

*Creating Decent Jobs for
Posterity*

KENYA ECONOMIC REPORT 2025



To create a globally competitive and
prosperous nation with a high quality of
life by 2030



The **KENYA INSTITUTE** for **PUBLIC**
POLICY RESEARCH and **ANALYSIS**



Kenya Economic Report 2025

Creating Decent Jobs for Prosperity

KER 2025 Technical Committee



*To create a globally competitive and prosperous nation with
a high quality of life by 2030*

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Statement by Cabinet Secretary, The National Treasury and Economic Planning

The Kenya Economic Report is prepared annually by the Kenya Institute for Public Policy Research and Analysis (KIPPRA), pursuant to Section 23(3) of the KIPPRA Act Cap 112A. This is a statutory report that annually reviews Kenya's economic performance and provides prospects for the medium-term. The Kenya Economic Report 2025 is themed "***Creating Decent Jobs for Prosperity***", in line with the national development goals of enhancing job creation and economic growth.

Creating decent jobs is a national development priority requiring urgent and sustained policy efforts. This aligns with the Government's Bottom-Up Economic Transformation Agenda (BETA) and MTP IV, with the aim to improve the livelihoods of Kenyans by focusing on job creation for economic growth. The agenda seeks to empower Kenyans and enhance their access to decent employment opportunities and promote wealth creation and economic prosperity across the country. Through targeted policies, investments, and initiatives, BETA aims to drive economic transformation and create a more equitable and prosperous society by fostering job creation across all sectors. The MTP IV places emphasis on smallholder agriculture, industrialization, innovation, and agro-processing as the key drivers of economic growth and job creation at the bottom of the economic development pyramid. The government aims to create over 1.2 million jobs annually by targeting the development of manufacturing value chains, investments in infrastructure, technology, and human capital development. The MTP IV prioritizes the sectors with high employment potential, such as manufacturing, construction, Information and Communication Technology (ICT), and trade. By enhancing the business environment and encouraging public-private partnerships, the County Integrated Development Plans (CIDPs) seek to stimulate private sector growth and entrepreneurship at the national and county levels, thereby generating decent employment opportunities. As part of the initiatives to promote decent jobs, the MTP IV targets to increase the share of formal employment from 17.0 per cent in 2023 to 40.0 per cent in 2027.

The KER 2025 captures the importance of enhancing descent employment creation for sustainable growth through analysis of sectoral situations, policies, and institutional structures influencing the availability of employment opportunities while considering possibilities of promoting decent jobs in Kenya. The report highlights the key sectors contributing to the creation of jobs, including macroeconomic stability and opportunities, agriculture, skills enhancement through Technical and Vocational Education and Training (TVETs), trade, e-mobility, and county development. The report is structured in eight key chapters: Trends of Macroeconomic Performance; Medium-Term macroeconomic Outlook for Kenya; decent jobs in agricultural sector enhanced by digital extension services; making the manufacturing industry more competitive to generate decent jobs; enhancing youths' employability by investing in TVET and education; re-activating job creation in the domestic trade industry; leveraging decent jobs potential in the sub-sector of e-mobility; and enhancing decent jobs at the county level.

The government is committed to enhancing the creation of decent job for economic growth. The Kenya Economic Report 2025, therefore, provides rich and timely evidence to policy makers in driving the government's development agenda. I therefore call upon all the stakeholders at national and county levels to consider and implement the policy recommendations provided in this Report.



Hon. FCPA John Mbadi Ng'ongo, EGH
Cabinet Secretary
The National Treasury and Economic Planning

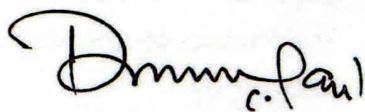
Foreword

The Kenya Economic Report 2025 provides evidence-based policy recommendations to support initiatives in enhancing decent jobs creation and economic growth at the national and county government levels.

The preparation of this Report enables the Institute to fulfil the statutory requirement under the KIPPRA Act Cap 112A Laws of Kenya, Section 23(3), which requires the Institute to develop the Kenya Economic Report in consultation with the Ministry responsible for Economic Planning, Finance, National Development, and the Central Bank of Kenya.

The KIPPRA Board of Directors provided oversight and strategic leadership in the preparation of the Report. I thank the management and staff, especially the KER Committee for their devotion, diligence, and professionalism that went into the preparation of this Report. I recognize and appreciate the contributions and insights from the stakeholders through the various consultative forums during the development of the Report.

I also thank the Government of Kenya for the continued financial support to KIPPRA. The support has enabled the Institute to undertake objective policy research and analysis that facilitates the Institute's role in providing advisory and technical services on public policy issues to the government, the private sector, and other stakeholders.



Prof. Paul Wachana
Chairperson
KIPPRA Board of Directors

Preface

The Kenya Institute for Public Policy Research and Analysis (KIPPRA) is mandated to undertake public policy research, analysis and economic forecasting to inform formulation of medium and long-term development plans and goals in Kenya. To achieve this mandate, the Institute reviews the macroeconomic and sectoral performance through the preparation of the Kenya Economic Report. The Kenya Economic Report 2025 is the 17th edition in the series of this flagship Report.

This Report comes at a time when policy makers urgently seek evidence to inform strategies that address the dwindling decent job opportunities for Kenya's rapidly growing youth population. The persistent rise in the youth bulge, coupled with limited employment prospects, has heightened the government commitment to support creation of decent jobs to absorb the youth in the country.

The economy is subjected to shocks, including the prolonged drought and spillover effects from global disruptions such as the Russia-Ukraine war, which have destabilized food and commodity supply chains. Debt service obligations have been growing, which constrains spending on productive and social sectors and job-creating investments. In response, there has been intense policy debate on the most appropriate interventions to cushion households while unlocking pathways for sustainable livelihoods.

Against this backdrop, the theme of the Kenya Economic Report 2025 was selected to prioritize creation of decent jobs for youth as a pathway to economic resilience. Addressing the limited employment opportunities for the youth will not only catalyze inclusive economic growth but also improve livelihoods. This will require targeted policies that harness opportunities in agriculture, manufacturing, digital technologies, and the green economy to create productive and decent jobs. Additionally, strengthening skills development at technical, vocational, education and training (TVET) level and improving trade across sectors will enhance the country's ability to withstand economic and climate-related shocks while fostering stable and inclusive social and economic development.

The report offers key policy recommendations for policy makers to consider in addressing the decent jobs deficit. Exploiting the opportunities brought out in the policy recommendations is pivotal in strengthening strategies for decent job creation. This serves to increase opportunities and decency of jobs created in the country.



Dr Eldah Onsomu
Executive Director
KIPPRA

Acknowledgments

The Kenya Economic Report 2025 was prepared through the participation of various stakeholders. The Institute acknowledges and appreciates the KIPPRA Board Chairperson, Prof. Paul Wachana; the Board of Directors; and the Executive Director, Dr Eldah Onsomu, for their leadership and guidance during the preparation of this statutory Report.

The Institute acknowledges the exceptional dedication and teamwork of the Kenya Economic Report 2025 Technical Committee under the leadership of Dr Hillary Wakhungu (Chairperson) and Violet Nyabaro (Secretary). The other members of the Technical Committee and authors of the report were Elizabeth Emongor, Elvis Kiptoo, Martha Nakumi, Lauren Karima, Dire Dika, Davis Milimo, Lillian Kingori, Jacob Nato, Kenneth Malot, Brian Nyaware and Cecilia Naeku. The Institute is also grateful to other KIPPRA researchers who generously provided their support and insights during the peer review processes, quality control processes and workshops. Special thanks to Adan Shibia and Boaz Munga for their invaluable technical support throughout the process.

Further, the Institute sincerely appreciates the support of the Kenya National Bureau of Statistics, county governments, ministries, state departments, and government agencies that availed data and information used in this Report. The Institute particularly appreciates the insights of the National Treasury and Economic Planning, the Central Bank of Kenya, and the Kenya National Bureau of Statistics for reviewing the Report. The Institute acknowledges the contribution and participation of all other stakeholders who participated in the validation of this Report.

The financial support to KIPPRA by the Government of Kenya facilitated the preparation of this Report.

Abbreviations and Acronyms

ACA	Anti-Counterfeit Authority	COTU	Central Organization of Trade Unions
AEAS	Agricultural Extension and Advisory Services	CPI	Consumer Price Index
AfCFTA	African Continental Free Trade Area	DSA	Debt Sustainability Analysis
AGOA	African Growth and Opportunity Act	DSF	Debt Sustainability Framework
AMS	Agricultural Marketing Strategy	EAC	East African Community
ASALs	Arid and Semi-Arid Lands	EASTRIP	Eastern Africa Skills for Transformation and Regional Integration Project
ASTGS	Agricultural Sector Transformation and Growth Strategy	EDS	External Debt Service
BETA	Bottom-up Economic Transformation Agenda	EPRA	Energy and Petroleum Regulatory Authority
BROP	Budget Review and Outlook Paper	ERS-WEC	Economic Recovery Strategy for Wealth and Employment Creation
CAK	Communications Authority of Kenya	EU	European Union
CBC	Competency-Based Curriculum	EV	Electric Vehicle
CBET	Competency Based Education and Training	FAO	Food and Agriculture Organization
CBK	Central Bank of Kenya	FDI	Foreign Direct Investment
CCAK	Communications Commission of Kenya	FISIM	Financial Intermediation Services Indirectly Measured
CEDEFOP	European Centre for the Development of Vocational Training	FKE	Federation of Kenya Employers
CGE	Computable General Equilibrium	FY	Fiscal Year
CGS	Credit Guarantee Scheme	GCP	Gross County Product
CIDPs	County Integrated Development Plans	GDP	Gross Domestic Product
COMESA	Common Market for Eastern and Southern Africa	GHG	Greenhouse Gas
		GoK	Government of Kenya
		GVA	Gross Value Added
		HELB	Higher Education Loans Board
		ICE	Internal Combustion Engine

ICT	Information Communication Technology	KMTC	Kenya Medical Training College
IEA	International Energy Agency	KNBS	Kenya National Bureau of Statistics
ILO	International Labour Organization	KNQA	Kenya National Qualifications Authority
IMF	International Monetary Fund	KNQF	Kenya National Qualifications Framework
IoT	Internet of Things	KTMM	KIPPRA-Treasury Macroeconomic Model
IPR	Intellectual Property Rights	KTTC	Kenya Technical Trainers College
ISCED	International Standard Classification of Education	KUCCPS	Kenya Universities and Colleges Central Placement Service
KACE	Kenya Agricultural Commodity Exchange	LAPSSET	Lamu Port-South Sudan-Ethiopia Transport
KALRO	Kenya Agricultural and Livestock Research Organization	LFPR	Labour Force Participation Rate
KAM	Kenya Association of Manufacturers	LICS	Low Income Countries
KASEP	Kenya Agricultural Sector Extension Policy	M3	Extended Broad Money Supply
KCHS	Kenya Continuous Household Survey	MSEs	Micro and Small Enterprises
KCNP	Kenya Coast National Polytechnic	MSMEs	Micro, Small, and Medium Enterprises
KCSE	Kenya Certificate of Secondary Education	MtCO ₂ e	Million Tonnes of Carbon Dioxide Equivalent
KDHS	Kenya Demographic and Health Survey	MTP	Medium Term Plan
KEBS	Kenya Bureau of Standards	NDA	Net Domestic Assets
KER	Kenya Economic Report	NEECS	National Energy Efficiency and Conservation Strategy
KICTANet	Kenya ICT Action Network	NEET	Not in Education and Employment or Training
KIHBS	Kenya Integrated Household and Budget Survey	NFA	Net Foreign Assets
KIPPRA	Kenya Institute for Public Policy Research and Analysis	NHS	National Health Service
KIRDI	Kenya Industrial Research and Development Institute	NITA	National Industrial Training Authority
		NOC	Network Operations Centre
		NOFBI	National Optic Fiber Backbone Infrastructure

NPISH	Non-Profit Institutions Serving Households	TDS	Total Debt Service
NSSF	National Social Security Fund	TIMPs	Technologies, Innovations, and Management Practices
NTBs	Non-Tariff Barriers	ToU	Time of Use
NTMs	Non-Tariff Measures	TVCs	Technical Vocational Colleges
NTSA	National Transport and Safety Authority	TVET	Technical and Vocational Education and Training
NVQs	National Vocational Qualifications	TVETA	Technical and Vocational Education and Training Authority
OCOB	Office of the Controller of Budget	TVET-CDACC	TVET Curriculum Development, Assessment and Certification Council
OECD	Organization for Economic Co-operation and Development	UHC	Universal Health Coverage
OSR	Own-Source Revenue	UK	United Kingdom
PFM	Public Finance Management	UNCTAD	United Nations Conference on Trade and Development
PPG	Public and Publicly Guaranteed (Debt)	UNESCO	United Nations Educational, Scientific and Cultural Organization
PPP	Public-Private Partnership	UNIDO	United Nations Industrial Development Organization
R4D	Research for Development	USSD	Unstructured Supplementary Service Data
RPL	Recognition of Prior Learning	VAT	Value Added Tax
SBCC	Social and Behaviour Change Communication	VTCs	Vocational Training Colleges
SDG	Sustainable Development Goal	VTDP	Voluntary Tax Disclosure Programme
SEZs	Special Economic Zones	WEO	World Economic Outlook
SHIF	National Health Insurance Fund	WHO	World Health Organization
SMEs	Small and Medium-sized Enterprises	WRI	World Resources Institute
SPS	Sanitary and Phytosanitary Measures	WRT	Wholesale and Retail Trade
SSA	Sub-Saharan Africa		
STEM	Science Technology Engineering and Mathematics		

Executive Summary

The Kenya Economic Report 2025 provides a detailed and technical analysis, and policy prescriptions for enhancing decent job creation for prosperity across Kenya's strategic economic sectors. The report begins by providing an overview of the macroeconomic performance and economic projections based on the medium-term forecasts. These are followed by thematic discussions, which include enhancing decent jobs in agriculture through digital extension services, enhancing the competitiveness of the manufacturing sector for decent job creation, revitalizing job creation in the domestic trade sector, promoting youth employability through investment in technical and vocational education and training, harnessing the potential of decent jobs in the e-mobility sector, and enhancing creation of decent jobs at the county level.

Macroeconomic performance and medium-term prospects

Kenya's macroeconomic performance presents an optimistic yet nuanced context for job creation and the pursuit of decent jobs. The economy expanded by 4.7 per cent in 2024 but at a slower rate than the 5.7 per cent expansion in 2023, with the growth being driven by agriculture and services. Agricultural growth is most important to employment creation because its labour-absorbing capacity is very high, especially in rural areas where poverty and vulnerability are highest. The services sector, dominated by wholesale and retail trade, transport, ICT, and financial services, also provided job creation opportunities. Over 782,300 new jobs were created in 2024, indicating the economy's continued capacity to generate employment. However, job creation in the modern sector rose by just 2.4 per cent, which means that a high percentage of new jobs remain in

the informal sector. The prevalence of informality – traditionally characterized by low productivity, job insecurity, and inferior social protection – is a constraint to the realization of decent work standards as articulated in BETA, MTP IV and other key provisions in SDGs 2030 (SDG 8) and Kenya Vision 2030.

Inflation declined significantly to 4.5 per cent in 2024 from 7.7 per cent in 2023, maintaining stability within the target range and boosting household purchasing power required for living standards and productivity improvement of workers. At the monetary policy front, the Central Bank of Kenya has reduced the policy rate from 13.00 per cent in early 2024 to 10.75 per cent in early 2025, and this has contributed to declining outturn interest rates. This reduction is most likely to stimulate private sector credit growth, enhance enterprise development, and set employment generation in motion particularly among the MSMEs, which play a critical role in Kenya's labour market.

Moreover, the external segment also performed better, with the current account deficit declining to 1.3 per cent of GDP from 2.5 per cent on the strength of diaspora remittances, which increased by 18 per cent to US\$ 4.95 billion. These remittance flows not only augment the households at the consumption level but also enhance investments in small and medium scale enterprises, real estate, and agriculture, sectors that have a basic role in creating job opportunities. The build-up of foreign exchange reserves to 5.1 months of import cover (US\$ 10.09 billion) in December 2024 enhances macroeconomic stability, shilling appreciation, and investor confidence and creates a good environment for decent jobs creation through increased foreign direct investment and business development. To achieve these macro gains in quality job outcomes, the policies should target formalization of enterprises, coverage of

social protection to the informal sector employees, and skill development plans corresponding to emerging industrial sectors such as digital economy, green jobs, and agro-processing. This will guarantee that economic growth is not just manifested in employment increase but also in quality, productive, and dignified jobs for Kenyans and therefore propel inclusive economic transformation.

Enhancing decent jobs in agriculture through digital extension services

Improving decent employment in agriculture through digital extension services entails addressing the acute lack of extension officers, a ratio that stands at a mere one officer to 1,500 farmers in Kenya against the FAO recommended ratio of 1 to 400. Digital extension services offer a workable solution by offering real-time agricultural counsel, reducing reliance on physical extension officers, and optimizing productivity. Its job creation potential is high, with estimates at 143,804 in food crops sub-sector, 5,891 in livestock, and 3,934 in dairy. Kenya's increasing ICT infrastructure, supported by the digital superhighway, provides a unique opportunity to expand digital extension services.

To take advantage of digital extension for agricultural productivity and employment creation, several interventions are required. Investments to focus on scaling up digital infrastructure, developing digital literacy among extension agents and farmers, and developing user-friendly platforms for tailored agricultural advice. The creation of national guidelines to ensure the precision and credibility of digital content, and certification of digital extension providers, will be critical in building trust and enabling mass adoption. Integrating digital literacy in training courses in agriculture, reinforcing public-private collaboration, and the development of monitoring

systems will assist in ensuring digital extension services are farmer needs-based and technology-oriented. Just as vital is establishing committed budget lines for agricultural extension at the county level, with well-defined expenditure targets and frequent audits to ensure greater accountability. These steps will not only enhance agricultural productivity but also generate decent jobs in Kenya's agricultural sector.

Enhancing the competitiveness of the manufacturing sector for decent job creation

The manufacturing sector is a key driver of Kenya's structural transformation, contributing to socio-economic development. However, its ability to generate decent jobs is limited by competitiveness factors. A range of factors weaken the competitiveness of the sector in terms of quality, price, and cost. There is a need for greater adoption of quality standards, enhanced protection of intellectual property rights, and strengthened enforcement against illicit trade. Additionally, improved utilization of trade agreements and support for firms in navigating non-tariff measures can improve market access. Further, establishing a predictable tax regime for raw materials and intermediate inputs, along with electricity cost reforms such as revising time-of-use tariffs, can strengthen the sector's competitiveness.

Revitalizing job creation in the domestic trade sector

The wholesale and retail trade (WRT) sector is the country's largest employer, with 50 per cent of all employees, and 80 per cent of the jobs being informal. Employment opportunities are unevenly distributed, with urban counties such as Nairobi, Kiambu, and Mombasa leading job creation due to robust commercial activity

and infrastructure, while rural regions face limited opportunities. Skills shortages occur, especially in agriculture-wholesale-related trade, where most workers have only basic education, while technical sub-sectors require specialist skills, and electronic skills are underdeveloped, limiting the growth of e-commerce. Constricted credit access also hinders business growth, especially for SMEs, since they face high-interest rates and stringent lending conditions. To unleash employment generation in the domestic trade sector, deep reforms are needed. Simplifying business registration, offering tax holidays, and establishing trade centres in secondary towns and rural areas can augment employment opportunities. Enhancing linkages between agriculture, manufacturing, and wholesale trade can enhance structured employment. Moreover, establishing structured trading zones with proper sanitation and safety, enhancing labour law enforcement, and enhancing union membership can augment job security. Decreasing the production cost, offering tax relief on primary goods, and expanding consumer credit can stimulate demand and trading activity. Investing in infrastructure would enhance market access and reduce the cost of distribution. Additionally, scaling up vocational training, ensuring digital literacy as a priority to encourage e-commerce, easing access to credit for SMEs, and implementing reskilling initiatives to allow employees to adapt to automation are key interventions to sustain employment generation in the sector.

Promoting youth employability through investment in technical and vocational education and training

Enhancing Technical and Vocational Education and Training (TVET) is crucial for improving youth employment outcomes. Enrolment in TVET has increased by 12.4 per cent between 2019 and 2023, driven

by government initiatives and changing attitudes towards vocational education. However, certain fields such as agriculture, engineering, and ICT have seen declining enrolment despite their critical role in the economy. To promote employability of the youth through TVET, the Technical and Vocational Education and Training Authority (TVETA) needs to strengthen implementation of CBET to align TVET programmes with industry demands, which includes regular updates to curricula based on occupational standards provided by industry actors. Incentivizing students to enrol in ICT and engineering by offering scholarships, grants, or subsidized tuition fees and increasing investment in ICT infrastructure across TVET institutions through the Kenya Education Network and the National Research and Education Network is also important. There is also a need to facilitate recognition of prior learning (RPL) by implementing a national RPL awareness and accessibility campaign and creating a national TVET industrial attachment fund and placement platform.

Harnessing the potential of decent jobs in the E-mobility sub-sector

The transition to electric mobility (e-mobility) presents an opportunity for Kenya to create decent and sustainable jobs across the transport and manufacturing sectors. The e-mobility sub-sector is experiencing rapid growth, particularly in two- and three-wheelers, which accounted for 96.4 per cent of all registered electric vehicles (EVs) in 2023, up from 67.7 per cent in 2018. This expansion is largely driven by cost savings on fuel and maintenance, making electric motorcycles an attractive option for riders in the informal transport sector. However, high upfront costs, limited financing options, and inadequate charging infrastructure continue to hinder widespread adoption. The transition to e-mobility requires

specialized skills in battery diagnostics, high-voltage systems, and EV maintenance. Although some TVET institutions and private sector players have initiated EV-focused training programmes, skills gaps persist, and limited training opportunities could slow down sector growth. Expanding workforce development programmes and mainstreaming e-mobility courses in TVET institutions will be essential for ensuring a steady pipeline of skilled workers. To harness the full potential of e-mobility for decent job creation, Kenya needs strategic investments, policy coordination, and private sector engagement. Strengthening local production capacity, expanding workforce training, and enhancing charging infrastructure will be key to ensuring that the sector contributes meaningfully to job creation and economic transformation. Fast-tracking the finalization and implementation of the Draft National E-Mobility Policy, 2024, will be crucial in providing a clear regulatory framework, attracting investment, and ensuring sector-wide coordination.

Enhancing creation of decent jobs at the county level

The opportunities for decent work in the agricultural, services, and industrial sectors

across the counties vary by intensity of aridity. There are prospects of decent work in livestock production in arid counties, and mixed farming and crop production in semi-arid and non-ASAL counties. Wholesale and retail trade, and transport and storage, makeup the largest share of employment in services sectors across the counties. Employment in the industrial sector is relatively low, primarily in the manufacturing and construction. The share of the economically active population contributing to pension scheme is highly concentrated in the formal sector. The National Government and the counties can enhance skills to bridge the gap between education and employment and create new job opportunities. There is need to nurture partnerships between the private sector and the government in establishing incubators and seed capital to support entrepreneurship and self-employment among the youth. Aligning job training programmes suited for specific sectors will address skill mismatches and facilitate employee transition to better paying jobs. There is also need to sensitize communities on girl child education to achieve gender parity in wage employment in non-agricultural sectors.

1. Introduction

1.1 Background

The Kenya Economic Report (KER) 2025 is prepared pursuant to Section 23(3) of the KIPPRA Act, CAP 112A, Laws of Kenya. This report provides comprehensive analyses of Kenya's economic performance in the previous financial year, while also providing economic prospects for the subsequent three years. The KER 2025 focuses on the theme “**Creating Decent Jobs for Prosperity**”. The overarching goal is to present evidence-based public policy options that can create decent jobs for inclusive growth and a shared prosperity, especially for the youth across various sectors. This theme is particularly important as Kenya strives to harness the demographic dividends of the economically active youthful population by creating more decent jobs and maintain its economic development momentum in the face of global economic uncertainties, environmental pressures, and technological advancements. Thus, this report provides analytical insights and recommendations to support evidence-based policy decisions towards supporting sustainable economic growth and a prosperous future characterized by decent jobs.

While Kenya's economic growth has demonstrated resilience and recovery from shocks, with 2019-2023 growth rates averaging 4.6 per cent compared to that of Sub-Saharan Africa at 2.8 per cent (IMF, 2024), this growth rates are yet to translate to adequate and decent jobs. The economic growth increased from 4.9 per cent in 2022 to 5.7 per cent in 2023, and decelerated to 4.7 per cent in 2024 (KNBS, 2024a;

KNBS 2025). This growth was driven by key sectors such as services, agriculture, and manufacturing. The services sector has been a major contributor, alongside advancements in agricultural productivity and increase in manufacturing activities. The expansion of the economy presents an opportunity to translate the gains into tangible benefits, including more job opportunities and improved living standards. The overall unemployment rate eased from 5.0 per cent in 2022 to 4.8 per cent in 2023, but the youth unemployment rate was high at around 9.6 per cent (KNBS, 2022). In addition, majority of the employed youth (87.3%) are in informal jobs (KNBS, 2021), highlighting the constraints the youth face in securing decent employment. This mismatch between economic growth and job creation presents the need for targeted policies to foster economic growth that sufficiently translates into more decent employment opportunities.

While there have been positive trends in the modern sector employment, comprising wage employment and self-employment, most of the employment has been created in the informal sector. The wage employment in the modern sector grew from 2.9 million persons in 2019 to 3.2 million persons in 2024 while the self-employed persons increased from 162,700 to 175,500 persons over the same period. The agriculture, industry and service sectors, respectively, accounted for 11.0 per cent, 20.8 per cent and 68.3 per cent of the formal sector wage employment in 2023 (KNBS, 2024). Employment in the informal sector increased from 15.1 million in 2019 to 17.4 million jobs in 2024. The new jobs generated in the economy in 2024 were about 782,300, with the informal sector creating 90 per cent of all the new jobs (703,700 jobs). Wage employment in the formal sector grew by 2.4 per cent, translating to 78,600 new jobs (KNBS, 2025). Most of the jobs in the informal sector are in wholesale

and retail trade, hotels and restaurants (57.7%) followed by manufacturing (20.2 per cent), and community, social and personal services at 11.9 per cent, while others such as construction, transport and communication cumulatively accounted for 10.2 per cent of the informal sector jobs in 2023 (KNBS, 2024a).

The need to create decent jobs is underscored in Kenya's policy framework, including the Kenya Vision 2030, the Sessional Paper No. 4 of 2013 on Employment Policy and Strategy for Kenya, and various strategic initiatives to foster inclusive growth, including the Medium-Term Plan IV (MTP IV 2023-2027) and the Bottom-up Economic Transformation Agenda (BETA). The MTP IV emphasizes smallholder agriculture, industrialization, digital transformation, innovation, and agro-processing as the key drivers of economic growth and for creation of jobs at the bottom of the pyramid. The government aims to create over 1.2 million jobs annually through development of targeted manufacturing value chains, investments in infrastructure, technology upgrading, and human capital development. The MTP IV prioritizes sectors with high employment potential, such as manufacturing, construction, Information Communication Technology (ICT), and trade. By mainstreaming the MTP IV priorities towards enhancing the business environment, the County Integrated Development Plans (CIDPs) provide impetus for stimulating private sector growth and entrepreneurship at the national and county levels, thereby generating decent employment opportunities. As part of the initiatives to promote decent jobs, the MTP IV targets to increase the share of formal employment from 17.0 per cent in 2023 to 40.0 per cent in 2027.

The MTP IV further focuses on empowering Micro, Small, and Medium-sized Enterprises (MSMEs) as one of the strategies to creating decent jobs. These enterprises are crucial

for employment creation and economic resilience. The MSMEs account for over 80 per cent of employment in Kenya, yet they face various constraints, including limited access to finance, technology, markets, supportive infrastructure and requisite skills. The MTP IV aims to address these barriers through targeted interventions such as improved access to credit, technology, skills development, and market linkages. By fostering an inclusive economy that supports MSMEs, the plan aims to create a more equitable distribution of economic benefits and enhance the quality of jobs across the country. Thus, the KER 2025 is critical in providing policy recommendations on not only addressing unemployment but also ensuring that the jobs created offer stability, fair wages, and opportunities for growth across the country.

The KER 2025 will provide valuable insights into the country's economic landscape and offer policy options to stimulate decent job creation in various sectors of the economy. By aligning with Kenya's Vision 2030 and its medium-term plans, policy makers can promote measures for fostering an enabling environment for sustainable and decent employment opportunities.

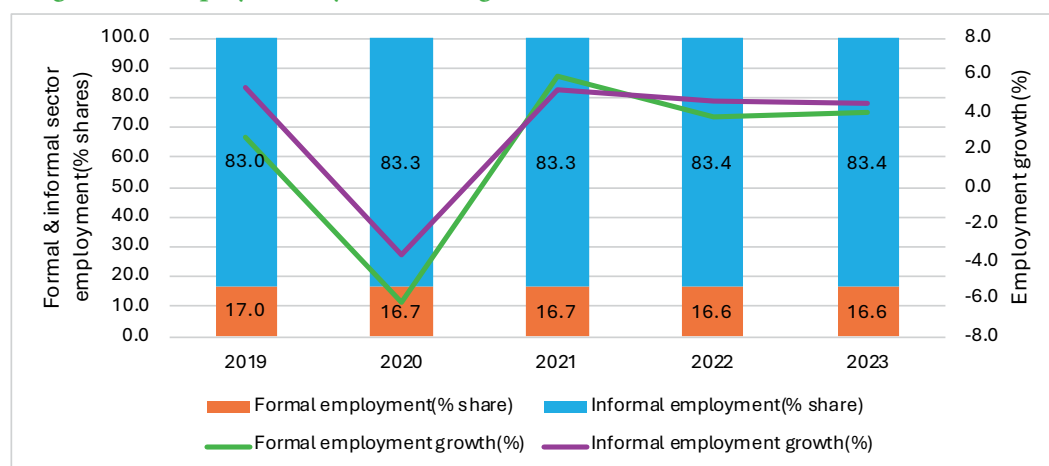
1.2 Rationale of the Theme

Decent employment provides a pathway towards productive work and incomes. Employment that curtails the rights of workers or offers inadequate social protection mechanisms potentially increases vulnerability of workers, making it harder to progress out of poverty. Major strides have been made both legislatively and institutionally to ensure that decent employment is enhanced. For instance, the tenets of decent employment are embedded in Chapter Four of the Constitution of Kenya, 2010. The issues addressed include economic and social rights, including social security; freedom of association;

labour relations; equality and freedom from discrimination; and specific application of rights for youth, children and people living with disabilities. Additionally, the devolved system of government also brought about by the Constitution of Kenya presents opportunities for further expansion of decent employment opportunities in the country. The Kenya Vision 2030 provides that it is essential to entrench the fundamental principles and rights at work and the impetus for the entrenchment of workers' social and economic rights in the Constitution. The MTP III (2018-2022) aimed to achieve accelerated, high, inclusive, broad-based, and sustainable economic growth. It sought to provide every Kenyan with decent and gainful employment and widen social protection coverage. Similarly, MTP IV (2023-2027) and the CIDPs (2023-2027) provide for establishment of secure decent working spaces in every county besides identifying the sectors, programmes and enablers that enhance decent and sustainable jobs, especially for the youth.

Despite strong economic growth performance, Kenya faces constraints in job creation and utilization of its labour. About one million people join the workforce every year and only one in five are likely to find formal employment. The rest will be unemployed or engaged in non-wage-earning occupations. As such, the government through the MTP IV aims to create 1.2 million jobs annually, of which 40.0 per cent will be in the formal sector by 2027. Of this target, there have been new job creations in Kenya with 816,600 new jobs in 2022; 848,200 new jobs in 2023, and 782,300 new jobs in 2024. The constraints are more severe for the youth and vary widely across rural and urban areas, and regions. The labour force participation rate was at 77 per cent in 2019 (KNBS, 2019), an indication of a large supply of labour available to engage in productive activities. This notwithstanding, over 80 per cent of the labour force is employed in the informal sector (Figure 1.1). The informal sector includes economic activities not fully covered by formal laws or regulations and exposure to inadequate decent work environment.

Figure 1.1: Employment by sector and growth rates, 2019-2023

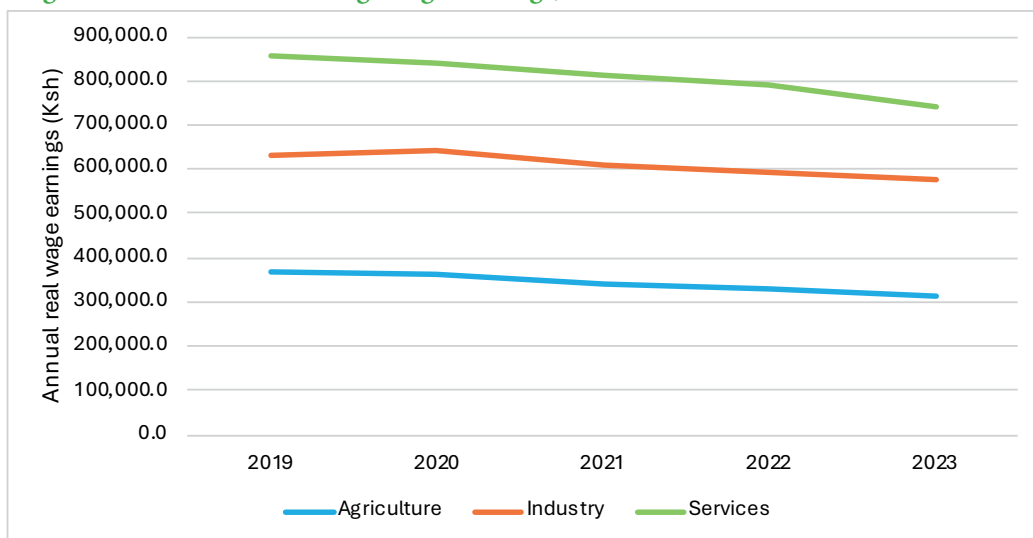


Data source: KNBS (2024a), Economic Survey

Real wages that fairly compensate workers are vital for economic and social well-being of employees. The real wages are lower for employees in the agriculture sector (Figure 1.2), suggesting vulnerability of those working in this sector. Moreover, real wage earnings are marginally declining across

various broad sectors presented in Figure 1.2, suggesting erosion of economic welfare among those who are employed. While real wages are higher in the services sector, it is marginally declining more compared to those of the industry and agriculture sectors.

Figure 1.2: Annual real average wage earnings, 2019-2023



Data source: KNBS (2024a), Economic Survey

Decent work is a crucial component of shared economic prosperity as it provides opportunities for people to work in productive and secure conditions. When workers have access to fair wages and safe working conditions, they are more likely to be motivated and committed to their work. This contributes to increased productivity, and improved quality of work. Additionally, decent work can support increased innovation and entrepreneurship, as workers are more likely to be innovative, all these being important for income economic growth.

There are a number of sectors that serve as anchors for job creation in Kenya but face various constraints in supporting decent jobs. The agriculture sector, which is a key anchor for Kenya's economy and job

opportunities in rural areas, employs 40 per cent of the labour force nationally and 60 per cent in rural areas (KNBS, 2024b). Most of these jobs are, however, in the informal sector and the employees face low real wage earnings. Within the formal sector, employment in agriculture increased from 338,000 jobs in 2019 to 344,300 as of 2023, representing 11.0 per cent of total formal sector wage employment (KNBS, 2024a). The manufacturing sector, a key pillar under MTP IV (2023-2027), employs 11.5 per cent in the formal sector and 20.2 per cent in the informal sector, representing 362,300 and 3.4 million jobs, respectively. While the manufacturing sector is envisaged to play a pivotal role in the job creation agenda, the jobs it supports are mainly in the informal sector, partly due to

the competitive constraints it faces in the formal sector. The trade sector is also a key player of the economy and jobs, supporting 8.7 per cent (272,800 jobs) and 57.7 per cent (9.7 million jobs)¹ of the employees in the formal and informal sectors, respectively. Technical and Vocational Education and Training (TVET) is essential towards developing skills for promoting youth employability owing to the practical skills required in the industry. The TVET enrolment increased from 430,598 students in 2019 to 642,726 students in 2023, a 49.3 per cent increase of the five-year period. This reflects increasing demand for TVET skills. Moreover, there are job opportunities in the emerging e-mobility industry, with the registered electric vehicles² increasing from 129 in 2019 to 2,694 in 2023. The job opportunities are anchored within the e-mobility value chain, including new manufacturing opportunities, charging infrastructure operations, servicing and recycling. With the devolved governance structure, the counties serve as centres of production and services and an assessment of decent jobs across different regions is vital.

Against this background, it is evident that it is important to enhance job creation for sustained growth. The KER 2025, therefore, assesses sectoral contexts, policies and institutional frameworks that influence job creation and explore options for enhancing decent job creation for sustainable growth in Kenya. The objective of the report was addressed by focusing on the key sectors for job creation, including macroeconomic stability and prospects, agriculture, skills development through Technical and Vocational Education and Training (TVETs), trade, e-mobility and county development. The following are the key

chapters of the report:

1. Macroeconomic Performance
2. Medium-Term Economic Prospects for Kenya
3. Enhancing Decent Jobs in Agriculture through Digital Extension Services
4. Enhancing the Competitiveness of the Manufacturing Sector for Decent Job Creation
5. Revitalizing Job Creation in the Domestic Trade Sector
6. Promoting Youth Employability through Investment in Technical and Vocational Education and Training
7. Harnessing the Potential of Decent Jobs in the E-Mobility Sub-Sector
8. Enhancing Creation of Decent Jobs at the County Level

1.3 Conceptual Framework

Kenya's economic growth and prosperity is crucial for achieving both long-term development and raising the standards of living of its people. One of the key drivers of prosperity in the Bottom-up Economic Transformation Agenda (BETA) and implemented through the MTP IV (2023-2027) is decent job creation across the various sectors of the economy. The conceptual framework aims to outline the key elements and inter-relationships necessary to sustain Kenya's prosperity and maintain decent employment for a large section of the population. The quest for prosperity is linked to the creation of decent jobs, a concept that lies at the heart of sustainable economic development. Decent job creation not only provides a means of livelihood but also fosters a sense of dignity and inclusion among the workforce. It is through employment quality, rather than merely quantity, that true prosperity begins to take shape. Focusing on creating jobs that

1 Informal sector jobs include those in the hotels and restaurants.

2 Includes two-wheelers (motorcycles), three-wheelers (tuk tuk) and four-wheelers (motor vehicles).

offer fair wages, safe working conditions, and opportunities for personal growth and development, will create a path towards a more equitable and prosperous future.

Promoting decent work for all is a critical strategy for fostering economic prosperity, reducing poverty, and achieving sustainable development. The International Labour Organization (ILO) framework for decent work provides a comprehensive approach to achieving this goal. This conceptual framework outlines the key elements and interactions necessary to create decent jobs for prosperity, leveraging the ILO's four strategic pillars: Employment Creation, Rights at Work, Social Protection, and Social Dialogue. These pillars provide a comprehensive framework for ensuring work is not only available but also equitable and supportive of workers' rights and well-being. The Legatum Institute also identifies three pillars of prosperity: inclusive societies, open economies, and empowered people.

Creation of decent jobs is anchored on multifaceted policy strategies. The ILO framework underscores the need for coherent and inclusive economic policies that stimulate job creation across various sectors. The key strategies include implementing macroeconomic policies that promote investment, stimulate demand, and support sustainable enterprises. This involves fiscal policies that incentivize businesses to expand and hire more workers. Additionally, enhancing the skills of the workforce through education and vocational training programmes ensures that workers have the necessary competencies to meet the demands of the labour market. Encouraging entrepreneurship by providing access to finance, business development services, and reducing regulatory burdens creates opportunities for self-employment and

the growth of small and medium-sized enterprises (SMEs).

Ensuring rights at work is fundamental to creating decent jobs. Protecting workers' rights is key through strengthening the enforcement of labour laws to ensure safe working conditions, fair wages, and reasonable working hours. Implementing minimum wage policies guarantees a living wage for all workers. Enforcing regulations to eliminate child labour, forced labour, and discrimination in the workplace, while promoting gender equality and inclusive work environments, is crucial.

Social protection mechanisms are essential for safeguarding workers and their families against economic and social risks. The key components include providing social safety nets, for example food assistance and housing support to vulnerable populations. Expanding access to health insurance to cover all workers ensures that they can access necessary medical care without financial hardship. Establishing unemployment insurance schemes provides financial support to workers who lose their jobs, helping them transition to new employment opportunities.

Social dialogue involves engaging employers, workers, and government representatives in discussions and negotiations to create a consensus on labour policies and practices. This pillar focuses on supporting the formation and operation of labour unions to represent workers' interests effectively, encouraging collective bargaining as a means to negotiate wages, working conditions, and other employment terms. Ensuring that employers, workers, and government bodies collaborate in the formulation and implementation of labour policies promotes transparency, accountability, and mutual understanding.

Inclusive societies ensure that all individuals have equal opportunities to participate in

economic, social, and political life. Decent job creation contributes to inclusivity by providing equitable access to employment opportunities and promoting diversity within the workplace. When people from diverse backgrounds can access quality jobs, societal cohesion and mutual respect are enhanced, laying the groundwork for a more harmonious and prosperous society.

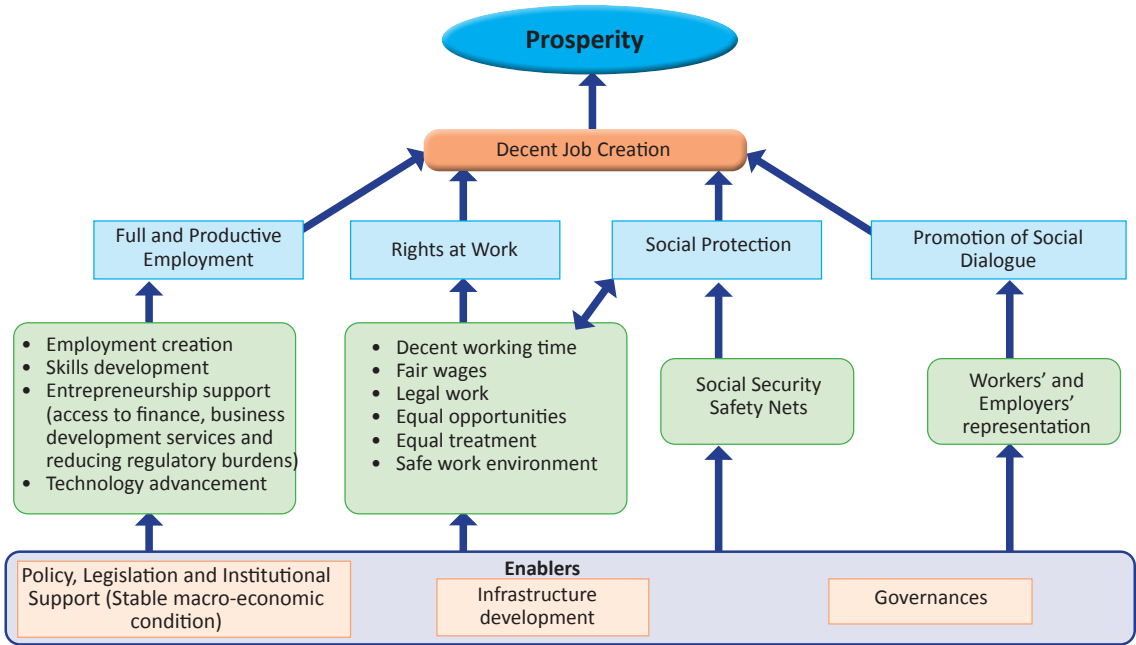
Moreover, open economies are characterized by free markets, trade, and investment, facilitating economic growth and innovation. Decent job creation supports open economies by generating employment that fuels consumer spending and drives economic expansion. Additionally, protecting workers' rights and ensuring social protection creates a stable and confident workforce, which is essential for sustained economic activity.

Empowered individuals have the skills, education, and opportunities to influence their own lives and contribute to society. Decent job creation empowers individuals by providing employment opportunities that enhance their skills and capabilities, offering career advancement and personal growth. This empowerment is a critical component of sustainable prosperity, as it enables individuals to achieve their full potential and contribute positively to the economy. When individuals are empowered through meaningful work,

they are more likely to participate actively in their communities and contribute to social and economic development.

Policy, legislation, institutional support, infrastructure development, and governance are cross-cutting drivers that underpin all pillars of decent job creation. Good policies and legal frameworks create an enabling environment for employment creation through the encouragement of investment, entrepreneurship, and workforce development. Institutional support ensures effective implementation and enforcement of labour laws to safeguard workers' rights and enhance social protection mechanisms. Investment in infrastructure, such as transport, digital connectivity, and energy access increases productivity and market access, with potential for economic growth and jobs. Good governance enhances transparency, accountability, and inclusive decision-making, and strengthens social dialogue among workers, employers, and government, and workers' rights, representation, and labour standards. Together, these crosscutting elements reinforce the foundation for long-term prosperity by ensuring that economic growth translates into sustainable opportunities, decent working conditions, and social well-being.

Figure 1.3: Conceptual framework for prosperity through decent job creation



Source: Authors construct based on ILO framework

The conceptual framework in Figure 1.3 shows that economic prosperity is the goal while job creation is the key instrument of focus. The key outcomes of job creation, which lead to better prosperity are higher national output, better aggregate demand, and higher living standards. However, the framework also recognizes that these alone would not suffice for prosperity, and therefore there are other complementary enablers that can support prosperity, apart from job creation; that is, lower cost of living, enhanced revenue mobilization, and inclusive growth.

As articulated in Figure 1.3, for economic prosperity to occur, a stable macroeconomy is a pre-requisite. Macroeconomic stability will therefore be assessed by analyzing the country’s economic performance and establishing its prospects through macroeconomic projections. The report also examines how the country can leverage digitization to create decent jobs, focusing on extension services. Jobs are also

created through manufacturing activities due to their higher productivity, ability to stimulate economic growth through multiplier effects, and the ability to create diversified employment opportunities along value chains, and hence the analysis will focus on enhancing the competitiveness of the manufacturing sector for creating decent jobs. MSMEs have the potential to generate job opportunities, and therefore aspects of domestic trade and its potential for job creation are also examined. As Kenya embraces e-mobility as a way of addressing climate change challenges, the report considers the potential of green jobs. Finally, the conceptual framework takes cognizance of the large potential held by county governments in supporting the job creation agenda, and that prosperity at the county level translates to prosperity at the national level. The framework therefore gives an overview of the analysis that is used within the report.

2. Macroeconomic Performance

Macroeconomic stability is the foundation for economic growth and employment creation. In 2024, the economic growth of 4.7 per cent was accompanied by 3.9 per cent growth in employment. Growth in domestic credit declined to 1.3 per cent in 2024 from 12.6 per cent in 2023. Constrained domestic credit limits private sector investments, and therefore limits job creation. Inflation rate eased to an average of 4.5 per cent in 2024, down from 7.7 per cent in 2023. Gross national savings declined from 16.1 per cent of GDP in 2023 to 16.0 per cent of GDP in 2024. Investments remained at 18.6 per cent in 2023 and in 2024. Development expenditure declined over time to 3.2 per cent of GDP in 2024/25 from 5.8 per cent in 2019/20, while recurrent expenditure rose to 17.6 per cent of GDP in 2024/25 from 16.1 per cent in 2019/20. Debt servicing costs took up 68.0 per cent of total revenue in 2023/24, rising from 41.4 per cent in 2019/20. The rising recurrent expenditure and debt servicing costs constrains funding for job-creating infrastructural projects. Public debt-to-GDP declined to 65.7 per cent in 2023/24 from 72.0 per cent in 2022/23 due to appreciation of the Kenyan shilling against major international currencies. The ratio of present value of external debt to exports and the external debt service to exports exceeded sustainability thresholds. The current account deficit narrowed to 1.3 per cent of GDP in 2024, supported by an 18 per cent increase in diaspora remittances, which rose to US\$ 4.19 billion in 2023 to US\$ 4.95 billion in 2024. Strengthening domestic savings, improving credit access, prioritizing concessional debt financing, and promoting exports can enhance job creation and economic growth.

2.1 Introduction

Kenya's economy expanded by 4.7 per cent in 2024, below the Kenya Vision 2030 target of achieving a 10 per cent annual economic growth rate from 2012 to 2030. While the actual performance averaged 4.6 per cent growth rate between 2012 and 2023, Kenya has maintained a stable macroeconomic environment that supports investment and job creation. The key indicators of macroeconomic stability, such as GDP growth, inflation, exchange rate, and fiscal balances shape the capacity of the economy to create jobs. The trends in inflation affect the monetary policy interventions, such as the Central Bank Rate (CBR), which in turn reflect in the cost of credit through the lending rates. A stable exchange rate fosters a more predictable environment for investors. The exchange rate of the Kenyan shilling also determines the competitiveness of Kenya's exports in the international markets.

The macroeconomic conditions work together to enable job creation in the economy. Kenya's development plans, from the Economic Recovery Strategy for Wealth and Employment Creation (ERS-WEC) to the Medium-Terms Plans I-IV all aimed at achieving a stable macroeconomic environment to enable job creation. The ERS-WEC targeted to create 500,000 jobs annually between 2003 and 2007, but it achieved only 468,400 jobs annually. The strategies for job creation were increasing savings and investment. The ERS-WEC strategy aimed to increase the ratio of gross fixed capital formation from 16.8 per cent of GDP in 2002 to 23.0 per cent in 2007. The ERS-WEC targeted domestic savings to increase from 10.7 per cent in 2002 to 15.8 per cent in 2007. The MTP I provided for similar strategies of increasing the level of savings and investments. Other strategies in MTP I included implementing

the Employment Policy and Strategies for Kenya aimed at large-scale job creation, and implementation of Sessional Paper No. 2 of 2005 to support the growth of micro and small enterprises (MSEs) to enhance job creation. During MTP I, an average of 511,000 jobs were achieved against a target of 740,000 jobs annually between 2008 and 2012. To achieve job creation targets, MTP II employed strategies such as public work programmes, SME support and establishment of special economic zones and industrial parks. The MTP II strategies led to creation of 820,000 jobs annually against a target of 1.03 million jobs annually.

The MTP III continued the labour-intensive public work programmes, skills training support, internship programmes, MSMEs support, and establishment of special economic zones and industrial parks. The Medium-Term Plan (MTP IV) 2023-2027 is the final plan under the Kenya Vision 2030. It targets to create an average of 1.2 million jobs annually from 2023 to 2027. This chapter of the Kenya Economic Report examines the latest trends in Kenya's macroeconomic performance and the interaction between macroeconomic stability and job creation. The analysis highlights how macroeconomic policies can support the broader goal of creating decent jobs for prosperity. The analysis covers economic growth and employment, trends in inflation, monetary policy, and developments in the fiscal sector and the external sector.

2.2 Economic Growth and Employment Creation

Kenya's economy grew by 4.7 per cent in 2024 compared to 5.7 per cent in 2023, following a reduced growth across most of the sectors. The agriculture, forestry and fishing sector expanded by 4.6 per cent in 2024, down from a growth of 6.6 per cent in 2023. However, it maintained its important role in supporting overall economic activity. Non-agricultural sectors grew by 4.7 per cent in 2024, down from 5.5 per cent in 2023, reflecting a slower momentum particularly in industry. Industry recorded a growth of 0.8 per cent in 2024 compared to 2.0 per cent in 2023. Within the sector, manufacturing grew by 2.8 per cent, improving slightly from 2.2 per cent in 2023. Construction, however, contracted by 0.7 per cent in 2024, reversing the 3.0 per cent growth recorded in 2023. Electricity supply grew by 1.9 per cent, while mining and quarrying experienced a sharp contraction of 9.2 per cent in 2024.

The services sector remained the main driver of economic growth, expanding by 6.0 per cent in 2024. Accommodation and food service activities posted a growth of 25.7 per cent in 2024, following a 33.6 per cent expansion in 2023. The continued expansion of the sector reflects the ongoing recovery in travel and hospitality after a 47.7 per cent contraction in 2020. Information and communication activities grew by 7.0 per cent. Real estate expanded by 5.3 per cent in 2024, compared to 7.3 per cent in 2023. Financial and insurance activities continued to perform with a growth of 7.6 per cent in 2024 following 10.1 per cent in 2023.

Table 2.1: Economic growth performance (2019-2024)

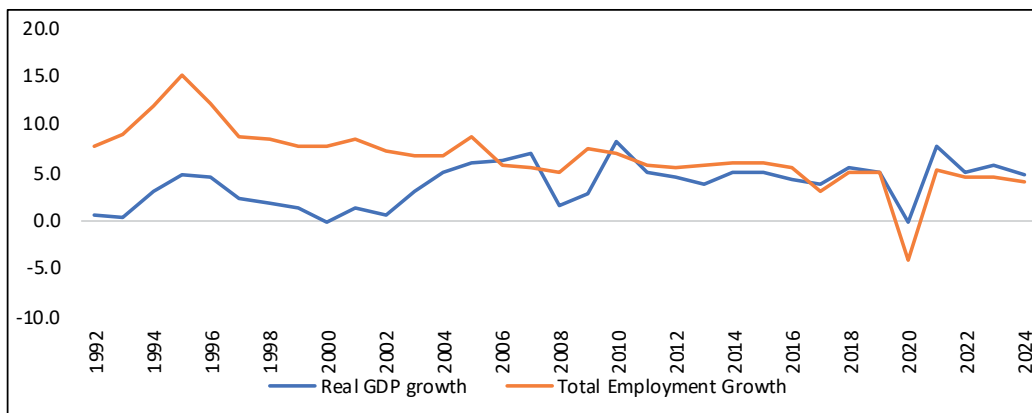
Sector	2019	2020	2021	2022	2023	2024
1.0 Agriculture	2.7	4.6	(0.4)	(1.5)	6.6	4.6
2.0 Non-Agriculture	5.7	(1.4)	9.5	6.3	5.5	4.7
2.1 Industry	4.0	3.3	7.5	3.9	2.0	0.8
Mining and quarrying	4.3	5.5	18.0	9.3	(6.5)	(9.2)
Manufacturing	2.6	(0.3)	7.3	2.6	2.2	2.8
Electricity supply	1.9	(0.5)	5.3	5.7	3.1	1.9
Construction	7.2	10.1	6.7	4.1	3.0	(0.7)
2.2 Services	6.5	(1.8)	9.8	7.0	7.0	6.0
Wholesale and retail trade	5.3	(0.4)	8.0	3.5	3.3	3.8
Transportation and storage	6.3	(8.0)	7.4	5.8	5.5	4.4
Accommodation and food service activities	14.3	(47.7)	52.6	26.8	33.6	25.7
Information and communication	7.0	6.0	6.1	9.0	10.3	7.0
Financial and insurance activities	8.1	5.9	11.5	12.0	10.1	7.6
Real estate	6.7	4.1	6.7	4.5	7.3	5.3
Professional, scientific and technical activities	6.8	(11.5)	7.9	5.3	8.4	6.3
Public administration	8.4	7.0	6.0	5.1	5.0	8.2
Education	5.7	(9.2)	22.8	5.2	2.9	3.9
Human health	5.5	5.6	8.9	3.4	4.5	6.3
Other service activities	4.9	(19.5)	18.9	7.1	3.6	4.1
FISIM	9.5	(1.8)	5.3	0.2	2.7	9.0
All economic activities	5.2	0.5	7.2	4.7	6.0	4.8
2.3 Taxes on products	3.9	(8.0)	11.9	6.7	3.2	4.4
GDP at market prices	5.1	(0.3)	7.6	4.9	5.7	4.7

Data source: KNBS (2025), Economic Survey

Job creation grew by 3.9 per cent in 2024, adding 782,300 new jobs into the economy. The informal economy contributed 703,700 new jobs while the formal sector contributed 78,600 new jobs. The economy has recovered from the effects of COVID-19 in terms of job creation and economic growth. Before the COVID-19 pandemic, the economy grew by an average

of 4.9 per cent per year (2017-2019) but has improved to 5.7 per cent per year post-COVID (2021-2024). The 0.3 per cent economic contraction during COVID-19 pandemic led to contraction of jobs by 3.6 per cent in 2020.

Figure 2.1: GDP and employment growth rates

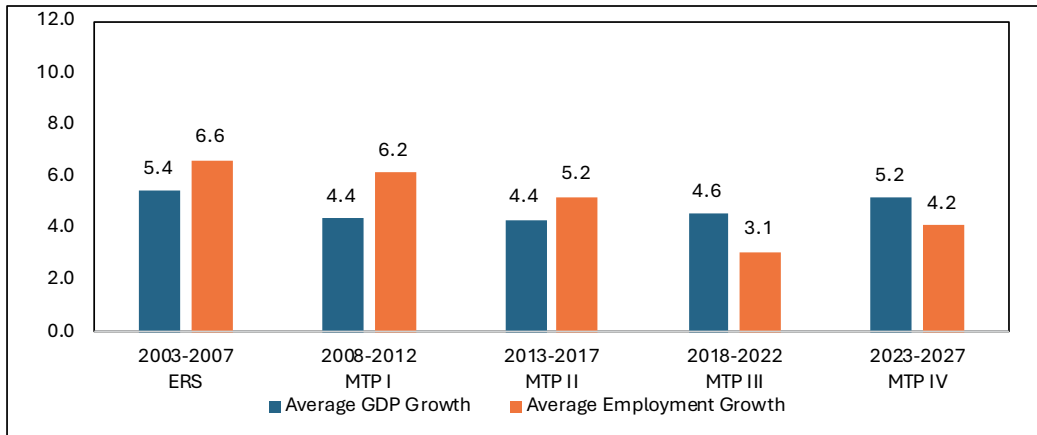


Data source: KNBS (Various), Economic Survey

Employment growth has been above the economic growth across the planning periods, except under the MTP III. During the period 2003-2007, under the Economic Recovery Strategy for Wealth and Employment Creation (ERS-WEC), average GDP growth averaged 5.4 per cent, having grown from 2.9 per cent in 2003 to 7.0 per cent in 2007. The growth in employment averaged 6.6 per cent. GDP growth averaged 4.4 per cent during the MTP I period, and employment growth averaged 6.2 per cent. During the MTP II period, GDP grew at an average of 4.4 per cent, even though employment growth decelerated to 5.2 per cent. In the ERS-WEC, MTP I and MTP II, employment growth was able to outpace economic growth.

The GDP growth in the MTP III period (2018-2022) averaged 4.6 per cent, while employment growth dropped to an average of 3.1 per cent. The decelerated growth in both output and jobs in the MTP III period was occasioned by the COVID-19 pandemic in 2020. The GDP contracted by 0.3 per cent in 2020, and employment contracted by 4.1 per cent. The formal employment was the most affected by the COVID-19 pandemic in 2020, with a contraction of 6.2 per cent compared to a contraction of 3.6 per cent in the informal employment. During the MTP III period, employment growth was below the economic growth. The slower pace of job creation is an indication that job creation is not keeping pace with the rate of economic expansion. Similar patterns are observed in MTP IV (covering the first two years of MTP IV (2023 and 2024).

Figure 2.2: Growth and employment creation across planning periods



Data source: KNBS (Various), Economic Survey (MTP* 2023-2027 analysis cover 2023 and 2024)

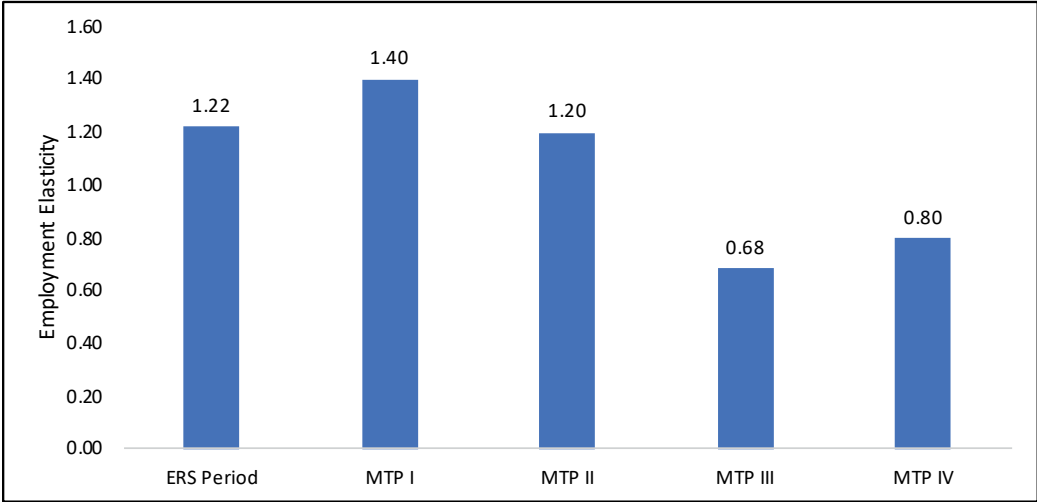
2.3 Employment Elasticities in Kenya

Kenya's record on job creation closely follows economic growth patterns. Employment growth exhibits a degree of sensitivity to changes in real GDP growth, as demonstrated by employment elasticities to GDP growth. The responsiveness of employment to GDP growth varies across regimes, with a general decline over time. During the ERS-WEC period (2003-2007), employment elasticity was 1.22, indicating that a 1.00 per cent increase in GDP resulted in a 1.22 per cent increase in employment. The ERS-WEC aimed to achieve economic growth rates that could support creation of 500,000 jobs annually. While the ERS-WEC did not achieve the targeted number of jobs, the jobs grew faster than economic growth in the ERS-WEC period. Strong job creation relative to economic growth was supported by post-recovery economic policies and expansionary government spending. The strategy prioritized macroeconomic stability, governance reforms, and infrastructure development, with key initiatives in agriculture, tourism, and manufacturing.

During MTP I (2008-2012), employment elasticity improved and peaked at 1.40 and is the highest across the planning periods. The jobs created at this period were supported by investments in large-scale infrastructural projects, agricultural productivity programmes, and Special Economic Zones (SEZs) and labour-intensive government programmes. During MTP I, the Employment Policy and Strategies for Kenya was implemented with the aim of large-scale job creation and establishing a 24-hour economy. Despite the 2008 global financial crisis and post-election instability (2007/08), employment remained highly responsive to GDP growth. Under MTP II, employment creation remained elastic at 1.20.

The employment elasticity dropped to 0.68 during MTP III. While the plan promoted public-private partnerships and sectoral productivity, challenges such as the COVID-19 pandemic in 2020 disrupted the labour markets. The COVID-19 disruptions caused widespread job losses and weakened employment responsiveness to economic growth in the MTP III. During the first two years of MTP IV (2023 and 2024), the employment elasticity

Figure 2.3: Employment elasticity



Data source: KNBS (Various), Economic Surveys

slightly improved to 0.80. The Bottom-up Economic Transformation Agenda (BETA) prioritizes inclusive labour market reforms, sectoral investments, and workforce competitiveness to address structural unemployment

2.3.1 Employment elasticities in the agriculture sector

The sectoral analysis of employment elasticity shows that economic sectors responded differently to sectoral growth. Some sectors created more jobs as they expand, while others grew with minimal employment changes. Employment response to growth in the agricultural sector output shows mixed results across planning periods in Kenya. Employment elasticity in agriculture remained low, an indication of limited job creation in the sector despite sectoral growth.

During the ERS-WEC period, employment elasticity was 0.20, following an average GVA growth rate of 8.6 per cent and average employment growth of 1.62 per cent. In the MTP I period, the agricultural

sector recorded a negative response to growth, as employment shrank by 0.12 per cent despite an average sectoral growth in GVA of 24.79 per cent. Similarly, in MTP II period, there was a negative employment elasticity of 0.01, which stemmed from 0.31 employment contraction despite GVA expansion of 10.96. The MTP III recorded modest improvements in employment elasticity (0.14). The positive elasticity arose from a 9.88 per cent average growth in GVA and 0.14 per cent average growth in employment. The MTP IV covering the 2023-2027 period started on a positive trajectory, with agriculture GVA output growing by an average of 13.35 per cent in 2023 and 2024, despite the impressive GVA growth, the agricultural sector employment creation grew modestly by 1.38 per cent and therefore a low resultant elasticity of 0.10.

Table 2.2: Agriculture sector GVA growth, employment and elasticities

	ERS-WEC (2003-2007)	MTP I (2008-2012)	MTP II (2013-2017)	MTP III (2018-2022)	MTP IV* (2023-2027)
Average GVA Growth	8.60	24.79	10.96	9.91	13.35
Average Employment Growth	1.62	-0.12	-0.31	0.61	1.38
Average Employment Elasticity	0.20	-0.41	-0.01	0.14	0.10

Data source: KNBS (Various), Economic Survey (MTP* 2023-2027 analysis cover 2023 and 2024)

2.3.2 Employment elasticities in the industrial sector

The industrial sector demonstrated robust growth trends, with GVA growth averaging 15.40 per cent during the ERS-WEC period. The industrial GVA growth peaked at 22.78 per cent in the MTP I period and declined to 7.91 per cent in the MTP IV period. Employment growth remained strong during the MTP II period (4.42%) and MTP III period (4.48%). Employment

elasticity in the industrial sector reflected an increasing responsiveness of employment to output growth, rising from 0.14 in ERS-WEC period to 0.48 in MTP III period. Employment in the industrial sector was responsive to growth in output in MTP II and III periods as reflected by relatively high elasticities of 0.40 and 0.48, respectively. Job creation in the industrial sector is, however, less responsive to sector's output in MTP IV, with the first two years recording an elasticity of 0.24.

Table 2.3: Industry sector GVA growth, employment and elasticities

	ERS-WEC (2003-2007)	MTP I (2008-2012)	MTP II (2013-2017)	MTP III (2018-2022)	MTP IV* (2023-2027)
Industry					
Average GVA Growth	15.40	22.78	13.56	9.79	6.33
Average Employment Growth	2.03	2.63	4.42	4.48	1.58
Average Employment Elasticity	0.14	0.18	0.40	0.47	0.24

Data source: KNBS (Various), Economic Survey (MTP* 2023-2027 analysis cover 2023 and 2024)

During the ERS-WEC period (2003-2007), there was a focus on revitalizing the manufacturing sector through interventions that laid down the strategies for industrialization. The consolidated

investment incentives aimed to boost competitiveness and value addition. The MTP I (2008-2012), the first medium-term plan under the Kenya Vision 2030 initiated flagship projects, such as special economic zones (SEZs), to stimulate industrial output. In MTP II, there was implementation of the sector plan for

manufacturing 2013-2017, whose goal included, among others, to facilitate investment and employment creation in the economy. The MTP III (2018-2022) emphasized industrialization under the Big Four Agenda, which sought to increase the contribution of manufacturing to GDP and employment, support industrial growth through improved infrastructure, enhance access to finance, and promote innovation.

2.3.3 Employment elasticities in the services sector

Employment elasticity in the services sector is higher compared to agriculture and industry, indicating that employment is more responsive to changes in economic output in the services sector. Across various planning periods, employment elasticities have been improving from 0.20 in the ERS-WEC (2003-2007) period, rising to 0.23 in MTP I period and peaking at 0.41 at MTP II (2013-2017) period. Employment responded to several strategies laid out in the plans. For instance, during MTP I, labour intensive public work programmes were implemented by the government, such as the “Kazi Kwa Vijana” programme by the government. A one per cent increase in the output of the services sector leads to a 0.42 per cent increase in employment

under the first two years of MTP IV (Table 2.4).

2.3.4 Trends in formal and informal employment

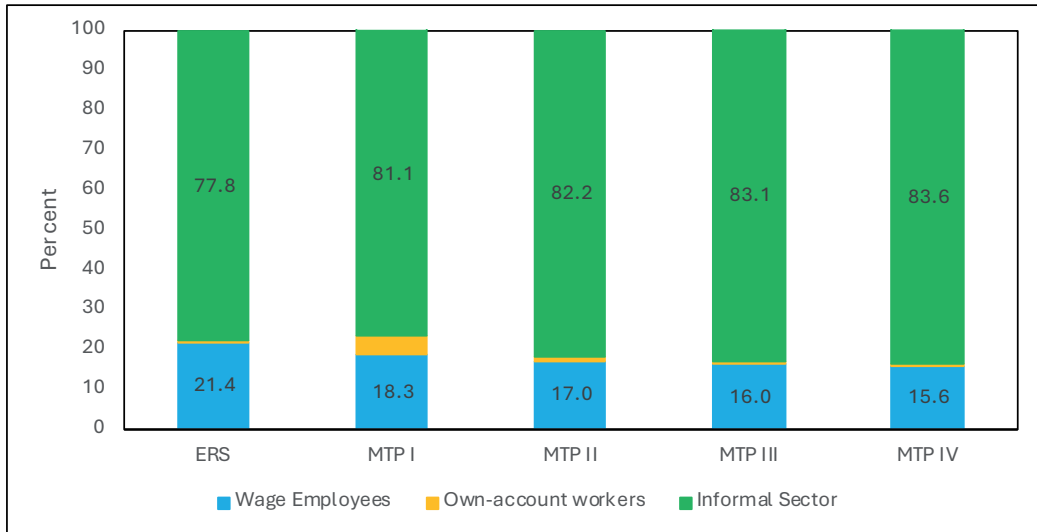
The share of formal employment has been steadily declining across the planning periods in Kenya. In the ERS-WEC period (2003-2007), wage employees constituted 21.4 per cent of Kenya’s labour force, but this has declined to 16.0 per cent and 15.7 per cent in MTP III and MTP IV periods, respectively. In contrast, the share of informal employment has expanded from 77.8 per cent in the ERS-WEC planning period to 83.1 per cent and 83.6 per cent in MTP III and MTP IV periods, respectively. The structure of the labour market has implications for economic growth and employment creation. Formal employment contributes to economic stability through higher consumer spending and tax revenue through employment taxes. In 2024, the government collected tax revenue of Ksh 648.7 billion from employment income tax, which accounted for 25.5 per cent of the total tax revenue. Workers in formal jobs engage in consistent consumption, driving the demand for goods and services and boosting economic activity.

Table 2.4: Services sector GVA growth, employment and elasticities

Services	ERS (2003- 2007)	MTP I (2008- 2012)	MTP II (2013- 2017)	MTP III (2018- 2022)	MTP IV* (2023- 2027)
Average GVA Growth	13.27	17.43	19.30	9.65	9.58
Average Employment Growth	2.64	3.13	5.23	2.56	4.06
Average Employment Elasticity	0.20	0.23	0.41	-1.04	0.42

Data source: KNBS (Various), Economic Survey (MTP* 2023-2027 analysis cover 2023 and 2024)

Figure 2.4: Share of formal and informal sector employment



Data source: KNBS (Various), Economic Survey (MTP* 2023-2027 analysis cover 2023 and 2024)

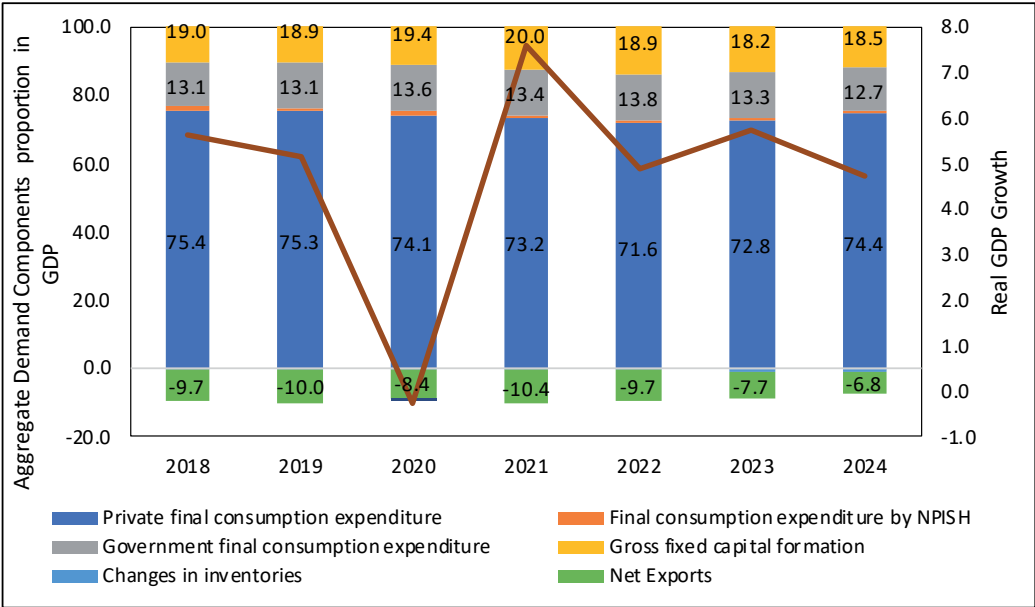
The sharp expansion of the informal sector is part of a broader trend observed in developing economies, where large informal labour markets coexist with formal employment. The rapid expansion in formal sector employment is attributed to a limited number of formal sector jobs and a more accessible route into informal sector employment for those without formal qualifications or skills. Formal jobs in such economies are stable and subject to less turnover. The informal employment is characterized by higher job separation rates and greater volatility. Informal jobs often provide flexibility to employers, but lack the security and benefits typically associated with formal employment. The decision to hire formal or informal workers is influenced by a range of factors, including labour regulations, skills-match, the quality of job matches, and the costs associated with formalizing contracts. Formal jobs must adhere to regulatory standards, while informal employment offers employers more flexibility but carries risks due to its unregulated nature. The informal employment is characterized by

irregular incomes, lack of job security, and minimal access to social protection.

2.4 Expenditure on the Gross Domestic Product

The components of the aggregate demand interact to determine the number of jobs created. Aggregate demand includes consumption by households, public and private investment, government spending, and net exports. Increased household spending on goods and services necessitates increased demand for labour and investment in labour, technology, and infrastructure across various sectors of the economy. On the other hand, the government provides a conducive business environment through provision of public services and large infrastructure projects, directly employing workers in the public sector. A positive trade balance creates jobs locally to satisfy external demand for goods and services. Figure 2.5 shows the proportion of the aggregate demand components in GDP.

Figure 2.5: Aggregate demand components (2019-2023)



Data source: KNBS (Various), Economic Survey

Private final consumption expenditure, accounting for 74.4 per cent of GDP in 2024, is a key driver of both economic growth and employment. In terms of percentage point contributions to GDP, private final consumption remained the single largest contributor with 5.1 percentage points to GDP growth in 2024. In 2021, as the economy recovered from the COVID-19 pandemic-induced downturn, consumption contributed 4.8 percentage points to GDP growth. When households spend more, business experience increased demand for goods and services, prompting them to scale up

production and expand their workforce. For instance, higher consumer spending in retail boosts demand for manufactured goods, leading to more production activity in factories and increased hiring in both sectors. Additionally, services such as transport, warehousing, and logistic experience higher demand as businesses strive to deliver products to consumers. The demand-driven expansion not only generates direct employment in sectors such as retail, manufacturing, and services but also stimulates job creation in supporting industries such as supply chains and distribution networks.

Table 2.5: Percentage point contributions to GDP growth

	2019	2020	2021	2022	2023	2024
Private final consumption expenditure	3.8	(1.4)	4.6	1.8	5.4	5.1
Final consumption expenditure by NPISH	0.0	0.0	(0.1)	(0.1)	0.0	(0.0)
Government final consumption expenditure	0.7	0.4	0.8	1.1	0.3	0.0
Gross fixed capital formation	0.9	0.4	2.1	(0.2)	0.4	1.1
Changes in inventories	0.2	(0.0)	0.6	(0.4)	(1.4)	0.1
Net exports	(0.8)	1.6	(2.8)	0.2	1.5	0.6
Discrepancy	0.4	(1.3)	2.4	2.4	(0.5)	(2.3)
GDP Growth	5.2	(0.3)	7.6	4.9	5.7	4.7

Data source: KNBS (Various), Economic Survey

As businesses grow, they allocate funds to purchase assets such as capital goods (machinery, buildings), or infrastructure with the expectation of generating future profits or returns. The gross fixed capital formation contributed 1.1 percentage points to GDP growth in 2024 and accounted for 18.5 per cent of total GDP. The contribution of gross fixed capital formation to GDP growth has, however, fluctuated over time. Investment rebounded and registered a strong contribution of 2.1 percentage points in 2021, driven by expanded activity in construction and infrastructure. However, investment slowed in 2022, with a negative contribution of -0.2 points. In 2023, investment slightly recovered, contributing 0.4 points.

As private investment increases, businesses expand their operations, necessitating the hiring of an additional labour force. Additionally, private sector investments lead to the adoption of innovative technologies and practices that boost productivity, enabling companies to grow and employ more workers. The resulting economic growth generates heightened demand for goods and services, compelling businesses

to increase their workforce to meet consumer needs. Furthermore, foreign direct investment (FDI) not only injects capital but also brings in technology and expertise, enhancing local businesses' capabilities and fostering the establishment of new enterprises. The multiplier effect of increased investment generates additional income, leading to greater consumption and stimulating further business activity and job creation across related sectors. However, private investment is sensitive to the business environment. Stable conditions, such as favourable interest rates and supportive infrastructure, are necessary to sustain long-term, investment-driven job creation.

Public investment influences job creation directly and indirectly. Directly, government spending on infrastructure projects such as roads, energy facilities, and public buildings generates employment in construction and public works. Public investment generates jobs indirectly by fostering an enabling business environment through improved infrastructure, reduced operational costs, and enhanced productivity, which encourages private sector expansion and job creation. For instance, better

roads and telecommunications enhance market accessibility, facilitating trade and investment. However, while public investment is expected to complement private sector growth, excessive government borrowing from banking institutions can sometimes limit credit availability for private enterprises. Additionally, direct government involvement in economic activities may, in some cases, compete with private sector initiatives.

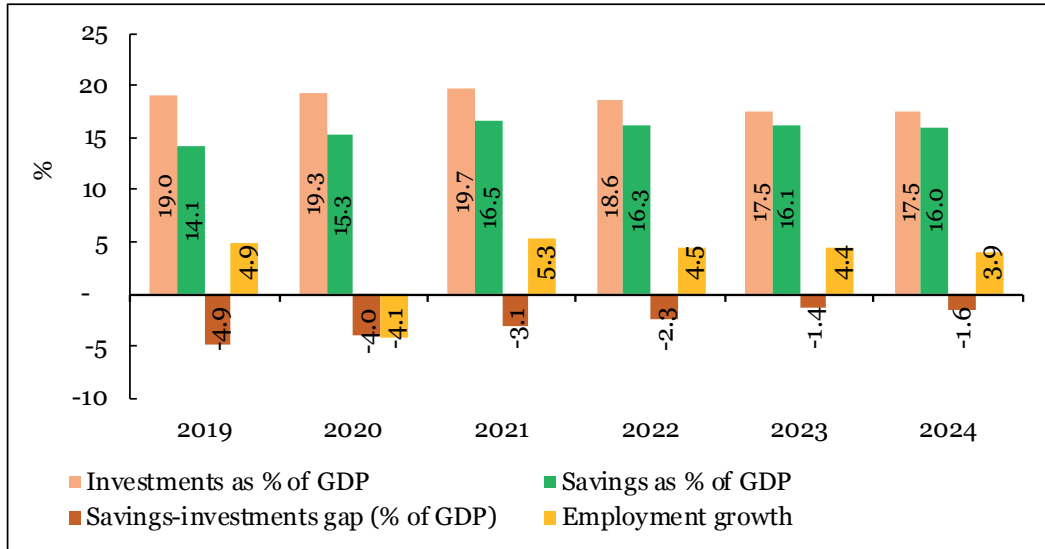
Government final consumption expenditure has consistently contributed positively to GDP growth, peaking in 2022 with a contribution of 1.1 percentage points. In 2023, it contributed 0.5 percentage points to GDP growth. However, in 2024, government final expenditure contributed 0.0 percentage points to GDP growth. The little contribution of government final consumption expenditure reflects austerity measures put in place as part of the broader fiscal consolidation efforts. The same is reflected in the declining proportion of government final consumption expenditure from 13.3 per cent of GDP in 2023 to 12.7 per cent of GDP in 2024. This expenditure reflects the government's spending on goods and services necessary for its operations, such as education, healthcare, and public administration. While it does not directly expand productive capacity,

it sustains demand for labour in public services and stimulates economic activity in sectors that supply goods and services to the government. Net exports have contributed negatively to GDP growth in 2019, 2020 and 2021. In 2021, net exports reduced GDP growth by 2.9 percentage points. Exports are a key source of employment in export-oriented sectors. There were minor improvements from 2022 to 2024, where net exports contributed to GDP expansion at 0.3, 1.5, and 0.6 percentage points, respectively. Efforts to promote import substitution and enhance the competitiveness of Kenya's export sectors are important for the creation of more jobs in industries that are focused on international markets.

2.5 Investment and Savings

Investment and savings are critical drivers of economic growth and employment creation. In a well-functioning economy, domestic savings provide the necessary funds to finance productive investments, which generate employment opportunities. However, when domestic savings are insufficient to meet investment needs, the resulting savings-investment (SI) gap requires external financing.

Figure 2.6: Savings-investment gap and employment



Data source: KNBS (Various), Economic Survey

Gross national savings (per cent of GDP) have remained stable, with minor fluctuations over time. Gross national savings in 2024 declined marginally to 16.0 per cent in 2024 from 16.1 per cent of GDP in 2023. A peak in gross national savings was recorded in 2021 at 16.5 per cent of GDP. The investments recorded a decline from 19.0 per cent in 2019 to 17.5 per cent in 2024. The drop in investment level and stable gross national savings led to the narrowing of the savings-investment (SI) gap. From 2019 to 2024, Kenya's SI gap gradually closed, narrowing from 4.9 per cent in 2019 to 1.6 per cent of GDP in 2024. Therefore, the improvement in savings-investment gap is due to a decline in investment rather than a substantial increase in savings. The existence of SI gap suggests that the economy is not generating sufficient domestic savings to finance new investments. While it is possible to finance investment through international

portfolio inflows, reliance on external capital inflows compromises economic stability, particularly if faced with adverse shocks such as exchange rate fluctuations or changes in global investor sentiment.

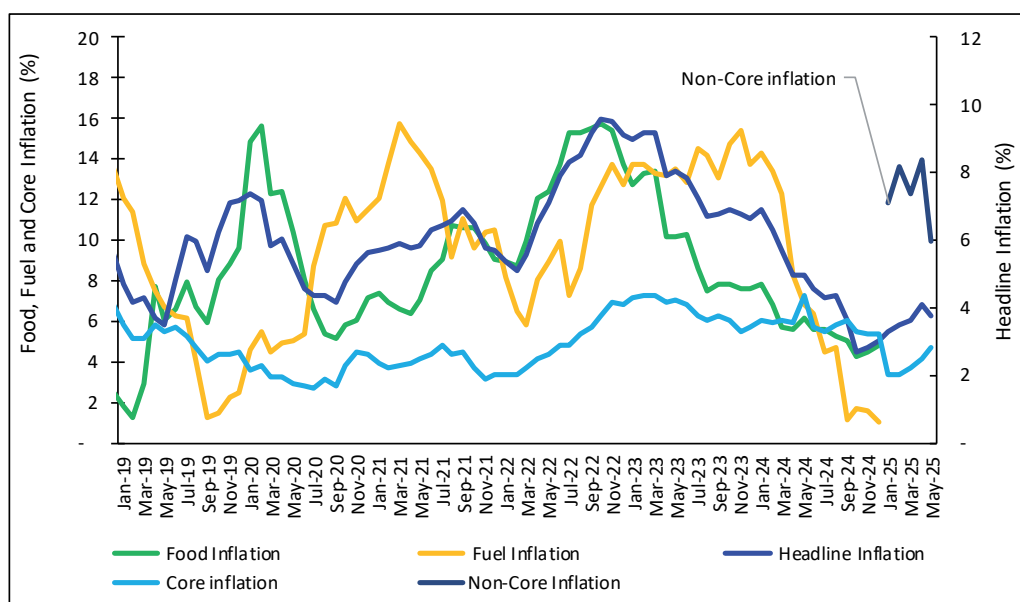
The declining trends in employment growth mirror the declining trends in investment. Total employment growth slowed from 4.9 per cent in 2019 to 3.9 per cent in 2024. The contraction in employment in 2020 (-4.1%) is an outlier, which was occasioned by the COVID-19 pandemic. Investment-driven job creation is vital for long-term employment, as higher levels of capital formation are typically associated with increased demand for labour, especially in capital-intensive sectors such as infrastructure, manufacturing, and construction. The decline in investment is reflected in the limited ability of the economy to generate new jobs, despite the narrowing SI gap.

2.6 Consumer and Producer Price Index

Inflation and unemployment are key factors in an economy that influences households' incomes, business investment and overall economic stability. In the short-run, rising inflation is associated with lower unemployment as captured by the Phillip's curve. However, sustained inflation does not lead to permanent lowering of unemployment due to expectation adjustments over time. As workers and

firms adjust their expectations, the labour market stabilizes to its natural level of unemployment. Looking at the inflation performance, the headline CPI inflation eased in 2024, averaging 4.5 per cent, remaining within the government policy target of 5 ± 2.5 per cent, down from an average of 7.7 per cent in 2023. In December 2024, headline inflation stood at 3.0 per cent. The low level of inflation in 2024 was driven by lower food and fuel prices and subdued demand pressures.

