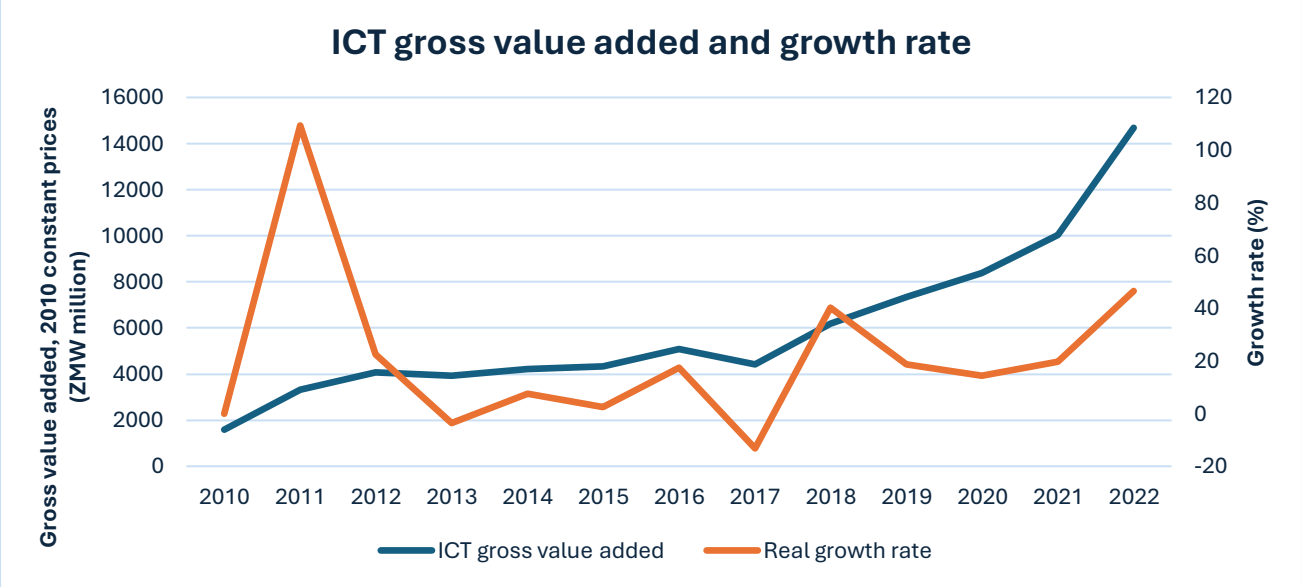
The exponential increase observed after 2018 could mainly be attributed to the government's drive for a coordinated approach to implementation of ICT projects in the public service. Increased

[30] Digital Development (itu.int

government investment has aimed to ensure that the requisite ICT infrastructure is in place, including deployment of national data centers and broadband networks and the deployment of shared services to improve internal collaboration and efficiency in operations. This works through the Government-Wide Area Network (GWAN) supported by the Electronic Government Master Plan (2018-2030) and a strengthened regulatory environment. The program has enabled private sector firms to leverage government infrastructure for their service delivery leading to an increased number of new entrants. The result is more mobile phone service and internet providers, commencement and expansion of metro optic-fiber networks and wireless networks especially in rural areas, and enhanced internet provision of points of presence in provincial centers. Expansion of the GWAN is earmarked to connect more sites, covering mostly district administrative centers, local authorities, and border control points (Smart Zambia, 2022).

The ICT sub-sector, being an enabler of growth, has supported the expansion and productivity growth of other sectors. Notable among them are the financial, agricultural, and commerce and trade sectors through fintech, agritech and e-commerce.

Figure 17: Gross value added of the ICT sub-sector, 2010-2022 (ZMW million, 2010 constant prices)



Source: MoFNP, Zamstats

4.5.2. Electronic financing (Fintech)

Zambia's fintech landscape has grown considerably from the 25 companies identified in the market scoping exercise undertaken by the UN Capital Development Fund (UNCDF) in 2018 to 57 companies in 2023[31]. The 2023 UNCDF study found that of the 57 fintechs identified, there appeared to be an even spread of business focus areas, from business-to-business (B2B), business-to-customer (B2C), and a combination of B2B and B2C activities. The B2B category had remained the leading category of fintech in Zambia, with the majority of B2B services including payment switching or payment

[31] UNCDF. 2023. Fintech Landscape study: Trends, challenges and opportunities for growth observed in the Zambian fintech ecosystem

gateways. The promotion of financial inclusion, universal access to expanded service provision and other innovations have been the main driver of the growth of the fintech sub-sector.

The progress towards financial inclusivity can be traced from Zambia's first Financial Sector Development Plan (FSDP, 2004-2009) which recognized the deficit in the provision of financial services to low-income households in the rural and peri-urban areas as a significant challenge and outlined a series of legal, regulatory, and infrastructure reforms to address this situation. The FSDP was designed to provide strategic guidance and coordinate holistic financial sector development initiatives. It was followed by the FSDP II (2010-2015), which explicitly prioritized financial inclusion, with expanded access to finance as one of three strategic pillars. This led to the development of the Bank of Zambia new strategic plan for 2016-2019, which set the strategic objective of increasing formal financial inclusion by 16 percentage points to enhance living standards.

To achieve universal access and promote usage of a broad range of quality and affordable financial products and services in both the formal and informal sectors, the government introduced the National Financial Inclusion Strategy (NFIS) 2017-2022, anchored on the FSDP, and extended it to 2023. During the implementation of the NFIS, the country advanced its level of financial inclusion from 59.3 percent in 2015 to 69.4 percent in 2020[32]. However, the NFIS review undertaken in 2023 highlighted outstanding challenges, including low financial literacy, high income, gender and other social disparities, with women more financially excluded. This led to the drafting and launch of the NFIS II (2024–2028), which aims to create an inclusive and robust financial ecosystem. The Strategy promotes access to and informed usage of a broad range of quality and affordable financial products and services that meet the needs of all individuals and businesses in a fair, simple, dignified and sustainable manner.

The financial system is regulated under the Bank of Zambia. The regulatory framework that governs the financial system in Zambia is the Banking and Financial Services Act No. 7 of 2020 and the National Payment Systems Act (NPSA) No. 1 of 2007. These Acts provide a licensing system for the conduct of banking and the provision of other financial services, as well as regulation of payment system operations to ensure their dependability, security, and safety. Under the NPSA, the Bank of Zambia has issued directives governing electronic payments. Some guidelines that the central bank has released to facilitate fintech include the National Payment Systems Directives on Electronic Money Issuance 2018, the National Payment Systems on Automated Teller Machine, Point of Sale, Internet Transactions and Mobile Payments of 2019, and the National Payment Systems (Money Transfer Services) Directives of 2021. The introduction of these payment platforms have significantly improved the operations of financial firms in the digital space.

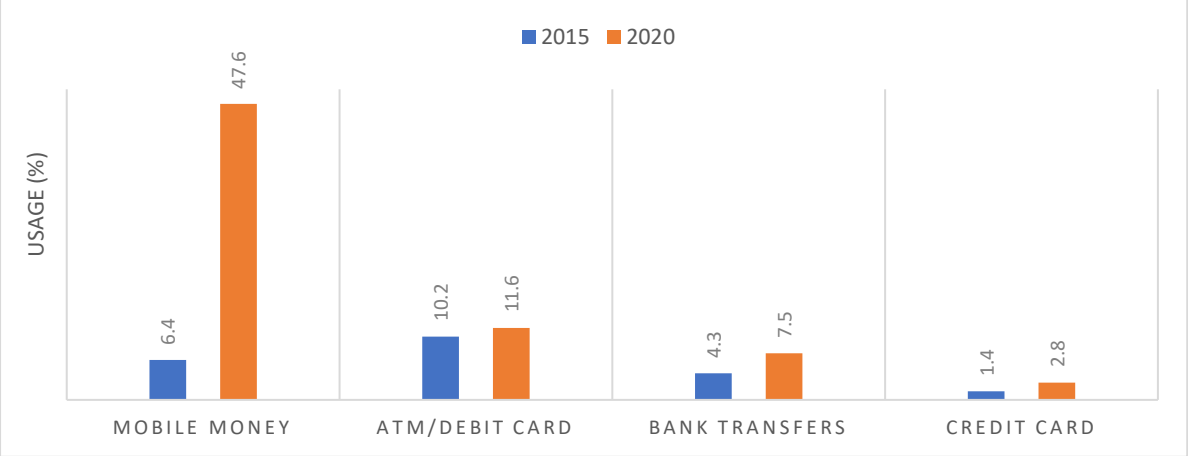
The banking sector has recognized the various innovations in digital financial systems through fintech companies as platforms for strategic partnerships. To support financial inclusion through inclusive innovations, the Bank of Zambia on 1st April 2021 issued the Regulatory Sandbox Guidelines for the deployment of a variety of innovative products and services and other emerging financial technologies. The Guidelines were issued to underpin small-scale, live testing of payment system innovations in a controlled environment operating under special time-bound exceptions under the Bank's supervision before becoming fully operational.

Over the years, the banking sector has adopted many technologies that link their internal transactions, and also link them to non-bank financial institutions and mobile network operators on innovative

[32] FinScope Surveys 2015 and 2020

platforms such as the National Financial Switch. By 2020, significant movement towards the adoption of digital financial systems from paper-based transactions was evident when the purchase of goods and services using electronic payment methods increased to 48.7 percent from 14.4 percent in 2015. Mobile money became the most widely used electronic payment channel at 47.6 percent of transactions compared with 6.4 percent in 2015, while credit cards were the least utilized at 2.8 percent compared with 1.4 percent in 2015. Other electronic payments used were ATM/debit cards at 11.6 percent compared with 10.2 percent in 2015, and bank transfers at 7.5 percent compared to 4.3 percent in 2015 (Figure 18**Error! Reference source not found.**).

Figure 18: Usage of electronic payments for purchases of goods and services, 2015, 2020 (%)



Source: FinScope, 2020

The increase in the use of electronic platforms for the purchase of goods and services was partly driven by the efforts and campaigns of the central bank to promote a cash-lite society and enable the delivery of financial services to rural and remote areas. This drive was overtaken by the onset of the COVID-19 pandemic, which turned out to provide greater impetus for the use of digital financial services to facilitate contactless financial transactions, hence reducing opportunities for the spread of the disease (FinScope, 2020).

Mobile money systems, as observed from Figure 18 above, have become the preferred payment platform and have brought affordable and accessible payment options to previously financially excluded segments of the population. Zambia was in fact one of the first developers of mobile money systems through Celpay in 2002, but it failed to take off (UNCDF, 2019) Over the years, there has been an increase in access to mobile money providers and this has facilitated the growth of mobile money transactions. This growth was supported by the introduction of the National Payment Systems Act (NPSA) No. 1 of 2007 and its implementation requirements. By 2022, mobile transactions grew to a value of K295.8 billion and volumes of 1.6 billion transactions, from K1.2 billion and 17.4 million transactions in December 2012 (BoZ NPS, 2022).

Overall, Zambia has been making significant progress towards increased financial inclusion. The first FinScope survey, conducted in 2005, found that only 33.7 percent of Zambian adults were financially included in some way, leaving two thirds of all Zambian adults financially excluded. By 2009, financial inclusion increased by 3.6 percentage points from 33.7 percent of adults in 2005 to 37.3 percent in

2009. By 2020, the level of financial inclusion rose by 10.1 percentage points to 69.4 percent in 2020 from 59.3 percent in 2015. Subsequently, financially excluded adults decreased to 30.6 percent from 40.7 percent. The survey showed that there were more formally included adults in urban areas (80.9 percent) compared with 52.2 percent in 2015 whereas in rural areas, formally included adults had increased to 44.2 percent in 2015 from 26.6 percent in 2015. With regard to gender distribution, there were more formally included males (64.4 percent) than females (58.6 percent) in 2020. Conversely, there were more females who were informally included than males.

According to the Global Findex Database, 2021, Zambia's overall account ownership in 2021 remained unchanged from 2017, with financial institution account ownership decreasing by 12 percentage points, from 36 percent in 2017 to 24 percent in 2021, with about 67 percent of unbanked adults living in the rural areas. Mobile money account ownership increased by 14 percentage points from 28 percent to 42 percent. The distribution of population using a digital product or service remains skewed towards males. According to Digital 2023 Zambia, among the total population (aged 15+) that owned a digital account or carried out a digital transaction by February 2023, more males than females used a digital product or service.