Figure 2.7: Performance of consumer inflation



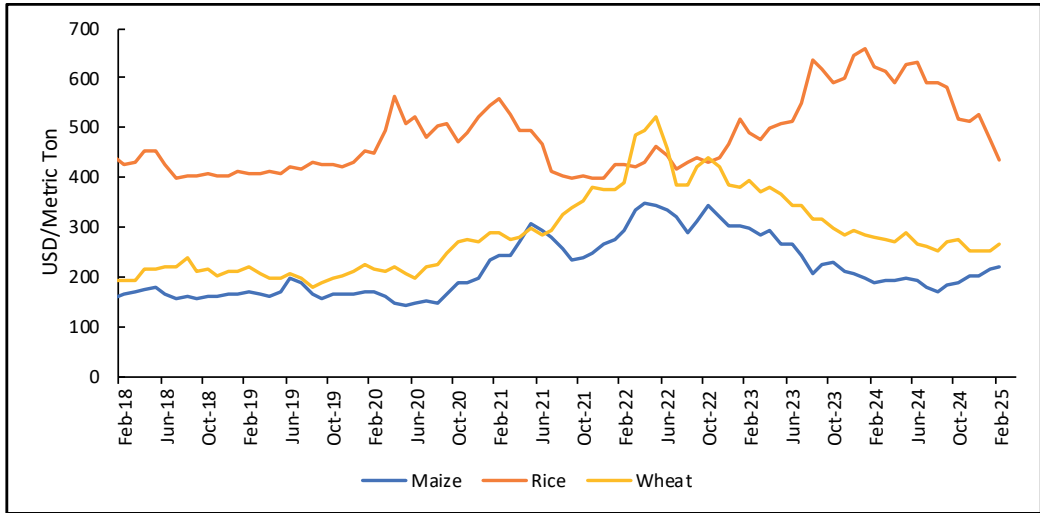
Note: Non-core inflation statistics produced from January 2025 (replaces food and fuel inflation)

Data source: KNBS (Various), Monthly Consumer Price Reports; CBK (Various), Monthly Economic Indicators

Food inflation averaged 5.6 per cent in 2024 compared to 9.2 per cent in 2023 and 13.1 per cent in 2022. The elevated food inflation in 2022 was driven by global supply disruptions and adverse weather conditions, easing in 2023 and 2024. Core inflation averaged 3.0 per cent in 2022, 3.9 per cent in 2023, and decreased to 3.5 per cent in 2024. Fuel inflation averaged 9.5 per cent in 2022 and increased to 13.9

per cent in 2023 due to global energy price fluctuations and supply chain constraints. Fuel inflation declined to 6.3 per cent in 2024 as international oil prices stabilized. All components of inflation eased in 2024 due to a drop in key food commodities. Wheat products averaged US\$ 271.82 per metric tonne in 2024 (up to October 2024) down from US\$ 340.43 per metric tonne in 2023. However, the global prices of edible oils have exhibited a rising trend.

Figure 2.8: International prices of selected cereals

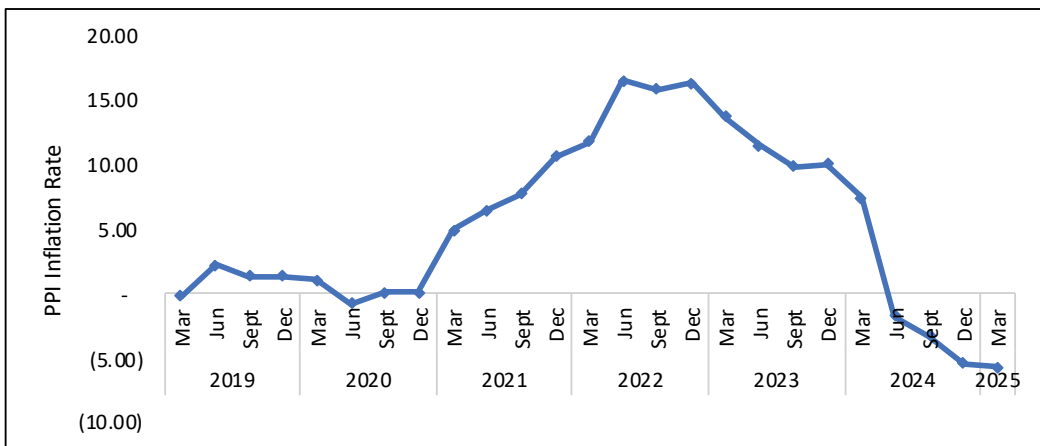


Data source: World Bank

The PPI inflation increased from an average of 4.76 per cent in 2019 to a high of 16.5 per cent in 2022. The rise in producer prices in 2022 suggests that businesses faced heightened production costs due to rising

prices of inputs such as raw materials, fuel, and fertilizers during the twin crises of COVID-19 and Russia-Ukraine War. The year-on-year PPI inflation was lower in 2024, averaging -0.7 per cent, which reflects an improved business environment.

Figure 2.9: Producer inflation



Data source: KNBS (Various), PPI Reports

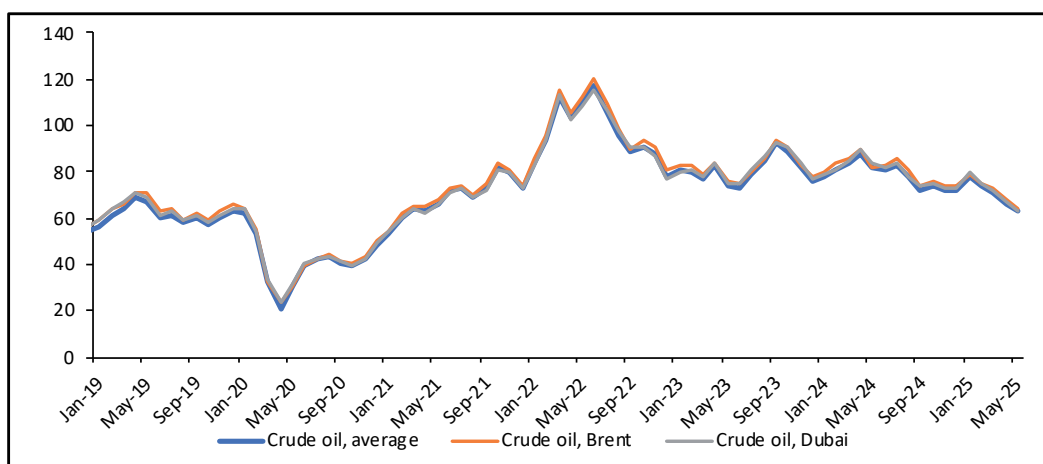
The decline in producer inflation was driven by falling prices of key inputs. In 2024, fertilizer and energy prices declined, leading to lower producer prices and improved business conditions. Crude oil prices fell from US\$ 75.72 per barrel in December 2023 to US\$ 72.31 per barrel in December 2024.

Box 2.1: Phillip's curve for Kenya: Inflation-unemployment trade-off

Macroeconomic policies are implemented to achieve government's main objectives of full employment and stable economy through low inflation. The "Phillips Curve" is a tool for explaining the trade-off between these two macroeconomic objectives. In estimating Phillip's curve, inflation is the dependent variable. The output gap (the difference between potential and actual output) is used to proxy unemployment. Lagged difference of import price index was included to capture the effect of external supply shocks on inflation. Annual data on consumer price index, output gap and import price index between 1990 and 2023 were used.

Dependent variable			
Variable	Coefficient	Standard errors	T-statistic
	0.74***	0.13	5.85
D. ()	-2.22***	0.49	-4.54
	0.35***	0.07	4.79
L. ECT	-0.75***	0.23	-3.31
Constant	-0.01	0.02	-0.39
Observations 32			
R-squared 0.7037			
Adjusted R-squared 0.6598			
Probability (F-statistic) 0.0000			
Durbin Watson statistic 1.926465			

The results show that there is a trade-off between inflation rate and unemployment rate in Kenya, with a very strong and significant relationship. For a 1.00 per cent rise inflation rate in Kenya, there is a 2.22 per cent fall in unemployment rate.

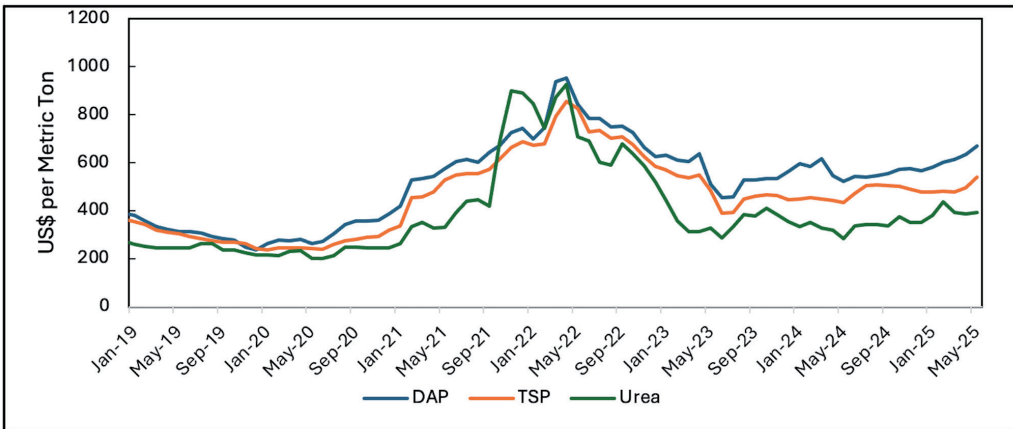
Figure 2.10: Global oil prices

Data source: World Bank (2025), Pink Sheet Database

The international fertilizer prices declined at the end of 2024 after their sharp increases in 2021 and 2022. The price of DAP fertilizer reduced from US\$ 596.25 per metric tonne in January 2024 to US\$ 568.33 per metric tonne in December 2024. After declining in 2024, fertilizer prices rose slightly in early 2025; for instance,

DAP rose to US\$ 603.75 per metric tonne in February 2025. However, fertilizer prices in Kenya are subsidized under the National Fertilizer Subsidy programme. These price reductions coupled with the subsidy programme will help reduce production costs for businesses, supporting a more favourable operating environment.

Figure 2.11: Global fertilizer prices



Data source: World Bank (2025), Pink Sheet Database

The movements in CPI and PPI inflation reflect the transmission of inflationary pressures from production to consumption. Higher CPI inflation reduces consumers' purchasing power, leading to decreased demand for goods and services, which in turn affects business revenue. As a result, companies often respond by cutting back on production or reducing hiring, thereby slowing employment growth. Employment grew by 5.0 per cent in 2018 when CPI

inflation was moderate at 4.7 per cent, by 2023, as CPI inflation reached 7.7 per cent, employment growth slowed to 4.4 per cent. Employment grew by 5.3 per cent in 2021 before falling to 4.5 per cent in 2022 following a rise in PPI inflation from 7.4 per cent to 15.1 per cent. Inflationary pressures, from both consumer prices and producer costs affect the pace of job creation by limiting businesses' ability to expand.

Box 2.2: Granger causality between PPI and job creation

For firms, inflation results in rising costs, falling profitability, and a decline in international competitiveness, which in turn can undermine job creation (Camara, Ouedraogo, and Sy, 2023). A Granger Causality Test was conducted between producer price inflation and employment growth. The Granger Causality Test shows a unidirectional relationship where PPI Granger-causes employment growth (F-statistic: 11.0758, p-value: 0.0394).

Null Hypothesis	F-Statistic	Prob.
PPI does not Granger Cause Employment Growth	11.076	0.039
Employment Growth does not Granger Cause PPI	0.758	0.587

The results of the Granger Causality Test suggest that PPI has a significant impact on employment growth (F-statistic: 11.076, p-value: 0.039). Changes in producer prices influence firms' hiring decisions. As production costs rise, businesses may reduce hiring or cut jobs to manage expenses. The cost-push effect on the labour market results in employment reduction. However, the reverse relationship is not significant (F-statistic: 0.758, p-value: 0.587), implying that employment growth does not drive changes in PPI.

2.7 Monetary Policy and Financial Sector Developments

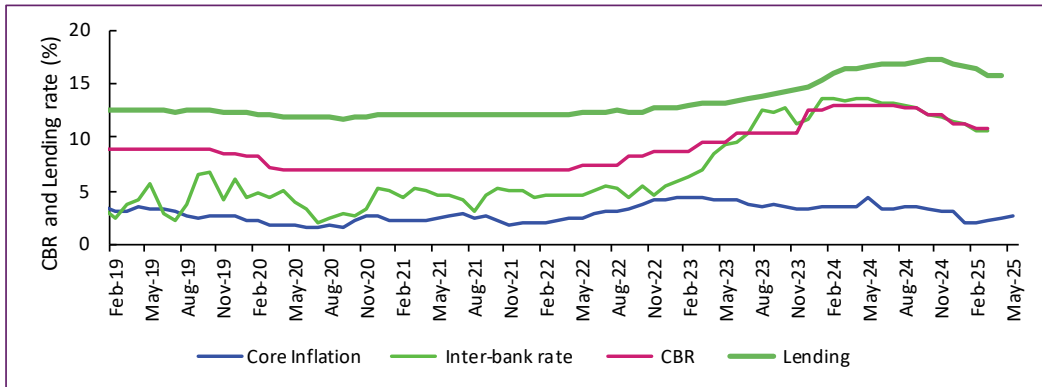
2.7.1 Monetary policy and interest rates

The primary objective of monetary policy is to maintain price stability and support economic growth. A key indicator of price stability is low and stable inflation over time. Following a decline in inflation, which averaged 5.2 per cent in 2024, the Monetary Policy Committee of the Central Bank has progressively reduced the Central Bank Rate (CBR) to 10.75 per cent as of February 2025. Between 2020 and mid-2024, inflation rose persistently, prompting successive adjustments to the CBR to anchor price stability. Initially, the CBR increased from 7.0 per cent in mid-2020 to a peak of 13.0 per cent by mid-2024 due to inflationary pressures. However, with inflation easing, monetary policy shifted from a contractionary stance to a more accommodative approach aimed at fostering economic growth while maintaining price stability. The shift is in line with the ongoing reduction of

monetary policy rates in both advanced and emerging economies.

Adjustments in the CBR influence other interest rates through a structured transmission mechanism. Changes in the rate first affect short term rates, such as the interbank rate, which affect liquidity conditions in the banking sector. The interbank rate declined from 13.70 per cent in April 2024 to 11.42 per cent in December 2024. The downward trend continued into 2025, reaching 10.70 per cent in February 2025. Reduced interbank rates improve the liquidity of the banking system. These movements then pass through to commercial banks' lending rates, impacting borrowing costs for businesses and households. For instance, when the CBR increased from 7.0 per cent in April 2020 to 13.0 per cent in April 2024, lending rates rose from 11.92 per cent to 16.45 per cent, peaking at 16.85 per cent in June 2024. The reduction of the rate to 10.75 per cent in February 2025 led to a decline in short-term rates, including the interbank rate. In response, commercial banks have also lowered their base lending rates, improved credit access, and therefore supporting economic activity.

Figure 2.12: Monetary policy stance



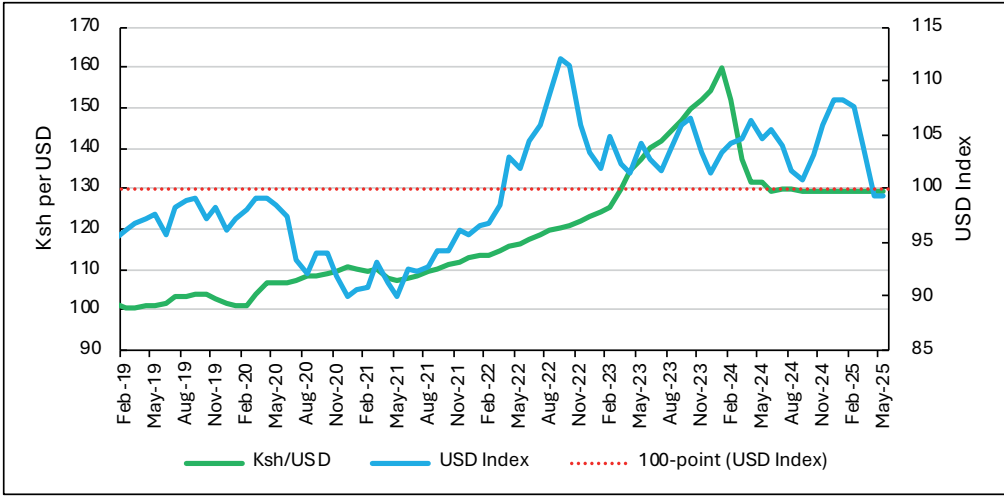
Data source: CBK Monthly Economic Indicators

2.7.2 Exchange rate performance

The Kenyan shilling has remained stable since its sharp appreciation against major currencies in February 2024, following Kenya's successful Eurobond issuance and improved market sentiments. The appreciation follows a period of depreciation in 2023. The Kenyan shilling depreciated against the US Dollar by 25.35 per cent in 2023, before appreciating by 16 per cent in 2024. The appreciation of the Kenyan shilling lowers the cost of imported raw materials and capital goods, reducing production costs for firms reliant

on imports. Lower costs allow businesses to pass savings to consumers, stimulating demand, expanding operations, and improving employment. However, a stronger shilling can make exports less competitive, potentially reducing demand in export-driven sectors such as horticulture, which could limit job growth. Therefore, the overall impact on employment depends on the balance between reduced costs for domestic producers and the potential slowdown in export-driven sectors.

Figure 2.13: Exchange rate performance



Data source: CBK Monthly Economic Reports

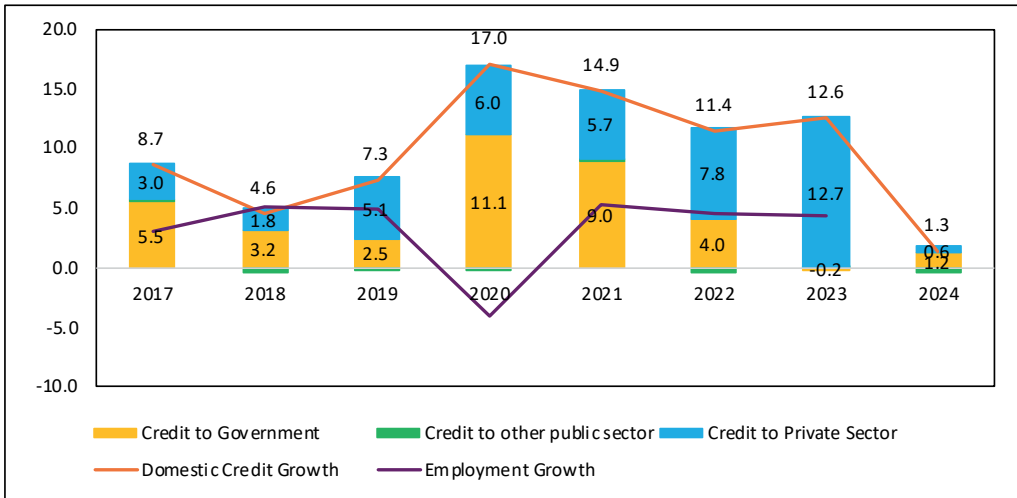
The US dollar, however, remains stronger against major international currencies, as reflected by US Dollar index remaining above 100. The strength of the US Dollar against other international currencies could reduce FDI inflows to Kenya as investors shift capital to more attractive US assets such as bonds and stocks.

2.7.3 Credit to the economy

The domestic credit growth has been on a downward trend. Figure 2.14 shows the trends in domestic credit growth, and the contribution of credit to the government and the private sector to overall domestic credit growth between 2017 and 2023. Domestic credit growth slowed to 1.3 per cent in 2024 from a growth of 12.6 per cent in 2023. Credit to the government contributed the highest growth of 1.2 percentage points in 2024. The private sector contributed 0.6 percentage points in 2024, down from 12.7 percentage points contribution in 2024. Credit to the other public sector entities, which include county governments and parastatals, contributed 0.6 percentage points in 2024, up from a negative contribution of 0.2 percentage points in 2023.

Credit to the government significantly influenced domestic credit growth in 2020, contributing 11.1 per cent to domestic credit growth. In 2020, the government explored fiscal response to the COVID-19 pandemic. However, in the post-COVID period, the contribution of government progressively declined, reaching a contribution lower than the pre-COVID period of 3.37 per cent in 2023 and 1.2 per cent in 2024. Previously, the private sector contribution to domestic credit growth increased from 3.0 per cent in 2017 to 12.7 per cent in 2023. However, in 2024, private sector contribution declined to a low of 0.6 percentage points. The employment effects of private sector credit primarily emerge through business expansion, investment in productive capacity, and increased labour demand. When firms access credit, they can scale operations, invest in technology, and hire more workers. In contrast, credit to the public sector influences employment creation through infrastructure projects, public services, and social programmes, which generate both direct public-sector jobs and indirect employment through increased demand for goods and services from private enterprises.

Figure 2.14: Domestic credit and employment growth



Data source: KNBS (Various), Economic Survey

The relationship between domestic credit growth and employment growth is not always straightforward. In some instances, credit growth did not always translate directly into employment growth. Factors such as labour market conditions and sector-specific dynamics affect credit-employment relations. For instance, in 2020, domestic credit growth reached 17.0 per cent, driven by government borrowing, while employment growth fell sharply to -4.1 per cent. The economic conditions and labour market dynamics during the COVID-19 pandemic made it difficult to translate credit growth into immediate job creation. Subsequently, in 2021 and 2022, domestic credit grew at 14.86 per cent and 11.45 per cent, respectively, with employment growth rebounding to 5.3 per cent and 4.5 per cent, respectively. The domestic credit growth was 12.64 per cent in 2023, with employment stabilizing at 4.4 per cent.

The government has put in place measures to enhance credit access. The measures include the establishment of the Financial Inclusion Fund (Hustler Fund) to provide affordable credit to individuals and small businesses. The government has also implemented risk-based credit pricing to expand access for borrowers previously locked out of formal lending. Additionally, reforms in the credit information-sharing framework aim to enhance transparency in lending. The government launched the Credit Guarantee Scheme (CGS) in 2020 to enhance credit access for MSMEs, facilitating loans worth Ksh 6.18 billion by 2023. However, its reliance on annual budgetary allocations raised sustainability concerns. To address this, the National Treasury is developing a Credit Guarantee Policy to establish a structured and sustainable long-term framework.

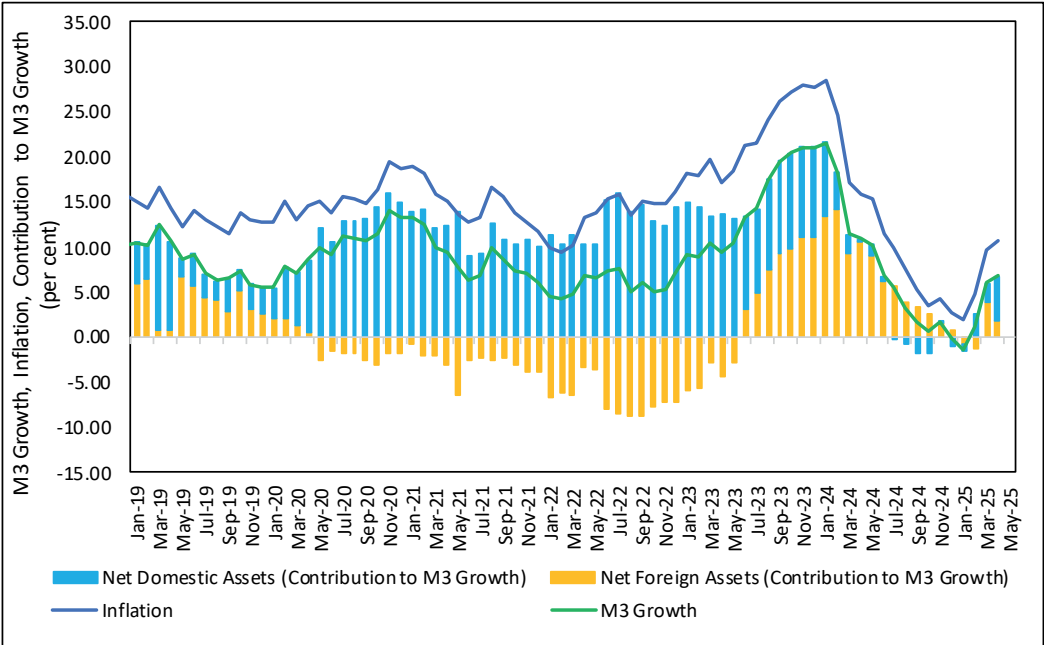
2.7.4 Money supply

Employment dynamics in Kenya are linked to liquidity conditions through the credit availability that influences business expansion and job creation. Net domestic financial assets (NDAs) are the primary drivers of liquidity. NDAs have consistently contributed positively to extended broad money supply (M3) growth. Sufficient liquidity enables business entities to secure financing for operational expansion and workforce retention. During expansive monetary policy phases, such as in November 2020 when NDAs contributed 16.02 per cent to M3 growth, increased credit availability supported business investments that sustained and generated employment. Fluctuations in net foreign

assets (NFAs), such as the decline beginning in mid-2020 and recovery in late 2021, affected overall liquidity conditions.

M3 growth peaked at 21.13 per cent in November 2023, driven by recovering NFA and sustained NDA contributions, enhancing financing conditions that allowed businesses to create new jobs and stabilize wages. In contrast, the lowest M3 growth of 4.67 per cent in January 2022 is because of negative NFA contribution of 6.65 per cent off-setting NDA's 11.32 per cent. The observed trends in M3 growth and inflation rates reinforce the role of monetary policy in shaping macroeconomic stability, which directly impacts employment prospects by influencing credit accessibility and business confidence.

Figure 2.15: Monetary aggregates



Data source: Central Bank of Kenya

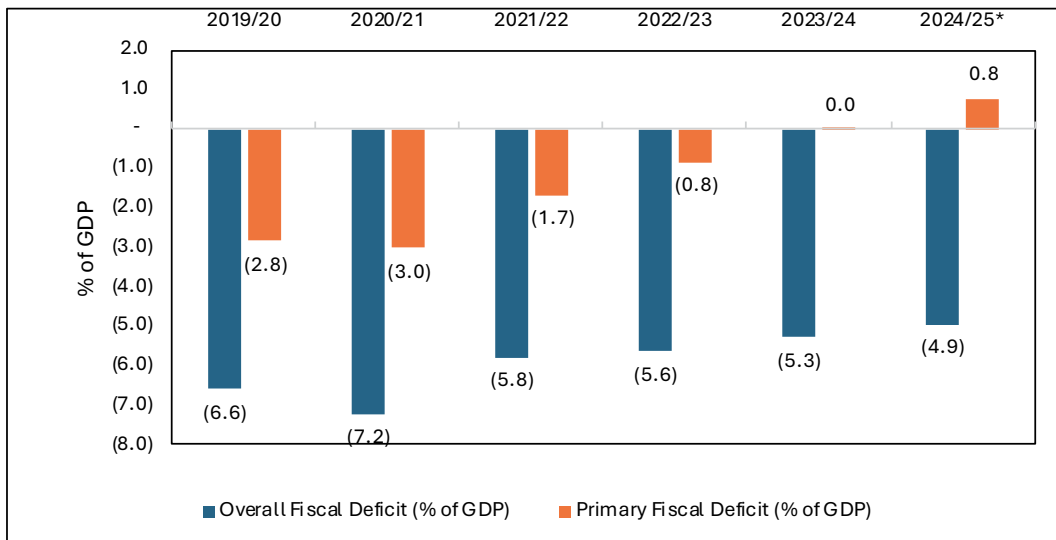
2.8 Fiscal Trends and Debt Developments

2.8.1 Primary and overall fiscal balance

Fiscal deficit, both overall and primary, can be managed to support economic growth and job creation. In recent years, Kenya has pursued fiscal consolidation by narrowing both the overall and primary fiscal deficits through a mix of expenditure rationalization and revenue-enhancing

measures. A lower fiscal deficit can be realized through increased revenue mobilization from spending cuts. To manage the fiscal deficit, the government has implemented measures such as freezing of public sector hiring, a shift to cheaper concessional loans, and cuts to non-priority expenditures. On the revenue side, efforts to broaden the tax base, reduce exemptions, and enhance compliance aim to strengthen domestic resource mobilization. These fiscal adjustments influence employment, private sector activity, and long-term economic stability.

Figure 2.16: Overall fiscal balance and primary fiscal balance, 2017/18–2023/24



Data source: National Treasury (2025), Budget Policy Statement

Efforts to consolidate Kenya's fiscal balance have led to both the primary and overall fiscal deficits decreasing as a percentage of GDP. The overall fiscal deficit reduced from 8.1 per cent of GDP in 2019/20 to 5.2 per cent in 2024/25. Similarly, the primary fiscal balance, excluding interest payments, improved from a deficit of 2.8 per cent of GDP in 2019/20 to a surplus of 0.8 per cent in 2024/25. The declining fiscal deficits (primary and overall) indicates that Kenya is achieving fiscal consolidation while managing its rising debt obligations.

A lower fiscal deficit implies either an increase in revenue or a reduction in public spending. The reduction in public spending directly affects employment generation by limiting government's investment in critical sectors such as infrastructure and education, which are essential for long-term employment growth. The government's fiscal strategy aims to further reduce the deficit to 3.8 per cent of GDP in 2025/26 (The National Treasury and Economic Planning, 2024).

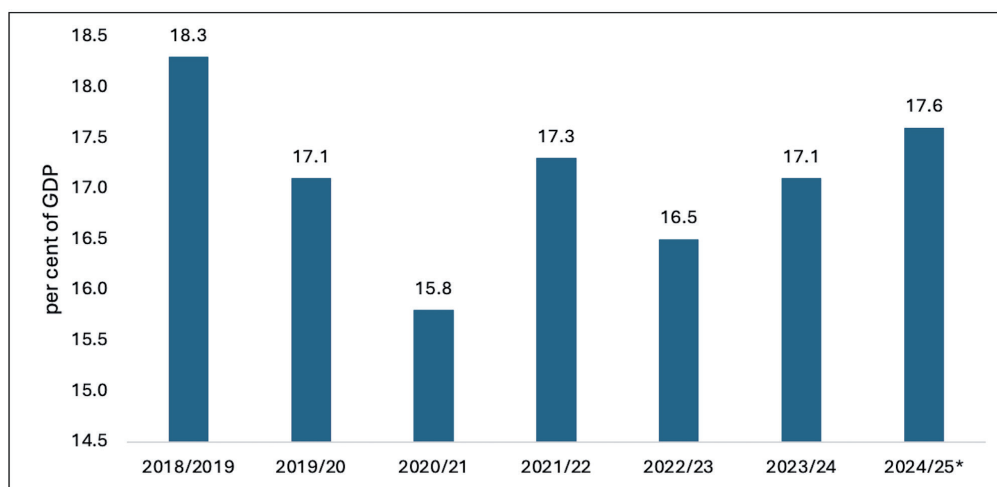
2.8.2 Government revenue

Enhanced revenue collection also reduces fiscal deficit, and can be achieved by minimizing tax exemptions, broadening the tax base, and improving compliance. Government revenue enhancement can support employment creation through sustained public investment in the productive sectors. Increased revenue mobilization enables the government to finance infrastructure projects, enhance social services, and support programmes that foster job creation and economic growth. A widening fiscal deficit constrains the government's ability to finance development expenditures. Reduced public

investment weakens employment prospects by limiting the expansion of critical sectors that drive job creation. Additionally, sustained revenue shortfalls could lead to increased borrowing, crowding out private sector credit and further dampening employment growth.

The revenue of the government has shown notable improvement post-pandemic, particularly in income tax and value-added tax (VAT) collections. The improvement follows the implementation of initiatives such as broadening the tax base, the Voluntary Tax Disclosure Programme, tax amnesty and enhanced revenue collection efforts, which have contributed to the improvement in revenue performance.

Figure 2.17: Performance of government revenue



Data source: KNBS (Various), Economic Survey (Note * is provision)

Government revenue as a share of GDP increased to 17.6 per cent in 2024/25 from 16.5 per cent in 2022/23. The increase is due to revenue mobilization efforts resulting in an increase in various tax heads such as VAT and income tax. The implementation of programmes such as the Voluntary Tax Disclosure Programme (VTDP) and the tax amnesty programme has contributed to increased revenue collection. Launched under the Finance

Act of 2020, the VTDP allows taxpayers to disclose previously undeclared liabilities while receiving relief from penalties and interest, provided they pay the principal tax due. VTDP has encouraged compliance and provided an opportunity for taxpayers to rectify past omissions. Additionally, the Tax Procedures (Amendment) Act, 2024 has reintroduced tax amnesty on interest, penalties, or fines on tax debt for periods up to 31st December 2023. The amnesty

allowed taxpayers who settle their principal tax liabilities to benefit from a waiver of penalties and interest during the specified period. The programme aims to enhance compliance and broaden the tax base by providing an incentive for taxpayers to address outstanding liabilities without incurring additional costs.

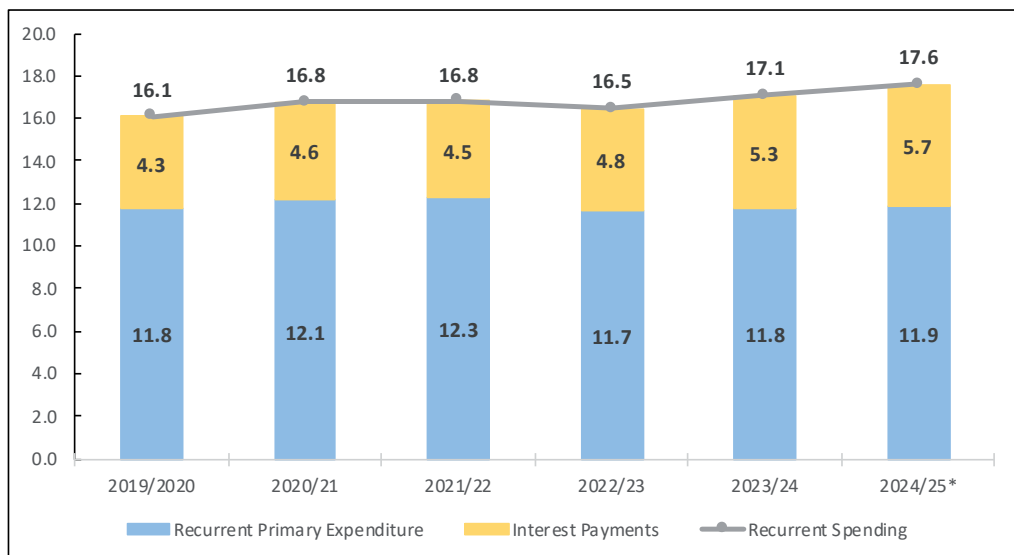
Kenya has implemented various tax exemptions and zero-rating measures to stimulate investment and foster employment across key sectors. However, these incentives have fiscal implications in the context of fiscal consolidation efforts. Tax expenditures, which include revenue forgone due to exemptions, deductions, and credits, have been substantial. In 2023, total tax expenditure increased to Ksh 510.56 billion (3.38% of GDP) from the revised Ksh 393.13 billion (2.91% of GDP) in 2022. The government has proposed rationalizing tax expenditures to enhance revenue collection while maintaining a balance between providing investment incentives and ensuring fiscal responsibility. Recent legislative amendments, such as

the Tax Laws (Amendment) Act, 2024, reflect efforts to reform tax policies in line with fiscal consolidation objectives. The treatment of tax exemptions in fiscal consolidation involves a trade-off between immediate revenue gains and long-term economic growth. Eliminating unnecessary exemptions enhances revenue collection, while maintaining investment incentives and promoting job creation.

2.8.3 Government expenditure

Government expenditure impacts economic growth and job creation through its allocation to infrastructure, social services, and other development initiatives that support productivity and private sector expansion. Public spending on education, healthcare, and infrastructure enhances human capital, improves productivity, and generates direct and indirect employment opportunities. Development expenditures in sectors such as transport, energy, and industry support private sector growth by reducing production costs and improving market access.

Figure 2.18: Performance of recurrent expenditure



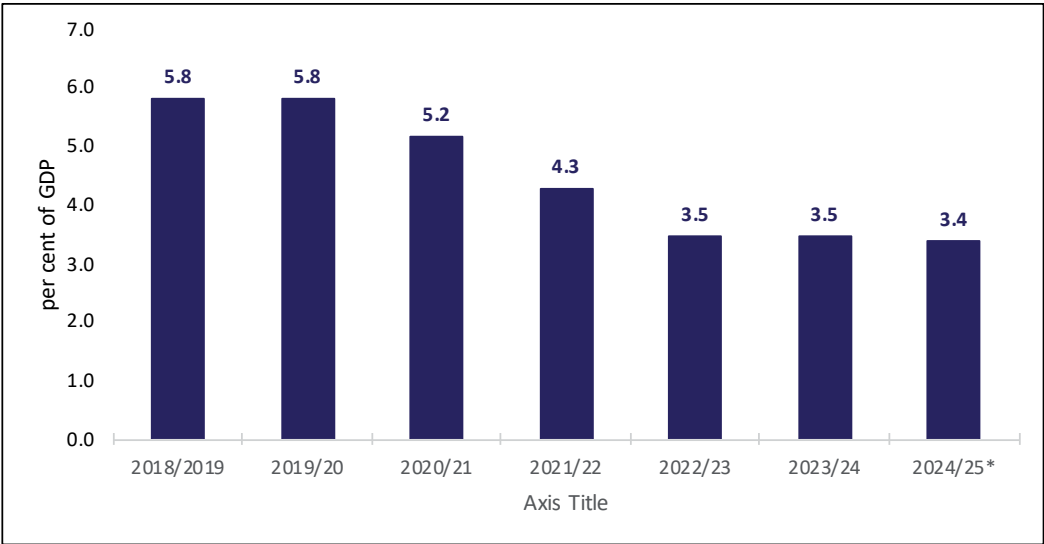
Data source: National Treasury (2025), Budget Policy Statements

Kenya’s recurrent expenditure has steadily increased as a percentage of GDP over recent years, rising from 16.1 per cent in 2019/20 to 17.6 per cent in 2024/25. The growth has been driven primarily by higher interest payments, which accounted for 5.7 per cent of GDP in 2024/25, up from 4.3 per cent in 2019/20. The increasing debt burden has significantly constrained fiscal space, limiting the government’s ability to allocate funds toward development expenditure and other productive spending. Despite primary recurrent expenditure remaining stable at around 12 per cent during this period controlled spending on wages and operational costs—the escalating interest payments have diverted critical resources

from initiatives that could stimulate economic growth and employment.

The substantial share of recurrent expenditure dedicated to servicing debt restricts the government’s capacity to invest in development projects that have a direct impact on job creation and economic expansion. High debt service costs mean that only a small percentage of the budget is available for essential infrastructure projects, education, and healthcare sectors vital for long-term economic stability and growth. Containing recurrent expenditure, particularly interest payments, is crucial for creating room to invest in initiatives that promote sustainable employment opportunities and enhance the overall economic landscape in Kenya.

Figure 2.19: Development expenditures



Data source: National Treasury (2025), Budget Policy Statement

Development expenditure in Kenya has exhibited a declining trend in recent years from 5.8 per cent of GDP in 2019/20 to 3.4 per cent of GDP in 2024/25. Domestic financing of development projects has decelerated at a faster rate than foreign financing, pointing to the sufficiency of

local capital to support infrastructure and capital projects. As a result, Kenya increasingly relied on foreign sources of financing, particularly concessional loans, to fund development projects. Development expenditure is key in expanding the economy’s productive

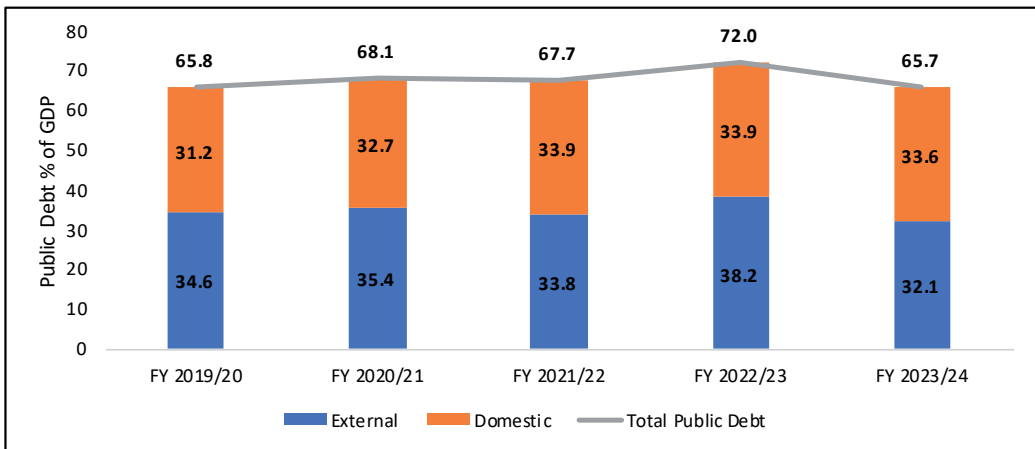
capacity and crowding-in effect on private investment through an improved operating environment for businesses. Reliance on domestic financing could potentially crowd out private investment.

2.8.4 Public debt performance

Several empirical studies have examined the effect of public debt on employment. Ehikioya et al. (2020) and Al-Tamimi and Jaradat (2019) found that rising public debt has had little to no impact on employment creation, attributing this outcome to the allocation of borrowed funds towards recurrent expenditures rather than

productive investments that generate jobs. Kenya's total stock of public and publicly guaranteed debt has increased to Ksh 10,581.99 billion in 2023/24, up from Ksh 10,278.88 billion in 2022/23. However, as a percentage of GDP, public debt reduced from 72.0 per cent in 2022/23 to 65.7 per cent in 2023/24. Kenya's stock of public debt is composed of external debt and domestic debt. The external debt was 32.1 per cent of GDP while domestic debt was 32.1 per cent of GDP as of June 2024. The appreciation of the Kenya shilling against major currencies saw the nominal values of the external debt decline from Ksh 5,446.56 billion in 2022/23 to Ksh 5,171.70 billion in 2023/24.

Figure 2.20: Performance of public debt

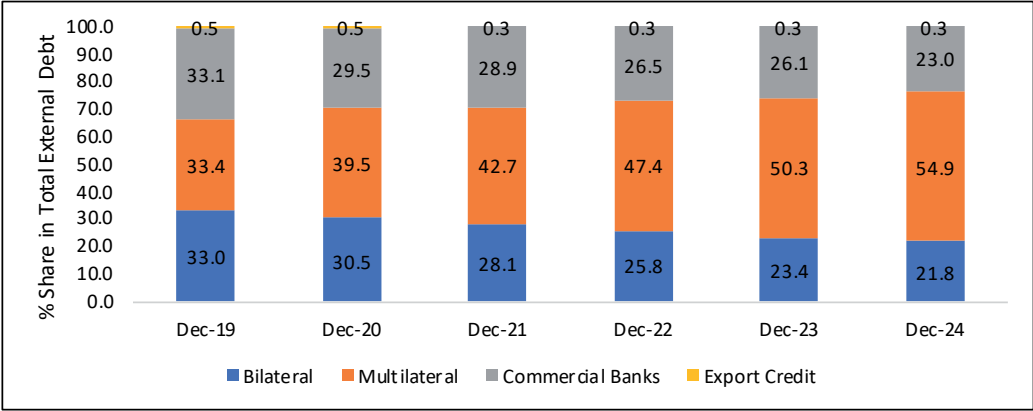


Data source: National Treasury (2024), Annual Debt Management Reports

However, the growing cost of debt servicing limits the government's capacity to allocate resources towards development initiatives that could stimulate economic activity and create employment opportunities. In 2023/24, the government borrowed more in the domestic market (33.6% of GDP)

than the external market (32.1% of GDP). Government competition with the private sector for financial resources make it more difficult for businesses to access affordable credit, therefore, leading to crowding out of the private sector.

Figure 2.21: Shares of bilateral, multilateral, and commercial debt in external debt

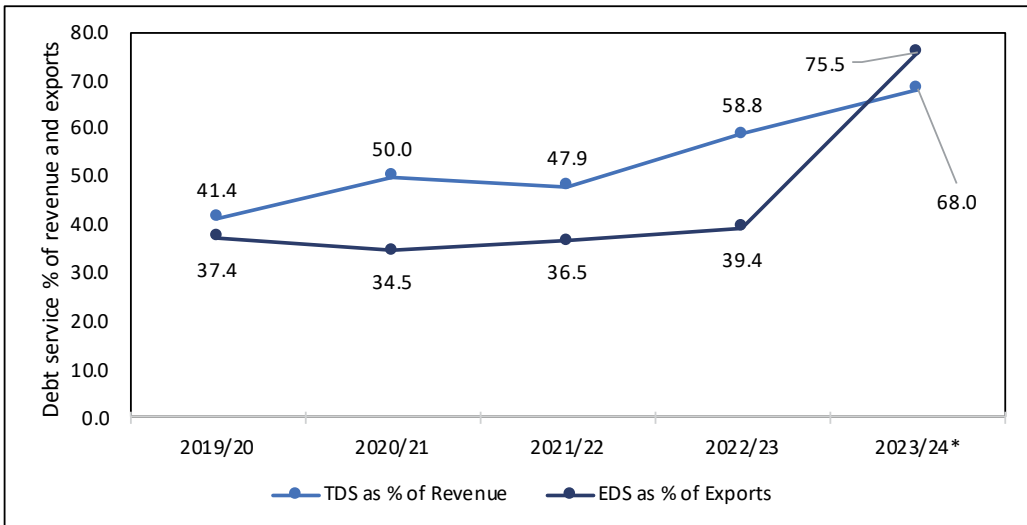


Data source: Central Bank of Kenya

The share of multilateral debt in total external debt has increased over time, accounting for 54.9 per cent of external debt by December 2024, up from 33.4 per cent in 2019. Over the same period, the share of bilateral debt declined to 21.8 per cent in 2024 from 33.0 per cent in 2019, while commercial debt reduced to 23.0 per cent from 33.1 per cent. The more expensive commercial bank loans and bilateral loans escalate the debt servicing costs. The declining shares of bilateral and commercial debt reflect the government’s medium-term borrowing strategy that emphasizes a shift towards more concessional financing.

The rising share of multilateral debt in external debt composition reflects Kenya’s approach to maintaining a sustainable debt profile in the context of increasing public debt levels. Multilateral loans are typically provided on concessional terms, including lower interest rates, extended grace periods, and favourable repayment schedules. Concessional debt, acquired at below-market interest rates, is therefore beneficial in managing debt servicing costs. Optimization of the financing mix with a preference for concessional borrowing will support the government’s efforts to contain fiscal pressures.

Figure 2.22: Debt servicing



Data source: National Treasury (2024), Annual Debt Management Reports (Various issues)

Public debt servicing costs in Kenya have risen over the years. The total debt service (TDS) rose from 41.4 per cent of revenue in 2019/20 to 68.0 per cent in 2023/24. External debt service (EDS) as a percentage of exports has also increased from 37.4 per cent in 2016/17 to 75.5 per cent in 2023/24. The rising cost of debt service in 2023/24 was contributed by repayment of the principal and interests. The repayments include US\$ 2 billion Eurobond, which matured in February 2024. The upward trend in debt servicing costs has implications on fiscal sustainability. The increased debt service diverts resources that could be invested in different sectors to drive employment and growth.

2.8.5 Public debt sustainability

A country's external debt is considered sustainable if it can meet its current and future payment obligations without exceptional financial assistance, disrupting its development, and or defaulting. The Debt Sustainability Analysis (DSA) examines both solvency and liquidity aspects. The Debt Sustainability Framework (DSF) uses the debt-to-GDP and debt-to-exports ratios to assess a country's solvency. For liquidity, the focus is on the availability of liquid assets and the government's ability to meet its immediate external obligations. The DSF evaluates liquidity using the debt service-to-exports and debt service-to-revenue ratios.

Table 2.6: Debt sustainability indicators

Indicators	Thres- hold	2023	2024*	2025*	2026*	2027*	2028*	2033*
PV of PPG external debt to GDP ratio	40	31.7	35.8	33.8	31.8	29.9	28.3	23.3
PV of PPG external debt to export ratio	180	256.9	240.3	224.0	209.9	194.3	182.1	137.9
PPG debt service to export ratio	15	24.9	36.0	25.2	24.9	21.1	23.3	15.5
PPG debt service to revenue ratio	18	17.3	28.5	19.8	19.6	16.9	18.8	13.6
PV of debt-to-GDP ratio	55	68.2	67.2	64.0	61.4	59.1.9	56.9	48.1

Data source: National Treasury (2024), Annual Debt Management Reports (* represent projections)

Kenya's debt sustainability indicators reveal a mix of results across various debt sustainability indicators. The present value (PV) of public and publicly guaranteed (PPG) to GDP and the PPG debt service to revenue ratio are still within the debt sustainability threshold. However, the indicators linked to exports have been exceeded in 2023/24. The ratios that have exceeded thresholds for sustainability include the present value of public and publicly guaranteed external debt to export ratio at 256.9 against a threshold of 180, the public and publicly guaranteed debt service to export ratio at 24.9 against a threshold of 15. The present value of the debt-to-GDP ratio has also exceeded the benchmark threshold of 55, reaching 68.2 per cent of GDP. The breaching of exports-based thresholds is an indication that the level of exports needs to be enhanced to be able to service external debt sustainably.

Both public external debt and debt servicing negatively affect economic growth and investment with the risks of "debt overhang" and "crowding out" effects (Akram, 2017). As public debt accumulates, it creates uncertainties for investors who

fear that future government revenue will be primarily allocated towards servicing this debt rather than funding essential development projects. For instance, with approximately 58.8 per cent of government revenue dedicated to debt servicing, public investment is severely constrained. High debt servicing costs not only limit the resources available for infrastructure development and social services but also diminishes investor confidence, leading to a slowdown in private sector investment. Such dynamics can stifle economic growth and curtail job creation in sectors critical for long-term stability.

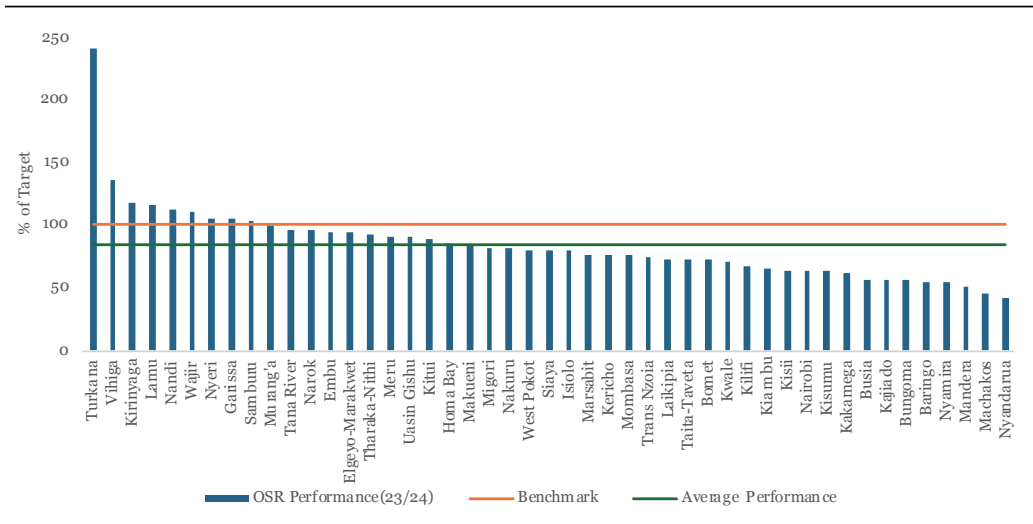
2.8.6 Fiscal performance at county level

County level spending has the potential to directly stimulate job creation through infrastructural development, business support programmes and provision of public services such as healthcare and education. County governments received Ksh 442,328 million in 2023/24, which includes 354,591 million from the

exchequer and Ksh 58,949 million from own source revenue. The exchequer issues from the national government in 2023/24 accounted for 80 per cent of the county governments revenue receipts, while own source revenue accounted for 13 per cent. The own source revenue increased from Ksh 36,875 million in 2022/23 to Ksh 58,948 million in 2023/24 following the recognition of facility-improvement-fund/(AiA) funds as part of the county governments own source revenue. FiF funds from hospital facility operations are collected and spent in the county hospitals.

County governments continue to record low own-source revenue (OSR) collection, with ten counties surpassing the benchmark of 100 per cent. Turkana recorded the highest performance at 241.2 per cent, followed by Vihiga (136.3%) and Kirinyaga (118.4%). Other counties that exceeded the benchmark include Lamu (116.2%), Nandi (113%), and Wajir (110%). Nyandarua had the lowest performance at 42.1 per cent, followed by Machakos (46.5%) and Mandera (50.8%). The average OSR collection rate across all counties was 84.3 per cent of their targets.

Figure 2.23: County own source revenue performance (2023/2024)



Data source: Controller of Budget (2024), County Budget Implementation Reports

The expenditure component of compensation of employees (45.42%) constitutes the largest share of county spending, followed by use of goods and services (21.43%) and acquisition of assets (16.44%). Transfers to other government units account for 8.63 per cent, while other grants and transfers take up 5.96 per cent. The Public Finance Management (PFM)

regulations require that the wage bill for national and county governments does not exceed 35 per cent of total revenue. However, the wage bill at the county governments exceeds the 35 per cent threshold set by the PFM Act, 2012, and PFM (County Government) Regulations, 2015. The growing wage bill limits resources for development and service delivery.

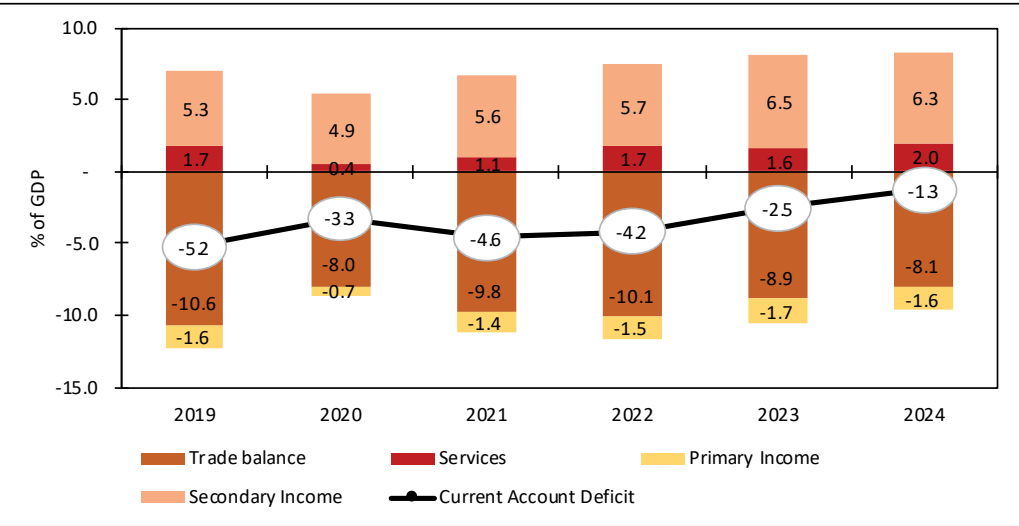
2.9 External Sector Developments

2.9.1 Current account balance

The current account balance shapes employment dynamics through trade performance and foreign exchange stability. A narrowing current account deficit signals improvements in trade balances, export competitiveness, and external income sources. An improved trade balance implies employment expansion of export-oriented sectors. Kenya’s current account deficit narrowed to 1.3 per cent of GDP in 2024 from 5.2 per cent of GDP in 2019. The positive shift is attributable to

a narrowing trade deficit, which reduced from 10.6 per cent in 2019 to 8.1 per cent in 2024. The decline in the trade deficit reflects improved export performance and reduced import, particularly in key sectors such as agriculture and manufactured goods. Secondary income as a percentage of GDP has grown to 6.3 per cent of GDP in 2024 from 5.3 per cent in 2019. The growth in secondary income is supported by growth in diaspora remittances, which are classified under secondary income. Secondary income is a critical source of foreign currency reserves, which is key in maintaining exchange rate stability, providing buffer to short term shocks in foreign exchange markets, and meeting international payment obligations.

Figure 2.24: Current account balance performance

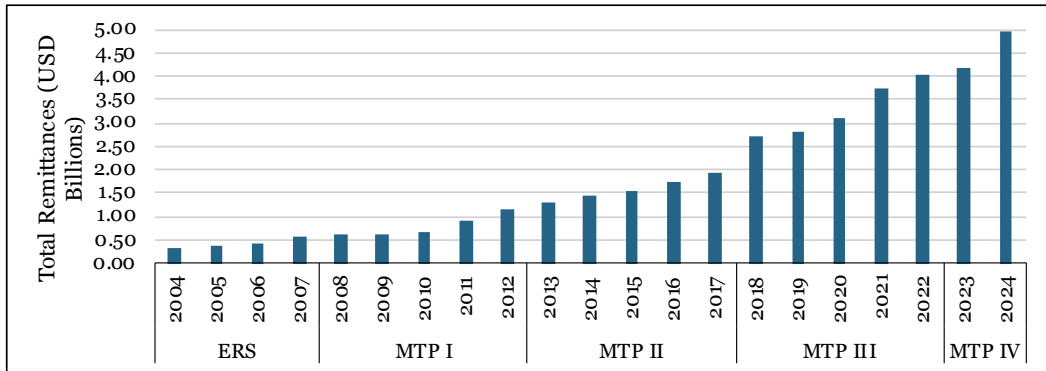


Data source: CBK (Various issues), Monthly Economic Reports

Kenya’s external balances continue to reflect a deficit. However, the increasing contributions from remittances and the services sector present opportunities to reduce current account deficit. The

resilience of remittance flows indicates that robust diaspora remittances could help cushion economic shocks and stimulate the Kenyan economy.

Figure 2.25: Diaspora remittances



Data source: Central Bank of Kenya

Kenya's total remittance inflows were US\$ 4.95 billion in 2024, an 18.02 per cent increase from US\$ 4.19 billion in 2023. Remittances are a key source of foreign exchange, supporting household incomes, investments, and economic stability. The United States of America (USA) accounted for 50.38 per cent of total remittances in 2024. Europe contributed 34.37 per cent while the Rest of the World, including Asia, Australia, Oceania, and Africa, accounted for 15.25 per cent. Growth in non-traditional remittance corridors underscores the need for targeted strategies to sustain inflows. Total remittances have increased across Kenya's economic planning periods. The ERS-WEC (2003-2007) recorded total remittances inflows of US\$ 1.70 billion.¹ The Medium-Term Plan I (MTP I) (2008-2012) saw an increase to US\$ 3.92 billion. The MTP II (2013-2017) recorded total remittances of US\$ 7.94 billion, while the MTP III (2018-2022) registered the highest cumulative remittances at US\$ 16.33 billion. Under the MTP IV (2023-2024), remittances have reached US\$ 9.14 billion in just two years.

¹ 1.70 billion covers 2004-2007 period, data not available for 2003, which is part of ERS-WEC period

Remittances from Kenyans working abroad create employment by injecting capital into the economy and supporting business activity. Many recipients use these funds to start or expand small enterprises, increasing demand for labour. Improved financial stability from remittances enhances access to credit, enabling more investments in income-generating activities. The construction sector also benefits, as remittances often finance housing and commercial projects, creating jobs in related industries. Additionally, remittance inflows sustain household spending on goods and services, stimulating local businesses and supporting employment.

2.9.2 Official reserves

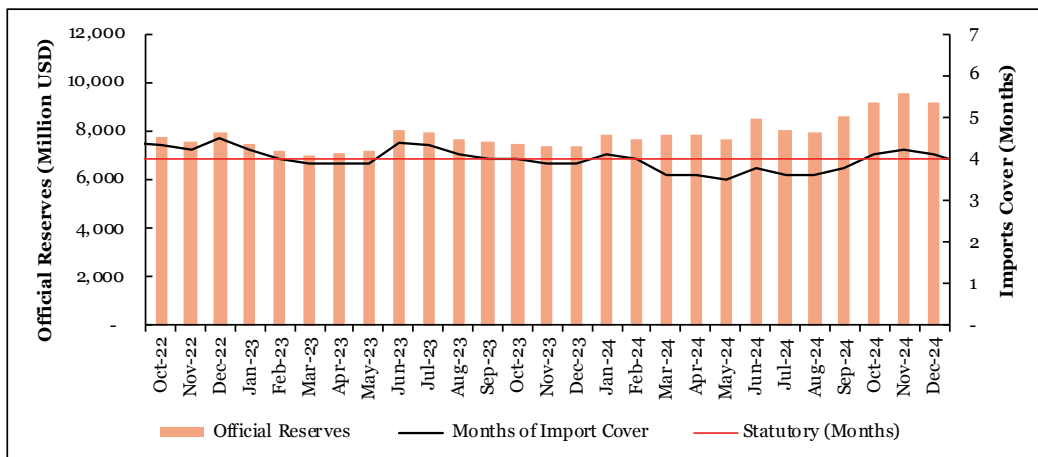
Foreign exchange reserves provide a buffer against external shocks, helping to maintain a stable business environment conducive for job creation. Sufficient reserves ensure that the country can meet its international obligations, including paying for import demand and servicing the government external debt. The importation of capital goods and intermediate goods is essential to increasing the productive capacity of the economy, which in turn supports the creation of more jobs. The ability to sustain the import of goods that are productive to

the economy depends on the adequacy of official reserves.

The official reserves at the Central Bank of Kenya averaged USD 8,319 million in 2024, providing an average import cover of 3.8 months. By December 2024, official diaspora remittance inflows.

reserves stood at USD 9,201 million, sufficient to cover 4.1 months of imports. Overall, reserve levels remained stable throughout the year, ensuring adequate coverage for imports. The stability in official reserves was supported by strong

Figure 2.26: Official reserves and months of import cover



Data source: CBK Monthly Economic Reports (Various)

2.10 Key Messages and Recommendations

2.10.1 Key messages

1. Kenya's economy grew by 4.7 per cent in 2024, which is lower than the 5.7 per cent growth recorded in 2023. The slower growth was due to reduced expansion across most sectors. Agriculture grew by 4.6 per cent in 2024 compared to 6.6 per cent in 2023, while industry expanded by 0.8 per cent with contractions registered in construction and mining activities.
2. Employment grew by 3.9 per cent in 2024, adding 782,300 new jobs, of which 703,700 jobs were created in the informal sector and 78,600 in the formal sector. The responsiveness of employment to economic growth was lowest in the MTP III (2018-2022) period compared to the previous planning periods of ERS-WEC, MTP I and MTP II. The responsiveness improved slightly in MTP IV.
3. Kenya's labour market is dominated by informal employment, accounting for 83.6 per cent of total employment under MTP IV (2023 and 2024), up from 77.8 per cent during the ERS-WEC period (2003-2007). Formal employment has steadily declined, shrinking from 21.4 per cent of the workforce during the ERS-WEC to 15.6 per cent in MTP IV. Informal employment is characterized by irregular incomes, inadequate social protection, and high job turnover. A large informal sector also increases the

- tax burden on formal sector workers, as informal employment does not generate employment income tax for the government.
4. Gross national savings rose to 16.0 per cent in 2024 from 14.1 per cent of GDP in 2019, while investments fell to 17.5 per cent of GDP in 2024 from 19.0 per cent in 2019. The insufficient investment limits business expansion and job creation, as evidenced by declining trends in both investment and employment growth over the years.
 5. Domestic credit growth slowed sharply from 12.6 per cent in 2023 to 1.3 per cent in 2024, driven by a decline in private sector credit growth from 12.7 per cent in 2023 to 0.6 per cent in 2024. The constrained access to credit hampers business expansion and investment, weakening employment growth.
 6. Public debt declined to 65.7 per cent of GDP in 2023/24 from 72.0 per cent in 2022/23, partly due to the appreciation of the Kenyan Shilling. However, debt servicing costs took up 68.0 per cent of revenue, limiting fiscal space for development spending and employment-supporting programmes. The debt service-to-export ratio reached 36.0 per cent in 2024, exceeding the 15 per cent threshold, which highlights the need for export growth to ensure sustainable debt repayment. The growing debt servicing costs limits the government's ability to invest in infrastructure and other job-creating sectors.
 7. Development expenditure declined to 3.2 per cent of GDP in 2024/25 from 5.8 per cent of GDP in 2019/20, while recurrent expenditure rose to 17.6 per cent of GDP in 2024/25 from 16.1 per cent in 2019/20. The shift in spending priorities limits resources for job-creating infrastructure projects and other development initiatives.
 8. Inflation eased to an average of 4.5 per cent in 2024, down from 7.7 per cent in 2023, driven by lower food and fuel prices. Food inflation declined from an average of 9.2 per cent in 2023 to 5.6 per cent in 2024. Similarly, fuel inflation declined to 6.3 per cent in 2024 from 13.9 per cent in 2023 following a drop in international oil prices.
 9. Kenya's current account deficit narrowed to 1.3 per cent of GDP in 2024, supported by improved export performance and strong remittance inflows. Official reserves increased to 4.1 months of import cover in December 2024. The reserves provide a buffer against external shocks and support a stable business environment for job creation. Diaspora remittances grew by 18 per cent in 2024, reaching US\$ 4.95 billion. Remittances support household income, business activities and play a key role in job creation.

2.10.2 Recommendations

To enhance macroeconomic stability that supports job creation:

1. Strengthen domestic savings to sustainably meet investment demand by implementing policies that encourage long-term savings and improve access to financial services. This can be achieved by expanding pension schemes to cover a larger segment of the population, promoting financial literacy programmes to enhance awareness of savings and investment opportunities, and strengthening financial inclusion through digital savings platforms. Additionally, incentives such as tax benefits on savings and investment products can encourage higher savings rates.

2. Enhance domestic credit access to improve financing for businesses and investment by expanding credit guarantee schemes, strengthening development finance institutions, and reforming lending frameworks to lower borrowing costs. Expanding credit guarantee schemes will help reduce the risks faced by financial institutions, enabling them to extend more loans to small and medium-sized enterprises. Strengthening development finance institutions will ensure the availability of long-term, low-cost credit for businesses that may not qualify for commercial bank loans. Additionally, reforming collateral requirements and risk assessment frameworks, such as adopting alternative credit scoring models, will make it easier for businesses to access credit.
3. To reduce the tax burden, increase the share of formal employment by enforcing labour laws and enhancing skills development through vocational training programmes. Vocational training will equip workers with industry-relevant skills, improving their employability in the formal sector. Increased share of formal employment will broaden the tax base for employment income tax, therefore, reducing the overall tax burden. Enforcing labour laws will ensure decent jobs through fair wages, job security, and safe working conditions.
4. Shift towards more concessional public debt financing to ease fiscal pressures and support development by securing favourable borrowing terms. Prioritizing project financing through multilateral international development partners will enable access to concessional funding. Concessional terms will lower debt servicing costs, free up resources for critical development expenditure, and support social programmes and essential infrastructure.
5. Prioritize development spending at the county level to stimulate job creation and economic growth. Enforcing Public Finance Management (PFM) regulations that cap wage spending at 35 per cent of total revenue while ensuring development expenditure accounts for at least 30 per cent of total expenditure will enhance fiscal discipline. Prioritizing development spending will improve infrastructure, support business growth, and create employment opportunities at the county level.
6. Promote exports in export-oriented sectors to boost economic growth and enhance external balance. Investing in value addition will increase the competitiveness of exported goods, while improved trade facilitation through enhanced infrastructure and streamlined regulatory processes will lower costs and improve efficiency. Negotiating market access agreements will expand export destinations, while export promotion incentives will attract investment in key sectors. The strategies to promote exports will create jobs in export-oriented industries, strengthen official reserves, and support debt sustainability.

3. Medium Term Economic Prospects for Kenya

Kenya's economy demonstrated resilience in 2024 despite global uncertainties and tight financial conditions. Real GDP grew by 4.7 per cent, supported by strong performance in services and industry sectors, particularly transport, finance, construction, and manufacturing. This reflects improvement in investor confidence, recovery in domestic demand, and ongoing reforms under the Bottom-Up Economic Transformation Agenda (BETA). Growth is projected to improve to 5.1 per cent in 2025, averaging 5.6 per cent over the 2025-2027 period. The key drivers include continued recovery in agriculture, expansion in services, and stronger manufacturing and construction activity. Macroeconomic stability is expected to be sustained through easing of inflation, a more stable exchange rate, and a narrowing current account deficit. The risks to the outlook, however, remain. These include tighter global financing conditions, high oil prices, regional security challenges, weather shocks, and domestic fiscal pressures. If these risks materialize, growth may moderate to 4.9 per cent in 2025. On the upside, faster fiscal consolidation and accelerated implementation of BETA programmes could lift growth to 5.9 per cent. Realizing this outlook will depend on sustained macroeconomic stability, improved weather conditions, and timely execution of planned investments and reforms. Strengthening domestic resource mobilization and supporting private sector recovery will be key to maintaining the momentum in economic performance.

3.1 Introduction

The global economy expanded by 3.3 per cent in 2024, down from 3.5 per cent in 2023, reflecting a deceleration in both advanced and emerging market economies. The global economy is projected to grow at a slower rate of 2.8 per cent in 2025 (International Monetary Fund - IMF and World Economic Outlook - WEO, 2025). The projected slower growth in 2025 reflects direct effects of the trade measures and their indirect effects through trade spillovers, with trade policy uncertainty assumed to remain elevated through 2025 and 2026. The Sub-Saharan Africa region faced external pressures such as tightening global financial conditions and volatile exchange rates. These constraints have strained public finances and impacted access to funding, leading to a “funding squeeze”. Sub-Saharan Africa's economic performance grew by 4.0 per cent in 2024, and the growth is projected to slightly slow to 3.8 per cent in 2025 with global trade disruptions, public debt servicing costs and climate shocks weighing down the projections.

Kenya's economy expanded by 4.7 per cent in 2024, with the main sources of growth being agriculture, forestry and fishing (contributing 16.8% to overall growth), financial and insurance activities (15.3%), real estate (11.4%), transportation and storage (9.0%), and accommodation and food services (7.2%). The sectoral growth performance shows that the financial and insurance sector recorded the highest growth at 7.6 per cent, while real estate grew by 5.3 per cent with continued urban development and property market activity. Agriculture, forestry and fishing grew by 4.6 per cent, driven by favourable weather and improved crop performance. Transport and storage and wholesale and retail trade

expanded by 4.4 per cent and 3.8 per cent, respectively. Manufacturing posted modest growth of 2.8 per cent.

Kenya's economy expanded by 4.7 per cent in 2024, a slower growth compared to 5.7 per cent in 2023. The main sources of growth in 2024 were agriculture, forestry and fishing (contributing 16.8% to overall growth), financial and insurance activities (15.3%), real estate (11.4%), transportation and storage (9.0%), and accommodation and food services (7.2%). The sectoral growth performance shows that the financial and insurance activities recorded the highest growth at 7.6 per cent, while real estate grew by 5.3 per cent with continued urban development and property market activity. Agriculture, forestry and fishing grew by 4.6 per cent, driven by favourable weather and improved crop performance. Transport and storage and wholesale and retail trade expanded by 4.4 per cent and 3.8 per cent, respectively. Manufacturing posted a modest growth of 2.8 per cent.

Table 3.1 compares GDP growth estimates and forecasts for Kenya, Sub-Saharan Africa, and the Global Economy for 2024-2027 as provided by the IMF, World Bank,

and Kenya's Budget Policy Statement (BPS). Kenya's GDP growth for 2024 stands at 4.7 per cent. The IMF projects Kenya's GDP growth to rise slightly to 4.8 per cent in 2025, followed by 4.9 per cent in 2026 and 5.0 per cent in 2027. The World Bank projects a more subdued path, with growth estimated at 4.5 per cent in 2025, improving to 4.9 per cent in 2026 and 5.0 per cent in 2027. The lower 2025 forecast may reflect concerns that range from fiscal challenges, weather and external shocks such as the impacts of trade wars. The National Treasury of Kenya through the Budget Policy Statement projects a stronger rebound, with a GDP growth forecast at 5.3 per cent in both 2025 and 2026, before easing to 4.4 per cent in 2027. The forecasts reflect a more optimistic domestic outlook in the medium term but with a dip in 2027 signalling anticipated fiscal pressures. Sub-Saharan Africa's growth is expected to strengthen gradually, rising from 4.0 per cent in 2024 to 4.3 per cent in 2027 (IMF), with the World Bank projecting slightly lower rates over the period.

Table 3.1: Selected GDP growth rates (2023-2026)

	IMF (April 2025 WEO)	World Bank (June 2025 Global Economic Prospects)	Budget Policy Statement 2025 (Kenya)
Kenya			
2024	4.7	4.7	4.7
2025f	4.8	4.5	5.3
2026f	4.9	4.9	5.3
2027f	5.0	5.0	4.4
Sub-Saharan Africa			
2024	4.0	3.5	-
2025f	3.8	3.7	-
2026f	4.2	4.1	-
2027f	4.3	4.3	-

	IMF (April 2025 WEO)	World Bank (June 2025 Global Economic Prospects)	Budget Policy Statement 2025 (Kenya)
Global			
2024	3.3	2.8	-
2025f	2.8	2.3	-
2026f	3.0	2.4	-
2027f	3.2	2.6	-

Data source: IMF (2025) World Economic Outlook April 2025; World Bank (2025) Global Economic Prospects June 2025; Government of Kenya (2025) Budget Policy Statement; f is forecast

3.2 Medium-Term Prospects for Kenya

This section outlines the medium-term economic projections for 2025-2027 based on the KIPPRA-Treasury Macroeconomic Model (KTMM), an aggregate demand-focused model of the economy. It incorporates simulations from the Computable General Equilibrium (CGE) framework and forecasts for county-level Gross County Products (GCPs).

The outlook is influenced by both upside risks (opportunities) and downside risks, with growth factors evaluated against potential opportunities the country could capitalize on. The growth forecasts are shaped by the government’s development agenda, particularly the Bottom-Up informed by the KTMM.

Economic Transformation Agenda and the Medium-Term Plan IV for 2023-2027, which are pivotal for ensuring robust national growth.

The medium-term prospects (2025 to 2027) are presented under three scenarios: the baseline scenario, optimistic scenario, and depressed scenario. The baseline scenario assumes sustained normalcy in the prevailing economic conditions; the optimistic scenario assumes more favourable economic environment for performance; while the depressed scenario assumes the worst economic environment for performance. The identified risks and opportunities are significant in shaping and informing the optimistic and depressed scenario that explain growth forecasts and other key macroeconomic variables as

Table 3.2: Medium-term economic outlook (baseline scenario)

Volume Growth (%)	2022	2023	2024	2025f	2026f	2027f
Rates (%)						
GDP growth	4.9	5.7	4.7	5.1	5.1	5.6
Inflation	7.7	7.6	4.5	4.9	5.2	5.3
Interest rate	9.3	15.7	10.3	12.3	11.6	11.1
Volume Growth (%)						
Private consumption	5.3	7.7	5.4	5.3	5.0	5.5
Government consumption	8.1	3.5	2.7	2.2	3.4	5.0
Private investments	-1.1	-7.9	2.0	3.9	4.5	4.2

Volume Growth (%)	2022	2023	2024	2025f	2026f	2027f
Government investments	-38.0	81.9	25.2	22.3	22.3	23.5
Export goods and services	11.9	-4.5	2.4	2.5	3.6	4.0
Import goods and services	11.7	-3.1	2.9	3.4	3.4	4.2
Per cent of GDP						
Current account balance	-4.2	-2.6	-1.3	-1.1	-2.0	-3.1
Index						
Ksh per Dollar	117.9	139.9	134.8	134.2	134.0	133.8

Data source: KIPPRA-Treasury Macroeconomic Model, 2024; where f is forecast; authors' estimations

Under the baseline scenario, real GDP growth is forecast to grow by 5.1 per cent in 2025 and accelerate gradually to 5.6 per cent in 2027. Medium term average growth is at 5.3 per cent. The slowed growth in 2024 is attributed to contractions in private and public consumption patterns and declines in private and public investments. Increased taxation is linked to lower private consumption, with fiscal deficits impacting government consumption. The high interest rates coupled with increased taxation have been key in slowing down private investment in the country with fiscal pressures limiting government investments. However, private investment has picked up in 2024 at 2.0 per cent, supported by easing inflation, accommodative monetary policy, and a pickup in credit growth, and is expected to continue a positive trajectory assuming that no shocks or negative externalities will happen in the medium term. Modest expansion is expected in the 2025-2027 period, influenced by enhanced aggregate demand, which is composed of consumption, investment, government spending, and net exports.

Inflation is anticipated to remain within the government band range of 5 ± 2.5 per cent in the medium-term. In 2023, inflation rate averaged 7.6 per cent and declined to 4.5 per cent in 2024. It is, however, expected to remain within the Government policy range of 5 ± 2.5 per cent in the medium

term. The stable inflation is supported by declining food and fuel prices emanating from favourable agricultural weather patterns and declining global energy prices. The easing of monetary policy in 2025 contributed to the lower trend in interest rates.

Private consumption is a key element of aggregate demand and is expected to average at 5.3 per cent in 2024-2027. This decline is attributed to deteriorating consumer incomes arising from increased taxes negatively influencing consumer spending patterns. Government consumption is expected to decline in 2024-2027 as the government pursues fiscal consolidation aimed at managing public debt.

Private investment enhances job creation by stimulating investments in the private sector through capital accumulation and enhanced access to high-level technologies. There was a decline in investment volume in 2023 because of rising interest rates. At the baseline, private investment is projected to average 3.5 per cent over the medium term. Achieving this will be dependent on a conducive environment for business through improvements in infrastructure, stable macroeconomic environment, and leveraging Public-Private Partnerships (PPPs). By enhancing productivity within the private sector, private investment plays a vital role in driving overall economic

growth and generating employment opportunities.

Government investment is key in supporting inclusive economic growth, job creation, and sustainable development. Public investment raises both direct and indirect job creation in the formal and informal sectors by enhancing the responsiveness of job creation to economic growth. From the baseline, government investment is expected to continue, and an average of 23.3 per cent in the medium-term due to the implementation of various development projects that are part of the BETA. The MTP IV (2023-2027) aims to increase the investment-to-GDP ratio from 19.3 per cent in 2022/23 to 26.7 per cent in 2027/28. This can be achieved through fast-tracking investments in the affordable housing programme, community health, investment in key value chains, public infrastructure investments, and social protection. These investments are lower than the 81.9 per cent in 2023 because of limited fiscal space brought about by fiscal consolidation measures.

A stable domestic currency is crucial for maintaining macroeconomic stability, fostering economic growth, and generating employment opportunities. In 2024, the US dollar appreciated against other international currencies, partly due to the improved flow of diaspora remittances. Consequently, the local currency appreciated against the dollar to an average of Ksh 134.8 per dollar in 2024. A projected gradual easing of the exchange rate in the medium-term is anchored on government efforts to improve the foreign exchange balance. If external shocks persist, such as trade uncertainties and slower global growth, then the recovery of the local currency against the US dollar may take longer than expected.

Growth in export volumes is expected to take a positive trajectory in the medium-

term by 3.0 per cent emanating from the governments' priority on increasing exports, especially focusing on the tea, dairy, leather and leather products, rice, edible oils, textile and apparel, and construction materials value chains. Export growth is projected at 3.0 per cent in 2025 from an estimated -2.4 per cent for 2023. The growth in exports relies heavily on enhancing market access and facilitating export diversification through continued implementation of the Single Customs Territory, and the African Continental Free Trade Area (AfCFTA).

In terms of percentage, growth in volume imports and exports have shown volatility between 2022 and 2023. From the baseline projections, imports are projected to grow in volume at 2.9 per cent in 2024 and further to 3.4 per cent in 2025, partly driven by domestic demand for foreign goods and services besides implementation of government programmes under the MTP IV (2023-2027) that are reliant on locally available unavailable inputs. Exports gradually recover, growing by 2.4 per cent in 2024 and by 3.0 per cent in 2025 over the medium-term, reflecting improved global demand and competitiveness. The trend partly reflects structural issues, including reliance on imported capital goods and insufficient export diversification.

The current account balance is expected to remain stable in the medium-term, attributed to government efforts to explore new commodity markets and strategic partnerships for trade that would boost exports and therefore improve the trade account. The trade balance for Kenya is the key contributor to the current account deficit, followed by net primary income balance, and net services account. The current account balance is supported by an improvement in the net receipts on the services account and the net secondary income balance.

3.3 Medium-term Risks, Opportunities and Outlook

Kenya's macroeconomic environment has been stable in the post-COVID era as evidenced by the economic recovery growths of 5.7 per cent in 2023 and 4.7 per cent in 2024. However, the country faces risks that could slow down this trajectory, but there are also myriad opportunities that it can exploit to accelerate the growth. Bearing in mind the essence of economic performance on job creation, this section identifies the opportunities the country could explore to boost employment

through economic growth and the risks it could mitigate to stabilize job creation patterns in the country.

Table 3.4 presents a summary of the key downside risks and upside opportunities that could influence Kenya's economic performance and job creation patterns in the medium-term. The downside risks highlight potential challenges that could slow the economic performance of the country. The table also outlines potential upside opportunities that favour growth. These risks and opportunities are based on recent global, regional, and national developments, reflecting the dynamic nature of the economic environment.

Table 3.3: Summary of downside risks and upside opportunities

Downside risks	Upside opportunities
Climate shocks	Macroeconomic stability
Global economic slow down	Monetary and inflation easing
Governance challenges	Regional integration
Limited global financing	Green economy and sustainable investments
Debt refinancing challenges and fiscal pressures	Digital technology
Regional conflicts and the ongoing trade wars	Favourable weather conditions
Commodity price volatility	

Source: Author illustration based on recent developments globally, regionally, and nationally

3.3.1 Risk factors

(a) Climate shocks

The rising frequency of extreme weather events poses severe risks to agricultural production, infrastructure, and energy supply, with far-reaching economic and employment consequences. The financial burden of climate-related disasters is increasing, especially in vulnerable regions including the ASAL regions in the country.

Recurrent droughts, one of the most frequent climate shocks, continue to slow economic growth by reducing agricultural output, increasing food prices, and straining water resources. The long-term economic effects include lower productivity, declining rural incomes, heightened risks to food security and declining job creation.

(b) Global economic slowdown

A global economic slowdown poses significant risks to Kenya's economic outlook by reducing demand for its key exports, such as tea, coffee, and horticulture, which are vital sources of foreign exchange earnings. With the World Bank forecasting a slower global growth rate by 2.3 per cent in 2025, this implies decreased foreign direct investment (FDI) and remittances, both of which are critical for supporting Kenya's balance of payments and economic stability. Additionally, a downturn in major economies may tighten global financial conditions, making it more expensive for Kenya to service its external debt and limit access to international capital markets. This could further strain fiscal resources, thus limiting the government's space to invest in infrastructure and social programmes, dampening economic growth, and exacerbating unemployment and poverty levels.

(c) Governance challenges

Political instability and protests disrupt business operations, leading to temporary closures, infrastructure damage, and loss of productivity. These interruptions create uncertainty in the business environment, making companies hesitant to expand or hire. Protests emanating from governance challenges have had damaging impacts on sectors such as tourism, retail, and transportation, which are sensitive to instability. Continued protests in the future are likely to reduce business confidence, leading to lower investments in job creation, and often resulting in layoffs or fewer job opportunities.

(d) Limited global financing

Limited global financing poses a significant risk to Kenya's economic outlook by constraining the country's

ability to access external funding for critical development projects, infrastructure, and budgetary support. Reduced access to international capital markets or higher borrowing costs could strain public finances, increase debt servicing burdens, and limit investments in key sectors such as energy, healthcare, and education. Additionally, diminished foreign direct investment (FDI) and reduced inflows of development aid could slow economic growth, exacerbate unemployment, and hinder poverty reduction efforts, particularly in a context where Kenya relies on external financing to address fiscal deficits and drive economic transformation. This could further weaken investor confidence and amplify vulnerabilities to external shocks, such as currency depreciation or rising inflation.

(e) Debt refinancing challenges and fiscal pressures

High public debt in Sub-Saharan African countries, including Kenya, limits fiscal space and reduces the government's ability to invest in development projects. Debt servicing costs are rising, diverting resources from critical infrastructure and social spending. As of 2023/24, Kenya's debt service as a ratio of ordinary revenue was 68.3 per cent, which shows the impact of debt service on limiting fiscal space. Kenya's public debt, as of June 2025, was about Ksh 11.5 trillion, occasioned by borrowing to support various public sector projects. However, with successful fiscal consolidation, the debt ratios are expected to improve over time. If not checked, persistent debt challenges could lead to elevated debt vulnerability and could in the long-run undermine efforts towards debt stabilization.

(f) Regional conflicts and ongoing trade wars

Regional conflicts pose a significant risk to Kenya's economic outlook due to their potential to disrupt trade, increase security costs, and create uncertainty for investors. As a hub for regional trade and logistics, Kenya relies heavily on stable relations with neighbouring countries. Conflicts in the region can lead to border closures, reduced cross-border commerce, and higher transportation costs, negatively impacting key sectors such as agriculture, manufacturing, and tourism. Additionally, heightened insecurity may deter foreign direct investment (FDI) and strain government resources as more funds are diverted to defence and humanitarian efforts. The resulting economic instability could exacerbate social challenges such as unemployment and inflation, further dampening Kenya's growth prospects.

(g) Commodity price volatility

Commodity price volatility poses a significant risk to Kenya's economic outlook due to the country's reliance on key commodities such as tea, coffee, and oil. Fluctuations in global prices can lead to unpredictable export revenues, affecting foreign exchange earnings and trade balances. For instance, a decline in tea or coffee prices directly impacts farmers' incomes and agricultural sector growth, while rising oil prices increase import costs, leading to higher inflation and pressure on the current account deficit. This volatility creates uncertainty for businesses, investors, and policy makers, making it challenging to plan and sustain long-term economic growth, particularly in a country where agriculture and energy are critical drivers of the economy.

3.3.2 Opportunities**(a) Stable macroeconomic environment**

A stable macroeconomic environment leads to increased stability in consumer spending, which boosts demand in sectors such as retail, tourism, and entertainment. A stable macroeconomic environment provides businesses with the confidence to expand their workforce, as it signals long-term economic stability and growth prospects. A stable currency reduces the cost of imports and stabilizes inflation, creating a conducive environment for both domestic and foreign investment. This stability increases investor confidence, encouraging businesses to expand and hire more workers. Capital investments in industries such as manufacturing, real estate, and infrastructure drive job creation, as these sectors require a large workforce. Furthermore, foreign direct investment (FDI) brings new employment opportunities, particularly in technology and manufacturing sectors, where new projects often generate a substantial number of jobs. Since February 2024, the shilling has been gaining against the dollar and stabilizing at around Ksh 134.8 in 2024 from Ksh 139.9 in 2023.

(b) Expected easing of monetary policy and inflation

With the Monetary Policy Committee decision to lower the Central Bank rate to 10.75 per cent on 5th February 2025, the easing monetary policy points to reduced interest rates, which increases the availability of credit, therefore stimulating business investment and consumer spending. Businesses are therefore able to invest in expansion

through borrowing, therefore leading to job creation, especially in capital-intensive sectors such as manufacturing, construction, and real estate. Additionally, increased consumer spending drives demand for goods and services, prompting businesses to hire more workers to meet this demand. This creates a positive feedback loop, where increased demand leads to more jobs, higher incomes, and thus boosting employment.

(c) Regional integration

Initiatives such as the African Continental Free Trade Area (AfCFTA) under implementation in the region present significant opportunities for boosting intra-African trade, economic integration, and growth across the region. Enhanced trade within the continent can reduce dependence on global markets, increase resilience, and promote diversified growth for Kenya.

(d) Green economy and sustainable investments

The transition to a green economy and the rise of sustainable investments present a significant opportunity for Kenya's economic outlook. By embracing renewable energy, sustainable agriculture, and eco-friendly infrastructure, Kenya can unlock new avenues for growth, create green jobs, and attract foreign investment. These initiatives not only align with global climate goals but also enhance resilience to environmental challenges, reduce dependency on fossil fuels, and promote long-term economic stability. Additionally, sustainable investments can position Kenya as a leader in the

green economy within Africa, fostering innovation, improving energy access, and driving inclusive development while safeguarding natural resources for future generations.

(e) Digital economy

The rapid expansion of digital technologies in Sub-Saharan Africa offers growth potential, particularly in fintech, e-commerce, and mobile telecommunications. Kenya, a regional hub for digitization, is likely to benefit from digital transformation, which can spur job creation, improve service delivery, and drive economic development.

3.3.3 Medium-term outlook

(a) Optimistic scenario

The optimistic scenario considers the factors that will favourably influence economic growth in the country by exploiting the existing opportunities. Favourable macroeconomic conditions entail inflation levels at the policy position of 5 per cent, exchange rate at pre-pandemic levels that favours a sustainable current account, and debt payments on external debt. It is premised on a stable political environment, favourable rainfall for increased agricultural productivity, growth in exports and declining imports, and improved government expenditure on development in the country. Based on these assumptions, Table 3.5 gives the forecasts under the macroeconomic stability assumptions made.

Table 3.4: Medium-term economic outlook (optimistic scenario)

Volume growth (%)	2022	2023	2024	2025f	2026f	2027f
Rates (per cent)						
GDP growth	4.9	5.7	4.7	5.9	6.3	6.5
Inflation	7.7	7.6	4.5	4.7	5.0	5.1
Interest rate	9.3	15.7	10.3	12.0	11.1	10.9
Volume growth (%)						
Private consumption	5.3	7.7	5.8	6.1	6.2	6.4
Government consumption	8.1	3.5	2.1	1.8	2.0	1.9
Private investments	-1.1	-7.9	2.4	4.1	4.9	4.9
Government investments	-38.0	81.9	26.7	20.8	24.5	24.7
Export goods and services	11.9	-4.5	2.9	3.0	4.0	4.5
Import goods and services	11.7	-3.1	2.6	2.2	2.0	2.0
Per cent of GDP						
Current account balance	-5.1	-4	-3.9	-3.8	-3.6	-3.5
Index						
Ksh per Dollar	117.8	139.9	134.8	130.4	128.5	129.0

Data source: KTMM (2025) Projections

Under the optimistic scenario, economic growth is projected at 5.3 per cent in 2024 and 5.8 per cent in the medium-term. Thus, the optimistic growth projection could be achieved with the implementation of the BETA, supported by the private sector and county governments. The optimistic scenario reflects a resilient economy with growth prospects supported by private and public investments, stable inflation, and improving external balances. Achieving these projections will require continued policy reforms, particularly in enhancing export competitiveness, managing fiscal deficits, and fostering a conducive environment for private sector growth.

Inflation was within the government inflation band of 5 ± 2.5 per cent in 2024, under the optimistic scenario, and gradually ease towards the government target of 4.9 per cent in the medium-term. This decline in inflation is partly attributed to improved weather conditions that will boost agricultural production, and prospects for

stable oil prices, which would mean less expensive imports for Kenya. The IMF (2025) projects declining inflation rates by 4.2 and 3.5 per cent in 2025 and 2026.

Private consumption optimistic projections show a growth of 5.8 per cent in 2024, with a rising trend to 6.4 per cent by 2027. Private consumption is a key driver of growth, accounting for about 80 per cent of real GDP. An increase in private consumption stimulates employment growth by enhancing aggregate demand for goods and services in the economy. Expansionary patterns in government consumption through expansionary fiscal policy crowds in private consumption, influencing private consumption and growth and in turn job creation.

Increased private investment is anticipated in the medium-term, partly attributed to prospects of declining interest rates that are likely to lower the cost of borrowing. Government investments are expected to complement private investments, averaging

24.0 per cent in the medium-term.

Exports are projected to rise from -4.5 per cent in 2023 to 2.9 per cent in 2024 and 3.1 per cent in the medium-term under the optimistic scenario. The growth in exports is on various economic partnership agreements that Kenya enters, such as the AfCFTA and Economic Partnership Agreement (EPA) trade deal with the European Union, and another trade deal signed with Indonesia. Growth in imports is expected at a lower rate compared to exports and to average 2.6 per cent in 2024 and 2.3 per cent in the medium-term following government commitment to reduce the import expenditure on imported food commodities. Consequently, the current account balance is envisaged to improve to 3.9 per cent of GDP in 2024 and further to 3.8 per cent in 2025 from 4.0 per

cent in 2023.

(b) Depressed scenario

The depressed scenario captures the worst case scenario in forecasting GDP growth projections. The assumptions include unstable macroeconomic conditions, implying increased inflationary pressures stemming from climate shocks, heightening interest rates that affect domestic investments, depreciation of the local currency and adversely affecting the current account balance and external debt servicing. Worsening global conditions and negative effects of climate change are potential slowdowns to the growth in the economy. Table 3.5 presents the forecasts from the depressed scenario assumptions.

Table 3.5: Medium-term economic outlook (depressed scenario)

Volume growth (%)	2022	2023	2024f	2025f	2026f	2027f
Rates (%)						
GDP growth	4.9	5.7	4.7	4.2	4.0	4.1
Inflation	7.7	7.6	4.5	5.1	5.6	6.1
Interest rate	9.3	15.7	10.3	14.0	13.3	12.8
Volume growth (%)						
Private consumption	5.3	7.7	5.4	4.0	3.7	4.3
Government consumption	8.1	3.5	2.7	2.5	2.4	2.3
Private investments	-1.1	-7.9	2.0	3.5	3.3	3.0
Government investments	-38.0	81.9	25.2	20.3	20.3	20.0
Export goods and services	11.9	-4.5	2.4	2.5	2.3	2.0
Import goods and services	11.7	-3.1	2.9	3.1	3.1	3.0
Per cent of GDP						
Current account balance	-4.2	-2.6	-1.3	-1.6	-2.0	-2.5
Index						
Ksh per Dollar	117.9	139.9	134.8	135.3	136.3	136.6

Data source: KTMM (2025) Projections

Under the depressed scenario, the economy is expected to grow at 4.2 per cent in 2025, and 4.1 per cent in the medium-term. The anticipated growth is attributed to the actualization of risk factors such as debt refinancing challenges and fiscal pressures emanating from dwindling revenue collections, climate shocks and a slowdown in global economic growth.

Inflation is envisaged to remain within the government inflation band of 5 ± 2.5 per cent in 2025 and average 5.6 per cent in the medium-term. This increasing trend in inflation is attributed to unfavourable weather conditions, deteriorating global economic conditions, and a rise in energy and oil prices that would adversely influence non-core inflation.

Exports are projected to grow marginally from 2.4 per cent in 2024 to 2.6 per cent in 2025-2026 and to 2.0 per cent by 2027. The initial growth will be supported by expanding export markets for key exports and through value addition for exports. Imports growth under this scenario are projected at 3.1 per cent in 2025 and 3.0 per cent in the medium-term. Consequently, the current account balance is envisaged to deteriorate in the medium-term to an average deficit of 2.0 per cent of GDP.

To address the potential risks to economic growth that negatively influence job creation, the country needs to pursue structural reforms, such as enhancing efforts in export diversification, incentivising the business environment, and maintaining macroeconomic stability. Additionally, targeted policies to reduce inflation and interest rates could help revive private investment and consumption, fostering sustainable economic growth.

3.4 Job Creation in Economic Sectors

Table 3.6 provides a detailed breakdown of direct job creation across various economic sectors in Kenya from 2023 to 2027, measured in thousands of jobs. The data highlights the employment trends in key sectors such as agriculture, manufacturing, services, and public administration, offering insights into the drivers of job creation and the structural composition of Kenya's labour market in the medium-term. This analysis is critical for understanding how different sectors contribute to employment growth, and identifying areas for policy intervention to enhance job creation and economic development.

Table 3.6: Direct job creation from employment in sectors (in thousands)

Sector	2023	2024	2025f	2026f	2027f
Agriculture, forestry, and fishing	344.3	346	347.7	353	356.3
Mining and quarrying	15.2	15.2	15.1	15.2	15.4
Manufacturing	362.3	365.9	369.1	380.7	390.2
Electricity, gas, steam, and air conditioning supply	21.3	20.9	20.4	20	19.6
Water supply; sewerage, waste management and remediation activities	16.9	17.3	17.7	18.5	19.2
Construction	236	239.7	243.5	248.2	252.8
Wholesale and retail trade; repair of motor vehicles and motorcycles	272.8	275.5	277	282.4	287.4

Transportation and storage	90	90.2	90.2	93.1	95
Accommodation and food service activities	98.7	105.9	114.8	135.1	157.6
Information and communication	147.6	151.5	156.1	164.9	171.9
Financial and insurance activities	83.2	84.8	86.4	88.2	90.5
Real estate activities	4.3	4.3	4.3	4.5	4.5
Professional, scientific, and technical activities	75.4	77	78.4	81.8	84.4
Administrative and support service activities	6.7	6.9	7.1	7.7	8.2
Public administration and defence; compulsory social security	343.9	354.3	365.2	377.1	387.3
Education	680.2	703.3	727.4	765.9	801.9
Human health and social work activities	169	173.5	177	183.2	189.7
Arts, entertainment, and recreation	8.1	8.3	8.5	8.9	9.2
Other service activities	41.8	43.2	44.5	47.3	49.6
Activities of households as employers; in differentiated goods- and services-producing activities of households for own use	119.3	120	120.7	121.5	122.2
Activities of extraterritorial organizations and bodies	1.5	1.5	1.6	1.6	1.7
TOTAL	3138.5	3200.4	3260.8	3376	3478.5

Note: The sectors in bold represent sectors with the highest job creation potential as shown.

Data source: Author's computation

Total employment is expected to grow from 3,138,500 in 2023 to 3,478,500 in 2027, reflecting the country's expanding labour force and economic diversification. However, the pace of job creation is insufficient to absorb the growing workforce, leading to under-employment and informality.

As of 2023, the education sector was the largest employer, accounting for 21.7 per cent of the total jobs in the economy followed by manufacturing at 11.2 per cent, public administration, and defence (11.0%) and agriculture, forestry, and fishing (11.0%). However, Kenya's sectoral job creation varies

in response to sectoral growth changes, thus exposing the underlying structural issues. The accommodation and food services sector has the highest growth forecasts on job creation, with new direct jobs totalling about 182,000, exhibiting a 59.7 per cent growth in jobs. The administrative and support services sector has the potential to increase job creation by 22.4 per cent by 2027.

Growth in the services sector is forecast at 15 per cent by 2027, with the industry and agriculture sector growth at 3.5 and 4.4 per cent, respectively, a phenomenon attributed to structural shifts. The services sector benefits from urbanization, technological

advancements, and increased consumer spending, which drive demand for services such as ICT, tourism, finance, and education. In contrast, the slower growth in agriculture reflects structural challenges such as low productivity, climate vulnerability, and limited mechanization, which highlights the inefficiencies of traditional agricultural economies. The industrial sector's modest growth is constrained by high production costs, reliance on imports, and inadequate infrastructure, limiting its ability to compete globally. Additionally, Kenya's economic policies and investments have increasingly focused on digital transformation and service-oriented industries, further accelerating growth in the services sector while agriculture and industry lag due to under-investment and structural bottlenecks.

3.5 County GCP and Medium-Term Prospects

The Gross County Product (GCP) is a measure of the economic size of counties, akin to the GDP obtained at the national level, and is prepared by the Kenya National Bureau of Statistics. To date, four GCP estimates for counties for 2019, 2021, 2023, and 2024, spanning the period 2013/14 to 2022/23 have been done. GCP is a key variable that helps county governments assess their economic progress over time and areas of intervention required to grow their local economies. Other than GCP, counties can also focus on employment improvement for their key economic sectors.

Table 3.7 provides annual growth rates by percentage for various counties in Kenya from 2022 to 2024, and potential projections for 2025 to 2027.

Table 3.7: County GCP projections

County	2022	2023	2024	2025f	2026f	2027f
Baringo	-1.2	9.4	4.0	4.1	4.1	4.3
Bomet	6.6	-0.4	5.1	5.4	5.2	4.5
Bungoma	4.3	-0.8	2.9	2.5	2.9	3.1
Busia	7.2	0.5	4.3	4.4	4.5	4.5
Elgeyo Marakwet	-14.0	6.1	4.4	4.1	5.8	5.0
Embu	-0.2	-1.7	1.8	2.5	2.7	1.9
Garissa	-3.4	5.1	4.9	4.9	5.1	4.1
Homa Bay	5.8	1.7	3.8	3.8	4.1	4.4
Isiolo	4.4	9.5	5.8	6.6	6.0	6.3
Kajiado	13.4	9.5	5.9	6.0	6.2	5.7
Kakamega	3.4	-0.5	3.7	3.5	3.6	3.3
Kericho	1.4	4.1	4.1	3.8	4.0	4.1
Kiambu	2.8	5.3	4.0	3.9	3.7	3.6
Kilifi	6.3	6.9	4.5	4.5	4.3	4.6
Kirinyaga	1.6	7.2	3.3	3.4	3.2	3.1
Kisii	5.0	2.3	3.3	3.2	3.1	2.9
Kisumu	5.5	4.7	4.4	4.6	4.5	4.7

County	2022	2023	2024	2025f	2026f	2027f
Kitui	4.4	4.3	4.6	4.2	4.0	5.0
Kwale	6.1	2.2	3.8	4.0	4.6	4.8
Laikipia	6.6	4.6	4.7	5.0	4.2	3.6
Lamu	9.2	12.3	5.8	6.2	5.9	6.4
Machakos	2.9	6.5	3.9	4.0	3.9	4.1
Makueni	3.8	5.2	4.4	4.6	4.2	4.3
Mandera	-4.5	3.0	4.9	5.4	5.1	5.3
Marsabit	1.3	5.5	6.6	7.5	7.1	7.3
Meru	0.4	7.6	3.7	3.5	3.4	3.6
Migori	1.0	-0.6	3.8	3.4	3.8	4.5
Mombasa	6.8	6.1	4.6	4.7	4.8	4.7
Murang'a	1.4	0.9	2.8	2.5	2.6	2.6
Nairobi	7.7	7.4	5.9	6.0	5.9	6.0
Nakuru	5.9	10.6	6.1	5.5	5.4	5.2
Nandi	3.9	6.4	4.1	3.9	4.1	3.9
Narok	1.3	7.5	4.8	5.2	4.9	4.8
Nyamira	4.6	-1.3	3.3	3.7	3.7	3.4
Nyandarua	0.3	6.5	4.4	3.9	3.0	3.4
Nyeri	-0.7	5.6	3.4	3.2	2.9	3.0
Samburu	5.6	8.4	6.0	6.8	5.5	5.1
Siaya	4.3	2.1	4.2	4.0	3.9	4.6
Taita Taveta	4.6	5.7	4.7	4.5	4.6	4.6
Tana River	-2.0	8.8	5.1	6.4	4.6	5.7
Tharaka Nithi	4.2	4.2	4.5	4.7	4.8	4.8
Trans Nzoia	1.3	9.5	4.8	4.8	4.7	5.0
Turkana	11.2	8.5	5.6	6.1	5.4	6.0
Uasin-Gishu	3.2	9.8	5.0	5.1	5.2	5.2
Vihiga	5.1	1.8	3.3	3.7	3.9	3.7
Wajir	4.0	-0.1	5.3	6.4	4.8	4.8
West Pokot	-3.0	8.9	5.2	5.3	4.7	4.3

Source: Author's computations using KNBS, Gross County Product Reports (Various)

Table 3.7 highlights significant regional disparities in economic performance, with urban and resource-rich counties outperforming rural and arid regions. This reflects uneven development where historical inequalities and resource distribution create persistent gaps. However, counties such as Isiolo and Marsabit show potential for convergence, driven by infrastructure projects such as the Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) corridor, which can integrate marginalized regions into the national and regional economy.

High growth counties such as Nairobi, Nakuru, Lamu, and Turkana exhibit high and stable growth rates, driven by their unique economic advantages. Nairobi, as the economic hub, benefits from agglomeration economies, where the concentration of businesses, services, and infrastructure fosters productivity and innovation, consistent with urban economics theory. Nakuru and Lamu show robust growth due to investments in infrastructure, tourism, and port activities where public and private investments stimulate economic activity. Turkana's growth is linked to oil exploration and related investments, highlighting the role of natural resource endowments in driving regional development, though sustainable management is critical to avoid volatility.

Moderate-growth counties such as Kisumu, Mombasa, and Kiambu demonstrate moderate but steady growth. Kisumu benefits from its role as a regional trade and logistics hub, leveraging its strategic location around Lake Victoria, consistent with trade theory. Mombasa, a port city, thrives on international trade and tourism but is constrained by infrastructure bottlenecks and global economic fluctuations. Kiambu's growth is driven

by its proximity to Nairobi, benefiting from spillover effects of urbanization and industrialization.

Counties exhibiting volatile growths include Baringo, Elgeyo Marakwet, and Mandera, which are associated with climate shocks, insecurity, and limited infrastructure, which disrupt economic activities, particularly in agriculture and pastoralism. Low-growth counties such as Nyamira, Nyeri, and Vihiga show slower growth, often below the national average. This can be explained by structural bottlenecks such as limited industrialization, low agricultural productivity, and inadequate infrastructure. Counties such as Garissa, Tana River, and West Pokot show recovery from negative growth in 2022 to positive growth in subsequent years, reflecting resilience and targeted interventions. For instance, Garissa benefits from investments in renewable energy (for example wind power), while Tana River and West Pokot see improvements in agriculture and security. This aligns with resilience theory, where targeted investments and policy interventions can help regions recover from shocks and build sustainable growth.

The trends in County GCP projections underscore the importance of addressing structural bottlenecks, investing in infrastructure, and leveraging regional comparative advantages to promote inclusive growth. While urban and resource-rich counties drive national growth, targeted policies are needed to support lagging regions, reduce disparities, and build resilience against shocks. By fostering regional integration, enhancing productivity, and promoting diversification, Kenya can achieve more balanced and sustainable economic development across its counties.

3.6 Key Messages and Policy Recommendations

3.6.1 Key messages

1. Globally, growth is projected to average 2.8 per cent in 2025 from 3.3 per cent in 2024, while for Sub-Saharan Africa, it is projected to grow at 3.8 per cent and 4.2 per cent, respectively, in 2025 and 2026. Estimates by the IMF project Kenya's growth at 4.8 per cent in 2025 and 4.9 per cent in 2026. Growth in 2024 averaged 4.7 per cent, supported by robust growth in the services sector, premised on favourable food and accommodation services.
2. At baseline, the economy is projected to grow at 5.1 per cent in 2025, and average 5.3 per cent in the medium-term, while inflation remains within the policy target range. Under the optimistic scenario, growth is likely to accelerate to 5.9 per cent in 2025, which assumes that the various opportunities identified come to fruition, while depressed to 4.2 per cent in 2025 should the downside risks materialize, including poor weather prospects and debt vulnerabilities. The robust growth will be supported by favourable weather, growing partnerships, and ongoing initiatives to implement the BETA and MTP IV (2023-2027) programmes.
3. Direct job creation is expected to grow across sectors, with agriculture, manufacturing, and services (for example accommodation, ICT, and education) leading. However, challenges such as high interest rates, climate shocks, and global economic slowdown could hinder employment growth.
4. The services sector, particularly accommodation, ICT, and education, is

the largest contributor to employment, but structural bottlenecks in agriculture and industry limit job creation.

5. Counties are critical in supporting accelerated growth. However, counties have experienced negative growth in their gross county products for the past years since their establishment. Counties have different areas of comparative advantages depending on whether they are in arid, semi-arid, or non-arid areas.
6. Urban and resource-rich counties such as Nairobi and Nakuru outperform rural and arid regions, highlighting the need for targeted interventions to reduce inequalities.

3.6.2 Policy recommendations

1. National and county governments to fast-track implementation of programmes and initiatives that raise employment growth across their economic sectors. Growing employment through skills development, capital productivity by augmenting with technology, and enhancing employment elasticity will be key for placing the country on a higher growth path.
2. Prudent monetary and fiscal policy interventions are critical to support job creation and aggregate demand, especially through investment, consumption, and net export channels. This means leveraging upside risks such as favourable weather and strategic partnerships, while mitigating potential risks such as poor rainfall patterns and debt vulnerabilities. Policy makers need to be more vigilant of the risks and mitigate them.
3. Promote sustainable investments in renewable energy, eco-friendly infrastructure, and green technologies

- to create jobs and align with global climate goals.
4. Create a conducive business environment by improving infrastructure, reducing regulatory bottlenecks, and leveraging Public-Private Partnerships (PPPs) to attract domestic and foreign investments.
 5. Implement strategies to enhance employment within the various sectors through investment in technology, skills development, and digital infrastructure development to facilitate collaboration, and access to information. There is a need for efforts towards fostering more synergies and interdependence between sectors.
 6. County governments have the potential to strengthen growth rates and support job creation by leveraging various government initiatives, such as involvement in value chains and accelerating technological progress, promoting agro-processing, and investing in productive resources in their areas of comparative advantage.

4. Enhancing Decent Jobs in Agriculture through Digital Extension Services

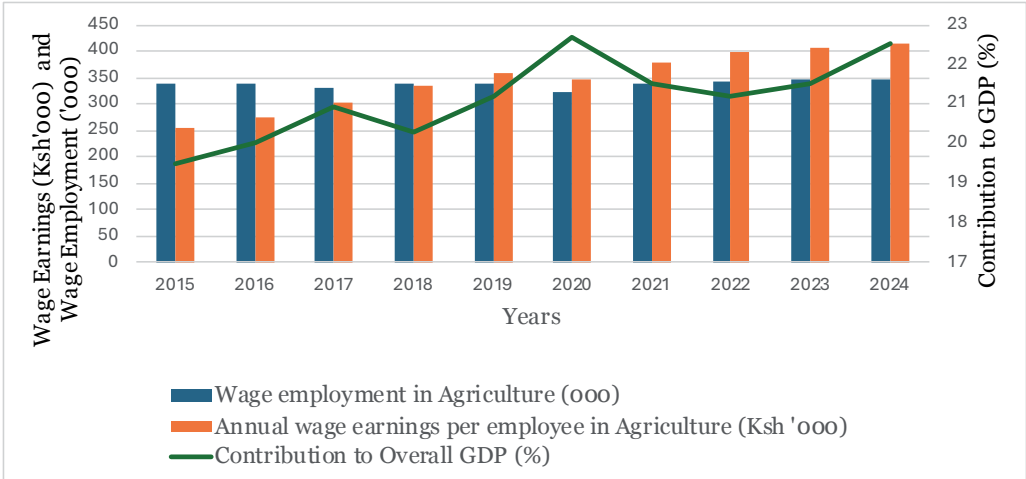
Agriculture plays a crucial role in job creation, both directly and indirectly, yet the sector faces productivity challenges due to limited access to agricultural information. The dwindling number of traditional extension officers, one for every 1,500 farmers against the recommended one officer per 400 farmers as per the Food and Agriculture Organization benchmark, hinders agriculture sector growth. Leveraging digital extension services is an alternative pathway not only to enhance agricultural productivity but also decent job creation particularly for the youth as digital extension agents, app developers, and data analysts. The analysis simulated the effects of investment in digital extension services as a catalyst for agricultural transformation and employment growth. The adoption of digital extension services is projected to create an additional 143,804 jobs in the food crop sub-sector, representing an 8.7 per cent growth and another 5,891 from the livestock sector, representing a 3.1 per cent growth rate in new jobs. However, limited budgetary allocation, with 63.1 per cent of the counties reporting not having budgeted for extension services, is a key constraint. The digital divide between rural and urban areas, along with limited digital literacy among farmers and uncoordinated quality assurance, further poses barriers to digital extension adoption and utilization. To address these gaps, it is important to invest in digital infrastructure, extension agents and farmer digital literacy user-friendly platforms, and

foster collaborations with private sector innovators and development partners. To ensure the quality and reliability of digital extension content, regulatory frameworks and certification systems that are supported by continuous monitoring and evaluation need to be established. Additionally, integrating digital literacy into agricultural education, offering affordable financing through dedicated county budget lines, and enhancing accountability measures are critical to sustaining digital extension services and enhancing agricultural productivity and job creation.

4.1 Introduction

Agriculture is a key sector in the country's economy, contributing 22.5 per cent to GDP in 2024, an increase from 21.5 per cent in 2023 (KNBS, 2025). The sector provides employment to over 40 per cent of the labour force nationally and more than 70 per cent of the labour force in rural areas (Central Bank of Kenya - CBK, 2023). The formal wage employment in this sector increased from 344,300 in 2023 to 351,100 in 2024, accounting for 14.1 per cent of all private sector employment (Figure 4.1). This shows that although the sector is vital in job creation in Kenya, majority of the jobs created are informal. The spike in the sector's contribution to GDP in 2020 shows that agriculture was more resilient to the impacts of COVID-19 relative to other sectors that were exposed through measures to restrict the spread of the pandemic. Overall, the years that experienced prolonged droughts such as 2017-2018 and 2022 recorded a decline in agriculture's contribution to GDP.

Figure 4.1: Contribution of agriculture to GDP, annual wage earnings and employment, 2015-2023



Data source: KNBS (Various), Economic Survey

Despite the immense contribution, Kenya’s agricultural sector has limited technologies and decision-support tools that are needed for sustaining and improving yields. This makes farmers grapple with increasing challenges of low productivity and employment creation along the agricultural value chains. The limited access to agricultural information through traditional extension services, particularly on aspects such as climate-smart agriculture, pest and disease management, and access to markets limits the farmers’ ability to make informed decisions, adopt improved technologies, and enhance productivity. One possible solution to address these challenges is the adoption of digital extension services. While the concept of digital extension is relatively new and still evolving, foundational technologies such as mobile and Internet connectivity are already available to support innovative digital solutions in the agricultural sector. Digital extension and

advisory services serve a crucial catalytic role that aids farmers to harness their optimum potential, which will culminate into increased productivity, creation of jobs and improved livelihoods as envisaged in the Kenya Agricultural Sector Extension Policy – KASEP 2023 (Government of Kenya, 2023).

The analysis in this chapter focuses on the role of digital extension services in enhancing decent jobs in the agriculture sector. It highlights the instances where decent jobs can be created in digital extension along the agricultural value chain. By examining the potential of digital extension services, the chapter underscores the potential of digital extension to transform the agricultural job market, fostering better working conditions for the farmers and increased efficiency to boost decent job creation. This chapter also covers the gaps and potential solutions for successful extension services, and policy recommendations.

4.2 Extension Services in Kenya

Extension services in Kenya serve as a dynamic process designed to educate, empower, and transform the livelihoods of farmers. These services are integral in bridging the gap between agricultural research and practice, thereby enhancing productivity and sustainability in farming (Anil et al., 2024). Extension is fundamentally an educational process that provides farmers with knowledge, skills, technical advice, and organizational support to address their challenges and improve their economic conditions. A well-functioning agricultural extension service operated by the public and private sectors is one of the critical inputs required for increased agricultural productivity to transform subsistence farming into vibrant, commercial and modern farming, attain food security, improve incomes, create wealth and employment opportunities. The concept is multidimensional, embracing educational strategies that equip farmers with actionable insights into crop management, pest control, value addition, input supply, production logistics, financial services, soil fertility, and market access, among other critical areas. In addition, extension fosters a participatory approach where farmers' local knowledge is valued, and a two-way exchange of ideas between farmers and extension agents is prioritized. This reciprocal interaction not only enriches the relevance of agricultural research but also ensures that farmers adopt innovations tailored to their specific contexts.

The MTP IV in its priority areas in agriculture identifies extension services as one of the areas to tap from to spur productivity and job creation in the agricultural sector. Agricultural extension services encompass a range of institutions and services that support actors in the agricultural value chain by providing

them with the information, skills, and technologies needed to enhance productivity, ensure food and nutrition security, and improve overall well-being. These services are a crucial component of agricultural research and development.

However, there is one extension officer for every 1,500 farmers, far below the Food and Agriculture Organization (FAO) recommended ratio of one officer per 400 farmers (Government of Kenya, 2023). The limited coverage and poor extension services has been adversely impacted by diminished funding and a shortage of extension personnel. These services have historically required substantial investments in manpower, time, and financial resources. The public extension system has often been characterized as top-down, paternalistic, uniform, and inflexible, leading to bureaucratic inefficiencies that hinder its ability to adapt to the evolving demands of contemporary agriculture (Government of Kenya, 2023).

In response to these gaps, the government, in collaboration with various stakeholders, has increasingly adopted participatory and demand-driven extension platforms. This shift is informed by lessons learned from previous approaches, emphasizing the necessity for systems that are more responsive to the diverse needs of farmers and the dynamic nature of agricultural practices. Such reforms aim to enhance the relevance and effectiveness of extension services by fostering greater involvement in technology and tailoring solutions to meet specific agricultural needs.

Farmers receive a range of services from extension officers, which encompasses critical aspects of agricultural production, financial management, and marketing (Figure 4.2). Extension officers provide guidance on climate change risks adaptations, pest and disease management for both crops and livestock, ensuring

that farmers are equipped to respond to environmental challenges. In addition, extension officers help farmers access vital financial services, including credit, loans, savings, warehouse receipts, and insurance, which are essential for maintaining and expanding agricultural activities. These officers also assist with acquisition of input and machinery, helping farmers adopt technologies that improve productivity, and they offer advice on value addition and market access, enabling farmers to enhance distribution efficiency and profitability across the agricultural value chain.

While some extension services can be digitized, such as disseminating agricultural

information through mobile apps, Short Message Service (SMS), websites, and mass media such as television and radio, certain traditional services may still require face-to-face interaction. For example, hands-on training on new machinery, localized pest and disease diagnostics, artificial insemination and personalized financial consultations might be difficult to fully replicate through digital platforms. Therefore, a hybrid approach is necessary, where digital extension interfaces with traditional methods. Farmers can access general advice, weather forecasts, and market prices digitally, while extension officers continue to offer in-person support for complex, location-specific issues.

Figure 4.2: Digital extension services and products typology



Source: Adopted and modified from World Bank's Digital Agriculture Priority Areas (2021)

4.3 Classification and Scope of Digital Extension Platforms in Kenya

The classification of digital extension applications reflects a diverse landscape aimed at enhancing agricultural productivity and market access through innovative technologies (Figure 4.2). Each application serves distinct functions within the agricultural sector, addressing various challenges faced by farmers and stakeholders. The digital extension applications can be categorized based on their primary functions, such as agricultural extension services or production, market information dissemination, financial management, and agricultural infrastructure support.

- (i) **Production:** Applications such as DigiCow and DIGIFARM provide critical data and educational resources to farmers. These applications focus on comprehensive data management, offering insights on production, financial reports, and health records, which are essential for informed decision-making in dairy farming and crop management. They aim to reduce agricultural losses by educating farmers on best practices, thus enhancing farm management. These platforms exemplify how digital tools can transform traditional agricultural extension services by making them more accessible and tailored to the needs of farmers. Further, these digital extension tools support production by offering information on climate change, weather patterns, and pest and disease management for both crops and livestock. For instance, weather-related applications such as KALRO KAOP and CLIMARK-Manga offer farmers real-time, location-specific weather advisories. These services are vital for planning agricultural activities, as they
- help farmers mitigate risks associated with climate variability. The integration of weather data into farming practices enhances resilience and productivity, particularly in regions prone to extreme weather conditions due to climate change and other causes.
- (ii) **Marketing:** Platforms such as the Kenya Agricultural Commodity Exchange (KACE) and M-Kilimo play pivotal roles in market information dissemination. KACE facilitates price discovery and connects buyers and sellers, thereby enhancing market transparency. M-Kilimo provides real-time market information to farmers, livestock keepers, and fishers, enabling them to make informed decisions regarding sales and purchases. Furthermore, platforms such as DIGIFARM and TruTrade focus on market linkage, connecting farmers directly with retailers and ensuring fair pricing for their produce. This direct connection not only improves farmers' income but also enhances the efficiency of the agricultural supply chain.
- (iii) **Financial:** To enhance the provision of credit, loans, savings, warehouse receipts, insurance, and other vital financial services to farmers, digital extension platforms provide personalized financial solutions. With digital extension platforms, farmers can manage their finances better so that the farming business becomes sustainable. For instance, digital extension platforms such as Budget Mkononi are designed to assist farmers in managing their finances effectively. By providing tools for budgeting and financial planning, it empowers farmers to set up and sustain their farming enterprises. This financial literacy is crucial for smallholder farmers who often face challenges in accessing credit and managing their resources efficiently.

(iv) **Input and machinery:** To connect input and machine suppliers to farmers, digital extension platforms such as E-Tinga and DIGIFARM play a significant role. Such platforms provide availability, price, and maintenance information of farm inputs and machinery, thereby enabling the efficient use of resources and enhanced productivity. Other digital extension platforms exemplify the intersection of agricultural infrastructure and renewable energy solutions. By providing off-grid solar technology for irrigation and other agricultural needs, it addresses both energy and water scarcity challenges faced by farmers. This holistic approach to resource management is essential for sustainable agricultural practices in the country.

4.4 Digital Extension Services and Job Creation

Digital extension services have emerged as a transformative force in the agricultural landscape of Kenya, particularly highlighted in the MTP IV and BETA. These services, leveraging information and communication technology (ICT), aim to enhance agricultural productivity and empower farmers across the country (Government of Kenya, 2023). Historically, agricultural extension services in Kenya have relied on face-to-face interactions between extension agents and farmers. However, this traditional model has faced significant challenges due to limited resources, and the vast geographical spread of rural farming communities. The Kenya Economic Report 2024 underscores the necessity for innovative solutions to improve agricultural productivity, emphasizing that digital extension services can bridge the gap left by conventional methods. By bridging the gap between

research and practice, digital extension can promote the adoption of new farming techniques and technologies, making agriculture more efficient and attractive.

Digital extension services have the potential to transform agriculture into a more attractive and dynamic sector for the youth by creating new opportunities for engagement, innovation, and employment. These platforms enhance the dissemination of agricultural knowledge, improve productivity, and connect farmers with markets, making agriculture more accessible and appealing to tech-savvy youth. The rise of digital platforms necessitates a workforce skilled in web design, application development, content creation, and customer support (Singh et al., 2023), enabling the youths to apply their digital skills in agriculture or agripreneurs. Skilled web designers and developers are crucial in creating user-friendly platforms and mobile applications that offer real-time data on crop management, weather patterns, and market prices, empowering farmers to make timely, informed decisions (Misaki, 2021). Additionally, content creators produce educational materials to promote innovative farming practices and emerging technologies, while digital extension services create consultancy roles to help farmers adopt these tools effectively. As agriculture becomes increasingly digitized, these roles not only provide direct employment but also position the youth as drivers of agricultural transformation, bridging the gap between traditional farming practices and modern technological solutions.

Web designers play a critical role in developing intuitive platforms that facilitate farmer engagement and improve access to vital information. Application developers are tasked with creating mobile solutions that provide real-time data on crop management and market access, thereby empowering farmers to make

informed decisions. Furthermore, the demand for content creators has surged as educational materials have become essential for informing farmers about innovative practices and technologies in agriculture. Consultations and specialist roles are equally important; they guide farmers in effectively implementing digital tools that can enhance their productivity and profitability.

Indirectly, digital extension can create jobs for farmers. As they gain access to tailored information on crop management, market trends, and best practices through digital platforms, farmers are better positioned to increase their yields and improve the quality of their produce (Fabregas et al., 2019). This heightened productivity not only leads to increased incomes for them but also stimulates demand for a range of services that support agricultural activities. For instance, as farmers produce more, there is a corresponding growth in the need for agro-input suppliers who provide seeds, fertilizers, and other essential materials. Additionally, enhanced productivity necessitates improved logistics and transportation services to efficiently move goods from farms to markets. Consequently, sectors such as processing and marketing also see growth, as more products require handling and distribution, thereby creating job opportunities.

As the agricultural sector embraces digital extension, customer care positions will become vital in assisting farmers with technical inquiries related to digital services. These individuals are critical in linking the farmers to field extension officers for services that require physical intervention, such as artificial insemination, machine installation, field demonstration, among other tasks (Singh and Kolar, 2024). Additionally, potential employment opportunities will be created in value addition processes such as agro-processing, packaging, and marketing, and in other sectors that use agricultural produce as raw materials (Fabregas et al., 2022). Extension services also contribute to strengthening rural economies by linking farmers to markets, creating non-farm rural employment, and fostering agribusiness development. As they address the challenges related to climate change, environmental sustainability, and health, digital extension services have become vital drivers of inclusive growth and long-term agricultural transformation. Thus, the integration of digital extension services into agriculture serves as a catalyst for job creation across multiple sectors—ranging from direct and indirect agricultural roles to technology-driven positions—thereby contributing significantly to job creation in the economy.

Table 4.1: Potential jobs to be created in the digital extension value chain

Job type	Location of job creation	How jobs are achieved	Stage in value chain
Web design	Digital agencies -Web designers -Web hosting	Development of user-friendly platforms for farmer engagement	Input and production
Application development	Tech companies -App developers -Software innovators -Trouble shooting	Creation of mobile apps for crop management and market access	Input and production

Job type	Location of job creation	How jobs are achieved	Stage in value chain
Content creation	Media and education -Producer -Director -Videography -Support roles -Editing	Production of educational materials and resources for farmers	Processing and marketing
Consultancy	Agricultural consultancies by traditional extension officers	Providing expert advice and implementation of tangible extension service	Input and production (link the digital extension and the farmer during service provision)
Customer care	Digital service providers	Offering support for technical issues and inquiries	Processing and marketing

Source: Author conceptualization from literature

4.5 Gaps in the Digital Extension Services and Products

Digital extension services offer significant potential to address gaps in various agricultural value chains, enhancing efficiency and creating jobs (Table 4.2). Agricultural advice or extension services currently cover 83.3 per cent of farmers, leaving a 16.7 per cent gap that could be filled through digital platforms. By leveraging

mobile technology and AI-driven advisory systems, more farmers in remote areas can access critical information, presenting job opportunities for ICT-skilled workers. Similarly, marketing services reach only 25 per cent of farmers, indicating a 75 per cent gap. Digital marketing platforms can bridge this divide by connecting farmers directly to markets, eliminating intermediaries and fostering new employment opportunities in platform management and digital product promotion.

Table 4.2: Analysis of digital extension gaps in Kenya

Name of the Digital Extension Application	Production	Marketing	Credit Service	Information Dissemination/ Health Record	Farm Machinery Rental	Financial Management	Consumer Linkage
Function of digital extension application	<ul style="list-style-type: none"> • Monitor crop and livestock production using digital dashboards and sensors • Guide input use (e.g., fertilizer, seeds, pesticides) based on soil and crop data • Enable precision agriculture through drones, GPS, and satellite imagery • Track planting, irrigation, and harvesting schedules through mobile apps • Provide real-time alerts and recommendations on weather, pests, and diseases • Record and analyze farm activities and yields to improve decision-making 	<ul style="list-style-type: none"> • Promote farm products through online platforms (e.g., social media, e-commerce) • Enable farmers to reach wider markets beyond local boundaries • Facilitate online pricing and advertising • Support product branding and customer engagement 	<ul style="list-style-type: none"> • Facilitate mobile-based loan applications and disbursements • Enable tracking and repayment of loans through mobile money • Connect farmers to microfinance institutions or digital lenders 	<ul style="list-style-type: none"> • Share timely agricultural or health-related updates through SMS, apps, or web platforms • Educate users on best practices, weather alerts, pest outbreaks, and crop management • Digitally store patient or livestock health records for easy retrieval and monitoring • Support remote consultations and follow-up via telemedicine or mobile apps 	<ul style="list-style-type: none"> • Allow farmers to book/rent tractors and other equipment through mobile apps or websites • Track usage and maintenance schedules of machinery • Provide location-based services for nearest available machinery • Promote efficient sharing of costly equipment among smallholder farmers 	<ul style="list-style-type: none"> • Help record farm income, expenses, and profits digitally • Generate reports for planning and decision-making • Offer budgeting and forecasting tools • Integrate with digital payment systems for transaction tracking 	<ul style="list-style-type: none"> • Connect producers directly with consumers via e-commerce or digital marketplaces • Facilitate online ordering, payments, and delivery logistics • Improve transparency in value chains (traceability, fair pricing) • Encourage feedback and ratings to build trust and loyalty

Name of the Digital Extension Application	Production	Marketing	Credit Service	Information Dissemination/Health Record	Farm Machinery Rental	Financial Management	Consumer Linkage
DigiCow	✓	✓	✓	✓		✓	
DIGIFARM	✓	✓		✓		✓	
iCow	✓	✓		✓			✓
Smart Cow	✓			✓			
I Shamba	✓			✓			
Viazi Soko	✓	✓			✓		✓
Budget Mkononi	✓					✓	
KALRO KAOP	✓			✓			
SunCulture	✓				✓		
Kenya Agricultural Commodity Exchange (KACE)	✓			✓	✓		✓
Kitchen Soko	✓			✓			✓
E-Tinga					✓		
Coverage (%)	83.3	25	8.3	58.3	33.3	16.7	33.3

Sources: Various Digital Company websites

Other areas such as credit services (8.3% coverage), farm input and machinery rental (33.3%), and consumer linkages (33.3%) also show substantial gaps. Expanding digital solutions for microloans and machinery rental could improve access to financial resources and farming tools, boosting productivity and creating jobs in fintech, logistics, and customer service. Information dissemination, health records management (58.3% coverage), and financial management services (16.7% coverage) also offer growth opportunities. Expanding these services through digital platforms could help farmers make informed decisions, manage their finances, and maintain records efficiently, contributing to job creation in data management, app development, and financial advising. In summary, filling these gaps across value chains through digital extension holds significant potential to transform agriculture while creating new jobs.

4.6 Estimating Jobs Creation in Agriculture with Application of Digital Extension Services

4.6.1 Impact on agricultural productivity and job creation

The implementation of digital extension services, as envisioned under the Medium-Term Plan IV (MTP IV), presents a transformative opportunity for job creation across various sectors of the economy. By channeling funding into agricultural research to support the development of crop and livestock technologies, innovations, and management practices (TIMPs), a key component of digital extension, significant growth in employment can be realized.

These digital solutions directly enhance productivity, efficiency, and access to markets, generating substantial spillover effects across the food crops, livestock, manufacturing, and services sectors.

A Computable General Equilibrium (CGE) analysis was conducted to evaluate the economy-wide impacts of public and donor investments in Technologies, Innovations, and Management Practices (TIMPs), a core component of digital extension services in Kenya. The analysis covered the period 2017 to 2024 and was based on the Kenya 2021 Social Accounting Matrix (SAM), jointly developed by the Kenya Institute for Public Policy Research and Analysis (KIPPRA), the Kenya National Bureau of Statistics (KNBS) and the International Food Policy Research Institute (IFPRI). A dynamic CGE model, adapted from the standard IFPRI framework, was calibrated to reflect the structure of Kenya's economy. The model incorporated detailed representations of production activities, factor markets, and household groups, allowing for an analysis of how TIMP investments influence productivity, income distribution, and macroeconomic outcomes. The model incorporated assumptions of productivity improvements resulting from the adoption of TIMPs, drawing on empirical evidence from past studies to estimate annual Total Factor Productivity (TFP) gains ranging between 1.5 per cent and 4.0 per cent. The investment shocks were phased into the model dynamically, reflecting the time lag typically observed in the adoption and impact of agricultural innovations. The simulation results provided insights into how investing 6.0 per cent of annual agricultural budget to TIMP could enhance sectoral GDP growth, particularly in agriculture and agro-processing, while generating employment opportunities and reducing poverty, especially in rural areas.

The CGE analysis (Table 4.3) revealed that in the food crops sector, which forms the

backbone of Kenya's agricultural economy, implementation of digital extension services is expected to create an additional 143,804 jobs, thus contributing to total projected jobs in the agriculture sector. This represents an 8.7 per cent growth in new employment opportunities from a base of 1,647,056 jobs. The adoption of TIMPs in this sector facilitates precision farming, better crop management, and access to timely market information, empowering farmers to optimize their outputs. Moreover, the spillover effects extend to increased demand for agricultural inputs, transportation, and value addition processes, thereby stimulating job creation in related industries.

The livestock sector, a vital component of rural livelihoods and food security, will see a growth rate of 3.1 per cent, resulting in the creation of 5,891 new jobs from a base of 187,847 jobs. This growth underscores the role of digital extension in enhancing livestock management practices, such as disease control, breeding programmes, and feeding strategies. These advancements

improve productivity and reduce losses, fostering a ripple effect on the supply chain, including veterinary services, feed production, and meat processing industries. The integration of digital platforms also enhances market access for livestock farmers, contributing to increased economic activity and employment in ancillary sectors.

In the other manufacturing sectors, which encompass the production of agro-based goods, an additional 8,989 jobs will be generated, reflecting a 1.0 per cent growth from a baseline of 899,787 jobs. The adoption of digital extension services drives demand for agro-processing technologies and products, catalyzing growth in manufacturing. For instance, the increased production of raw agricultural materials due to enhanced farming practices stimulates the manufacturing of food products, bio-based materials, and agricultural tools. The indirect benefits also extend to logistics, packaging, and distribution networks, further amplifying job creation across the value chain.

Table 4.3: CGE analysis on potential number of jobs driven by adoption of digital extension services envisioned in MTP IV

Sub-sector	Base number of jobs	Growth in new jobs (%)	Potential number of jobs
Direct effects in the food crops sub-sector			
Food crops	1,647,056	8.731	143,804
Indirect effects due to sectoral linkages and spillovers			
Livestock	187,847	3.136	5,891
Dairy	131,957	2.981	3,934
Fertilizers	11,580	2.3	266
Forestry	124,014	1.234	1,530
Transportation and storage	2,093,587	1.232	25,793
Other services	1,641,235	1.139	18,694
Finance and insurance	276,931	1.021	2,827

Sub-sector	Base number of jobs	Growth in new jobs (%)	Potential number of jobs
Other manufacturing	899,787	0.999	8,989
Information and communication	295,989	0.976	2,889
Other chemicals	95,124	0.893	849

Sub-sector	Base number of jobs	Growth in new jobs (%)	Potential number of jobs
Machinery and other equipment	134,278	0.722	969
Other food processing	6,355	0.204	13

Source: Author's analysis using CGE

The services sector, a critical driver of economic diversification, will experience the creation of 18,694 new jobs, marking a 1.14 per cent growth from an existing 1,641,235 jobs. Digital extension services enhance knowledge dissemination, financial inclusion, and access to markets, enabling farmers and agribusinesses to thrive. The resultant economic activities stimulate demand for professional services such as consulting, ICT support, financial services, and education, which further drive employment. Additionally, rural areas benefit from improved access to extension services, fostering community development and entrepreneurship.

Overall, the implementation of digital extension services will lead to the creation of 177,447 new jobs across these sectors. Beyond direct job creation, the spillover effects contribute to economic growth, poverty alleviation, and the realization of food security goals. The integration of digital technologies in agriculture exemplifies how innovation can address pressing developmental challenges while unlocking employment opportunities, particularly for youth and women in rural and urban settings. By fostering a resilient

and inclusive agricultural economy, the envisioned MTP IV plan demonstrates the potential of digital transformation to shape Kenya's socio-economic future.

4.7 Enablers of Digital Extension

The government has recognized the critical role of agricultural productivity and food security in its economic development and has established various policy frameworks and programmes to enhance these sectors. Central to these frameworks is the Bottom-up Economic Transformation Agenda (BETA), which emphasizes the integration of digital tools to support farmers. This aligns with the Fourth Medium Term Plan (MTP IV) for 2023-2027, which advocates increased investment in technology and infrastructure to facilitate access to digital services for farmers. The integration of digital extension services is crucial for improving agricultural productivity, as it allows for the dissemination of timely information and resources to farmers, thereby enhancing their decision-making

capabilities and productivity levels. The successful implementation of digital extension services in Kenya's agricultural sector is underpinned by several enablers, including capacity building, financial allocation, infrastructure development, incubation of innovative technologies and digital extension content, and quality assurance.

4.7.1 Capacity building

The deployment of appropriate ICT applications for digital extension services improvement in Kenya requires a multi-faceted process that considers capacity building, digital infrastructure, and policy support. Capacity building in enhancing the capability and skill of stakeholders, in addition to advocacy, is critical in closing the digital divide, particularly for rural areas. The lack of human resources with digital extension skills limits the ability of public agencies and extension agents to improve the delivery of such services, resulting in a shortfall that undermines agriculture's productivity and resilience. Kenya's Agricultural Policy, 2021, highlights the importance of leveraging technology to enhance agricultural productivity but does not elaborate on the upskilling of extension agents for digital technologies. Similarly, the Fourth Medium Term Plan (MTP IV) 2023-2027 emphasizes modernization and digitalization of agriculture but offers little clarity in terms of strategies for empowering extension workers with digital competence. Without specialized training, extension agents are not sufficiently prepared to ensure smallholder farmers' utilization of upcoming digital instruments such as USSD-responsive market platforms and Internet of Things (IoT)-based solutions.

The Kenya Agricultural Sector Extension Policy (KASEP), 2023, aims at reviving agricultural extension services through the promotion of digital innovations. However,

the process is hindered by low digital literacy among extension agents and inadequate rural infrastructure. Integration of ICT into extension services has been irregular, with most training targeting conventional methods instead of using digital means. The result is continued reliance on the traditional extension models, which limits the farmers' exposure to information that is timely and relevant. The 2019 Agricultural Sector Transformation and Growth Strategy (ASTGS) recognizes the possibility of using technology to transform agriculture, but does not have any stated intention of upskilling the 6.4 million smallholder farmers capable of using digital technology. The extension agents, being direct channels of contact between the farmers and policy makers, need transformative training courses to become familiar with digital platforms and how to use them to meet the needs of the clients. If nothing is done in this area, the usage of ICT for agriculture is limited, stalling sector growth.

Kenya's Digital Literacy Programme (2016) offered generic digital competence frameworks but did not make provisions for extension workers in agriculture. This is a gap that deprives extension agents of the digital competencies to facilitate technology uptake by farmers. The Digital Economy Blueprint also aims at achieving "universal digital literacy" but does not factor in the integration of such competencies into agricultural value chains. As a result, farmers miss out on the potential benefits of digital extension services, such as real-time weather forecasts, pest management alerts, and market price updates.

The Kenya National Digital Master Plan 2022-2032, which focuses on four pillars (digital infrastructure, digital government services, digital skills, and digital innovation) aims to enhance Internet access and bridge the digital divide (ICT Authority, 2022). The plan also seeks to digitize government services by automating operations, digitizing over 5 billion records,

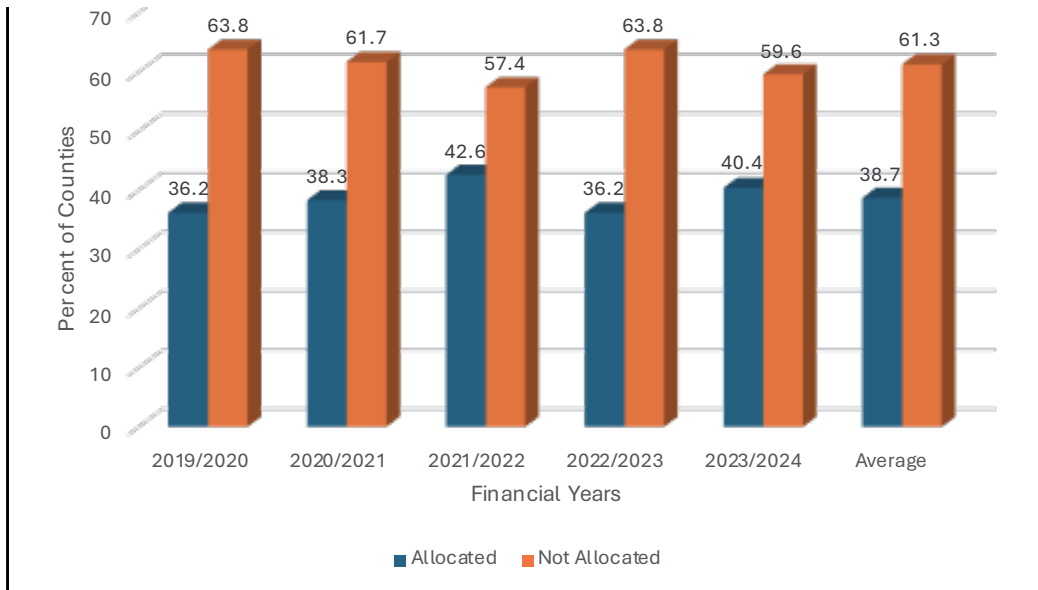
establishing a national digital identity, and creating an integrated online portal for efficient service delivery. Further, it prioritizes the building of digital skills by training 20 million citizens and equipping the workforce for a digital economy. These ideas and plans are key in driving digital extension and influencing a paradigm shift in access to extension services. However, budget gaps have been a threat to the implementation of the masterplan.

4.7.2 Financial allocation

The underfunding of extension services at the county level poses a significant challenge to both traditional and digital

agricultural advisory systems, despite policy frameworks such as the Agricultural Marketing Strategy (AMS), 2023-2032, and the Kenya Agricultural Sector Extension Policy (KASEP), 2023, advocating for digitization to enhance productivity and job creation in agriculture. While these policies emphasize leveraging mobile technologies, e-commerce platforms, and data-driven solutions, financing gaps persist due to inadequate budget allocations, with more than half (61.3%) of the counties failing to allocate funds for extension services between 2019 and 2024 financial period (Office of the Controller of Budget - OCOB, 2024) (Figure 4.3).

Figure 4.3: Allocation of budget to agriculture extension by counties between 2019 and 2024

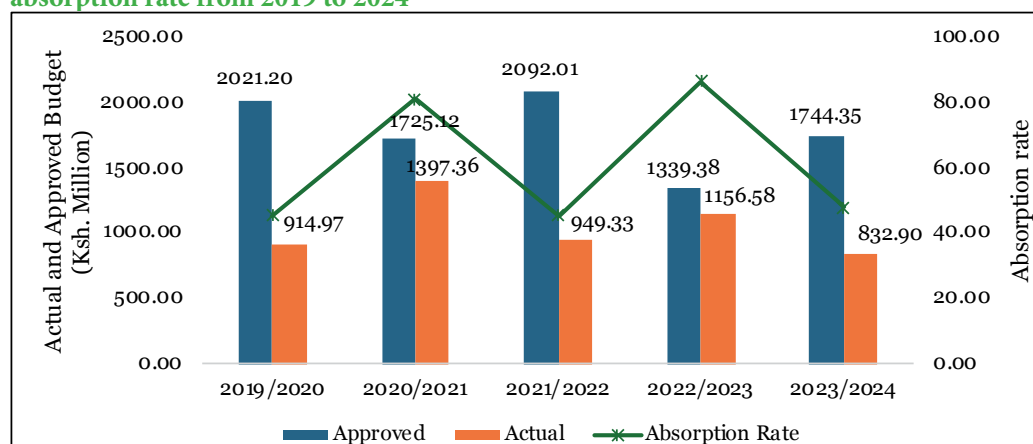


Data source: OCOB (Various), County Governments Annual Budget Implementation Review Report

Further, the application and utilization of the budget for Kenyan counties' agricultural extension services between 2019 and 2024 reflect significant imbalances, where actual expenditure has been lower than approved budgets (Figure 4.4). For instance, in 2019/20, just 45.3 per cent of the budgeted Ksh 2.02 billion was used, while in 2021/22, utilization decreased to 45.4 per cent despite approved funds being increased to Ksh 2.09 billion. Although 2020/21 and 2022/23 posted improved absorptions of 80.9 per cent and 86.4 per cent, respectively, the general tendency reflects inefficiencies in fund disbursement and programme execution. Under-utilization is likely to be challenging for

Kenya's digitalization of extension services, which is one of the critical pillars in the MTP IV and BETA, aimed at enhancing productivity in agriculture and ensuring youth employment. Unpredictable funding and low absorption rates can slow the utilization of digital tools and limit the recruitment and training of extension officers, ultimately slowing the nation's push to revolutionize agriculture and improve job creation in the sector. Bridging these gaps requires enhanced accountability, planning, and capacity at the county level to ensure that funds are used efficiently to fund digital innovations and sustainable agriculture (OCOB, 2024).

Figure 4.4: Approved and actual county budget for agricultural extension with absorption rate from 2019 to 2024



Data source: OCOB (Various), County Governments Annual Budget Implementation Review Report

4.7.3 Infrastructure development

Robust infrastructure is vital for the deployment of digital extension services. The government, in collaboration with private sector stakeholders, is investing in improving Internet connectivity and mobile network coverage, particularly in rural areas. Internet penetration has reached 92 per cent in urban areas but is significantly lower in rural regions, highlighting a

critical gap that must be addressed (The Kenya ICT Action Network (KICTANet), 2024). Initiatives such as the National Optic Fiber Backbone Infrastructure aim to enhance connectivity and accessibility, which would enable farmers to benefit from digital extension services.

Robust infrastructure development is a critical enabler for the successful deployment of digital extension services

in Kenya, particularly in rural areas where agricultural productivity and food security are paramount. The government, in collaboration with private sector stakeholders, is actively enhancing Internet connectivity and mobile network coverage. As reported by the Kenya National Bureau of Statistics (KNBS), Internet penetration is significantly higher in urban areas at 92 per cent, while rural regions experience much lower connectivity rates, indicating a substantial digital divide that must be bridged to facilitate effective agricultural practices.

The National Optic Fiber Backbone Infrastructure project exemplifies the government's commitment to improving connectivity, which is essential for farmers to access digital extension services. By enhancing Internet access, farmers can use

various digital platforms to receive timely agricultural information, market data, and weather updates, thereby improving their decision-making and productivity. The National Broadband Strategy articulates in greater detail strategies towards the realization of connectivity in the country. The flagship projects planned include providing quality and secure connectivity to key government offices, rehabilitating unusable optic fiber cable segments, and centralizing NOFBI equipment at ICTA offices or other suitable government locations. Additionally, the backbone network will be expanded to cover all counties, sub-counties, and wards, while a National Network Operations Centre (NOC) will be established and mirrored across all 47 counties to ensure efficient management and coordination (Table 4.4).

Table 4.4: ICT infrastructure project in support of digital superhighway project in Kenya

	Backbone and Shelter Project Activities	Output
1.	Upgrading of degraded backbone routes	2,521 km
2.	New build backbone connectivity to underserved Sub-Counties	723 km
3.	Build new OFC to complete existing backbone infrastructure	4,701 km
4.	New build backbone connectivity to all wards	20,320 km
5.	Construction of ICT equipment shelters	47 units
6.	Network Operation Centre	580 centres
7.	Construction of ICT shelters in all counties to house ICT infrastructure equipment and offices (NOC, SOC, training room and call centres)	47 Units

Source: Ministry of Information, Communications and Technology (2019)

Although Kenya has put in place robust measures for digital transformation, a significant portion of the population is unconnected to essential infrastructure

such as electricity and the Internet. Approximately 30 per cent of Kenyans lack access to electricity (KNBS, 2023), which is a fundamental requirement for

digital services. However, there has been an upward trend in the number of connected consumers due to government initiatives, such as rural electrification and the Last Mile Connectivity Programme, which aims at improving electricity access in urban and rural areas.

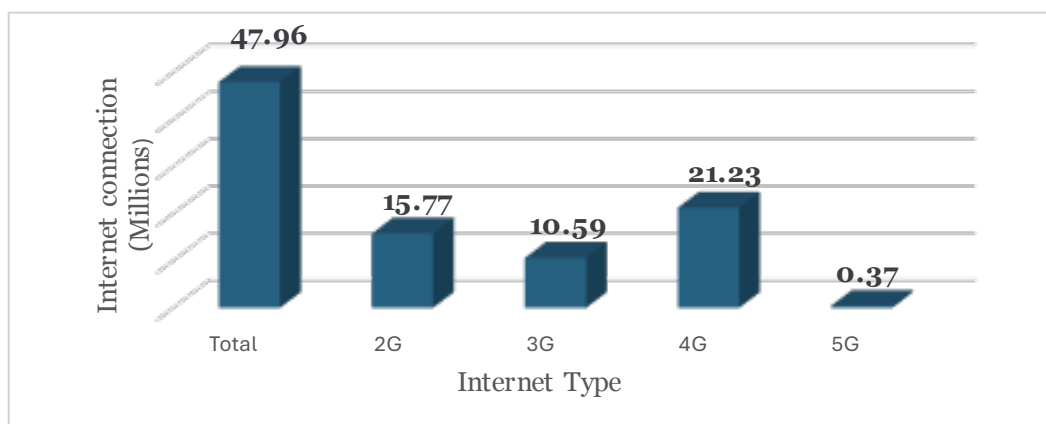
Furthermore, Internet penetration is uneven, with rural areas experiencing markedly slower connectivity rates compared to urban centres (Figure 4.6). This disparity is exacerbated by the high costs associated with extending infrastructure to remote regions, where the return on investment is often perceived as low (ICT Authority, 2022).

The limited reliable Internet access curtails the ability of farmers and rural communities to use digital extension services effectively, thereby hindering agricultural productivity and economic growth.

4.7.4 Incubation of digital extension innovations

Innovation in digital extension services is transforming the agricultural landscape in the country, significantly enhancing productivity and creating job opportunities (Singh et al., 2023). Digital extension applications have revolutionized how

Figure 4.6: Number of users connected to different internet connection types



Data source: Communication Authority of Kenya (2023)

farmers access critical information regarding weather patterns, market prices, and best farming practices. These digital tools not only facilitate real-time information dissemination but also foster a more interactive relationship between farmers and extension service providers, thereby enhancing engagement and knowledge transfer. Furthermore, the application of data analytics and artificial intelligence allows for the customization of advice tailored to individual farmer needs, which has been shown to lead to increased

productivity and better decision-making in agricultural practices (Rao et al., 2021). The impact of digital technologies and improved agricultural outcomes is well-documented, indicating that farmers who use these tools are more likely to adopt modern farming techniques, ultimately leading to higher yields and better market access (Kudama et al., 2021).

Moreover, the adoption of innovative technologies in agriculture is crucial for fostering agri-enterprise development

along the agricultural value chain in Kenya. As the agricultural sector increasingly relies on technology, various stakeholders—including farmers, traders, and processors—are encouraged to integrate modern technologies into their operations, thereby enhancing efficiency and productivity (FAO, 2023). This integration not only supports existing agricultural practices but also opens an avenue for new business models and job creation. For instance, the rise of digital platforms has led to the emergence of new jobs in data management, technology support, and logistics, which are essential for the functioning of these digital ecosystems (FAO, 2023). Additionally, the use of mobile money services has been instrumental in improving financial accessibility for farmers, enabling them to invest in inputs and services that enhance productivity (KNBS, 2022). The synergy between technology adoption and job

creation is evident, as the agricultural sector evolves to meet the demands of a growing population and changing market dynamics.

Albeit these potential gains, the cost of digital tools and services poses a significant barrier to digital service adoption among rural populations. It is recognized that the rural-urban divide is slowly getting obscured, and the devolved system of government may redefine it further, with counties being the focal points of development planning (Communications Authority of Kenya - CAK, 2022). Subsequently, the distinction in broadband speeds between rural and urban areas will be blurred with the convergence that will arise out of regional development. As of 2022, minimum Internet speeds in urban areas were six times faster than those in the rural areas (Table 4.5).

Table 4.5: Minimum broadband speeds

	2013-2017	2018-2022	2023-2027	2028-2030
Urban	40 Mbps	300 Mbps	1,024 Mbps	2,048 Mbps
Rural	5 Mbps	50 Mbps	100 Mbps	500 Mbps

Source: Communications Authority of Kenya (CAK)

Capacity building is essential for the effective implementation of digital extension services, yet literacy levels in Kenya present a significant challenge. A substantial portion of the population lacks the necessary digital literacy skills to navigate online platforms and use digital tools effectively (CAK, 2023). The cost of capacity building initiatives, including

training programmes and workshops, can also be prohibitive, particularly for rural communities with limited resources (CAK, 2022). Without targeted efforts to enhance digital literacy and provide training on the use of digital tools, the potential benefits of digital extension services may not be fully realized. Thus, the constraints to the implementation of digital extension services in Kenya are multifaceted, encompassing infrastructure and connectivity issues, the

digital divide, affordability challenges, and the need for capacity building. Addressing these barriers is crucial for enhancing the accessibility and effectiveness of digital extension services, ultimately contributing to improved agricultural productivity and economic development in rural areas.

4.7.5 Digital extension standards and quality assurance

Digital extension services can transform agricultural extension and advisory services (AEAS) by extending farmers' access to timely knowledge, information, and technologies (Government of Kenya, 2023). However, the effectiveness of these services is dependent upon high-quality digital extension standards and quality assurance practices. Standards refer to authoritative directions to ensure uniformity and professionalism in AEAS delivery, while quality assurance pertains to the maintenance of excellence through ongoing checking of service delivery. AEAS capacity development in Kenya lacks a harmonized system of assessing qualifications, thus having varying competencies among service providers. Some digital extension providers lack the necessary qualifications in designing and disseminating agricultural information on digital platforms, print media, and electronic media. Farmers could receive uncoordinated, inaccurate, and slanted information, compromising trust and efficiency. In 2017, Kenya's Ministry of Agriculture, Livestock, and Fisheries, alongside county governments and stakeholders, developed standards and guidelines for AEAS to promote professionalism and consistency (Government of Kenya, 2023). However, in the absence of a legal framework for enforcement, they have fallen behind complete implementation, thus leaving

a gap in the quality and reliability of digital extension content. There is no credible institution for accrediting and certifying agricultural extension service providers, contributing to discrepancies in delivery of the same. The establishment of a legal framework for executing such standards, and the formulation of a central organization for accreditation, would help harmonize qualifications, standardization of agricultural messages, and ensure that digital extension services deliver reliable, timely, and usable information for farmers. Besides, integration of provisions for regular monitoring and evaluation of electronic extension content would enhance accountability for guaranteeing that the information posted is aligned with best practices to facilitate farmers with credible information to boost productivity and sustainability.

Under the Data Protection Act 2019, farmers' data is safeguarded through principles of lawful, fair, and transparent processing, ensuring that personal information collected through digital tools, platforms, and by digital extension officers is used solely for the intended agricultural support services. The operators of digital extension platforms are required to obtain consent obtained before collecting any data and offer clear communication on how the information will be used, stored, and shared. Data handlers, including digital extension officers and platform providers, are required to implement robust security measures to prevent unauthorized access, breaches, or misuse of data, and must register with the Office of the Data Protection Commissioner as data processors or controllers. This legal framework fosters trust and accountability in the digitization of agriculture, ensuring that farmers remain in control of their personal and farm-level information.

4.8 Key Messages and Recommendations

4.8.1 Key messages

1. Extension services are crucial for improved agricultural production. However, inadequate number of extension officers, one per 1,500 farmers against the FAO benchmark of one for 400 farmers, hinders effective implementation of agricultural extension services. Digital extension services could fill this gap by providing real-time advice and support to farmers for improved productivity with reduced dependence on physical extension officers.
2. The implementation of digital extension services has the potential to create new jobs, notably 143,804 jobs in the food crops sub-sector, 5,891 jobs in the livestock sub-sector and 3,934 in the dairy sub-sector.
3. There are limited and uncoordinated efforts towards streamlining capacity building in digital extension services at the national and county level, although this is key to enhancing coverage and efficiency. Existing policies do not adequately elaborate on the skilling of extension agents for digital technologies, thus depriving extension agents of the digital competencies to facilitate technology uptake by the farmers.
4. Between 2019 and 2024, 61.3 per cent of counties did not allocate funds for extension services, and where budgets existed, actual expenditure consistently fell short of approved amounts. Notably, from the start of devolution up to 2019/20 financial, no dedicated budget entries for extension services or activities were recorded, highlighting a longstanding neglect that

undermines agricultural productivity and job creation. This is of concern given that sustainable financing for agricultural extension services at the county level is critical to strengthening both traditional and digital extension systems, yet persistent underfunding remains a barrier.

5. The ICT infrastructure that has been developed through the digital superhighway, including backbone upgrades, new connectivity to underserved areas, ICT equipment shelters, and Network Operation Centres, holds immense potential to enhance digital extension and technology adoption across the country. However, there exists digital divide with rural areas lagging, and delays in project completion and the high costs involved have slowed progress, limiting the full realization of these benefits.
6. Limited legal and regulatory framework for enforcement has left a gap on the quality and reliability of digital extension contents. This has led to loss for farmers as some digital extension providers may not have the necessary qualifications, designing and disseminating agricultural information on digital platforms, print media, and electronic media without adequate verification.

4.8.2 Policy recommendations

1. To successfully deploy digital extension services, enhance investment to support digital extension services to replace the deficit created by inadequate extension officers. The investments would boost digital infrastructure especially in rural areas, empowering farmers with digital literacy skills, and designing friendly platforms that provide timely, tailored agricultural advice. Additionally,

collaboration with private sector innovators and development partners will be key to ensuring sustainability and widespread adoption of digital extension.

2. To realize the potential of digital extension towards increasing farm productivity and the generation of employment, establish a regulatory framework to promote standards and enforce compliance with the quality of digital extension material provided to farmers. National guidelines could be developed to determine accuracy, applicability, and reliability of digital extension material. Additionally, a mechanism for certification to validate the skills of digital extension service providers would be required, along with sustained compliance with standards for content. A monitoring and evaluation system will be necessary to regularly assess digital extension platforms and enforce compliance, with a view to building farmers' trust and level of adoption for digital advisory services.
3. To enhance digital extension capacity, integrate digital literacy into the curriculum of agricultural training institutions and provide on-going professional development for extension workers. The government, private

sector organizations, and development partners could consider collaborating to implement digital extension activities. In addition, develop monitoring and evaluation frameworks to track progress and evaluate areas for modification, so that digital extension services evolve in accordance with farmers' needs and technology innovation.

4. To realize budgetary allocation and utilization for electronic extension, establish a particular budget line at the county level for agricultural extension services to ensure sustainable funding, with clear expenditure targets and regular audits to track fund utilization and allocation. The Council of Governors, the National Treasury, and Ministry of Agriculture and Livestock Development could consider developing guidelines to prioritize extension services in county budgets and improve accountability measures for increased agricultural productivity and employment.
5. To realize the positive impact of digital extension in improving agricultural output that can create decent jobs, adopt measures to regulate the quality of digital extension content offered to farmers.

5. Enhancing the Competitiveness of the Manufacturing Sector for Decent Job Creation

The manufacturing sector is a cornerstone of structural transformation, promoting industrial development and providing both direct and indirect employment opportunities. Of the 3.8 million jobs in the manufacturing sector, 90.0 per cent is in the informal sector, and only 10.0 per cent in the formal sector. The sector's ability to generate decent jobs is constrained by competitiveness factors related to quality, price, and cost. High production costs, low compliance with standards, illicit trade, and non-tariff measures limit the sector's ability to compete in both domestic and international markets. Promoting the growth of the manufacturing sector to generate more decent jobs requires addressing these competitiveness barriers. Enhancing quality competitiveness requires strengthening adherence to standards and reinforcing intellectual property rights to protect manufacturers from counterfeiting, substandard goods, and unexcised goods. Price competitiveness hinges on effectively leveraging trade agreements and improving compliance with non-tariff measures to unlock export potential and expand market access. Additionally, cost competitiveness can thrive in a predictable cost environment for raw materials, intermediate inputs, and electricity, which are key cost drivers for manufacturing firms.

5.1 Introduction

Manufacturing supports structural transformation essential for economic prosperity mainly through higher

productivity, job creation, foreign exchange earnings, and investment growth (Szirmai, 2012). The sector has the potential to create jobs directly and indirectly through backward and forward linkages with other sectors such as agriculture, mining, quarrying, and trade. Given Kenya's predominantly agricultural economy, the manufacturing sector activities and employment are largely agro-based. There are, however, opportunities for diversification into medium and high technology sub-sectors such as electricals, electronics, pharmaceuticals, chemicals, and machinery by fostering innovation and boosting investment, which are essential for generating additional decent jobs. Kenya's manufacturing sector comprises micro, small, medium, and large enterprises, classified mainly by employment levels and capital investment. While medium and large industries comprise less than 5.0 per cent of all manufacturing enterprises, they account for over 60.0 per cent of the sector's GDP contribution (Government of Kenya, 2012). In contrast, micro and small enterprises represent approximately 95.0 per cent of firms but contribute only about 20 per cent to the sector's GDP (Government of Kenya, 2012). Cognizant of the sector's importance, the Kenya Vision 2030 targets to realize a diversified and competitive manufacturing sector.

The contribution of the manufacturing sector to GDP declined from 7.5 per cent in 2023 to 7.3 per cent in 2024 (KNBS, 2025). Despite the manufacturing sector not realizing its full potential, it leads in the provision of wage employment, accounting for 15.9 per cent of the total wage employment in 2024, compared to agriculture at 14.1 per cent and wholesale and retail trade at 12.6 per cent (KNBS, 2025). This translated to 369,200 jobs in 2024 compared to 362,300 in 2023 (KNBS, 2025). The manufacturing

informal sector jobs in 2024 were 3.5 million compared to 3.4 million in 2023. This is the second largest sector in the creation of informal employment after the wholesale and retail trade, hotels, and restaurants (KNBS, 2025). Although the sector generates employment, a deficit in decent jobs persists, since 90.0 per cent of the jobs are in the informal sector. Further, the sector is marked by lower average real wages and gender inequality gaps compared to sectors such as wholesale and retail trade (KNBS, 2025).

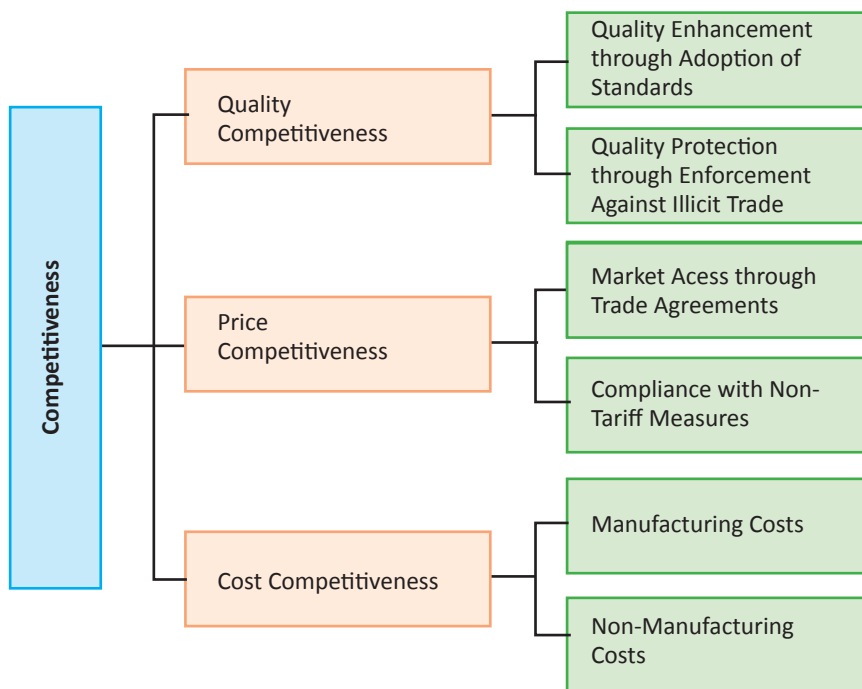
Recognizing constraints that need to be addressed to enhance the sector's performance, key policy and legal reforms have been undertaken following the Kenya Vision 2030, including the enactment of the Special Economic Zones Act of 2015, which establishes the Special Economic Zones Authority and provides for the development of special economic zones such as industrial parks, ICT parks, and science and technology parks. Further, the Export Processing Zones Act Cap 517 provides for the establishment of the export processing zones. Additionally, industry-academia collaborations have been enhanced through institutions such as the Kenya Industrial Research and Development Institute (KIRDI), which focuses on industrial research and innovation. KIRDI, which has been in existence since 1979, is now governed under the KIRDI Act, 2022, with the mandate of collaborating with institutions of higher learning, government agencies, and others to advance technology, innovation, and development.

Other legislative developments include the Standards Act Cap 496 of 1973, which established the Kenya Bureau of Standards (KEBS) and provides for the promotion of standards. The Kenya Accreditation Act of 2019 established the Kenya Accreditation Service, which exercises oversight of entities that perform conformity assessment activities. The Trademarks Act Cap 506

governs the registration of trademarks. Moreover, the Industrial Property Act of 2001 promotes the protection of intellectual property through patents, certificates for industrial design, rationalization certificates, and utility certificates. The Scrap Metal Act of 2015 supports the regulation of scrap metal dealings. The government also established the Sessional Paper No. 9 of 2012 on the National Industrialization Policy Framework for Kenya 2012-2030, which provides various policy priorities to create an enabling environment for manufacturing sector's growth. The Sessional Paper No. 1 of 2022 on National Automotive Policy targets interventions for development of the automotive sub-sector. Further, the *Buy Kenya, Build Kenya* Strategy, 2017 provides a framework for promoting domestic consumption of locally produced goods and services by eliciting patriotism and enforcing public procurement opportunities. However, despite these efforts, the sector is yet to achieve the transformation needed to create large-scale decent jobs and economic growth.

The sector's ability to drive decent job creation is constrained by competitive elements, where firms are unable to meet customer demands at a profit by offering products valued higher than those of competitors (Chikán et al., 2022). This is realized through quality, price, and cost competitiveness. Quality competitiveness examines quality enhancement and quality protection. Quality enhancement entails adoption of standards and certifications, and quality protection entailing enforcement against illicit trade. Further, price competitiveness interrogates market access through trade agreements and compliance with non-tariff measures. Finally, the cost competitiveness dimension investigates the cost structure of manufacturing firms. The three dimensions of competitiveness are illustrated in Figure 5.1.

Figure 5.1: Conceptual framework



Source: Author's conceptualization

5.2 Global Competitiveness of the Manufacturing Sector

Competitiveness is a relative concept describing how countries, industries, or firms develop capabilities to gain market share through strategies such as cost leadership and differentiation (Morikawa, 2021). The UNIDO Competitive Industrial Performance (CIP) Index evaluates manufacturing competitiveness using six indicators grouped into three key dimensions: capacity to produce and export manufactured goods, technological advancement, and global impact. The capacity to produce and export manufactured goods is directly linked to cost and price competitiveness. A country's ability to scale up production and expand exports depends on efficient

resource utilization, low production costs, and the ability to offer competitively priced products in both domestic and international markets. High production costs impede cost competitiveness. This, in turn, affects price competitiveness, as local manufacturers struggle to compete with cheaper imports.

The technological advancement dimension corresponds to quality competitiveness. Technological capabilities, investment in research and development, and skills development largely determine the ability to produce high-quality goods that meet international standards. The global impact dimension, which assesses a country's role in international manufacturing and trade, integrates all three dimensions of competitiveness—cost, price, and quality. Countries with a strong global manufacturing presence produce high-

quality goods at competitive prices while maintaining cost efficiency. Although performing better than regional peers such as Uganda and Tanzania, Kenya ranks low in industrial competitiveness compared to other benchmark countries, ranking 111 out of 152 in 2022 (Table 5.1). Constraints such as high production costs, limited access to markets, illicit trade, and non-tariff measures have been highlighted as affecting firm competitiveness. The CIP Index score for Kenya reveals limited value addition within the sector where low-technology manufacturing dominates.

Table 5.1: Comparison of Kenya's competitive industrial performance with regional peers and select newly industrialized countries

Country	Rank 2021	Rank 2022
Kenya	110/152	111/152
Uganda	120/152	121/152
Tanzania	129/152	127/152
India	40/152	40/152
South Africa	49/152	51/152
Turkey	27/152	24/152
Indonesia	39/152	38/152
China	2/152	2/152
Egypt	67/152	67/152

Data source: UNIDO (2022)

This chapter provides analyses of the manufacturing sector competitiveness along the three dimensions of quality, price, and cost.

5.3 Quality Competitiveness

This dimension is associated with competition to create new products perceived as high value by consumers, dependent on the ability of firms to adopt

technology to achieve differentiation. Quality competitiveness allows firms to gain market share in both domestic and foreign markets.

5.3.1 Quality enhancement

Quality competitiveness is essential for manufacturing firms as it influences consumer satisfaction and loyalty and ease of entry into diverse markets, including those with more stringent product standards and consumer demands. Firms realize quality standards by upgrading product standards, sourcing skilled labour, adopting advanced machinery, using high-quality materials, and employing superior organizational practices (Simionescu et al., 2021). In competitive markets, quality serves as a differentiator, enabling firms to stand out, capture market share, and implement premium pricing strategies that enhance profitability. Investing in quality also reduces operational costs by minimizing defects and reworks, thus improving production efficiency. Further, adhering to quality standards ensures compliance with regulations, avoiding penalties, and strengthening a firm's reputation. Strong quality management fosters better relationships with suppliers and distributors, thus enhancing operational efficiency.

Quality competitiveness enhances market access (Figure 5.2). Firms exporting to advanced economies such as the European Union benefit from high incomes that support affordability of quality products. In high-income countries, demand for quality goods correlates with disposable income. High-quality competition allows firms to overcome market entry barriers and remain competitive despite high production costs that may be involved, as innovation margins can be maintained and price competition mitigated (Simionescu et al., 2021).

Figure 5.2: Internationally certified firms export market access


Data source: World Bank (2018), Enterprise Survey

National quality standards such as those enforced by the Kenya Bureau of Standards (KEBS) require firms to undergo a compliance process that includes cost attached to attaining certification (Table 5.2) and inspection, administrative procedures (Table 5.3).

while MSEs with a turnover of Ksh 300,000 pay Ksh 12,000 (4%). This disparity can distort pricing and make products from smaller manufacturers more expensive. Additionally, manufacturers with annual turnovers below Ksh 200,000 are exempt, but this threshold compels MSEs to levy

Table 5.2: KEBS certification costs

Type of firm	Inspection fees per production site for 2 years (Ksh)	Permit fees for 2 years (Ksh)
Large enterprises	40,000	15000
Medium enterprises	20,000	-
Small enterprises	10,000	-

Source: KEBS

The administrative procedures for obtaining certification can be cumbersome, particularly for Micro and Small Enterprises (MSEs) (Table 5.3). Unlike medium and large firms, which often have dedicated personnel for quality assurance and compliance, MSEs may have limited resources, leading to delays or errors in meeting certification requirements. Additionally, financial constraints may limit MSEs from adhering to the product specifications required for compliance with KEBS standards.