Zambia has largely remained a cas-based economy despite the availability of electronic payment solutions. According to the National Electronic Commerce Strategy (2023), most consumers are reluctant to use electronic payments on delivery options due to cultural preferences and safety concerns. Similarly, some small-scale businesses do not accept electronic or mobile payments but simply prefer cash, mainly due to a lack of mindset change.

For regional cross-border trade, payments were made through the SADC Real Time Gross Settlement System (SADC-RTGS) and the COMESA Regional Electronic Payments and Settlement System (REPSS). In 2022, the value of payments processed by Zambian commercial banks on the SADC-RTGS increased by 67.8 percent to ZMW9.9 billion in 2022 from ZMW5.9 billion. The volume of payments also increased by 163.8 percent to 39,820 from 15,095 in 2021. The reason for the increase was attributed to the recovery of trade between South Africa and Zambia as well as the onboarding of one Zambian bank on the SADC-RTGS. On the COMESA REPSS, however, the value and volume of transactions received by Zambian banks declined to $11.8 million in 2022 from $14.7 million in 2021 and to 111 transactions in 2022 from 121 transactions in 2021. This was due to the absence of payments from Zambian banks on this platform (BoZ NPS, 2022).

4.5.3. Electronic commerce (E-commerce)

The use of electronic payment platforms for the purchase of goods and services in Zambia has gained prominence in recent years. Electronic commerce refers to the buying and selling of goods and services over the internet. It involves the exchange of money for products or services, as well as the transfer of data and information necessary for completing transactions. Zambia's e-commerce sub-sector has grown over the years although no regulations exist for the sector save the recently launched National Electronic Commerce Strategy of 2023. This has identified areas of strategic focus and interventions to tackle bottlenecks in the e-commerce sector including regulation of e-commerce and export promotion through e-commerce.

The National Productive Gap Assessment (2022) reported a high adoption rate for electronic commerce through digital financial services. This was mostly for food delivery services and tourism-related services such as transportation through the development of mobile taxi applications, among

others. By December 2023, there were 10 main taxi applications[33] developed in Zambia to facilitate urban mobility, namely Yango, Ulendo, Hover Taxi, ZamCab, Ubuntu, Book-it Taxi, MyRide, Twenshe, ZIZA and My Cab Zambia.

Another development in the e-commerce sub-sector was the launch of the Zambian Commodities Exchange (ZAMACE) in 2015 following its establishment under the Zambia Agricultural Credit Act 35 of 2010. The Zambian Commodities Exchange, a dynamic digital, agricultural commodity exchange provides certification of warehouses, issuance of "negotiable" warehouse receipts, provision of a trade platform which includes buying and selling of commodities, ensuring compliance to industry acceptable grades and standards, coordinating the Zambian Commodities Futures Contract with the Johannesburg Stock Exchange, and providing market information (MUSIKA, 2015). ZAMACE is committed to the development of the whole agricultural ecosystem with the aim of connecting the primary producer to the Exchange thereby paving the way for sustainable and inclusive growth of Zambia and the region's agrarian economy.

This development originates from the time when there was no evidence of online commerce in Zambia in 2002 and people preferred paper-based transactions, despite notable growth in the number of websites registered (Esselaar, 2003). This CETO study identified more than 7 out of the 17 interviewed firms in the digital space as firms operating in e-commerce while all 17 operated as online marketplaces. On the other hand, the government has stepped up the electronic provision of services through the Zamportal, which was introduced in September 2019. To date, there are more than 240 services provided, including filing of taxes and annual returns.

4.5.4. Agricultural technology (Agritech)

The agricultural sector has seen a number of digital innovations developed over time. The Digital Agriculture Country Study (DACS) carried out by the Centre for Coordination of Agricultural Research and Development for Southern Africa and the World Bank Group in 2021/2022 identified six agricultural innovations operational in Zambia. The six (6) were in: digital advisory services; agriculture-digital financial services; digital procurement; agri-business e-commerce; and smart farming. Digital advisory was the most common-use case provided by number of innovations, followed by agriculture e-commerce, and digital procurement. The study found a total of 26 electronic service innovations in Zambia, with 12 being homegrown digital solutions and 14 being shared, regional innovations.

Generally, the agriculture sector has not fully utilized the benefits of ICT in production. Digital agriculture has been underexploited mainly because about 90 percent of farmers are small-scale subsistence farmers predominantly based in rural Zambia. The poor ICT infrastructure in rural areas serves mainly for electronic procurement processes of accessing inputs through the government electronic voucher system under the Farmer Input Support Programme (ITA, 2022). The e-voucher was launched in the 2017/2018 farming season through a web-based platform called the Zambia Integrated Agricultural Management Information System (ZIAMIS) under Smart Zambia. ICT has also been used in the provision of extension services through radio, television and text messages to provide advisory services for good agricultural practices.

While adoption of agritech has been slow among small-scale farmers, commercial farmers have made attempts at more advanced uptake of ICT in their agriculture production. One such commercial

[33] Top Taxi Apps in Zambia: Revolutionizing Urban Mobility.

farming entity is Syngenta, which has used drones for research and development (Chikoti, 2023). Drone technology is being promoted by the National Remote Sensing Centre (NRSC), while Delta Drone International has been spearheading the use of drones to apply pesticide to get rid of army worms. Another firm, among others promoting the use of drones, is a local drone technology firm, Sunagri Investment Zambia Limited, incorporated in 2017, which has grown its drone capacity from carrying four liters of pesticide covering one acre of land in 2018 to 40 liters that can spray five to six hectares in 2023.

4.6. DEPTH analysis of the digital economy and areas for growth

SMEs have had a gradual uptake of ICT services over the years. The ITC SME Competitiveness Survey carried out in 2019 on 242 SMEs in the Lusaka, Copperbelt and Central provinces of Zambia found that more than half of the 36 firms surveyed in the services sector reported access to a good quality Internet connection. About 44 percent of them maintained a company website and 56 percent of them were advertising their businesses on social media platforms.

4.6.1. Diversification in the digital economy

There is a diverse range of digital services provided by SMEs in the ICT space. The CETO study interviewed 17 digital firms that were offering a wide range of digital services including fintech, agritech, e-commerce and innovation hubs. The services being provided included software development and marketing, online platforms specialized in the supply of irrigation systems, veterinary supplies and pesticides, mobile applications for financial transactions, distribution of hybrid brick-and-mortar and ICT products and services, and design and innovation services. There was also an online platform for informal savings for village banking, online transactions for day-old chicks, stock feed for all animal husbandry and livestock of up to 100 product lines. Other services included domain registration, web hosting, Wordpress hosting, web design, professional emails, and e-commerce vending software. The largest number of firms were in the e-commerce space, followed by fintech. Agritech had the lowest number of firms.

Looking ahead, firms expressed interest in developing products that leverage emerging technologies and trends. These include artificial intelligence business products, integration with major online platforms like those in China, and the potential introduction of cryptocurrencies pending regulatory support in Zambia. There are also plans to merge platforms with neighboring countries and develop high-tech products in line with upcoming tech trends. Educational marketing, standardization of schools, and the creation of online marketplaces for shares and bonds are also on the horizon. Notably, firms aim to tap into the green cities initiative by offering seamless online shopping solutions that reduce the need for travel and promote eco-friendly delivery methods. Despite these promising developments, ICT firms face significant challenges in diversifying products.

In analyzing the challenges faced by e-commerce firms in Zambia, it is essential to consider the various business models they employ. As revealed by the CETO study, these models generally follow one of two approaches. The first revolves around the online platform itself, with a firm or company directly selling physical goods or a third-party developer facilitating transactions, which generates revenue through the software. For firms operating within this model, a key challenge lies in securing reliable payment systems. Despite the authorization of multiple payment systems by the Bank of Zambia, e-commerce firms continue to struggle with high transaction fees and limited integration with other payment options. These obstacles not only hinder the seamless processing of payments but also restrict the firms' ability to expand their product offerings and conduct international transactions. As

one respondent aptly noted, "How can one diversify if they can't even ensure payment for the few products they already offer?"

The second challenge for e-commerce firms emerges in the physical realm, where goods must be delivered after an online transaction is completed, particularly for non-digital products. In this context, a dependable transportation system is critical. However, Zambia's unreliable transportation infrastructure, high delivery costs, and limited access to remote areas severely impact firms' ability to deliver products efficiently. These logistical challenges result in delayed deliveries and poor customer satisfaction, which in turn limit the potential for product diversification. Without the ability to scale operations and ensure timely delivery, e-commerce firms find it difficult to introduce new products and grow their businesses. The combined impact of payment system inefficiencies and logistical hurdles presents substantial barriers to the diversification of e-commerce offerings in Zambia.

The fintech sector encounters its own set of challenges that impede product diversification, as revealed in the CETO study interviews. Fintech start-ups and small businesses often face high collateral requirements and stringent lending conditions, making it difficult to secure the necessary funding for innovation and expansion. Regulatory uncertainty also affects the fintech landscape. The evolving regulatory environment, including ambiguous cryptocurrency regulations and data protection laws, creates a climate of unpredictability that can delay investment and the development of new financial products. Additionally, building trust in digital financial services is essential but challenging with the rise in financial crimes through digital platforms that has made potential clients wary. Financial literacy and trust-building measures are needed to encourage adoption of digital financial products, in view of the strong preference for cash transactions among some segments of the population. Cybersecurity risks further complicate the fintech sector, with firms needing to invest heavily in robust security measures to protect user data and financial transactions, which can be prohibitively costly and constrain growth.

Zambia's agritech sector, while in its infancy, faces significant barriers to product diversification and innovation. This is primarily due to high costs of inputs and limited access to advanced technologies such as drones and precision farming tools. Furthermore, limited digital infrastructure, particularly in rural areas, and low technological literacy among smallholder farmers hamper the adoption of tech-driven farming solutions. Financial constraints, including expensive credit and restrictive lending conditions, also prevent agritech firms and farmers from investing in new tools. Additionally, the weak agricultural value chain, with inadequate storage and distribution facilities, stifles demand for innovative solutions. Gender disparities exacerbate these challenges, as women, who are crucial to Zambian agriculture, face obstacles in accessing technology and financial resources. Addressing these issues through improved access to technology, finance, and infrastructure, while promoting gender inclusion, is vital for unlocking the sector's growth and innovation potential.

4.6.2. Export competitiveness in the digital economy

The value of ICT-related goods among Zambia's total exports has been increasing. Between 2000 and 2020, the value of ICT exports in total exports increased from $195.78 in 2000 to $3,367.084 in 2020. The value of ICT exports reached a record high of $250,368 in 2016 (UNCTAD, 2000-2020). This could be attributed to the increased drive towards adoption of ICT processes through a supportive regulatory environment. The proportion of ICT goods in total exports rose from 0.02 percent in 2000 to 0.04 percent in 2020 and fell slightly to 0.03 percent in 2021 (UNCTAD, 2024).

Zambia's ICT products have become relatively competitive on price over time. According to the ITU (2023)[34], the ICT price basket for most Zambian products has become cheaper compared with the African average in 2023 as opposed to 2013 (Table). According to the World Bank (2020), Zambia had the sixth cheapest broadband rate provider in Africa for a 1 gigabyte prepaid mobile bundle through ZAMTEL.

Table 6: Zambia's ICT prices compared with the African average, 2013 and 2023

	2013		2023	
ICT product	**Zambian price in USD**	**African average in USD**	**Zambian price in USD**	**African average in USD**
Data only mobile broadband basket (2GB)	23.17	20.2	2.15	5
Fixed broadband basket (5GB)	74.13	42.3	13.45	21.6
Mobile data and voice high consumption basket (140 mins + 70 SMS + 2GB)	N.A.	N.A.	4.3	8.6
Mobile data and voice low-consumption basket (70 mins +20 SMS +500 MB)	19.46	N.A.	2.69	5.5
Mobile cellular low-usage basket (70 mins + 20 SMS)	17.64	14.1	1.53	3.4

Source: Digital Development (itu.int)

Zambia's digital economy shows low export activity to regional and international markets. Only 4 out of 17 respondents sold their services in regional and international markets. The primary factor that facilitated the competitiveness of their products was the quality of work and services delivered, which was aligned to international market standards and gave the firms an opportunity to work with international clients.

The competitiveness of Zambian ICT products in international markets is notably limited due to several structural and systemic challenges. One of the key factors identified is the shortage of skilled labor, with 58.82 percent of respondents in the CETO study highlighting this issue. This lack of expertise hampers the ability of ICT firms to innovate, develop high-quality products, and compete effectively with global players. The talent pool for advanced ICT skills such as software development, cybersecurity, and data analytics remain shallow, forcing firms to either invest heavily in training or rely on external expertise, both of which increase operational costs and limit their ability to scale.