Further, the Standards Levy Order established through Legal Notice No. 267 of June 22, 1990, is a key funding mechanism for KEBS but does not align with the constitutional principle of tax equity. It imposes a 2.0 per cent levy on turnover, capped at Ksh 400,000 annually, with a minimum of Ksh 1,000 per month. This structure disproportionately impacts MSEs, which may pay a higher effective rate than medium and large manufacturers. For instance, a large manufacturer with an annual turnover of Ksh 20 million pays the maximum levy of Ksh 400,000 (2%),

and increase their cost of doing business. Furthermore, the levy has inadequate incentives to encourage compliance. Measures such as compliance certificates, penalty waivers, and rollover of excess payments could improve adherence while easing financial burdens on manufacturers.

Table 5.3: Administrative procedures for KEBS certification

Certification Process	Constraints faced by firms
Online application process (has a separate manual)	Operating the online platform requires digital literacy skills and an understanding of the operating manual, which some applicants may not possess.
Provision of documentation	Prior research is required to know the documentation required.
Payment of fees	Fees are charged per product and may not be friendly for start-ups with multiple products.
Familiarization with specific product standards	The product manual requires technical skills to understand and apply in the production process. This includes raw material specifications, and labelling requirements.
Industrial inspection, sample analysis, and permit issuance	Post-certification surveillance is still required but is limited.

Data source: KEBS

5.3.2 Quality protection

Counterfeiting is one of the most widely examined forms of illicit trade, ranking highest among various illicit activities. Counterfeiting involves the violation of various intellectual property rights including trademarks, patents, designs, and utility models. This definition aligns with the Kenya Anti-Counterfeit Act No. 13 of 2008. However, illicit trade extends beyond counterfeiting. The Organization for Economic Cooperation and Development - OECD (2016) defines it as any trade that contravenes rules, including laws, regulations, licenses, taxation systems, embargoes, and procedures that countries implement to organize trade, protect citizens, raise living standards, and

enforce ethical codes. Intellectual property protection is essential for manufacturing firms as it incentivizes innovation by granting exclusive rights to their creations, ensuring that investments in research and development are safeguarded. This protection also provides a competitive advantage by allowing firms to differentiate

their products and technologies, strengthening their market position.

Counterfeiting undermines quality strategies for domestic production, making it more profitable for manufacturers to locate their production in international markets. This dampens investments and domestic production capacity, and therefore constrain job creation opportunities. The Medium-Term Plan IV highlights that counterfeiting infringes on manufacturers' intellectual property rights and damages their reputation. The private sector has heavily invested in brand building, research, innovation, and the protection of intellectual property rights, including trademarks and copyrights, to secure market shares in domestic, regional, and global markets. However, genuine products and brands often compete against counterfeit goods designed to mimic

original products. The Kenya Association of Manufacturers (KAM) estimates that manufacturers in Kenya lose nearly 40 per cent of their market share to counterfeiters (KAM, 2024).

In response to these constraints, the government has strengthened its legal framework to address illicit trade through amendments to the Anti-Counterfeit Act No. 13 of 2008. Additionally, the establishment of the Inter-Agency Anti-Illicit Trade Executive Forum and Technical Working Group on 10th July, 2018, aims to enhance cooperation among the agencies, facilitate rapid information exchange, and improve enforcement measures. Intellectual Property Rights Recordation Regulations Programme by the Anti-Counterfeit Authority also aims to limit the proliferation of counterfeit goods imported into the country by developing a robust database of intellectual property rights. Various institutions are actively engaged in combating illicit trade through the framework established by the Inter-Agency Anti-Illicit Trade Executive Forum and Technical Working Group on 10th July 2018. The key institutions involved in this effort include the Anti-Counterfeit Authority, Kenya Revenue Authority, Kenya Bureau of Standards, Kenya Industrial Property Institute, the Pest Control Products Boards, the National Police Service, Kenya Plant Health Inspectorate Service, and the Department of Weights and Measures. The Kenya Industrial Property Institute, which focuses on protecting industrial property rights such as patents and trademarks. The Pest Control Products Board regulates pest control products to prevent the circulation of counterfeit and substandard goods. The National Police Service enforces laws against illicit trade through investigations and law enforcement actions. Similarly, the Kenya Plant Health Inspectorate Service ensures compliance with regulations related to agricultural products, while the Kenya Revenue Authority is responsible for customs enforcement and tackling

tax evasion. Further, the Kenya Bureau of Standards sets and enforces standards for goods to combat substandard products, and the Department of Weights and Measures ensures accuracy in measurements. Given that the response against illicit trade involves several state and non-state actors, coordination and high-level reporting are key to enhancing enforcement.

Moreover, county governments, through the County Licensing (Uniform Procedures) Act No.8 of 2024, play a vital role in enhancing manufacturing quality by standardizing licensing processes. Further, counties can enforce compliance with quality, safety, and environmental regulations through inspections before issuing permits. Additionally, the establishment of the County Aggregated Industrial Parks (CAIPs) presents an opportunity for counties to further support quality improvement especially for MSEs. The CAIPs can be equipped with quality enhancement infrastructure, such as testing facilities, to help manufacturing MSEs meet standards. Shared facilities provide opportunities for lowering quality compliance costs.

5.3.3 Illicit trade and firm competitiveness

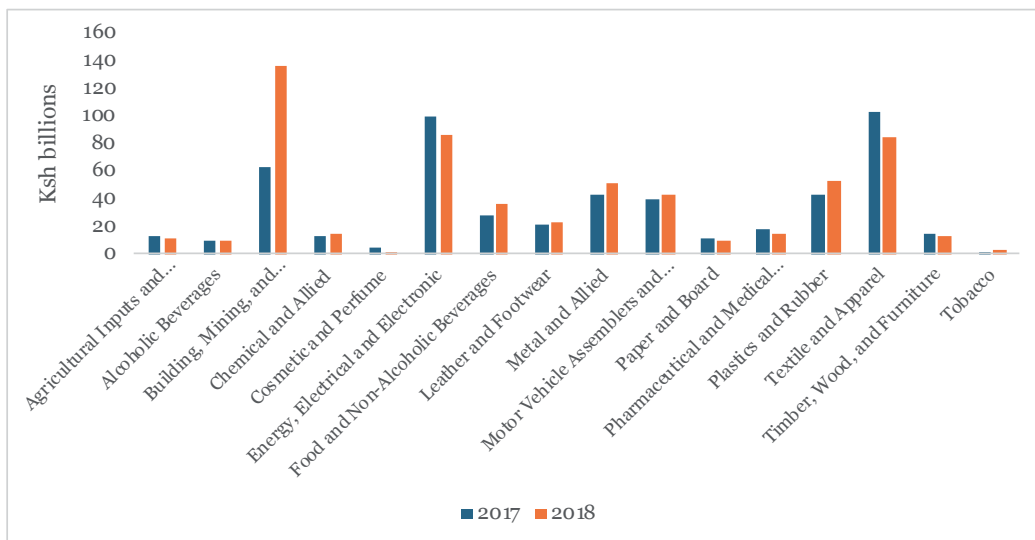
The availability of cheaper, illicit goods forces legitimate manufacturers to lower their prices, shrinking their market share and profit margins. This reduces firms' ability to invest in innovation, technology, and expansion, further weakening their competitive position. In the long run, reduced profitability leads to job cuts, as firms struggle to sustain operations and compete with non-compliant producers.

The reality of this constraint is evident from the fact that illicit trade in goods manufactured by sixteen (16) sub-sectors, which contribute 90 per cent of the total manufacturing sector's GDP in Kenya, accounted for 71 per cent of the total

illicit trade. The sub-sectors most affected as evidenced by the size of illicit trade are building, mining and construction; energy, electrical and electronics; textiles and apparel; plastics and rubber; and metal and allied sectors (Figure 5.3). Further,

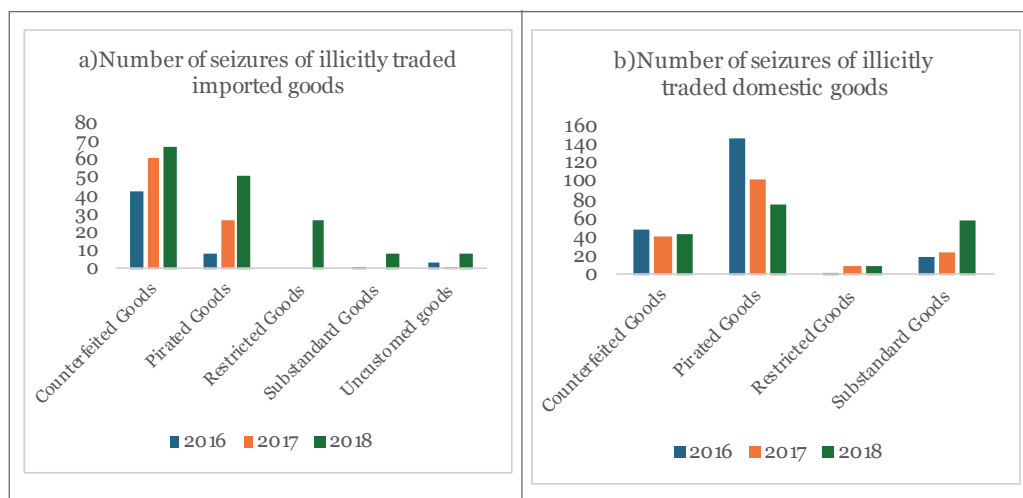
a large proportion of counterfeit goods are imported with another proportion produced locally (Figure 5.4).

Figure 5.3: Size of illicit trade by sub-sector



Data source: Anti-Counterfeit Authority (2020)

Figure 5.4 Seizures of illicitly traded goods



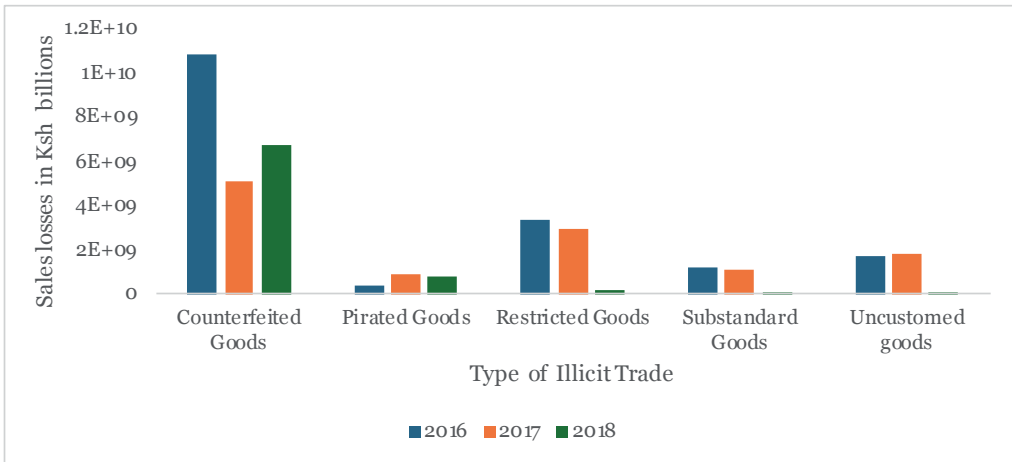
Data Source: Anti-Counterfeit Authority (2020)

The availability of cheaper counterfeit and smuggled goods diverts consumer demand away from genuine products, leading to reduced market share. These losses occur because illicit traders bypass regulations, taxes, and quality controls, allowing them to sell products at much lower prices. Legitimate firms, facing unfair competition, are forced to lower their prices, further squeezing profit margins. Most sales

revenue losses were attributed to counterfeit goods, followed by restricted, substandard, and uncustomed goods. Firms reported an average loss of Ksh 10 billion between 2016 and 2018.

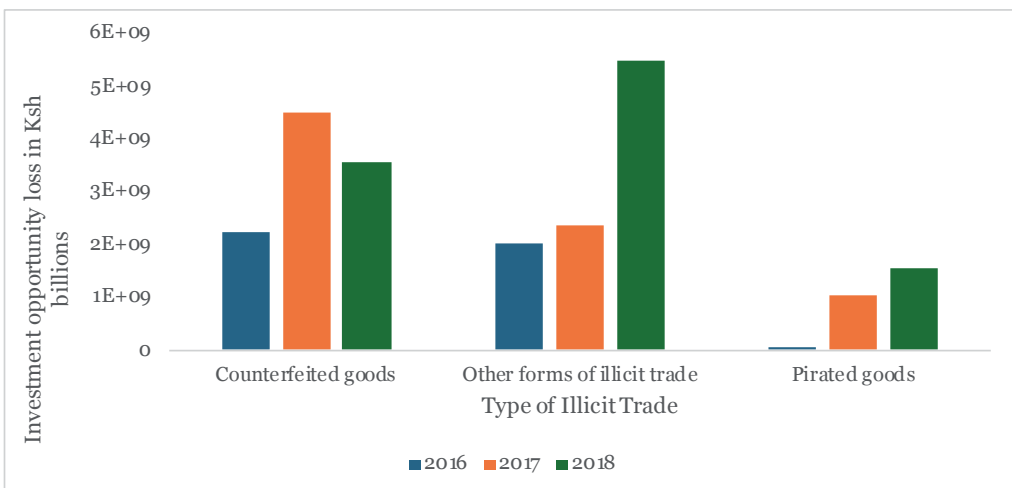
Illicit trade also contributes to investment losses for manufacturing firms. As counterfeit and illicit goods erode legitimate firms' sales and profitability,

Figure 5.5: Firm sales losses by form of illicit trade

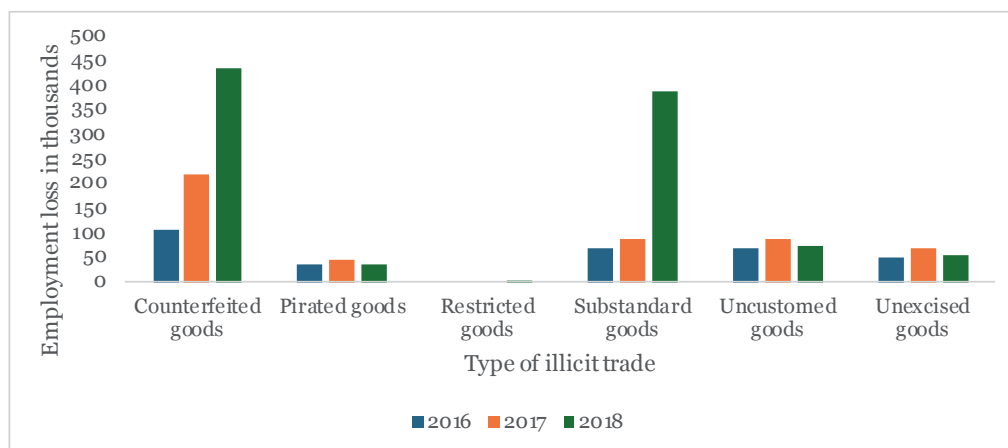


Data source: Anti-Counterfeit Authority (2020)

Figure 5.6: Firms' investment opportunity loss by form of illicit trade



Data Source: Anti-Counterfeit Authority (2020)

Figure 5.7: Firms' employment loss by form of illicit trade

Data source: Anti-Counterfeit Authority (2020)

businesses face lower incentives to reinvest in innovation, technology, and expansion. The uncertainty and market distortion caused by illicit trade also discourage both local and foreign investors, who may view the sector as high-risk due to weak intellectual property protections and unfair competition.

Illicit trade has precipitated investment decline. This is evidenced by investment opportunity lost, which increased by 178 per cent from Ksh 44 billion in 2016 to Ksh 123 billion in 2018. Further, illicit trade enables substantial employment losses in the manufacturing sector. As legitimate firms experience declining sales and profitability, they may be forced to cut costs, which often include reducing their workforce. This not only results in job losses but also hinders the creation of new job.

Job losses increased by 484 per cent from 7,565 jobs lost in 2016 to 44,198 jobs in 2018. The leading driver of job losses was reported to be other forms of illicit trade (substandard, uncustomed, restricted and unexcised goods) accounting for 76 per cent of total employment loss in 2018. This was followed by counterfeit goods, which

accounted for 21 per cent of total estimated employment loss in 2018 (ACA, 2020).

5.4 Price Competitiveness

Price competitiveness is essential for manufacturing firms, directly influencing their ability to attract customers and achieve sustainable profitability. While production cost is a key factor in the price competitiveness of manufactured products, other considerations also play a vital role. The price of related goods, consumer tastes and preferences, and costs associated with non-tariff measures in trade agreements can influence demand and market access. Balancing these factors with cost considerations enables manufacturers to better align with market dynamics and enhance their competitiveness.

5.4.1 Export market access

Trade agreements play a crucial role in enhancing the price competitiveness of manufacturing firms by reducing tariffs and other market access barriers. Kenya has made strides in integrating firms into global value chains through national trade agreements at the East Africa Community

(EAC), Common Market for East and Southern Africa (COMESA), African Continental Free Trade Area (AfCFTA), Economic Partnership Agreement with the European Union (EU-EPA), the African Growth and Opportunity Act (AGOA), and various bilateral trade agreements.

Kenya's ability to harness its export growth potential depends on existing trade agreements and preferential trade arrangements, which grant duty-free and quota-free market access. Flexible rules of

origin under frameworks such as the EAC, COMESA, the EU-EPA, and AGOA further enable the manufacturing sector to export a variety of products, even with minimal value addition or specific processing, under favourable trade terms. Despite the market access opportunities granted by trade agreements, manufacturing firms are yet to fully capitalize on them for export expansion. The market opportunities under various frameworks is detailed in Table 5.4.

Table 5.4: Market opportunities through trade agreements

Trade agreement	Market Access Opportunities
AfCFTA	<ul style="list-style-type: none"> • Single African market with a population of over 1.3 billion and GDP of US\$ 3.4 trillion • AfCFTA Implementation Strategy targeted manufacturing sub-sectors include textiles and apparel, leather and leather products, pharmaceuticals, plastic products, metals and allied products, chemicals and allied products, furniture and furnishings, automotive and automotive parts • Untapped potential in intra-African trade
EU-EPA	<ul style="list-style-type: none"> • 16 trillion Euro market • 21.1 per cent of Kenya's exports are to the EU • Exports are mainly in horticulture and other agricultural products • Untapped potential for the manufacturing sector exports diversification
AGOA	<ul style="list-style-type: none"> • Duty free and quota free access to a market size of about 323 million • About 6,000 tariff lines available, however, only about six have been used • Exports are mainly in the apparel, agricultural products, minerals, metals, electronics, and chemicals • Untapped potential for the manufacturing sub-sectors targeted in the Medium-Term Plan IV with very few tariff lines used
EAC	<ul style="list-style-type: none"> • Large market of about 305.3 million and combined GDP of US\$ 337.5 billion • Main destination of Kenya's exports in 2023, consisting of about 40 per cent of total exports valued at Ksh 435 billion • Exports are mainly in construction materials (cement, iron, steel, paints and varnishes, paper board), petroleum products, beer, salt, pharmaceuticals, edible oils and household consumable products • Untapped potential for the manufacturing sub-sectors targeted by MTP IV

COMESA

- Large market of 583 million and combined GDP of US\$ 805 billion
- Exports valued at Ksh 319.5 billion in 2023
- Most of the exports are to EAC members who are also members of COMESA
- Kenya is one of the leading countries in intra-COMESA trade
- Exports mainly consist of horticultural products and other agricultural produce, iron and steel, medicaments, cement, textiles, and petroleum products
- There is untapped potential for the manufacturing sub-sectors targeted by MTP IV to other nations outside EAC

Source: Author's compilations

5.4.2 Compliance with non-tariff measures

While trade agreements create favourable conditions for exports, they also introduce complexities that can affect price competitiveness. Non-tariff measures influence the price strategies of manufacturing firms in Kenya by introducing additional costs that limit market access. Non-tariff measures refer to policy instruments, other than standard customs tariffs, that can influence international trade in goods by affecting trade volumes, prices, or both (UNCTAD, 2012). Classified as either technical or non-technical measures, where technical measures include sanitary and phytosanitary measures and technical barriers to trade (UNCTAD, 2012). The key focus with technical measures is not related to trade and ideally should apply equally to domestic and foreign products. Technical measures are targeted to achieve policy objectives that protect human and animal life, the environment and enhance national security. However, their incorporation in international trade rules justifies their inclusion as non-tariff measures. Non-technical measures, also referred to as non-tariff barriers, are instruments of trade policy that aim to protect domestic production from foreign competition through changes in prices or quantities

of imported goods through quotas, price controls, or contingent trade protective measures (UNCTAD, 2012).

Research in the United States of America and the European Union markets has shown that, on average, NTMs on fruits and vegetables and meats raise the retail prices of these products by 141 per cent and 93 per cent, respectively (Dean et al., 2006). Further, the average price increases due to non-tariff measures (NTMs) on processed food and on apparel averages 87 per cent and 21 per cent, respectively (Dean et al., 2006). These measures often manifest as technical regulations, standards, and compliance requirements that firms must meet to export their products (Mwatu et al., 2024). These disproportionately affect MSEs as they may lack the capabilities to comply effectively. Therefore, only large and medium firms with economies of scale can afford to navigate the regulatory landscape limiting access to export markets for MSEs.

In Africa, the average *ad valorem* equivalent costs of technical measures in the agri-food and manufacturing sectors are 12.8 and 1.8 per cent, respectively (UNCTAD, 2024). The low average impact of technical measures in manufacturing is due to their relatively low incidence (UNCTAD, 2024). However, for manufacturing products where measures are applied, the average cost is 5.4 per cent (UNCTAD, 2024).

Through further regulatory reform and convergence, the *ad valorem* equivalents of SPS measures and TBT could be lowered by 30 to 40 per cent. The average cost of outright barriers is rather low due to their limited incidence, but very costly where they occur, with 38 per cent and 14 per cent in agri-food and manufacturing, respectively (UNCTAD, 2024).

Complying with NTMs can place financial and procedural burdens on businesses. They may need to invest in new equipment,

modify production processes, hire and train additional staff, or pay substantial fees for licenses or permits before importing goods. Additionally, administrative requirements such as notifications, information publication, and record-keeping add further strain on the private sector. Since sanitary and phytosanitary measures and technical barriers to trade are essential for achieving public policy objectives, their removal is not feasible. However, variations in these regulations across

Table 5.5: Common non-tariff measures experienced by exporters per trade agreement

Agreement	Non-tariff measures prevalent
AfCFTA	<ul style="list-style-type: none"> • Technical barriers to trade are the most common for manufactured products in Africa, with about 33 per cent of products regulated • Non-automatic licenses are also encountered, affecting close to 40 per cent of products • Licenses and quotas experienced by 20 per cent of products
AGOA	<ul style="list-style-type: none"> • Sanitary and phytosanitary measures and technical barriers on the importation of cotton lint are experienced by firms • Compliance constraints experienced are procedural and regulatory • Procedural issues include delays in shipment clearance, weak cross-border agency cooperation, duplication and overlaps in border procedures, high inspection, and shipment clearance fees, and limited technical knowledge of inspection staff • Regulatory issues include poor harmonization and mutual recognition of conformity assessment procedures and phytosanitary requirements for cotton lint across EAC member states
EAC	<ul style="list-style-type: none"> • The EAC Time-Bound Programme for eliminating non-tariff barriers is integrated into the COMESA-EAC-SADC Tripartite web-based NTB Monitoring System, which has been operational since 2007 • To enhance the reporting, monitoring, and removal of NTBs within the region, the Secretariat also developed the EAC Elimination of NTBs Mobile Application, which was launched in December 2023 and is now in use • The main unresolved NTBs include discriminatory charges, fees, and levies imposed by partner States, lack of preferential treatment for goods originating from partner states, non-recognition of calibration certificates, and the requirement for upfront payment of guaranteed cheques for oil storage, along with penalties after the grace period expires
COMESA	<ul style="list-style-type: none"> • Common NTBs experienced are related to customs and administrative entry procedures • NTBs relating to transport, clearing, and forwarding are also common

Source: Author's compilations

countries increase trade costs. Therefore, regulatory cooperation and harmonization are necessary to address this challenge. In contrast, non-technical measures should be prioritized for elimination to facilitate smoother trade between Kenya and its partners.

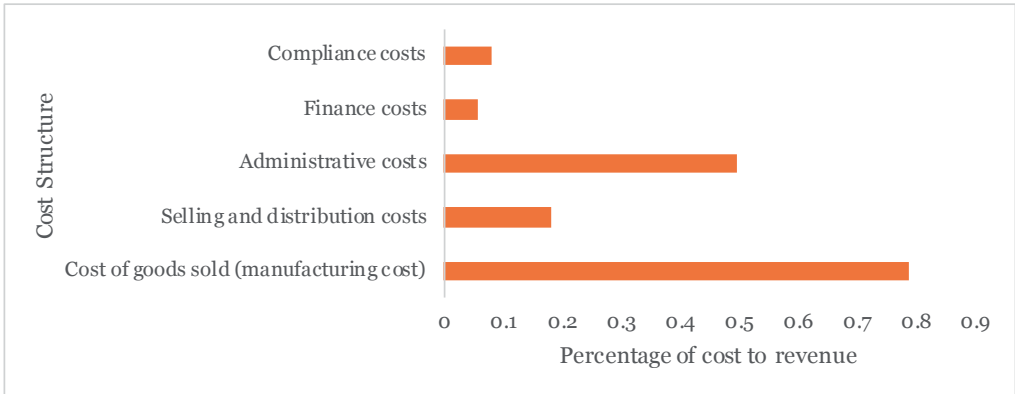
5.5 Cost Competitiveness

Cost competitiveness for manufacturing firms refers to the ability to produce goods at lower costs than competitors while maintaining quality and enabling firms to offer lower prices. The cost structure of manufacturing firms is crucial for cost competitiveness, as it directly influences their ability to offer products at competitive prices while maintaining profitability. The cost of goods sold comprising direct costs such as purchase of raw materials, labour and overheads such as utilities (electricity and water) is a major component of manufacturing firms’ costs (Figure 5.8). This is followed by administrative costs, selling and distribution costs, compliance costs and financing costs.

5.5.1 The cost structure of manufacturing firms

The total costs incurred by manufacturing firms can be classified into manufacturing and non-manufacturing costs. Manufacturing costs form the highest proportion of costs, averaging 78 per cent of firm revenue, which puts pressure on earnings. It consists mainly of raw materials, intermediate inputs, and packaging materials, which are largely imported. Although sourcing manufacturing raw materials locally is desirable, there are constraints in relation to supply consistency. Agricultural and other raw materials are often subject to seasonal fluctuations, weather conditions, and infrastructure constraints, leading to unpredictable supply chains. This inconsistency results in shortages or delays for manufacturers, disrupting production schedules and increasing costs. Manufacturers also face quality variability with domestic sourcing related to adherence to standards, leading to inconsistent quality in raw materials. This affects the quality of manufactured goods, making it difficult for firms to

Figure 5.8: Cost structure of manufacturing firms



Data source: KNBS (2016)

Table 5.6: Tax on imported billets EAC partner comparison

Type of tax	Kenya	Uganda	Tanzania	Rwanda
Import duty	10%	0%	0%	0%
Export and investment promotion levy	17.5%	-	-	-
Import declaration fee	2.5%	-	-	-
Railway development levy	1.5%	-	-	-
Infrastructure development levy	-	1.5%	1.5%	1.5%
African union levy	-	-	-	0.2%
Quality inspection fee	-	-	-	0.2%
Total	31.5%	1.5%	1.5%	1.9%

Source: Kenya Association of Manufacturers - KAM (2024)

maintain consistent product standards. Additionally, local markets do not always offer the full range of raw materials needed, necessitating importation.

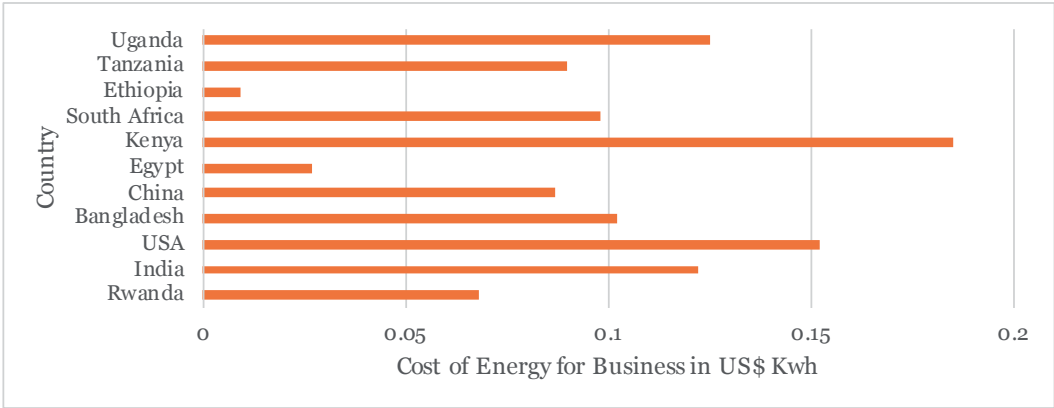
Firms that import raw materials are faced with constraints such as exchange rate risk and geopolitical disruptions that affect the supply chain. Additionally, imports are subject to various taxes, including import duty, the export and investment promotion levy, the import declaration fee, and the railway development levy, in addition to the EAC Common External Tariff bands. Compliance with additional taxes raises the cost of manufacturing raw materials. Table 5.6 shows a comparison of taxes on imported billets, between four EAC partners, where Kenya has the highest percentage of taxes on a raw material that is a key ingredient in the wire rods and hot-rolling sub-sectors.

The cost of electricity features both as a manufacturing and non-manufacturing cost component. However, electricity is a primary input for various manufacturing processes, and therefore the highest proportion of cost is in the production of goods. High electricity costs can lead to

increased operational expenses, eroding profit margins. Additionally, in a global marketplace, manufacturers must remain competitive on cost, and elevated electricity expenditure can force firms to raise product costs, making them less competitive against those from regions with lower energy costs.

Kenya's cost of electricity for industrial users ranges from approximately US\$ 0.10 to US\$ 0.20 per kilowatt-hour (kWh), making it relatively high compared to regional and global counterparts (Figure 5.9). In South Africa, electricity costs average around US\$ 0.07 to US\$ 0.12 per kWh, benefiting from coal generation. Ethiopia offers much lower prices, around US\$ 0.003 to US\$ 0.009 per kWh, largely due to its reliance on hydroelectric power. In comparison, China's electricity costs for industrial users are generally around US\$ 0.08 to US\$ 0.10 per kWh, benefiting from investments in renewable energy and a diversified energy mix. India's industrial electricity prices vary between US\$ 0.07 to US\$ 0.15 per kWh, with costs influenced by state-specific tariffs and generation methods (Globalpetrolprices, 2025).

Figure 5.9: Electricity prices for businesses as of June 2024 (kWh, US\$)

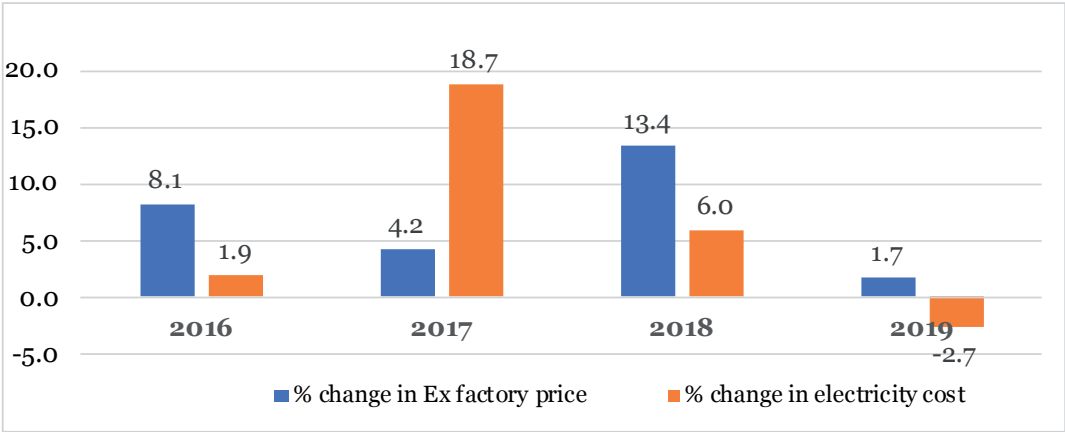


Data source: <https://www.globalpetrolprices.com/> and EPRA

Moreover, a study by KIPPRA (2021) sought to track the trends in the ex-factory prices versus the electricity cost across sectors. This was conducted by calculating the percentage change in the ex-factory price and the cost of electricity from the previous year. The food and beverage sector

registered an increase in both electricity costs (8.1) and ex-factory prices (1.9), and the same trend was replicated in 2017 and 2018. Notably, 2019 recorded a decline in electricity cost and the ex-factory price (Figure 5.10).

Figure 5.10: Percentage change of the ex-factory prices versus electricity cost in the food and beverage sub-sector (%)



Source: KIPPRA (2021)

The findings showed a relationship between electricity costs and the final product price (Figure 5.10). An increase in electricity costs raises the ex-factory price, as electricity is a component of production expenses. For instance, in 2019, several sectors—including chemical and allied, food and beverage, leather and footwear, metal and allied, paper and board, and textiles and apparel—experienced declines in both ex-factory prices and electricity costs (KIPPRA, 2021) following the removal of fixed charges across all consumer categories under the 2018/19 tariff structure. Additionally, many industries leveraged the discounted electricity rates under the Time of Use (ToU) tariff, introduced in 2017, by shifting production to off-peak hours between 10 p.m. and 6 a.m. (KIPPRA, 2021).

Non-manufacturing costs¹ are not directly traceable to the production process but are important in supporting the production and delivery of the finished product to consumers. While finance costs are within the range of 5 per cent to 10 per cent of revenue, the affordability of long-term credit is vital for the growth and development of the manufacturing sector (Figure 5.8). It allows firms to finance capital-intensive investments, such as acquiring modern machinery, expanding production capacity, and upgrading technology. These investments are essential for improving efficiency, productivity, and achieving economies of scale, which directly enhance the sector's competitiveness.

Further, access to affordable long-term credit also supports innovation and product development, enabling firms to diversify their product offerings and improve quality, which is critical in competing in both domestic and international markets.

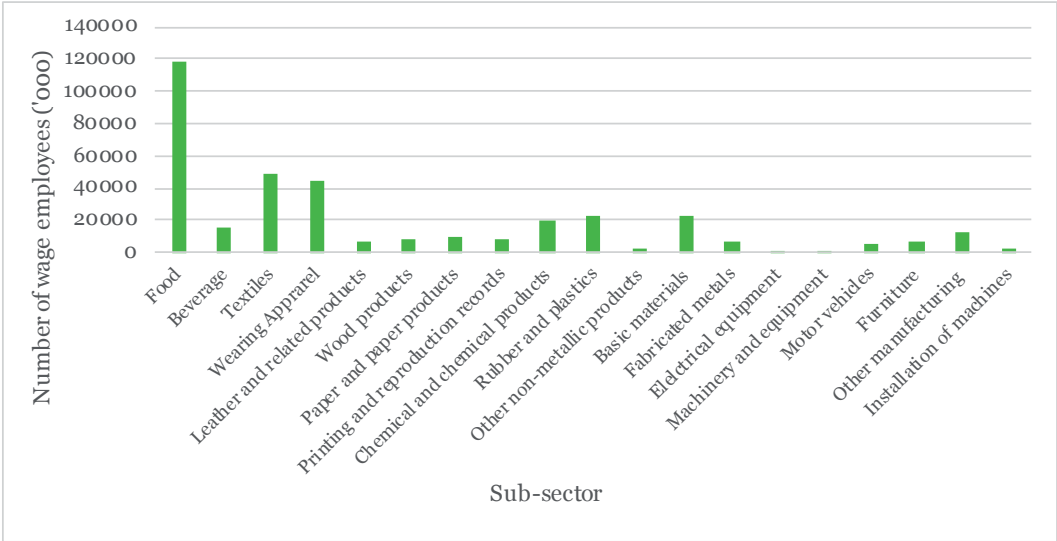
¹ Non-manufacturing costs include administration costs (e.g., office salaries), selling expenses (e.g., advertising), distribution expenses (e.g., transport costs), and finance costs (e.g., interest on loans).

Where the cost of borrowing is often high, lack of affordable credit can constrain industrial growth and prevent firms from adopting new technologies or expanding operations. Without access to affordable financing, manufacturers may struggle to modernize, innovate, or take advantage of growth opportunities, limiting their potential to drive industrialization and create jobs in the economy.

5.6 Firm Competitiveness and Job Creation

The manufacturing sector displays variation in employment distribution across its sub-sectors. Jobs are predominantly concentrated in labour-intensive sub-sectors such as textiles, wearing apparel, and food and beverage production. These sub-sectors absorb large numbers of workers due to their labour-intensity, low skill requirements, and their strong demand in both local and international markets. The nature of production in these sub-sectors often involves multiple stages requiring human labour, making them key contributors to employment. In contrast, capital-intensive sub-sectors, such as machinery, motor vehicles, and electrical equipment, create fewer direct jobs due to their dependence on automation and advanced technology.

Figure 5.11: Manufacturing sub-sector employment distribution ('000)



Source: KNBS (2024)

Manufacturing competitiveness, especially in labour-intensive sub-sectors, is crucial for employment growth. While low labour costs provide a comparative advantage, they must be complemented by low production costs. Success in producing low-technology products can enable firms to gradually upgrade their offerings, leading to increased productivity and value addition, thereby enhancing competitiveness while creating job opportunities.

A regression analysis was performed to examine the influence of cost competitiveness measured by five different cost components on employment growth. These components included administrative costs, finance costs, cost of goods sold, selling and distribution costs, and compliance costs. Capital intensity was also considered a firm-specific characteristic that may influence employment growth.

Administrative costs encompassed salaries and wages, utilities, office supplies, social responsibility expenditures, and other overheads. Selling and distribution costs included transportation, repairs, advertising, and additional operating expenses. The cost of goods sold consisted of the purchases of inputs and raw materials, business wares, and costs associated with product and process innovations. Compliance costs were defined as taxes and licenses, while finance costs reflected the interest on outstanding debt. All categories of cost were scaled by sales revenue to enable comparison. Employment growth was quantified as the per cent change in employment over time, calculated by the difference between initial and current regular employment divided by the simple average of current regular employment. The regression results are presented in Table 5.7.

Table 5.7: Regression results on the cost competitiveness and employment growth

Variables	Positive employment growth	Negative employment growth	Overall employment growth
Cost of goods sold	-0.00287 (0.0457)	0.00454 (0.00701)	-0.0638*** (0.0174)
Selling and distribution costs	0.139 (0.136)	-0.209* (0.112)	0.210 (0.278)
Administrative costs	-0.0969 (0.0812)	0.124 (0.103)	-0.100 (0.0954)
Finance costs	-0.132 (0.199)	0.0752*** (0.0233)	-0.221* (0.130)
Compliance costs	0.0161* (0.00932)	-0.368 (1.074)	0.0487** (0.0202)
Capital intensity	-0.186 (0.142)	0.162* (0.0882)	-0.326 (0.278)
Constant	1.678 (0.0550)	-0.852 (0.0804)	1.399 (0.0710)
Observations	346	54	400
R-squared	0.016	0.093	0.028

Note: Standard errors are in brackets

Source: Author's analysis based on the KNBS (2016), MSME Survey

The analysis of cost competitiveness reveals insights into how various costs influence employment growth. The findings show that the cost of goods sold has a negative influence on overall employment growth. An increase in the cost of goods sold leads to a 6.38 per cent decrease in overall employment growth. This highlights that higher production costs, whether due to expensive inputs, energy inefficiencies, or supply chain constraints, limit a firms' ability to create jobs. Lower production costs enable firms to reinvest savings in hiring and business expansion. Further, an increase in selling and distribution costs results in a 20.9 per cent decrease in negative employment growth, indicating that costs such as advertising may have a positive influence of employment growth as firms increase market share.

Moreover, an increase in finance costs leads to a 13.2 per cent decrease in overall employment growth, suggesting that higher financial obligations, such as debt servicing or interest payments, restrict a firms' capacity to hire. Additionally, there is a 7.52 per cent increase in negative employment growth, indicating that firms burdened with high finance costs are more likely to cut jobs. This finding strongly argues for the need to have affordable finance to support growth and expansion. Moreover, compliance costs show a positive relationship with employment growth. An increase in compliance costs leads to a 4.87 per cent increase in overall employment growth. This shows that firms capable of meeting regulatory and legal standards benefit from expanded market access, enabling them to create more jobs.

5.7 Key Messages and Policy Recommendations

5.7.1 Key messages

1. Price competitiveness, anchored on firm knowledge of trade agreements and non-tariff measures presents untapped potential in export markets through existing trade agreements, offering opportunities for expanded market share and decent job creation. While trade agreements provide access to export markets, information on non-tariff measures is key to effectively navigating and complying with market-specific requirements.
2. Quality competitiveness is constrained by low adoption of standards and inadequate enforcement against illicit trade. Illicit trade limits the manufacturing sector's ability to grow market share, and constraints focus on quality in the domestic market as counterfeit products distort fair competition and undermine consumer confidence in local brands. Intellectual property protection is essential for manufacturing firms as it incentivizes innovation by granting exclusive rights to their creations, ensuring that investments in research and development are safeguarded. Further, porous borders enable the smuggling of illicit goods from neighbouring countries.
3. Cost competitiveness is constrained by the manufacturing costs of firms. Production cost optimization enables business sustainability that fosters the creation of decent jobs. The cost of imported raw materials and intermediate inputs forms the bulk of the cost of production for manufacturers. Additional taxation over and above the established EAC

Common Market External Tariff and export-led duty remission scheme places firms at a disadvantage relative to other regional peers. Kenya's cost of electricity is higher than that of regional peers and other benchmark countries. Electricity costs are passed on to consumers through adjusted ex-factory prices of products.

5.7.2 Policy recommendations

1. To support quality competitiveness, strengthen adherence to standards, and reinforce intellectual property rights. The Anti-Counterfeit Authority could prioritize the coverage and implementation of the IPR Recordation Programme to reduce the importation of counterfeit goods by checking against a robust database of intellectual property rights. Further, strengthen border controls and inter-agency collaboration to deter the smuggling of illicit goods from neighbouring countries.
2. To enhance price competitiveness, leverage trade agreements and improve compliance with non-tariff measures. The Micro and Small Enterprises Authority together with other agencies such as the Kenya Investment Authority and the Kenya Export Promotion and Branding Agency could develop capacity building programmes for MSEs, with a focus on support towards compliance with standards, exploiting market access opportunities through existing trade agreements, and compliance with non-tariff measures.
3. To promote cost competitiveness, promote a predictable cost environment for raw materials, intermediate inputs and electricity. The National Treasury and the Parliament could develop a predictable tax regime for raw materials

and intermediate inputs that is cognizant of the duty remission scheme and the EAC Common External Tariff. Further, the State Department for Energy and the Energy and Petroleum

Regulatory Authority could fast-track the revision of the time-of-use tariff to allow more manufacturing firms to enjoy reduced electricity costs during off-peak hours.

6. Revitalizing Job Creation through Domestic Trade

The domestic trade sector plays a vital role in facilitating the distribution of goods from agriculture, manufacturing, and imports to final consumers, significantly contributing to trade and economic growth. The wholesale and retail trade (WRT) sector is a key driver of Kenya's economy, accounting for over 50 per cent of total employment, with 80 per cent of jobs in the informal sector. This chapter assesses employment trends, focusing on wages, working conditions, social protection, sanitation access, skills, gender disparities, and employment drivers. Despite its employment potential, the WRT sector faces low wages, poor working conditions, and limited social protection. The retail trade tier is highly informal, with workers concentrated in market stalls at 35 per cent, open-air markets at 25 per cent, and kiosks at 15 per cent, often having limited job security and fair wages. The wholesale trade tier offers more structured employment but depends on supply chain efficiency and credit accessibility. A skills gap exists, particularly in digital commerce, restricting opportunities in e-commerce platforms. While some sub-sectors such as pharmaceuticals and machinery require specialized skills, most economic activities such as agriculture-linked wholesale relies on workers with basic education. Employment growth is driven by consumer demand, contributing to 25 per cent; urbanization, e-commerce, supply chain and trade policies contribute to 20 per cent, 18 per cent, 15 per cent and 10 per cent employment growth rate, respectively, while automation and Artificial Intelligence contributed a 5 per cent decline in low-skilled retail jobs. Limited credit access and high interest rates have further constrained the growth of Micro and Small Enterprises

(MSEs). To sustain job growth, formalizing businesses, improving working conditions, and expanding access to credit, digital skills, logistics, and e-commerce are essential. Addressing wages, workplace protections, and gender disparities will ensure inclusive economic growth.

6.1 Introduction

Domestic trade, comprising Wholesale and Retail Trade (WRT) activities, makes a key contribution to Kenya's economy. In 2023, the sector accounted for 7.5 per cent of Gross Domestic Product (KNBS, 2024). The retail trade was the largest employing economic activity in 2023, accounting for over 45 per cent of the total employment and more than 70 per cent of the rural employment, followed by other trade-related sectors such as transport and construction (KNBS, 2023).

The WRT plays an important distributional role in the supply chain through purchase and resale of goods, including raw or intermediate materials used in production, consumer and durable goods. The wholesalers primarily serve other businesses such as retailers and manufacturers, as compared to selling directly to the end consumers. The retail traders include businesses that purchase merchandise from wholesalers and sell directly to consumers, usually without transforming the products. The retail trade represents the final stage in the distribution chain, offering goods in small quantities to individual consumers. The retail trade has a diverse range of businesses, from supermarkets and chain stores to informal market vendors and small neighbourhood shops. Some of them operate as store-based retailers while others operate as non-store retailers such as e-commerce platforms and

mobile vendors. These different modes of operations reflect adaptability to different consumer needs across urban and rural settings. A key feature of Kenya's wholesale and retail trade enterprises is diversity, with microenterprises and small enterprises (MSEs) that dominate the sector, to medium and large enterprises. The 2016 Micro, Small and Medium Enterprises (MSMEs) survey shows that about 85 per cent of the WRT sector consists of MSEs, which are vital in providing employment and livelihoods, though mostly operating in the informal sector. The informality is associated with challenges such as variations in business practices, compliance with regulatory and safety standards, poor working conditions, and limited access to financial and operational resources.

Because of its features, jobs in the WRT face constraints in meeting decent jobs as defined by the International Labour Organization (ILO) to include not only job creation but also the quality of those jobs. The decent work concept integrates aspects such as job security, conditions of work and employee satisfaction. Importantly, ILO's definition underscores four core pillars of the decent work agenda: productive and freely chosen work, rights at work, social protection, and social dialogue, which have proved time and again indispensable to achieving inclusive growth and social peace. Therefore, sustainable job creation requires a shift towards more formalized businesses that offer quality jobs with fair wages, proper working conditions and secure contracts. This includes ensuring that workers have access to social protection, clear grievance mechanisms and decent working environments both in terms of worksite and labour rights.

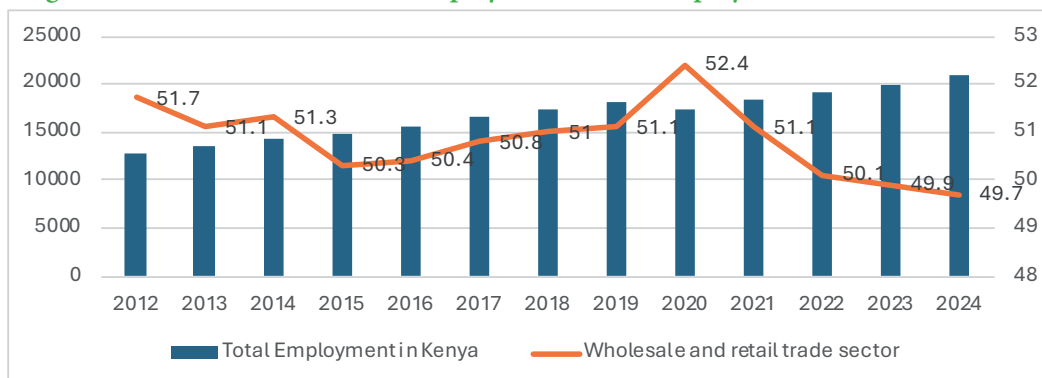
This chapter reviews the existing employment policies and regulations that govern the WRT sector. It evaluates the effectiveness of these policies in promoting decent work and highlights the gaps that

need to be addressed to enhance creation of quality decent jobs. The chapter assesses the impact of policy shocks on employment in the WRT sector, focusing on how policy implementation and changes in tax reforms, technological innovations and infrastructure investment can create direct jobs and generate spillover effects in related sectors such as agriculture, manufacturing, transport and storage, accommodation and food services, and finance and insurance sectors.

6.2 Current State of WRT Sector Contribution to Employment

The WRT sector serves as an important link between supply and demand in the economy by facilitating the distribution of goods from supply sectors such as agriculture and manufacturing to consumers and businesses. Enabling industries such as transportation and logistics, finance and insurance, ICT and digital infrastructure provide an essential ecosystem for efficient movement of goods from manufacturing industries and warehouses to wholesalers and retailers. These support sectors form an ecosystem, where growth and investments in the WRT sector have spillover effects to the supply sectors such as agriculture, and manufacturing. For instance, an increase in retail demand stimulates agricultural production and manufacturing output, thus contributing to more job opportunities. These linkages underscore the WRT sector's capacity to drive economic growth and employment across the related upstream and downstream sectors.

Total employment shows a consistent upward trend for the past 10 years, indicating expansion of jobs created across various economic sectors (Figure 6.1). The wholesale and retail trade sector is a major employer; over the last decade, it

Figure 6.1: Contribution of WRT employment to total employment

Data source: KNBS (Various), Economic Survey

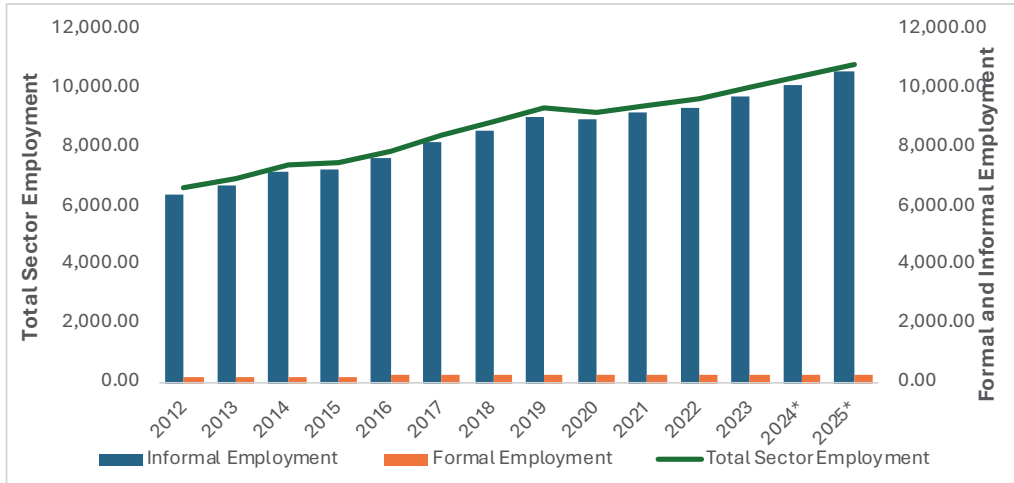
contributed about 50 per cent of the total employment in rural and urban areas, and more than 70 per cent in rural areas (KNBS, 2023). Employment in the WRT sector increased by 2.0 per cent from 272,800 in 2023 to 278,300 in 2024 (KNBS, 2025).

Employment in Kenya's WRT sector has been declining post-2020, raising concerns about its contribution to the economy. This decline may be linked to the weak performance of its key supply sectors (agriculture and manufacturing), which are essential for ensuring a steady flow of locally produced goods. With the domestic production constrained to meet demand, the WRT has increasingly relied on imports, which is associated with higher costs and rising inflation. This has resulted in higher retail prices, reducing consumer purchasing power and slowing sectoral growth. The sector has been lagging in recovery, reflecting constraints faced by traders, especially among the MSEs. Reliance on physical stores, informal setups, and limited access to capital constrain new businesses to sustain operations. This means that while the wholesale and retail trade sectors have the potential to create more job opportunities, they face vulnerabilities to shocks that dampen job prospects.

Figure 6.2 shows a continuous increase in the total employment for the last ten years and

is projected to increase to 10,777 thousand in 2025. Notably, informal employment accounts for 80 per cent of employment in this sector and has been consistently increasing over the years. However, formal employment has been relatively stagnant, with minimal growth over the past ten years. This indicates that while the sector's overall capacity to generate more jobs has expanded, the informal segment has been predominant. Informality in the sector is driven by regulatory constraints, high compliance costs, and labour market flexibility. Strict regulations and taxation discourage MSEs from formalizing due to administrative burdens (Besley and Persson, 2014). Additionally, firms often prefer informal labour arrangements to maintain flexibility and reduce compliance costs OECD (2023). The ease of entry and exit in informal markets and low capital requirements further sustain informality, allowing businesses to operate without the legal obligations (Williams and Horodnic, 2017). This raises concerns over the creation of decent jobs in the WRT sector and the need for policy interventions to promote formal job growth and improve labour security for decent jobs in the sector.

Figure 6.2: Formal and informal employment in the domestic trade sector



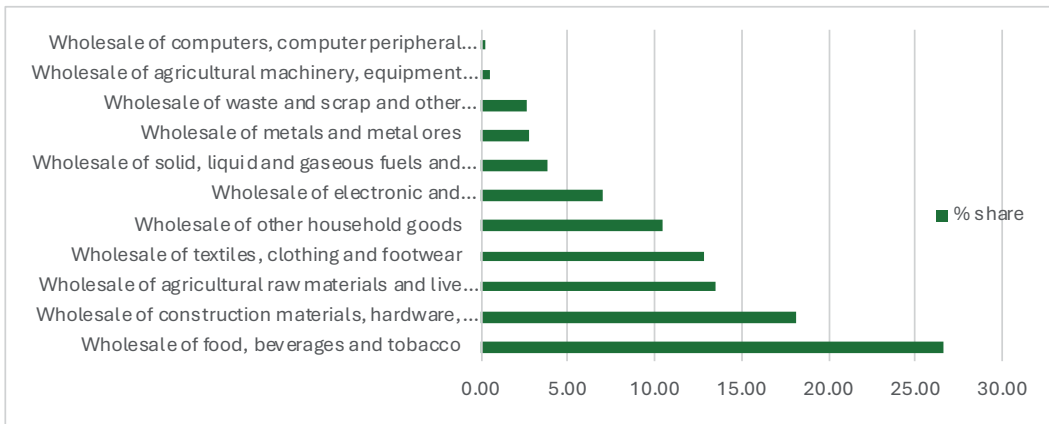
*Estimates

Data source: KNBS (Various), Economic Survey

The potential for job creation within the WRT sector can be by examining the two key wholesale and retail trade sector tiers. The wholesale trade tier generally has fewer employees compared to the retail trade tier but often has more formal jobs while in the retail trade tier, informal employment is prevalent. Figure 6.3 shows the distribution

of jobs within the wholesale trade. The largest share of employment is other specialized wholesale, which includes pharmaceuticals, and industrial goods accounting for 24.7 per cent. Wholesale of food, beverages, and tobacco accounts for 24.0 per cent of jobs, reflecting the sector’s dependence on agriculture for the supply of staple and processed goods. Wholesale household goods contribute 21.3 per

Figure 6.3: Distribution of jobs within the wholesale trade tier



Source: KNBS (2021), KCHS Survey

cent, which is largely driven by imports and manufacturing sectors that produce durable consumer goods such as furniture and textiles. Wholesale of agriculture raw materials and live animals accounts for 12.6 per cent, which directly links to the agriculture sector as it facilitates the aggregation and distribution of raw commodities. Wholesale of machinery, equipment and supplies accounts for 7.0 per cent. Wholesale trade has a heavy reliance on the manufacturing sector. This shows that the manufacturing sector is important in sustaining wholesale trade operations for sustainable growth and job creation.

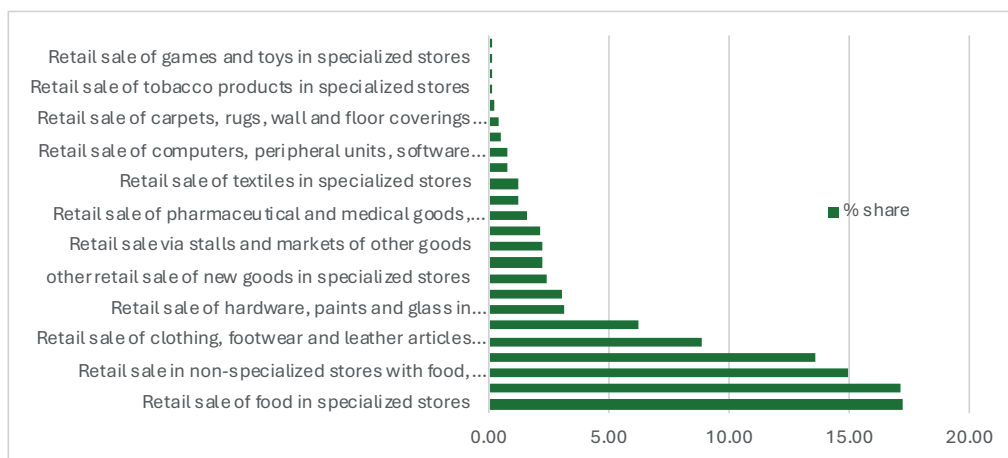
The distribution of employment across the retail trade tier (Figure 6.4) highlights the dominance of labour-intensive areas, particularly in food and beverage retail, which accounts for the largest share of employment through both specialized (17.17%) and non-specialized (17.25%) stores. E-commerce and mail-order operations contribute to 13.54 per cent of retail employment, reflecting the rising demand for online shopping platforms and related logistics. The pharmaceutical and healthcare sectors employ a significant

share at 8.85 per cent. Employment in second-hand goods has a share of 6.26 per cent, showing a notable focus on sustainability and the circular economy. Home and lifestyle products, including carpets and furnishings, contribute to 3.16 per cent of employment in retail trade, indicating potential for growth in this area. Information and technology sector, represented by sales of computers and peripherals, accounts for 0.75 per cent of jobs in the retail trade. This shows that a shift towards more innovation and technology will increase the number of jobs in this trade.

6.2.1 Wholesale and retail trade activities in counties

Job opportunities lie in supporting expansion into underserved areas such as arid and semi-arid lands (ASALs), peripheral towns and smaller urban centres. Rural areas and ASALs such as Turkana and Garissa face limited access to large-scale retail services due to logistical challenges and sparse populations. Urban informal settlements in cities such as Nairobi and

Figure 6.4: Distribution of jobs activities within the retail trade tier



Data source: KNBS (2021), KCHS Survey

Mombasa are often underserved due to infrastructure and security issues despite their high population and market potential. Peripheral towns and smaller urban centres on the outskirts of major cities and coastal and lake region towns outside main urban hubs also remain underserved.

6.2.2 Wholesale trade in counties

From data in Annex 6.1, employment potential varies across counties, with wholesale trade having a key role in job creation in urban centres. Nairobi leads in most sectors, employing the highest number of people in pharmaceuticals (17,837 jobs), food, beverages, and tobacco (14,961 jobs), and machinery and equipment (13,059 jobs). Its position as the country's capital and commercial hub makes it the dominant force in wholesale trade. Kiambu County has more jobs in non-specialized wholesale trade (21,865 jobs) and pharmaceuticals (6,029 jobs). Mombasa, Kenya's coastal trade hub, has a significant presence in the sale and repair of motor vehicles (15,184 jobs) and food, beverages, and tobacco (2,344 jobs), benefiting from its port-driven economy.

Some counties have outstanding performance in creating jobs in specific wholesale sectors. Nairobi leads in household goods (13,570 jobs), followed by Kakamega (4,577 jobs) and Kajiado (5,326 jobs), reflecting the demand for home supplies in urban and growing peri-urban areas. In machinery, equipment, and supplies, Nairobi is the highest with 13,059 jobs, Machakos 4,009 jobs and Kisumu with 690 jobs, also showing notable employment in this field. Pharmaceuticals is a key sector, attracting high employment across counties, with Nairobi employing the most people (17,837 jobs), while Kakamega (1,860 jobs) and Kajiado (3,766 jobs) also have a strong presence. Non-specialized wholesale trade is dominated by Nairobi (52,884 jobs), followed by Kiambu (21,865 jobs),

Machakos (4,706 jobs) and Bungoma (2,070 jobs) contributing significantly as well.

Agriculture-related wholesale activities are key employers, with Kericho County having the highest number of jobs at 24,410, Nyamira 3,229 jobs, and Bungoma 721 jobs leading in agricultural raw materials and live animals. Food, beverages, and tobacco wholesale provide a high number of jobs primarily in Nairobi (14,961 jobs), Kiambu (10,339 jobs), and Kakamega (3,371 jobs), indicating the importance of food processing and distribution. Meanwhile, the sale and repair of motor vehicles is a thriving sector, with Nairobi having 52,884 jobs, Kiambu 21,865 jobs, and Nakuru with 6,214 jobs showing a strong high number of jobs.

6.2.3 Retail trade employment in counties

Employment in retail trade is concentrated in urban and commercially active counties, with varying levels of specialization across different retail activities. Nairobi City County has the highest number of jobs in retail trade employment, with approximately 65,246 jobs created across various retail sectors. As Kenya's capital city and with the largest business hub, Nairobi has a highly developed retail market, including supermarkets, specialty stores, and informal markets. Kiambu County follows closely with 58,470 jobs, benefiting from its proximity to Nairobi and a rapidly growing urban population that drives demand for retail goods. Machakos also ranks among the top counties with 36,864 jobs, reflecting its position as a key commercial centre in the larger Nairobi metropolitan area. Other counties with significant retail employment include Makeni (15,929 jobs) and Kajiado (15,723 jobs), both of which have growing urban centres supporting retail activities.

Different counties have specialization in various retail sub-sectors. Retail of food,

beverages, and tobacco products is most prevalent in Nairobi, which accounts for 13,524 jobs, followed by Kirinyaga and Lamu, though on a much smaller scale. The retail sale of automotive fuel is also highest in Nairobi (14,683 jobs), followed by Kirinyaga (503 jobs) and Tharaka Nithi (354 jobs), suggesting that urban centres and transportation corridors are the key drivers of this segment. The retail sale of ICT equipment is another major employer, with Nairobi having the highest number (46,842 jobs), followed by Nakuru (11,780 jobs) and Machakos (7,728 jobs). This trend reflects the concentration of technology and electronics businesses in major urban centres. Similarly, the retail sale of household equipment is highest in Nairobi (46,842 jobs), Machakos (7,728 jobs), and Migori (4,542 jobs), indicating demand in urban and semi-urban regions.

Retail employment in pharmaceutical and other specialized goods is particularly strong in Nairobi, which accounts for 110,306 jobs (the highest among all retail categories). Kiambu (24,612 jobs) and Nakuru (22,367 jobs) also have significant employment in this sector, highlighting the growing demand for healthcare-related retail. Counties with active market-based retail trade include Nairobi (79,107 jobs), Kisumu (20,486 jobs), and Mombasa (14,551 jobs). These counties have vibrant informal retail markets where traders operate outside conventional store spaces. Further, the retail trade not conducted in stores, stalls, or markets is particularly high in Mombasa (36,990 jobs), Kiambu (30,846 jobs), and Nairobi (29,217 jobs), suggesting a growing trend in mobile and online-based retail businesses.

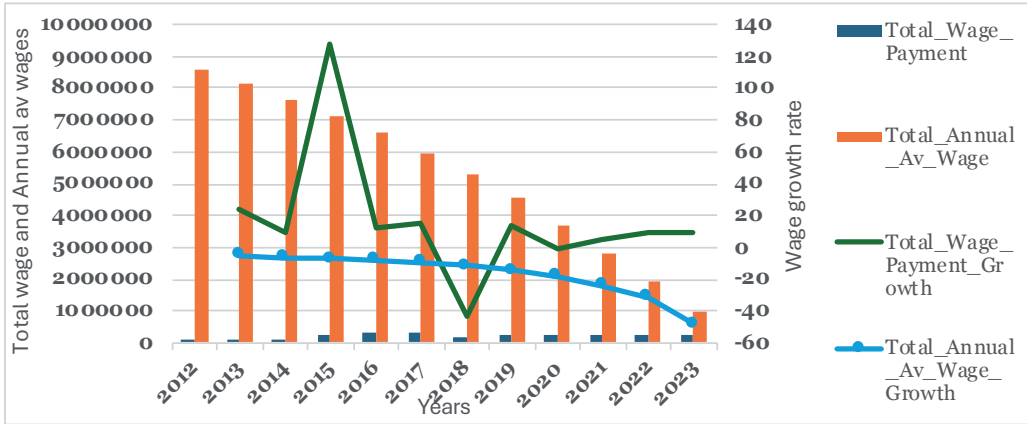
6.3 Analysis of Wages and Job Quality for Decent Jobs in the Trade Sector

6.3.1 Wage levels and role in poverty reduction

The Protection of Wages Convention by ILO establishes comprehensive measures to safeguard workers' wages. It defines wages as monetary remuneration for work performed, and mandates that wages be paid in legal tender, with limited allowances for in-kind payments under regulated conditions. The Convention emphasizes direct and timely payment of wages, prohibits wage deductions and restrictions on workers' freedom to use their earnings, and prioritizes wage claims in cases of employer bankruptcy. It also ensures that workers are informed of wage conditions and payment details, prohibits coercion to use employer-operated stores or services and mandates regular reporting and legal compliance. These provisions aim to promote economic security, prevent exploitation and support workers' rights globally.

Evidence shows that a significant portion of workers in the trade sector are employed in low-paying jobs with limited job security and poor working conditions (ILO, 2020). The lack of decent job opportunities not only affects individual workers but also reduces consumer demand, as low wages limit household purchasing power, restricting spending on essential and non-essential goods. This, in turn, slows economic activity in the retail and wholesale trade sector, creating a cycle of stagnant growth and declining job creation. Persistently low wages contribute to rising poverty levels, making it harder for workers to invest in education, healthcare, and improved living standards, ultimately hindering long-term economic prosperity.

Figure 6.5: Total wage payment and total annual average wage growth (in Ksh millions)



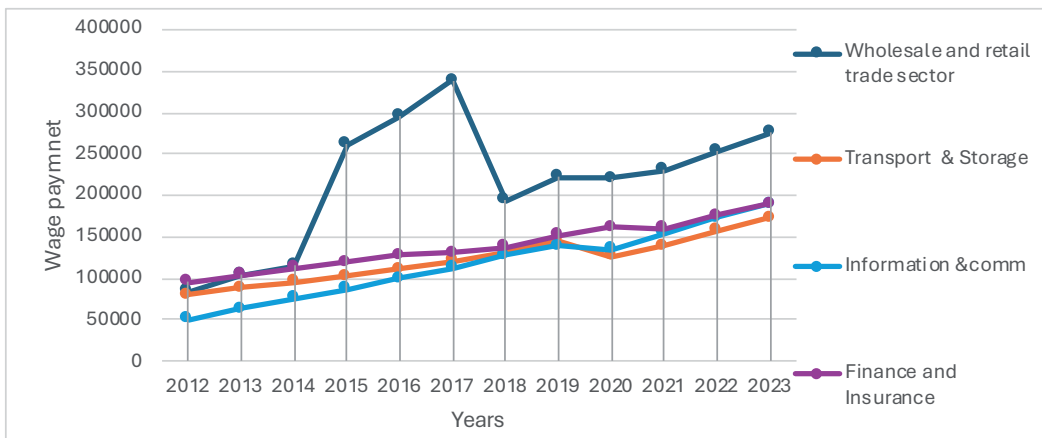
Data source: KNBS (Various), Economic Survey

Figure 6.6 shows a divergent trend between the overall wage payments and the average wage per worker, which points to underlying structural issues with the domestic trade sector labour market. Despite an increase in the total wage payments, there has been a consistent decline in average wages, suggesting that job creation has largely occurred in lower-paying positions and possibly within the informal sector or to

roles that offer minimal compensation. This also reflects on the rise of part-time or uncertain employment and limited wage growth in formal employment for this sector.

The wholesale and retail trade sector is the largest employer in Kenya and has the potential to reduce poverty through wage generation. The sector provides vital

Figure 6.6: Wage payment in major services sectors (in Ksh millions)



Data source: KNBS (Various), Economic Surveys

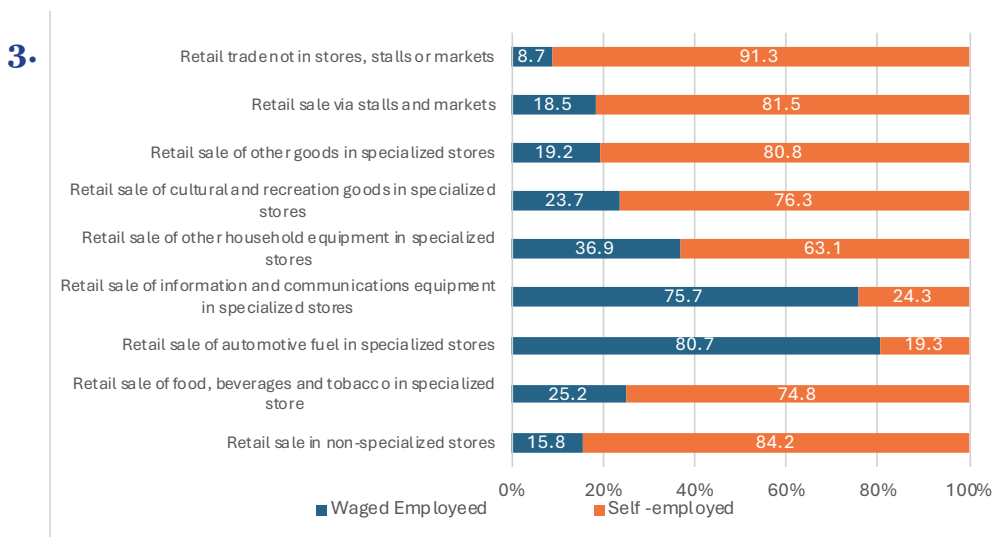
income opportunities, especially for low-skilled and entry-level workers. Enhancing wage levels and job quality within this sector could significantly impact poverty reduction in Kenya. Total wage payment in the wholesale and retail trade sector has been increasing, with a major spike in 2015 when the Public Sector Wage Bill was implemented, leading to a substantial increase in total compensation paid within the sector. However, this growth has been inconsistent, with notable fluctuations in subsequent years, which shows the volatility in wage payments in this sector. Further, the total annual average wage has consistently been declining over the period. The average wage growth rate has dropped significantly, highlighting a persistent reduction in the average income received by workers in this sector annually.

6.3.2 Wage earnings in the wholesale and retail trade

The analysis of wage earnings within the wholesale and retail trade sectors shows a distinct pattern of employment and earnings. Both types of domestic trade show a trend of small-scale businesses, typically employing between 1 and 2 workers. In the retail trade, the average number of employees per business is slightly higher (1.791), compared to the wholesale trade (1.583), probably due to the high prevalence of retail trade.

Figure 6.7 shows that the retail trade sector has a dual employment structure, with self-employment dominating most retail trade activities and wage employment concentrated in specialized categories. Self-employment accounts for 91.3 per cent of employment in retail trade, not in stores, stalls and markets and 81.5 per cent in retail through stalls and markets. This reflects the informal and entrepreneurial nature of retail trade. Self-

Figure 6.7: Employees for wage and self-employees in the retail trade tier



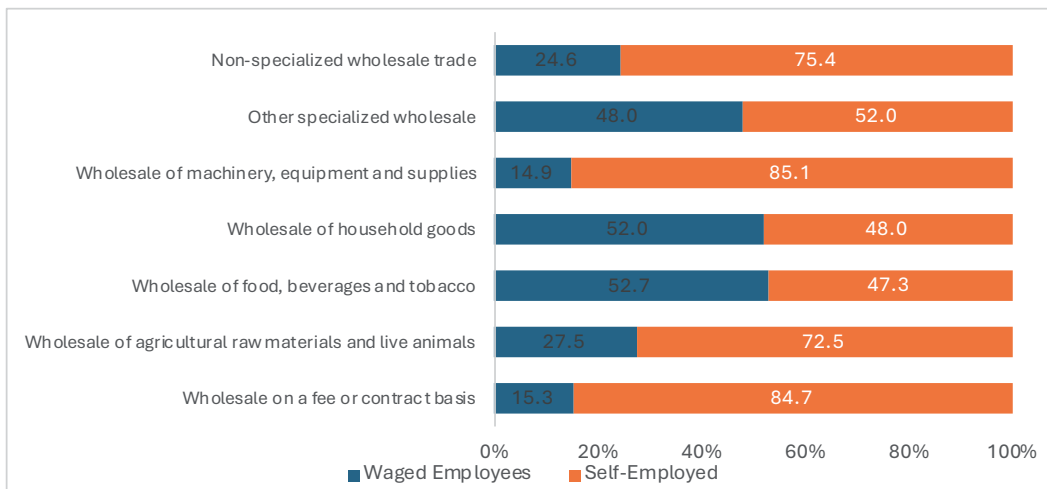
Data source: KNBS (2021), KCHS Survey

employment is high in categories such as retail sales of pharmaceuticals and other goods in specialized stores, accounting for 81.0 per cent. Sub-sectors such as food, beverages and tobacco, and sale of cultural and recreational goods account for 75 per cent and 76 per cent of self-employed individuals. Wage employment is prominent in specialized and formalized activities such as retail sale of information and communication equipment, where 76 per cent of employees are waged and retail sale of automotive fuel had 81 per cent of waged employment. These types of retail trade require technical expertise and operate within regulated environments. A high prevalence of self-employment across most categories shows the informal nature of this tier. The growth of waged employment in specialized retail points to the importance of enhancing skills training and technical capacity to enhance job creation in formal retail activities.

Figure 6.8 shows the distribution of waged employees and self-employed individuals within the wholesale trade tier. Wholesale

of machinery, equipment and supplies has the highest proportion of self-employed individuals at 85.0 per cent, wholesale on a fee or contract basis accounts for 84.7 per cent, and non-specialized wholesale trade is at 75.0 per cent. This reflects on the reliance on small-scale entrepreneurial operations in these segments. The wholesale of agricultural raw materials and live animals accounts for 73.0 per cent, indicating the presence of informality of the agricultural value chain. Other categories such as wholesale of household goods have 48.0 per cent self-employed and 52.0 per cent waged employees. Wholesale of food, beverages and tobacco has 47.3 per cent self-employed 53.0 per cent waged employees. For these economic activities, employment is more evenly balanced, indicating presence of both informal and formal employment structures and independent operators. The wholesale of pharmaceuticals and other specialized wholesale categories reflects a balance in wages and self-employed employees driven by niche goods and high-value trade. This distribution shows the importance of policies that support self-

Figure 6.8: Employees for wage and self-employees in the wholesale trade tier



Data source: KNBS (2021), KCHS survey

employed operators in informal segments while encouraging the formalization of categories with the potential for scaling, such as wholesale of food and household goods. Improving linkages with agriculture and manufacturing, which supply many of these goods, could create more stable wage employment opportunities across the WRT sector.

6.4 Working Conditions and Labour Rights in the Wholesale and Retail Trade Sector

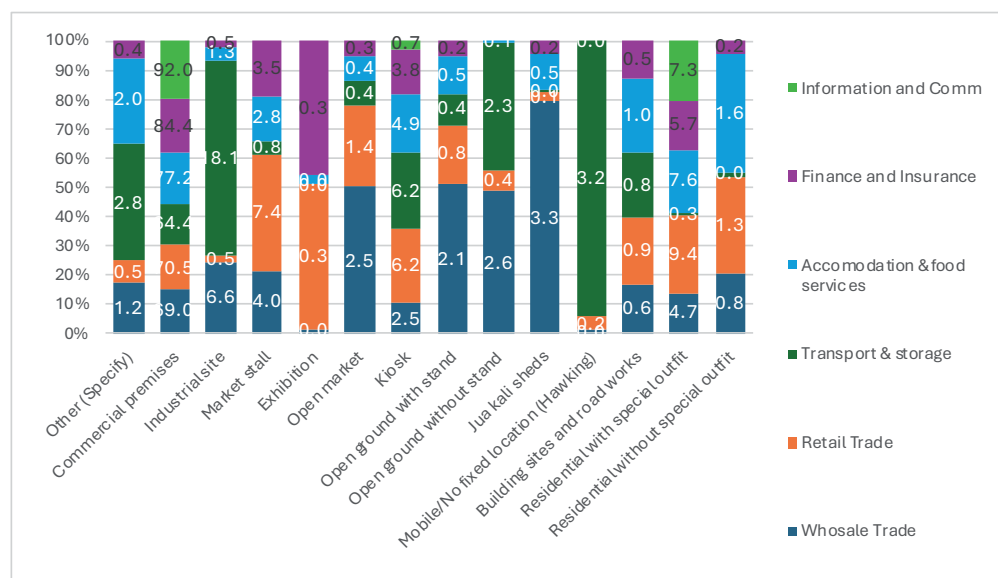
6.4.1 Access to worksites

The ILO reports have highlighted challenges, particularly concerning access to worksites and overall working conditions in informal employment. Informal sector workers in Kenya face significant barriers to decent work, including limited access

to secure worksites and decent work with formal employment benefits. This situation is prevalent in sectors such as agriculture, construction and retail trade. There is therefore a need to improve policies that ensure safer and more secure work environments, particularly for informal sector workers who make up a substantial portion of Kenya’s labour force.

Most workers, especially in the trade sector, operate under risky conditions without formal contracts, making it difficult for them to access proper benefits and secure working environments (ILO, 2023). This is supported by Kenya’s MSMEs Survey (Figure 6.9), which reveals that there are significant differences in worksite access across major services sectors. In the wholesale trade tier, a substantial share of the employees (40%) are in commercial premises, industrial sites 30 per cent, market stalls 12 per cent, and open markets 10 per cent. These worksites show that at least the wholesale trade tier has a structured and formal nature of employment because many employees work in well-established and regulated environments, such as

Figure 6.9: Access to worksites



Data source: KNBS (2016), MSMEs Survey

commercial premises and industrial sites.

However, data shows a different pattern in the retail trade tier, where most employees are concentrated in market stalls at 35 per cent, open markets at 25 per cent, and kiosks account for 15 per cent. Additionally, hawking or *jua kali* sheds account for 10 per cent, while mobile or no fixed locations account for 8 per cent of retail trade employees. This concentration of workers in more informal and less structured environments shows the WRT sector reliance on informal employment spaces, which may suggest lower job quality, less security and fewer benefits compared to more formalized settings such as those predominant in the wholesale trade sector.

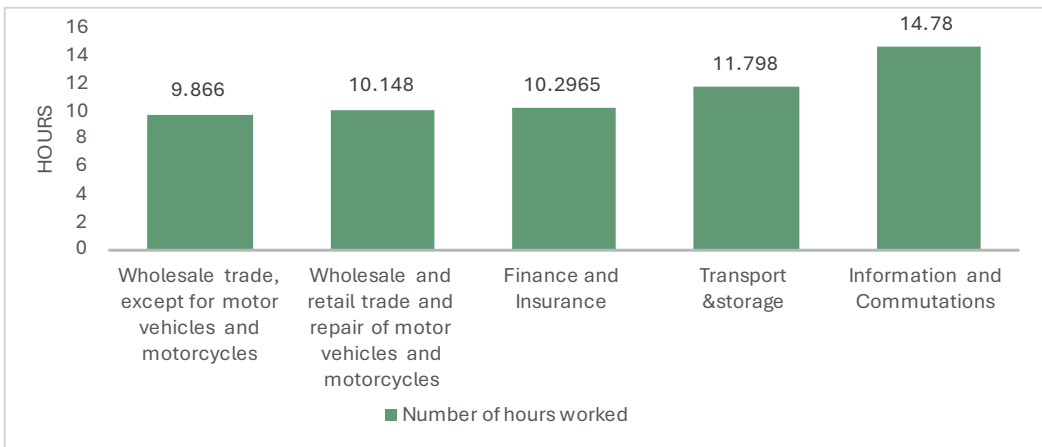
6.4.2 Hours of work

The ILO recognizes the importance of regulating working hours as a key aspect of decent work. According to ILO standards, the maximum number of working hours should be limited to prevent overwork and ensure workers’ health and safety.

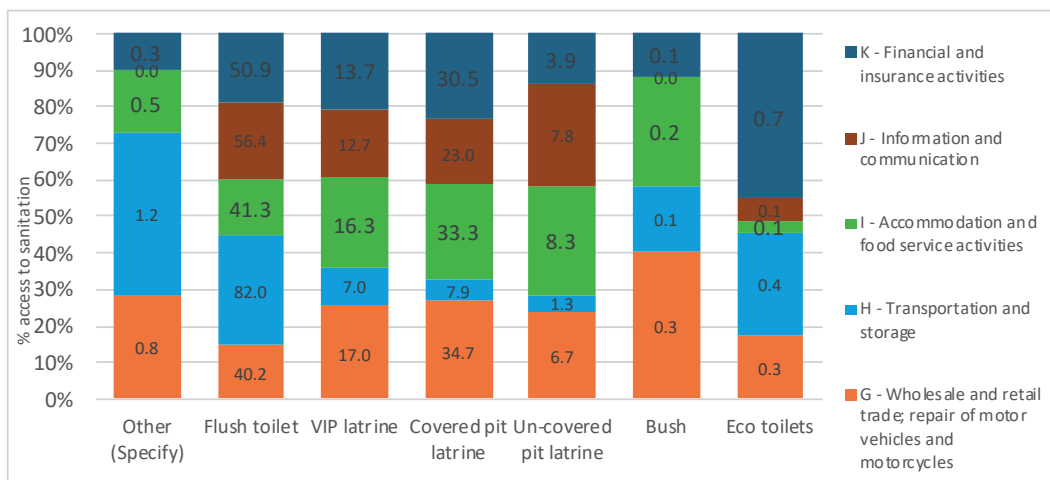
The ILO also advocates for predictable hours and rest periods, emphasizing that excessive working hours can undermine job security and reduce the overall quality of employment. For Kenya, the ILO notes that many workers, particularly in informal and service sectors, face unregulated hours, which directly impacts job quality and worker satisfaction. Therefore, managing working hours, particularly in labour-intensive sectors such as wholesale and retail trade, is critical for improving job quality. Workers in this sector often work extended hours due to the nature of the business, but ensuring these hours are balanced with adequate rest and fair compensation is essential for fostering sustainable employment.

In terms of hours worked, the wholesale and retail trade sector show a mix of flexibility and stability. Employees in the wholesale trade tend to have more consistent working hours (averaging 9.87 hours per day), which can contribute to better work-life balance and predictability. This consistency

Figure 6.10: Hours worked in the wholesale and retail sector



Data source: KNBS (2016), MSMEs Survey

Figure 6.11: Access to sanitation facilities

Data source: KNBS (2016), MSMEs Survey

is a positive indicator of job quality, as it can reduce the stress associated with irregular work schedules and allow for better time management.

6.4.3 Access to sanitation facilities and waste management infrastructure

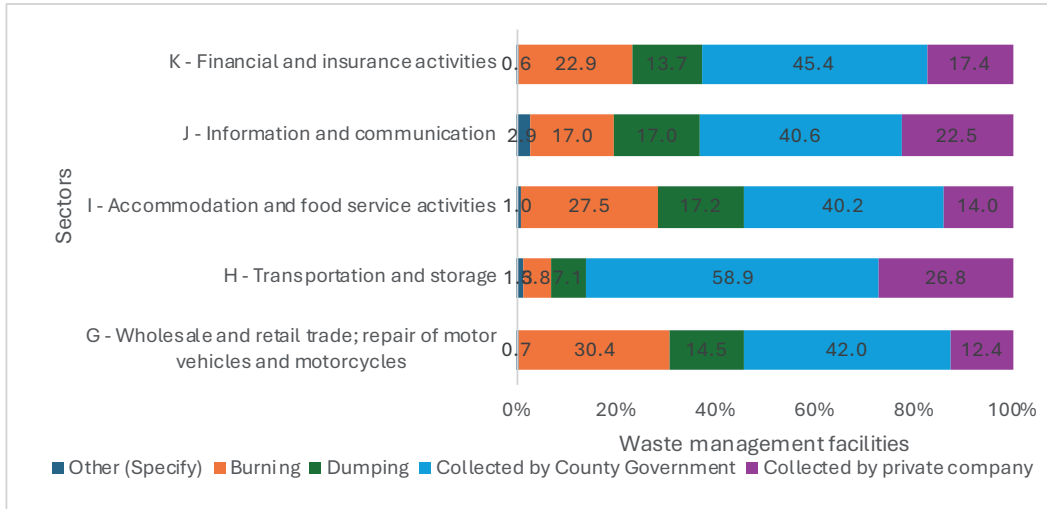
The ILO highlights that access to sanitation facilities is a core aspect of decent working conditions. Adequate sanitation, including clean toilets and safe drinking water, is critical for maintaining workers' health, safety, and productivity. Poor sanitation can lead to health issues, increased absenteeism, and affect job quality, especially in sectors such as the wholesale and retail trade, where informal employment is common. The ILO advocates for governments and employers to ensure that these basic facilities are provided, particularly for vulnerable workers.

The wholesale and retail trade sector, including the repair of motor vehicles and motorcycles, faces critical challenges in

providing adequate sanitation facilities, which directly impacts the creation of decent working conditions (Figure 6.11). Over 40 per cent of WRT workers have access to flush toilets, but this is lower than in other sectors such as transportation and storage 82.0 per cent, accommodation and food services 41.3 per cent, information and communication sector 56.4 per cent, and financial and insurance activities at 50.9 per cent. Further, 6.7 per cent of workers in the WRT sector rely on uncovered pit latrines and 0.3 per cent leads to bush defecation. This shows that there is a significant gap in sanitation infrastructure, which undermines workers' dignity, safety and health in this sector.

Low access to proper sanitation facilities presents a policy issue in ensuring decent jobs, which is a key component of Kenya's national development and labour agenda. Adequate sanitation is essential for maintaining workers' morale, reducing health risks and boosting productivity. Reliance on uncovered latrines and bush defecation exposes workers to unsanitary conditions, increasing the risk of disease

Figure 6.12: Access to waste management facilities



Data source: KNBS (2016), MSMEs Survey

and absenteeism, which ultimately affect the sector’s efficiency in having decent jobs. Aligning decent jobs requires policies that prioritize investment in improved sanitation infrastructure within warehouses, retail spaces and motor repair facilities. Regulations should require minimum sanitation standards, including the provision of flush or covered toilets at all WRT workplaces. This builds competitive and sustainable jobs by improving employees’ well-being and enhancing productivity.

Waste management practices in the WRT sector faces constraints that hinder efforts to create decent jobs in this sector. In the WRT sector, 30.4 per cent of waste is disposed of by burning and 7.1 per cent through dumping. These practices pose serious health risks to workers through exposure to toxic fumes and hazardous waste. Only 14.5 per cent of waste is collected by county governments and 12.4 per cent by private companies, suggesting that there is a limited reliance on formal waste management systems. In comparison to other services sectors such as transportation and storage,

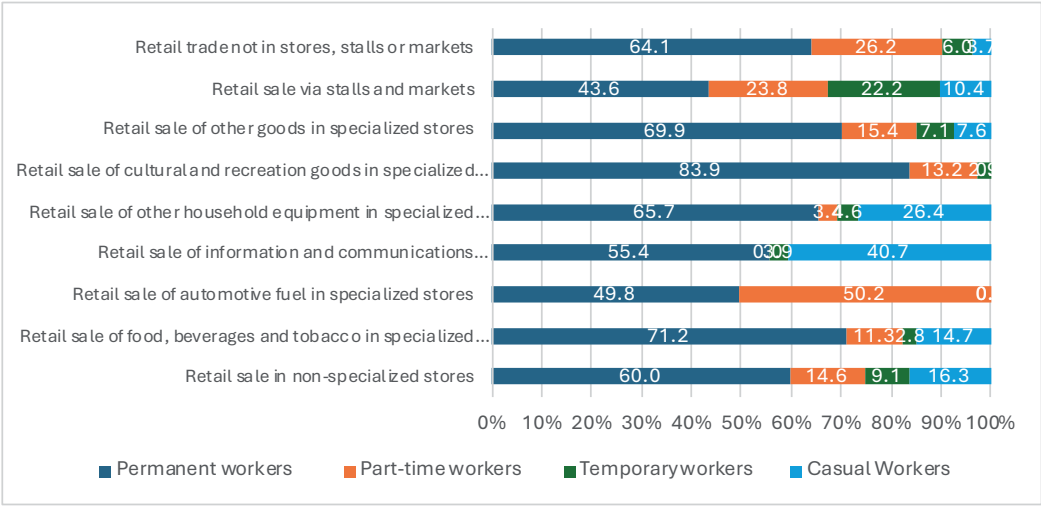
these sectors show to benefit from better waste management infrastructure with 58.9 per cent of waste managed by county governments and 26.8 per cent by private companies.

This reliance on unsafe waste disposal methods in the WRT sector raises concerns about its ability to provide decent working conditions essential for workers’ health, safety and dignity. To align with SDG 8 for decent work and economic growth, there is a need for interventions that promote formal waste management systems, reduce reliance on burning and dumping and leverage PPPs in waste collection. Improving on waste management infrastructure means improving workers’ well-being but boosting productivity and creating a sustainable and competitive sector that meets international labour standards.

6.4.4 Evaluating the prevalence of secure vs insecure employment

Secure forms of employment, such as permanent and contract-based jobs,

Figure 6.13: Type of employment contract in the retail trade tier

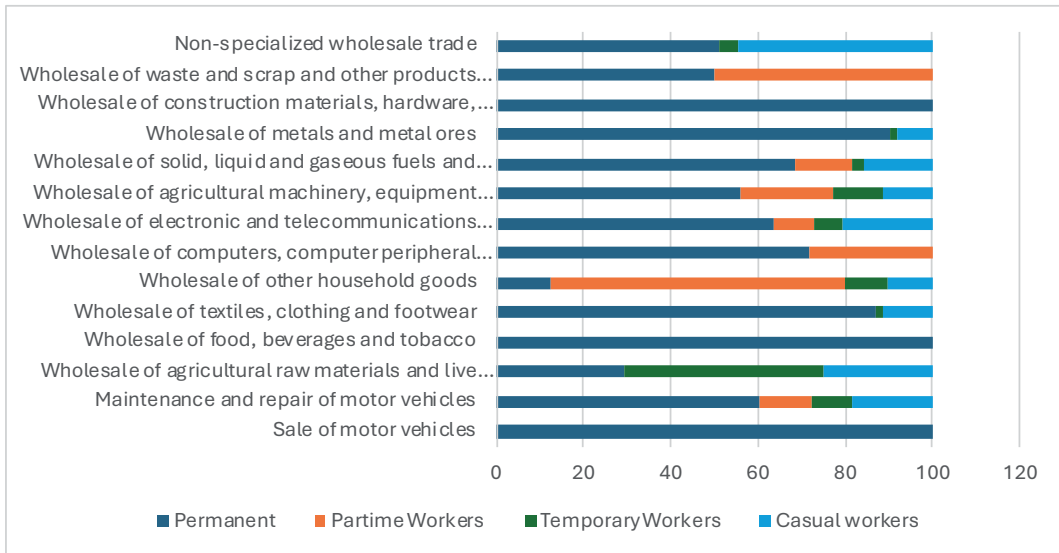


Data source: KNBS (2021), KCHS Survey

provide workers with high levels of job security, access to social benefits and legal protections, better healthcare, pensions and paid leave. These forms of employment are often tied to better and decent working conditions, which allow individuals to build long-term careers and contribute more effectively to economic growth. Further, insecure forms of employment, such as temporary, casual and day labour are characterized by instability and lack of legal and social protection. Temporary workers often have short-term job contracts with limited access to benefits, while casual and day labourers are employed on an informal basis typically without employment protection. These workers face significant risks of income instability, job insecurity and vulnerability to exploitation. The ILO notes that temporary and insecure work is becoming more common, especially in low- and middle-income countries and in sectors such as agriculture, construction, and services sectors.

Sectors such as the retail sale of beverages, food and tobacco in specialized stores have a high percentage of permanent workers

(100%). This shows that there is more job stability in retail businesses dealing with essential goods such as food items. Retail sale of food specialized stores also has a significant proportion of permanent workers (66%). Other sectors such as online retail at 97 per cent and market stalls at 48 per cent heavily rely on casual labour, indicating a more flexible and informal employment setup. Temporary workers are more prevalent in sectors such as retail sale of games and toys in specialized stores at 44 per cent and household appliances 45 per cent, which experience seasonal demand. Part-time work is significant in retail of audio and video at 80 per cent, suggesting that there is seasonal or fluctuating demand where employers hire part-time workers to manage peak periods. Additionally, part-time positions offer flexibility in attracting students and individuals seeking non-traditional hours. The rise of online retail and smaller store sizes further contribute to this trend, as fewer full-time employees are needed for in-store operations. Therefore, the reliance on flexible and insecure employment means that a significant

Figure 6.14: Type of employment contract in the wholesale trade tier


Data source: KNBS (2021), KCHS Survey

portion of the workforce may experience unstable incomes and limited opportunities for career growth, which are key aspects of decent work.

Most wholesale activities show a high dominance of permanent workers, which suggests that there is a stronger presence of secure and long-term employment. For instance, activities such as the wholesale of construction materials, and the sale of motor vehicles have a high number of permanent workers (100%). Wholesale of solid, liquid and gaseous fuels has 69 per cent of permanent workers and the wholesale of food beverages and tobacco has 87 per cent of permanent workers. Part-time and casual employment is relatively uncommon in most wholesale activities. Part-time work is very minimal, except in sectors such as wholesale of electronic and telecommunications equipment at 21 per cent and wholesale of other household goods at 13 per cent. Further, casual work is limited, with a few sectors such as wholesale of solid, liquid and gaseous fuels at 16 per

cent and sale of motor vehicles at 18 per cent. Low prevalence of casual and part-time work suggests that many wholesale sectors prefer to hire workers permanently, which likely results in better employment conditions for most workers. However, the reliance on temporary and casual labour in some of the activities such as contract-based wholesale activities and sale of motor vehicle parts indicates that some workers still face insecure job conditions and may require policy interventions to ensure that all workers regardless of their contract type have access to the protections and benefits necessary for decent work.

6.4.5 Labour rights and access to benefits

The ILO provides a comprehensive framework to ensure that workers in the trade sector have access to and can exercise fundamental labour rights that include the right to unionize, engage in collective bargaining, and access to grievance mechanisms. Through ILO Conventions

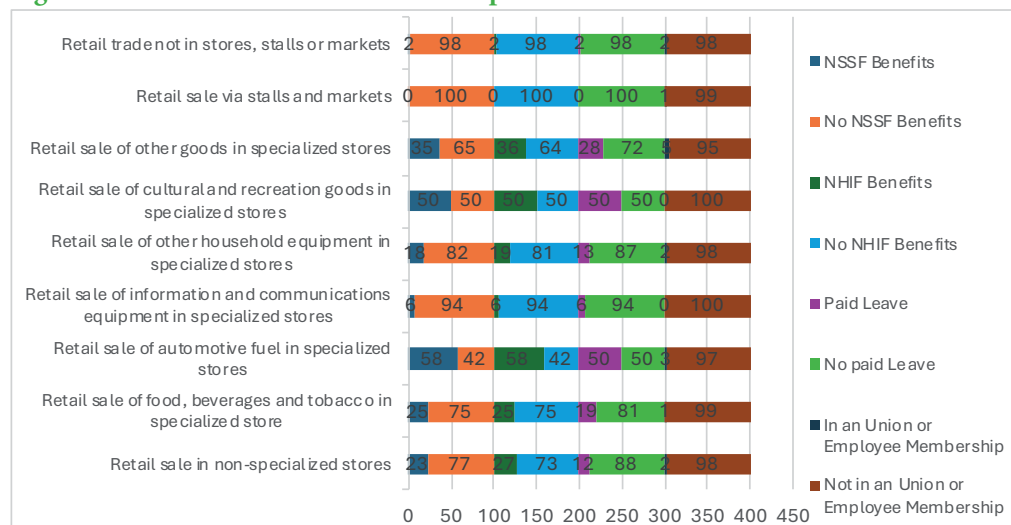
No. 87 and No. 98, workers are guaranteed the freedom to form or join trade unions and negotiate collectively for improved working conditions, wages, and benefits. The ILO also protects workers from anti-union discrimination, ensuring that those involved in union activities are not penalized by their employers. Additionally, the ILO promotes the establishment of effective grievance mechanisms and dispute resolution systems, such as mediation and arbitration, providing workers with formal channels to address workplace issues. Workers also have the right to strike as a last resort in stalled negotiations. These rights aim to promote decent work, ensure job security, fair treatment, and protection for workers in the trade sector while encouraging a just and equitable working environment for decent and sustainable work.

In retail trade, data shows that union membership is very low across most activities, with retail sale through stalls and markets of textiles, clothing and footwear having only (1%) unionized workers, indicating a lack of collective bargaining

power for most workers. Access to health benefits is high in economic activities such as retail sale of beverages and retail of tobacco products, which have 100 per cent access to health benefits. However, workers in most retail activities do not have access to health insurance benefits. The NSSF benefits are widely available in some activities such as retail sale of beverages (100%). However, other activities such as those involving market stalls show a gap in access to National Social Security Fund (NSSF) benefits. Paid leave is important because it allows workers to take time off for personal or medical reasons without fear of losing their income. Most retail trade activities in the retail trade do not have access to paid leave, showing that only 33 per cent of workers in the retail trade have access to paid leave. This means that there is a need for better enforcement of labour standards to ensure that all workers have access to protection that contributes towards decent work.

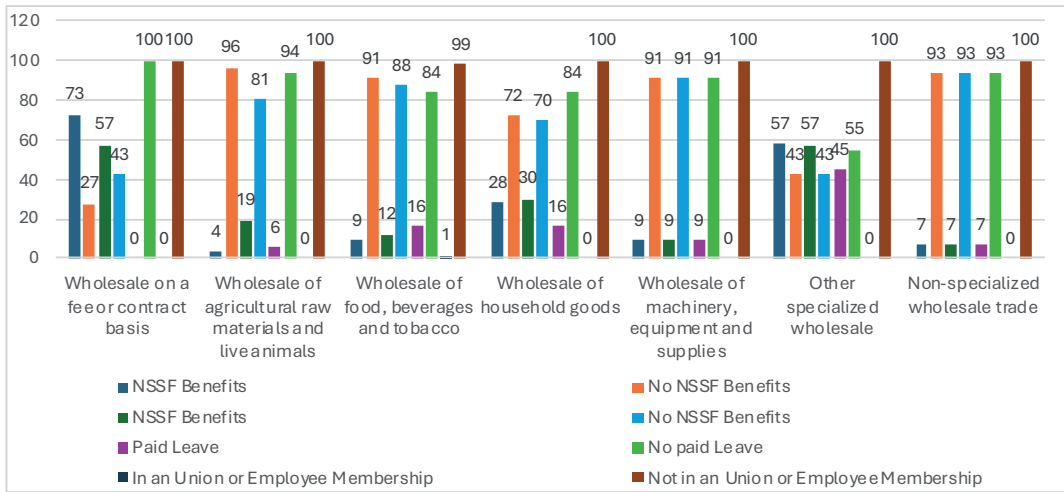
Figure 6.16 shows the state of decent work in the wholesale trade focusing on union membership, access to NHIF (health

Figure 6.15: Access to benefits and social protection in the retail tier



Data source: KNBS (2021), KCHS Survey

Figure 6.16: Access to benefits and social protection in the wholesale tier



Data source: KNBS (2021), KCHS) Survey

insurance), NSSF (social security) and paid leave. Union representation is notably low across most sectors, with only 7 per cent of workers in wholesale of waste and scrap and 6 per cent in the sale of motor vehicles being unionized while most activities have no union representation at all. Employees not being in unions means that workers in the wholesale trade are limited to engaging in collective bargaining and negotiating for better working conditions. Access to health insurance is widespread in most sectors, with sectors such as wholesale of food beverages and tobacco and maintenance and repair of motor vehicles having 10 per cent access to health insurance. However, there are significant gaps in other sectors such as the wholesale of metals and metal ores (28%) and wholesale of solid, liquid and gaseous fuels (9%) of workers accessing health benefits. Access to NSSF benefits is also largely prevalent in some activities such as sale of motor vehicles and maintenance and repair (100%) but most workers in this sector do not have access to NSSF benefits.

Provision for paid leave varies across the activities, showing disparities in the provision of this benefit, which is key for decent jobs since most of the activities have low access to paid leave. The sale of motor vehicles and maintenance of motor vehicles (100%), wholesale of solid, liquid, and gaseous fuels (90%), wholesale of other household goods sector (72%), wholesale of textiles clothing and footwear and 54 per cent have access to paid leave. These disparities suggest that while some sectors are meeting decent work standards in providing paid leave, others, particularly in areas such as textiles and house goods still have significant gaps that need to be addressed to ensure fair labour conditions for all workers.

6.5 Skills and Training of Employees in the Wholesale and Retail Trade Sector

The wholesale and retail trade sector is an important component of economic policy due to its substantial contribution to employment across diverse skill levels. As a major source of both skilled and unskilled labour, the sector plays a key role in reducing unemployment and enhancing social inclusion, particularly in regions with limited industrial development. However, it faces ongoing challenges related to labour market dynamics, including the imperative for upskilling and reskilling to align with technological advancements and evolving consumer preferences.

The WRT sector reflects a significant skills gap, with a large proportion of employees possessing primary and secondary education and relatively fewer workers holding vocational training or university

degrees. In the wholesale trade, low skills are prevalent in the agriculture sector and sale of non-specialized wholesale. Most workers have basic primary education at 45 per cent and secondary education at 33 per cent in the agricultural sector and 46 per cent and 44 per cent for primary education and secondary education, respectively, in sale of non-specialized wholesale. This limits productivity and innovation. The sub-sectors such as machinery equipment and supplies and pharmaceuticals and other specialized wholesale show a higher proportion of workers with vocational training or university education at 89 per cent and 38 per cent, respectively. This is associated with the fact that sectors dealing with complex and technical products inherently demand more specialized knowledge. These sectors are highly regulated, requiring adherence to strict legal and safety standards. These regulations demand a workforce trained in quality control, documentation and compliance pushing for higher skills levels.

Table 6.1: Skills levels and education qualifications of employees in the wholesale trade

Type of Trade (Wholesale trade)	1 st Level (Primary education %)	2 nd level (Secondary education %)	3 rd level (Vocational training/Diploma %)	4 th level (University education %)
Wholesale on a fee or contract basis	13	24	63	0
Agriculture raw materials and live animals	45	33	17	6
Food beverages and tobacco	32	46	15	8
Household goods	22	43	26	9
Machinery equipment and supplies	7	4	5	84
Pharmaceuticals and other specialized wholesale	28	34	25	13

Type of Trade (Wholesale trade)	1 st Level (Primary education %)	2 nd level (Secondary education %)	3 rd level (Vocational training/Diploma %)	4 th level (University education %)
Non-specialized wholesale	46	44	10	0
Sale of motor vehicles and accessories	40	46	12	3

Source: KNBS (2021), KCHS) Survey

Revitalizing job creation in retail trade requires addressing the differences in skill levels across the sub-sectors. High-skill areas such as sale of automotive fuels employ 33 per cent of workers with vocational training, and 29 per cent with university degrees. Sectors such as pharmaceuticals and equipment have 25 per cent of employees with vocational training, yet only 5 per cent have university degrees, signalling a gap in advanced skills that could hinder sectoral growth. ICT equipment, pharmaceuticals and automotive fuels demand targeted training programmes to develop specialized knowledge and technical expertise, unlocking the potential

for higher-value jobs. At the same time, low-skill retail trade activities such as sale through stalls and markets are dominated by workers with basic primary education at 47 per cent and secondary education at 43 per cent. Non-store retail has the highest trade and the highest number of workers with basic primary education at 50 per cent, reflecting the informality nature of these jobs. To bridge the skills gap in the WRT sector and stimulate job creation, targeted investments in vocational training and upskilling for informal workers is important.

Table 6.2: Skills levels and education qualifications of employees in the retail trade

Type of trade (Retail trade)	Primary education (%)	Secondary education (%)	Vocational training / Diploma (%)	University education (%)
Retail in non-specialized stores	17	25	36	22
Sale of food, beverages and tobacco in specialized stores	30	37	19	25
Sale of automotives fuels in specialized stores	8	30	33	29
Sale of information and communication equipment in specialized stores	27	44	25	5
Sale of other household equipment in specialized stores	30	36.7	19	14

Type of trade (Retail trade)	Primary education (%)	Secondary education (%)	Vocational training / Diploma (%)	University education (%)
Sale of cultural and recreation goods in specialized stores	9	30.2	33	29
Sale of pharmaceuticals and other goods in specialized stores	30	44	25	5
Sale through stalls and markets	47	43	8	2
Retail trade not in stores stalls or markets	50	34	7	1

Source: KNBS (2021), KCHS Survey

Figure 6.17 shows the percentage of employees trained in various skills within the wholesale and retail trade sectors. It highlights clear differences in training focus across the two trade tiers. Marketing training is significantly more prevalent in the wholesale trade sector, with 29 per cent of employees receiving this type of training compared to only 17 per cent in retail trade. Information technology (IT)

training is more prominent in wholesale trade at 14 per cent compared to 11 per cent in retail trade. Technical training and management training are more common in the retail trade, with 20 per cent and 17 per cent of employees trained, respectively. In the wholesale trade, 15 per cent and 13 per cent of employees are trained in technical training and management training, respectively. Retail trade also shows a slight edge in finance and accounting training at

Figure 6.17: Types of employee training in the wholesale trade and retail trade tiers



Data source: KNBS (2016), MSMEs Survey

16 per cent compared to the wholesale trade sector at 15 per cent. Business counselling and consultancy advice training are notably less common in both trade tiers, with retail trade having 6 per cent and 2 per cent of employees trained in this area and 8 per cent and 5 per cent in the wholesale trade, respectively.

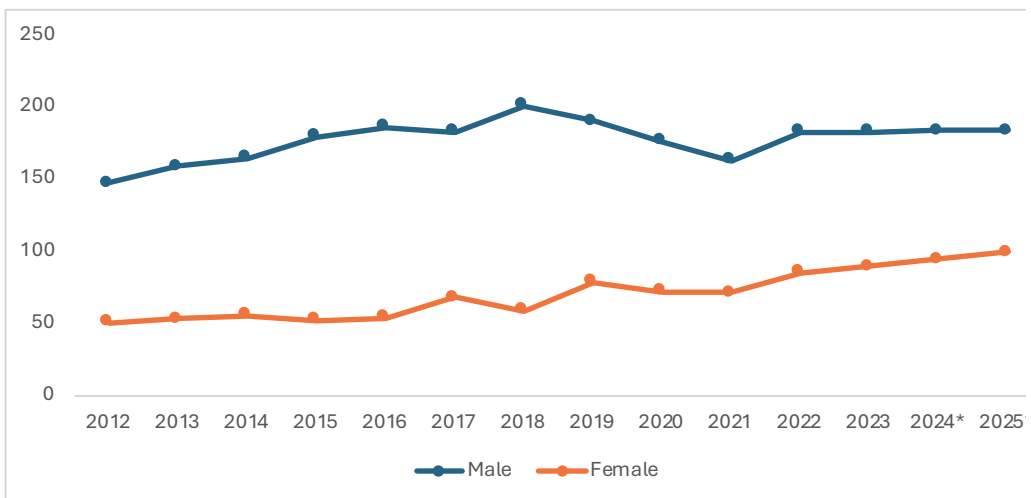
Aligning workers' skills with job requirements is important for sustaining productivity and competitiveness. As the sector evolves with technological advancements and shifting market demands, ensuring that workers have the necessary skills becomes increasingly important. This alignment includes not only pre-existing qualifications but also the continuous need for on-the-job training and professional development. Providing opportunities for skill enhancement not only improves job performance but also promotes career growth, leading to better job satisfaction and retention. To maintain sectoral growth and competitiveness, strategic investment in workforce

development and training programmes is essential, ensuring a labour force that is adaptable, resilient, and equipped to meet the demands of an evolving retail environment.

6.6 Gender and Equality Issues in the Wholesale and Retail Trade Sector

Achieving gender equality in the workplace is a cornerstone of the decent work agenda, which seeks to ensure fair treatment and equal opportunities for both men and women in the labour market. Women in the labour market are often over-represented in low-paying, insecure jobs (ILO Report). Figure 6.18 illustrates the gender distribution in the WRT sector for the last decade, highlighting trends for males and females. Over the years, the number of males employed in this sector has consistently been higher than females, though there has been a gradual decline in male representation from 2018. In contrast, the number of females working in this sector

Figure 6.18: Gender distribution in the wholesale and retail trade sector employment



Data source: KNBS (Various), Economic Surveys

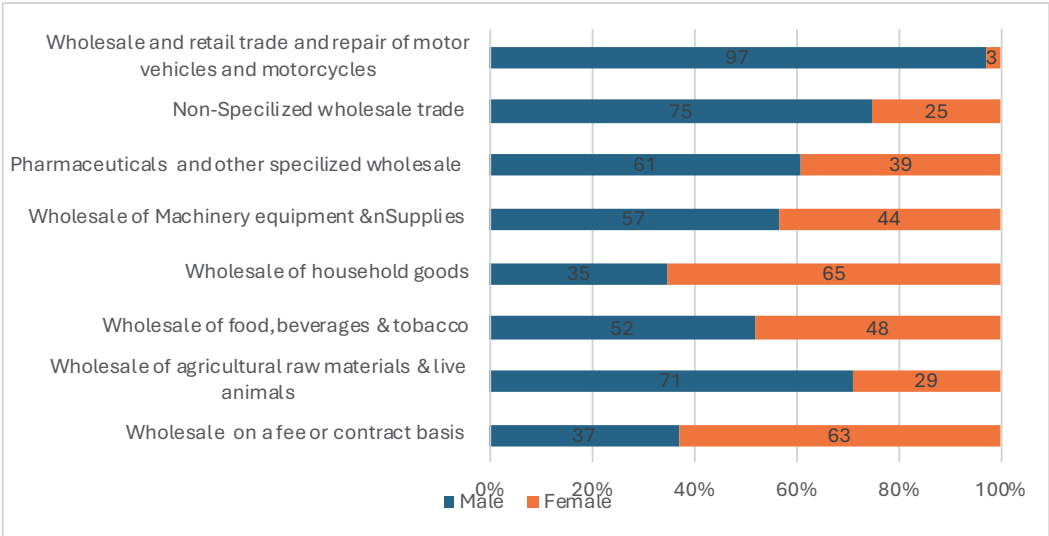
has been increasing since 2016. The gender gap has been steadily decreasing over the years, showing a positive shift towards increased female representation in the WRT where in 2025 it is projected that the gender gap will be approximately 33 per cent.

Figure 6.19 shows gender distribution across various sub-sectors of the wholesale trade. Male dominance is evident in most sectors. This reflects both historical and societal factors that influence male and female participation in different industries. In the wholesale and retail trade and repair of motor vehicles and motorcycles, male workers make up to 97 per cent of employees, while female workers account for only 3 per cent. This sub-sector normally has physical demands, and its technical nature of work aligns with traditional gender norms that have historically attracted men into these roles. Wholesale of machinery, equipment, and supplies where males make up approximately 80 per cent of workers in this sector, the technical expertise and intensive work for these sectors create

barriers to female participation. Other sectors such as pharmaceuticals and other specialized wholesale trade show a higher female representation of approximately 40 per cent. This reflects on the alignments of these roles with skills such as relationship management and tasks that are often associated with women. Wholesale of household goods has females workers representing about 65 per cent while males represent approximately 35 per cent. This can be associated with the fact that this sub-sector is connected to consumer-based products and, therefore, the sector is more inclusive of female workers.

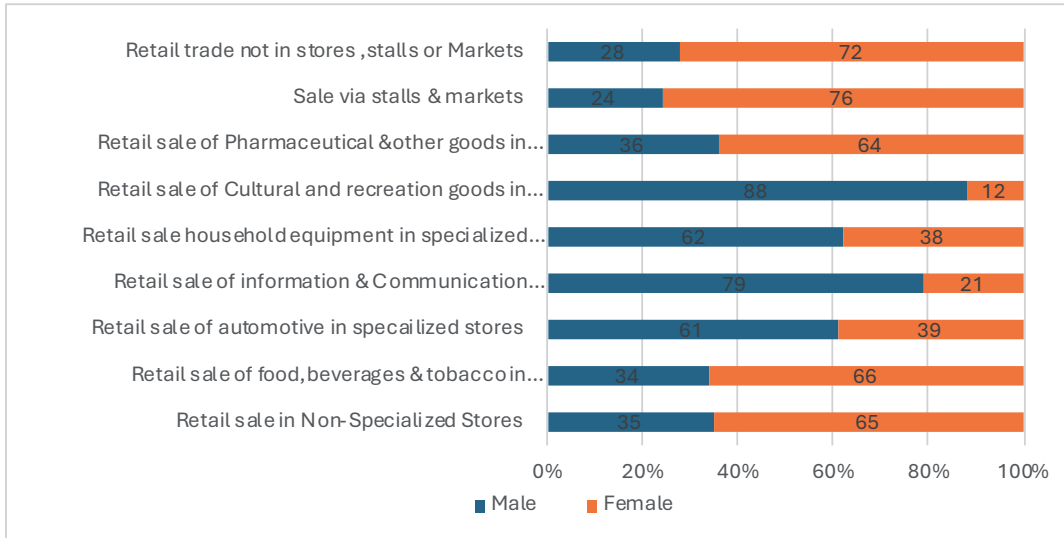
There is a higher number of women working in the retail trade sector, which is closely linked to the WRT sector's high levels of informality, and provides easier entry points for women seeking employment (Figure 6.20). Informal retail, such as those in stalls and markets where women account for 76 per cent of workers compared to males and 24 per cent of men, usually require fewer formal qualifications,

Figure 6.19: Gender distribution across wholesale trade sub-sectors: Male vs female representation



Data source: KNBS (2021), KCHS Survey

Figure 6.20: Gender distribution across retail trade sub-sectors: Male vs female representation



Source: KNBS (2021), KCHS Survey

making them accessible to women who may lack advanced education or technical training. Women in non-specialized retail stores dominate at 65 per cent, and in food, beverages and tobacco retail, females make up 66 per cent. Retail trade jobs are often flexible, and therefore they offer part-time hours or proximity to home, which aligns well with the needs of women balancing work with domestic responsibilities.

6.7 Key Drivers of Employment in the Wholesale and Retail Trade Sector

Analysis from Table 6.3 shows that the wholesale and retail trade (WRT) sector is one of the largest employers, providing jobs for workers across different skill levels. Literature shows that employment in this sector is driven by technological advancements, financial performance, market conditions, and policy frameworks.

Digitalization and automation improve efficiency but also reshape labour demand (Alzyadat and Almuslamani, 2024; Chen et al., 2022). Financial stability and credit access support business growth and job creation, particularly for SMEs (Buele et al., 2021). Market dynamics, economic fluctuations, and consumer trends influence workforce stability, often requiring policy interventions to sustain employment (Jalil and Jalil, 2022; Sirait and Paranita, 2024). Additionally, regulatory frameworks, including labour laws and public-private partnerships, play a key role in shaping employment conditions (Reardon et al., 2021; Eastlake and Hornback, 2021).

Table 6.3: Drivers of employment in the wholesale and retail trade sector

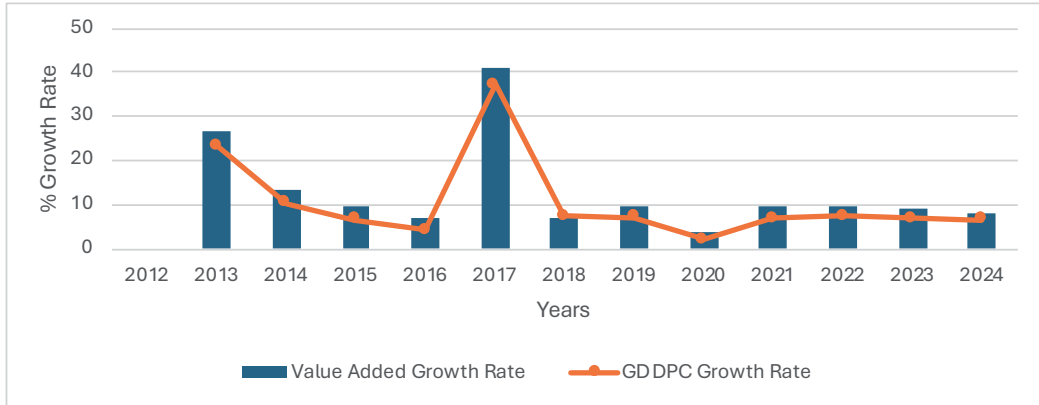
Macrotheme	Articles	Geographical area	Contribution to employment
Technological innovation	Alzyadat and Almuslamani (2021), Chen et al. (2022), Hasbullah et al. (2024), Tsvirko et al. (2022)	Saudi Arabia, China, Indonesia, Global	Digitalization and automation improve efficiency, enhance service delivery, and create new retail jobs, but also restructure traditional employment
Financial performance and management	Buele et al. (2021), Özbek (2022), Zajac et al. (2022), Tocar (2024), İç et al. (2022)	Ecuador, Turkey, Poland, Global	Effective financial management and credit access support business sustainability, boosting employment, especially among SMEs
Regulatory frameworks and labour policies	Karanja (2021; 2022), Covaci and Covaci (2022), Reardon et al. (2021), Eastlake and Hornback (2021)	Kenya, Romania, Developing regions, USA	Labour regulations, minimum wage policies, and business-friendly policies influence employment stability and working condition
Entrepreneurship and informal sector growth	Gunawan et al. (2023), Massie (2023), Raditya et al. (2024)	Indonesia, Nigeria, Kenya	The rise of self-employment and small retail enterprises boosts job creation in informal domestic trade markets
Supply chain and logistics development	Herath Bandara, (2024), Miller et al. (2025)	USA, West Virginia, Sri Lanka	Efficient supply chains and improved retail distribution networks expand employment opportunities in wholesale and logistics

Source: Author's compilation

6.7.1 Market performance and economic impact of WRT sector

In the KNBS National Accounts, the sector's contribution is measured primarily through value added, which represents the wealth generated by distribution activities.

Value added in WRT is calculated as the difference between the total revenue from sales and the cost of intermediate goods and services used in the sales process. This metric is a key indicator of the sector's efficiency and economic impact, as it directly contributes to Gross Domestic Product (GDP), employment creation, and consumer spending.

Figure 6.21: Value added and GDP per capita growth rates in the WRT sector

Source: KNBs (Various), *Economic Surveys*

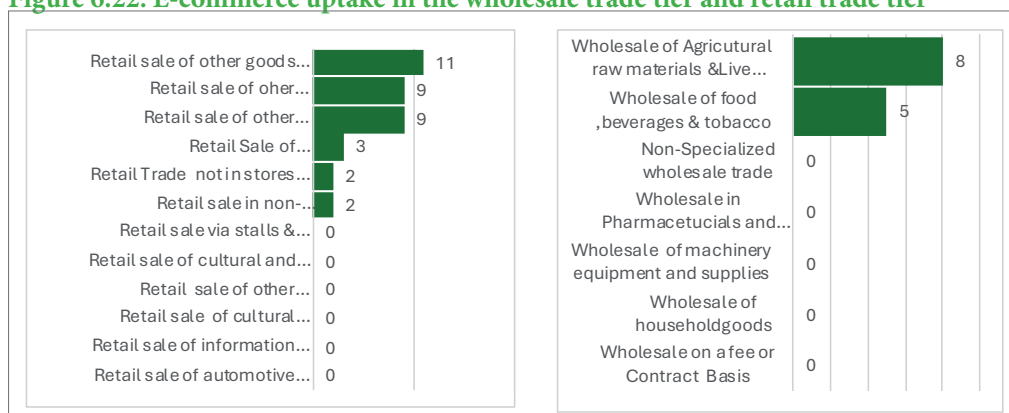
Figure 6.21 shows that from 2018 to 2024, both Value Added Growth and GDP Per Capita (GDPPC) growth have remained low, limiting the wholesale and retail trade (WRT) sector's ability to sustain employment. Employment in this sector is directly influenced by value added growth and GDP per capita (GDPPC) growth, as both drive business expansion and labour demand. Value added growth reflects the sector's economic contribution. Higher growth in value added leads to increased business activity, profitability, and employment opportunities. GDPPC growth enhances household purchasing power, boosting consumer demand, retail sales, and job creation in the sector.

Continuous declines in value added and GDPPC growth have affected the WRT sector's ability to sustain employment. One key factor behind this trend is low production in the manufacturing and agricultural sectors due to high production costs, including rising energy prices, expensive raw materials, and inefficiencies in supply chains. As a result, the WRT sector has become increasingly dependent on imported goods, which are more expensive due to currency fluctuations and higher global prices, reducing the sector's competitiveness and profitability and limiting household

purchasing power, as consumers face higher prices for essential goods. There is, therefore, the need to strengthen domestic production to enhance value-added growth and stabilize consumer prices.

6.7.2 Role of technology in transforming the domestic trade sector

The National e-Commerce Strategy 2023 emphasizes the key role of e-commerce in enabling wholesale and retail trade by modernizing traditional trade practices and integrating digital solutions towards hybrid models that combine physical stores with online platforms to broaden market reach and operational efficiency. The strategy prioritizes the inclusion of MSMEs by equipping them with access to digital marketplaces, logistics services and payment solutions to enhance competitiveness in both domestic and export markets. The strategy aims to gradually formalize informal trade over social media to ensure scalability and trust. Further, the strategy seeks to lower barriers to market entry by ensuring affordable Internet, accessible digital tools, streamlined regulatory processes, and improved infrastructure such as logistics networks and a national

Figure 6.22: E-commerce uptake in the wholesale trade tier and retail trade tier

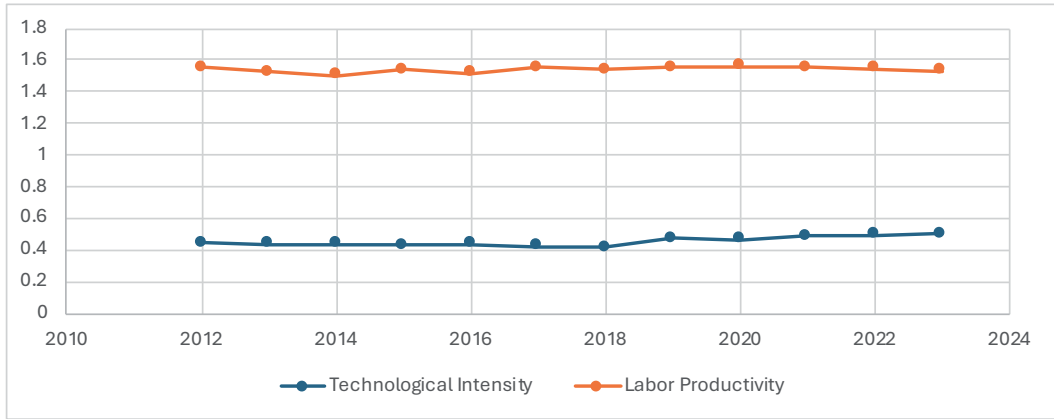
Data source: KNBS (2021), KCHS Survey

addressing system. Integration of secure, low-cost digital payment systems, including mobile money platforms such as M-Pesa is central to building trust and efficiency in the wholesale and retail trade, leading to job creation, economic growth and inclusivity in the digital economy.

A variety of goods and services being purchased are from food, groceries and alcohol to financial products, clothing, household items and cosmetics showing that there is a growing digitalization of the retail sector. Consumers are using various platforms, social networking sites such as Facebook and Instagram instant messaging apps such as WhatsApp and e-commerce applications such as Jumia and Amazon to facilitate purchase. Payment methods are also evolving, with widespread use of mobile money platforms such as M-Pesa, credit/debit cards and online banking services supported by fintech solutions such as Pesa Pal. Delivery options, including direct delivery and pick-up points, cater to both domestic and international markets, highlighting the need for flexible logistics. Additionally, loyalty programmes such as Bonga points are gaining popularity as alternative payment methods, reflecting their influence on consumer purchasing habits. This shows how technology is

reshaping the WRT sector by enhancing accessibility convenience and easy access to clientele.

Figure 6.22 shows E-commerce uptake for various economic activities within the wholesale trade tier and retail trade tiers. E-commerce adoption in the wholesale and retail trade (WRT) sector remains low, despite its potential to drive efficiency and market expansion. While retail trade, which directly interacts with consumers, is expected to have higher digital adoption, only a few segments such as miscellaneous goods at 11 per cent and other retail categories at 9 per cent show notable uptake. Many sectors, including cultural products, information goods, and automotive sales, have minimal online presence, indicating that traditional sales methods still dominate. The wholesale trade tier has even lower adoption, with agricultural raw materials at 8 per cent and food, beverages, and tobacco at 5 per cent, showing some e-commerce activity, while pharmaceuticals, machinery, and household goods have yet to effectively integrate digital platforms. This slow transition is linked to logistical challenges, reliance on traditional networks, and inadequate digital infrastructure.

Figure 6.23: Labour productivity and innovation and technology in the WRT sector

Data source: KNBS (Various), Economic Survey

A key barrier to e-commerce adoption is the lack of digital skills training in the sector as is evidence in Figure 6.23. While employees receive training in customer service, sales, and inventory management, there is a clear gap in e-commerce training, leaving businesses unprepared for digital transformation. Without knowledge of online sales strategies, digital payments, and logistics for e-commerce, businesses struggle to integrate online platforms effectively. To bridge this gap, investment in digital training, improved infrastructure, and incentives for online business models is crucial. Expanding e-commerce in retail trade will enhance consumer access and market reach, while digitizing wholesale trade will boost supply chain efficiency and reduce costs, making the sector more competitive in the digital economy.

Comparing technological intensity and labour productivity, labour productivity remained relatively stable, maintaining a level between 1.4 to 1.6 throughout the period. This shows that the sector has not

experienced significant gains in efficiency or output growth. Further, technological intensity has steadily been increasing for the period, though it remains much lower compared to labour productivity. This shows that there has been slow adoption and integration of technology within the sector and technology appears to be insufficient to significantly impact on labour productivity.

A Computable General Equilibrium (CGE) simulation was conducted to assess the impact of labour productivity improvements due to improved use of technology in the wholesale and retail trade sector. The simulation assumed a labour productivity increase of 10 per cent and 20 per cent due to increase in technology use in the WRT sector, respectively. The analysis used the 2020 Social Accounting Matrix (SAM) as the baseline to estimate employment effects across different economic sectors.

Table 6.4: Jobs created in WRT sector as labour productivity increases due to technology and spillover effects

Sector	Base number of jobs (2020)	New job growth (10%)	Actual number of jobs (10%)	New job growth (20%)	Actual number of jobs (20%)
Agriculture	2,682,471	0.74	9,853	1.45%	38,990
Manufacturing	899,787	0.99%	56,741	1.97%	112,368
Wholesale and retail trade	2,202,151	18.77%	413,322	39.02%	859,323
Transport and storage	2,093,587	0.81%	16,853	1.59%	33,456
Finance and insurance	276,931	-0.33%	(914)	-0.62%	(1,703)
ICT	295,989	0.19%	559	0.39%	1,143
Accommodation and food services	214,915	0.76%	1,623	1.50%	3,226

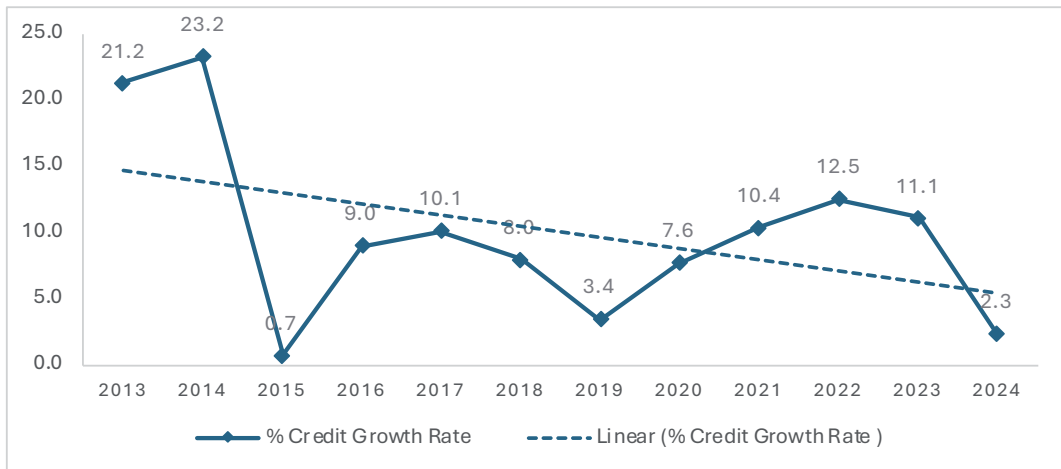
Data source: Author's computations using CGE

The simulation results indicate that increasing labour productivity in the wholesale and retail trade (WRT) sector through technology adoption leads to substantial job creation, particularly within WRT itself. A 10 per cent productivity increase results in 413,322 new jobs (+18.77) per cent, while a 20 per cent increase creates 859,323 new jobs (+39.02) per cent. This growth spills over into other sectors, notably manufacturing, which sees 56,741 new jobs (+0.99) per cent at 10 per cent and 112,368 jobs (+1.97) per cent at 20 per cent, suggesting increased demand for goods. The agriculture, transport, and accommodation sectors also benefit, though to a lesser extent. However, finance and insurance experiences job losses, possibly due to automation, thus reducing the need for human labour. While the ICT sector sees only modest job growth, the overall impact of productivity gains in WRT is largely positive, driving employment in key industries.

6.7.3 Financial performance management

The Hustler Fund, a flagship programme under the Bottom-up Economic Transformation Agenda (BETA), was introduced to improve access to affordable credit for small-scale traders and MSMEs. However, despite its introduction, the overall credit growth rate in the WRT sector has continued to decline, suggesting that the fund alone is not sufficient to reverse credit access challenge (Figure 6.24).

The WRT's sector credit growth rate between 2013 and 2024 shows a declining trend in access to credit. The growth rate peaked at 23.2 per cent and 0.7 per cent in 2014 and 2015, respectively. Although there were subsequent periods of moderate recovery, with rates reaching 12.5 per cent in 2022, the trend remains downward, culminating in a 2.3 per cent growth rate in 2024. This overall decline suggests persistent structural barriers, thus limiting

Figure 6.24: Percentage credit growth rate in the WRT sector

Source: KNBS (Various), *Economic Survey*

access to financial resources, particularly for Micro, Small, and Medium Enterprises (MSMEs) and the informal sector. One of the key barriers to credit access is the limited financial inclusion of informal businesses. Many traders and small-scale entrepreneurs operate in unstructured environments, lacking formal contracts, business records, or collateral—factors that banks and financial institutions require to extend credit. Additionally, weak labour law enforcement and low social protection coverage (NSSF, NHIF) further limit financial security, making it difficult for informal workers and small traders to build creditworthiness. As a result, their access to both formal bank credit and government-backed initiatives, such as the Hustler Fund, is constrained.

The Hustler Fund was introduced to improve access to affordable credit for small-scale traders and MSMEs. The factors such as limited outreach, stringent repayment structures, and lack of structured trading environments could be limiting its effectiveness. Without complementary interventions such as financial literacy training and market

access support, beneficiaries may struggle to translate credit into sustainable business growth.

6.7.4 Evaluation of policies and regulation in domestic trade

Karanja (2022) argues that regulatory inefficiencies could lead to under-reporting of economic activities, thereby distorting GDP calculations and fiscal planning. Streamlining regulatory processes and improving compliance mechanisms could facilitate better data capture, leading to a more accurate representation of the sector's contributions to tax revenue and employment statistics. Additionally, the study highlights the need for a balanced regulatory approach that promotes business growth while ensuring compliance with fiscal obligations. The study presents empirical evidence, suggesting that regulatory certainty and policy consistency are key to creating a conducive business environment. It also emphasizes the importance of aligning domestic trade policies with broader economic development strategies to enhance sectoral contributions to national accounts.

The Kenya Vision 2030 agenda aims to transform the trade sector into an efficient multi-tiered, diversified, and innovative powerhouse that links local producers with regional and global markets. The government has embarked on various

policy initiatives to streamline the supply chain, establish supportive trade infrastructure, and enhance formal market participation.

Table 6.5: Policies and regulatory frameworks in the trade sector

Policy variable	Regulatory framework	Year of reform	Reforms	Expected outcome
Streamlining the supply chain and establishment of small operator markets	Kenya Vision 2030, MTP I and II, CIDPS	2008 onwards	Linking producers to markets, reducing intermediaries, enforcing quality standards, creating organized market entities for small-scale producers	Enhance efficiency, reduce transaction costs, improve product quality, increase market access, formalize trade practices, job creation
Development of wholesale hubs	Kenya Vision 2023, CIDPs	2014 onwards	Construction of at least 10 wholesale hubs with a pilot in Maragua; land was identified, detailed designs and surveys completed	Improve supply chain for small operator retail markets, expand formal market, outreach enhance market efficiency
Expansion of formal market outreach and building of one free trade port at the Coast	Kenya Vision 2030, MTP I and II, SEZ Act No. 16 of 2015	2008 onwards	Establishment of duty-free port, development of Dongo Kundu free Port and SEZ. Wholesale hubs, resettlement of 1,500 squatters, declaration of SEZ area	Strengthen trade, infrastructure attraction of local and foreign investments, reduced costs, enhanced technology and innovation, structured growth of manufacturing and trade sectors
Creation of producer based groups (PBGs) to facilitate distribution to the WRT	Kenya Vision 2030 MTP I and II, Cooperative Society Act (CAP 490 MSE Act No. 55 of 2012)	2008 onwards	Formation of 1000-1500 PBGs, profiling and strategy development, realignment with cooperative or MSE associations	Better market integration legal operation through collective action, increased bargaining power, stronger supply chains access to larger markets
Development of tier-one retail markets	Kenya Vision 2030, CIDPs	2008 onwards	Pilot projects in Athi River, dissemination of design in key counties	Increase market efficiency, expand retail footprint, create more employment, access to diverse products

Policy variable	Regulatory framework	Year of reform	Reforms	Expected outcome
Taxation and tax compliance simplification	VAT Act Finance Act Finance Bill Act 2023	2020 2023	Reduction of VAT from 16% to 14% temporarily (2020), turnover tax reduction from 1% to 0.5% for MSMEs (2023), Simplified tax filing processes for MSMEs	Lower operational costs for traders, increase business activities, compliance and reinvestment into business expansion, reduce administrative burden for MSMEs to focus on growth reinvestment and job creation
Labour laws	Employment Act	2007 2019 2022	Amendments to include protection for workers in informal sectors	Improved labour standards, enhanced workers' rights and conditions in domestic trade
Social protection and benefits	National Social Protection Policy, Employment Act, NHIF / SHIF Act	2011 2022 2023	Extension of social security, healthcare and labour protections to informal sector workers	Enhanced social protection coverage, improved worker welfare and security for all workers across all domestic sectors
Access to credit	Finance Bill Act 2023	2023	Incentives for financial institutions to MSMEs	Improved access to credit, enabling business expansion and job creation
Digital trade and transformation	E-commerce Regulations Finance Bill Act 2023	2019 2023	Introduction of e-commerce regulation to govern online trade, tax incentives for MSMEs adopting digital platforms and e-commerce	Growth in digital trade protection for online consumers and businesses, enhanced market access, increased operational efficiency and job creation
Sector-specific wage guidelines	Wage Council and sectoral wage guidelines	Ongoing	Setting industry-specific wage standards and allowances	Ensuring fair wages in specific sectors, protecting workers from underpayment

Sources: (Various) policy documents

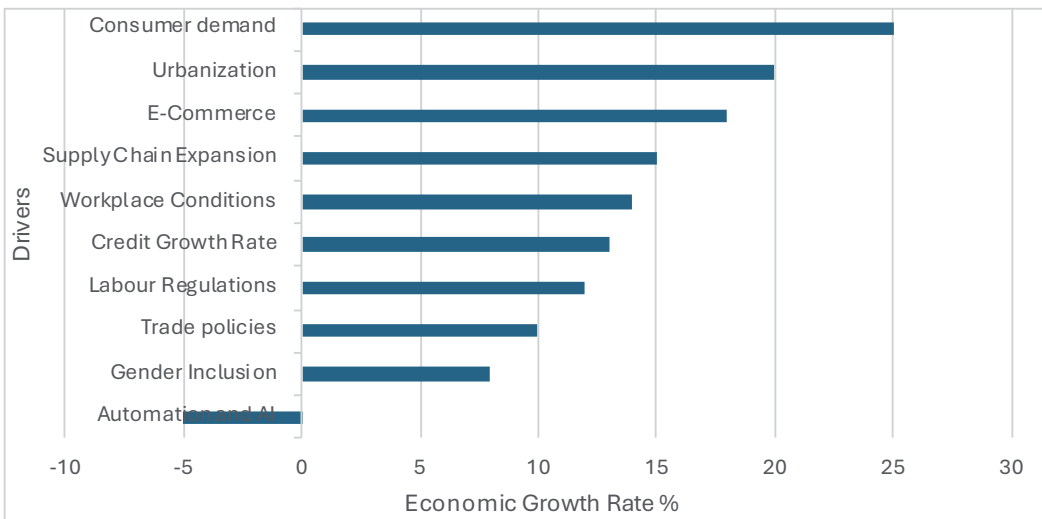
Figure 6.25 illustrates the key factors influencing employment growth in the WRT sector, showing the percentage contribution of each driver to job creation. Consumer demand has the most significant impact, meaning that a strong increase in consumer spending can directly boost employment by 25 per cent as businesses expand to meet demand. Urbanization (20%) follows, indicating that for every rise in urban expansion, employment in the WRT sector increases by 20 per cent, which is driven by growing retail markets and improved infrastructure.

E-commerce growth has also become a key driver for jobs, contributing to an 18 per cent increase in employment, particularly in logistics, digital sales, and supply chain management. This indicates the importance of investments in digital platforms, financial incentives for SMEs, and workforce training in e-commerce skills. Supply chain expansion increases employment by 15 per cent, indicating the value of efficient logistics, trade

facilitation, and reduced operational costs in enabling businesses to grow. Workplace conditions, such as worksites, availability of sanitation facilities, labour rights and social protection contribute to 14 per cent employment growth, emphasizing the need for policies that improve job security and working environments,

Access to credit allows businesses to expand, supporting a 13 per cent increase in employment, underscoring the importance of financial sector reforms that enhance SMEs’ access to affordable loans and investment capital. Labour regulations, when balanced between worker protection and business flexibility contribute to a 12 per cent employment increase, ensuring that fair wages and secure job conditions support workforce stability. Trade policies play a smaller yet significant role, with an employment impact of 10 per cent, showing how market accessibility and competition affect job creation. Gender inclusion remains a relatively low contributor to employment growth, reflecting on continued inequalities in access to economic

Figure 6.25: Employment drivers in the wholesale and retail trade



Source: Author’s computation

opportunities. Expanding employment for women in the sector requires stronger policies on equal pay, entrepreneurship support, and access to financial resources for female-led businesses. On the other hand, automation and artificial intelligence (-5%) negatively impact employment, as technological advancements replace certain low-skilled jobs. This highlights the need for retraining programmes and digital skills development to prepare workers for shifts in labour demand.

6.8 Key Messages and Policy Recommendations

6.8.1 Key messages

1. The wholesale and retail trade (WRT) sector is the largest employer in Kenya, contributing over 50 per cent of total jobs, with 80 per cent of workers in informal employment. Retail trade provides the bulk of employment due to its labour-intensive nature, while wholesale trade, though smaller, offers structured jobs in pharmaceuticals, food, and household goods. Urban areas such as Nairobi, Kiambu, and Mombasa have the highest employment due to strong commercial activities, high population densities, and better infrastructure. However, rural and arid and semi-arid regions face limited formal WRT employment, reducing job opportunities and increasing income instability for workers in these areas.
2. The working conditions in the WRT sector vary substantially, with wholesale trade providing more structured employment, while retail trade is largely informal. Most retail workers operate in market stalls at 35 per cent, open-air markets at 25 per cent, and kiosks at 15 per cent, where they face low wages, poor job security, and inadequate workplace infrastructure. In contrast, 40 per cent of wholesale workers are based in commercial premises and 30 per cent in industrial sites, benefiting from greater job stability. However, low unionization rates, with only 1 per cent of workers unionized, limit wage bargaining power, reinforcing the need for improved labour rights enforcement and better workplace protections.
3. The WRT sector accommodates workers of all skill levels, but agriculture-linked and non-specialized wholesale jobs mostly require basic education. In contrast, technical sub-sectors such as machinery, pharmaceuticals, and specialized wholesale employ vocational and university-trained workers due to higher skill requirements. A significant digital skills gap exists, with low adoption of e-commerce, online trade, and digital payment systems limiting the sector's adaptation to modern trade. Expanding vocational training and digital literacy programmes is critical to improving employment quality, business competitiveness, and sectoral efficiency.
4. The WRT sector's employment performance is driven by market conditions, credit availability, and business environment stability. Consumer demand contributes to 25 per cent of employment growth, but low GDP per capita and high production costs in agriculture and manufacturing constrain domestic supply and reduce household purchasing power. This has increased reliance on imports, raising costs and limiting affordability, thereby slowing overall business expansion. Addressing supply chain inefficiencies, trade barriers, and production costs is essential to enhancing domestic trade,

business growth, and employment creation.

5. Access to affordable credit is a constraint, particularly for MSEs, which face high-interest rates and strict lending conditions. Formal wholesale businesses have better access to structured financing, while informal retailers rely on microfinance and informal lending, which have higher borrowing costs and shorter repayment terms. Limited financial access prevents businesses from investing in technology, workforce development, and inventory expansion, ultimately slowing employment growth. Strengthening credit policies, easing lending regulations for SMEs, and promoting financial inclusion is necessary to enhance business sustainability and job creation in the WRT sector.

6.8.2 Policy recommendations

1. Fast-track the implementation of wholesale hubs and tier retail markets through the medium term plans (MTPs) in secondary cities and rural areas. This could expand job opportunities beyond urban centres. Strengthening linkages between agriculture, manufacturing, and wholesale trade would enhance structured employment, while urban zoning policies would support mixed-use commercial spaces to boost trade and job creation.
2. Establish structured trading zones with sanitation and security by county governments through public-private partnerships. Strengthen labour law enforcement by the Ministry of Labour through workplace inspections, wage compliance, and penalties for violations. Promote collective bargaining by trade unions through awareness campaigns and simplified membership processes. Expand social protections (NSSF, NHIF) by the government through subsidized contributions and mobile registration for informal workers.
3. Enhance domestic production by reducing costs of production in agriculture and manufacturing to lower retail prices, make goods more affordable and stimulate trade. Introducing tax relief on essential retail goods would boost purchasing power, while expanding consumer credit facilities would sustain household spending and retail sales. Investments in infrastructure (roads, logistics centres, and storage facilities) would improve market access, lower distribution costs, and support business growth.
4. Expand vocational training programmes tailored to pharmaceuticals, machinery, and food distribution to enhance technical competencies. Digital literacy training should be prioritized to improve e-commerce, digital payments, and online business operations. Establishing apprenticeship programmes through public-private partnerships (PPPs) would provide hands-on experience, while integrating trade management courses into tertiary education would professionalize the sector.
5. Lower interest rates and ease collateral requirements to enable businesses to expand and hire more workers. Government-backed credit guarantee schemes could reduce lending risks, while digital lending platforms would provide small retailers with alternative financing options. Improving the design and implementation of the Hustler Fund by incorporating flexible repayment terms, increasing loan sizes,

and linking recipients to structured markets could maximize its impact and contribute to reversing the declining trend in credit growth.

6. Simplify taxation, licensing, and compliance regulations to enhance the ease of doing business. This would help reduce the bureaucratic burden on entrepreneurs and companies, particularly MSEs.

7. Promoting Youth Employability through Investment in Technical and Vocational Education and Training

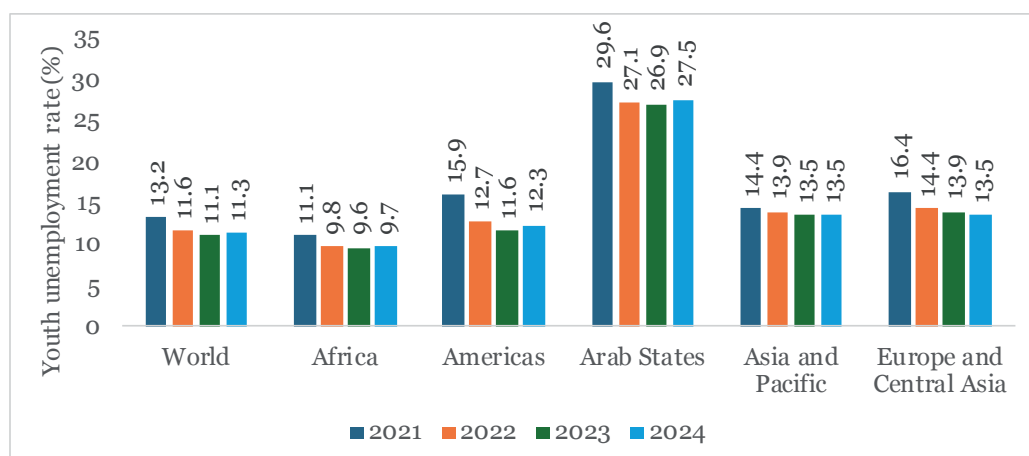
Youth unemployment is a global challenge, with a rate of 11.3 per cent, more than twice the overall unemployment rate of 5.0 per cent in 2024. Kenya faces a similar challenge, with youth unemployment at 9.6 per cent compared to the national average of 4.8 per cent in 2022. However, strengthening skills development that align to the industry needs presents an opportunity to productively engage the growing youth population. Investing in Technical and Vocational Education and Training (TVET), through Competency-Based Education and Training (CBET) could improve youth employability. Implementation of CBET is hindered by declining development expenditure in TVET, which has constrained infrastructure development, equipment upgrades, and instructor capacity, while delays in capitation grants constrain the delivery of training programmes. Awareness of the Recognition of Prior Learning (RPL) certification is low among the intended beneficiaries. Additionally, high costs and lack of a centralized placement system limit access to industrial attachments among the youth, affecting acquisition of skills necessary for employability. Enrolment in ICT is low, despite its relevance in driving a digital economy. Employment of the youth in agriculture is also low, influenced by negative perceptions, limited access to resources, and curriculum-industry mismatches. Strengthening TVET requires enforcing

industry-aligned curricula and formalizing industry consultations. Expanding the digital economy requires scholarships, ICT infrastructure investment, and subsidized digital access. Increased TVET financing should focus on infrastructure upgrades, timely capitation disbursements, and public-private partnerships. Raising awareness of Recognition of Prior Learning (RPL) through nationwide campaigns could improve certification uptake. Youth employment in agriculture can be enhanced through agribusiness incubation centres and entrepreneurship training in TVETs. Establishing a National TVET Industrial Attachment Fund and centralized placement platform will support low-income students in accessing industrial attachments.

7.1 Introduction

The status of the youth labour market outcomes globally presents a complex and challenging landscape. The global unemployment rate was estimated at 5.0 per cent in 2024, whereas youth unemployment rate was 11.3 per cent, the lowest level since 2000 (Figure 7.1) (ILO, 2025). While persons in employment in Sub-Saharan Africa (SSA) increased from 435.7 million to 485.3 million between 2021 and 2024, most of them are not in productive and decent work (ILO, 2025). In 2024, 86.6 per cent were employed informally, with low access to social protection and irregular income. The youth are most affected where three in four lack secure work (ILO, 2023) in SSA, while only one in five young adult workers aged 25-29 are engaged in regular paid jobs, compared to four in five for high-income economies (ILO, 2025).

Figure 7.1: Global youth unemployment rate (%)



Data source: ILOSTAT (2024), modelled estimates

Similar to the broader global and African context, Kenya faces significant challenges in its youth employment landscape, with high levels of youth unemployment at 9.6 per cent in 2022, and inactivity among young people. The employment to population ratio decreased from 56.7 per cent in 2019 to 53.2 per cent in 2022, an indication that a smaller proportion of the youth population was employed in 2022 compared to 2019. This mirrors the overall employment and GDP growth rate, where GDP growth in the MTP III period (2018-2022) averaged 4.6 per cent, while employment growth dropped to an average of 3.1 per cent. This indicates there is a job creation challenge, where economic growth has not adequately translated into

employment opportunities for the youth. There was also a decline in the labour force participation rate from 61.4 per cent in 2019 to 58.0 per cent in 2022 (Table 7.1). This decrease implies that fewer young people were actively seeking work or were employed, and this could be attributed to economic downturn and increased discouragement among the youth. The proportion of the youth Not in Education, Employment, or Training (NEET) increased from 13.7 per cent in 2019 to 20.0 per cent in 2021 and 2022. A growing number of young people are neither working nor acquiring skills through education or training, which has consequences for long-term unemployment and skill gaps.

Table 7.1: Youth labour market indicators, 2019-2022

Indicator	2019 (%)	2022 (%)	2021 (%)	2022 (%)
Employment to population ratio	56.7	53.8	53.4	53.2
Labour force participation rate	61.4	59.9	58.7	58.0
Not in Education, Employment or Training (NEET)	13.7	17.8	20.0	20.0
Unemployment rate	8.4	10.5	9.5	9.6

Data source: KNBS (Various), Quarterly Labour Force Surveys

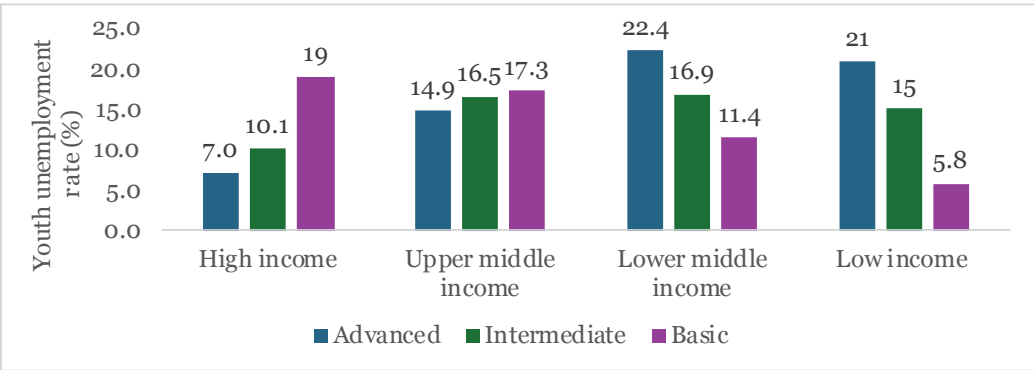
The challenges notwithstanding, the country is experiencing a ‘youth bulge,’ a situation where 36.1 per cent of the population consists of individuals between 15 and 34 years and young people between 0 and 34 years make up 75.1 per cent of the total population (KNBS, 2019). This presents a critical juncture for the country, offering the potential for harnessing demographic dividends. The outcome hinges on the ability to effectively harness and empower the young population through access to quality education and employment opportunities. If managed well, this could lead to a prosperous socio-economic future for all (African Union, n.d.). However, if this opportunity remains untapped, it could result in economic stagnation and pose risks to the country’s future development.

The decline in the youth labour market indicators can be partly addressed through education and training. Although higher levels of education can improve the chances of youth accessing jobs, the disparities are evident across different income levels. In high income and upper middle-income countries, the unemployment rates among the youth with advanced education are low

at 7.0 per cent and 14.9 per cent, respectively (Figure 7.2). In low and lower-middle-income countries, young people (15 to 29 years) with an advanced¹ education are more likely to be unemployed compared to young people with only basic education. The unemployment rate of youth with advanced degrees is 21.0 per cent compared to 5.8 per cent for those with basic education in low-income countries. This indicates that productive structural transformation in low-income countries has not been achieved, and low-income countries (LICs) rely on low-productivity sectors such as subsistence agriculture and informal services that require low skill levels. In addition, the scarcity of skilled jobs in LIC contributes to high unemployment rates among educated jobseekers.

1 Following the standard ILO approach, “advanced” education corresponds to tertiary education (ISCED 5–8: ISCED 5: Short-cycle tertiary education; ISCED 6: Bachelor’s or equivalent level; ISCED 7: Master’s or equivalent level; ISCED 8: Doctoral or equivalent level), “intermediate” corresponds to upper secondary (ISCED 3–4: ISCED 3: Upper secondary education; ISCED 4: Post-secondary non-tertiary education), and “basic or less” refers to attainment of a lower secondary education or less (ISCED 0–2; ISCED 0: Early childhood education (‘less than primary’ for educational attainment; ISCED 1: Primary education; ISCED 2: Lower secondary education).

Figure 7.2: Youth unemployment rate (15 to 29 years) by level of education, 2023



Data source: ILOSTAT (2024), modelled estimates

Enhancing youth employability² through education and training and in particular tertiary education confers several benefits in terms of better access to jobs. Tertiary education enhances job quality, where graduates secure positions that offer better working conditions, benefits, and job security. Tertiary education encompasses general and vocational education. General education is defined as “education programmes that are designed to develop learners’ general knowledge, skills and competencies, as well as literacy and numeracy skills, often to prepare participants for more advanced education programmes at the same or a higher ISCED level and to lay the foundation for lifelong learning” (UNESCO, 2011). General education includes education programmes that are designed to prepare participants for entry into vocational education, but do not prepare them for employment in a particular occupation, trade, or class of occupations or trades, nor lead directly to a labour market-relevant qualification. Technical and Vocational Education and Training (TVET) is an educational and skills development system that focuses on providing individuals with practical skills, knowledge, and competencies related to specific trades, crafts, and professions. TVET programmes are designed to prepare individuals for various careers in skilled trades, technology, and other vocations, emphasizing hands-on training and practical experience. TVET equips young people with the necessary skills for employability³ and prepares them to fill specialized roles in various sectors (Luxembourg, 2021).

Evidence shows that youths with TVET qualification have greater chances of

securing employment than those with general education. In Malaysia, the employability rate of TVET graduates has increased from 65.5 per cent in 2010 to 87.6 per cent in 2020, outperforming non-TVET graduates (Hawati et al., 2023). In Germany, the employment rate of TVET graduates reached 90 per cent in 2019, well above the European Union (EU) average of 81 per cent. The employment rate of TVET graduates in Germany is also 23.3 percentage points higher than graduates from general education (Cedefop, 2017). In France, the employment rate of TVET graduates of 70.2 per cent is higher than that of graduates from general education by 3.6 percentage points (Cedefop, 2017). In Kenya, only 12.5 per cent of TVET diploma graduates were unemployed, against the 93.75 per cent of unemployed non-TVET diploma graduates (Nason, 2019).

Employability of TVET graduates notwithstanding, skill sets from TVET are in short supply yet highly demanded in the African labour market (Brown et al., 2022). This has been attributed to the poor quality of training and an over-supply of non-Science Technology Engineering and Mathematics (STEM) graduates in a market where the demand for STEM specialization is high. Moreover, educational systems in Sub-Saharan Africa (SSA) face significant challenges in aligning curricula and pedagogical approaches with the evolving demands of the labour market (Brown et., 2022).

A substantial gap also exists in teacher training and resources, which constrains their ability to deliver effective education. Many teachers lack adequate training in modern pedagogical methods, particularly those that emphasize learner-centred approaches essential for developing 21st-century skills. In low-income countries, teachers receive only 6 to 9 months of preservice training compared to the 3 to 4 years typical in high-income economies (Snilstveit et al., 2016). This limited preparation leaves teachers insufficiently

2 Employability refers to the ability of a young person to gain initial employment, to maintain employment, and to obtain new employment if required (Dacre and Sewell, 2007).

3 Editorial Staff (2023), The Benefits of TVET: Why Technical and Vocational Education and Training is a Smart Choice, <https://tvetjournal.com/tvet-systems/benefits-of-tvet/>

prepared to address the diverse needs of learners. For instance, in Cameroon, teacher training programmes often lack modern pedagogical tools and are underfunded, resulting in inconsistent quality among educators (Fombo, 2024). Additionally, the curricula used in teacher training programmes frequently emphasizes theoretical knowledge over practical skills. Notably, 70 per cent of teacher education institutions in Africa still use rigid models that discourage innovation and adaptability (UNESCO, 2022; Sakata et al., 2022). Opportunities for apprenticeships, internships, and on-the-job training are limited, constraining students from gaining practical experience critical for employment. Non-exposure to work-based learning opportunities further disconnects education from the labour market needs.

This chapter assesses the current employment status of the youth in line with the decent work pillars, and potential investment in technical and vocational education and training towards employable youth. The key issues of analysis include: (i) Linking the TVET training with sectors of employment of TVET graduates; (ii) Assessing employment conditions among TVET graduates in line with decent work

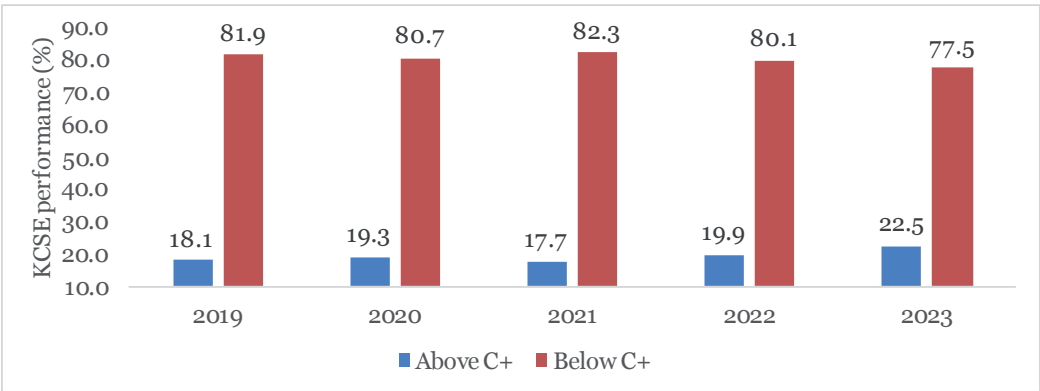
pillars; and (iii) Assessing the adequacy of TVET training to labour market needs.

7.2 Youth Employment in Kenya

7.2.1 Status of TVET education

Currently, one is expected to attain a mean grade of at least a C+ in the Kenya Certificate for Secondary Education (KCSE) to qualify to join a university in Kenya. While there has been an increase in the number of learners attaining the minimum entry into university from 18.1 per cent in 2019 to 22.5 per cent in 2023, a higher proportion of candidates score below the minimum requirement. This indicates that a substantial majority of students (77.5%) in 2023 were unable to meet the C+ threshold necessary for university admission (Figure 7.3). The high proportion of KCSE candidates below the university attainment entry indicates the potential demand the country faces to realize higher education and training, vocational training.

Figure 7.3: Trends in KCSE performance overall, 2019-2023 (%)



Data source: KNBS (2024), Economic Survey

Enrolment in TVET institutions has grown in the recent past. The number of public TVET institutions increased from 2,140 in 2019 to 2,577 in 2023. Total enrolment in public TVET institutions increased from 430,598 trainees in 2019 to 642,726 in 2023 (Table 7.2). In 2019, the number of TVET institutions experienced a robust annual growth rate of 21.0 per cent, accompanied by a strong enrolment growth rate of 19.7 per cent. In 2023, the growth rates for both TVET institutions and enrolment numbers were positive, with annual growth rates of 7.4 per cent and 14.3 per cent, respectively. The government's increased focus on enhancing TVET has played a crucial role in attracting more learners. The policies aimed at revamping technical colleges have resulted in improved facilities, reduced tuition fees, and expanded

access to funding through the Higher Education Loans Board (HELB) for TVET students. The government's commitment to providing financial support has made vocational training more accessible to a broader demographic, encouraging high school graduates to consider these options seriously. Additionally, the alignment of TVET programmes with Kenya's competency-based curriculum (CBC) has made vocational education more appealing. The CBC emphasizes practical skills and real-world applications, which resonates with many students who prefer hands-on learning experiences over theoretical knowledge. As a result, learners are increasingly recognizing that TVETs offer relevant training that meets current labour market demands.

Table 7.2: Trends in number of TVET institutions and enrolment numbers, 2019-2023

Period	Number of TVET institutions	Enrolment	Number of TVET institutions (Annual growth rate %)	Enrolment numbers (Annual growth rate %)
2019	2,140	430,598	21.0	19.7
2020	2,301	451,205	7.5	4.8
2021	2,271	503,798	-1.3	11.7
2022	2,401	562,499	5.7	11.6
2023	2,577	642,726	7.4	14.3

Data source: KNBS (2023), *Statistical Abstract*

More male learners are enrolled in TVETs compared to female learners. In 2019, male students accounted for 57.2 per cent of enrolments, while female students made up 42.8 per cent (Table 7.3). By 2023, male representation had declined to 54.0 per cent, while female enrolment increased to 46.0 per cent. Disaggregation by type of TVET shows that Vocational Training Centres (VTCs) have the least representation of women in their training

programmes at 43.3 per cent in 2023, an increase from 39.9 per cent in 2019. This highlights a persistent gender imbalance in TVET institutions, with males consistently having a higher enrolment percentage than females. This is attributed to societal norms and gender stereotypes that often influence career choices where technical fields are frequently perceived as more suitable for men. This leads to fewer women pursuing traditionally male-dominated fields within TVETs.

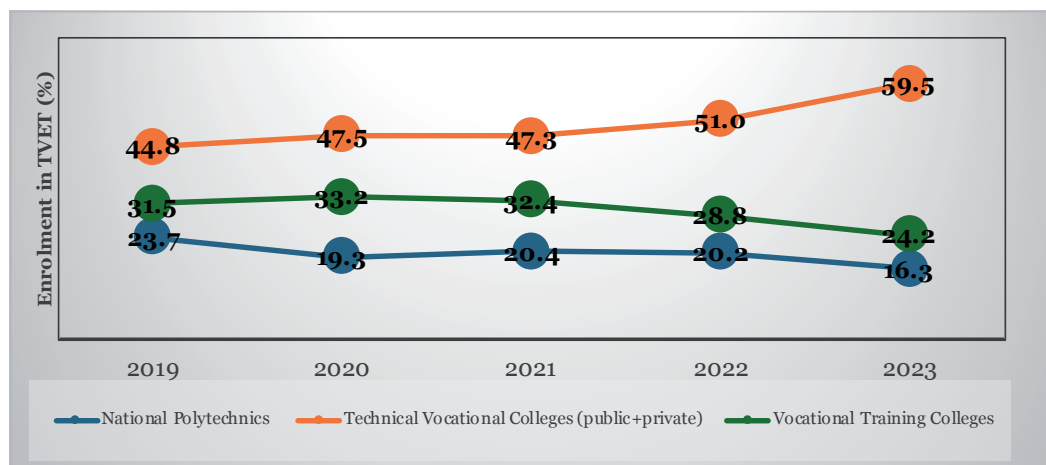
Table 7.3: Gender differences in TVET enrolment by type of institution (2019-2022)

Institution	2019 (%)		2020 (%)		2021 (%)		2022 (%)		2023 (%)	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
National Polytechnics	59.0	41.0	57.5	42.5	57.0	43.0	53.8	46.2	53.0	47.0
Technical Vocational Colleges (public and private)	54.3	45.7	55.2	44.8	55.2	44.8	54.6	45.4	53.3	46.7
Vocational Training Colleges	60.1	39.9	59.9	40.1	59.9	40.1	52.5	47.5	56.7	43.3
Total	57.2	42.8	57.2	42.8	57.1	42.9	53.8	46.2	54.0	46.0

Data source: KNBS (2024), Economic Survey

The share of enrolment in national polytechnics has declined from 23.7 per cent of total TVET enrolments in 2019 to 16.3 per cent in 2023. This decline suggests a reduced preference for national polytechnics, possibly due to competition from other TVET institutions, mainly the Technical Vocational Colleges (TVCs). Enrolment in TVCs increased from 44.8 per cent to 59.5 per cent in 2023. The increasing popularity of these colleges could be attributed to their accessibility, affordability (especially public colleges), and their ability to offer diverse programmes that align with market demands and an overall expansion in the number of TVCs in the country. Enrolment in TVCs has been declining over the years as a proportion of total TVET enrolments, from 31.5 per cent in 2019 to 24.2 per cent in 2023 (Figure 7.4).

Figure 7.4: Enrolment by type of TVET institution (%)



Data source: KNBS (2024), Economic Survey

The Kenya Universities and Colleges Central Placement Service (KUCCPS) 2023-24 intake record shows a larger number of students opting to pursue technical and vocational education and training (TVET) programmes as opposed to university degrees. In 2023, 188,775 learners were placed in TVET institutions compared to 141,392 in universities (Table 7.4). Changes in job market demands, lower fee requirements for TVETs, and access to higher education loans for TVETs are some of the key factors contributing to the influx of students into TVETs. In the five-year period from 2019 to 2023, while university enrolments have shown growth rates, apart from 2022, the enrolment for TVET has consistently demonstrated higher growth rates. For instance, from 2022 to 2023, TVET enrolments surged by approximately 43.9 per cent, outpacing the university sector's growth of 13.2 per cent during the same period. This has coincided with the government's increased focus on technical colleges in the quest to supply the labour market with craftsmen and technicians. Moreover, a significant factor contributing to the rise in TVET enrolment is the changing perception of vocational training. As students recognize the value of practical skills in today's job market, there has been a marked increase in those opting for TVET.

Table 7.4: Government sponsored students placed to universities vs TVETs 2019-2023

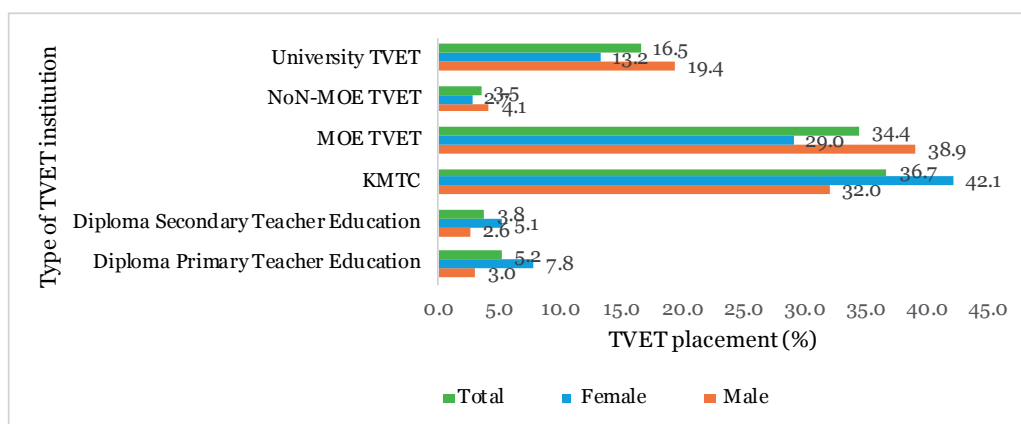
Type of	2019	2020	2021	2022	2023
Total university	89,488	122,831	128,336	124,940	141,392
Total TVET	115,923	94,609	144,440	131,019	188,775
Diploma	64,539	56,455	90,080	78,769	115,192
Certificate	43,662	31,712	43,737	41,488	59,232
Artisan	7,722	6,442	10,623	10,762	14,351

Data source: KNBS (Various), Economic Survey

An analysis of placement by TVET category shows that 36.7 per cent of KCSE candidates who qualified for university admission were placed in Kenya Medical Training College (KMTTC), whereas 34.4 per cent of candidates who qualified for university admission were placed in TVETs

under the purview of the Ministry of Education in 2023. Of those admitted to KMTTC, 52.9 per cent were female compared to 47.1 per cent who were male (Figure 7.5). This shift suggests that more women are entering fields traditionally dominated by men, further diversifying the workforce and challenging outdated stereotypes.

Figure 7.5: KCSE candidates with a C+ and above placed to lower levels in 2023



Data source: KUCCPS (2023)

A disaggregation by field of training in certificate courses shows an emphasis on health and welfare programmes, while other critical fields such as agriculture, ICT, and engineering are under-represented. Healthcare programmes have consistently attracted the highest number of placements, increasing from 86.8 per cent in 2019 to 92.1 per cent in 2023, underscoring the priority placed on building capacity in the healthcare sector. The dominance of health and welfare programmes in TVET placements reflects a response to the growing demand for healthcare workers, particularly with decentralization of health care services and immigration. Decentralization of healthcare services led to an increase in healthcare facilities from 13,794 in 2019 to 15,064 in 2023 (Table 7.5). This has led to

a higher demand for healthcare workers at the county level, including nurses, medical technicians, community health workers, and other allied health professionals. The country has experienced an increase in the migration of healthcare professionals to the UK, particularly nurses. According to the UK Nursing Council, Kenya ranked 6th in Africa and 11th globally in terms of nurse migration. Between 2017 and 2021, the number of Kenyan-trained nurses registered in the UK National Health Service (NHS) grew by 23 per cent, rising from 571 in 2017 to 703 in 2021 (Ministry of Health, 2023). While this focus is essential for addressing public health needs, it has overshadowed other fields that are equally vital for socio-economic development.