Poor digital infrastructure is another significant barrier, cited by 52.94 percent of respondents. The limited availability of reliable and fast internet connectivity coupled with frequent power outages due to load shedding undermine the operational efficiency of ICT firms. Many respondents expressed frustration with the frequent disruptions to online services, noting that they struggle to test and deploy new products in a timely manner, which further limits their export readiness.

[34] IPB (itu.int).

Additionally, the unfavorable policy environment, identified by 32.59 percent of respondents, presents further obstacles. The regulatory framework governing the ICT sector in Zambia is often seen as cumbersome, with slow approvals and inadequate support for export-driven initiatives. The lack of incentives for tech-based start-ups and established firms alike discourages investment in innovation, and the complex tax regime makes it difficult for businesses to remain competitive. This is compounded by high transaction fees in the payment systems, which limit the profitability of cross-border transactions and restrict market access.

Other challenges raised during interviews include the high-quality standards required by international markets, which are difficult to meet due to domestic challenges. Zambian ICT firms often struggle to meet the rigorous technical and operational benchmarks set by global competitors. This is particularly problematic in sectors such as fintech and e-commerce, where international standards for data security, compliance, and user experience are non-negotiable. Respondents also expressed concern over currency fluctuations, which make it difficult to price products competitively in foreign markets and manage costs effectively.

Load shedding remains another critical issue, frequently disrupting business operations and slowing down production cycles. Respondents noted that prolonged power outages negatively impact their ability to work on large-scale ICT projects, delaying time-to-market and reducing the overall competitiveness of their products. Additionally, the volatility of the Zambian kwacha, coupled with rising import costs for critical technologies and components, further undermines the profitability of ICT exports.

Digital firms in Zambia are also heavily taxed, which compels them to increase their prices. These fees force e-commerce companies to charge higher prices compared to regional competitors, reducing their ability to compete effectively in both regional and global markets. Additionally, the limited integration options with other payment platforms such as PayPal constrain the ability of Zambian firms to expand their product offerings or engage in international transactions, restricting their market reach.

Together, these factors create a complex environment in which Zambian ICT firms struggle to compete on a global scale. To improve export competitiveness, addressing the foundational issues around skills development, digital infrastructure, regulatory reforms, and economic stability will be critical for the sector's growth and ability to tap into international markets.

4.6.3. Productivity Increases in the digital economy

Productivity increases brought about by the digital economy has benefited SMEs. The introduction of electronic systems through the Government Enterprise Service Bus (GSB) has boosted SME labor productivity through online registration of start-up firms, access to the government electronic services directory, including licensing, electronic access to credit, electronic procurement processes, and voluntary compliance of tax filing in real time. This has helped SMEs avoid time-consuming, paper-based, in-person access to services, making them more efficient.

Zambia's ICT productive capacity has been increasing over the years. Based on the 2022 Productive Capacities Index of ICT (UNCTAD, 2022), which estimates the accessibility and integration of communication systems within Zambia and includes fixed line and mobile phones users, internet accessibility and server security. Zambia's productive capacity in ICT has increased from 4.9 in 2000 to 21.6 in 2022. The sharp fall in the ICT productive capacity index by 44.4 percent from a record high of

27.3 in 2019 to 18.9 in 2020 can be attributed to poor change management in adjusting to new ways of working when the COVID-19 pandemic hit the country. The key constraints to progress in ICT productive capacity in Zambia were insufficient electricity access, lack of ICT skills and lack of infrastructure needed to foster e-commerce (UNCTAD, 2022).

From the CETO fieldwork, over half of the 17 respondents rated worker efficiency as high. The factors that were highlighted as influencing the labor productivity of the firms included the level of ICT skills, good customer service that prompted referrals, and digital marketing, which helped with more customers. Other factors were access to digital infrastructure and technology, Clear systems standard operating procedures and strategic plans, experience and knowledge, flexible working conditions which included remote working and high renumeration, and access to fast and reliable internet. However, the extent to which the available workforce possesses the capacity for modern tech-skills was assessed as moderate.

4.6.4. Technology upgrading in the digital economy

Technology upgrading has continued in the ICT sector. By 2022, the number of communication towers stood at 3,548, comprising IHS, ZICTA, Airtel, Zamtel Zesco and Infratel towers, up from 1,735 installed in 2016. The number of telecommunications sites increased to 11,987 from 10,574 in 2020. The largest proportion of telecommunication sites continued to be 2G sites accounting for 38 percent of all sites, 3G sites at 31 percent and 4G/LTE sites at 30 percent (MoFNP Annual Economic Report, 2022).

Table 7: Telecommunication sites, 2020-2022

	2020	2021	2022	% change 2020/2022
2G	4,344	4,557	4,600	6%
3G	3,472	3,663	3,756	8%
4G/LTE	2,758	3,258	3,631	32%
TOTAL	10,574	11,478	11,987	13%

Source: MOF 2022 Annual Economic Report

Increased technology upgrading has been witnessed in the last two years. By November 2022, MTN Zambia had launched the country's first 5G network services commercially for increased productivity arising from faster speeds, lower latency, better security and stability and the ability to handle high-volume connections and mobile data. This was followed by Airtel Networks Zambia PLC launching its 5G network rollout on 26th June 2023 as part of its comprehensive infrastructure growth plan, which aims to enhance seamless connectivity for all its products to support Zambia's 8th National Development Plan regarding digital innovation and inclusivity.

According to the 2023 ATI score, Zambia's level of automation was assessed as medium scale as of 2020. Similarly, among the firms interviewed in the CETO study, the level of technology upgrading was

assessed as medium as most firms had not adopted modern high technologies such as blockchain technology, robotics and 3D printing. The annual average allocation towards technology upgrading investments was about 28 percent, with only about 15 percent towards research and development in new technologies.

4.6.5. Human well-being in the digital economy

Innovations in information and communications technology (ICT) have influenced human life. The positive influences include timesaving, diffusion of knowledge, easy communication and networks, access to information and automation, increased productivity, improved transparency and governance, social capital building and individual empowerment (Maiti, 2020). A study conducted by Mwila et al. (2019) found that businesses that implemented ICT had a steady increase in productivity over the years. This was attributed to the fact that costs were reduced in the production of goods and provision of services and firms were able to allocate funds from operational costs and invest in increasing business productivity. Additionally, businesses that have leveraged services on the Government Service Bus have had the opportunity to reduce their operational costs associated with transportation and time management.

The education system in Zambia has in recent times exploited ICT products through e-learning platforms. This has supported inclusivity for working professionals who are unable to attend class full time, including women in home management that cannot sit in a classroom. The Zambia Research and Education Network (ZAMREN), for example, has provided inter-institutional connectivity for researchers and connects them to regional research bodies.

Small-scale farmers have benefited through digital platforms on their phones. These have included early warning systems provided through text using extension services. They are also able to register for their input supplies using electronic vouchers. Additionally, they have been given access to trade agricultural produce on the ZAMACE platform, all using ICT.

Nine of the 17 firms surveyed for this CETO recognized gender gaps in income/salary, as well as gender gaps in employment opportunities in the digital economy. Additionally, among ISP employees, ZICTA ISP statistics suggest there is a gender imbalance with more male employees than female employees. About 13 of the respondents also agreed that there was some level of income inequality within and across the digital sub-sectors, particularly in fintech. The level of attrition of female employees in the digital economy was observed to be high, with many opting to venture into other businesses. The average cost of labor as a share of total costs was fairly high at around 34 percent, with firms in fintech and innovation paying higher salaries than their counterparts. Adoption and use of systems for managing gender-based work violence, harassment, discrimination in recruitment, maternity/paternity leave, and retirement age was observed in eight of the respondents, with limited adoption in another six.

4.7. Recommendations for the digital economy

	Short- and medium-term recommendations	Long-term recommendations
Diversification	• Develop tailored digital literacy programs for women entrepreneurs to help bridge the skills gap and improve their participation in the digital economy. • Provide incentives for investors to establish data centers across the country to meet the growing demand for data storage as more entities, both public and private, transition to digital platforms. • Incorporate programming courses from primary school, with a deliberate emphasis on girl child participation to curtail the negative cultural norms and stereotypes as well as ensure availability of skilled labor in the future labor force.	• Diversify the Internet Exchange Point (IXP) located at ZAMTEL, which is operated by the Internet Service Providers' Association to support the connection of the increasing numbers of ISPs in the country and reduce the cost of data, including the provision for backup in the event of failure.
Export competitiveness	• Encourage the formalization of SMEs in technology to facilitate their access to global electronic platforms that promote formalized processes for access to finance in technological upgrades, including R&D. • Develop targeted mentorship with multinational tech companies and funding opportunities from cooperating partners in the digital space, especially for for women in tech, along with initiatives that promote their participation in digital innovation hubs. This would not only enhance export competitiveness but also contribute to more inclusive growth in the digital economy. • Accelerate the enactment of the Start-up Bill, which gives preferential treatment to start-ups, including in the innovation space, to support the growth of MSMEs.	• Improve the quality of the digital infrastructure across the country, by increasing the number of communication towers, especially in the rural areas, and come up with a solution that eliminates network challenges arising from long hours of load shedding that affect transmission from communication towers. • • Waive tax obligations or filing of company returns for start-up firms in the tech sector to allow expansion and growth

Labor productivity	• Expand digital skills training programs that target women, providing them with the knowledge and tools needed to leverage digital platforms for business growth and improved efficiency. This can be achieved through targeting women cooperatives in various communities.	• Provide incentives for content and software development to fill the gap in tailor-made applications that address the needs of local communities and locally established corporate entities.
Technology upgrading	• Encourage the creation of partnership programs between tech providers and women entrepreneurs to facilitate greater technology adoption and foster innovation within the digital economy, while ensuring equal access for women. • Improve coordination in the deployment of high-technology infrastructure among players to avoid duplication of effort. • Maintain fiscal incentives towards investments in irrigation technology and mechanization to help build resilience in the face of climate change.	• Increase budget allocation for investments in the upgrading of the current lower grade infrastructure that does not support the application of emerging technologies such as blockchain, Internet of Things, machine learning, big data, and artificial intelligence • Provide incentives that encourage Public-Private Partnerships to participate in the middle and last miles through expansion of retail fiber optics, among other initiatives.
Human well-being	• The government should carry out change management and capacity-building programs, especially among underserved populations, through the Digital Transformation Centres earmarked for establishment in rural areas to ensure a smooth transition from the cash economy – which poses challenges of efficiency – to more digitalized processes that enhance productivity.	• Increase investments in online education and telemedicine services that target women to improve their access to health care and educational resources, further enhancing their well-being and economic potential • Adapt the education curriculum to meet the needs of industry and correct the mismatch between the supply and the demand for labor. Low budget allocations for investment in human capital development in the medium term may result in reduced productivity.

4.8. Tourism

Tourism has been identified as being among the sectors with the greatest potential to drive Zambia's growth agenda. The sector has been highlighted in the 8th National Development Plan as a significant contributor to economic transformation and job creation. The objective is to make Zambia a major tourism destination of choice, which will contribute to sustainable economic growth and poverty reduction[35][36].

In Zambia, tourism is dominated by leisure tourism and nature-based attractions, such as its heritage landscapes, wildlife protected areas as well as abundant lakes and rivers, including the renowned Musi-oa-Tunya Falls (Victoria Falls). The tourism industry also comprises various enterprises, including hotels, lodges, guesthouses, tour operators, activity providers, and transport providers. Several large international chains and franchises (such as Intercontinental, Protea Hotels, Southern Sun, Sun International, and Taj Group) operate in Zambia. The sector is dominated by small and medium-sized operators, many of which rely on overseas providers for services like representation, marketing, and flights.

With well-established backward, forward, and side-stream linkages, the tourism sector's spillover effect on other aspects of the economy is enormous. The sector provides various social snf economic benefits to the economy in the form of foreign exchange, and employment opportunities (especially for local communities through activities as traditional ceremonies, basketry, local cuisine promotion and curio-making). Tourism also provides income (through taxes, duties, license fees and park entry fees), rural and infrastructural development and entrepreneurship stimulation[37]. Tourism also provides an avenue for diversification of an economy, something that is sorely needed in Zambia where much of the economy is based on the export of primary commodities, which of course are highly vulnerable to price fluctuations.

To promote the sector and achieve its vision, various initiatives have been launched by the government recently. Key among them is a four-pronged program outlined in the 8NDP that includes infrastructure development, tourism product development, tourism promotion and marketing and wildlife management. These interventions are expected to revamp and boost the sector.

4.8.1. Performance of the tourism sector

Despite the massive growth potential of the tourism industry in Zambia, sector growth has only averaged 3.1 percent between 2005 and 2020. The sector experienced significant improvement in the early 2000s, recording double-digit growth until 2007. After 2007, the growth rate deteriorated significantly, notably in 2008 due to the global economic crisis and swine flu pandemic. Growth was moderate until 2012 when the sector recorded a contraction of -2.6 percent due to a decline in foreign tourists, particularly from Europe, who were affected by the Euro-zone financial crisis. The sector

[35] Unilever has incorporated gender considerations into its product lines by designing and marketing products that cater to the distinct needs of different gender groups. In its Dove beauty campaign, the company embraced a broader definition of beauty that appealed to women of all ages, shapes, and ethnicities. This inclusive marketing strategy boosted Dove's sales significantly by appealing to a wider, more diverse audience, especially women who felt underrepresented in traditional beauty advertising. The success of this campaign highlights the commercial benefits of gender-responsive product design and marketing, as sales of Dove products increased by over $1 billion following the shift. Similarly, Coca-Cola has integrated gender considerations into its business model by tailoring its marketing and product offerings to women through its 5by20 initiative. This program empowers women entrepreneurs in the company's supply chain, particularly in developing countries, by offering training, resources, and market access.

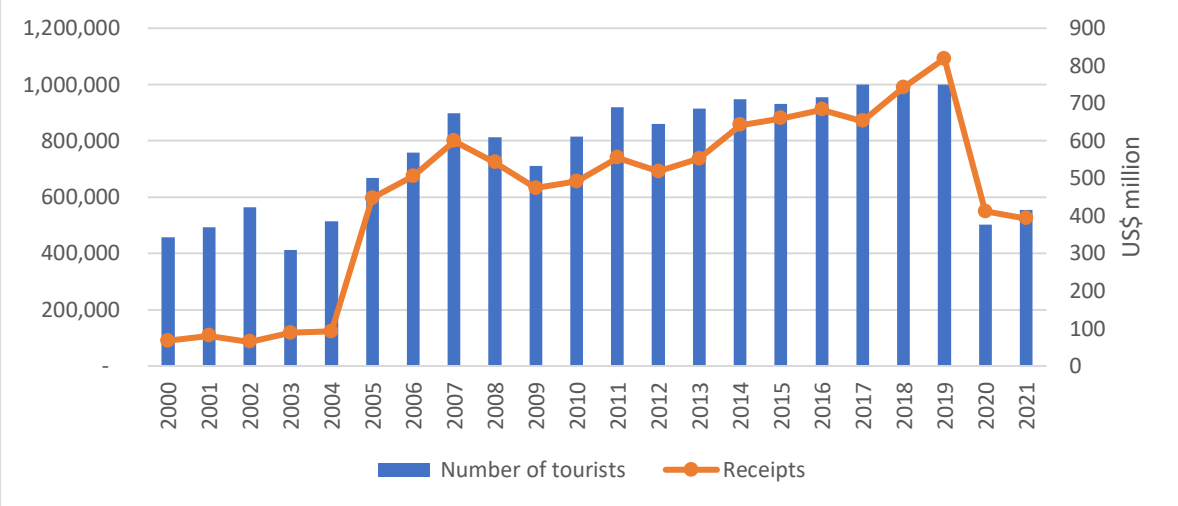
[36] National Tourism Policy (2015).

[37] National Tourism Policy (2015).

continued to record sluggish growth that ultimately contracted steeply in 2020 due to the COVID-19 pandemic[38].

Overall, Zambia's tourism sector has recorded significant improvements both in terms of tourist arrivals and revenue generation over time. In terms of international tourist arrivals, there was an upward trend between 2000 and 2010, despite fluctuating around 2008 mainly due to the global economic crisis and swine flu pandemic. In this period, tourist arrivals almost doubled from 450,000 tourists to 815,000 (Figure). Tourism receipts increased six-fold from $67 million to $492 million over the period. This upward trajectory in both arrivals and receipts continued until 2019, before declining sharply in 2020 due to the COVID-19 pandemic that necessitated restrictions on travel. According to UNDP (2020), Zambia's tourism sector was one of the worst affected due to these disruptions. Although the sector rebounded slightly in terms of tourist arrivals in 2021, receipts declined significantly.

Figure 19: Tourist arrivals and total receipts, 2000-2021



Source: World Trade Organization (2024)

Zambia's tourism industry is a significant contributor to economic growth and development. The direct contribution of the sector to GDP grew from 2.4 percent of GDP ($0.63 billion) in 2017 to 2.9 percent of GDP ($0.8 billion) in 2019[39]as depicted in table 9 below. Direct contribution essentially measures spending on services – such as accommodation, food and beverages, transportation, culture, sports and recreation as well as the retail trade – that cater to domestic and international tourists. However, the industry's contribution declined to 1.7 percent of GDP ($0.46 billion) in 2020 following the adverse effects of the COVID-19 pandemic. The relaxation of the COVID-19 restrictions globally boosted the performance of the industry, raising the contribution of travel and tourism to 1.8 percent of GDP ($0.50 billion) in 2022. The direct contribution of tourism to GDP over time in Zambia has been in tandem with the level of government spending on tourism and travel as depicted below. In periods of increased expenditure on the sector by the government, the industry has contributed more to GDP, underscoring the importance of continued investments if the sector is to thrive going forward.

[38] Ministry of Finance Economic Reports.
[39] WTTC, 2023.

While the direct contribution to GDP of 1.8 percent in 2022 is close to the sub-regional average of 1.9 percent , the performance of the travel and tourism industry in Zambia was below that of several peers: Namibia (5.6 percent), Botswana (4 percent), Gambia (3.7 percent), Senegal (2.5 percent), South Africa (2.5 percent), Tanzania (2.3 percent), Kenya (2.1 percent), Zimbabwe (2.1 percent), and Malawi (1.9 percent). However, the World Travel and Tourism Council (WTTC) expects the direct contribution of the sector to grow by 2 percent in 2023 and maintain an average annual growth rate of 6.8 percent between 2023 and 2033.

Table 8: Economic contribution of travel and tourism, 2017-2022 (at real 2022 prices)

	2017	2018	2019	2020	2021	2022
Direct contribution (% of GDP)	2.4	2.5	2.9	1.7	1.7	1.8
Total contribution (% of GDP)	6.3	6.3	7.4	4.5	4.5	4.5
Total contribution to employment (000)	419.5	415.7	477.6	314.2	320.5	335.6
Capital investment ($ bn)	0.18	0.16	0.17	0.13	0.11	0.11

Source: World Travel and Tourism Council; Ministry of Tourism

The overall contribution of tourism to the economy is, however, much larger when sector expenditures on investment, government taxes, materials, labor, energy, etc., are included. Between 2017 and 2019, the overall contribution of the sector to the total economy grew from $1.6 billion (6.3 percent of GDP) to $2.0 billion (7.4 percent of GDP).[40] It declined to $1.2 billion in 2020 where it remained until 2022.

4.9. DEPTH analysis of tourism

4.9.1. Diversification in tourism

Zambia, located in Southern Africa, boasts a rich array of assets that make it stand out as one of Africa's prime tourist destinations. The country is divided into two tourism circuits: Northern Tourism and Southern Tourism, both rich in natural attractions. The country's tourism assets can be broadly categorized into four main areas: natural attractions, historical heritage, cultural heritage, and other attractions offering exceptional opportunities for wildlife safaris, ecotourism, and adventure tourism. The array of attractions highlighted by the CETO study include wildlife and adventure, with bungee jumping and helicopter rides among the features. There are plans to increase the array of products, including diversification of destinations from the southern circuit to the northern .

Zambia's tourism sector comprises many tourism services including 20 national parks and 34 game management areas that occupy about 32 percent of Zambia's total land area. The country also has abundant rivers, lakes, wetlands and waterfalls that include the Musi-oa-Tunya Falls (formerly Victoria Falls) which is among the seven wonders of the world drawing tourists from across the globe (UNESCO

World Heritage Sites). These water bodies account for nearly 35 percent of Southern Africa's total natural water resources. The country also has a rich and diverse culture, historical sites, monuments and infrastructure facilities for Meetings, Incentives, Conferences, and Exhibitions (MICE) tourism.

Zambia's historical and cultural heritage is equally impressive, with a rich tapestry of traditions and historical sites. The city of Livingstone, near Musi-oa-Tunya Falls, serves as a hub for historical exploration, with the Livingstone Museum providing insights into Zambia's pre-colonial, colonial, and post-independence history. Cultural tourism is further enriched by traditional ceremonies such as the Kuomboka of the Lozi people, Umutomboko of the Lunda and Luba, Ukusefya pa Gwena of the Bemba, the Nc'wala of the Ngoni, and the Lwiindi Gonde of Tonga, which offer visitors a glimpse into the vibrant customs and traditions of various Zambian ethnic groups.

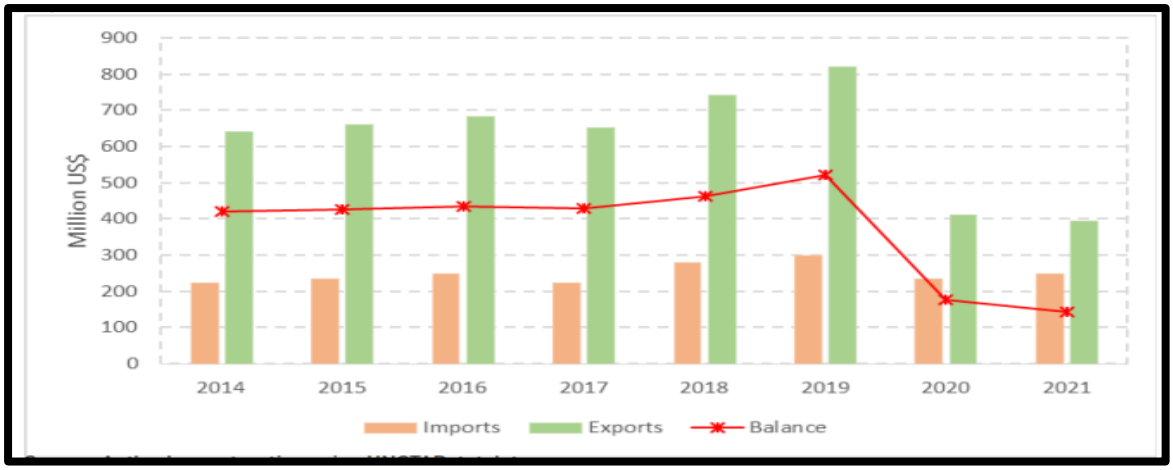
Urban tourism is centered around the capital city, Lusaka, and other major cities such as Ndola and Kitwe. Lusaka, as the economic and political heart of Zambia, offers numerous opportunities for business and conference tourism. It is well connected by its Kenneth Kaunda International Airport, which is the primary gateway to Zambia and is serviced by several international and regional airlines. The city boasts a range of accommodation options, from luxury hotels to budget lodges, catering to diverse visitor preferences.

The hospitality sector in Zambia is evolving, with significant investments in hotel infrastructure to meet the growing demand. Major international hotel chains have established a presence in the country, enhancing its capacity to host international tourists and business travelers. Despite the progress, challenges remain, including the need for more trained personnel in the hospitality industry and improvements in service standards in some locations. Zambia's tour operators and travel agencies, while growing in number, face similar challenges as the hospitality sector, particularly in terms of service quality and international standards.

In the transport sector, Zambia's aviation infrastructure has seen improvements, with Kenneth Kaunda International Airport undergoing upgrades to handle increased passenger traffic. Additionally, there are several domestic airports that facilitate travel within the country, making remote tourist destinations more accessible. Overall, Zambia's travel and tourism industry is poised for growth, driven by the country's natural beauty, rich cultural heritage, and strategic investments in infrastructure and hospitality. With continued focus on improving service quality and marketing its diverse attractions, Zambia has the potential to become a premier travel destination in Africa.

Zambia's tourism sector has consistently recorded a positive trade balance. Tourism exports (i.e. revenue generated from foreign tourists spending money on goods and services within Zambia) rose from over $600 million 2014 and peaked at $800 million in 2019 (Figure 20). While imports in the tourism sector also increased, these consistently remained far below exports, resulting in a positive balance of trade in the sector. The advent of the COVID-19 pandemic brought a drastic decline of exports in the sector mainly due to restrictions placed on travel by different regions and countries. Despite not rebounding to pre-pandemic levels, exports in the sector have still remained above imports.