Table 7.5: Placement in certificate courses by field of education and training (%)

Fields of education and training (Based on UNESCO ISCED-F 2013)	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)
Health and welfare	86.8	87.8	92.8	91.7	92.1
Agriculture, forestry, fisheries, and veterinary	2.6	0.8	0.0	0.2	0.0
Engineering, manufacturing, and construction	10.5	8.9	6.2	7.9	6.9
Business, administration, and law	0.0	1.6	0.0	0.0	0.0
Information and communication technologies	0.0	0.8	0.5	0.0	0.4
Arts and humanities	0.0	0.0	0.3	0.0	0.4
Services (e.g., tourism, hospitality)	0.0	0.0	0.0	0.1	0.0

Data source: KUCCPS (2023)

Agriculture, a cornerstone of the economy, has seen a sharp decline in TVET placement from 2.6 per cent in 2019 to 0.0 per cent in 2023 (Table 7.5). Despite its critical role in food security and rural livelihoods, the sector’s educational appeal has diminished significantly. Although placement in engineering, manufacturing, and construction fields is higher than in agriculture, there has been a decline during the period under review. Placement declined from 10.5 per cent in 2019 to 6.9 in 2023. These fields are pivotal for industrialization and infrastructure development, yet they fail to attract sufficient students. The under-representation might be due to low awareness about opportunities in these fields, inadequate training infrastructure, or societal perceptions that undervalue technical skills. ICT programmes have shown minimal progress in placement, despite the growing demand for digital skills in the country’s expanding digital economy. This slow uptake highlights barriers such as limited access to ICT resources, insufficient outreach, and inadequate integration of digital skills into foundational TVET education. The arts, humanities, and

personal services programmes have received marginal placements, reflecting a systemic undervaluation of creative and service-oriented professions. These fields, however, hold significant potential for job creation and innovation, particularly in sectors such as fashion, tourism, and beauty industries, which appeal to the youth.

At the diploma level, the distribution of placements across fields of education and training highlights significant disparities, reflecting sectoral priorities and shifting labour market demands. Placement in health and welfare programmes increased from 12.4 per cent in 2019 to 38.2 per cent in 2023 (Table, 7.6), an indication of the sector’s critical role in addressing public health needs. Courses such as clinical medicine, nursing, and radiography and imaging account for a substantial proportion of total placements, particularly in the later years, where they capture over a third of the total placement. While placement in engineering, manufacturing, and construction was higher, their share has seen a gradual decline in recent years from 44.7 per cent 2019 to 20.4 per cent in 2023. The ICT field, despite its critical role in driving the digital economy, still

accounts for a smaller proportion of placements compared to other technical fields. This suggests an opportunity to enhance outreach and investment in digital education to meet the rising demand for ICT skills in a technology-driven economy.

Agriculture, forestry, and fisheries programmes are under-represented at the diploma level, despite the sector's potential for job creation and its pivotal role in food security.

Table 7.6: Distribution of diploma courses placements by field of education and training (%)

Field of education and training	2019 (%)	2020 (%)	2021(%)	2022 (%)	2023 (%)
Health and welfare	12.5	12.1	25.5	36.9	38.2
Engineering, manufacturing, and construction	44.7	46.7	37.1	25.5	20.4
Agriculture, forestry, fisheries, and veterinary	2.5	4.5	3.4	4.8	1.8
Information and communication technologies (ICT)	9.8	11.6	10.5	8.6	6.7
Business, administration, and law	7.3	8.4	7.5	3.9	3.3
Arts and humanities	3.0	3.9	3.1	1.7	1.5
Natural sciences, mathematics, and statistics	2.1	2.9	3.7	1.7	1.5
Services (e.g., tourism, hospitality)	5.9	4.4	3.2	1.7	1.3
Education	7.1	10.4	10.1	24.1	10.3

Data source: KUCCPS (2023)

Fields such as business, administration, law, and arts and humanities show modest but consistent placement numbers. These programmes cater to specialized career paths in administration, creative industries, and service-oriented sectors. However, their small share of placements suggests the need for efforts to display the career opportunities available in these fields. The education sector has experienced notable growth in placements, particularly in teacher education programmes. This reflects ongoing efforts to enhance the quality of education by training more

qualified teachers to meet the demands of an expanding student population.

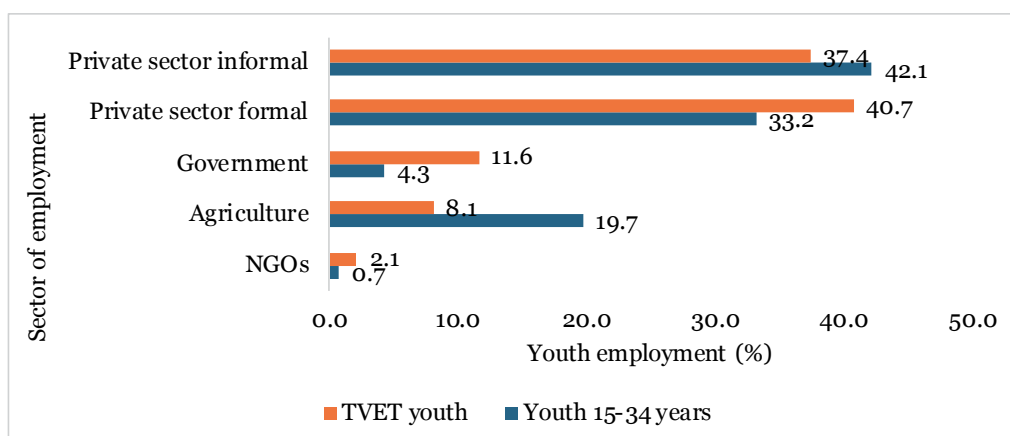
7.3 Sector of employment among TVET graduates

TVET graduates are employed in both formal and informal sectors. The formal sector employs a slightly higher proportion of the TVET graduates at 51.1 per cent compared to the informal sector at 48.9 per cent (KNBS, 2015). The private sector is a

significant employer for the broader youth population and youth who hold TVET qualifications. About 40.7 per cent of TVET graduates are employed in the formal private sector, compared to 33.2 per cent of the broader youth population (Figure 7.6). This disparity indicates that TVET training enhances graduates' employability in formal job settings, and is an indication of demand for skilled labour in industries such as manufacturing and construction. This underscores the importance of aligning training programmes with the

specific needs of employers to enhance job readiness and competitiveness. The practical skills and industry-relevant training provided by TVET programmes make graduates more attractive to formal employers, who value their ability to contribute immediately to the workforce. However, in the informal private sector, the broader youth population is more represented, with 42.1 per cent employed compared to 37.4 per cent of TVET graduates.

Figure 7.6: TVET graduate employment by type of sector 15-34 years (%)



Data source: KNBS (2016), Kenya Integrated Household Budget Survey

There are differences in employment among the youth aged 15-34 years and TVET graduates in the agricultural sector. The broader youth population has a higher proportion of the youth in agriculture, with 19.7 per cent employed in this sector compared to 8.1 per cent of TVET graduates. The low employment and engagement of the TVET graduates in agriculture can be attributed to systemic challenges and societal perceptions. Young people view agriculture as a low-status occupation associated with poverty and lack of opportunities. This discourages them from pursuing careers in farming

or agribusiness, leading to a preference for urban jobs that are perceived as more lucrative. The youth often face barriers in accessing land, capital, and technology necessary for successful agricultural ventures. Traditional land tenure systems typically favour older generations, leaving the youth without the means to establish their own farms or businesses. While TVET institutions provide valuable training, there may be a mismatch between the skills taught and the actual needs of the agricultural sector. Many graduates have insufficient exposure to modern farming techniques, value chain management, and

agribusiness strategies that are crucial in agriculture.

7.3.1 Decent work among TVET graduates

Decent work is a multifaceted concept defined by the International Labour Organization (ILO) as productive work that delivers fair income, security, social protection, and opportunities. The ILO's Decent Work Agenda comprises four key pillars: employment creation and enterprise development; social protection; standards and rights at work; and governance and social dialogue. While TVET plays a crucial role in equipping graduates with the skills necessary for the labour market, it is important that the graduates secure employment that is decent. Ensuring that TVET graduates understand their labour rights is essential for achieving decent work outcomes. Studies indicate that graduates face discrimination and lack representation in workplaces, which can negatively impact their job satisfaction and retention.

Job security

The Employment Act, 2007, which aims to protect both employee and employer rights dictates that employment contracts be

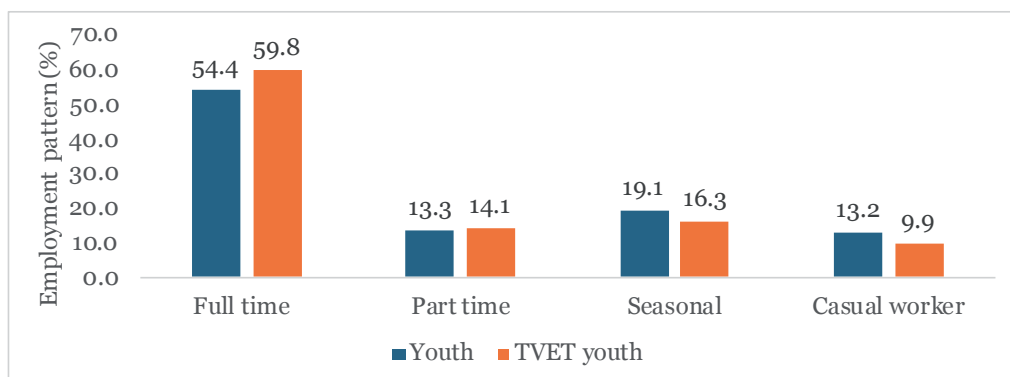
documented in writing for positions lasting longer than three months. Written contracts provide a formal record of employment terms, ensuring compliance with legal standards and minimizing disputes over employment conditions. Furthermore, employees often perceive written contracts as a guarantee of job security. The analysis shows that only 11.4 per cent of the youth have written contracts compared to 36.9 per cent of TVET graduates. This implies that TVET graduates are more likely to secure employment with written contracts, which provides them with greater job security and legal protection compared to the youth outside the TVET system. Written contracts serve as legally binding documents that outline the terms of employment, including job responsibilities, compensation, and termination conditions. Only 15.4 per cent and 17.2 per cent of the youth and youth in TVET systems had verbal contracts, respectively (Table 7.7). About 72.5 per cent of youth work in jobs where they have no contracts compared to only 45.1 per cent of youth who are TVET graduates. This highlights the precarious nature of employment for TVET graduates, raising concerns about job security and the quality of employment secured after completing their training.

Table 7.7: Type of contractual agreement among TVET employees (%)

Type of contract	Youth 15-34 years (%)	Youth (TVET qualification) (%)
Written contract	11.4	36.9
Verbal agreement	15.4	17.2
Implied contract	0.8	0.7
No contract	72.5	45.1

Data source: KNBS (2016), Kenya Integrated Household Budget Survey

Figure 7.7: Pattern of employment among the youth (15-34 years) and TVET graduates (%)



Data source: KNBS (2016), Kenya Integrated Household Budget Survey

The high percentage of youth working without contracts reflects the pervasive nature of informal employment in Kenya. Young people are forced into precarious jobs that lack legal protection, predictable income, and access to social benefits. This creates loopholes for exploitation, with employers taking advantage of the lack of formal agreements to deny workers fair compensation or terminate employment without notice. The absence of contracts also limits opportunities for career advancement, as informal employment often lacks the structure and recognition needed for professional growth.

A comparison of youth employment by pattern of employment shows that TVET graduates have a higher rate of full-time employment, at 59.8 per cent, compared to 54.4 per cent of the broader youth population. This indicates that TVET training provides a more direct pathway to stable, long-term employment opportunities. Full-time jobs offer greater job security, benefits, and opportunities for career advancement. Youth are more likely to be engaged in seasonal work (19.1%) compared to TVET graduates (16.3%). Seasonal employment often lacks the stability and predictability of full-time or part-time jobs, leaving workers vulnerable to income fluctuations and limited access to social benefits. TVET graduates are less

likely to be engaged in casual work, with only 9.9 per cent in such roles compared to 13.2 per cent of the broader youth population (Figure 7.7).

Adherence to minimum wage

Minimum wage laws are designed to protect workers from exploitation and ensure a basic standard of living. However, TVET graduates often find themselves in precarious employment situations, where adherence to these wage standards is inconsistent. Despite the established minimum wage, there are concerns regarding employers' adherence to these standards. A large proportion (48.9%) of TVET graduates are in informal employment, working in a sector where minimum wage laws are not fully enforced. This is prevalent in developing countries where informal labour constitutes a significant portion of the workforce. Graduates working in such conditions often receive wages below the legal minimum, further exacerbating their economic vulnerability. As of 2024, the minimum wage in urban areas such as Nairobi, Mombasa, and Kisumu were Ksh 15,201 per month. This rate varies by job type and skill level, with different categories of workers earning different amounts. The minimum wage is not uniform across all

Table 7.8: Gazetted minimum wage for 2021

	Cities (Ksh)	All former municipalities (Ksh)	Other towns (Ksh)
Ungraded Artisan	18,320	16,908	13,975
Artisan Grade III	23,039	21,175	18,846
Artisan Grade II	24,884	23,732	21,418
Artisan Grade I	30,627	28,822	27,024
Average	24,218	22,659	20,316

Data source: KNBS (2023), Economic Survey

sectors; it is divided based on skill levels and job types. For instance, ungraded artisans earn Ksh 18,320, while Artisan Grade I earn Ksh 30,627 per month (Table 7.8).

An analysis of wages paid among TVET graduates by age and highest education qualification reveals disparities in income earned among certificates and diploma holders. For instance, graduates aged 15 to 19 years with a certificate earn an average of Ksh 4,813 per month. This disparity highlights the initial challenges faced by younger graduates as they enter the job market, often securing lower-paying positions that reflect their limited experience. As graduates progress, the income levels increase notably. Those aged 20 to 24 years with a diploma earn an average of Ksh 15,685, while their counterparts with a certificate earn Ksh

7,902, depicting a wage gap (Table 7.9). This wage gap highlights the economic advantages that come with higher qualifications, emphasizing the importance of continuous education and skill enhancement in a competitive job market. When considering broader age groups, such as those aged 15 to 24 years and 15 to 34 years, the average incomes for certificate holders are Ksh 7,629 and Ksh 11,294, respectively. In contrast, diploma holders in these age categories earn significantly more at Ksh 15,685 for ages 15 to 24 years and Ksh 20,784 for ages 15 to 34 years.

As the job market evolves, the demand for specific skills intensifies, necessitating that TVET graduates engage in short courses and specialized training programmes. Short courses provide targeted skills that align with industry needs, enabling graduates to increase their employability and earning potential through workplace training.

Table 7.9: Wages among TVET graduates

Age categories (Years)	Certificate (Ksh)	Diploma (Ksh)
15-19	4,813	-
20-24	7,902	15,685
25-29	10,215	19,878
30-34	14,886	23,277
15-24	7,629	15,685
15-34	11,294	20,784

Data source: KNBS (2016), Kenya Integrated Household Budget Survey

Moreover, the disparity in earnings also reflects employers' willingness to pay for higher-skilled labour. By investing in upskilling and reskilling through short courses, TVET graduates can bridge the wage gap and enhance employment opportunities.

Access to social protection

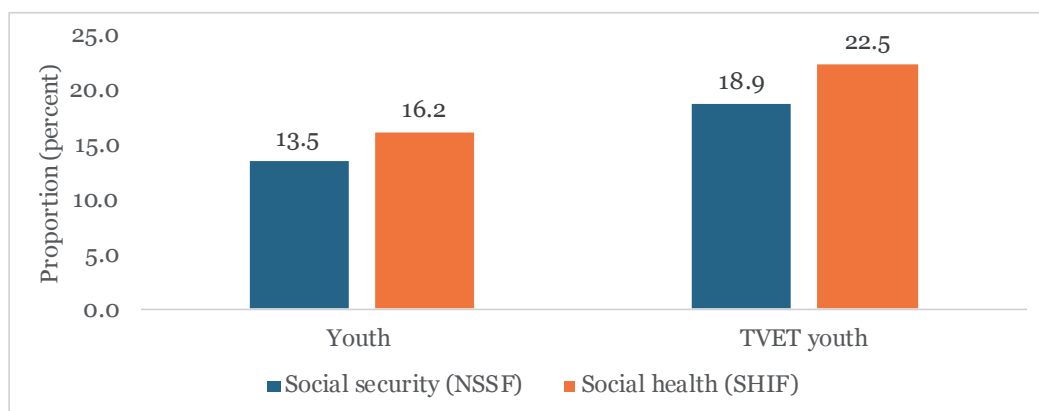
TVET graduates have a higher rate of enrolment in social security programmes such as the National Social Security Fund (NSSF), with 18.9 per cent covered compared to 13.5 per cent of the broader youth population (Figure 7.8). This difference shows that TVET graduates are more likely to be employed in formal sectors where such benefits are mandatory. This provides them with financial protection and security in retirement or during periods of unemployment. Similarly, TVET graduates have better access to social health insurance, such as the Social Health Insurance Fund (SHIF), with 22.5 per cent covered compared to 16.2 per cent of the youth. This increased coverage ensures that TVET graduates have access to medical care without incurring substantial out-of-pocket expenses, which can be a financial

burden. The disparity in social protection coverage between TVET graduates and the broader youth population is the effectiveness of vocational training in securing formal employment, which is associated with social benefits. However, it also points to the need to extend social protection to informal workers, and those outside the formal employment sector, who are more vulnerable to economic shocks and health crises.

7.4 Role of TVET in youth employability

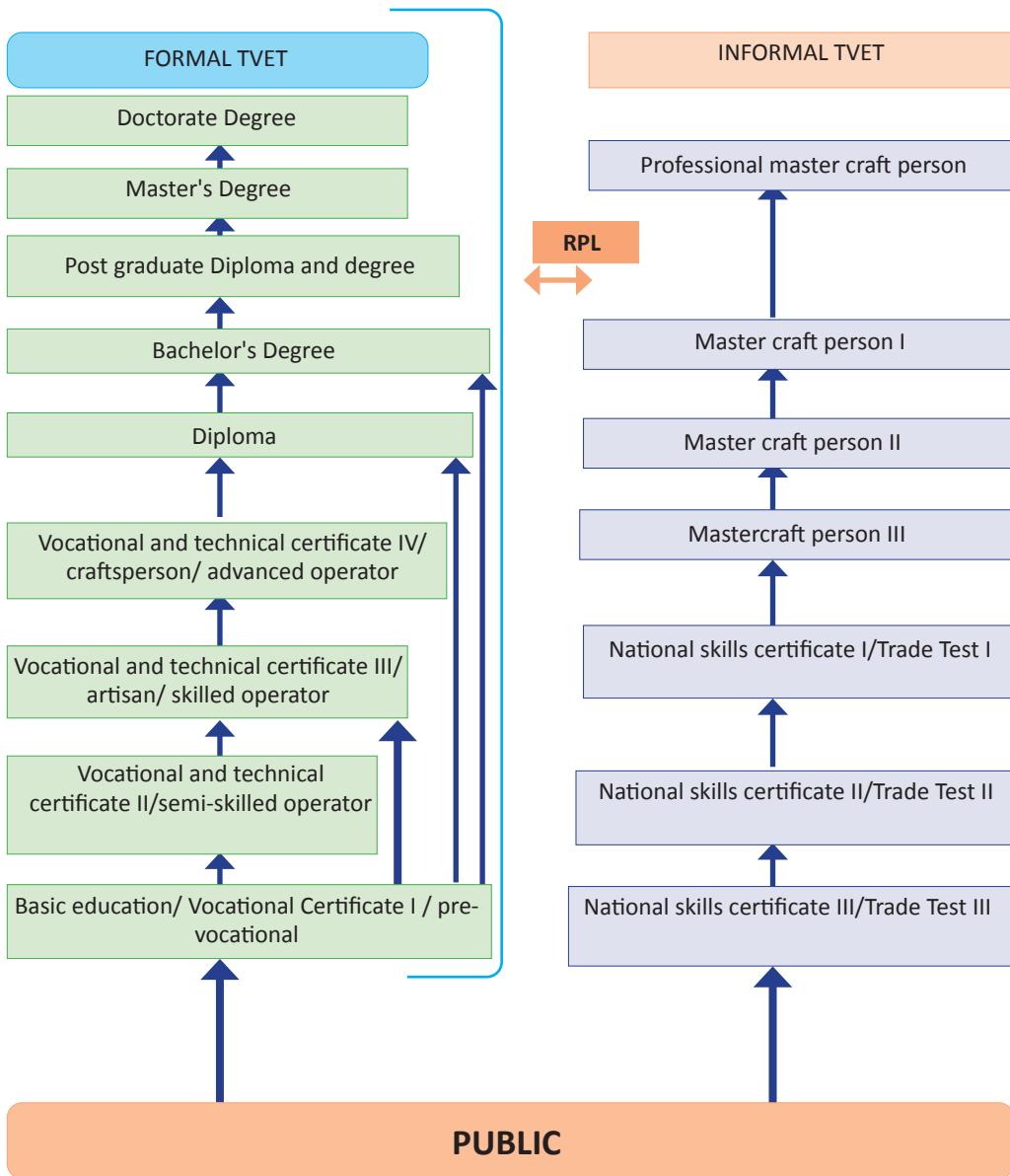
TVET formal and informal training systems play a distinct role in addressing the country's employment challenges, particularly among the youth (Figure 7.9). While formal training is structured and regulated, informal training often occurs through apprenticeships, workplace learning and mentorships in various trades such as carpentry, plumbing, tailoring, and other artisanal skills that can be formalized through Recognition of Prior Learning (RPL). Delivery of TVETs is under the purview of both national and county

Figure 7.8: Access to social protection among the youth (%)



Data source: KNBS (2016), Kenya Integrated Household Budget Survey

Figure 7.9: Education and TVET training pathways



Source: Authors' illustration based on Ministry of Education (2018)

governments as outlined in the Fourth Schedule of the Constitution of Kenya. The national government oversees the national polytechnics and training and vocational colleges. These institutions

offer a range of programmes, including government trade tests, artisans, craft, diploma, and professional certificates in technical and business courses. In addition, the national government is responsible for

setting policies, standards, curriculum, and examinations. County governments are responsible for VTCs, formulating county-specific programmes and ensuring the availability of necessary infrastructure and resources for vocational education and training.

7.4.1 Policy reforms in TVET

Prior to 2013, TVET in Kenya was governed by the Education Act, Cap 211 of 1968, which was revised in 1970 and 1980.⁴ TVET encompassed various training levels, including trade tests, national vocational certificates, artisan courses, craft courses, and diploma training. These programmes were offered in Vocational Training Centres, Technical and Vocational Colleges, Technical Trainers Colleges, National Polytechnics, and Institutes of TVET within universities. Despite its importance, the TVET sector faced challenges that necessitated reforms. These challenges were enumerated in the various Commissions, notably in the Mackay Commission (1981), Kamunge Commission (1988) and the Koech Commission (1999). The Mackay Commission was instrumental in introducing the 8-4-4 education system, which emphasized technical subjects to equip learners with practical skills for self-reliance. The Commission envisioned TVET institutions as centres for equipping students with technical skills, but many institutions lacked adequate funding, infrastructure, and equipment. The Kamunge Commission sought to address unemployment by strengthening TVET to produce skilled labour for industries. It recommended the expansion of technical institutes and polytechnics. However, the implementation of recommendations was hampered by the introduction of

cost-sharing in education, which meant that households had to contribute directly to tuition fees and other expenses. This disproportionately affected low-income families, leading to increased dropout rates among students. The Koech Commission highlighted failures in providing quality middle-level workers due to poor linkages between training institutions and industry, non-modular curricula, lack of credit transfer, and rigid systems.

In response to these gaps, the 2013 TVET Act was enacted to establish a more coordinated and effective TVET system. Among the organs created is the Technical and Vocational Education and Training Authority (TVETA), which is a regulatory body in charge of registration and accreditation of TVET institutions and trainers; the TVET Curriculum Development, Assessment and Certification Council (TVET-CDACC), which is charged with the responsibility of curriculum development, assessment and certification of programmes; and the Kenya National Qualifications Authority (KNQA), which is charged with the responsibility of establishing and maintaining the Kenya National Qualifications Framework (KNQF).

Besides the establishment of these bodies, other reforms that have contributed to the rebranding and repositioning of TVET include equipping institutions with modern training equipment, establishing Technical Vocational College (TVC) in each of the country's constituencies, upgrading of VTCs, TVCs and National Polytechnics, introduction of Competency Based Education and Training (CBET), recruitment, upskilling and retooling of the trainers and instructors, giving scholarships and bursaries and giving students in these institutions access to loans through the Higher Education Loans Board (HELB). These reforms have also led to the implementation of demand training

⁴ <https://ziziafrique.org/wp-content/uploads/2024/12/Technical-and-Vocational-Education-and-Training-in-Kenya-March-2019.pdf>

anchored on the implementation of CBET, emphasis on dual training, provision of industrial attachments, recognition of prior learning, re-assessment of accreditation and certification processes, reskilling and retooling of trainers and assessment of TVET financing. These efforts are geared towards strengthening the TVET sub-sector to provide an employable youth.

7.4.2 Demand-driven training

Implementation of CBET

CBET programmes are designed in collaboration with industry experts to ensure students acquire the specific skills that align with the labour market needs. The curriculum is continuously reviewed and updated to reflect the latest industry trends and employer demands. The CBET approach significantly enhances the employability of TVET trainees in Kenya by focusing on practical skills and industry alignment. CBET equips learners with competencies that are directly applicable to the workplace, increasing their job prospects in a competitive labour market. CBET is an industry-driven programme, ensuring graduates' training is based on industry's occupational standards. This approach leads to graduates who are highly competent and perform better in their workplaces compared to those from traditional programmes. The CBET curriculum, the qualifications of trainers, and industry engagement all contribute positively to developing the employability skills of TVET trainees. Through industry engagement and internships, trainees gain hands-on experience, exposure to workplace culture, and a chance to apply their knowledge practically. Despite the advantages conferred by the CBET approach, implementation is challenging. One of the primary obstacles is the inadequate infrastructure and resources. Many TVET institutions lack

adequate equipment, tools, and reference materials required for effective CBET implementation. The resource-intensive nature of CBET, which requires hands-on experience also means more resources are required, which most schools currently do not have.

Dual training

The dual training model ensures that students gain both theoretical knowledge and relevant work experience, thus making them more employable upon graduation. Trainees are expected to spend 50 per cent to 70 per cent of their time in industry settings, and the remainder in educational institutions to gain practical skills. Implementation of the Dual Training Policy, 2024, seeks to strengthen technical and vocational education and training. This aligns with the Competence-Based Education and Training (CBET) curriculum. The policy is designed to address the skills mismatch prevalent in the labour market by combining classroom instruction with practical, hands-on industry training. Moreover, the policy provides an opportunity for collaboration between training institutions and industry, leveraging the latest technologies and expertise to enhance the employability of graduates.

Evidence from Kenya shows that implementation of dual training enhances employability of TVET graduates from various fields. For instance, the Eastern Africa Skills for Transformation and Regional Integration Project (EASTRIP) supports dual training by strengthening private sector linkages and developing demand-driven short- and long-term specialty TVET programmes. A tracer study conducted by the Kenya Coast National Polytechnic (KCNP) in June 2024 reveals an overall employability rate of 73.9 per cent for its graduates, a slight decline from the previous year's 81.3 per

cent due to non-response. Females have a slightly higher employment rate (77.1%) compared to males (72.9%). The study also highlights that 78.0 per cent of employed graduates are working in fields related to their training, affirming the relevance of the TVET programmes to industry needs. However, a notable 22 per cent reported a mismatch between their training and current job roles. Enhanced employability of TVET graduates in construction, building infrastructure, textile and geothermal industries was also reported among graduates in the EASTRIP.

While the dual training approach improves the employability of TVET graduates, its successful implementation faces gaps. While some TVET institutions have modern facilities, many still lack the necessary infrastructure and equipment characterized by outdated equipment and machinery, which fail to provide students with the hands-on experience required. There are a limited number of industries and companies willing to participate in the dual training system. Institutions operating in small and medium-sized enterprises (SMEs) lack the resources or capacity to accommodate trainees. This is because the implementation of dual training requires investment in up-to-date machinery and software, resulting in high capital costs.

Industrial attachment

Industrial attachment in Kenya's TVET sub-sector is designed to bridge the gap between classroom learning and the practical skills required by industry, enhancing the employability of graduates and this part of their training curriculum. Industrial attachment is a crucial component of competency-based training within the TVET system, with strict guidelines and standards set by the TVET Authority to ensure quality and relevance to industry needs. In line with this, the TVET Authority is developing a

national Industrial Attachment Standard to ensure strong collaboration between training providers and industry. This standard provides guidelines for managing industrial attachments, distributing roles, and protecting trainees' interests, including standardized reporting through logbooks and comprehensive monitoring and evaluation. During industrial attachments, trainees are mentored, coached, and assessed, with monitoring and evaluation processes in place. To ensure that the industrial training programmes offered remain relevant and responsive to the changing needs of the economy, the sub-sector collaborates with the National Industrial Training Authority (NITA) in assessment and curriculum delivery.

The high cost of accessing industrial attachments among TVET graduates is a challenge. The costs include transport, accommodation, medical cover, and registration fees imposed by organizations. Lack of a centralized placement system forces students to seek attachments individually, leading to delays. Moreover, organizations have lengthy recruitment procedures for interns, making it difficult for students to complete the required attachment period within their academic timeline.

Recognition of prior learning

Recognition of Prior Learning (RPL) is important in enhancing the employability of TVET graduates, because it formally acknowledges skills and knowledge acquired through non-formal and informal learning experiences. RPL provides a pathway for individuals with practical skills gained either through work experience, apprenticeship, or self-directed learning to obtain nationally recognized TVET qualifications. Apart from facilitating recognition of informally earned skills, RPL significantly increases employability by enabling skilled

workers to obtain formal certification that validates their competencies. This strengthens their position in the labour market and improves their access to better job opportunities. Moreover, by recognizing and validating existing skills within the workforce, RPL helps address the gap between industry needs and the competencies possessed by TVET graduates. This alignment is essential for creating a competitive and resilient workforce that can adapt to changing economic demands. The development and implementation of Recognition of Prior Learning (RPL) in 2021 is part of a broader strategy by the Kenyan government to enhance skills development through certification of informal TVET training. This is in line with Kenya's Bottom-up Economic Transformation Agenda (BETA), which seeks to create an inclusive TVET system that values all forms of skills acquisition. Moreover, the policy is critical to the development of a responsive and equitable education and training system that facilitates access, mobility, and progression.

Despite its implementation, the policy faces challenges. RPL requires specialized professionals who can assess and validate prior learning against established standards. Without enough of these experts, the RPL process can be slow and inefficient, leading to delays in certification and recognition. There is low awareness of the RPL certification process among intended beneficiaries, particularly those in the *Jua Kali* sector and self-taught artisans. There have been low institutional efforts to educate the public about the certification process. Most workers in the informal sector are unaware that they can have their skills officially recognized without undergoing formal education. Moreover, the process of applying for certification is complicated, costly, and time-consuming.

7.4.3 Accreditation and certification

Accreditation and certification of TVET institutions is primarily managed by the TVET Authority, with the TVET Curriculum Development, Assessment and Certification Council (TVET-CDACC) responsible for curriculum development, assessment, and issuing certificates of competence to individuals completing TVET programmes. This is done in line with the guidelines set by the Kenya National Qualifications Framework (KNQA), which has developed assessment standards that guide how qualifications are assessed, ensuring that assessments reflect the competencies and skills expected at various qualification levels.

7.4.4 Trainer preparedness and training

Teacher training and preparedness are intrinsically linked to the effective delivery of Competency-Based Education and Training (CBET). The government, through the State Department for TVET, has shown commitment by retooling TVET trainers to enhance CBET implementation. This initiative includes training a significant number of trainers from national polytechnics, with ongoing programmes to train more across different regions. These retooling programmes, supported by various TVET agencies, aim to harmonize the CBET curriculum and ensure trainers possess the necessary practical skills. For example, in 2021/22, 495 trainers were trained in mechanical, Building and Civil Engineering (BCE), electrical and electronics engineering.

Despite the various efforts, gaps in the number of trainers in TVET institutions persist. The trainer-trainee ratio is a critical factor influencing the quality of skills development. There are inadequacies in

staffing where a trainer-trainee ratio of 1:55 is above the recommended TVETA ratio of 1:20 for practical-based programmes and 1:30 for theory-based programmes (TVETA, 2023). This inadequacy results in low delivery of the curricula and reduced individualized attention for trainees, thereby hindering effective acquisition of skills. This undermines the capacity of TVET institutions to provide standardized and effective training programmes essential for producing a skilled workforce. Trainers are inadequately trained to deliver and assess CBET effectively, which impacts their teaching. This gap in training is primarily attributed to insufficient on-the-job training opportunities, which limits their ability to apply CBET principles in knowledge transfer.

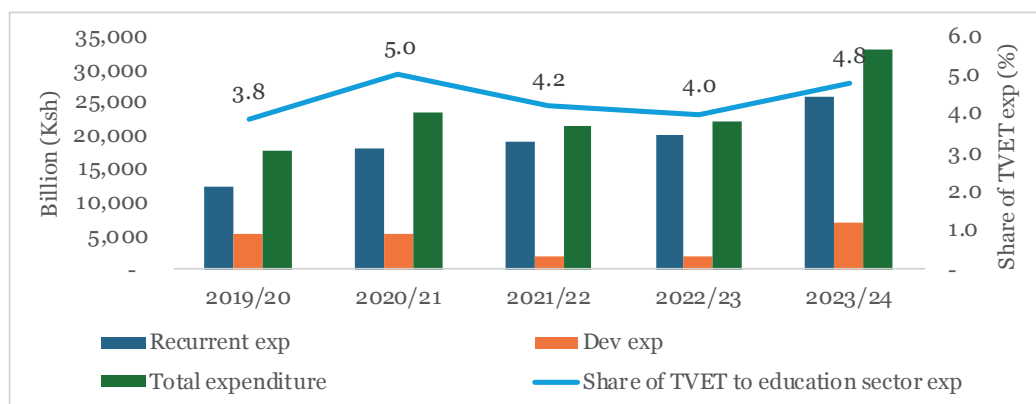
In cognizance of this, the Kenya Technical Trainers College (KTTC) initiated a CBET Trainer and Assessor Development Course targeting over 130 trainers aimed at reorienting trainers towards effective CBET implementation, emphasizing the importance of capacity building in achieving successful training outcomes (TVETA, 2021). Moreover, as of 2023, TVET-CDACC had trained over 12,556 trainers

and industry practitioners, specifically on competency-based assessment.

7.4.5 Financing TVET

Despite its critical role in economic development and social integration, TVET is underfunded. The World Bank (2024) reports that, on average, governments spend between 0 and 15 per cent of their total expenditure on TVET (World Bank, 2024). In Kenya, government spending on TVET has fluctuated between 2019 and 2024. The recurrent expenditure on TVET increased from Ksh 12.5 billion in 2019/20 to Ksh 25.8 billion in 2023/24, representing a growth of approximately 106 per cent over the five-year period (Figure 7.10). This increase indicates a growing recognition of the importance of TVET in equipping the workforce with necessary skills. The increasing recurrent expenditure signals a commitment to sustaining operational costs associated with running TVET institutions, including hiring more instructors and improving training materials. Moreover, the government also increased budget allocation to the sector to facilitate the recruitment of additional trainers, and the implementation of Curriculum-Based Education and Training (CBET).

Figure 7.10: Recurrent and development expenditure in TVETs, 2019-2024



Data source: KNBS (Various), Economic Survey

Development expenditure declined from Ksh 5.3 billion to Ksh 2.1 billion between 2019/20 and 2022/23, indicating a reduction in funds allocated for infrastructure development and equipment upgrades, and other capital projects. Reduced funding for development expenditure limits the construction of new TVET institutions and the upgrading of existing facilities. For example, in 2023, 60 per cent of TVET workshops lacked functional machinery, linked to funding shortfall. This hinders the sector's efforts to equip students with skills that are relevant to the modern workforce. Modern equipment and technology are essential for providing training that aligns with industry needs and, without adequate funding, TVET institutions struggle to acquire these resources. Moreover, low development expenditure curtails the implementation of the Competence-Based Education and Training (CBET) and

dual training programmes that require significant investment in infrastructure.

Capitation grants for TVET trainees were set at Ksh 30,000 for technical training institutes and Ksh 15,000 for learners in youth polytechnics. While this led to increased trainee enrolment in TVET institutions, the allocated capitation budget has remained unchanged. As enrolment continued to rise, the capitation per trainee declined from Ksh 17,258 in 2021/22 to Ksh 13,000 in 2022/23 and slightly increased to Ksh 14,000 in 2023/24, as shown in Table 7.10. This decline was able to cover 57 per cent, 43 per cent and 47 per cent of trainees during the review period. While the capitation is aimed at increasing access, the declining real value disproportionately affects vulnerable groups. Students from low-income households who rely on capitation grants face barriers as institutions struggle to subsidize their training.

Table 7.10: Disbursement of capitation grants

Financial year	Capitation budget (Ksh)	Disbursement	Capitation per trainee	% covered
2021/22	5,200,000,000	5,181,898,100	17,258	57
2022/23	5,200,000,000	3,859,307,000	13,000	43
2023/24	5,200,000,000	4,607,061,000	14,000	47

Source: Ministry of Education (2024)

The TVET sector experiences delays in disbursement of capitation grants, which affects the ability to provide essential resources, maintain infrastructure, and pay staff, leading to disruption in training programmes. TVET institutions rely on capitation grants to purchase the necessary materials and equipment for practical training. Delays in funding disbursement mean that institutions often struggle to acquire these resources, without which institutions cannot maintain a conducive learning environment. This can lead to

prolonged breaks in training, delayed completion of courses, and a diminished ability to adapt to changing industry needs.

7.5 Global Practices in TVET Training

Countries can be classified as having respective TVET models according to their training market structure, delivery modes and financing schemes, and to the shape of public-private partnership available in each

country. Previous research clusters current TVET systems in advanced economies as follows: the UK liberal market model, the French statist model, and the German dual model. The three models differ from each other in terms of training market organization, qualification systems, training practices, training costs, and the linkage between education and training (Fawcett et al., 2014).

The UK liberal market model emphasizes flexibility and market-driven principles. Training provision is highly decentralized, with a wide range of public and private providers competing in an open market. Employers play a voluntary role in shaping TVET programmes, often guided by immediate market demands rather than long-term skill needs. The qualification system is competency-based, with modular programmes such as National Vocational Qualifications (NVQs) that allow learners to build skills progressively. Training is delivered through diverse settings, including workplaces, colleges, and private providers. Financing in the UK model relies heavily on market mechanisms, with costs shared between the government, employers, and trainees. While this approach offers flexibility and responsiveness to changing labour market needs, it is often criticized for its lack of standardization and weak integration between education and training systems.

The French Statist model is characterized by a centralized, government-led approach. This model is rooted in the tradition of statism, where the state plays a dominant role in regulating and overseeing economic and social activities. In the context of TVET, the State plays a dominant role in designing curricula, setting standards, and funding TVET programmes. Public vocational schools and technical colleges

deliver training, with strong regulations ensuring standardized qualifications across the country. The qualification system is hierarchical, with certifications such as the *Brevet d'Études Professionnelles* (BEP) and *Baccalauréat Professionnel* (Bac Pro) providing clear progression pathways. Practical internships are mandatory, ensuring students gain hands-on experience in the workplace. Employers contribute to financing through mandatory training levies, which complement substantial government funding. This model ensures equity and access to quality education but can be criticized for its rigidity and limited ability to quickly adapt to regional or sector-specific labour market needs.

The German dual model is widely regarded as a benchmark for effective TVET systems. It is characterized by a structured collaboration between employers, vocational schools, and chambers of commerce. Apprentices split their time between theoretical education in schools and practical, on-the-job training in companies, ensuring a balance between academic knowledge and workplace skills. The qualification framework is standardized, providing broad competencies recognized across industries. Employers bear most of the training costs, including apprentice wages, while the government funds vocational schools. Subsidies are available for small and medium enterprises to encourage their participation. The dual model ensures strong linkages between education and employment, with graduates well-prepared to meet labour market demands. However, its success relies on significant institutional support and robust industry involvement, making it challenging to replicate in other contexts.

Table 7.11: TVET training systems

Characteristic	UK Liberal Market Model	French Statist Model	German Dual Model
Training market organization	Decentralized, market-driven; diverse private and public training providers	Centralized; State-led with standardized curricula and public institutions	Collaborative; employers, vocational schools, and chambers of commerce
Role of employers	Voluntary and minimal involvement; short-term market-driven training	Mandatory contribution through training levies; limited direct involvement	High involvement; employers provide on-the-job training and shape curricula
Qualification system	Modular, competency-based (e.g., NVQs); flexible and progressive	Hierarchical, regulated by the State (e.g., BEP, Bac Pro)	Standardized national framework; broad skill development for industries
Training delivery	Flexible; delivered by colleges, private providers, and workplaces	Primarily in vocational schools with mandatory internships in industries	Split system; theoretical education in schools and practical training in companies
Financing	Shared among government, employers, and trainees; market mechanisms dominate	Government-funded with mandatory employer training levies	Employers bear most costs (wages and training); government funds schools
Education-training linkage	Limited pathways from TVET to higher education; gaps in workforce readiness	Clear progression to higher education or specialized training	Seamless transition to skilled employment or higher education
Strengths	Flexibility, responsiveness to dynamic markets	Standardized qualifications, equity, and accessibility	Strong industry alignment, high-quality training, low youth unemployment
Weaknesses	Quality disparities, weak employer engagement, underinvestment in long-term skills	Rigidity; slow to adapt to regional or sectoral needs	Resource-intensive; challenging to replicate in less industrialized contexts

Data source: Author's conceptualization

7.6 Key Messages and Recommendations

7.6.1 Key messages

1. While efforts have been made to support the implementation of CBET, inadequate training infrastructure, and insufficient training of instructors hinder its implementation. The government uses CBET as a policy tool to address skills mismatches and enhance employability by equipping TVET trainees with industry relevant competencies. CBET can be delivered through the implementation of dual training, provisions of industrial attachments and recognition of prior skills acquired informally. The implementation of TVET requires financial and human resources, without which skills development becomes challenging.
2. There is a decline in the share of enrolment in TVET programmes related to industrial and digital transformations, including engineering, manufacturing, and construction. Similarly, enrolment in ICT, despite its critical importance in driving the digital economy, continues to account for a smaller proportion of placements compared to other technical fields. This is attributed to limited access to ICT resources, insufficient outreach, and inadequate integration of digital skills into foundational TVET education.
3. The employment rate of TVET graduates in the agricultural sector is lower than that of the broader youth population, with only 8.1 per cent of TVET graduates employed in agriculture compared to 19.7 per cent of all youth. This is driven by societal perceptions of agriculture as a low-status occupation, barriers to accessing land, capital, and technology, and a mismatch between TVET curricula and the actual needs of the agricultural sector, limiting their potential contribution to the sector.
4. While TVET enhances youth employability in the formal, full-time jobs that guarantee job security and social protection, government investment in development expenditure in TVET has declined, affecting infrastructure development, equipment upgrades, expansion of TVET institutions, and instructor capacity. This contributes to inadequate functional machinery, hindering skills training aligned with industry needs. Additionally, the stagnant capitation grants per trainee, despite rising enrolment, have led to reduced funding per student, disproportionately affecting learners from low-income households. The persistent delays in the disbursement of capitation grants also hinder TVET institutions' capacity to procure essential resources, maintain infrastructure, and remunerate staff, resulting in significant disruptions to training programmes.
5. There is low awareness of the RPL certification process among workers in the informal sector due to insufficient awareness creation efforts. The application process for certification is costly, and time-consuming, which discourages intended beneficiaries from pursuing the certification. Moreover, there is a shortage of qualified professionals to assess and validate prior learning, leading to delays in certification.
6. The high cost of accessing industrial attachment for TVET graduates, including transport, accommodation, medical cover, and registration fees is a challenge. This disproportionately affects students from low-income backgrounds, preventing them from

securing placements. The absence of a centralized placement system, combined with lengthy placement processes by organizations, leads to delays and difficulties in completing the required attachment period within academic timelines.

7.6.2 Policy recommendations

1. Strengthen the implementation of CBET by TVETA through:
 - Prioritizing and enforcing the Competency Based Education and Training (CBET) framework to align TVET programmes with industry demands. This includes regular updates to curricula based on occupational standards provided by industry actors.
 - Establishing a formal mechanism for industry consultation in curriculum development and review and ensuring that training programmes reflect current and future skills needs.
2. Invest in the expansion of digital economy by:
 - Offering scholarships, grants, or subsidized tuition fees for students pursuing courses in engineering, manufacturing, construction, and ICT.
 - Increasing investment in ICT infrastructure across TVET institutions through the Kenya Education Network and the National Research and Education Network.
 - Providing subsidized or free access to digital devices and Internet connectivity for students to facilitate learning.
3. Enhance employment of TVET graduates in agriculture by:
 - Establishing agribusiness incubation centres within TVET institutions to help graduates develop business ideas, secure funding, and connect with markets.
 - Developing programmes to support TVET graduates in transitioning to formal agriculture employment, such as entrepreneurship training alongside technical training.
4. Expand TVET financing by:
 - Increasing government funding for the TVET sector, allocating resources to upgrade infrastructure, providing modern equipment, and enhancing instructor training and increasing capitation grants in line with the enrolment rates.
 - Ensuring timely disbursement of capitation grants.
 - Establishing public-private partnerships to leverage external funding and expertise for TVET development with organizations such as GIZ.
5. Establishing a national RPL awareness and accessibility campaign. This campaign could involve multi-channel communication (radio, TV, community forums, digital platforms) to promote the benefits of RPL certification for informal sector workers.
6. Creating a national TVET industrial attachment fund and placement platform. This fund could provide financial assistance (stipends, transportation allowances, medical cover) to TVET students from low-income backgrounds to cover the costs of industrial attachment.

8. Harnessing the Potential of Decent Jobs in the E-Mobility Sub-Sector

The transport sector is vital to the economy, facilitating the movement of people and goods, but it is also a major source of greenhouse gas (GHG) emissions. In 2015, fossil fuel vehicles accounted for 13 per cent of Kenya's total GHG emissions, a share projected to rise to 17 per cent by 2030 due to sector growth. Transitioning to electric mobility presents an opportunity to curb emissions while generating employment along its value chain. This chapter examines the nascent e-mobility sector through a value chain lens, from raw materials to end-of-life management and estimates the potential for decent job creation at each stage while drawing lessons from leading electric vehicle (EV) markets and comparable emerging economies. The analysis in this chapter indicate that e-mobility could generate up to 334,503 new jobs across the economy by 2030 if Kenya meets its target of reducing transport sector emissions by 3.46 million tonnes of CO₂ equivalent (MtCO_{2e}). Despite this potential, constraints persist along the value chain, limiting the expansion needed to create more jobs. Raw material sourcing and processing are under-developed, with minimal local value addition in minerals such as graphite. Local EV manufacturing and assembly face supply chain gaps and high investment costs, hindering large-scale production. Moreover, less than one per cent of emerging jobs across the transport and related sectors are classified as decent, with many concentrated in informal, low-wage segments. While supportive EV policies have been introduced, implementation is inconsistent, particularly at the county level. Workforce readiness poses a significant challenge, as limited technical training

programmes and skills gaps in high-voltage systems and EV diagnostics could slow e-mobility expansion. The key interventions could focus on strengthening supply chains, expanding charging infrastructure, enhancing workforce training, and ensuring effective policy implementation.

8.1 Introduction

The transport sector is a crucial contributor to economic and social welfare. Over the period from 2019 to 2023, the transport and storage sector contributed an average of 12.3 per cent of the Gross Domestic Product (GDP). It also provides an increasing number of jobs, with about 90,000 Kenyans formally employed in transport and storage services as of 2023. Despite these benefits, transport is a leading source of air pollution and greenhouse gas emissions. In 2021, transport accounted for about 14 per cent of global energy-related CO₂ emissions, underscoring the urgency for cleaner mobility solutions (WRI, 2022). Around the world, countries are shifting to electric mobility to cut emissions and improve urban air quality. This transition not only addresses climate change but also contributes to the United Nations Sustainable Development Goal 11 that aims to create sustainable cities and communities. As countries seek to reduce their carbon footprints by using e-mobility, the initiative is poised to result in some benefits, including reduced air and noise pollution, social inclusion and creation of green jobs (Chaianong et al., 2024; Tsoi, et al., 2023; Remme et al., 2022). Kenya is among the economies supporting the adoption of e-mobility in the African region through its various policy and legal frameworks. Increased e-mobility could reduce locally produced emissions, with the domestic transport sector generating

12.60 MtCO₂e in 2022 (Government of Kenya, 2023) and address domestic unemployment.

Like many developing economies, Kenya faces the dual challenge of high unemployment and the need for greener growth. As of 2022, the unemployment rate was relatively low at 4.8 per cent, while youth unemployment was at 9.6 per cent. However, this masks the reality that 83.75 per cent of workers are in informal employment, often in low-paying, unstable jobs (KNBS, 2025). Creating decent, formal jobs is, therefore, a top policy priority. The e-mobility sub-sector offers a promising avenue to address this unemployment challenge. Studies show notable job potential in EV-related industries. For example, fully electrifying the auto industry in Michigan (USA) could create 56,000 new manufacturing jobs (WRI, 2023) and, across Europe, the EV revolution could generate about 200,000 jobs along the value chain (EuropeOn, 2019). By tapping into e-mobility, Kenya could similarly spur growth in green jobs while reducing reliance on fossil fuels.

The country is taking steps to encourage EV adoption through supportive policies and investments. The Bottom-up Economic Transformation Agenda (BETA) identifies e-mobility as a growth priority, aiming to expand EV infrastructure and local manufacturing. Notably, the government has set a target for 5 per cent of all registered vehicles to be electric by 2025 as part of its climate commitments (Government of Kenya, 2020). Achieving this target requires building of charging stations, incentivizing EV purchases, and restricting production or importation of high-pollution vehicles. So far, various policy measures have been introduced. For instance, excise duty on fully assembled EVs has been reduced to 10 per cent compared to the 20 per cent imposed on conventional vehicles, and EVs and charging equipment are exempt

from VAT as stipulated in the Finance Act 2023 (Government of Kenya, 2023). These incentives make EVs more affordable and signal strong government support.

Early signs of an e-mobility shift are evident. The country has seen a nascent but growing EV market, especially in two-wheelers and buses. Startups such as Roam (formerly Opibus) and BasiGo are assembling electric motorcycles and buses locally, creating new manufacturing jobs and transferring technology. The government has also committed to building charging infrastructure, with one of the BETA priorities being the roll out of 1,000 EV charging stations by 2027 across cities and highways. This will catalyze private investment and alleviate consumer “range anxiety” concerns by consumers that EV battery could run out before reaching an intended destination or next charging station. Additionally, the draft National E-mobility Policy (2024) lays out a roadmap for local EV production and standards.

The global momentum in electric mobility is also promising. Worldwide, EV sales increased from about 5 per cent of new vehicle sales in 2020 to 14 per cent by 2023 (IEA, 2023), indicating a rapidly maturing industry. Africa has begun to follow suit; for example, Rwanda and Uganda are promoting electric motorbikes and buses, and South Africa is attracting EV manufacturers. The EV fleet in Kenya is small, at an estimated 9,047 EVs on the road in 2024, including motorcycles and cars, but growth is expected to accelerate as vehicles become more affordable, and supportive infrastructure expands.

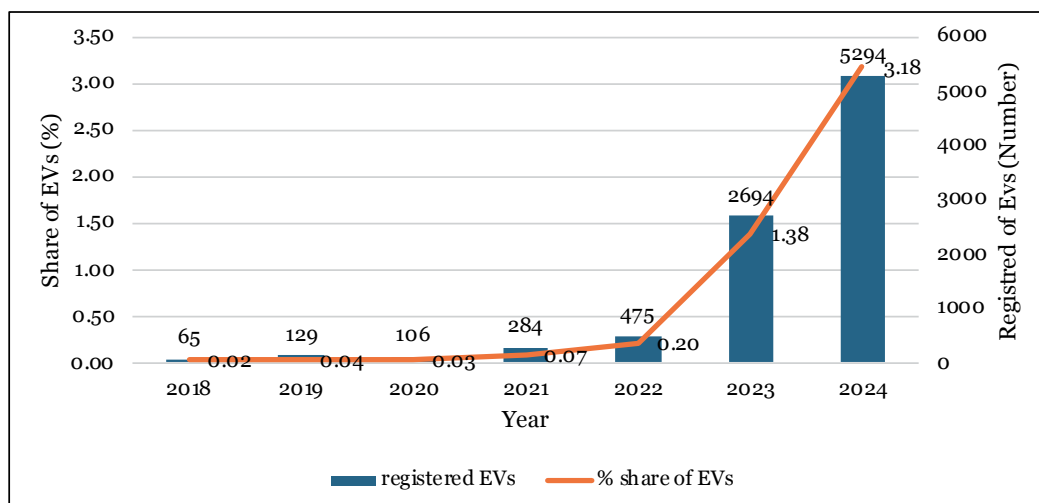
This chapter explores how Kenya could harness the transition to EV to create decent jobs. It examines each stage of the EV value chain to identify where most jobs could be generated and draws insights from the ancillary services that would help achieve the job creation potential of electric vehicles.

8.2 E-mobility Sub-sector Performance in Kenya

The e-mobility sub-sector is still in its early stages compared to global frontrunners, but it has shown promising growth in recent years. Annual electric vehicle (EV) registrations increased from just 65 units in 2018 to 5,294 units by 2024 (Figure 8.1), representing a more than eightyfold

increase over the six years. This notable increase demonstrates both the growing awareness of and demand for electric vehicles. While the absolute numbers remain low compared to global figures, the rapid acceleration signals a potential growth in the country's EV market, especially as supportive policies and infrastructure development continue to evolve.

Figure 8.1: Electric vehicle registrations in Kenya, 2018-2024

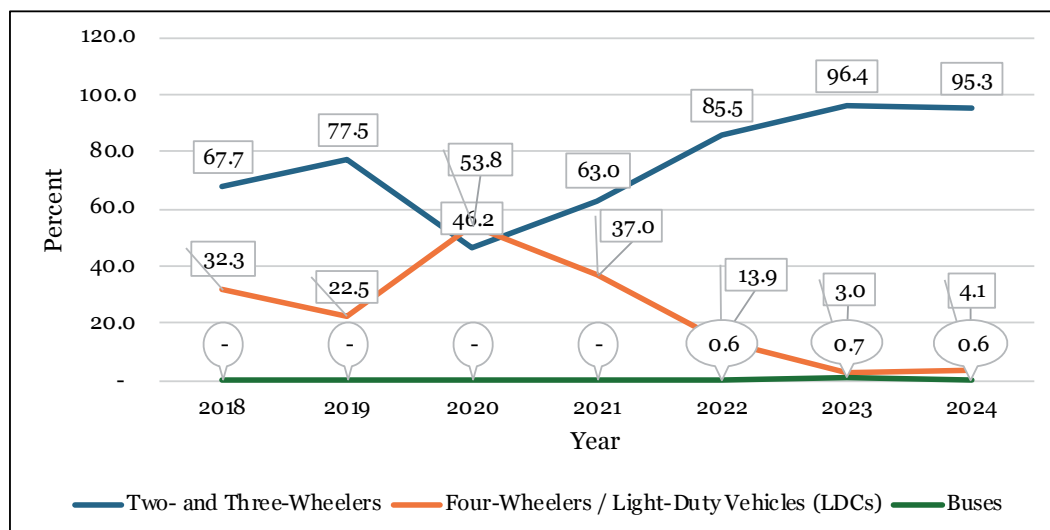


Data source: NTSA reports (Various)

The rise in e-mobility adoption mirrors the global growth patterns, although at a smaller scale. Between 2018 and 2024, the world saw a sixfold increase in EV registrations, while the country experienced a particularly steep rise after 2020, with a notable growth between 2020 and 2024 (Figure 8.1). The government's National Energy Efficiency and Conservation Strategy (NEECS) 2020 targets to have electric vehicles accounting for 5 per cent of all vehicle registrations by 2025, further accelerating this expansion.

Two- and three-wheelers (motorcycles and rickshaws or *tuk tuks*) have dominated EV registrations, accounting for 95.3 per cent of all EVs in 2024, up from 67.7 per

cent in 2018 (Figure 8.2). This increase reflects the rising adoption of electric motorcycles and tuk-tuks, driven by their cost-effectiveness, government incentives, and the need for sustainable urban mobility solutions. Conversely, registration of four-wheelers, including light-duty vehicles, has been fluctuating, peaking at 53.8 per cent in 2020 before declining to 4.1 per cent in 2024. This decline can be attributed to high upfront costs, limited charging infrastructure, concerns about the range of the battery charge (range anxiety), and the continued dominance of imported second-hand internal combustion engine (ICE) vehicles. Notably, electric buses accounted

Figure 8.2: Trends in the share of registered EV by vehicle type, 2018-2024

Data source: NTSA reports

for 0.6 per cent of registered EVs in 2024, signalling early efforts to electrify public transport. This trend is expected to gain momentum as private sector investment in electric mass transit solutions increases, supported by policy frameworks and infrastructure expansion.

Most recently, the country has witnessed local assembly initiatives, particularly in the two-wheeler and bus segments. Start-ups such as Roam and BasiGo have begun assembling electric vehicles domestically. Roam is focusing on electric motorbikes and shuttle buses, while BasiGo is assembling electric buses in partnership with Associated Vehicle Assemblers (AVA). Additionally, international collaborations, such as the partnership between Chery and Afrigreen Automobile, are setting up assembly plants to produce electric vehicles locally. These local initiatives contribute to job creation and technological development while reducing dependence on fully imported electric vehicles.

Looking ahead, the nation's EV market is poised for take-off. If supportive measures

are sustained, industry experts project exponential growth in EV adoption over the next decade. This presents an opportunity not only to cut carbon emissions and improve urban air quality, but also to create jobs across multiple sectors – from manufacturing and battery assembly to charging infrastructure deployment, electrical grid upgrades, vehicle maintenance, and end-of-life recycling. To capture this opportunity, it is crucial to map out the entire electric vehicle value chain and identify opportunities to integrate and build competitive advantages for job creation and economic development. The following sections provide a comprehensive value chain analysis, highlighting potential job creation at each stage and the conditions needed to realize these gains.

8.3 Navigating the EV Value Chain for Job Creation

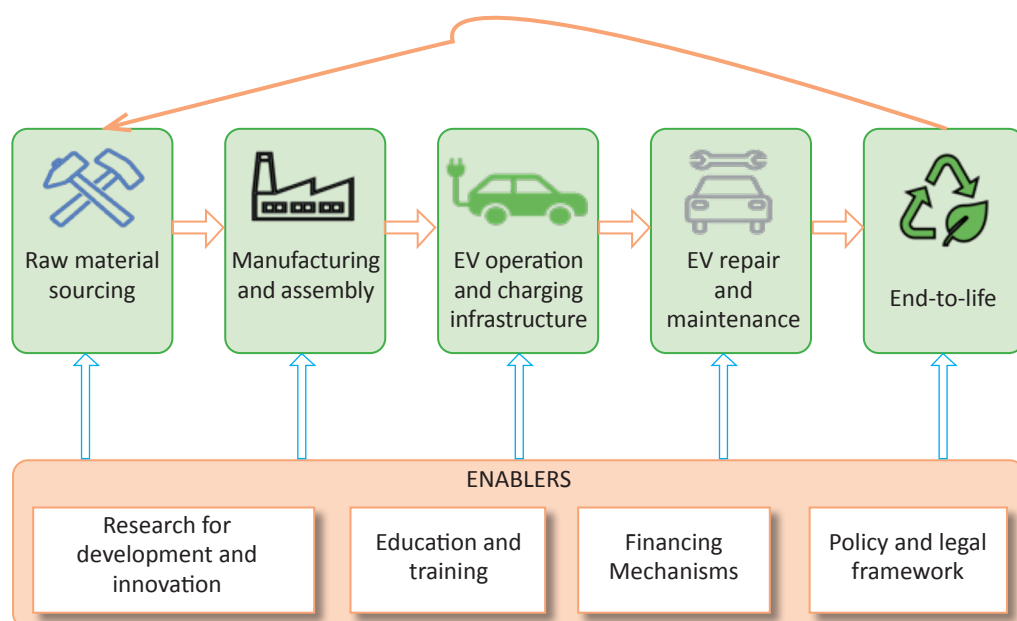
This section delves into the e-mobility value chain, emphasizing its potential to generate decent jobs. It provides a structured analysis of each component, from raw material sourcing to after-sales services and

end-of-life management, highlighting the necessary skills, technologies, and labour demands. The analysis explores how policy, local industry strengths, and workforce developments intersect to unlock job opportunities by contextualizing global trends within this emerging market. The goal is to offer actionable insights into how the country can strategically position itself within this evolving sub-sector.

Figure 8.3 shows the EVs value chain, with important stages including raw material sourcing and processing, EV manufacturing

and assembly, EV battery production and assembly, EV repair and maintenance (usage), and end-of-life management. It emphasizes how each phase—from production to distribution—requires crucial support activities such as R4D and innovation, education and training, financing mechanisms and policy and legal environment to drive growth. The value chain is interrelated, with developments in manufacturing and energy infrastructure having an impact on later phases such as use, maintenance and recycling.

Figure 8.3: Core EVs value chain components and ancillary functions



Source: Authors' illustrations based on reviewed literature

8.3.1 Raw material sourcing and processing

Raw material sourcing and processing are the foundation of the EV value chain, especially for batteries and electrical components. Through the MTP IV, 2023-2027, it is envisioned to establish and promote the manufacture of electric motorcycles. This is the first step towards

materializing the Draft National E-Mobility Policy's commitment to promoting local manufacturing and assembly of EVs—a strategy that mirrors global trends toward localized supply chains. For instance, Roam, a Swedish technology company specializing in vehicles designed for the African context, launched the Roam Rapid in 2023, the first electric mass transit bus that provides an eco-friendly alternative for

urban commuters (Roam, 2023).

Globally, the EV industry is powered by a concentrated set of essential materials such as lithium, cobalt, nickel, manganese, and graphite, sourced primarily from a few dominant suppliers. For instance, Australia, Chile, and Argentina collectively supply 80 per cent of the world's lithium, while the Democratic Republic of Congo (DRC) accounts for approximately 75 per cent of cobalt production (IEA, 2022). Nickel is predominantly sourced from Indonesia, which contributes 37 per cent of global supply, while China dominates the graphite market, providing over 65 per cent of the world's supply (IEA, 2022; Tan and Keiding, 2023). This supply concentration exposes vulnerabilities in the EV value chain, emphasizing the need for diversified sources of these materials.

While large-scale deposits of key battery materials such as lithium and cobalt may not be widely available, promising opportunities exist in other minerals, particularly graphite and manganese. Geological surveys have confirmed the existence of graphite deposits and manganese in Makueni County,¹ where artisanal mining activities are already underway. As a key anode material in lithium-ion batteries, graphite plays a crucial role in battery technology, and its global market is projected to reach US\$ 21.6 billion by 2027, growing at a compound annual growth rate (CAGR) of 5.3 per cent from 2020 to 2028. Early-stage explorations have also identified nickel deposits, and in January 2024, the Cabinet Secretary for Mining, Blue Economy, and Maritime Affairs confirmed the discovery of some coltan deposits in six counties—Embu, Kitui, Tana River, West Pokot, Samburu, and Turkana. Since coltan is the primary source of tantalum, a crucial component in EV capacitors, this discovery has the potential to diversify and strengthen the country's mineral portfolio.

These resources present opportunities to transition from artisanal to formalized mining operations, allowing greater integration with regional supply chains under the African Continental Free Trade Area (AfCFTA). The successful export of Exide batteries to Ghana, which is the first shipment under the AfCFTA framework (AfCFTA, 2022) demonstrates the potential for local production and trade expansion. With targeted investments in mining and processing infrastructure, a similar approach could be extended to raw material beneficiation. Enhancing processing capabilities for graphite, manganese, nickel, and coltan could position the nation as a key supplier in the domestic and regional EV supply chain. Neighbouring Tanzania's substantial graphite reserves in Lindi, combined with the DRC's dominance in cobalt production, reinforce the region's potential as an emerging hub for EV raw material processing (African Development Bank-AfDB, 2023).

The presence of key mineral deposits, including graphite, manganese, nickel, and coltan, presents an opportunity to strengthen the mining sector and align it with emerging EV supply chain demands. However, realizing this potential requires a shift from artisanal mining to large-scale, structured extraction and processing. Establishing formalized mining operations would not only support the local EV manufacturing agenda but also drive employment growth and economic transformation.

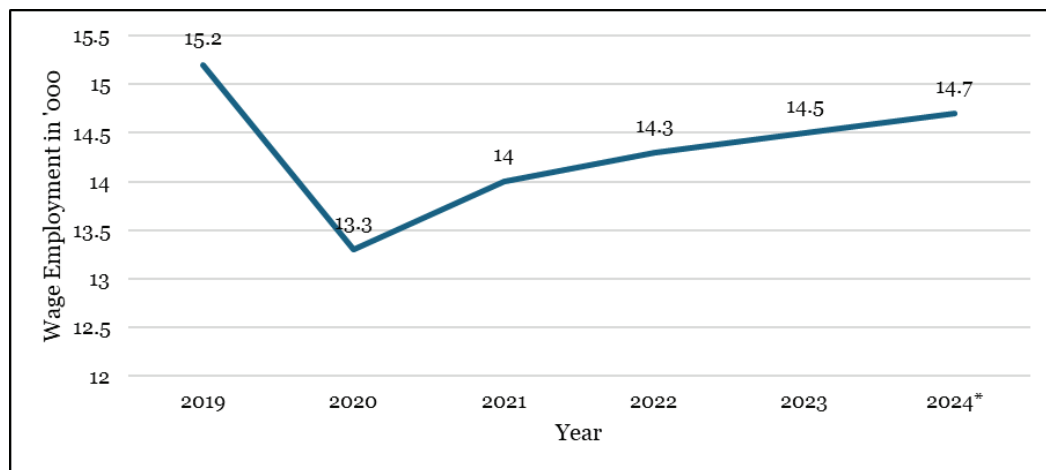
Against this backdrop, analysing employment trends in mining and quarrying provides insights into the sector's current capacity and its ability to absorb new investments. Wage employment in the industry has experienced fluctuations over the past six years, influenced by policy interventions, economic shifts, and external shocks such as the COVID-19 pandemic.

¹ <https://makueni.go.ke/2023/departments/lands/copper-manganese-iron-ore-discovered-in-makueni/>

The raw material sourcing offers job opportunities in mining and quarrying sectors. Wage employment in mining and quarrying increased from 14,600 in 2018 to 15,200 in 2019, before declining to 13,300 in 2020 due to pandemic-related

disruptions (KNBS, 2024). A gradual recovery followed, with employment rising to 14,000 in 2021, 14,300 in 2022, and returning to 15,200 in 2023, matching pre-pandemic levels (Figure 8.4).

Figure 8.4: Wage employment trends in mining and quarrying (in thousands), 2018-2023



Data source: KNBS (2024), Statistical Abstract

Consequently, there is a notable potential for expanding the mining sector to include critical raw materials for the EV supply chain, such as graphite. Investment in exploration, infrastructure, and capacity building is essential to unlock these resources. However, there are some challenges, including the need for large-scale extraction and processing facilities, environmental concerns, and the development of skilled labour to support this burgeoning industry. The government aims to increase the mining sector's contribution to GDP to 10 per cent by 2030, highlighting its potential as a key driver of economic growth and transformation (Government of Kenya, 2017).

The raw material sourcing and processing segment of the EV value chain is poised to generate additional jobs. For instance,

medium-scale mining operations are expected to create between 200 and 300 direct jobs (Table 8.1). Additionally, the multiplier effect of these mining jobs is noteworthy, as each direct job could lead to the creation of 5 to 7 indirect jobs in related sectors such as equipment supply, transportation, and local services, thereby boosting local economies, particularly in rural areas where mining activities are typically situated (World Economic Forum, 2022). Beyond mining, processing plants for graphite and other materials are anticipated to employ an additional 200 to 300 workers, focusing on high-value technical roles such as chemical engineers, quality control specialists, and plant operators (AfDB, 2023). The establishment of these processing facilities not only contributes to job creation but also promotes local value addition, enhancing competitiveness within the regional and global battery supply chain.

Table 8.1: Job creation potential in raw material sourcing and processing

Job Category	Estimated Jobs	Description	Source
Direct jobs in mining	200-300 jobs	These include mining operations, site management, logistics, and workforce directly involved in extraction	World Bank (2020)
Indirect jobs in supply chains	1,000-2,100 jobs (5-7 indirect jobs per direct job)	Jobs in equipment supply, logistics, local services, and administrative roles linked to mining operations	World Economic Forum (2022)
Refining and processing jobs	200-300 jobs	Jobs in processing plants, including chemical engineers, technicians, quality control specialists, and other skilled workers	African Development Bank (AfDB, 2023)

Data source: Authors' computations based on estimates from literature review

8.3.2 Vehicle manufacturing and assembly

Vehicle assembly is a labour-intensive process and has traditionally contributed to employment in the automotive sector. In the context of e-mobility, local assembly of electric vehicles (whether two-wheelers, three-wheelers, cars, or buses) can generate a range of jobs, from assembly line workers and technicians to engineers and quality control specialists. The country has some history of vehicle assembly (for conventional internal combustion engine (ICE) vehicles), which provides a foundation to build on. Several assembly plants operated in the past, such as Volkswagen and Peugeot, had assembly lines but faced challenges from competition due to cheap used-car imports, high production costs, and limited economies of scale. Indeed, imported second-hand vehicles currently dominate over 80 per cent of vehicle sales, making it hard for locally assembled vehicles to compete on price.

The country's target of having 5 per cent of registered vehicles being electric by 2025 has spurred efforts to establish local

assembly plants. Globally, it is estimated that for every 10,000 EVs produced annually, approximately 3,000 jobs are created. However, in assembly-focused economies, job creation could be 60 to 70 per cent of that figure, translating to approximately 1,800 to 2,100 jobs per 10,000 vehicles (ILO, 2018), an indication of the importance of a whole value chain development approach to harness more job opportunities.

The projected EV registrations are expected to reach 15,939 by 2025 (Table 8.2), indicating that the country could generate around 2,900 to 3,750 direct jobs in vehicle assembly alone. These roles include vehicle technicians, assembly line workers, and engineers.

To estimate potential jobs in EV assembly, one can look at projected EV uptake. Based on current trends, EV registrations are expected to reach around 15,000-16,000 by 2025. If a portion of these is assembled locally, the country could generate about 2,900-3,750 direct jobs in vehicle assembly by 2025. These jobs would include vehicle technicians, assembly line operators, electrical engineers, and supply chain/

logistics personnel. Table 8.2 provides illustrative estimates of jobs in EV assembly between 2018 and 2025, assuming the nation achieves about 60-70 per cent of the job creation efficiency observed in

global auto manufacturing to account for our current lower productivity and scale. Further, the estimates are guided by the assumption that assembling happened.

Table 8.2: Projected jobs from EV assembly in Kenya (2018-2025)

Year	Total annual registered vehicles ^a	Registered EVs ^b	% Share of EVs ^c	Estimated direct jobs created (Range)
2018	291,146	65	0.02	10–14
2019	327,176	129	0.04	23–27
2020	346,729	106	0.03	19–22
2021	399,052	284	0.07	51–60
2022	234,879	475	0.20	85–99
2023	195,656	2,694	1.62	480–560
2024	166,514	5,294	3.18	900–1,560
2025 (projected)	318,789	15,939	4.99	2,900–3,750

Data source: Adapted from NTSA reports and global job creation benchmarks

Note: ^a total registered vehicles as reported by NTSA, ^b total registered EVs, ^c author's calculations based on the annual EV registrations as a share of the total registered vehicles.

The data suggests that job creation has the potential to increase as EV registrations rise. For instance, while only about 12-14 direct jobs were created from the 65 EVs registered in 2018, this figure could rise to over 3,000 jobs by 2025 as the number of registered EVs grows. These jobs include both high-skilled roles, such as engineers and technicians, and semi-skilled roles in assembly and logistics.

By 2024, local EV assembly was still nascent, with only a handful of EVs (mostly buses and bikes) assembled, creating a few dozen direct jobs in assembly that year. However, as assembly initiatives scale up towards 2025, the job numbers could increase. The government's ambition to have assembly plants for electric motorcycles through MTP IV will particularly drive employment in that segment, since motorbike assembly

is relatively labour-intensive and can use semi-skilled labour with proper training.

Comparatively, India's EV push shows how assembly can create jobs even at early stages of market development. For instance, one analysis found that if the state of Odisha were to manufacture 30 per cent of India's EV demand by 2030, it would create about 23,000 Full Time Equivalent (FTE) jobs in EV manufacturing, and an additional 7,259 FTE jobs in battery. While this market is smaller, the principle holds that localizing assembly yields substantial employment. Rwanda provides another insight – its focus on electric motorcycles has led companies such as Ampersand Energy to set up assembly for e-motos and battery swap stations. This has created jobs for technicians and assembly workers in Kigali, and Ampersand Energy plans to produce

18,000 battery packs by 2025 to support its fleet, indicating growing manufacturing roles. South Africa, with its large auto industry, is targeting EV assembly as well; government incentives of about US\$ 54 million have been earmarked to attract EV and battery production projects, aiming to preserve and grow automotive jobs as the industry shifts to electric vehicles.

Achieving the upper range of the job estimates will require overcoming certain challenges. These include competition from used vehicle imports, which still undercut new EVs on price; the need for skilled workers trained in EV-specific assembly (high-voltage systems, power electronics); and reliable supply chains for EV components. The government's tax incentives (reduced excise tax, VAT zero-rating) already improve the cost-competitiveness of assembling EVs locally. Partnerships with established manufacturers can help with technology transfer and training. If local assembly plants can reach a sufficient volume (for example, assembling tens of thousands of electric two-wheelers per year), they can approach economies of scale that make them sustainable without heavy protection.

8.3.3 Battery production and assembling

The battery is central to EV performance, positioning battery production and assembly as a vital link in the e-mobility value chain. This segment encompasses the assembly of cells into modules and packs, and end-of-life recycling processes. Given its importance, this section will explore the status of battery production and assembly, the potential for job creation within this segment, and the steps needed to develop local capacity and capture value within the EV supply chain.

Currently, there is no large-scale EV battery manufacturing. EV batteries are imported

(typically from Asia) either as part of vehicles or as separate units for assembly. However, there are early moves to establish this capability. Notably, a deal with Neta (Hozon) – a Chinese EV manufacturer – will include setting up local assembly plants with battery assembly lines. Additionally, the Energy and Petroleum Regulatory Authority (EPRA) released Battery Swapping Infrastructure Guidelines in 2024 to spur battery swapping stations. These swaps involve local facilities where batteries are handled, maintained, and potentially assembled into swap-friendly packs, indirectly building battery handling expertise. The government and private sector are also keen on battery recycling to recover valuable materials (lithium, cobalt, nickel) and reuse them, which could feed into local battery production once it starts.

EV batteries globally are dominated by lithium-ion chemistry due to its high energy density and 8-15 years lifespan. Almost all battery electric vehicles and plug-in hybrids use lithium-ion packs. These packs must meet international safety and performance standards. While the country currently imports this technology, any local assembly operations will need to adhere to these standards to ensure safety. The key components – cells – are not yet produced locally, but assembling imported cells into battery packs is a logical first step. This involves wiring cells into modules, adding battery management systems (BMS), and housing them in pack enclosures.

EV batteries are designed to be recharged multiple times and have a longer lifespan, while Internal Combustion Engine (ICE) batteries are primarily for starting the engine and require replacement more frequently. Table 8.3 compares the characteristics of batteries used in EVs and ICE vehicles. EV batteries, specifically lithium-ion batteries, offer higher energy density, longer lifespans, and increased environmental considerations for recycling.

Table 8.3: Comparison of EV and ICE batteries

Feature	EVs	ICE Vehicle
Battery type	Lithium-ion	Lead-acid
Energy density	High (150-250 Wh ¹ /kg)	Lower (30-50 Wh/kg)
Lifespan	8-15 years	3-5 years
Recycling complexity	High, with valuable material recovery	Moderate
Environmental impact	Lower (when recycled)	Higher (toxic lead components)
Charging time	Requires specialized charging stations 20-60 minutes for fast charging or up to 8 hours via slow charging	None (engine-starting function)

Source: Author's compilation based on literature review

In terms of environmental impact, lithium-ion batteries have high recycling complexity and allow for the recovery of valuable materials, making them more sustainable when processed correctly. Conversely, lead-acid batteries pose environmental risks due to toxic lead components. Charging times for EVs can vary, with DC fast chargers enabling replenishment within 20 to 60 minutes, whereas ICE vehicles rely on conventional refuelling methods.

Global benchmarks suggest substantial employment from battery manufacturing. Each gigawatt-hour (GWh) of battery production capacity can require 500–1,000 workers, depending on the level of automation. For instance, an analysis by Ernst & Young (2022) found about 500 skilled jobs per GWh in modern battery plants, including recycling operations can increase that figure. Another study projects that 1 GWh of battery capacity can create 600-1,000 jobs, varying with technology and processes. These jobs range from assembly line operators and technicians to engineers and quality control staff.

Experiences from other countries demonstrate the job impacts of local battery production. In India, ambitious government incentives – the Production-Linked Incentive for Advanced Chemistry Cells – aim to install 50 GWh of domestic battery capacity. If realized, this could translate into thousands of direct jobs. For example, one estimate is around 7,000+ jobs for every 26 GWh of battery production based on state-level targets, implying roughly 270 jobs per GWh just in manufacturing. South Africa has analyzed scenarios where localizing just 25 per cent of battery production for its EV market could increase automotive component industry employment by about 2.7 per cent. This suggests that adding battery assembly lines can offset job losses from engine manufacturing and even create net gains. Meanwhile, Rwanda – though a much smaller market – shows how battery assembly and management creates jobs: e-mobility startup, Ampersand Energy, operates 32 battery swapping stations and is building a battery production capacity for battery packs, employing technicians for battery maintenance and assembly tasks. These international cases underscore that local battery initiatives can create

employment and are vital for broader EV industry growth.

The EV market's growth will determine the scale of battery activities. From 2018 to 2024, the EV stock grew from practically 65 to roughly over 3,000 EVs. This corresponds to a total battery demand of only a few dozen megawatt-hours (MWh) per year – not enough to justify a large plant, hence negligible local battery production in that period. By 2023, as small assembly pilots began, an estimated 5-10 direct jobs were created in battery pack assembly, essentially assembling imported cells into battery packs for buses or motorcycles.

However, projections indicate a sharp rise ahead. If EV uptake accelerates, there would be around 21,000 EVs by 2025, requiring roughly 1 GWh of cumulative

battery capacity to support them. Global benchmarks (600-1,000 jobs per GWh) suggest that meeting this demand through local assembly could create 600-1,000 jobs by 2025 in battery pack assembly and related roles. These would include assembly line workers, BMS technicians, electrical engineers, and quality inspectors, among others. By 2027, an EV fleet of ~40,000 (1.6 GWh battery demand) could require 1,000-1,600 jobs in battery assembly. By 2030, with a projected 75,000 EVs (~3 GWh demand), local battery production and partial cell manufacturing could employ 1,800-3,000 direct workers. These projections (summarized in Table 8.4) assume that the country progressively moves from just pack assembly (short-term) to some module or cell manufacturing (long-term) as the industry matures.

Table 8.4: Projected job creation in battery production and assembly in Kenya

Year	EV stock	Average battery size (kWh)	Required battery capacity (GWh)	Estimated jobs in production
2018	65	40	0.003	0
2019	194	40	0.005	0
2020	300	40	0.004	0
2021	584	40	0.011	0
2022	1,059	40	0.019	0
2023	3,753	40	0.108	5–10
2025	21,000	40	1	600–1,000
2027	40,000	40	1.6	1,000–1,600
2030	75,000	40	3	1,800–3,000

Data source: Author's computation based on data for actual EV stocks

In the near term, the strategy is “assembly-first” focusing on assembling imported cells into battery packs locally, rather than immediate full cell manufacturing. This is pragmatic given the high capital and technical requirements of cell production. By building know-how in pack assembly

and developing a skilled workforce, the country would be laying the groundwork for future moves into cell manufacturing when the market justifies it. It also means quicker job creation, as pack assembly facilities are faster to set up. Over time, as volumes grow, there could be a business case

to begin at least partial cell manufacturing or module assembly domestically.

An additional opportunity is in backward linkages, supplying battery production with local inputs. Since Kenya has graphite resources, activities such as investment, mining and processing these could create another 300-500 jobs by 2030 and feed into domestic battery production. While lithium and cobalt are not locally abundant, partnerships with neighbouring countries under the AfCFTA could allow import of raw materials for processing, further boosting industrial jobs.

Battery production and assembly represent a high-value segment where the country can create skilled, relatively well-paying jobs for roles in battery factories. There is a need to ensure that the EV transition is economically beneficial beyond just vehicle operation. With projections showing up to 3,000 direct jobs by 2030 in this segment, local battery initiatives could become a pillar of the green economy, provided there is strategic focus and investment. This includes attracting battery manufacturers, especially leveraging the African market potential, investing in workforce training for battery engineering, and formulating regulations around battery quality, safety, and recycling to build a sustainable industry.

8.3.4 Charging infrastructure

The charging infrastructure component of the EV value chain is vital to enable the use of electric vehicles and can itself be a source of jobs and entrepreneurship. Charging infrastructure encompasses the installation of charging stations, the operation and maintenance of those chargers, and the integration with the electric grid and possibly renewable energy sources. Building out charging infrastructure is a priority under BETA, and the draft EV policy, as current coverage is sparse.

There are three primary types of chargers, each with different power levels and use cases: Level 1 (basic AC, using a standard home outlet, very slow ~40-50 hours for full charge); Level 2 (AC fast, typically 4-10 hours for full charge); and DC Fast Chargers (Level 3), which can deliver 50 kW to 350 kW and charge an EV to 80 per cent in 20 minutes to 1 hour (Table 8.5). So far, most installations are Level 2 AC chargers, which are cheaper and easier to deploy but slower. For instance, NopeaRide's network is primarily Level 2, which suffices for overnight charging of taxis but may not meet the needs of long-distance or freight transport. As EV adoption grows, especially for private cars and commercial vehicles, there will be a need for more DC fast chargers along highways and in urban centres for quick top-ups.

Table 8.5: EVs charger characterization

Charger type	Power output	Charging time	Typical use cases
Level 1 Charger	120V AC, up to 3kW	40-50+ hours for a full charge	Residential use
Level 2 Charger	240V AC, up to 22kW	4-10 hours for a full charge	Homes, workplaces, public charging
DC Fast Charger (Level 3)	50kW to 350kW	20 minutes to 1 hour for a full charge	Public charging stations along highways

Source: Author's conceptualization based on reviewed literature

Globally, the trajectory of EV adoption has gone together with charging network expansion. China leads with over 2.9 million public chargers for its 12 million EVs, while a small country such as Norway (with 80% of new car sales being electric) has about 18,000 public chargers for a population of 5 million people. The United States had over 140,000 public chargers as of 2023, with plans for 500,000 by 2030. These examples illustrate the scale of infrastructure needed as EV numbers grow, and the investments being funnelled into this sector.

In Africa, South Africa has the most developed network to date, with around 300 charging points (mostly in major cities such as Johannesburg and Cape Town) by 2023. Rwanda has also begun establishing public charging stations, focusing on e-mobility for public transport through partnerships with companies such as Ampersand Energy and Siemens. These regional peers offer learning opportunities on business models (Rwanda's battery swapping, South Africa's utility-led chargers) that Kenya could adopt.

The current charging infrastructure is nascent. By the end of 2023, there were about 33 public charging stations in the country (KPLC, 2024). Most are concentrated in Nairobi and operated by private sector pioneers such as NopeaRide, Electric 254, and energy companies such as KPLC and TotalEnergies. KPLC has recognized the opportunity – it committed Ksh 258 million (~US\$ 2 million) to EV infrastructure and has already installed at least two public charging stations in Nairobi, featuring fast DC chargers free for public use as pilots. KPLC plans to roll out chargers in other major towns (Nakuru, Mombasa, Kisumu, Eldoret) by 2024. This utility-driven approach is crucial, given the need to manage grid demand and ensure electricity supply for charging.

Based on the EV charger characterization in Table 8.5, Table 8.6 provides an overview of the landscape of electric vehicles and their respective charging needs as of 2023.

Table 8.6: Charging needs from various types of EVs in Kenya, 2023

EV type	EV registrations	Description	Charging requirements
Two-wheelers and three-wheelers	1,676 units	Includes electric motorcycles, scooters, and e-rickshaws (e-Tuk Tuks)	Require Level 1 or Level 2 chargers for home or workplace charging
Four-wheelers / light-duty vehicles (LDCs)	205 units	Includes battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs)	Require Level 2 or DC fast chargers depending on usage patterns
Buses	20 units	E-buses for public transportation	Require DC fast chargers at depots or along routes to ensure quick turnaround times

Data source: Adopted from the Africa Electric Vehicle Readiness and Impact Index

The charging needs for EVs are shaped

by the current distribution of registered vehicles as of 2023, which includes 1,676 two- and three-wheelers, 205 four-wheelers/light-duty vehicles (LDCs), and

20 buses (Africa E-Mobility Alliance, 2023). The predominant charging requirements for these vehicles include Level 1 and Level 2 chargers for the two- and three-wheelers, which are essential for home and workplace charging. These chargers allow for overnight charging, catering to the high number of electric motorcycles and scooters that dominate the market. In contrast, the four-wheelers and buses necessitate Level 2 or DC fast chargers to accommodate their operational demands, particularly for public transport where quick turnaround times are critical.