Figure 20: Zambia's trade balance in the tourism sector, 2014-2021 ($ million)



Source: Adapted from the Zambia Diagnostic Integration Study Update (2023)

In terms of market share, Africa accounted for 87.9 percent of international visits to Zambia in 2021, followed by Asia and the Pacific (5.0 percent) and the Middle East (0.2 percent). High-value tourism from Europe (4.2 percent) and the Americas (2.6 percent) only accounted for 6.8 percent of total arrivals. Most of the tourists from neighboring African countries came for trade purposes, while long-haul business visitors related to the copper industry and the donor community also contributed to the sector. Most of these visitors are primarily business-focused and contribute to the industry's revenues.

4.9.2. Export competitiveness in tourism

Despite the significant gains made in Zambia's tourism sector, when compared to other countries such as Namibia, South Africa, Kenya and Senegal, Zambia is lagging behind. The four are all middle-income countries with South Africa in the upper middle-income bracket. Zambia faces growing competition from its SADC neighbors. South Africa remains the largest tourist destination in the region, accounting for 44 percent of visitor arrivals, followed by Botswana, Tanzania, and Namibia. Kenya also remains a significant competitor in the East. However, with its vast landscapes and stunning natural wonders, Zambia has the potential to become a hotspot for adventure tourism. By offering activities like whitewater rafting, bungee jumping, and zip-lining, Zambia can attract thrill-seekers from around the world.

However, in the current period, tourists prefer to travel to Zambia's neighbors for similar attractions. Respondents attributed this to the poor budget allocation for marketing Zambian tourist attractions internationally, using road shows, trade fairs, digital marketing, influencers and tourist attachés. It should be noted that travel and tourism investment fell from $0.18 billion in 2017 to $0.11 billion in 2022. Lessons can be learned from Rwanda and South Africa, which have raised their budgets for tourism marketing.

Receipts from international tourism as a proportion of total exports declined from $1.1 billion in 2019 to $0.54 billion in 2022. This emphasizes declining tourist expenditure on business and leisure trips (**Error! Reference source not found.**). Tourism sector employment increased markedly from 419,500 people in 2017 to 477,600 people in 2019. This fell to 314,200 in 2020 but has since recovered to 335,600 in 2022, highlighting the sector's role in employment creation. Despite being below the world average of 3.3 percent, the share of direct employment from the travel and tourism (1.7 percent) was above the sub-regional average of 1.4 percent and that of Tanzania (1.2 percent) and Zimbabwe (0.8 percent).

Tourist arrivals, which had averaged a 25.5 percent increase between 2017 and 2019, fell dramatically by 60.4 percent in 2020 due to the pandemic. With the resumption of business activities, tourist arrivals rebounded at a growth rate of 10.5 percent in 2021 and domestic tourist visits to sites rose by 58.7 percent, primarily due to the relaxation of COVID-19 travel restrictions. Despite this recovery, tourist arrivals were still significantly below pre-pandemic levels of 1,266,427 in 2019.

Table 9: Receipts from international tourism as a proportion of total exports, 2017-2022

Year		2017	2018	2019	2020	2021	2022
Visitor exports (foreign spending $ bn)		0.75	0.85	1.1	0.71	0.59	0.54
Arrivals (000)		1,009	1,072	1,266	502	554	1,061
Number of hotels		1,170	1,138	1,138	1,094	1,067	-

Source: WTTC data; and Ministry of Tourism

4.9.3. Export competitiveness in tourism

Zambia's tourism sector, while rich in natural and cultural assets, faces significant challenges in maintaining competitiveness within regional and global markets. The country ranks 104th out of 117 on the global travel and tourism development index, scoring 3.34 out of 7, which is below the global average of 4.0 (Table). Zambia lags behind regional competitors like South Africa (55th), Mauritius (57th), Tanzania (81st), and Kenya (77th), primarily due to weak infrastructure, inadequate health and hygiene standards, and insufficient prioritization of travel and tourism in government policy (WEF, 2022). Also, all comparators rank better on natural and cultural assets largely because they have more UNESCO World Heritage sites and do better in protecting their natural habitats.

There are several areas where Zambia falls short against comparator countries which has a negative impact on tourism in the country. Despite strong price competitiveness, Zambia underperforms in international openness and government spending on tourism. The tourism industry also struggles with marketing and promotional efforts, which reduces its visibility on the global stage. This finding is reflected in the declining government spending in support of general tourism activity from $0.07 billion in 2019 to $0.05 billion in 2022. However, Zambia has a competitive edge in the sustainability of its tourism industry, indicating potential for growth if investments in infrastructure, health standards, and strategic marketing are increased. Improving these areas can significantly boost Zambia's competitiveness, making it a more attractive destination for international tourists.

Table 10: 2024 Travel and tourism competitiveness rankings (out of 117 countries)

Travel and Tourism Competitiveness Index	Zambia	Kenya	Tanzania	South Africa	Mauritius
Overall ranking	104	77	81	55	57

Natural resources	42	27	15	14	112
Cultural resources	98	71	78	30	87
Prioritization of travel and tourism	87	37	26	67	5
Tourism services and infrastructure	111	118	104	75	49
Health and hygiene	108	109	116	97	54
Air transport infrastructure	107	68	81	49	41
Country brand strategy	69	62	11	15	33
Safety and security	86	105	68	113	34
Visa requirements	8	42	13	40	2
Hotel price index ($)	30	54	74	8	108
ICT readiness	104	99	106	58	52

Source: World Economic Forum, 2024

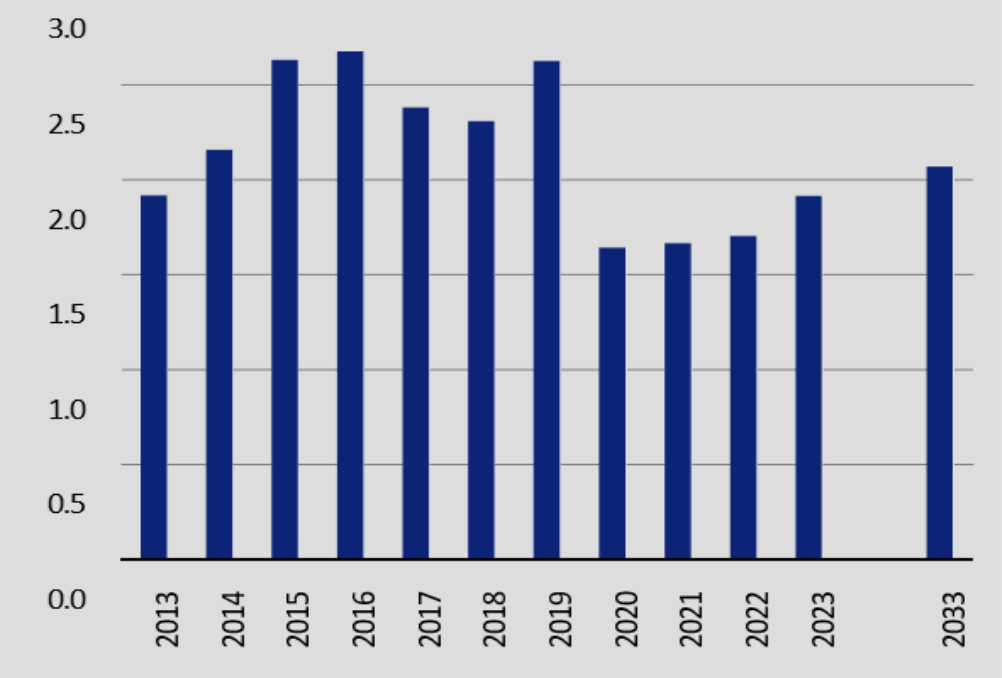
Despite Zambia's policy and institutional efforts, the level of tourism services and infrastructure (hotels, car rentals, and ATM service) as well as health and hygiene are comparable to what prevails in Kenya and Tanzania but lower than that of South Africa and Mauritius. Zambia outperformed them on safety and security issues and flexibility of visa regime except for Mauritius. In terms of average room rates for accommodation, Zambia performs better than the comparators except for South Africa, which has the lowest room rates. Zambia however, lags when it comes to ICT readiness, behind Kenya, South Africa and Mauritius. The country, however, is in a good position when compared with Tanzania.

4.9.4. Productivity increases in tourism

The travel and tourism industry in Zambia has experienced some decline in its productive capacity as measured by the sector's employment levels as a percentage of total employment**.** Between 2013 and 2016, the sector's share of total employment increased from about 1.8 percent to over 2.5 percent (Figure 21). The sector's contribution to employment declined slightly after 2016 before improving in 2019[41]. This was attributed to the sector's improved growth rate, increased expenditure by the government as well as investments. During the COVID-19 pandemic, the sector was hit hard, with its employment share falling from 2.6 percent in 2019 to 1.6 percent in 2020. However, this improved to 1.9 percent in 2023 and is expected to contribute 2.1 percent to total employment by 2033.

Figure 21: Tourism employment as a proportion of total employment, 2013-2023 (%)

[41] WTTC (2023).



NB: 2033 figure is a projection.

Source: WTTC (2023)

4.9.5. Technological upgrading in tourism

The tourism sector has been characterized by limited digitalization and use of innovative platforms to disseminate information on tourism and accommodation in Zambia [42]. Digitalization, especially among the SMEs in tourism, was found to be very poor with very few lodges having a company website or even being registered on Google Maps for directions. This has deprived potential tourists of necessary information about certain destinations. There was a proposal to have a portal of the tourism value chain created for the benefit of SMEs to help them achieve visibility, similar to the Zam portal.

4.9.6. Human well-being in tourism

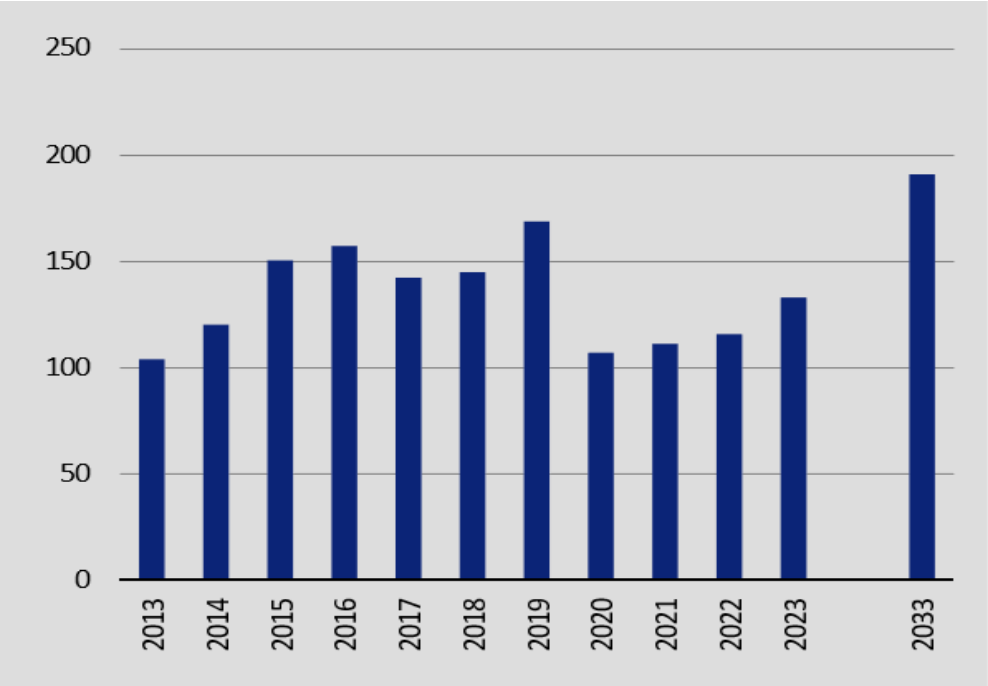
The tourism sector in Zambia contributes massively to community livelihoods, job creation, MSME promotion and living standards. It is among the job-rich sectors in Zambia, contributing to the services sector and providing nearly 150,000 formal jobs. According to the WTTC 2023, the number of formal jobs created by the sector was on an upward trajectory from 2013 to 2019, increasing from 100,000 jobs to 168,000. The sector has provided an average of 126,000 direct jobs in the last five years and is projected to offer 190,000 formal jobs by 2033[43].

Other than formal employment, the tourism sector has also boosted the domestic supply chain by involving small businesses and providing informal jobs and incomes to local communities. The sector has forward and backward linkages that generate demand for food and beverages, local transportation, clothing, handicrafts and various entertainment activities that are generated by the

[42] Zambia Tourism Policy (2015).
[43] WTTC (2023)

local people thereby fostering entrepreneurship and business ventures. Additionally, indirect benefits accrue to local communities, such as cultural and wildlife preservation.