Despite the progress made by the private sector, the existing infrastructure is insufficient for mass EV adoption. The concentration of charging stations in Nairobi leaves highways and other urban centres underserved, exacerbating challenges for potential EV users. It is against this backdrop that the government aims to establish 1,000 charging stations

by 2027; 700 in urban areas and 300 along highways (EPRA, 2022). This ambitious plan envisions a charging station every 3 km in urban grids and every 25 km on highways, along with fast charging stations every 100 km. This commitment to enhance EV infrastructure is crucial for improving accessibility and supporting long-distance travel for electric vehicle owners across the country.

The anticipated expansion of EV charging infrastructure is poised to create job opportunities, including electrical engineers, installation technicians, maintenance workers, software developers, and renewable energy experts. Table 8.7 presents a projection of potential job creation across the identified job categories. The establishment of 1,000 EV charging stations by 2027 presents an opportunity for job creation essential for fostering economic growth and promoting sustainable development.

Table 8.7: Job creation estimates for charging infrastructure expansion, 2027

Job category	Global benchmark	Estimated number of jobs per 1000 stations	Source
Electrical engineers	1 engineer per 10 stations	100	International Energy Agency (IEA, 2021)
Installation technicians	1-2 technicians per station	1,500	US Department of Energy (DOE, 2020)
Maintenance workers	1 worker per 10 stations	100	National Renewable Energy Laboratory (NREL, 2021)
Software developers	1 developer per station	1,000	McKinsey and Company (2021)
Renewable energy specialists	2-3 specialists per 10 stations	250	Renewable Energy World (2020)
Project managers	1 manager per 10-15 stations	80	Energy and Resources Institute (ERI, 2020)
Total estimated jobs		3,030	

Source: Author's calculations based on literature review

The analysis estimates that the EV charging infrastructure could generate approximately 3,030 jobs across various roles. This includes 100 electrical engineers responsible for integrating charging systems into the national grid, 1,500 installation technicians for deploying charging stations, and 100 maintenance workers to ensure operational efficiency. Additionally, 1,000 software developers will be needed to manage payment integration, grid optimization, and remote monitoring, while 250 renewable energy specialists will help align charging with the clean energy commitments. Further, 80 project managers will oversee the strategic execution of charging infrastructure projects, ensuring they maximize economic and environmental benefits.

Furthermore, integrating charging with the renewable energy grid can create specialized roles in energy management. Smart charging, where software schedules EV charging to off-peak times or when solar/wind power is abundant, requires IT and energy experts. There is also the prospect of battery swapping stations as an alternative model particularly for motorcycles, as firms such as Kiri and Ampersand Energy are doing. Battery swapping relies on charging many batteries off-board and swapping them into vehicles, which creates jobs for station attendants and battery technicians managing the charging and logistics of battery packs.

The relatively huge electricity generation capacity for Kenya means it can support a growing EV fleet without major new power plants in the near term. However, grid upgrades will be needed at local levels (transformers, distribution lines) to handle clustered fast chargers. This in turn generates work for utility engineers and grid

construction crews, essentially an extension of the power sector's employment.

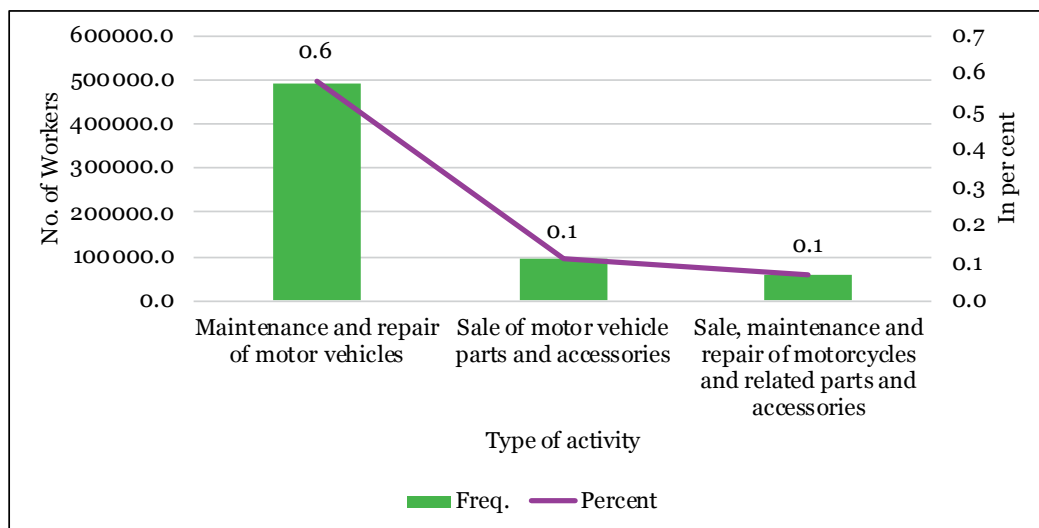
Beyond the physical deployment of charging stations, integrating e-payment systems is crucial for enhancing user experience and revenue collection. Implementing digital payment solutions at charging stations allows for automated taxation on electricity used or services offered for EV charging. Moreover, integrating e-payment options such as M-Pesa or ATM cards into electric buses and other public transport systems can streamline urban mobility and improve efficiency. This enables public transport users to make payments seamlessly, while also providing the government with a transparent mechanism to collect tax revenues from income earned by public transport vehicles and bus fares.

8.3.5 Repair and maintenance

Once electric vehicles (EVs) become more common domestically, an ecosystem of repair and maintenance services will be crucial to ensure their longevity and efficiency. This segment of the EV value chain is essential not only for vehicle performance but also for job creation, particularly among mechanics, technicians, and spare parts dealers.

The vehicle maintenance and repair sector contributes to employment domestically. Figure 8.5 shows that approximately 489,750 people work in motor vehicle repair and maintenance, while an additional 56,548 are employed in the repair and sale of motorcycles and their parts (KNBS, 2022). Furthermore, 95,045 jobs are in the sale of motor vehicle parts and accessories. This means that nearly 640,000 Kenyans are directly involved in vehicle maintenance and supply of parts.

Figure 8.5: Distribution of employment in the automotive sector: Economic activities related to maintenance and repair (2022)



Data source: KNBS (2022), Kenya Continuous Household Survey

The transition to e-mobility will possibly transform, rather than eliminate, these jobs. Unlike ICE vehicles, EVs have fewer mechanical parts—no engine oil changes, exhaust systems, or complex transmissions, which will reduce demand for some traditional maintenance services. However, new specializations will emerge, including expertise in battery diagnostics, electric motors, power electronics, and software troubleshooting. High-voltage electrical systems will also require enhanced safety training, and battery recycling and refurbishment will become integral services.

While the shift to EV repair and maintenance may reduce certain routine jobs, it will also create new employment opportunities. Many existing skills—such as working on brake systems, suspensions, and body repairs—are still applicable, but mechanics will need additional training in electrical systems and software-based diagnostics. The government and private sector have initiated upskilling programmes

to prepare the workforce. Institutions such as Kenya Technical Trainers College (KTTC) are integrating EV maintenance courses, while private firms such as Roam and BasiGo have begun hands-on training for mechanics. Additionally, a recent partnership between AfricaNEV and GIZ trained 35 technicians on EV servicing and battery management.

The scale of job creation in EV maintenance will depend on the rate of EV adoption. Every 1,000 EVs require 10 skilled technicians, thus attaining 75,000 EVs by 2030 translates to at least 750 specialized EV technicians. However, given that hundreds of thousands of workers are currently employed in vehicle repair, the transition must be managed to avoid job displacement. Many informal sector mechanics, particularly those servicing motorcycles, can transition to EV repairs if provided with the right training and tools.

Spare parts sales and distribution will also experience shifts. Currently, over 95,000 people work in sales of motor vehicle parts,

supplying engine components, exhausts, fuel pumps, and transmission parts, many of which will no longer be needed in EVs. However, new business opportunities will arise, including selling battery packs, electric drivetrain components, and specialized EV tools. Additionally, the growth of battery swapping stations and smart diagnostic tools will create a demand for new types of spare parts and accessories.

While some efficiency gains may lead to fewer overall repair jobs per vehicle, the increasing adoption of EVs, demand for battery servicing, and growth of charging infrastructure will offset potential job losses. With 12.6 per cent of current employment in the automotive repair sector connected to vehicle maintenance (KNBS, 2023) and estimating that 30 per cent of these mechanics could transition to EV servicing, about 4,000 mechanics will need upskilling by 2030.

An inclusive transition strategy is critical to protect and expand employment opportunities in the repair and maintenance sector. Without targeted interventions, EV servicing could become concentrated in formal service centres, leaving informal mechanics excluded. Government policies, such as certification programmes, subsidies for EV training, and partnerships with private sector firms, will be essential in ensuring broad-based employment growth. Ultimately, the repair and maintenance industry will remain a key pillar of the transport sector employment, but its structure and skill requirements must evolve alongside the transition to e-mobility.

8.3.6 End-of-life management

The electric vehicle (EV) sector is in its early stages, with approximately 4,000 EVs, including passenger and commercial vehicles, currently in operation. This

nascent phase implies a limited volume of end-of-life (EOL) EV batteries at present. However, as these vehicles age, the number of batteries requiring recycling or repurposing is expected to rise, underscoring the need for EOL management strategies.

The Draft National E-Mobility Policy (2024) emphasizes sustainable practices, including promoting local battery recycling and secondary uses of batteries. This policy recognizes the potential of the e-waste economy to create jobs while managing EV waste. Notably, there are existing e-waste recycling initiatives that could be extended to EV batteries.

A report by McKinsey suggests that a new battery manufacturing plant with an annual capacity of 30 to 40 gigawatt-hours may generate around 3,200 new job opportunities, indicating that each gigawatt-hour of capacity could create roughly 80 to 100 jobs (McKinsey and Company, 2021). However, since battery recycling is generally less labour-intensive than manufacturing, the estimate of 15 direct jobs per gigawatt-hour of recycling capacity is a more conservative figure, reflecting the industry's current understanding. These jobs involve disassembling battery packs, processing materials, and handling safety protocols, often requiring skilled labour with an emphasis on chemical processing.

Projections based on EV growth scenarios indicate that by 2025, about one gigawatt-hour of EV batteries could be approaching EOL, potentially generating approximately 15 direct recycling jobs. By 2030, with an estimated three gigawatt-hours of spent batteries, recycling operations could expand to around 45 direct jobs in battery recycling facilities. While these numbers may seem modest, they represent the core recycling jobs and do not account for additional employment avenues such as battery collection and logistics, dismantling and sorting, and second-life repurposing.

An illustrative example of local innovation in this sector is Qtron Industries, established in 2016. Specializing in repairing and recycling batteries for vehicles and motorcycles, Qtron ventured into EV battery recycling to address the growing issue of discarded batteries in the nation's landfills. By refurbishing used batteries from hybrid and electric vehicles, Qtron integrates these restored batteries into electric buses, motorbikes, and charging infrastructure, playing a pivotal role in the transition to green transport and renewable energy (Xinhua, 2025).

Proper EOL management is crucial to avoid negative externalities that could undermine the e-mobility agenda. For instance, without recycling, batteries could pose fire risks in landfills or lead to toxic leakage. Investing in recycling reduces the need to import raw materials for new batteries, aligning with global trends. Countries such as Germany have integrated auto battery recycling into their EV strategies, and the European Union has regulations mandating producer responsibility for battery take-back. Kenya could formulate clear guidelines on EV battery disposal and encourage public-private partnerships for recycling facilities. Initiatives such as the African Circular Economy Alliance (ACEA) can provide support and knowledge exchange in this area.

Currently, there is no policy on EOL EV management, though this gap has been identified. Addressing this gap through an extended producer responsibility (EPR) framework or incentives for recycling businesses will be essential. Such measures could stimulate innovation, leading to the development of low-cost recycling techniques or novel second-life battery products, such as community solar battery banks made from old EV cells.

8.4 Projections of Job Creation from Low-Carbon Transition in the Transport Sector

The CGE policy simulations project a 16.5 per cent reduction in emissions from the transport sector as a proxy for transitioning towards e-mobility. This target aligns with the country's climate action goals, which aim to cut greenhouse gas emissions by 3.46 million tonnes of CO₂ equivalent (MtCO₂e) by 2030 (Government of Kenya, 2024). The simulations also highlight the employment impact of this transition, showing job growth both in the transport sector and in related industries through spillover effects.

The shift towards EVs influences multiple sectors beyond transportation. Manufacturing benefits from increased demand for EV components, such as batteries, electronic systems, and charging infrastructure, therefore creating new industrial and assembly-line jobs. Electricity, gas, and steam industries experience growth due to rising demand for electricity to power EVs, necessitating expanded power generation, grid upgrades, and investment in renewable energy. Construction is impacted by the need for EV-related infrastructure, including charging stations, road adaptations, and urban mobility projects, leading to job creation in civil works and engineering. Additionally, the wholesale and retail trade sector would benefit from the distribution and sale of EVs, spare parts, and related services, and the development of new business models such as EV leasing and battery-swapping services.

Table 8.8 reveals that by 2030, reducing GHG emissions by 16.5 per cent due to the adoption of EVs could create 334,503 new jobs, representing a 20.6 per cent increase in employment across key sectors. While the transportation and storage sector will

directly benefit from electrification, its job growth is relatively modest at 2.8 per cent, adding 58,620 new jobs. This may be due to efficiency gains in EVs, which require less maintenance compared to internal combustion engine vehicles. In contrast, the manufacturing sector will expand by 5.11 per cent, creating 45,979 jobs as demand increases for EV components, batteries, and charging infrastructure. However, only 0.47 per cent of these new jobs are considered decent, highlighting the need for improved working conditions and better wages in this sector.

Beyond these direct effects, the construction sector will experience the highest absolute job growth, with 136,149 new jobs (4.01% growth), largely driven by investments in EV-related infrastructure, such as charging stations, road network upgrades, and grid expansion. The wholesale and retail trade sector will also benefit, growing by 4.14 per cent and adding 91,169 jobs, as the demand for EVs, spare parts, and services rises. Meanwhile, the electricity, gas, and steam sector will expand by 4.55 per cent, creating 2,586 new jobs, a relatively small

figure due to the capital-intensive nature of power generation and distribution. Across all sectors, the share of decent jobs remains low, with construction having the highest share at 0.53 per cent, followed by manufacturing at 0.47 per cent, while transport, electricity, and wholesale trade show lower shares.

These findings indicate that e-mobility will not only contribute to emission reductions but will also drive broad-based employment growth. However, strategic policies will be necessary to maximize economic benefits. Investments in local EV manufacturing, battery production, and charging infrastructure can enhance job creation, while skills development programmes will be essential to equip workers for new roles in EV assembly, renewable energy, and infrastructure development. Additionally, addressing informality in transport and retail sectors will be critical to ensuring that the transition provides equitable and sustainable employment opportunities.

Table 8.8: Job estimates from CGE policy simulations

Sector	Base number of jobs	Growth in new jobs with 16.5% reduction in GHG emissions	Actual number of new jobs	Share of decent jobs created (%)
Transportation and storage	2,093,587	2.8	58,620	0.22
Manufacturing	899,787	5.11	45,979	0.47
Electricity, gas and steam	56,839	4.55	2,586	0.16
Construction	3,395,234	4.01	136,149	0.53
Wholesale and retail trade	2,202,151	4.14	91,169	0.30
Total		20.6	334,503	1.68

Data source: Simulations from the DEMETRA-CGE Model for Kenya, 2021

Table 8.9: Policy and legal frameworks supporting the EV value chain

Component	Description	Policies, laws, strategies	Interventions	Gaps	Policies and interventions in comparator and aspirator countries
Raw material sourcing and processing	Involves extraction and processing of minerals such as lithium and cobalt for EV batteries	Draft Electric Mobility Policy (2024)	Proposes frameworks for local sourcing and processing of critical minerals, including mapping mineral resources and incentivizing local processing	Limited exploration of mineral resources; investment gaps in mining/processing infrastructure	South Africa: Regional critical minerals strategy for EV battery and solar panel production
EV manufacturing and assembly	Production and assembly of electric vehicles	Draft Electric Mobility Policy (2024)	Encourages local manufacturing to reduce reliance on imports by offering incentives to manufacturers to set up EV production facilities	Inadequate manufacturing infrastructure; shortage of skilled workforce	South Africa: Investing 1 billion rand to transition automotive industry to EVs by 2035
EV battery production and assembly	Manufacturing and assembly of EV batteries	Draft Electric Mobility Policy (2024)	Suggests establishing battery production plants to meet domestic and regional demand while leveraging the clean energy mix	Technological constraints; high capital requirements	South Africa: Funding local EV battery production and related projects
EV charging infrastructure	Development of charging stations	Electric Vehicle Charging and Battery Swapping Infrastructure Guidelines (2023)	Mandates installation of charging stations every 25 km on highways, with fast-charging stations every 100 km for long-range EVs	Need for accelerated infrastructure development; standardization gaps	Norway: Extensive fast-charging network with private-sector incentives
EV repair and maintenance	Service and upkeep of electric vehicles	Draft Electric Mobility Policy (2024)	Plans to establish training programmes for technicians specializing in EV maintenance to build a skilled workforce	Skill gaps; insufficient maintenance facilities	Ethiopia: Challenges with unreliable electricity supply and unskilled mechanics
EV charging tariffs	Pricing structure for EV charging electricity	Special Subsidized Tariff for EV Charging (2023)	Offers reduced electricity rates (Ksh 8 per unit during off-peak hours, Ksh 16 per unit during peak hours) to encourage EV adoption	Awareness/accessibility gaps; financial sustainability concerns for electricity providers	Germany: Reduced tariffs during off-peak hours to encourage EV adoption
End-of-life management	Recycling and disposal of EV components	Draft Electric Mobility Policy (2024)	Recommends establishing recycling facilities for end-of-life management of EV batteries and components, with a focus on minimizing environmental hazards	Absence of concrete regulations; environmental hazards from improper disposal	Norway: Developing battery recycling frameworks but lacks large-scale facilities

Source: Author's compilation based on reviewed literature

8.5 Key Enablers for Sustainable Growth in the Electric Vehicle Value Chain

8.5.1 Policy and legal framework for e-mobility

Table 8.9 provides a comprehensive overview of the policy and legal frameworks supporting the electric vehicle (EV) value chain. It outlines key components such as raw material sourcing, EV manufacturing, battery production, charging infrastructure, repair and maintenance, charging tariffs, and end-of-life management. For each component, the table details existing policies and strategies, current interventions, identified gaps, and references policies and interventions from comparator and aspirator countries. This structured analysis highlights areas where the country is making progress and identifies opportunities for further development by learning from international best practices.

The scarcity of EV charging stations, especially outside major urban centres such as Nairobi poses an obstacle to widespread EV adoption. This limited infrastructure restricts long-distance travel and contributes to range anxiety among potential EV users. Additionally, the country's electricity supply is characterized by frequent outages and unstable voltage, undermining the reliability needed for effective EV charging. Moreover, the absence of local battery recycling facilities exacerbates environmental concerns and increases the cost burden on EV owners when battery replacements become necessary.

The high upfront costs of EVs, driven by substantial import duties and taxes, make them less accessible to the average consumer. While the government has reduced excise duty on EVs from 20

per cent to 10 per cent to promote clean transport, other taxes and levies make them expensive. In contrast, countries such as Ethiopia have implemented more aggressive incentives, such as a 0 per cent import duty and a five-year VAT exemption on EVs, resulting in higher adoption rates. Furthermore, the draft National E-Mobility Policy does not provide comprehensive strategies, including clear roles for county governments and integration of renewable energy sources, hindering coordinated efforts toward EV adoption.

Further, to fully leverage the benefits of e-mobility, the policy and legal framework could address the integration of e-payment systems. Enabling digital payment solutions for EV charging and public transport could streamline payments, enhance tax collection, and promote financial inclusion. Policies could support the adoption of mobile money platforms such as M-Pesa and other digital payment methods to facilitate seamless transactions across the e-mobility ecosystem.

8.5.2 Financing mechanisms

Financing is a crucial enabler for both supply-side actors including manufacturers and infrastructure developers and demand-side adoption (consumers purchasing EVs). The capital-intensive nature of EV projects such as setting up an assembly plant or buying an electric bus means that access to affordable finance could make or break the e-mobility transition. Sustainable growth of the sector depends on innovative financing solutions that lower risks and costs.

A major hurdle for electric vehicle startups and projects on the supply side is the need for substantial upfront investment. Establishing assembly facilities, battery plants, or charging networks requires significant capital expenditure, and traditional banks may be hesitant to provide financing due to unfamiliarity with

the sector or perceived risks. To overcome these challenges and foster growth in the e-mobility sector, several alternative financing mechanisms could be utilized:

- **Public funding and incentives:** The government has already allocated some public funds, for example, KPLC's investment in charging stations. Expanding such support through dedicated funds or subsidies could catalyze private co-investment. For instance, South Africa's Government is spending 1 billion rand to support EV and battery production by subsidizing industrial investments. The country could consider a similar "Green Vehicle Fund" or incorporate e-mobility into existing programmes such as the Green Climate Fund projects.
- **Concessional loans and credit lines:** Development finance institutions (DFIs) and multilateral banks (World Bank, AfDB) could provide low-interest loans for e-mobility initiatives. In other countries, the World Bank has financed electric bus deployments and associated infrastructure through city transport projects. The Bus Rapid Transit (BRT) plans, for example, could seek DFI support to procure e-buses, which in turn creates local jobs in operations and maintenance.
- **Guarantee schemes:** To encourage local banks to lend to EV businesses (which they may view as high-risk), the government or donors could set up partial credit guarantee schemes. These would reduce the risk for commercial lenders, enabling more favourable loan terms to EV companies for equipment purchase or working capital.
- **Venture capital and private equity:** The surge of US\$ 50+ million into e-mobility startups by 2023 shows that private investors are interested. Maintaining a stable policy environment will keep such investors interested. Additionally, impact

investors focusing on climate and jobs could be courted to inject capital. Funds such as Toyota's Africa startup fund or large climate-tech funds might find EV ventures attractive, given the enabling environment.

- **Carbon financing:** As EVs help reduce emissions, there is potential to leverage carbon credits. Kenya could develop a framework for quantifying CO₂ reductions from e-mobility projects and allow them to earn carbon credits that could be sold in voluntary carbon markets, providing an extra revenue stream to improve project viability.

On the demand side, the high upfront cost of EVs is a barrier for many consumers and fleet operators. Even if an electric motorcycle or car has lower total cost of ownership (because electricity is cheaper than fuel and maintenance is lower), the purchase price is typically higher than a petrol equivalent. Financing solutions here include:

- **Consumer loans and asset financing:** Banks and microfinance institutions could offer loans or lease-to-own schemes for EVs. Some fintech companies are already providing pay-as-you-go models for electric two-wheelers, where riders pay in instalments (sometimes bundled with battery swapping fees). Encouraging more lenders to enter this space, perhaps with interest rate subsidies or guarantees, will help more individuals and small businesses afford EVs.
- **Fleet financing:** Public transport operators (for example matatu SACCOs) and logistics companies might want to electrify but may not have enough capital. The government could explore green bonds or credit lines earmarked for fleet electrification. For example, a city could issue a green bond to finance a batch of e-buses, repaying investors from future fare revenues or government budgets. The cities could pilot such models for their

transit fleets.

- **Incentive programmes:** In addition to tax breaks, direct incentives such as rebate checks (as used in some countries) could be offered for a limited number of initial EV purchases to stimulate market entry. For instance, a programme could offer a US\$ 1,000 rebate for the first 1,000 electric cars purchased, effectively reducing the price and nudging early adopters.
- **Battery leasing models:** Since the battery is a large chunk of an EV's cost, separating it from the purchase price could reduce upfront cost. Some companies (such as NIO in China) sell the car but lease the battery to the user. Besides, companies such as Ampersand do something similar for bikes; riders buy the bike but swap batteries on a subscription. This model means the user is effectively financing the battery over time rather than upfront. Support for such models (clear contracts, consumer protection, perhaps incentives for battery-as-a-service providers) can indirectly ease the financial burden on buyers.

The financial sector regulators also have a role. The Central Bank of Kenya and other lenders could include green lending in their priorities or offer banks incentives (such as lower capital requirements on green loans). The Capital Markets Authority could encourage green bonds or even an electric mobility investment trust.

International support is increasingly available for e-mobility financing. For example, the UN's Green Climate Fund (GCF) has financed e-mobility projects in some countries (such as electric bus schemes in Latin America). Kenya, being proactive on climate issues, could propose e-mobility programmes for such funding. Likewise, bilateral partners such as the UK's UKPID, Germany's KfW, and France's AFD have shown interest in financing EV projects as part of climate cooperation.

Mobilizing adequate financing is essential to driving the EV value chain. The nation should pursue a combination of strategies: use public funds smartly to leverage private capital, engage international climate finance for large-scale projects, and develop domestic financial instruments that make EVs accessible to consumers and businesses. By de-risking the sector for investors and reducing costs for users, financing initiatives will accelerate adoption, thereby fuelling the job creation engine across manufacturing, infrastructure, and services.

8.5.3 Skills development and training in e-mobility

Workforce preparedness is essential for harnessing the job creation potential of the e-mobility sector. The country has initiated several programmes aimed at integrating electric vehicle (EV)-related competencies into its education and training systems.

Currently, Technical and Vocational Education and Training (TVET) institutions, such as the Kenya Technical Trainers College (KTTC), have begun incorporating EV maintenance modules into their curricula. This initiative prepares students for careers in the growing electric mobility sector. Additionally, private companies such as Roam and BasiGo are actively involved in providing hands-on training for the assembly and maintenance of electric vehicles. For instance, Africa New Energy Vehicles (AfricaNEV), in partnership with Advanced Mobility and supported by GIZ, recently concluded an e-mobility training programme that enhanced the capacity of local technicians to maintain EVs. This programme marked a notable milestone in knowledge transfer and sustainable mobility promotion, involving over 35 participants from various sectors, including local EV dealers, KPLC, and the National Transport and Safety Authority (NTSA) (AfricaNEV, 2023).

The training featured a hands-on approach where participants dismantled and reassembled Nissan Leaf vehicles, gaining practical experience essential for future maintenance tasks. They also visited prominent e-mobility companies such as BasiGo, Roam, and Ampersand Energy, which provided a comprehensive view of diverse approaches within the electric mobility sector (AfricaNEV, 2023).

Despite these positive developments, several gaps remain that hinder the effective development of a skilled workforce for the e-mobility sector. One key issue is the limited coverage of EV-related training across all TVET institutions, leading to inconsistencies in skills level among graduates. Furthermore, many training programmes lack sufficient resources, including updated equipment and access to modern EV technologies critical for effective learning. There is also limited public awareness regarding career opportunities in e-mobility, which can deter potential students from pursuing relevant courses.

To enhance its e-mobility workforce development, the country could draw valuable lessons from countries that have successfully integrated EV training into their educational frameworks. For instance, Germany is known for its vocational training system that includes specialized programmes focused on electric mobility within its dual education system, combining classroom learning with practical experience in industries (BMBF, 2022). Norway has implemented extensive training programmes for technicians focused on electric vehicles as part of its broader strategy to promote EV adoption, establishing partnerships between educational institutions and the automotive industry to ensure curriculum relevance (Norwegian Electric Vehicle Association, 2021). Similarly, China has integrated EV technology into university engineering programmes through institutions such as Tsinghua University and Beijing Institute of Technology. Tsinghua University's School

of Vehicle and Mobility offers a master's programme that emphasizes electrification and intelligent connected vehicles and accepts fewer than 10 international students annually (Zhang et al., 2021). Additionally, Beijing Institute of Technology's Electric Vehicle Engineering Technology Centre has trained over 220 graduate students in electric vehicle technologies since its establishment (EVETC, n.d.).

8.5.4 Research for development and innovation

Some initiatives are underway to promote research and development in e-mobility. One notable example is the collaboration between Siemens Stiftung and GIZ, which supports innovative R4D projects led by the country's enterprises. These projects aim to enhance the social and economic impact of e-mobility by addressing challenges such as battery end-of-life management and improving access to e-mobility for farming communities. Selected enterprises can receive funding ranging from US\$ 30,000 to US\$ 110,000 for projects lasting up to 18 months (Siemens Stiftung, 2023).

Moreover, universities in the country are increasingly becoming hubs for innovation in e-mobility. The Technical University of Kenya (TU-K) has signed a Memorandum of Understanding with Car and General to foster collaboration on training, internships, and innovative projects related to electric vehicles. This partnership aims to bridge theoretical learning with practical applications, particularly in converting traditional petrol and diesel vehicles to electric vehicles.

Zetech University has also showcased its commitment to e-mobility by developing a rechargeable battery-powered motorbike as part of its Research and Innovation Week 2022. This initiative highlights the university's role in promoting sustainable transportation solutions while enhancing academic-industry collaborations. Additionally, Africa Smart Mobility Kenya Limited (ASMSKL),

in collaboration with TU-K, is establishing a specialized training centre focused on developing top talent in the electric vehicle industry. This initiative includes an 18-month Graduate Tech Training Programme and a one-year EV Specialization Course in partnership with Flemming College.

However, while these initiatives are commendable, they are not without their challenges. There are gaps within R4D landscape for e-mobility that need to be addressed. For instance, investment levels in R4D activities specific to electric vehicles remain low. Despite a burgeoning interest in e-mobility, many research projects struggle with inadequate funding and resources necessary for effective scaling. Furthermore, there is often a disconnect between academic research outputs and industry needs. A report from Times Higher Education indicates that almost half of university students feel unprepared for the workforce, highlighting a broader disconnect between higher education and industry expectations (Al-Majeed, 2024). Additionally, research by Gerrit Muller discusses how differing goals between academia and industry could lead to innovations that do not adequately address practical needs (Muller, 2020). This gap can limit the applicability of innovations developed in academic settings.

The capacity for advanced research is still developing as well. Many institutions have limited access to cutting-edge technology and facilities necessary for high-level R4D. This limitation hampers the ability of Kenyan researchers to engage in competitive global research efforts.

To enhance its R4D capabilities in e-mobility, Kenya could learn from successful models implemented in other countries. For instance, Germany has established a strong framework for public-private partnerships that facilitate collaboration between academia and industry. The country invests heavily in R4D for electric mobility through initiatives

such as the “National Platform for Electric Mobility,” which coordinates efforts across various stakeholders to advance technology and infrastructure.

India’s e-Mobility R4D Roadmap identifies critical areas such as energy storage cells, EV aggregates, materials recycling, and charging infrastructure as focal points for future research (Office of the Principal Scientific Adviser, 2024). By prioritizing these areas and fostering collaboration between government bodies and private enterprises, India aims to strengthen its domestic capabilities while reducing dependence on imports.

8.6 Key Messages and Policy Recommendations

8.6.1 Key messages

1. Local value addition in the e-mobility sub-sector holds great potential for job creation. The transition to electric vehicles (EVs) is projected to generate over 330,000 new jobs by 2030, with the highest gains expected from investments in local manufacturing, battery assembly, and raw material processing, rather than from vehicle imports or assembly.
2. Domestic mineral resources are under-utilized in supporting the EV industry. Graphite, manganese, and other minerals found in Kenya are largely untapped, yet their development could create up to 2,700 jobs, particularly benefiting rural communities and reducing reliance on imported inputs.
3. The quality of new jobs in e-mobility is a concern. Less than two per cent of projected new jobs meet decent work standards. Without targeted policies to enforce labour standards and support skills development, most new employment risks being informal or low wage, potentially reinforcing existing inequalities.

4. Sustainable growth in e-mobility is constrained by gaps in skills and workforce readiness. The rapid expansion of the sector requires a skilled workforce in EV assembly, battery technology, and charging infrastructure. Current technical training and industry partnerships are insufficient to meet this demand, creating a risk of missed opportunities for inclusive job growth.
5. Despite notable policy momentum, inconsistent implementation and gaps in local incentives threaten to slow the job creation potential for e-mobility. While national policies and incentives have attracted investment and startups, inconsistent implementation and gaps in end-of-life battery management threaten to slow progress and limit job creation.

8.6.2 Policy recommendations

1. The Ministry of Investments, Trade and Industry (MITI), National Treasury, and Kenya Investment Authority (KenInvest) could prioritize local value addition in the EV value chain by investing in local manufacturing, battery assembly, and raw material processing. Fast-tracking the establishment of Special Economic Zones for e-mobility and introducing local content requirements in public procurement will further stimulate domestic industry growth.
2. To build a competitive EV industry anchored in domestic resources, the Ministry of Mining and the State Department for Industry could develop and formalize the extraction and processing of local minerals such as graphite and manganese. This includes investing in geological surveys, streamlining licensing, and establishing public-private partnerships with a focus on environmental safeguards and community benefit agreements.
3. Ensuring that new jobs in e-mobility are decent and inclusive calls for the Ministry of Labour and Social Protection, MITI, and the State Department for Gender to integrate decent work standards into all e-mobility policies. This can be achieved by requiring formal employment contracts, fair wages, and workplace safety standards, and promoting gender inclusion through incentives for companies and training institutions that support women's participation in the EV workforce.
4. The Ministry of Education, TVET Authority, universities, MITI, and private sector partners need to update curricula to include EV technology, battery management, and charging infrastructure. Launching a national apprenticeship and certification programme for EV technicians, investing in modern training equipment for vocational institutes, and targeting outreach to youth and women will help build a skilled workforce for sustainable e-mobility growth.
5. Strengthening policy implementation and local incentives for e-mobility requires the Council of Governors (COG), Ministry of Transport and Roads, and State Department for Devolution to roll out capacity building programmes for county officials on e-mobility policy, establish clear guidelines for local implementation, and monitor compliance, especially in charging infrastructure deployment and enforcement of standards.
6. For environmental sustainability in the EV sector, the National Environment Management Authority (NEMA), MITI, and the Ministry of Energy and Petroleum should develop and enforce a comprehensive end-of-life (EOL) policy for EV batteries. This should include extended producer responsibility, standards for recycling facilities, and incentives for companies investing in battery recycling and second-life applications.

¹ “Wh” stands for watt-hour, a unit of energy that quantifies the amount of energy consumed or produced over time. One watt-hour represents the energy equivalent to one watt of power used for one hour.

9. Enhancing Creation of Decent Jobs at the County Level

The counties are centres of production and service delivery and play an important role in stimulating job creation. Creating decent and productive jobs in the agricultural, services and industrial sectors at the county level faces several challenges related to low wages, job insecurity, inadequate social protection, and declining productivity. The opportunities for decent work in these sectors across the counties vary by intensity of aridity. There are prospects of decent work in livestock production in arid counties; and mixed farming and crop production in semi-arid and non-ASAL counties. Wholesale and retail trade, and transport and storage make up 52.48 per cent of employment in the services sector across the counties. In the industrial sector, employment is low. The analysis reveals that overall decent job index was 0.58 out of 1.00, suggesting opportunities to improve availability and quality of jobs across the counties. Youth unemployment reflects the barriers that young people face to secure decent jobs such as skills mismatches, especially in arid counties. Promoting job security and social protection for workers can help to address precarious employment. The counties with more extreme aridity have a low share of women in wage employment in the non-agricultural sector. The share of population covered by basic healthcare provision, and those contributing to pension schemes imply constraints in accessing formal healthcare and social safety nets. There is a large proportion of workers without strong representation and collective bargaining power. The key policy considerations include enhancing skills that bridge the gap between education and employment; establishing

incubators and seed capital to support entrepreneurship; aligning job training programmes suited for specific sectors; and sensitizing communities on girl child education to help achieve gender parity in wage employment in non-agricultural sectors.

9.1 Introduction

Promotion of decent work is not only a national government priority but also an important agenda for sub-national governments such as the counties. The Decent Work Agenda, developed by the International Labour Organization (ILO), provides a framework for guiding decent working conditions across both national and county governments. Successful implementation of the decent work agenda is hinged on coordination, collaboration, and cooperation between the national and county levels, particularly the Ministry of Labour and Social Protection, and the implementation of complementary interventions by development partners such as ILO, FKE and COTU. Counties could tailor the Decent Work Agenda to local contexts and address specific labour market challenges.

Decent jobs can help to reduce inequalities and poverty levels and empower the people and communities. Increasingly, workers who are unable to secure formal sector employment are pushed to the informal sector, which operates outside the scope of formal regulations and law enforcement, and is characterized by low productivity, job insecurity, low wages, and inadequate social protection. Analyzing decent jobs at the county level is especially important because it helps to ensure that policy interventions are informed by the realities and unique needs in specific regions such as the availability of opportunities to create jobs. This chapter focuses on two areas; first, it analyzes sectoral and sub-sectoral

employment at the county level and identify sectors offering prospects for decent work; second, it presents decent work indices at the county level based on the ILO decent work indicators. This helps identify areas of decent work deficit that require policy interventions.

9.2 Sectoral and Sub-Sectoral Employment at the County Level

9.2.1 Employment in agriculture, services and industry sectors

The counties in Kenya span across diverse agro-climatic zones, and this

has implications for creation of job opportunities across different sectors. The arid and semi-arid lands (ASALs) are often characterized by extreme levels of seasonality and variability of the climate, manifested by frequent and prolonged droughts and water scarcity. To reflect such dynamics, the counties were grouped according to their level of aridity to gain a deeper understanding of decent jobs at the county level. Eight (8) counties are classified as arid and represent 85-100 per cent aridity level, thirteen (13) counties are semi-arid, representing 30-84 per cent aridity level, and eight (8) counties have 10-29 per cent aridity level while eighteen (18) counties have less than 10 per cent aridity (Table 9.1).

Table 9.1: Classification of counties by level of aridity

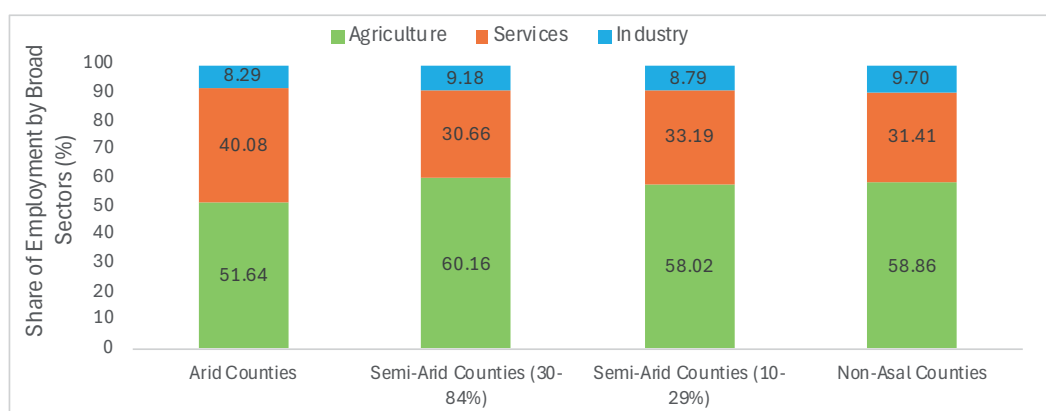
Arid counties (85-100% aridity)	Semi-arid counties (30-84% aridity)	Semi-arid counties (10-29% aridity)	Non-ASAL counties (<10% aridity)
Wajir	Tharaka Nithi	Lamu	Siaya
Marsabit	West Pokot	Homa Bay	Trans Nzoia
Garissa	Meru	Migori	Nyamira
Samburu	Baringo	Narok	Kirinyaga
Turkana	Kilifi	Elgeyo Marakwet	Busia
Mandera	Taita Taveta	Nyeri	Bomet
Isiolo	Kajiado	Kiambu	Kisii
Tana River	Kwale	Nakuru	Kericho
	Laikipia		Nyandarua
	Embu		Murang'a
	Machakos		Bungoma
	Makueni		Vihiga
	Kitui		Nandi
			Uasin Gishu
			Nairobi
			Kisumu
			Kakamega
			Mombasa

Data source: State Department for ASALs

The agricultural sector is Kenya's largest employer, accounting for 51.64 per cent in arid counties, 60.16 per cent in semi-arid counties (30-84% aridity), 58.02 per cent in semi-arid counties (10-29% aridity), and 58.86 per cent in non-ASAL counties. However, employment in this sector is predominantly informal, and characterized by seasonal labour and low wages. Agricultural workers, especially those involved in subsistence farming, often face precarious employment conditions, including inadequate social protection, insufficient wages, and long working hours.

Employment in the services sector accounts for 40.08 per cent in arid counties, 30.66 per cent in semi-arid counties (30-84% aridity), 33.19 per cent in semi-arid counties (10-29% aridity), and 31.41 per cent in non-ASAL counties. In the industrial sector, employment is low when compared to the other broad sector categories, accounting for 8.29 per cent in arid counties, 9.18 per cent in semi-arid counties (30-84% aridity), 8.79 per cent in semi-arid counties (10-29% aridity), and 9.70 per cent in non-ASAL counties.

Figure 9.1: Share of employment by broad sectors per county category



Data source: KNBS (2021), Kenya Continuous Household Survey

The government's commitment to create more decent jobs is articulated in the Bottom-up Economic Transformation Agenda (BETA) anchored on value chain approach to economic transformation. BETA aims to boost production, increase value addition, and expand market access, while attracting local and foreign investors.

The agriculture value chains include maize, dairy, beef, edible oils, tea, rice, coffee, cashew nuts, pyrethrum, avocado, macadamia nuts and cotton. Counties such as Bomet (83.83%), Baringo (78.78%), and Makueni (76.30%) demonstrate a strong reliance on agriculture (Figure 9.2), suggesting that these regions experience

a high level of agricultural activity and depend heavily on farming for employment and income generation. This trend is common among many counties with extensive agricultural land or favourable climatic conditions.

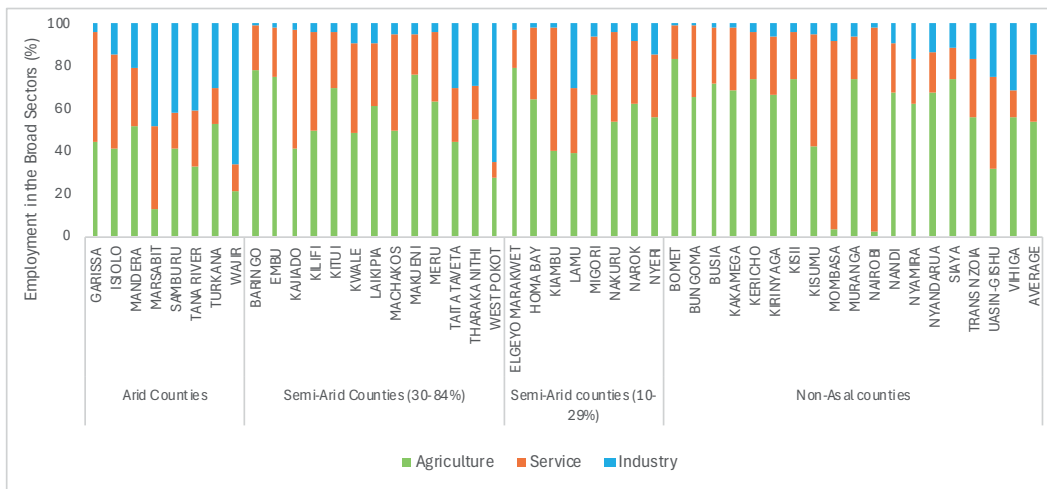
Industry value chains include agro-processing, leather and leather products, building and construction materials, textiles and apparel, dairy products, edible and crop oils, tea, coffee and sugar. Cotton is a strategic crop under MTP IV of Kenya's Vision 2030 and priority a value chain within the BETA. Counties such as Wajir (65.94%), Marsabit (47.94%), and Mandera (20.24%) display larger employment shares

in the industrial sector, particularly in Wajir, which indicates development in mining and quarrying activities relative to other industries. Overall, many counties reveal low percentages in industrial activity, suggesting that manufacturing, though expected to drive job creation opportunities, may not be a primary economic driver in these areas.

The services sub-sectors include financial and insurance services, accommodation and food services, tourism sector, information and communication, real estate, wholesale

and retail trade. Urban centres such as Nairobi (95.76%) and Mombasa (88.38%) exhibit a significant focus on the services sector, reflecting urbanization and a transition towards service-oriented economies. This shift likely stems from the presence of businesses, tourism, finance, and trade activities that thrive in these metropolitan areas. Additionally, counties such as Garissa (51.09%) and Kisumu (51.80%) also engage notably in the services sector, albeit with a more balanced distribution alongside agricultural activity.

Figure 9.2: Share of employment by broad sectors per county category



Data source: KNBS (2021), Kenya Continuous Household Survey

9.2.2 Employment in agriculture sub-sectors

The government, through the Bottom-up Economic Transformation Agenda (BETA), envisions to drive economic and inclusive growth through an agricultural value chain approach. By implementing this strategy, the agriculture sector is expected to be transformed, productivity increased, hunger be eradicated, cost of living reduced, jobs created, and inclusive growth promoted. The MTP IV 2023-2027 seeks to enhance productivity by promoting

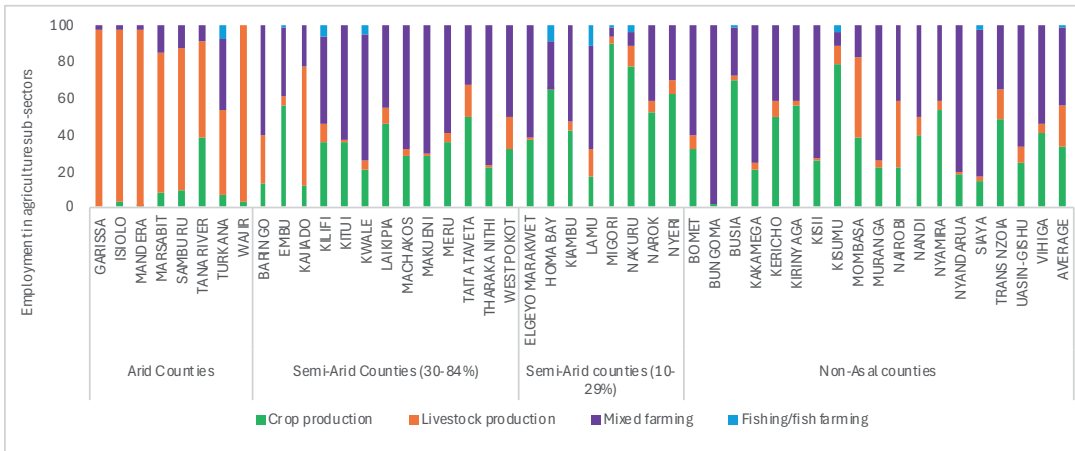
agriculture mechanization and expanding irrigation infrastructure.

The arid counties exhibit a strong reliance on livestock production, including rearing of sheep and goats, cattle, and camels. Therefore, these regions are predominantly pastoral communities where animal husbandry serves as the primary source of livelihood and employment. Counties such as Garissa (97.60%) and Mandera (96.55%) (Figure 9.3) exhibit a strong reliance on rearing of sheep and goats while Wajir (96.95%) exhibits a strong reliance on

raising of cattle. This trend is typical in the arid and semi-arid areas of northern Kenya, where unfavourable climatic conditions make crop production challenging, with a low share of employment as shown in Figure 9.3. The high levels of livestock production in these counties provide food security and create job opportunities in dairy and beef value chains. Counties such

as Baringo (60.68%) and Kitui (62.59%) demonstrate significant engagement in mixed farming, suggesting a balanced agricultural approach that incorporates both crops and livestock. This diversified agricultural sector can enhance food security and economic resilience while generating employment opportunities across both sectors (Figure 9.3).

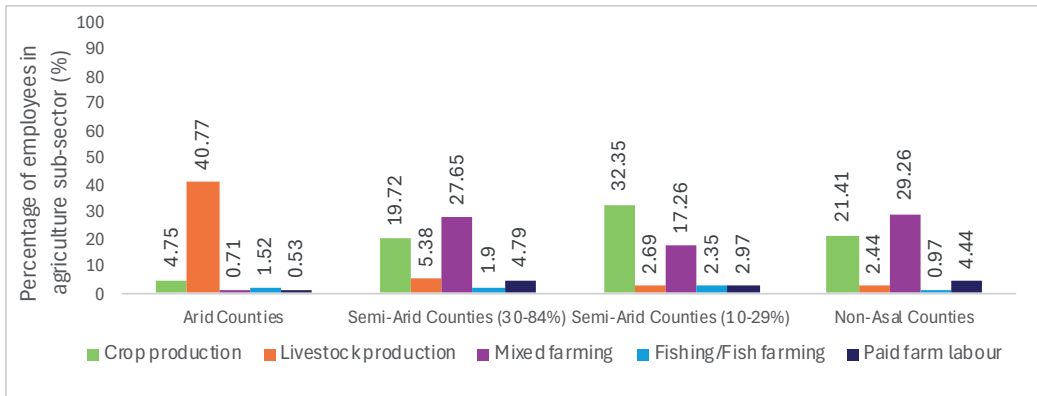
Figure 9.3: Employment in agriculture sub-sectors by county



Data source: KNBS (2021), Kenya Continuous Household Survey

A disaggregation of employment in the agricultural sector reveals that in arid counties, most workers (40.77%) are employed in the livestock sub-sector, while a smaller proportion (4.75%) is engaged in crop production (Figure 9.4). In semi-arid counties with 30-84 per cent aridity (27.65%) and non-ASAL counties (29.26%), mixed farming is the dominant practice. Among the semi-arid counties (10-29% aridity), crop production (21.41%) is dominant. However, in the face of climate change, the agricultural sub-sectors faces challenges in promoting decent work,

including vulnerability to extreme weather events, food insecurity, and declining productivity. Livestock farming in arid areas and mixed farming in semi-arid and non-ASAL counties hold better prospects for improved earnings and decent work if investments in sustainable practices, technology, and social protection are made to mitigate the impacts of climate change. In semi-arid counties with 30-84 per cent aridity (4.79%) and non-ASAL counties (4.44%), there is a higher level of paid farm labour, which includes activities related to forestry and logging.

Figure 9.4: Employment in agriculture sub-sectors by county category

Data source: KNBS (2021), Kenya Continuous Household Survey

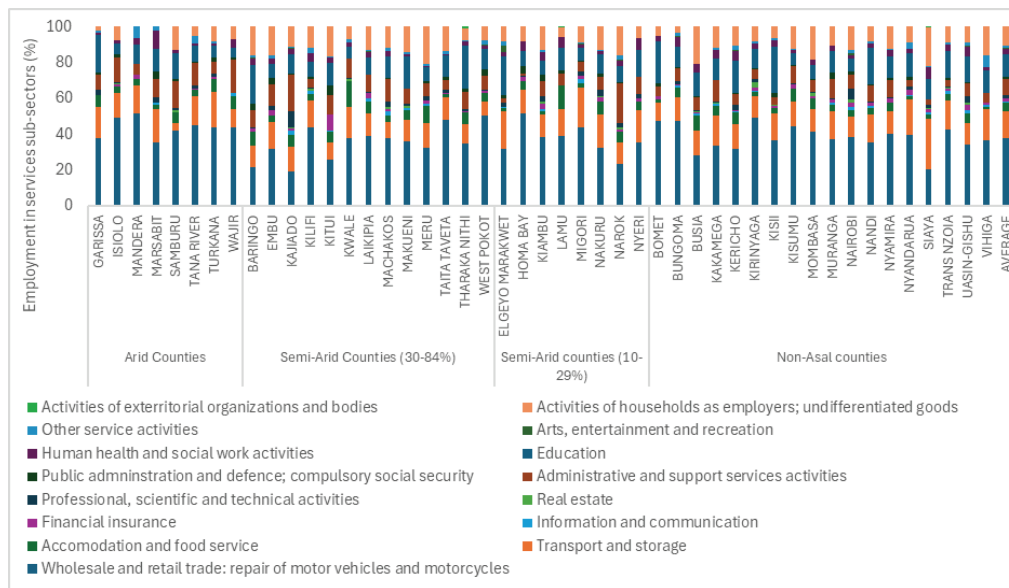
9.2.3 Employment in the services sub-sectors

A large proportion of employment in the services sector is concentrated in wholesale and retail trade (Figure 9.5), which is dominated by informal jobs that often lack social protection and stable income. The reliance on informal employment limits the potential for decent work, as workers face precarious conditions and inadequate labour standards. The policies that support the formalization of informal jobs and provide training for ICT-related employment are critical for enhancing decent work conditions in the services sector. Sub-sectors such as financial and insurance services, education, public administration, and professional, scientific, and technical activities can offer better prospects for improved earnings and decent work due to their higher levels of formal employment, skills development opportunities, and potential for career growth.

The wholesale and retail trade sub-sectors employ a large portion of the workforce, particularly in counties such as Mandera

(51.27%), Homa Bay (51.43%), West Pokot (50.15%) (Figure 9.5), indicating strong economic activity in retail and non-specialized stores in Mandera County and other retail sales not in stores, stalls or markets in Homa Bay and retail sale of new goods and food in specialized stores in West Pokot. Employment in the transport and storage sub-sector is mainly concentrated in urban and sub-urban passenger land transport and other passenger land transport. Employment in accommodation and food services is generally low and concentrated in coastal counties of Kwale (14.21%) and Lamu (13.14%), limiting opportunities in hospitality, while administrative and support services are more prevalent in counties such as Narok (22.30%) and Wajir (18.59%). Public administration jobs are scarce in many regions, raising concerns about job creation in this sector. Employment in education varies significantly, with counties such as Nyeri (14.58%) benefiting from a stronger educational workforce. The activities of households as employers also provide notable employment in counties such as Baringo (15.77%) and Busia (20.78%).

Figure 9.5: Employment in the services sector by county, 2021

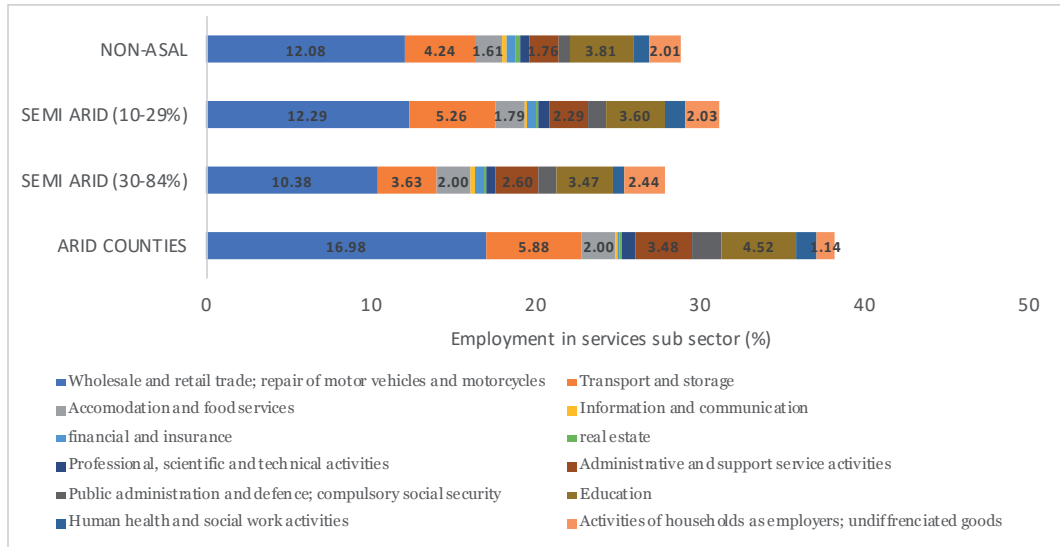


Data source: KNBS (2021), Kenya Continuous Household Survey

A disaggregation of employment in the services sector reveals that in arid counties, more workers (16.98%) are employed in the wholesale and retail trade, followed by transport and storage (5.88%) and education (4.52%). The trend is similar in other regions, in semi-arid counties with 30-84 per cent aridity, wholesale and retail trade (10.38%), transport and storage (3.63%), education (3.47%); in semi-arid (10-29% aridity), wholesale and

retail trade (12.29%), transport and storage (5.26%), education (3.60%); and in non-ASAL counties wholesale and retail trade (12.08%), transport and storage (4.24%), education (3.81%). Investing in key sub-sectors such as wholesale and retail trade, transport, and education can enhance job creation, while targeted skills development and improved infrastructure are essential for fostering decent work opportunities across counties (Figure 9.6).

Figure 9.6: Employment in services sub-sectors by county category



Data source: KNBS (2021), Kenya Continuous Household Survey

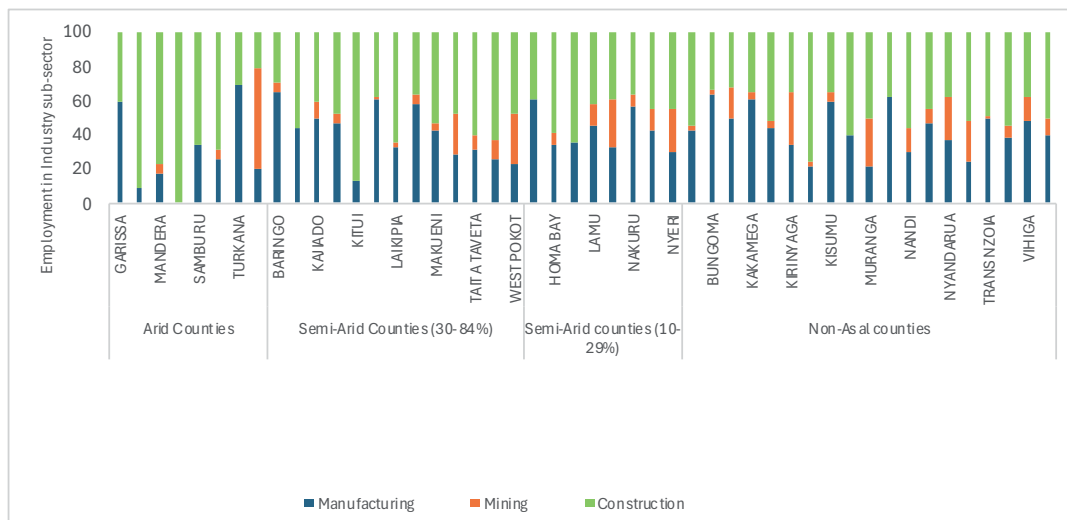
9.2.4 Employment in the industry sub-sector

Employment in the industry sector is mainly concentrated in the construction and manufacturing sub-sectors (Figure 9.7). Employment in manufacturing is particularly significant in counties such as Garissa (59.9%), Elgeyo Marakwet (60.3%), Baringo (65.2%), Turkana (69.1), and Kisumu (59.9%). These counties demonstrate diverse manufacturing activities: weaving and manufacturing of textiles in Garissa; manufacturing of dairy products, malt liquor, textile, sawmilling in Elgeyo Marakwet; and processing and preserving of meat, weaving of textiles in Baringo; and weaving of textile in Turkana; manufacture of food products, textile and wearing apparel in Kisumu. This indicates a robust manufacturing base that could potentially support local economies. Counties, such as Marsabit (0%), show little to no manufacturing activity, reflecting possible challenges in industrial development.

The employment in the mining sub-sector is in some counties, particularly Wajir (59.1%), Mandera (5.1%), Meru (24%), and West Pokot (28.8%). Mining is absent in several areas, such as Garissa and Elgeyo Marakwet, indicating no mineral exploitation. Quarrying of stone, sand and clay in Mandera and Meru counties, and mining of non-ferrous metal ores and other mining and quarrying in West Pokot County (Figure 9.7). There is a need to enhance manufacturing capabilities and exploring mining opportunities while addressing the varying degrees of involvement in construction across counties. Counties with a balanced distribution of employment across these sub-sectors may be better positioned for economic resilience and job creation.

Employment in the construction sector varies widely, with counties such as Isiolo (91.6%) and Wajir (20.45%) showing involvement in this sector. It is noteworthy that all counties reported employment in the construction sector, an indication that improvements in infrastructure could lead to economic growth for the county.

Figure 9.7: Employment in the industry sub-sector by county

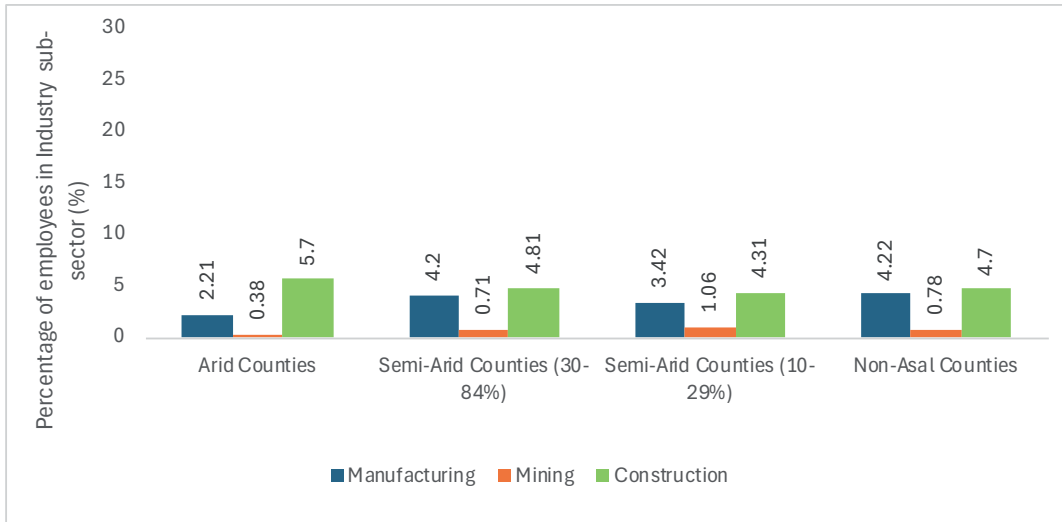


Data source: KNBS (2021), Kenya Continuous Household Survey

A disaggregation of employment in the industry sector reveals that in arid counties, more workers (5.7%) are employed in the construction, followed by manufacturing (2.21%). The trend is similar in other regions, in semi-arid counties with 30-84 per cent aridity, construction (4.81%), manufacturing (4.2%); in semi-arid (10-29% aridity), construction (4.31%), manufacturing (3.42%); and in non-ASAL counties construction (4.7%), manufacturing (4.22%). Arid counties

have lower levels of employment in manufacturing at 2.21 per cent (Figure 9.8), with many workers remaining in informal or less stable jobs. In contrast non-ASAL counties have higher employment in manufacturing (4.22%). This is attributed to most of the counties in non-ASAL counties benefiting from better infrastructure, access to markets, and proximity to major urban centres, which attract investment and offer more stable employment opportunities.

Figure 9.8: Employment in industry sub-sectors by county category



Data source: KNBS (2021), Kenya Continuous Household Survey

9.3 Decent Work at the County Level

This section employs the ILO’s Decent Work Indicators to compute the Decent Job Index to assess areas of strength and weakness in Decent Jobs across counties. The Decent Work Agenda covers eight thematic areas, which include employment opportunities, adequate earning and

productive work, working time, work that needs to be abolished, stability and security of work, equal opportunity and treatment in employment, social security and social dialogue, workers’ and employer representation (Table 9.2). The decent job index is a useful tool to assess and compare the progress across the identified thematic areas and indicators, and across the counties.

Table 9.2: Description of the ILO decent work indicators and benchmark for scoring indicators

Thematic area	Indicator	Indicators benchmark-Kenya Vision 2030, SDG 8	Data source
1 Employment opportunities	Employment-to-population ratio	Achieve an employment-to-population ratio exceeding 60% is indicative of a strong and healthy labour market	2019 Census
	Unemployment rate	Achieve an unemployment rate of below 5%	2019 Census
	Youth not in employment, education, or training, 15–24 years	Reduce the NEET rate to below 10% in line with international best practices	2019 Census
	Informal employment rate	Reduce the informal employment rate to below 50% by expanding the formal sector and encouraging formalization in traditionally informal sectors	KCHS 2021
	Labour force participation rate	Increase the LFPR to at least 70%	2019 Census
2 Adequate earnings and productive work	Youth unemployment rate, 15–34 years	Reduce the youth unemployment rate to single digits, ideally to below 10%, in line with targets set in national development plans and SDG commitments	2019 Census
	Employees with low pay rate (below two-thirds of median monthly earnings)	Reduce the percentage of employees earning below two-thirds of the median monthly wage to below 20%, aligning with Kenya Vision 2030 targets for adequate earnings and promote productive work in alignment with national and international goals	KCHS 2021
3 Decent working time	Employment in excessive working time (more than 48 hours per week)	Reduce the proportion of workers in excessive working hours to below 10% aligning with international labour standards	KCHS 2021
	Employment by weekly hours worked (hours in standardized hour bands-35-48 hrs)	Increase the percentage of workers in desirable weekly working hours (35-48 hours) to at least 70%	KCHS 2021
	Time-related underemployment rate	Reduce time-related underemployment to below 5% aligning with SDG 8 targets on promoting full and productive employment	KCHS 2021

	Thematic area	Indicator	Indicators benchmark-Kenya Vision 2030, SDG 8	Data source
4	Work that needs to be abolished	Child labour rate (as defined by ICLS Resolution)-less strict definition 5-17-year-old working	Reduce the child labour rate to below 5% by 2030 in line with the Kenya Vision 2030 and SDG 8.7 targets	2019 Census
		5-14 year working -child labour	Complete elimination of child labour in this age group, achieving a 0% target by 2030 in line with SDG 8.7	2019 Census
5	Stability and security of work	Precarious employment rate	Reduce the precarious employment rate to below 10% focusing on promoting secure employment with fair conditions	KCHS 2021
		Subsistence worker rate	Reduce the rate of subsistence workers to below 5% in line with Kenya Vision 2030 targets for moving toward formal employment	KCHS 2021
6	Equal opportunity and treatment in employment	Measure for employment of persons with disabilities	Achieve 5% of formal sector jobs to be held by persons with disabilities in accordance with affirmative action policies	Ethnic and Diversity Audit of the County Public Service 2023
		Share of women in wage employment in the non-agricultural sector	Achieve a 50-50 gender parity in wage employment in non-agricultural sectors by 2030, aligned with the Kenya Vision 2030 and SDG 8.5	KCHS 2021
7	Social security	Share of economically active population contributing to a pension scheme	Increase the share of the economically active population contributing to pension schemes to at least 60% by 2030	KDHS 2022
		Share of population covered by (basic) health care provision	Achieve 100% coverage of basic healthcare for the population by 2030, aligned with the "Big Four" agenda's health pillar	KDHS 2022
		Beneficiaries of cash transfer or social assistance (% of the poor)	Provide cash income support to at least 80% of the poor population by 2030, in line with the Kenya Vision 2030 social safety net goals	KDHS 2022

Thematic area	Indicator	Indicators benchmark-Kenya Vision 2030, SDG 8	Data source
8. Social dialogue, workers' and employers' representation	Trade union density rate	Increase trade union density rate to at least 50% by 2030, aligned with goals for strengthening labour representation	KCHS 2021

Key: Scoring indicators; Each indicator was assessed based on the scores and ranked according to how well it met the established criteria. The highest performance or benchmark of an indicator was used as the frontier or ideal point in the index calculation, while the lowest performance represented the worst-case scenario for that indicator.

The Distance to Frontier (DTF) methodology was initially developed by the World Bank for use as a benchmark in evaluating countries ranking in ease of doing business, based on their distance from the best performing economies. Distance to Frontier or ideal point score methodology was computed as follows:

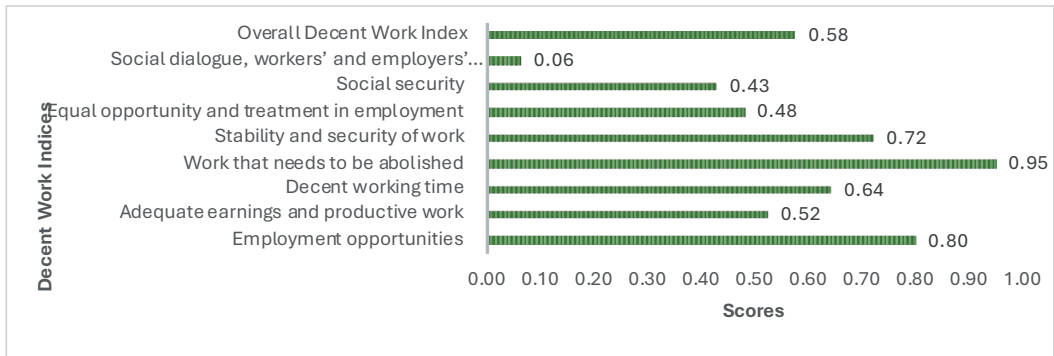
$$\text{Score} = (\text{Worst-y}) / (\text{Worst-Frontier})$$

Where y is the current data given for each indicator, “Worst” indicates worst performance, and frontier or ideal point shows best performance in each indicator represented by the benchmark. The score ranges from zero (0) to one (1). 0 indicates that the current data (y) is at the worst possible point, indicating no progress towards the frontier or ideal point. 1 indicates that the current data (y) is at the optimal, the frontier or ideal point, or it is exactly in line with the best possible outcome.

9.3.1 Overall decent work index

The Overall Decent Work Index is 0.58. The work that needs to be abolished is the highest in terms of achieving the target of reducing the child labour rate (0.95). In contrast, the Social Dialogue, Workers’ and Employers’ Representation Index fares the lowest in reaching its target of increasing trade union density rate (0.06).

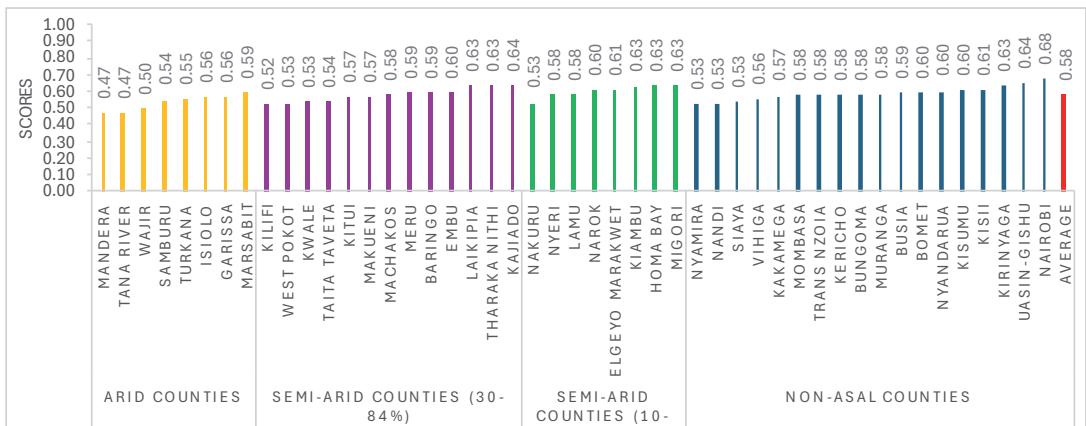
Figure 9.9: Overall decent work index score



Data source: Author's computation using KNBS (2019) Census, KCHS (2021) and KDHS (2022)

The Overall Decent Work Index scores vary considerably across the 47 counties. While the national average stands at 0.58, several counties particularly semi-arid and non-ASAL counties exhibit scores higher than the average score, while several arid counties display scores below the national average.

Figure 9.10: Overall decent work index score by county



Data source: Author's computation using KNBS (2019) Census, KCHS (2021) and KDHS (2022)

9.3.2 Employment opportunities index

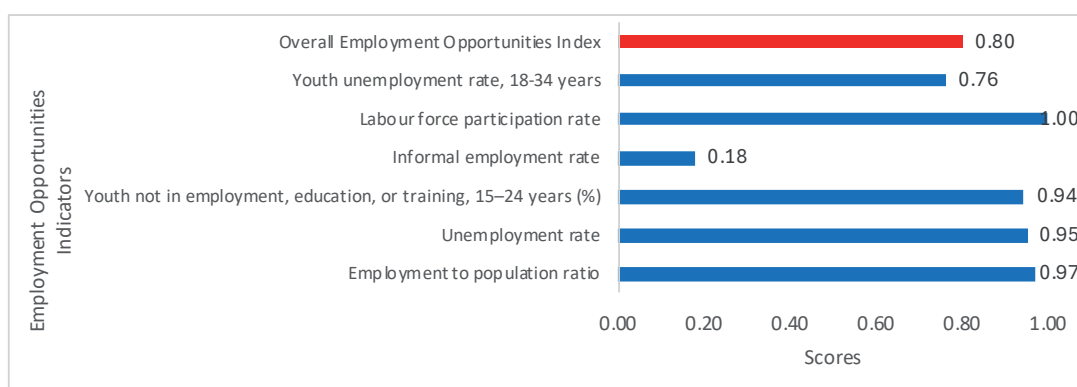
Employment opportunities are a critical aspect of decent work, significantly influencing economic stability, individual well-being, and social cohesion. This section explores various indicators of

employment opportunities at the county level, including employment to population ratio, unemployment rate, youth not in employment, education, or training (NEET), informal employment rate, labour force participation rate, and youth unemployment rates.

Figure 9.11 indicates moderate overall performance in employment opportunities across counties, with a high employment to population index (0.97) and full labour force participation index (1.00), showing strong labour market engagement. The unemployment index (0.95) and youth not in employment, education, or training (NEET) index (0.94) compared to frontier or ideal point (1.00), which highlights issues in job availability and

youth engagement. Despite a relatively low informal employment index (0.18), the youth unemployment index (0.76) is concerning, reflecting barriers for young people in securing jobs. The overall employment opportunities index (0.80) suggests that, while some aspects are positive, there are still substantial gaps in addressing unemployment and youth inclusion in the workforce.

Figure 9.11: Overall employment opportunities index score



Data source: Author's computation using KNBS (2019) Census

Out of the 47 counties, 31 counties had scores on employment opportunities index above the average level of 0.80, while 8 counties exhibited scores below this average and another 8 counties scored an average of 0.80 (Figure 9.12). The bottom performing counties included Garissa (0.66), Turkana (0.69), Wajir (0.69), Mandera (0.70)

and Isiolo (0.76), indicating significant challenges in employment creation.

The top performing counties included Nairobi (0.85), Kiambu (0.84), Uasin Gishu (0.84), Nakuru (0.83), Kajiado (0.83), Machakos (0.83), and Nyeri (0.83), reflecting more favourable employment opportunities in these areas.

Figure 9.12: Employment opportunities index score by county



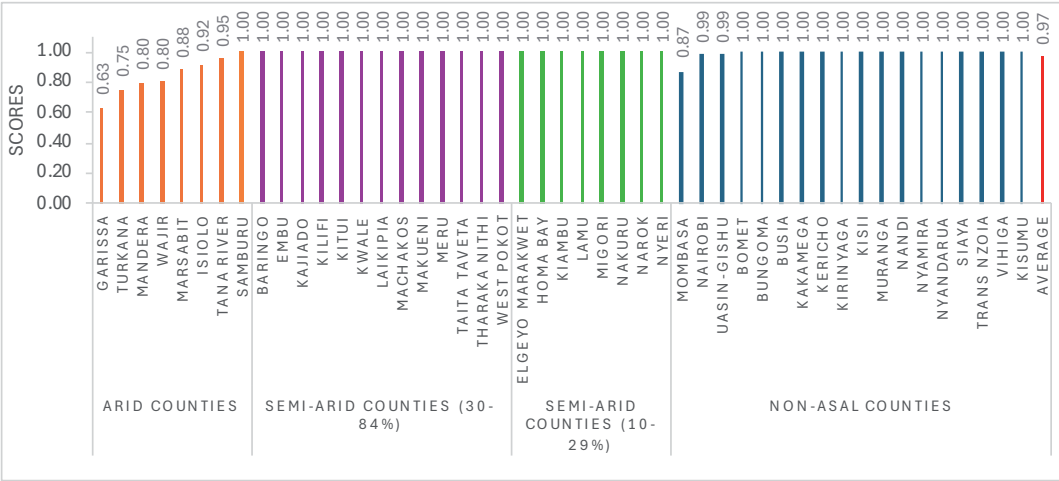
Data source: Author’s computation using KNBS (2019) Census

(a) Employment-to-population index

The employment-to-population rate measures the proportion of the working-age population (typically aged 15-64) that is employed, providing a broad sense of the level of employment in a given population and reflecting an economy’s ability to provide jobs. Out of the 47 counties, 39 counties had scores of employment to population index above the average level of 0.97, while 8 counties exhibited scores below this average (Figure 9.13). The 8 bottom counties included Garissa (0.63), Turkana (0.75), Mandera (0.80), Wajir (0.80), Marsabit (0.88), Isiolo (0.92), Tana River (0.95) and Mombasa (0.87). The low score in employment to population index

away from frontier or ideal point (1.00) in the eight counties can be attributed to a combination of factors, including insecurity and conflict, which disrupt economic activities and deter investment, and harsh geographical conditions in arid areas that limit job opportunities. Poor infrastructure further restricts market access and industrial growth, while historical marginalization has weakened institutional and human capital development. Additionally, low education and skill levels reduce access to formal employment, and economies centred around pastoralism offer fewer formal job opportunities. In a county such as Mombasa, sector-specific challenges, such as reliance on tourism, limit employment diversification.

Figure 9.13: Employment to population index score by county



Data source: Author’s computation using KNBS (2019) Census

(b) Unemployment index

The unemployment rate reflects the percentage of the labour force that is jobless and actively seeking employment. The unemployment index score is at 0.95. Out of the 47 counties, 36 counties had scores of unemployment index above the average level of 0.95, while 11 counties exhibited scores below this average (Figure 9.14). The 11 bottom counties included Garissa (0.67), Wajir (0.74), Turkana (0.75), Mandera (0.80), Marsabit (0.84), Isiolo (0.85), Tana River (0.88), Kajiado (0.93), Kiambu (0.94), Mombasa (0.87) and Nairobi (0.91). The lower scores away from the frontier or ideal point (1.00) in the eleven (11) counties can be attributed to insecurity and conflict, especially in counties such as Garissa, Wajir, Mandera, and Turkana, which have disrupted economic activities and deterred investments, reducing employment

opportunities. Harsh geographical conditions in arid and semi-arid areas such as Marsabit, Isiolo, and Tana River limit the scope of economic activities, particularly in sectors such as agriculture, which provides significant employment in other regions. Poor infrastructure and connectivity in these counties further constrain access to markets and services, hindering industrial growth and job creation. In urban areas such as Mombasa and Nairobi, sector-specific challenges such as high informal employment, reliance on industries such as tourism (for Mombasa), and high population (for Kiambu and Nairobi) may contribute to the high unemployment rate. These regional differences often stem from a lack of job opportunities, insufficient investment in local industries, and mismatches between available skills and market demand.

Figure 9.14: Unemployment index score by county, 2019



Data source: Author's computation using KNBS (2019) Census

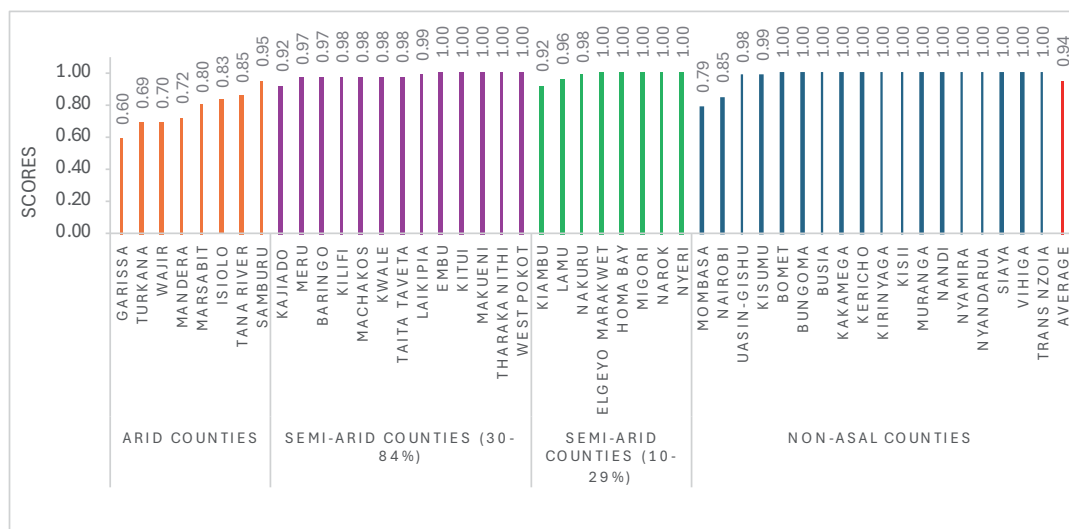
(c) Youth not in employment, education, or training (NEET) index

The proportion of youth aged 15-24 years not engaged in employment, education, or training is a critical indicator of economic exclusion. Out of the 47 counties, 36 counties had scores on youth not in employment, education, or training (NEET) index above the average level of 0.94, while 11 counties exhibited scores below this average (Figure 9.15). The 11 bottom counties included Garissa (0.60), Turkana (0.69), Wajir (0.70), Mandera (0.72), Marsabit (0.80), Isiolo (0.83), Tana River (0.85), Kajiado (0.92), Kiambu (0.92), Mombasa (0.79) and Nairobi (0.85). The lower scores away from the frontier or ideal point (1.00) could be attributed to conflict in counties such as in Garissa, Turkana, Wajir, and Mandera, which have disrupted educational systems and economic activities, limiting opportunities for the youth to engage in employment or training

programmes. The harsh geographical and environmental conditions in arid areas further reduce access to schools, vocational training centres, and job markets.

The lower scores reflect barriers to entry into the labour market, such as insufficient skills, lack of job opportunities, and limited access to vocational training. In addition, poverty and limited access to quality education have left many young people without the necessary skills or qualifications to enter the workforce, while poor infrastructure hampers mobility and access to employment opportunities. Additionally, cultural norms in some counties may discourage participation in formal education or employment, particularly among young women. In more urbanized counties such as Mombasa and Nairobi, factors such as urban poverty, overcrowding, and reliance on informal employment make it difficult for young people to find stable jobs or pursue further education.

Figure 9.15: Youth not in employment, education, or training (NEET) index score by county, 15-24 years, 2019



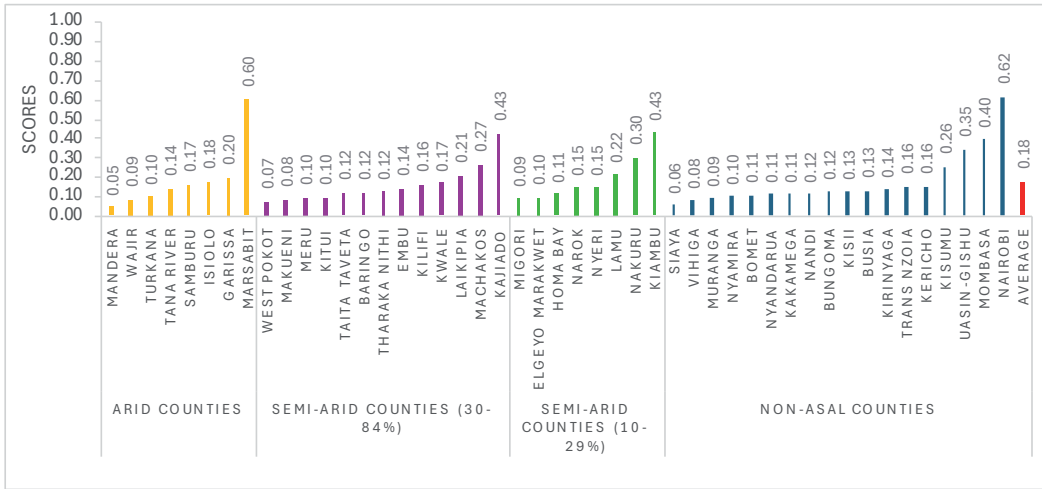
Data source: Author's computation using KNBS (2019) Census

(d) Informal employment index

The informal employment rate refers to the proportion of workers in jobs that are not regulated by formal labour laws or protections. Informal employment is common in agriculture, retail, and domestic work, where workers often face job insecurity, limited social protection, and lower wages. Out of the 47 counties, 12 counties had scores of informal employment index above the average level of 0.18, 34 counties exhibited scores below this average, while one county had a score equal to the average score (Figure 9.16). The bottom five performing counties included Mandera (0.05), Siaya (0.06), West Pokot (0.07), Vihiga (0.08), and Makueni (0.08). The top five performing counties included Nairobi (0.62), Marsabit (0.60), Kiambu (0.43), Kajiado (0.43), and Mombasa (0.40). Several factors likely contributed to these variations. The counties with higher scores

near the frontier or ideal point (1.00), such as Nairobi, Marsabit and Kiambu, have higher levels of urbanization, better infrastructure, and more diversified economic activities, which have provided greater access to formal jobs, particularly in the service and industrial sectors. In contrast, counties with lower scores exhibit high informal employment rates, such as Mandera and Siaya, are predominantly rural or arid, where informal economic activities such as subsistence agriculture and pastoralism dominate, limiting access to formal labour markets. Additionally, insecurity and under-developed infrastructure in some arid counties, such as Mandera, further reduce opportunities for formal employment. Cultural and social factors, including reliance on informal community structures for work in some areas, may also play a role in sustaining higher informal employment levels.