Figure 22: Direct jobs in the tourism sector in Zambia, 2013 -2023 (thousands)



NB: 2033 figure is a projection.

Source: WTTC (2023)

However, there is widespread casualization within Zambia's tourism sector, with many employees underpaid. This heavy casualization of the workforce raises serious concerns, particularly in the absence of adequate legal protection. Workers are underpaid, leading to the introduction of a service charge to supplement their wages. Furthermore, the sector lacks standardized conditions of service, including the absence of maternity leave, which forces expectant mothers to lose their jobs temporarily when they go on leave. Furthermore, without the security of permanent employment, both men and women are at heightened risk of sexual and other forms of exploitation. This lack of job permanency leaves them in precarious situations where they may feel compelled to tolerate exploitation out of fear of losing their livelihoods.

While arguments for addressing the stated deficiencies may be termed as primarily moral, there is strong economic justification for addressing them. The challenges associated with casualized labor such as exploitation and poor working conditions could lead to health problems such as mental health issues, chronic stress, and diseases stemming from unsafe environments. Over time, this could erode the country's human capital, reducing productivity and increasing absenteeism within the tourism sector. More importantly, the government may end up shouldering the financial burden of increased health care costs, diverting resources away from other critical areas of economic development.

4.10. Strengths of the tourism sector

Despite the many challenges documented above, Zambia has the potential to become one of the prime tourism destinations in Sub-Saharan Africa if the following strengths are leveraged and exploited more effectively:

Abundant unexploited natural tourist resources, youthful demographic profile and geographical advantage: Zambia's tourism sector stands out as one of the prime tourist destinations in Africa and is characterized by a young population that has the potential to offer a range of skills to the tourism sector and contribute significantly to national development. The country's tourism potential is overwhelming. It is endowed with everything from beautiful landscapes, rich culture, and unique history to cultural diversity and friendly people. Travelers can explore the natural beauty of Zambia's topography through guided hikes, safari trips and bird watching. In terms of geo-strategic relevance, Zambia is centrally placed in the region. The country's tropical climate is characterized by abundant sunshine which makes it perfect for summer holidays for tourists from the global North. The country has numerous game and wildlife parks, most of which have been barely tapped.

Zambia is a safe and peaceful country with a growing reputation as a prime tourist destination: The annual report on competitiveness in travel and tourism (2024) released by the World Economic Forum (WEF) indicates that Africa lags behind when it comes to the travel and tourism, with many states in the region burdened by political fragility, and outright conflict in some cases. Despite these, Zambia is among the major players in the sub-region that enjoys a stable political environment; it is safe and peaceful, and the crime rate is low. The increasing international endorsements and recognition of Zambia as a top destination in the sub-region will inevitably propel growth in the sector.

ICT readiness and developments in accommodation, restaurants and infrastructure: In recent years, there have been more hotels coming up and more investments in restaurants, pubs, and malls, making Zambia one of the most attractive locations for tourists in the region. The country also has an ICT advantage. Since the early 2000s, the growth of telecommunications in the country has vastly improved access to phone services and internet connections. Telecommunications infrastructure rollouts have been massive and the recent introduction of 4G technology puts the country ahead of its contemporaries in many ways.

4.11. Challenges of the tourism sector

Many of the issues and challenges facing tourism in Zambia have been well documented in several reports and stakeholder engagements by various organizations and institutions. The key issues include: a) Low product diversification and marketing; b) Limited understanding of tourism as a tool for economic development; c) Inadequate investment in the tourism sector; d) Poor infrastructure and tourism support services at tourism sites; e) Zambia as a high-cost tourism destination; and f) Poor health and hygiene services. These challenges are discussed below:

Low product diversification and marketing: Tourist activities in Zambia remain heavily concentrated in the southern circuit, particularly in Livingstone, despite the presence of notable attractions in the northern circuit. This imbalance has been partly attributed to limited marketing and promotion efforts for the northern circuit. On average, the length of stay for tourists in the northern circuit is shorter than for tourists visiting the southern circuit. This trend reduces tourist engagement and often leads to Zambia being perceived as a secondary destination for international visitors. The Auditor-General's Report (2020) notes that the tourism sector lacks sufficient product diversification. Beyond nature-

based activities, there is minimal value addition through secondary tourism services, especially in the northern circuit.

Limited understanding of tourism as a tool for economic development: Stakeholders have bemoaned the lack of understanding of tourism as a tool for economic development among a large segment of top officials in both the public and private sectors, and also within local communities. This has contributed to the low level of commitment and priority given to the sector even at the highest levels of government where there should otherwise be an appreciation of the potential of the sector.

A large portion of the benefits are derived from the services that support tourism attractions. Though some tourist spending occurs at tourism sites, a larger share usually occurs before and after visiting the site. Without comprehensive and timely data that help to identify and aggregate the economic benefits of tourism, it is easy to miss its scope and magnitude. Tourism has intangible and experiential dimensions that may not be easily recognized by citizens and officials who interact with tourists. The process of inducing people to visit new places and try new things is complex; it requires special skills in psychology and marketing to do it effectively. Zambia can gain greater economic benefits from tourism if the sector is prioritized. The inclusion of tourism as a strategic area for economic transformation in the 8th National Development Plan is an important step and a good foundation for tourism development in Zambia. But much has to be done in the areas of prioritization, marketing, capacity building, public investments, education, and community ownership to drive the plan.

Inadequate investment in the tourism sector: Many of Zambia's tourism assets remain undeveloped. There are attractive opportunities to diversify and grow Zambia's diverse tourism potential in ecotourism, beach tourism, cultural heritage tourism, and conference and business tourism. Capital investment remains below the total capital investment outlay of $0.18 billion in 2017. The sector currently receives one of the lowest budgetary allocations – about $0.05 billion – a significant proportion of which is sometimes not disbursed. Most private tourism operators recognize Zambia's potential, but they are unable to take advantage of opportunities. Ownership of tourism assets by community and traditional authorities and frequent land ownership disputes also create challenges for potential investors.

Poor infrastructure and tourism support services at tourism sites: Zambia lacks adequate infrastructure and tourism support services at most of its major tourism sites. The lack of increased tourism activities in regions other than the southern circuit in Zambia is not dictated by scarcity of sites but by bad infrastructure. The sector is characterized by inadequate roads, bridges, buildings, accommodation, rest stops, airports for tourist destinations and the lack of ATM facilities. These have been identified as major challenges that limit the positive tourist experience at the major attractions. This is more acute in rural areas, where most of the attractions are located. Although there are a few world-class hotels, restaurants, and resorts, there is also a clear lack of understanding between the public and the private sector as to who should lead the development of tourism infrastructure. With respect to air transport, the major challenges have to do with relatively high airport taxes and high fuel costs, which have invariably led to high fares. Poor tourism infrastructure is worsened by poor sanitation around many tourist sites, which makes them unattractive to international visitors. Indeed, one of Zambia's major shortcomings in the WTTC ranking in 2024 was health and hygiene.

Lack of professionalism and service quality: The lack of professionalism and poor quality of service across all segments of the tourism industry is a serious and endemic problem that the government has not been able to address through its institutions and bodies. There are no national standards in

training institutions, most of the programs are not accredited and there is a deficit of effective apprenticeship schemes.

Depleting wildlife population: Zambia is home to diverse wildlife. However, the issue of poaching and illegal hunting poses a significant threat to the tourism industry. The decline in wildlife population reduces the attractiveness of national parks and wildlife reserves, discouraging potential visitors. By investing in wildlife conservation efforts, such as anti-poaching initiatives and habitat preservation, the country can attract more eco-tourists who are passionate about experiencing wildlife.

4.12. Recommendations for tourism

	Short- and medium-term recommendations	Long-term recommendations
Diversification	• Increased investment in tourist attractions away from the Southern Circuit, specifically, in the Northern Circuit. This can be by building international standard infrastructure and technology that enhance tourism in the deprived sectors and the information about the unique tourism and heritage of the Northern circuit receives at much publicity as other parts of the country.	• Increase product diversification away from nature-based tourism activities, especially in the Northern Circuit. In this space, Zambia can take advantage of its membership to Meetings Incentives Conference and Events (MICE) membership by ensuring of the long term infrastructure development including access to airfreights spreads across all the 10 provinces in the country.
Export competitiveness	• Improve infrastructure and tourism support services at tourism sites, especially in the Northern Circuit, which has inadequate roads, bridges, buildings, accommodation, rest stops, absence of airstrips/airports to tourist destinations and lack of banking facilities, among others. This is more acute in rural areas. Ensuring that airports and provincial capitals has a tourism facilitation and information centre on how to access all the infrastructure and travel services countrywide	• Increase the budget allocation for marketing Zambian tourist attractions, including road shows, trade fairs, digital marketing, use of influencers and tourist attachés, with lessons drawn from Rwanda and South Africa who raised their budgeting for tourism marketing. • Review airport taxes for airlines and jet fuel prices, which have proven costly compared to prices in some neighboring countries, to increase competitiveness. This will enhance the flow of

		tourism from within the region and continent and as a result contribute to a higher revenue pool as noted by countries like Rwanda and South Africa that instigated similar policies.
Poductivity increases	• Need for policies that support increased recruitment of trained personnel in the hospitality industry and improvements in service standards in some accommodation facilities, including tour operators and travel agencies. • Increase awareness programs on tourism as a profitable economic sector and a respectable career; as well as offering credit skims, grants and spacialised training to local entrepreneurs investing in the tourism sector. • Increase awareness programs to educate citizens on the importance of tourism as a tool for economic development; and these can be in-person, virtually, on radio, tv and having it dubbed in all the 7 major languages for easy understanding and applicability by our local investors and communities.	• Develop national standards in these in tourism and hospitality curriculums and ensure accreditation to international bodies; and ensure strict adherence by regular monitoring and reviews on how they are applied by the stakeholders and end users involved in the industry.
Technology upgrading	• Develop targeted training programs for tourism operators that support digitalization of the tourism sector. these program should have the option of easy access even within internet and in all the 7 major languages and this could be possible with	• Develop a portal, similar to the ZAM portal, that connects the whole tourism value chain and increases the visibility of SMEs that are poorly digitalized; these portal should have the option of easy access even within internet and in all

	the involvement of and support from median and all the mobile communication networks in the country..	the 7 major languages and this could be possible with the involvement of and support from all the mobile communication networks in the country.
Human well-being	• Develop regulations that uphold the honour and dignity of laborers, by minimizing the widespread casualization in the sector, characterized by underpaid workers, absence of adequate legal protection for workers, lack of standardized conditions of service, including the absence of maternity leave, which forces expectant mothers to lose their jobs temporarily when they go on leave.	• Develop regulations that support the formalization of the tourism sector to enable compliance with minimum wage payment requirements, and safely measures, informing employees especially those in the formal sector of their rights as well as ensuring that expectant mothers receive there health breaks and prevaledges such as rights to be excused from employment to attend antinental services

5. RECOMMENDATIONS AND CONCLUSION

5.1. Policy recommendations and opportunities

Diversification

- **Diversification of production**. Actively pursue diversification into various products in agriculture, manufacturing, and tourism to reduce reliance on the mining sector and enhance economic resilience. This must include developing a sustainable energy mix that incorporates renewable sources like solar, wind, biomass, and geothermal energy, thereby reducing dependence on hydropower.
- **Support for women**. Improve access to financial products for women-led enterprises by creating dedicated funding programs and simplifying application processes, while also subsidizing operational costs. This may include targeted initiatives, such as mentorship programs and training access, to increase women's participation in key sectors.
- **Infrastructure development**. Develop a coherent and modern industrial policy hinged on agro-processing, light manufacturing, digitalization and tourism through strategic infrastructure improvements, including roads, airports, and digital connectivity, to support growth in key sectors. Strengthen the coordination, management, and financing of key industrial policy organizations in both the public and private sectors. Prioritize.
- **Digital adoption**. Encourage the use of digital tools to streamline business operations and foster a supportive business environment in agro-processing, light manufacturing, and tourism by providing grants or tax incentives for technology upgrades by local companies, enhancing efficiency and market access for women-led businesses.

Export competitiveness

- **Comparative advantage**. Develop and capacitate a one province one product strategy that will see each province's comparative advantage in just one product with exports being the focus. This should include diversifying the tourism sector, with specific initiatives in the northern and southern circuit aimed at increasing women's participation in higher-value roles.
- **Infrastructure and trade facilitation**. Improve infrastructure and streamline trade processes to reduce production costs, enhancing competitiveness for both male and female entrepreneurs, including scaling- up initiatives like multi-facility economic zones (MFEZs) to boost operations.
- **Centralized information hubs and customs efficiency**. Establish centralized information centers that provide reliable market data and trends, aiding firms in making informed decisions in real time and enhance export competitiveness by simplifying customs procedures to resolve border clearance issues for exporting firms and hence reducing delays and costs associated with exporting goods.

- **Integration of gender trade and AfCFTA preparedness**. Develop a gender-inclusive export strategy that integrates women into global value chains and ensure that export policies integrate a gender perspective. Additionally, position the country to realize the benefits of the AfCFTA once it goes online by ensuring that the country's regulatory agencies and trade institutions are educated on AfCFTA and prepared to implement the trade facilitation measures.

Productivity increases

- **Climate-resilient farming**. Introduce climate-resilient farming techniques, such as drought-resistant crops and improved irrigation systems, to enhance productivity and support women farmers vulnerable to climate change.
- **Education reforms to boost skills required by industry**.
    - Adapt the Zambian education curriculum to align with industry needs and prepare the workforce for Industry 4.0, addressing the skills mismatch. Establish specialized authorities to supervise industry-specific skill development and market alignment.
    - Increase budget allocations for human capital development, particularly in STEM and ICT, to build a skilled workforce.
    - Invest in national ICT training initiatives to develop capabilities in key sectors, starting with evidence-based pilot programs.
    - Enhance and expand Technical and Vocational Education and Training (TVET) to align with industry needs and close the gender skills gap.
    - Broaden training programs in hospitality management, tour guiding, and business skills specifically aimed at empowering women and enhancing productivity in the tourism sector.
    - Develop gender-inclusive training programs in STEM and manufacturing to equip women with essential skills, improving efficiency and contributing to growth in these sectors.
- **Collaborative platforms**. Build sustainable platforms that foster partnerships between educational institutions and industries, particularly in agro-processing and tourism, to align curricula with workforce skills and improve labor productivity.
- **Formalization of the informal sector**. Leverage emerging digital platforms to formalize the informal service sector to support their access to credit, opportunities for upskilling, specialization, and worker services and cooperating partner support.

Technology upgrading

- **Invest in ICT resilience**. Offer financial support, grants, and favorable financial products to firms in priority sectors that invest in advanced technology, digital infrastructure enhancing productivity and competitiveness and foster public-private partnerships to accelerate technological adoption across various industries.
- **Digital literacy for women**. Implement targeted digital literacy programs for women, Facilitate partnerships between women entrepreneurs and technology providers in agro-processing and light manufacturing to promote innovation and technology adoption, especially in rural areas, along with creating financial incentives for women-led enterprises.

- **Investment promotion and technological innovation in manufacturing**. Promote favorable domestic conditions for foreign direct investment in manufacturing including support towards local technical innovation. Specific actions that can be taken include youth skills development, the establishment of technology-focused industrial parks, and strengthening institutions like the Council for Scientific and Industrial Research.
- **Digital platforms in tourism**. Encourage the use of digital platforms in tourism, such as online booking systems and digital marketing tools, to improve operational efficiency and expand global reach, especially for women-owned businesses.

Human well-being

- **Strengthening social security systems**. Develop a comprehensive social security system that integrates both formal and informal workers while focusing on health care, education, medical insurance and retirement plans and other social protection programs that address the challenges faced by the vulnerable, including women and other marginalized groups in order to foster inclusive growth.
- **Promoting gender equality**. Implement policies to ensure equal access to education, employment, and leadership opportunities, contributing to better economic outcomes.
- **Expanding digital financial services**. Accelerate the adoption of mobile money and fintech solutions to enhance women's participation in the formal economy and invest in online education and telemedicine to improve access to essential services, particularly in rural areas.
- **Facilitating transition to formal employment and promotion of the ILO decent employment standards.** Create pathways for informal workers to shift into formal employment through targeted initiatives and training and carry out awareness campaigns by leveraging the use of mobile service providers through SMS across various sectors to promote ILO decent employment standards.

5.2. Outlook, risks, and conclusion

After experiencing significant economic challenges exacerbated by the COVID-19 pandemic, the Russia-Ukraine war and a decline in copper prices, Zambia's long-term growth prospects remain cautiously optimistic. The projected growth rate for the economy is approximately 4.5 percent in the coming years (AEO, 2024), although substantial public debt, climate risks and fluctuating copper price continue to pose significant risks to the growth and transformation prospects of the economy. A pressing issue hampering Zambia's economic transformation is the need for improved fiscal discipline, as rising public sector expenditures and wage bills often lead to fiscal slippages.

The most prominent risks in the medium term include tightened fiscal space for programs that support economic transformation, high inflation, depreciating and volatile exchange rate, emergence of epidemics and pandemics that can negatively influence the growth of many sectors, especially the tourism sector, slow adaption to climate change, continued heavy reliance of hydropower energy, and continued overdependence on the mining sector.

It is imperative for the government to revisit and build consensus around a cohesive long-term national development plan, integrating various sectoral priorities to drive inclusive growth. The authorities must commit to policies that promote economic transformation, guided by the DEPTH

framework. They must address the specific challenges and opportunities at macro level, sector level including agro-processing, light manufacturing, tourism, and the digital economy, as well as those presented at firm or enterprise level with a strong focus on gender inclusivity. By implementing policies that close gender gaps in these sectors, Zambia can unlock significant potential for economic growth and transformation by promoting diversification, export competitiveness, enhanced productivity, and improved technology upgrading, which ultimately improve the well-being of its citizens. With the right policies and monitored implementation, Zambia is sure to achieve transformative and resilient growth and become a prosperous middle-income country by 2030 in line with its Vision 2030.

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ANNEX 1. REVIEW OF NATIONAL DEVELOPMENT PLANS

Fifth National Development Plan (FNDP) 2006-2010

With the theme of "broad based wealth and job creation through citizenry participation and technological advancement", the Fifth National Development Plan (FNDP), 2006-2010, was the first building block in a series of five-year plans to actualize Vision 2030. The plan focused on agricultural development as the engine of income expansion in the economy (Government of the Republic of Zambia, 2006). To complement this, the Plan also focused on other linkage sectors such as infrastructure, tourism, manufacturing, mining and energy. Specifically, the macroeconomic objectives of the FNDP included: 1) To accelerate pro-poor economic growth of at least 7 percent; 2) To achieve and sustain single-digit inflation; 3) To achieve financial and exchange rate stability; 4) To sustain a viable current account position; and, 5) To reduce domestic debt to sustainable levels.

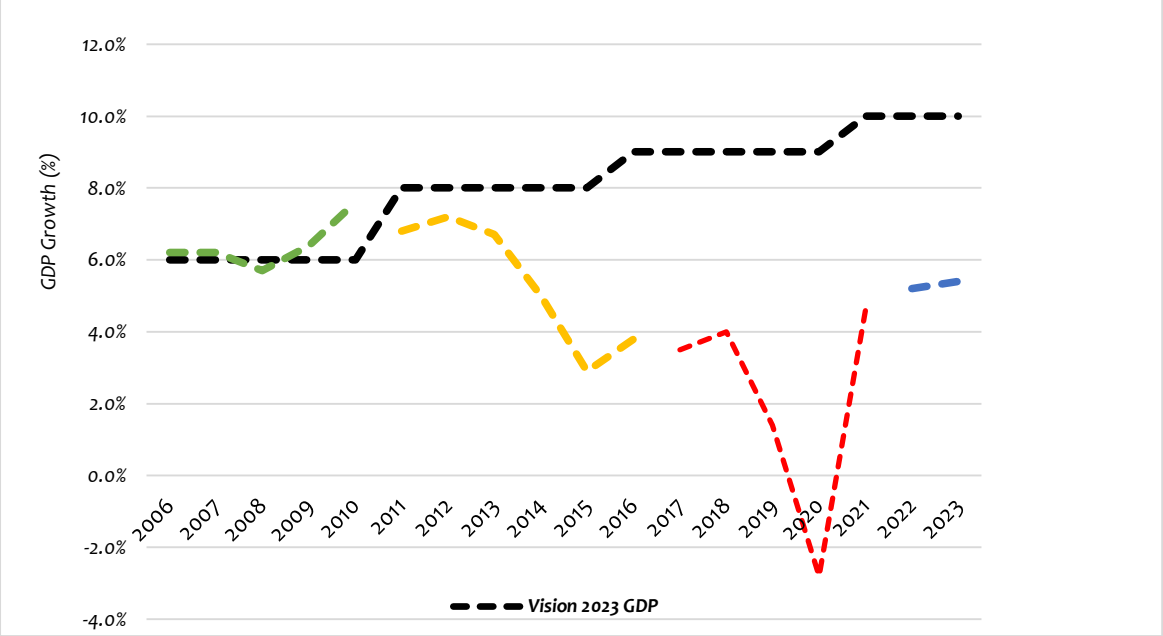
Other macroeconomic and fiscal policies and strategies under the FNDP included maintenance of macroeconomic stability, improving budget execution, and strengthening fiscal accountability and expenditure, straightening the revenue base (Government of the Republic of Zambia, 2006). With regard to socio-economic development and well-being, the FNDP recognized the need for economic growth to be complemented by social distributive measures to reduce poverty and destitution, including expanding social safety nets, increasing social protection, dealing with disability issues, and improving good governance.

During the five-year implementation of the FNDP, the Zambian economy grew at an average rate of 6.4 percent, exceeding the 6 percent growth target set in Vision 2030 for the period 2006-2010 (

Figure 23). This positive growth was based on strong performance from agriculture, mining, construction, transport, and communications (Ministry of Finance and National Planning, 2011). Similarly, the financial sector was resilient, with the exchange rate strengthening against major currencies and annual inflation contained for most of the period (7.9 percent annual inflation in 2010, just slightly below the end year target of 8.0 percent.

Finally, the conducive political, institutional and regulatory environment set the economy on a strong foundation. During this period, Zambia strengthened the fight against corruption and emphasized the need for the rule of law to underpin socio-economic development. Other major highlights include Zambia's Fifth Constitutional Review process, which was undertaken in 2006 to clarify key issues such as the Bill of Rights, Parliamentary Oversight, and the 50+1 percent requirement for presidential elections (IDEA International, 2024)

Figure 23: Zambia's real gross domestic product growth, 2006-2023



Source: Constructed by Author from Vision 2023, Annual Economic Reports and NDP Data

Sixth National Development Plan (SNDP) 2011-2016

The overall Sixth National Development Plan period (2011-2016) is split between two development plans. The government launched the Sixth National Development Plan (SNDP) 2011-2015 and then revised it and called it the Revised Sixth National Development Plan (R-SNDP) 2013-2016. With the change in government in September 2011, the new government abandoned the SNDP after only two years of implementation (2011 and 2012). The goal was to refocus the country's development priorities in line with the new administration's policies and manifesto (Government of the Republic of Zambia, 2013). As such, the R-SNDP became Zambia's second medium-term development plan for achieving Vision 2030.

With the theme, "People-centered economic growth and development", the R-SNDP was the manifestation of the new government's populist campaign message of improving the quality of life for all Zambians. The specific objectives of the R-SNDP included: 1) To promote employment and job creation through targeted and strategic investments in selected sectors; 2) To promote rural development by promoting agricultural development, rural enterprises and providing support infrastructure in rural areas; 3) To enhance human development by investing in the social sectors; and 4) To accelerate infrastructure development to enhance the growth potential of the economy.

Other macroeconomic objectives and policies of the R-SNDP included: 1) Achieving real GDP growth rates of above 7.0 percent per annum; 2) Promoting economic diversification and industrialization, especially in labor-intensive sectors like agriculture, tourism, manufacturing, and construction; 3) Sustaining stable single-digit inflation and progressively reducing it to 5.0 percent end-year inflation by 2016; and 4) Increasing international reserves to at least 4 months of import cover by end-2016. With regard to fiscal policies, the R-SNDP was equally ambitious, aiming to broaden the tax base, substantially reducing tax exemptions, and increasing the contribution of state-owned enterprises to national revenue.

Despite the objective of maintaining public debt within sustainable levels, the R-SNDP was mainly characterized by increasing debt accumulation in pursuit of the government's aggressive infrastructure development agenda. During this period, the government undertook massive investment spending on various infrastructure projects in sectors such as energy, health, education and transport. Notable transport infrastructure projects include the Link Zambia 8000 project, Pave Zambia 2000 project, as well as the upgrading and rehabilitation of the Kenneth Kaunda International Airport and Simon Mwansa Kapwepwe International Airport (Ministry of Finance and National Planning, 2014). In the energy sector, the government undertook to increase the installed electricity generation, transmission and distribution capacity by developing the Itezhi-Tezhi and Kafue Gorge lower power stations and extending the Kariba North Bank power station, among others (Ministry of Finance and National Planning, 2012).

In order to sustain this aggressive infrastructure development program, the government borrowed heavily externally, particularly from the Eurobond market, issuing three Eurobonds amounting to USD3 billion between 2012 and 2015 (ZIPAR, 2019). Unfortunately, this massive infrastructure development program did not yield the anticipated economic growth, especially taking into account the low productivity and output from key sectors such as agriculture and energy partly due to adverse weather conditions during the 2014/2015 rainfall season (ZIPAR, 2019). In the end, Zambia's economic growth greatly weakened to an average of 4.6 percent between 2013 and 2016, with the lowest growth rate of 2.9 percent recorded in 2015 (see **Error! Reference source not found.**). This was a significant deviation from the Vision 2030 growth target of 8.0 percent for the period 2011-2015 (Government of the Republic of Zambia, 2006). In general, the country's economic performance during the entire SNDP period was marred by overall lack of prudent macroeconomic and fiscal management and unsustainably high debt levels under the PF administration.

Seventh National Development Plan (7NDP) 2017-2021

The performance of Zambia under the Seventh National Development Plan (7NDP) period can be viewed as the culmination of the country's economic 'fall from grace' which was triggered mainly by rapid debt accumulation during the R-SNDP period. With the theme, "Accelerating development efforts towards the Vision 2030 without leaving anyone behind", the 7NDP (2017-2021) was the second NDP under the Patriotic Front government. As opposed to other NDPs which approached economic development through sector-specific policies, the 7NDP adopted a multi-sectoral integrated approach to development with special emphasis on five pillars: 1) Economic diversification and job creation; 2) Reducing poverty and vulnerability; 3) Reducing developmental inequalities; 4) Enhancing human development; and 5) Creating a conducive governance environment for a diversified economy (Ministry of Finance and National Planning, 2017).

The 7NDP was crafted around specific macroeconomic and fiscal objectives. These included: 1) Achieving an average annual real GDP growth rate of above 5 percent; 2) Sustaining single-digit inflation; 3) Increasing international reserves to at least 4 months of import cover; 4) Raising domestic revenue collection to over 18 percent of GDP; 5) Containing domestic borrowing to less than 2 percent of GDP; and 6) Reducing the budget deficit to less than 3 percent. Despite having modest macroeconomic and fiscal targets compared with previous NDPs, the 7NDP period was greatly impacted by the country's debt challenges, with domestic debt as a percentage of GDP reaching 43.5 percent, as depicted in **Error! Reference source not found.**1 below. Similarly, the country's economic growth was greatly subdued, averaging 2 percent during 2017-2021.

Table 12: Zambia's macroeconomic indicators, 2017-2021

Economic indicators	2017	2018	2019	2020	2021
Real GDP growth (%)	3.5	3.6	1.4	-2.8	4.6
Inflation (%)	6.6	7.5	9.1	15.7	22.1
Nominal exchange rate (ZMW/$)	9.5	10.5	12.9	18.2	19.9
Fiscal deficit (% of GDP)	7.5	8.3	9.4	13.8	8.4
Domestic debt (% of GDP)	19.6	20.9	26.7	39.2	43.5

Source: Constructed by author based on data from ZamStats, MoFNP and BoZ

With the advent of the COVID-19 pandemic, the Zambian economy contracted by 2.8 percent and Zambia become the first country to default on its foreign debt obligations. Although the pandemic has been blamed for undoing the Zambian economy including triggering the default, it is worth noting that the economy had been under stress for a long time before the pandemic, with GDP growth hitting 1.4 percent in 2019, a record low for decades (Ministry of Finance and National Planning, 2020). This persistent decline since 2010 reflects a significant departure from the growth path envisaged in Vision 2030 (ZIPAR, 2020).

The government continued to spend massively on agricultural subsidies. With regard to the governance and institutional framework, the government continued to spend considerably in agriculture during the 7NDP period, particularly on the Farmer Input Support Programme (FISP) and Strategic Food Reserves (SRF), with a view to propping up economic recovery. With the public debt situation worsening after the 2020 default, the country enacted the National Planning and Budgeting Act No. 1 of 2020, with the overall goal of 'ring-fencing' the country's economic development program, including the national planning and budgeting process (Government of the Republic of Zambia, 2020).

Finally, with regard to good governance and the rule of law, international observers noted that civil liberties and human rights, including freedom of speech, were greatly infringed upon during the tenure of President Lungu (BTI, 2024). Specifically, space for critical voices was significantly constricted and the government became less tolerant of dissent and freedom of expression, with some radio and TV stations either heavily controlled or closed altogether (ibid). Politically, this became unattainable, especially with so much damage to the economy – as reflected by subdued economic growth over 2017-2021 – and Zambians finally turned against President Lungu government. The United Party for National Development (UPND) was elected in September 2021.

Eighth National Development Plan (8NDP) 2022-2026

With the 7NDP expiring in 2021, and in line with the requirements of the National Planning and Budgeting Policy of 2014, the government was to develop the fourth building block towards the attainment of Vision 2030. The Eighth National Development Plan (8NDP) was launched at the end of 2021 for implementation during the period 2022-2026 (ZIPAR, 2020). On the backdrop of an ailing economy, default on foreign debt obligations, and limited foreign direct investment due to a

deterioration in international relations and the national investment outlook, the UPND government thus had a huge responsibility of drafting a national development plan that would restore fiscal discipline and macroeconomic stability.

Themed “Socio-Economic Transformation for Improved Livelihood”, the 8NDP therefore became the next building block towards achieving Vision 2030. Specifically, the 8NDP focuses on three strategic development areas, namely: 1) Economic transformation and job creation; 2) Human and social development; and 3) Environmental sustainability (Ministry of Finance and National Development Planning, 2022). The overall goal was to restore macroeconomic stability by raising real GDP growth as well as attaining fiscal and debt sustainability in order to improve the livelihoods of Zambians, especially the vulnerable.

Specific macroeconomic and fiscal policies and strategies include: 1) Achieving an annual real GDP growth rate of at least 4.5 percent by 2026; 2) Reducing the fiscal deficit to 3.6 percent of GDP by 2026; 3) Maintaining an annual domestic revenue-to-GDP ratio of at least 21 percent; 4) Containing domestic borrowing to less than 4.7 percent of GDP; 5) Reducing domestic arrears and curtailing accumulation of new arrears; and 6) Reducing and maintaining inflation within the 6-8 percent target range, among others (Ministry of Finance and National Development Planning , 2022). With regard to socio-economic development, the 8NDP aims to reduce poverty and inequalities among the vulnerable as well as provide equal opportunities for all to reach their full socio-economic potential.

After two years of implementation (2022-2023), the Zambian economy showed signs of recovery with GDP growth rates of 5.2 percent and 5.8 percent, for 2022 and 2023, respectively, thereby surpassing the average of 4.6 percent growth envisaged in the 8NDP. On the other hand, the government failed to contain annual inflation within the 6-8 precent target range, mainly driven by the rise in the cost of living due to high fuel prices following the removal of subsides in the petroleum and electricity sub-sectors, as well as knock-on effects from external shocks like the Russia-Ukraine war and the Israel-Gaza conflict. With regard to institutional framework, the government has managed to slowly re-establish international relations and trust, including national investment confidence. This is in part due to enacting significant pieces of legislation such as the Public Debt Management Act (2022), Medium-Term Debt Management Strategy (2023), Debt Sustainability Analysis Report (2023), and the Public Debt, Grants and Guarantees Report (2023). Furthermore, notable progress with regard to advancing human rights and freedom of information was achieved by the enactment of the Access to Information Act (2023).

Finally, with the debt restructuring process nearing its completion, there is hope of economic recovery for Zambia in the short- to medium-term. That stated, the El Niño-induced drought, which affected the 2023-24 rainfall season, has had significant impact on major sectors of the economy, especially agriculture and energy production, thereby forcing the government to revise growth forecast for 2024 from 4.7 percent to 2.3 percent (Ministry of Finance and National Planning, 2024). With continued implementation of prudent macroeconomic and fiscal management policies, economic growth is likely to rebound in 2025, albeit far from the 10 percent growth envisioned by Vision 2030 (Government of the Republic of Zambia, 2006).

ANNEX 2. SECTORAL CONTRIBUTION TO GROWTH

Table 13: Sectoral contribution to growth, 2011-2022 (at 2010 constant prices)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture, forestry and fishing	7.8%	3.4%	-3.8%	1.1%	-7.7%	3.7%	9.8%	-21.2%	7.7%	17.2%	6.9%	-11.0%
Mining and quarrying	0.1%	0.8%	3.6%	-2.3%	0.2%	7.3%	3.0%	6.3%	-5.1%	8.0%	-4.7%	-3.7%
Manufacturing	10.6%	4.8%	6.2%	6.5%	5.4%	1.9%	4.4%	4.1%	2.4%	1.0%	13.1%	4.7%
Electricity, gas, steam and air conditioning supply	12.4%	4.0%	8.0%	1.9%	-1.5%	-13.6%	23.6%	11.7%	-8.1%	3.1%	12.7%	9.5%
Water supply; sewerage, waste management and remediation activities	80.5%	9.9%	29.1%	-7.9%	-6.7%	-3.4%	-3.7%	5.1%	-1.2%	2.1%	2.9%	6.4%
Construction	2.1%	0.6%	-3.5%	10.6%	18.0%	10.2%	6.4%	2.4%	-5.0%	-5.4%	14.5%	-8.8%
Wholesale and retail trade; repair of motor vehicles and motorcycles	19.5%	8.3%	19.8%	3.4%	1.5%	-0.1%	0.7%	3.3%	0.4%	-12.6%	2.3%	1.2%
Transportation and storage	-15.4%	5.5%	-19.8%	6.6%	0.6%	-2.2%	7.8%	7.7%	-2.8%	13.8%	8.7%	28.4%
Accommodation and food service activities	2.6%	33.6%	3.8%	4.0%	-0.1%	1.3%	6.0%	1.7%	2.2%	-22.4%	-18.4%	74.7%
Information and communications	109.4 %	22.4%	-3.5%	7.5%	2.5%	17.4%	-13.2%	40.1%	18.6%	14.3%	19.7%	46.5%
Financial and insurance activities	-6.1%	7.9%	-6.6%	15.1%	12.1%	-1.8%	-6.2%	23.5%	8.1%	13.0%	15.3%	-1.8%
Real estate activities	2.5%	1.1%	-2.3%	2.6%	3.1%	3.2%	2.9%	3.3%	3.5%	3.5%	3.6%	2.8%
Professional, scientific and technical activities	-7.5%	53.0%	-3.5%	5.6%	1.1%	6.4%	6.1%	2.5%	-0.9%	6.8%	2.1%	-1.2%
Administrative and support service activities	-26.6%	-19.2%	27.5%	-9.0%	4.0%	5.3%	6.0%	6.1%	0.3%	3.3%	36.7%	-9.3%
Public administration and defense; compulsory social security	-16.2%	38.6%	27.8%	4.5%	2.0%	9.7%	2.8%	1.6%	8.3%	-15.9%	6.5%	5.4%
Education	4.4%	10.4%	6.0%	10.9%	0.5%	4.7%	6.7%	4.8%	1.8%	-19.3%	-0.6%	20.6%
Human health and social work activities	-10.9%	12.6%	-23.4%	10.9%	2.9%	1.6%	17.4%	11.0%	8.3%	7.4%	2.5%	-4.1%
Arts, entertainment and recreation	-12.4%	-15.9%	60.1%	14.6%	3.8%	0.5%	-4.0%	12.2%	3.8%	-71.6%	25.2%	62.2%
Other service activities	-0.6%	5.2%	10.9%	3.0%	3.1%	3.2%	2.8%	3.3%	3.5%	3.5%	2.8%	-9.1%
Total for the economy	5.6%	7.6%	5.1%	4.7%	2.8%	3.8%	3.5%	4.0%	1.5%	-2.2%	6.4%	5.5%
Taxes less subsidies on products	5.6%	7.6%	5.1%	5.1%	5.4%	3.5%	3.5%	3.8%	0.4%	-12.6%	2.3%	1.2%
Gross domestic product (GDP) at market prices	5.6%	7.6%	5.1%	4.7%	2.9%	3.8%	3.5%	4.0%	1.4%	-2.8%	6.2%	5.2%

Source: Ministry of Finance and National Planning