Figure 9.16: Informal employment index score by county, 2021



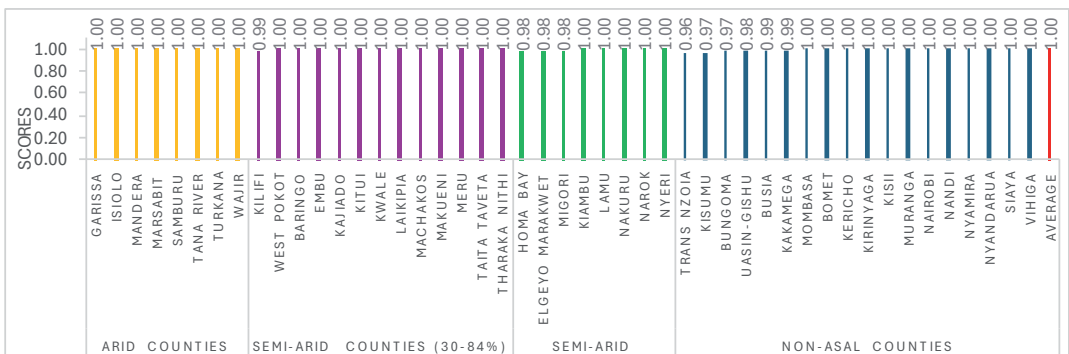
Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

(e) Labour force participation index

The labour force participation rate (LFPR) measures the proportion of the working-age population that is either employed or actively seeking employment, with higher index typically found in urban counties due to greater employment opportunities and better infrastructure. In contrast, rural counties, especially those in arid and semi-arid lands (ASALs), often exhibit lower labour participation because of

limited job opportunities and economic activities. Interestingly, the scores indicate high labour participation in arid counties and non-ASAL. The higher score in ASAL counties close to the frontier or ideal point (1.00) could be attributed to engagement in informal work such as subsistence farming and pastoralism, the necessity to seek any available employment even if the jobs are informal or low-paying, cultural expectations for community contribution, and seasonal or migratory work pattern.

Figure 9.17: Labour force participation index score by county, 2021



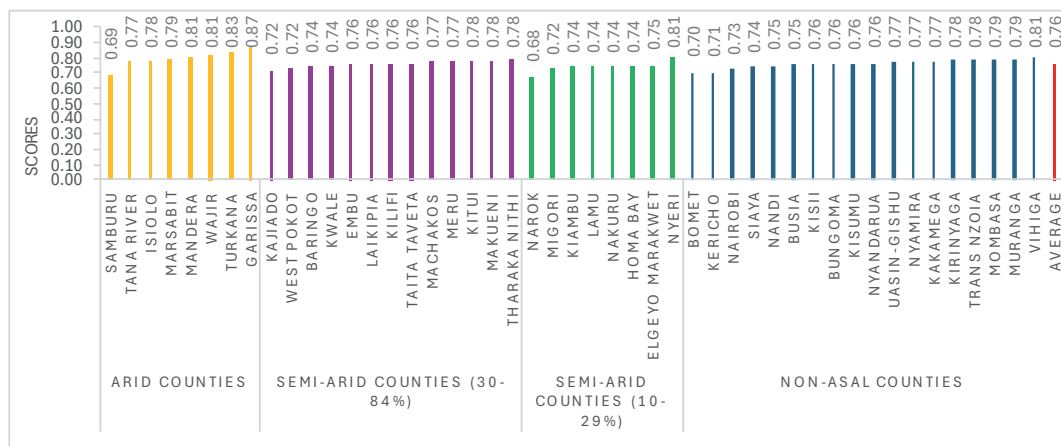
Data source: Author's computation using KNBS (2019) Census

(f) Youth unemployment index

The youth unemployment rate measures the percentage of individuals aged 15 to 34 who are unemployed and actively seeking work. High youth unemployment rate reflects not only a lack of job opportunities but also challenges such as skills mismatches, economic instability, and the population size of a county. Kenya's goal is to reduce the youth unemployment rate to single digits, ideally below 10 per cent. Out of the 47 counties, 21 counties had scores on youth unemployment index above the average level of 0.76, 18 counties exhibited scores below this average, while 8 counties had a score equal to the average score (Figure 9.18). The bottom 5 counties included Narok (0.68), Samburu (0.69), Bomet (0.70), Kericho (0.71), Kajiado (0.72),

West Pokot (0.72) and Migori (0.72). The lower scores away from the frontier or ideal point (1.00) could be attributed to challenges related to limited economic activities, lower levels of industrialization, and inadequate job creation mechanisms. These regions may also have less access to infrastructure, skills training, and investment, leading to fewer employment opportunities. The top 5 counties included Garissa (0.87), Turkana (0.83), Wajir (0.81), Mandera (0.81), Nyeri (0.81) and Vihiga (0.81). These counties may have benefited from targeted development interventions and job creation programmes aimed at addressing unemployment. Additionally, these counties might have smaller labour force participation rates, which could also explain higher unemployment scores due to relatively fewer people actively seeking jobs.

Figure 9.18: Youth unemployment index score by county, 2019



Data source: Author's computation using KNBS (2019) Census

9.3.3 Adequate earnings and productive work

Adequate earnings and productive work are essential components of decent work, reflecting both the quality of employment and the economic well-being of workers. This section explores one critical indicator

related to adequate earnings and productive work: employees with low pay rates.

Employees with low pay rates, defined as those earning below two-thirds of the median monthly earnings, provide a measure of income disparity and wage inadequacy within the workforce. Low pay rates reflect broader labour market

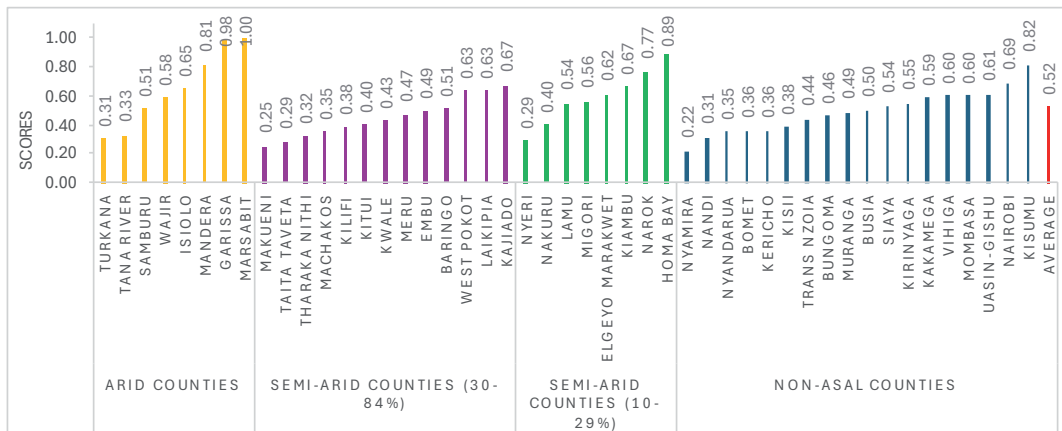
issues, such as income inequality and stagnant wage growth. Research indicates that workers earning below two-thirds of the median earnings often face economic hardships, struggling to access basic needs such as healthcare, education, and housing (ILO, 2019). In addition, these low pay rates expose structural challenges in the economy, including limited job opportunities in higher-wage sectors, insufficient minimum wage policies, and a high prevalence of informal employment (Chen, 2016).

Out of the 47 counties, 22 counties had scores of employees with low pay index above the average level of 0.52, while 25 counties exhibited scores below this average (Figure 9.19). The bottom 5 counties include Nyamira (0.22), Makueni (0.25), Taita Taveta (0.29), Nyeri (0.29), Turkana (0.31), and Nandi (0.31). The lower scores away from the frontier or ideal point (1.00) could

be attributed to a combination of factors, including a high prevalence of informal employment, limited access to higher-paying job opportunities, and economic challenges specific to these regions, such as inadequate infrastructure and low levels of investment in skills training and education.

In contrast, the top five (5) counties include Marsabit (1.00), Garissa (0.98), Homa Bay (0.89), Kisumu (0.82), and Mandera (0.81). The higher scores near to the frontier or ideal point (1.00) in these counties could be attributed to a more favourable economic environment characterized by better access to higher-paying job sectors and effective labour market policies. Additionally, these counties may benefit from stronger local economies and initiatives aimed at promoting job creation and supporting workers in transitioning to better-paying roles.

Figure 9.19: Employees with low pay index score by county



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

9.3.4 Decent working time

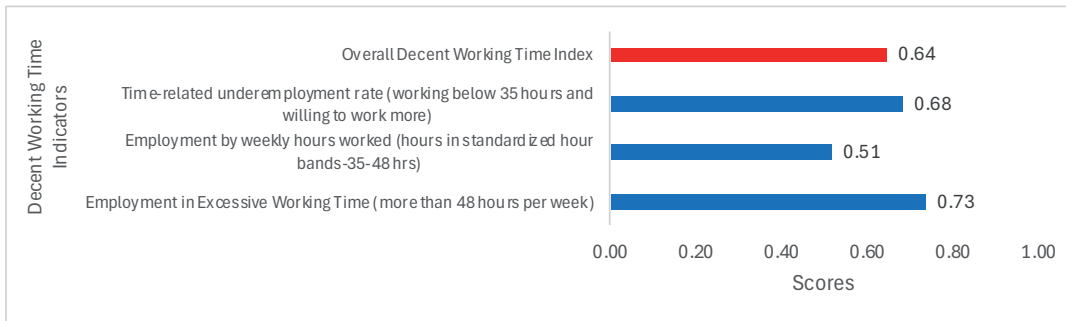
Decent working time reflects the quality of work in terms of hours worked and work-life balance. This section examines

three key indicators of decent working time: employment in excessive working time (more than 48 hours per week), employment by weekly hours worked, and time-related underemployment rate.

Figure 9.20 highlights significant concerns regarding decent working time in the country, with a score of 0.73 indicating a high level of workers employed in excessive working hours (more than 48 hours per week), which poses risk of burnout and decreased productivity. The score of 0.51 indicates that just over half of the workforce operates within the standard working hours

of 35-48 hours. Additionally, a score of 0.68 reveals a troubling level of time-related under-employment, showing that many workers are working less than 35 hours per week but are willing to take on more. The decent working time index stands at 0.64, suggesting a moderate level of decent working conditions overall.

Figure 9.20: Overall decent working time index score



Data Source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

Out of the 47 counties, 26 had scores on the decent working time index above the average level of 0.64, 20 counties scored below this average, and 1 county had a score of 0.64 (Figure 9.21). The bottom five counties were Mombasa (0.37), Wajir (0.38), Isiolo (0.42), Kakamega (0.45), and Kilifi (0.46). The lower scores in these counties could be attributed to a combination of factors, such as limited formal employment opportunities, high levels of underemployment, and excessive working hours. In contrast, the top five

counties were Tharaka Nithi (0.90), Kitui (0.81), Elgeyo Marakwet (0.80), Kericho (0.80), and Makeni (0.79). The higher scores in these counties could be attributed to better labour market conditions, balanced working hours, and stronger policy frameworks supporting decent work.

Figure 9.21: Decent working time index score by county



Data Source: Author’s computation using KNBS (2021), Kenya Continuous Household Survey

(a) Employment in excessive working time index

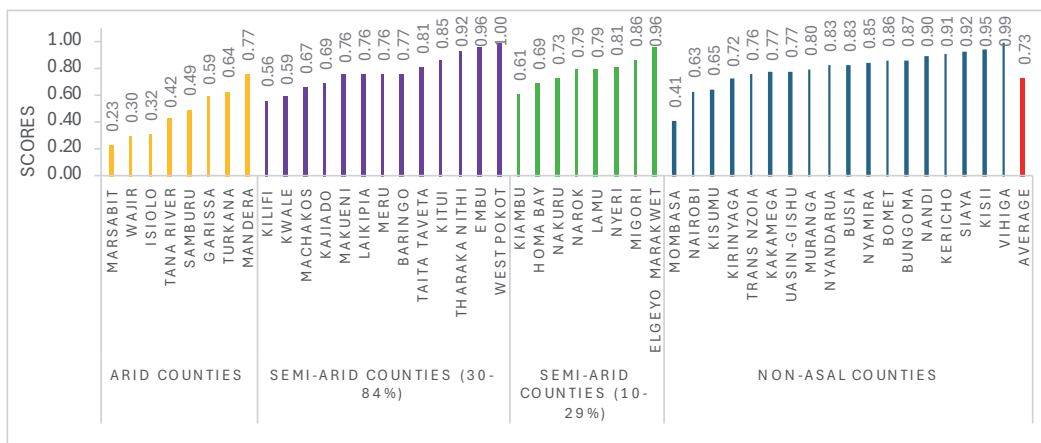
Employment in excessive working time, defined as working more than 48 hours per week, is a significant indicator of work intensity and its impact on workers’ well-being. Figure 9.22 shows that a substantial proportion of workers in Kenya are engaged in excessive working hours. This often results from economic pressures, job insecurity, and the nature of certain industries where long hours are normalized. Excessive working time is associated with various negative outcomes, including increased stress, poor health, and reduced productivity. Studies have shown that prolonged working hours can lead to physical and mental health issues such as chronic fatigue, cardiovascular diseases, and work-related stress (ILO, 2020). Moreover, it disrupts work-life balance, affecting family life and overall quality of life (Gonzalez et al., 2019).

Out of the 47 counties, 29 had scores for employment in excessive working time index above the average level of 0.73, 17 counties scored below this average, and 1 county had a score of 0.73 (Figure 9.22).

The bottom five counties were Marsabit (0.23), Wajir (0.30), Isiolo (0.32), Mombasa (0.41), and Tana River (0.42). The lower scores in the excessive working time index scores in these counties is because of higher reliance on informal and seasonal work, limiting access to formal employment. In contrast, the top five performing counties were West Pokot (1.00), Vihiga (0.99), Embu (0.96), Elgeyo Marakwet (0.96), and Kisii (0.95). The higher scores close to the frontier or ideal point (1.00) could be attributed to factors such as better labour market conditions, greater adherence to labour standards, and a higher prevalence of formal employment.

The findings underscore the urgent need for policy interventions to regulate excessive hours and improve job availability, which could enhance employee well-being and promote economic stability. Addressing excessive working time requires policy interventions that promote better work-life balance, such as enforcing maximum working hours regulations, promoting flexible work arrangements, and encouraging employers to implement better working conditions.

Figure 9.22: Employment in excessive working time score by county



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

(b) Employment by weekly hours worked (hours in standardized hour bands of 35-48 hrs) index

Research highlights the importance of balancing working hours to avoid both excessive and insufficient work hours. Policies that encourage balanced work hours, including part-time work options and job-sharing arrangements, can support better work-life balance and prevent overwork (Dawkins and Finkel, 2021).

Out of the 47 counties, 25 had scores for employment by weekly hours worked (in standardized hour bands of 35-48 hours) above the average level of 0.51, while 22 counties scored below this average (Figure 9.23). The bottom five performing counties were West Pokot (0.17), Vihiga (0.22), Migori (0.23), Kakamega (0.25), and Wajir (0.26). The lower scores away from the frontier or ideal point (1.00) employment in these counties could be attributed to a high prevalence of informal or part-time work, limited formal sector opportunities,

and economic activities that do not demand regular working hours, such as subsistence agriculture or casual labour. In contrast, the top five performing counties were Tharaka Nithi (0.99), Embu (0.82), Kitui (0.81), Mandera (0.78), and Nairobi (0.73). The high scores close to the frontier or ideal point (1.00) in these counties can be attributed to a more structured labour market with greater formal sector employment, more regulated working hours, and industries that promote full-time work, providing a stable working environment that aligns with the standardized hour bands.

Figure 9.23: Employment by weekly hours worked (hours in standardized hour bands-35-48 hrs) score by county



Data source: Author’s computation using KNBS (2021), Kenya Continuous Household Survey

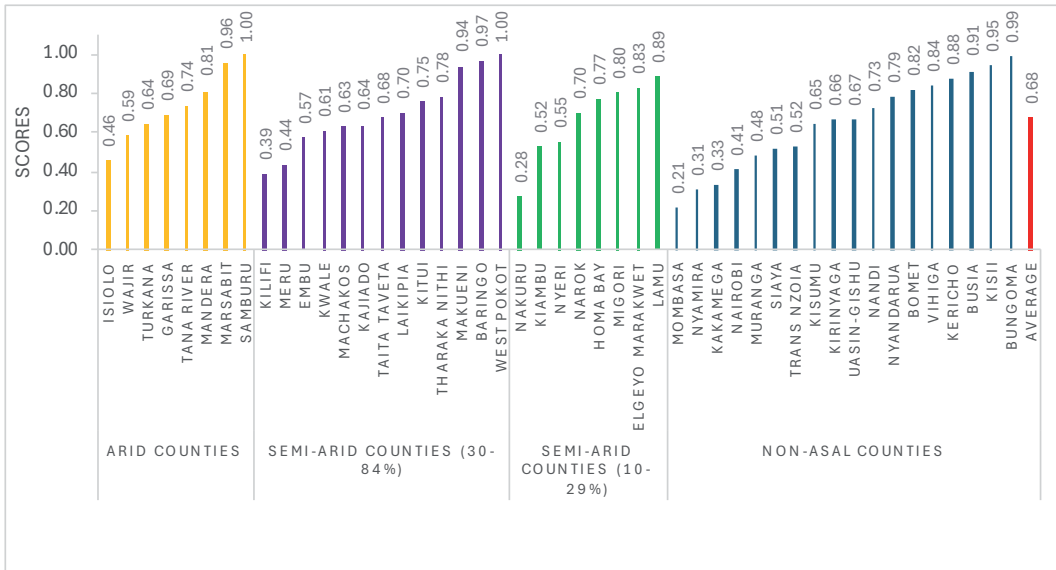
(c) Time-related under-employment rate

The time-related under-employment rate measures the proportion of workers who are employed but desire to work more hours. The time-related under-employment rate reflects a portion of the workforce seeking additional work hours to achieve adequate earnings and job satisfaction. Workers facing under-employment may experience income insecurity and reduced job satisfaction, impacting on their overall economic well-being (ILO, 2020). Addressing time-related under-employment involves creating more full-time job opportunities, improving job quality, and ensuring that labour market policies support sufficient working hours for those seeking them (Blau and Kahn, 2021).

Out of the 47 counties, 24 had scores for the time-related under-employment rate

(defined as working below 35 hours and willing to work more) above the average level of 0.68, one (1) county scored 0.68, while 22 counties fell below this average (Figure 9.24). The bottom five counties were Mombasa (0.21), Nakuru (0.28), Nyamira (0.31), Kakamega (0.33), and Kilifi (0.39). The lower scores away from the frontier or ideal point in these counties can be attributed to factors such as limited job opportunities and challenging economic conditions, which increase workers’ willingness to seek additional hours. In contrast, the top five counties were Samburu (1.00), West Pokot (1.00), Bungoma (0.99), Baringo (0.99), and Marsabit (0.96). The higher scores close to the frontier or ideal point in these counties could reflect a lack of formal employment options overall, with many workers engaged in informal or subsistence activities, leading to a lower willingness to seek additional hours.

Figure 9.24: Time-related under-employment rate (working below 35 hours and willing to work more) score by county



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

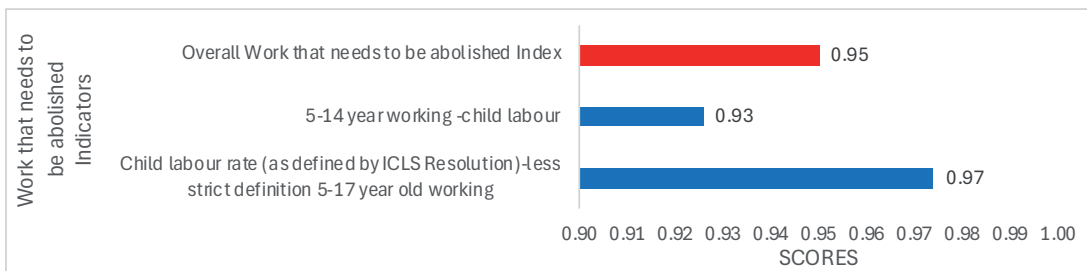
9.3.5 Work that needs to be abolished index

Work that needs to be abolished refers to employment practices and types of work that are considered exploitative, harmful, or otherwise unacceptable. This section explores child labour, focusing on two specific indicators: the child labour rate (as defined by the International Conference of Labour Statisticians (ICLS) Resolution) for children aged 5-17 years, and the more

stringent definition of child labour for children aged 5-11 years.

Figure 9.25 shows an average score of 0.97 for children aged 5-17 years and 0.93 for those aged 5-14 years. The work that should be abolished index had an average of 0.95. These scores suggest that while progress has been made, targeted interventions and policies are essential to ensure that all children are protected from harmful labour practices and have access to education.

Figure 9.25: Overall work that needs to be abolished index score

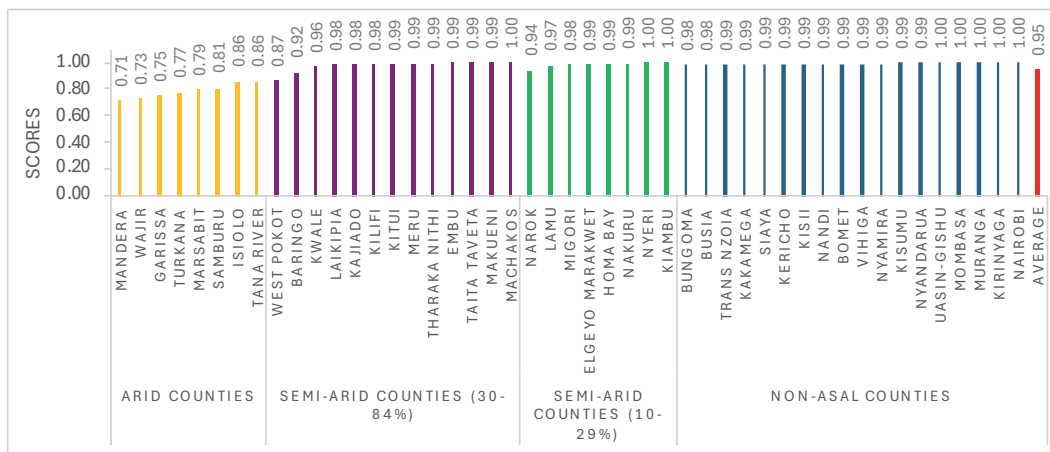


Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

Out of the 47 counties, 36 scored above the average level of 0.95 on the work that should be abolished index while 11 counties fell below this average (Figure 9.26). The bottom five performing counties were Mandera (0.71), Garissa (0.75), Turkana (0.77), Marsabit (0.79), and Samburu (0.81). The lower scores away from frontier or ideal point (1.00) in these counties can be attributed to factors such as extreme poverty, limited access to education, and a lack of economic opportunities that drive

families to rely on child labour for survival. In contrast, the top five performing counties, including Kiambu (1.00), Nairobi (1.00), Kirinyaga (0.99), Nyeri (0.99), and Murang'a (0.96) exhibited lower levels of child labour. The higher score close to the frontier or ideal point (1.00) in these counties could reflect better access to educational resources, stronger economic development, and effective local policies promoting children's rights and welfare, which collectively contribute to a safer environment for children.

Figure 9.26: Work that needs to be abolished pillar score by county



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

(a) Child labour index (5-17 years)

Child labour is defined as work performed by children that is detrimental to their health, development, and education (ILO, 2017). Research shows that child labour is often driven by socio-economic factors such as poverty, lack of access to quality education, and economic pressures on families (Edmonds and Shrestha, 2019). Children involved in child labour may experience negative long-term effects, including limited educational attainment, poor health, and reduced future employment opportunities (Basu and Van, 2019). Addressing child labour requires comprehensive strategies,

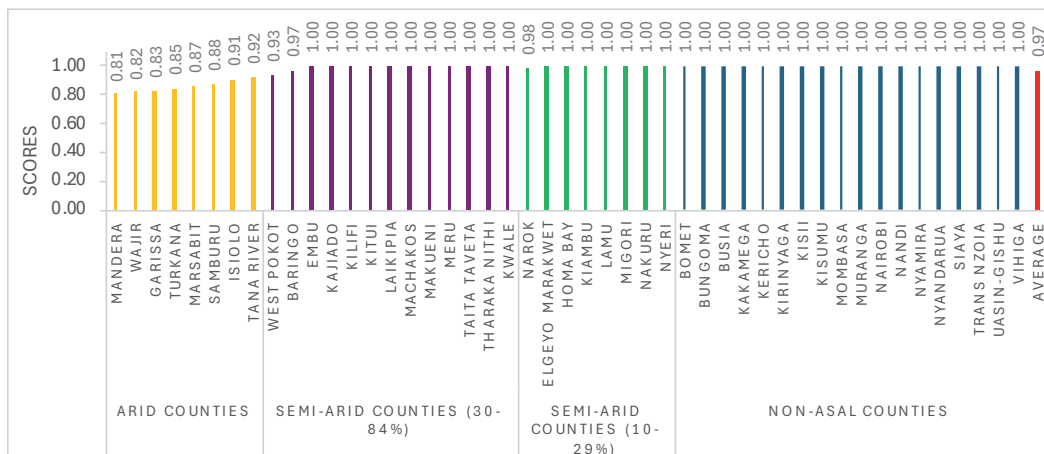
including strengthening education systems, improving social protection for families, and enforcing labour laws that prevent the exploitation of children (ILO, 2017).

Out of the 47 counties, 37 scored above the average level of 0.97 on the child labour index (5-17 years), one (1) county had a score of 0.97, while nine (9) counties fell below this average (Figure 9.27). The bottom five counties were Mandera (0.81), Wajir (0.82), Garissa (0.83), Turkana (0.85), and Marsabit (0.87). The lower scores away from the frontier or ideal point (1.00) suggest that many children in these regions are engaged in labour that compromises

their health and education due to the challenging economic conditions and limited opportunities. In contrast, the top five counties of Kwale (1.00), Vihiga (1.00), Uasin Gishu (1.00), Trans Nzoia (1.00), and Tharaka Nithi (1.00) exhibited lower levels of child labour (5-17 years). The higher scores close to the frontier or ideal point

(1.00) in these counties could reflect a more favourable environment for children's welfare. These higher scores in non-ASAL counties imply that these regions benefit from better access to education, more robust economic opportunities, and effective local policies that prioritize child protection and discourage exploitative labour practices.

Figure 9.27: Child labour rate (5-17 years) score by county



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

(b) Child labour rate (5-11 years)

The more stringent definition of child labour, focusing on children aged 5-11 years, highlights the most severe forms of child exploitation. This age group is especially vulnerable to the negative impacts of child labour, including physical harm, developmental delays, and educational disruptions (Beegle, Dehejia, and Gatti, 2009). In many cases, younger children involved in labour are subjected to hazardous conditions and exploitative practices, which can have lasting consequences on their health and prospects (Udry, 2004).

Efforts to combat child labour in this age group must include targeted interventions, such as improving access to primary education, increasing awareness about the dangers of child labour, and implementing

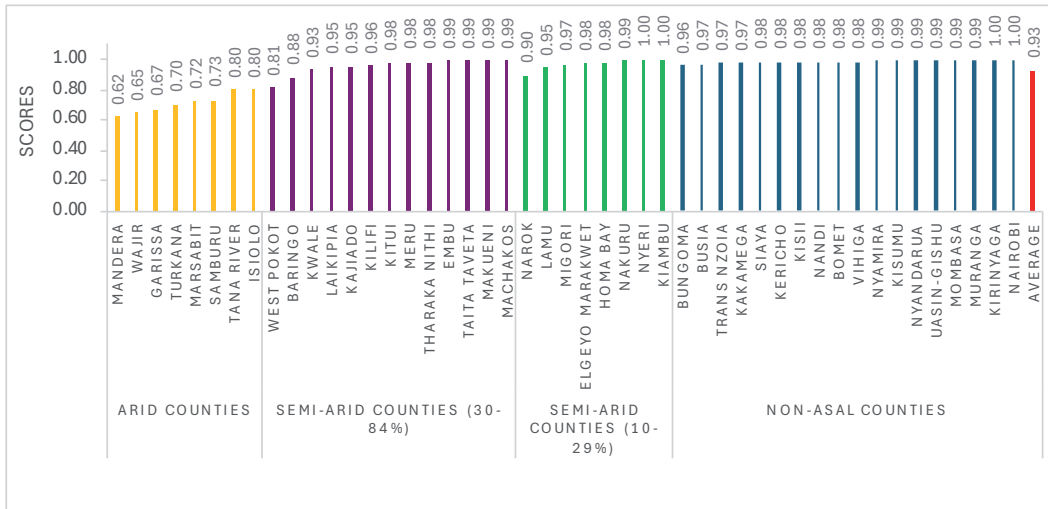
stronger regulations and enforcement mechanisms to protect young children from exploitation (Basu and Van, 2019). Additionally, social and economic support for vulnerable families can help reduce the need for children to work and enable them to focus on their education and development (Edmonds and Shrestha, 2019).

Out of the 47 counties, 35 scored above the average level of 0.93 on child labour index for 5-11 years, one (1) county had a score of 0.93, while 11 counties fell below this average (Figure 9.28). The bottom five performing counties were Mandera (0.62), Wajir (0.65), Garissa (0.67), Turkana (0.70), and Marsabit (0.72). The lower scores away from the frontier or ideal point (1.00) suggest that many children in these regions are engaged in labour that compromises their health and

education due to the challenging economic conditions and limited opportunities. In contrast, the top five performing counties of Kiambu (1.00), Nairobi (1.00), Kirinyaga (1.00), Nyeri (1.00), and Murang'a (0.99) exhibited significantly lower levels of child labour (5-11 years). The higher scores close to the frontier or ideal point (1.00) in these

counties could reflect a more favourable environment for children's welfare. These higher scores in non-ASAL counties imply that these regions benefit from better access to education, more robust economic opportunities, and effective local policies that prioritize child protection and discourage exploitative labour practices.

Figure 9.28: Child labour rate (5-11 years) score by county



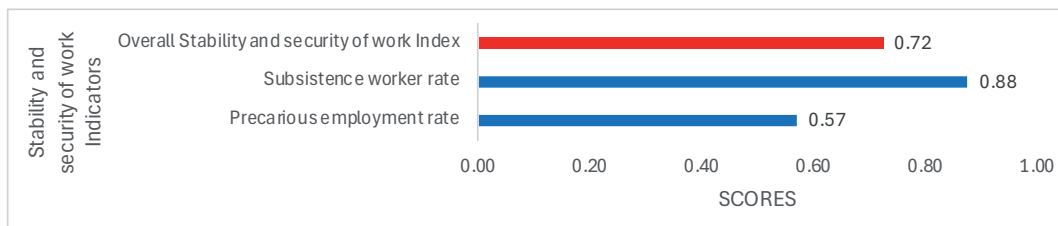
Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

9.3.6 Stability and security of work

Stability and security of work are fundamental aspects of decent work, reflecting the quality and reliability of employment. This section examines the key indicators related to job stability and

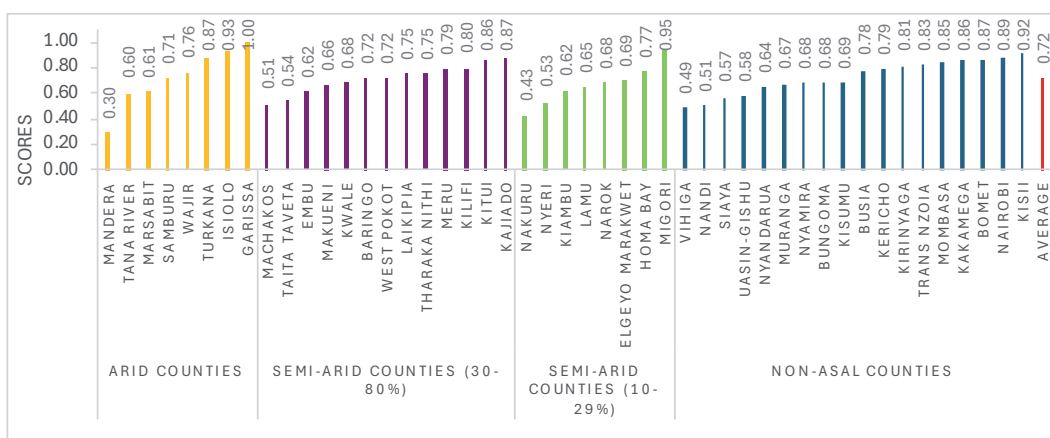
security, including the rate of subsistence workers, real earnings of casual workers, and the precarious employment rate. Figure 9.29 shows an average score of 0.88 for the subsistence worker rate and 0.57 for precarious employment rate. The stability and security of work index had an average of 0.72.

Figure 9.29: Overall stability and security of work index score



Data source: Author’s computation using KNBS (2021), Kenya Continuous Household Survey

Figure 9.30: Stability and security of work index score by county



Data source: Author’s computation using KNBS (2021), Kenya Continuous Household Survey

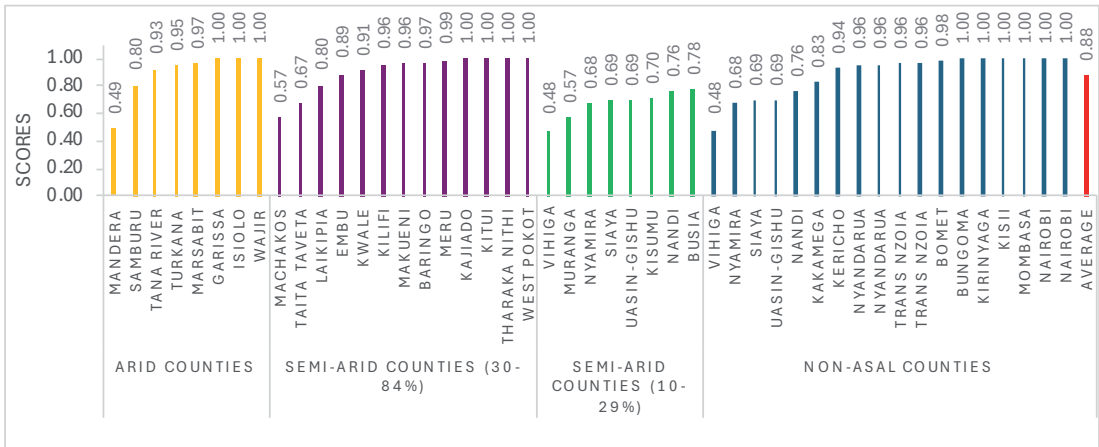
(a) Subsistence worker index

Subsistence workers are those engaged in economic activities primarily for their own consumption rather than for the market. This form of work is often characterized by its informal and precarious nature, with workers frequently facing instability and lack of social protection.

Subsistence work is often associated with low income and job insecurity. Workers in this category typically lack access to formal employment benefits, such as health insurance, pensions, and job stability (De Janvry and Sadoulet, 2020). The prevalence of subsistence work could be a sign of economic vulnerability and limited access to better employment opportunities.

Out of the 47 counties, 29 scored above the average level of 0.88 on the subsistence worker rate, while 18 counties fell below this average (Figure 9.31). The lower scores away from the frontier or ideal point (1.00) mean high subsistence worker rate whereas higher scores close to the frontier or ideal point imply low subsistence worker rate. Addressing the issues faced by subsistence workers requires policies that enhance their access to market opportunities and social protection. Initiatives such as promoting agricultural productivity, providing microfinance services, and integrating subsistence activities into formal economic sectors can help improve their economic stability and security (Barrett, 2008).

Figure 9.31: Subsistence worker index score by county



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

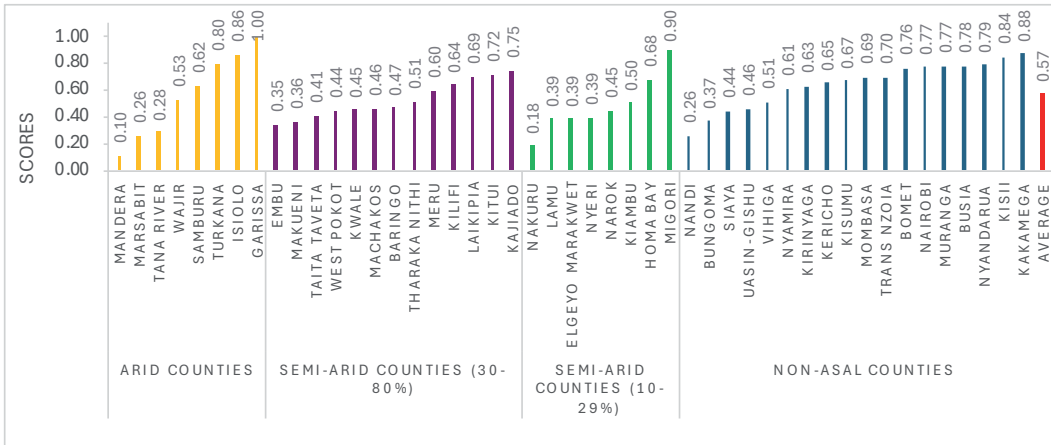
(b) Precarious employment index

Precarious employment refers to jobs characterized by uncertainty, low pay, and lack of social security. The precarious employment rate is an important indicator of job stability and security, reflecting the proportion of workers in such vulnerable employment situations.

Precarious employment is linked to several negative outcomes, including job insecurity, low income, and poor working conditions. Workers in precarious jobs often face barriers to accessing social protection, health care, and other benefits, leading to greater economic instability and vulnerability (Standing, 2011). Studies have shown that precarious work is associated with higher levels of stress and poorer mental health (Kalleberg, 2018).

Out of the 47 counties, 24 scored above the average level of 0.57 on the precarious employment rate, while 23 counties fell below this average (Figure 9.32). The low scores away from the frontier or ideal point (1.00) mean high precarious employment rate whereas high scores close to the frontier or ideal point imply low precarious employment rate. Addressing precarious employment requires comprehensive labour market policies that promote job security and decent work conditions. The strategies include strengthening labour regulations, improving job quality, and enhancing social protection systems to cover workers in non-standard employment arrangements (Gallie, 2013).

Figure 9.32: Precarious employment rate score by county



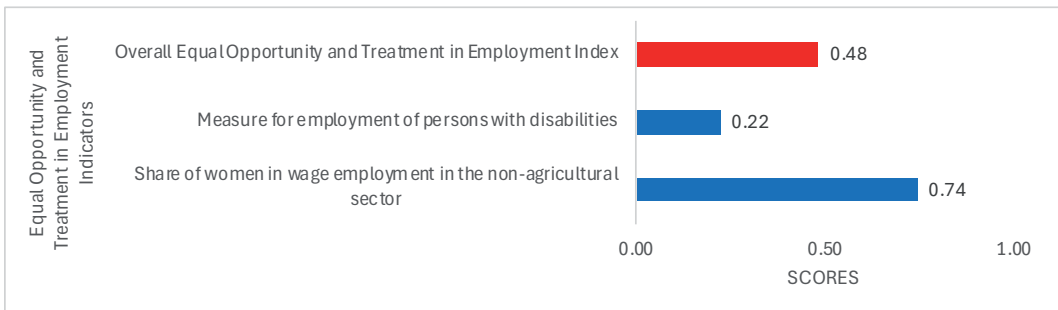
Data source: Author’s computation using KNBS (2021), Kenya Continuous Household Survey

9.3.7 Equal opportunity and treatment in employment

Equal opportunity and treatment in employment are critical components of decent work, ensuring that all individuals, regardless of their background or personal circumstances, have fair access to employment opportunities and fair treatment in the workplace. This section

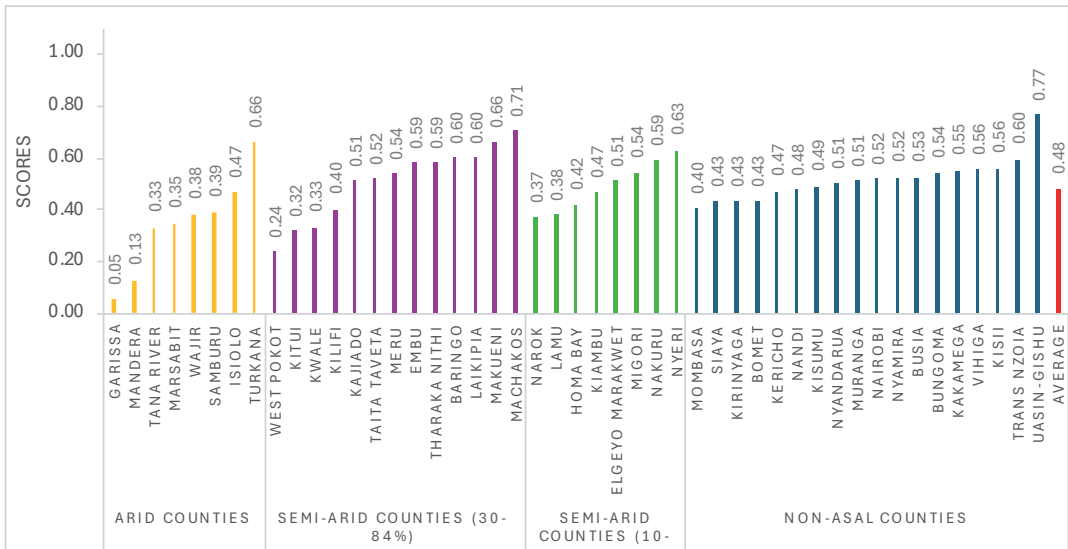
focuses on two key indicators: the employment of persons with disabilities, and the share of women in wage employment in the non-agricultural sector. Figure 9.33 shows an average score of 0.22 for employment of persons with disabilities and 0.74 for share of women in wage employment in the non-agricultural sector. The stability and security of work index had an average of 0.48.

Figure 9.33: Overall equal opportunity and treatment in employment index score



Data source: Author’s computation using KNBS (2021), Kenya Continuous Household Survey

Figure 9.34: Equal opportunity and treatment in employment index score by county



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

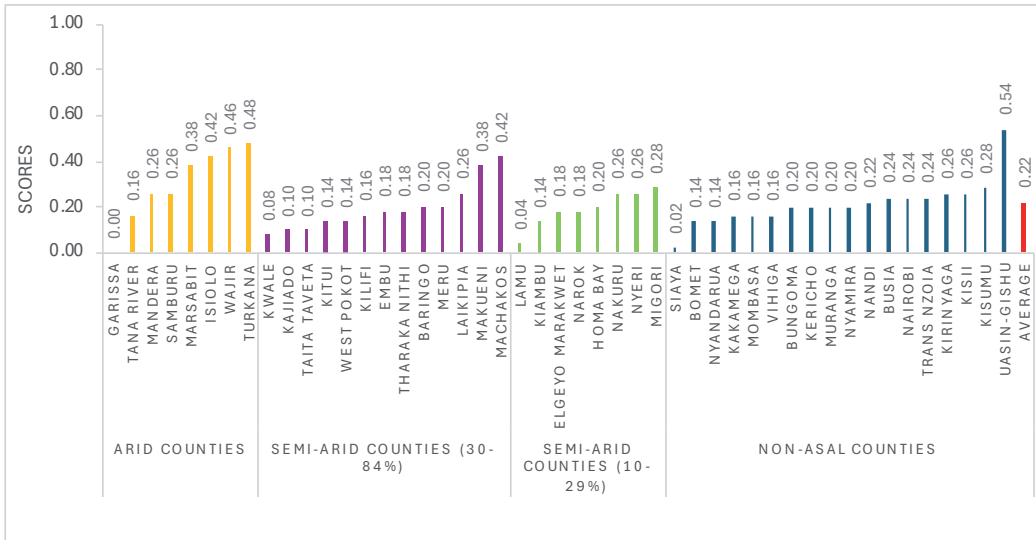
(a) Measure for employment of persons with disabilities

Employment of persons with disabilities (PWDs) is a key indicator of equal opportunity in the labour market. People with disabilities often face significant barriers to employment, including discrimination, inaccessible workplaces, and lack of accommodation (Schur et al., 2013). Ensuring their full participation in the labour market is essential for promoting inclusive growth and equitable development.

Out of the 47 counties, 19 scored above average level of 0.22 on employment of

persons with disabilities, 27 counties fell below this average and one (1) had a score equal to the average score (Figure 9.35). The lower scores away from the frontier or ideal point (1.00) imply low employment of persons with disabilities. Research shows that despite various legal frameworks and policies designed to promote their employment, individuals with disabilities are often under-represented in the workforce. The barriers they face are multifaceted, including physical barriers to accessing workplaces, attitudinal barriers related to discrimination and stereotypes, and lack of appropriate support and accommodation (Beyer et al., 2016).

Figure 9.35: Representation of persons with disabilities in public service score by county



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

(b) Share of women in wage employment in the non-agricultural sector

The share of women in wage employment in the non-agricultural sector is another important indicator of gender equality in the labour market. According to the Kenya Continuous Household Survey (KCHS) 2021, this indicator measures the proportion of women who are employed for wages in sectors other than agriculture, which traditionally has higher levels of informal employment.

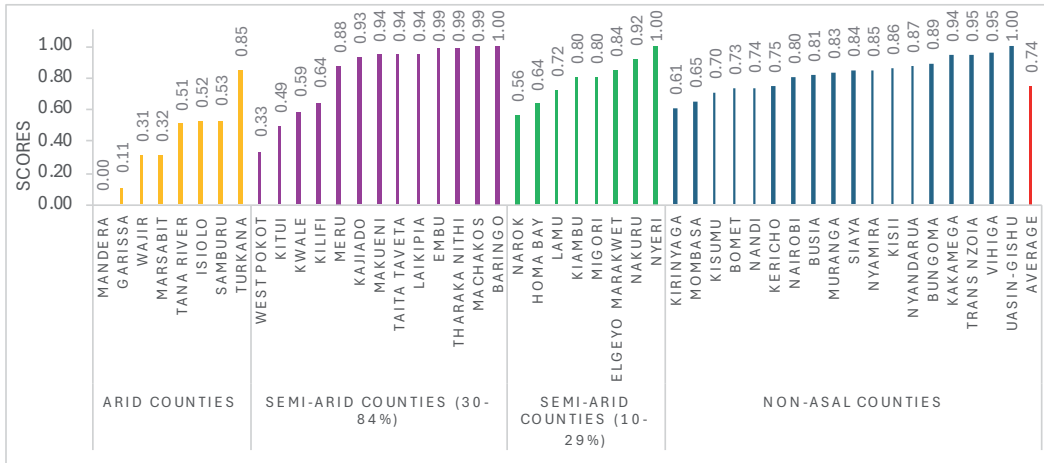
Women have historically faced barriers to accessing wage employment, particularly in non-agricultural sectors. These barriers include gender discrimination, occupational segregation, and unequal access to education and training (ILO, 2019). The share of women in wage employment reflects the progress made towards gender equality in the labour market and highlights areas where further efforts are needed.

Out of the 47 counties, 28 scored above the average score of 0.74 on employment

of persons with disabilities, 18 counties fell below this average and one (1) had a score equal to the average score (Figure 9.36). The lower scores away from the frontier or ideal point (1.00) imply low share of women in wage employment in the non-agricultural sector. Research indicates that increasing women's participation in wage employment contributes to economic growth and poverty reduction. Gender equality in employment is associated with higher productivity, improved economic outcomes, and enhanced social development (World Bank, 2020). Strategies to increase women's participation in wage employment include promoting equal pay for equal work, providing family-friendly workplace policies, and addressing gender biases in hiring and promotion practices (Kabeer, 2015).

Efforts to improve women's employment outcomes also involve enhancing access to education and vocational training, supporting women entrepreneurs, and implementing policies that address the challenges faced by working women, such as balancing work and family responsibilities (Duflo, 2012).

Figure 9.36: Share of women in wage employment in the formal employment score by county



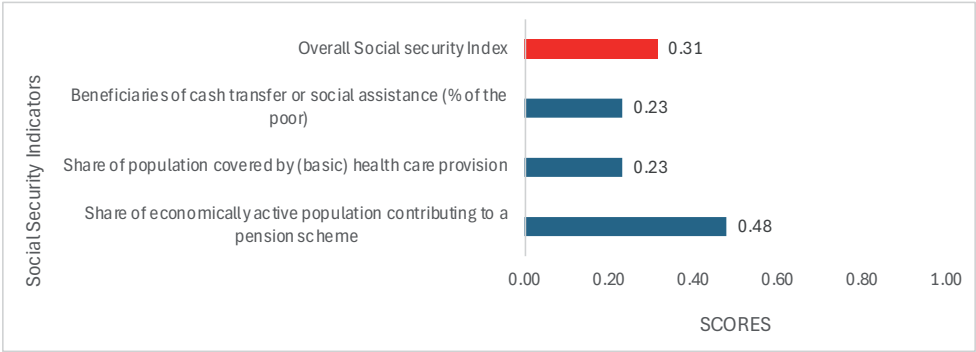
Data source: Author’s computation using KNBS (2021), Kenya Continuous Household Survey

9.3.8 Social security

Social security plays a pivotal role in promoting decent work, providing a safety net for individuals throughout their working lives and beyond. It encompasses a range of programmes aimed at protecting workers from economic shocks, ensuring access to healthcare, and supporting the elderly through pension systems. In this section, we explore key social security indicators in Kenya, including the share of the population above the statutory pensionable age, public social security expenditure, healthcare financing, pension scheme participation, and cash income

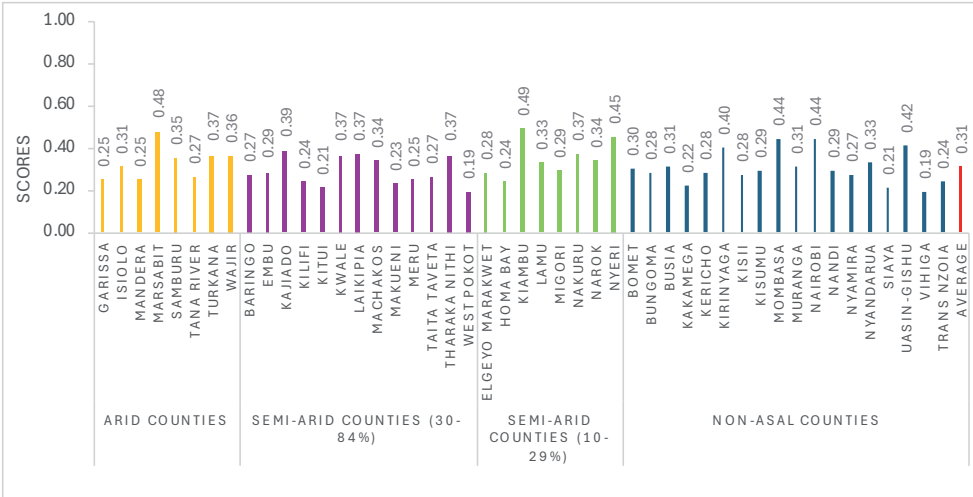
support for the poor. These indicators are critical in assessing the effectiveness of Kenya’s social security system in reducing poverty, inequality, and vulnerability. Figure 9.37 shows an average score of 0.23 for beneficiaries of cash transfer or social assistance, 0.23 for share of population covered by (basic) health care provisions and 0.48 for share of economically active population contributing to a pension scheme. The overall social security index was 0.31.

Figure 9.37: Overall social security index score



Data source: Author’s computation using KNBS (2022), Kenya Demographic Health Survey

Figure 9.38: Social security employment index score by county



Data source: Author’s computation using KNBS (2022), Kenya Demographic Health Survey

(a) Population contributing to a pension scheme

The share of the economically active population contributing to a pension scheme is a key indicator of the coverage of formal social protection mechanisms. In Kenya, pension scheme participation is highly concentrated in the formal sector, leaving out a significant proportion of workers in informal employment. The 2022 KDHS reports that only about 20 per cent of the economically active population is

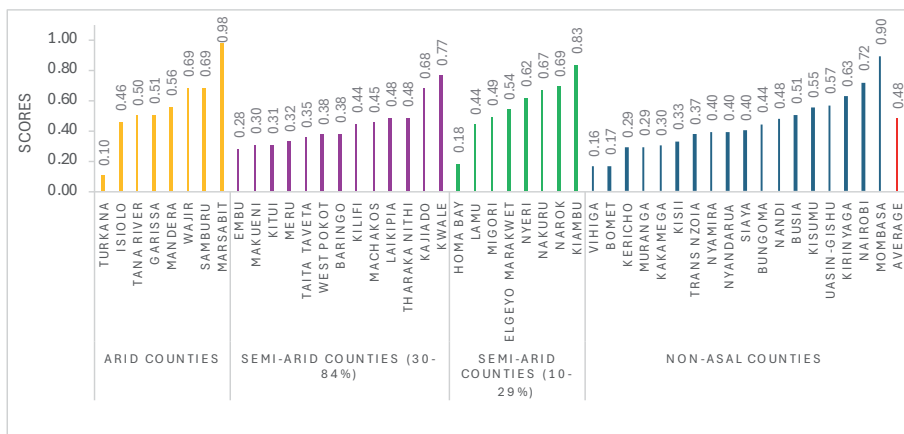
enrolled in a pension scheme, reflecting the country’s high levels of informal employment, which makes it difficult for many workers to access formal social security systems (Rono, 2021).

Out of the 47 counties, 20 scored above the average level of 0.48 on share of economically active population contributing to a pension scheme, whereas 24 counties fell below this average (Figure 9.39). The lower scores away from the frontier or ideal point imply the share of economically active population contributing to a pension scheme is low.

Studies on pension scheme coverage in developing countries show that expanding pension access to informal workers is one of the key challenges in building comprehensive social security systems (ILO, 2021). In Kenya, recent reforms, such as the introduction of the Mbao Pension Plan, which targets informal workers, are steps in the right direction. However, more needs to be done to incentivize pension

contributions among informal workers and expand access to pension savings (Barbone and Sanchez, 2019).

Figure 9.39: Share of economically active population contributing to a pension scheme score by county



Data source: Author’s computation using KNBS (2022), Kenya Demographic Health Survey

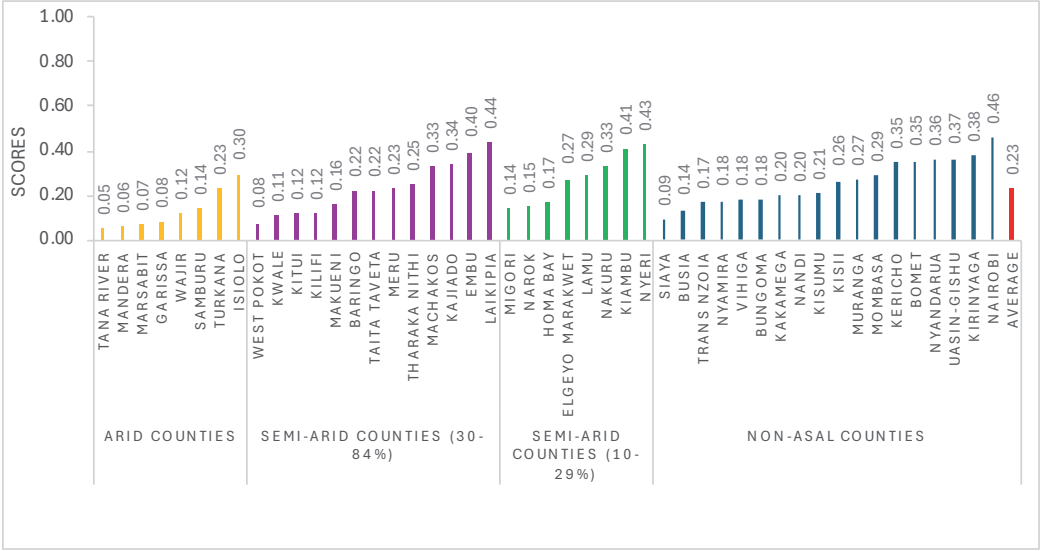
(b) Population covered by (basic) healthcare provision

Access to basic healthcare is a cornerstone of social security, ensuring that all individuals, regardless of their employment status or income level, can access essential health services. The 2022 KDHS indicates that while Kenya has made significant progress in expanding healthcare coverage, gaps remain, particularly in rural and marginalized areas. The National Health Insurance Fund (NHIF) is the main vehicle for providing healthcare coverage, but its reach is still limited among informal sector workers and low-income households.

Out of the 47 counties, 20 scored above the average level of 0.23 on share of population covered by (basic) healthcare provision

whereas 25 counties fell below this average (Figure 9.40). The lower scores away from the frontier or ideal point (1.00) imply the share of the population covered by basic healthcare provision is low. The UHC has been widely recognized as a key driver of social and economic development. According to the WHO, achieving UHC requires expanding access to essential services, reducing out-of-pocket payments, and increasing government investment in healthcare infrastructure (WHO, 2020). Kenya’s UHC pilot programmes, which were launched in select counties, have demonstrated the potential for improving healthcare access, but full national implementation will require sustained investment and reform (Omondi and Were, 2021).

Figure 9.40: Share of population covered by (basic) healthcare provision score by county



Data source: Author’s computation using KNBS (2022), Kenya Demographic Health Survey

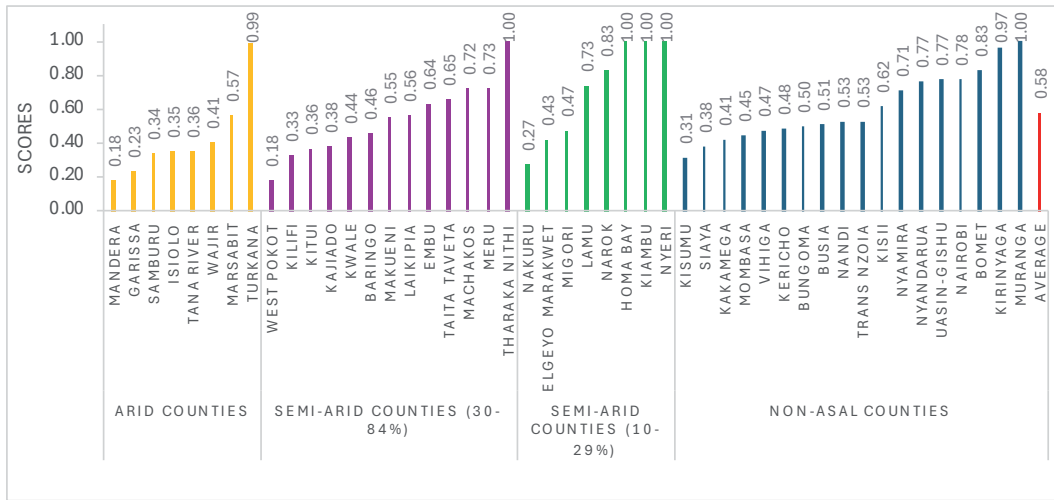
(c) Beneficiaries of cash income support (% of the poor)

Cash income support programmes play a vital role in poverty reduction by providing direct financial assistance to low-income households. In Kenya, these programmes are targeted at vulnerable populations, including orphans, elderly persons, and persons with disabilities. According to the KNBS (2022) KDHS, the proportion of the poor receiving cash income support remains low, which highlights gaps in the reach and adequacy of these programmes.

Out of the 47 counties, 19 scored above the average level of 0.58 on beneficiaries of cash income support whereas 28 counties fell below this average (Figure 9.41). The lower scores away from the frontier or ideal point (1.00) imply a few beneficiaries of cash income support. Research shows that cash transfer programmes, when well-designed

and effectively targeted, can significantly reduce poverty and improve well-being (Maluccio et al., 2019). However, in Kenya, administrative inefficiencies, inadequate funding, and targeting challenges have limited the impact of cash transfer programmes, particularly in rural and marginalized areas (Kenya Institute for Public Policy Research and Analysis - KIPPRA, 2020). Expanding the coverage and scope of these programmes is essential for ensuring that all vulnerable populations receive the support they need to escape poverty and achieve economic stability.

Figure 9.41: Beneficiaries of cash income support (% of the poor) score by county



Data source: Author's computation using KNBS (2022), Kenya Demographic Health Survey

9.3.9 Social dialogue, workers' and employers' representation

Social dialogue and the representation of both workers and employers are important in the development and maintenance of decent work conditions. Social dialogue refers to the process of negotiation and consultation between workers, employers, and governments to address issues related to employment, wages, working conditions, and economic and social policy. In Kenya, the strength and efficacy of social dialogue are measured by indicators such as trade union density rate and employers' organization density rate. These indicators reflect the level of collective representation in the workforce and the extent to which both workers and employers can engage in discussions and negotiations that shape labour policies and workplace practices.

Trade union density index

Trade union density rate is an important indicator of workers' representation and the overall strength of labour unions in

a country. It is defined as the proportion of employees who are members of trade unions relative to the total number of employees. A high trade union density rate indicates that a significant proportion of workers are organized and represented in collective bargaining processes, whereas a low rate may signal limited representation and reduced worker influence in social dialogue.

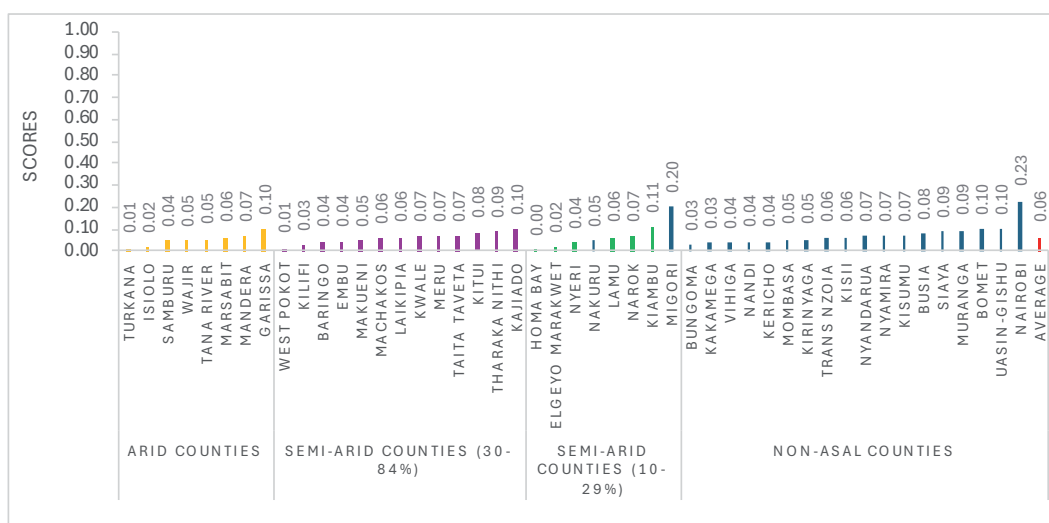
Out of the 47 counties, 20 scored above the average level of 0.06 on trade union density rate support whereas 23 counties fell below this average score (Figure 9.42). The lower scores away from the frontier or ideal point (1.00) imply a very low trade union density rate. In Kenya, trade unions play a significant role in advocating for workers' rights, improving working conditions, and ensuring fair wages. The country's trade union movement has a long history dating back to the colonial period, with unions such as the Central Organization of Trade Unions (COTU) representing workers across various sectors. However, trade union density has declined in recent decades due to factors such as the

growth of informal employment, where unionization is less common, and the shift towards flexible and precarious forms of employment (Kimani, 2020).

Despite this decline, trade unions in Kenya are important vehicles for labour advocacy. They are involved in tripartite negotiations with employers' organizations and the government, contributing to the development of labour laws and policies

that promote decent work. Studies show that countries with higher trade union density tend to have stronger labour protection laws, better wage outcomes, and reduced income inequality (ILO, 2019). However, to strengthen the role of trade unions, particularly in the informal sector, Kenya needs to address barriers to unionization, such as legal constraints and employer resistance to union activities.

Figure 9.42: Proportion of membership of a trade/labour union or a similar employee association score by county category



Data source: Author's computation using KNBS (2021), Kenya Continuous Household Survey

9.4 Key Messages and Recommendations

9.4.1 Key messages

1. Despite the efforts by the national government and the counties to reduce youth unemployment through the Bottom-up Economic Transformation Agenda (BETA), there has been little progress. Many young people especially in arid counties, aged between 18 and 34 years, face barriers in securing employment due to inadequate job

opportunities, and skills mismatch in specific sectors.

2. Women's participation in wage employment in non-agricultural sectors is low, especially in arid counties. Women face barriers to access of equal opportunities in formal employment that deter their participation in the labour market, including societal norms and limited access to education and training particularly in arid counties. Similarly, persons with disabilities face significant under-representation in the workforce, indicating widespread exclusion from employment

opportunities. Persons with disabilities face obstacles such as physical barriers to accessing workplaces, discrimination and negative stereotypes, and lack of appropriate workplace accommodation and support systems.

3. A key component of the decent work agenda is reducing the percentage of employees earning below two-thirds of the median monthly wage to below 20 per cent. Many employees earning low salaries across the counties show a widening income gap. It also suggests that many workers could be trapped in low-paying jobs with limited prospects for advancing. Low wages are often prevalent in informal jobs where there is job insecurity and the inability to access higher-paying formal employment opportunities. Precarious employment across the counties shows a need to promote stable employment under fair conditions.
4. Basic healthcare provision is low, while the contribution to pension varies across the counties. This is especially true for informal sector workers, who make up a large portion of the workforce who have limitations in accessing formal healthcare and social safety nets. There are gaps in the implementation of the Bottom-up Economic Transformation Agenda (BETA), which aims to achieve 100 per cent coverage of basic healthcare for the population and to increase the share of economically active population contributing to pension schemes to at least 60 per cent.
5. A large proportion of employment is without strong representation and collective bargaining power. This weakens employees' ability to advocate for better wages and working conditions. Social dialogue, workers' and employers' representation through labour unions such as ILO, COTU and

FKE could aim to increase the trade union density rate to 50 per cent by 2030.

9.4.2 Recommendations

1. Support entrepreneurship by offering business development training, mentoring, seed capital, and incubators to stimulate job creation across the counties. Partnerships between the government and private sector can improve employment outcomes and offer job training programmes tailored to specific needs of industrial and services sectors. Investing in sustainable practices and technology can help mitigate the impacts of climate change and encourage young people to venture into the agricultural sector.
2. Education plays a pivotal role in achieving gender parity, particularly in arid counties where cultural and economic barriers often hinder girls' access to schooling, resulting in lower enrolment rates compared to boys. Sensitizing parents about the importance of educating girls can significantly enhance female literacy and their participation in the labour market. Additionally, addressing educational barriers for persons with disabilities through inclusive education systems and specialized training programmes is essential for improving employment prospects and reducing substantial under-representation of girls in the workforce.
3. The government could raise the minimum wage and implement supportive wage policies. Well-designed minimum wage policies can boost workers' income, improve job prospects and stimulate economic growth. Investing in education and skills training can enhance workers'

- employability and facilitate their transition to better-paying jobs. The government could provide tax credit for low-income earners.
4. Establishing comprehensive legal protections for informal workers can ensure access to social security benefits. Leveraging technology can facilitate access to social benefits across the counties. Advocating for universal social protection can address the needs of those currently lacking coverage. These strategies lead to job security and social benefits.
 5. There is a need to strengthen the role of trade unions particularly in the informal sector by addressing barriers to unionization, such as legal constraints and employer resistance to union activities. The government could foster partnerships with businesses and civil society to enhance worker rights and conditions, ensuring that decent work principles are upheld in community development initiatives. Successful promotion of decent work often relies on grassroots movements and advocacy, which highlights the role of local actors in driving change.

10. Conclusion And Policy Recommendations

10.1 Conclusion

Trends in macroeconomic performance

1. The economy grew by 4.7 per cent in 2024, compared to a growth of 5.7 per cent in 2023 driven by agriculture (6.5% and key services). Employment in the modern economy increased by 3.9 per cent, creating 782,300 new jobs. However, growth in employment remained below GDP growth under MTP III and in 2023, the first year of MTP IV.
2. Domestic savings remained stable at 16.0 per cent of GDP in 2024, but investment levels dropped to 17.5 per cent of GDP. The savings-investment gap narrowed from 1.4 per cent in 2023 to 1.6 per cent in 2024, while employment growth declined from 6.2 per cent in 2014 to 4.4 per cent in 2023.
3. Domestic credit growth slowed sharply to 1.3 per cent in 2024, down from 12.6 per cent in 2023. The credit to private sector also declined, with businesses struggling to access affordable financing. The slowdown in credit growth negatively affects private sector expansion and job creation.
4. Development expenditure declined from 5.8 per cent of GDP in 2019/2020 to 3.2 per cent in 2024/25. The recurrent expenditure increased from 16.1 per cent of GDP in 2019/21 to 17.6 per cent of GDP in 2024/25. The shift in spending priorities limits the resources available for development spending.
6. Public debt was 65.7 per cent of GDP in 2023/24, down from 72.0 per cent in 2022/2023. The reduction is partly attributed to the appreciation of the Kenya Shilling. However, debt servicing costs consumed 68.0 per cent of revenue, constraining development spending. Rising debt service obligations reduce fiscal space for employment-supporting programmes.
7. The debt service-to-export ratio reached 36.0 per cent in 2024, exceeding the 15 per cent threshold. The present value of public and publicly guaranteed debt-to-export ratio is 256.9 per cent, surpassing the 180 per cent threshold in the debt sustainability framework. The exceeded thresholds highlight the need to promote export growth to ensure sustainable external debt repayment.

Kenya's medium term macroeconomic prospects

1. The medium-term outlook for Kenya indicates a cautious but steady recovery. This is contingent upon addressing global uncertainties, inflationary pressures, and supporting private sector investments.
2. Kenya's GDP growth rate is projected to decelerate to 5.3 per cent in 2025, down from 5.7 per cent in 2024, primarily due to global uncertainties and a slowdown in private consumption and investment. However, a slight rebound is expected in 2026, with growth anticipated at 5.5 per cent.
3. Private consumption growth slowed from 6.2 per cent in 2023 to 4.6 per cent in 2024, influenced by higher inflation and interest rates. However, a recovery is projected for 2025, with growth reaching 6.4 per cent.

4. Post-2020, there is a noticeable upward trend, indicating recovery and expansion in employment rates. This improvement might be attributed to policy changes, expansion in economic activities, and increased public and private sector activities.

Enhancing decent jobs in agriculture through digital extension services

1. The inadequate number of extension officers hinders effective implementation of agricultural extension services. Digital extension services can help fill this gap by enabling extension officers to reach more farmers and provide real-time advice and support to farmers for improved productivity with reduced dependence on physical extension officers.
2. The implementation of digital extension services has the potential to create 143,804 new jobs in the food crops sub-sector, another 5,891 in livestock and 3,934 in the dairy sub-sectors.
3. There are limited and uncoordinated efforts towards streamlining capacity building in digital extension services at the national and county level. This is key to enhancing coverage and efficiency. The existing policies do not adequately elaborate on the skilling of extension officers for digital technologies, which deprives extension personnel of the digital competencies to facilitate digital extension services to farmers.
4. Between 2019 and 2024, 61.3 per cent of counties allocated no funds for extension services, and where budgets existed, actual expenditure consistently fell short of approved amounts. Notably, from the start of devolution up to the 2019/2020 financial year, no dedicated budget entries for extension services or activities were recorded, highlighting a longstanding neglect that

undermines agricultural productivity and job creation. This is of concern given that sustainable financing for agricultural extension services at the county level is critical to strengthening both traditional and digital extension systems, yet persistent underfunding remains a barrier.

5. The ICT infrastructure that has been developed through the digital superhighway, including backbone upgrades, new connectivity to underserved areas, ICT equipment shelters, and Network Operation Centres, holds immense potential to enhance digital extension and technology adoption across the country. However, delays in project completion and the high costs involved have slowed progress, limiting the full realization of these benefits.
6. Limited legal framework for enforcement has left gaps for the quality and reliability of digital extension contents. This presents threats to farmers as some digital extension providers may not have the necessary qualifications to offer extension services, designing and disseminating agricultural information on digital platforms, print, and electronic media without adequate verification.

Competitiveness of the manufacturing sector

1. Enhancing the competitiveness of the manufacturing sector requires increased adoption of industry standards and stronger enforcement against illicit trade. The presence of counterfeit, substandard, and unexcised goods affects market confidence and limits the ability of firms to invest in quality improvements. Strengthening intellectual property protection and promoting compliance with national and international standards will

enhance market access.

2. Trade agreements provide opportunities for market expansion, but firms have yet to fully use them. Compliance with non-tariff measures is a key consideration, particularly for micro and small enterprises that require support in navigating regulatory requirements. Enhancing firms' knowledge of trade agreements can facilitate their participation in regional and global markets.
3. The cost structure of Kenya's manufacturing sector influences firms' ability to compete on the cost of production. The key cost drivers, including raw materials, intermediate inputs, and electricity influence firms' operational efficiency. High electricity costs and additional taxes beyond the EAC Common External Tariff affect production expenses and limit firms' ability to compete effectively in domestic and export markets.

Revitalizing job creation in the domestic trade sector

1. The WRT sector is Kenya's largest employer, accounting for 50 per cent, with 80 per cent of jobs being informal. The retail trade absorbs more workers due to its labour-intensive nature, while wholesale trade offers fewer but more structured jobs, especially in pharmaceuticals, food, and household goods. Employment is unevenly distributed, with urban counties such as Nairobi, Kiambu, and Mombasa leading in job creation due to strong commercial activity and infrastructure, while rural areas and ASALs face lower opportunities.
2. Working conditions vary across trade tiers, with wholesale jobs being more structured while retail trade are largely informal. Many retail workers operate in unregulated spaces, lacking basic

facilities and job security. Labour rights remain weak, with only 1 per cent of workers unionized, limiting their ability to advocate for better wages and protections.

3. The WRT sector absorbs workers across all skills levels, but significant gaps exist, especially in agriculture-related and non-specialized wholesale trade, where most employees have only basic education. Technical wholesale sub-sectors, such as pharmaceuticals and machinery, require higher education and vocational skills. Digital skills are a critical gap limiting e-commerce adoption and business competitiveness.
4. Market conditions, credit access, and business policies directly influence employment growth. Consumer demand drives 25 per cent of employment growth, yet low GDPPC and Value-Added Growth (VAG) indicate reduced household purchasing power, therefore limiting trade activity. The high production costs in agriculture and manufacturing further increase reliance on imports, raising prices and slowing business expansion.
5. Limited credit access hinders business growth, particularly for SMEs, which face high-interest rates and strict lending conditions. Formal wholesale businesses have better financing access, while informal retailers rely on costly microfinance options. Regulatory challenges, taxation complexities, and policy inconsistencies further affect business sustainability, while automation and AI create both opportunities and risks for employment.

Promote youth employability through TVET

1. CBET aims to address skills mismatches and enhance employability by equipping TVET trainees with industry

relevant competencies. CBET can be delivered through the implementation of dual training, provision of industrial attachments and recognition of prior skills acquired informally. The implementation of TVET requires financial and human resources, without which skills development becomes challenging. While efforts have been made to support the implementation of CBET, inadequate training infrastructure, and insufficient training of instructors hinder its implementation.

2. There is a decline in the share of enrolment in engineering, manufacturing, and construction. Similarly, enrolment in ICT, despite its critical importance in driving the digital economy, accounts for a smaller proportion of placements compared to other technical fields. This is attributed to limited access to ICT resources, insufficient outreach, and inadequate integration of digital skills into foundational TVET education.
3. The employment rate of TVET graduates in the agricultural sector is lower than that of the broader youth population, with only 8.1 per cent of TVET graduates employed in agriculture compared to 19.7 per cent of all youth. This is driven by societal perceptions of agriculture as a low-status occupation, barriers to accessing land, capital, and technology, and a mismatch between TVET curricula and the actual needs of the agricultural sector, therefore limiting their potential contribution to the sector.
4. Government investment in development expenditure in TVET has declined, therefore affecting infrastructure development, equipment upgrades, expansion of TVET institutions, and instructor capacity. This has led to inadequate functional machinery, hindering skills training aligned with industry needs. Additionally, the stagnant capitation grants per trainee, despite rising enrolment, have led to reduced funding per student, disproportionately affecting learners from low-income households. The persistent delays in the disbursement of capitation grants also hinder TVET institutions' capacity to procure essential resources, maintain infrastructure, and remunerate staff, resulting in significant disruptions to training programmes.
5. There is low awareness of the Recognition of Prior Learning (RPL) certification process among workers in the informal sector due to insufficient awareness creation efforts. The application process for certification is costly and time-consuming, which discourages intended beneficiaries from pursuing certification. Moreover, there is a shortage of qualified professionals to assess and validate prior learning, leading to delays in certification.
6. The high cost of accessing industrial attachment for TVET graduates, including transport, accommodation, medical cover, and registration fees is a challenge. This disproportionately affects students from low-income backgrounds, preventing them from securing placements. The absence of a centralized placement system, and lengthy placement processes by organizations lead to delays and difficulties in completing the required attachment period within academic timelines.

Harnessing the potential of decent jobs in the E-mobility sub-sector

1. Kenya's e-mobility sector is in its early stages but has demonstrated rapid growth, particularly in two- and three-

- wheelers. Between 2018 and 2023, EV registrations increased more than fortyfold, from 65 units to 2,694 units. The sector is dominated by two- and three-wheelers, which accounted for 96.4 per cent of all registered EVs in 2023, up from 67.7 per cent in 2018. This growth is driven by cost savings on fuel and maintenance, making electric motorcycles an attractive option for riders, particularly in the informal transport sector. However, high upfront costs, limited financing options, and a lack of adequate charging infrastructure hinder widespread adoption.
2. The transition to electric mobility presents an opportunity for job creation along the EV value chain. If Kenya meets its emission reduction target of 3.46 million tonnes of CO₂ equivalent (MtCO₂e) in the transport sector, e-mobility could generate up to 334,503 new jobs by 2030. These jobs span various stages of the value chain, including raw material sourcing, vehicle assembly, battery production, charging infrastructure development, and after-sale services. However, despite this potential, less than 1 per cent of jobs in transport and related sectors qualify as decent employment, highlighting the need for better labour policies and structured workforce development programmes to support the transition.
 3. Retrofitting internal combustion engine (ICE) vehicles—including motorcycles, matatus, and buses—into electric presents a cost-effective alternative to purchasing new EVs. The high cost of new electric vehicles is a major barrier to adoption, particularly for public service vehicles such as *matatus*, which dominate Kenya's urban and peri-urban transport system. Retrofitting allows for the gradual electrification of Kenya's transport fleet while creating new jobs in conversion technology, battery integration, and maintenance services. However, the success of this strategy depends on the establishment of clear technical standards, investment in automotive engineering training, and ensuring affordable access to quality lithium-ion batteries.
 4. Limited workforce preparedness affects the sector's expansion. The e-mobility transition requires specialized skills, particularly in high-voltage systems, battery diagnostics, and EV maintenance. While some training institutions such as TVET colleges and private sector initiatives have begun incorporating EV-related courses, there are gaps in technical training programmes. Without strategic investments in workforce development, Kenya risks importing skilled labour or experiencing delays in industry growth due to a shortage of local expertise.
 5. The insufficient local supply chain integration limits job creation in the sector. Kenya is heavily reliant on imports for key EV components, such as battery cells, electronic control units, and motors, due to under-developed local manufacturing capacity. This dependence raises costs, restricts domestic job opportunities, and limits value addition within the country. Thus, the need for investing in local component manufacturing, mineral processing, and battery recycling, to help retain more economic value, reduce supply chain vulnerabilities, and create sustainable employment opportunities.

Enhancing decent jobs at the county level

1. Despite the efforts by the national government and the counties to reduce youth unemployment to less than 10 per cent through the Bottom-up Economic

Transformation Agenda (BETA), there has been little progress. Many young people, especially in arid counties, aged between 18 and 34 years, face barriers in securing employment due to inadequate job opportunities, and skills mismatches required in specific sectors.

2. While Kenya aims to achieve 50-50 gender parity in wage employment in non-agricultural sectors, women's participation in wage employment in non-agricultural sectors, including industry and services, is low. Women face barriers to access equal opportunities in formal employment that deter their participation in the labour market, including societal norms and limited access to education and training, especially in arid counties.
4. A key component of the decent work agenda is reducing the percentage of employees earning below two-thirds of the median monthly wage to below 20 per cent. Many employees earning low salaries across the counties show a widening income gap. It also seems to suggest that many workers could be trapped in low-paying jobs with limited prospects for advancing. Low wages are often prevalent in informal jobs where there is job insecurity and the inability to access higher-paying, formal employment opportunities. Precarious employment across the counties shows the need to promote stable employment under fair conditions.
5. Basic healthcare provision is low, while the contribution to pension varies across the counties. This is especially true for informal sector workers, who make up a large portion of the workforce, especially in the agriculture sector. There are gaps in the implementation of the Bottom-up Economic Transformation Agenda (BETA), which aims to achieve 100

per cent coverage of basic healthcare for the population and to increase the share of economically active population contributing to pension schemes to at least 60 per cent.

6. A large proportion of employment is without strong representation and collective bargaining power. This weakens employees' ability to advocate for better wages and working conditions. Social dialogue, workers' and employers' representation through labour unions such as ILO, COTU and FKE can aim to increase the trade union density rate to 50 per cent by 2030.

10.2 Policy Recommendations

To enhance macroeconomic performance:

1. Strengthen domestic savings to finance investment demand. Domestic savings can be enhanced by expanding pension schemes, promoting financial literacy programmes, and enhancing financial inclusion through digital savings platforms to support long-term investment financing.
2. Enhance domestic credit access by implementing credit guarantee schemes, strengthening development finance institutions, and reform collateral requirements to reduce lending costs and facilitate affordable credit for businesses.
3. Shift towards more concessional debt financing by negotiating lower-interest external loans, restructuring existing debt, and prioritizing project financing through international development partners to free up resources for development expenditure.
4. Promote exports in export-oriented sectors by investing in value addition,

enhancing trade facilitation through improved infrastructure, negotiating market access agreements, and implementing export promotion incentives to create jobs, improve official reserves, and strengthen debt sustainability.

To enhance Kenya's medium-term macroeconomic prospects:

1. Expand initiatives under the Bottom-Up Economic Transformation Agenda (BETA) to strengthen MSMEs, particularly in agriculture, manufacturing, and housing, where employment elasticity are low. Enhancing skills development and entrepreneurship will support the MTP IV target of 1.2 million jobs annually.
2. Scale up agricultural productivity programmes, such as the National Fertilizer Subsidy, to sustain sectoral growth while improving employment responsiveness. Despite 13.35 per cent GVA growth in agriculture in 2024, employment elasticity remained low at 0.05, indicating a need for climate-smart technologies and value-chain development to create sustainable rural jobs.
3. Balance inflation control with credit accessibility by ensuring CBR adjustments do not limit private sector borrowing. Inflation eased to average 4.5 per cent in 2024, but businesses require affordable lending solutions to sustain job creation. Strengthening external reserve buffers will support the stability of the Kenya Shilling, while diversifying exports will enhance competitiveness and reduce over-reliance on traditional agricultural products.
4. Prioritize concessional borrowing to manage debt servicing costs, which reached 68 per cent of revenue in 2023/24. Debt sustainability concerns

underscore the need for high-return public investments, rather than commercial debt reliance. Expanding digital tax administration and sustaining compliance programmes such as VTDP will broaden the revenue base while supporting fiscal consolidation efforts.

5. Support the transition of informal enterprises into formal employment by improving access to affordable credit and simplifying business regulations. With the formal sector's share of employment shrinking to 15.6 per cent in MTP IV, targeted incentives will enhance business resilience and expand social protection coverage for informal workers.
6. Leverage diaspora remittances to finance productive investments through specialized diaspora bonds or investment vehicles. Inflows reached US\$ 4.95 billion in 2024, presenting an opportunity to channel funds into infrastructure, SMEs, and job-generating sectors, thus strengthening local economic development.

To enhance descent jobs in agriculture through digital extension:

1. To successfully deploy digital extension services, enhance investment to support digital extension services to replace the deficit created by the limited number of extension officers. The investments will boost digital infrastructure, empower farmers with digital literacy skills, and design friendly platforms that provide timely, tailored agricultural advice. Additionally, collaboration with private sector innovators and development partners will be key to ensuring sustainability and widespread adoption of digital extension.
2. To realize the potential of digital extension towards increasing farm

productivity and the generation of employment, there is a need to establish a regulatory framework to promote standards and enforce compliance with the quality of digital extension material provided to farmers. National guidelines should be developed to determine accuracy, applicability, and reliability of digital extension material. Additionally, a mechanism for certification to validate the skills of digital extension service providers would be required, along with sustained compliance with standards for content. A monitoring and evaluation system will be created that regularly assesses digital extension platforms and enforces compliance, with a view to building farmers' trust and level of adoption for digital advisory services.

3. To enhance digital extension capacity, integrate digital literacy into the curriculum of agricultural training institutions and provide on-going professional development for extension workers. The government and private sector organizations and development partners could collaborate to implement digital extension activities. In addition, develop monitoring and evaluation frameworks to help track progress and evaluate areas for modification, so that digital extension services evolve in accordance with farmers' needs and technology innovation.
4. To realize budgetary allocation and utilization for electronic extension, there is a requirement to establish a particular budget line at the county level for agricultural extension services to ensure sustainable funding, with clear expenditure targets and regular audits to track fund utilization and allocation. The Council of Governors, the National Treasury, and Ministry of Agriculture and Livestock Development to consider developing guidelines to prioritize

extension services in county budgets and improve accountability measures for increased agricultural productivity and employment.

5. To realize the positive impact of digital extension in improving agricultural output that can create decent jobs, there is need to adopt measures to regulate the quality of digital extension content offered to farmers.

To enhance competitiveness of the manufacturing sector:

1. Support quality competitiveness. The Anti-Counterfeit Authority could strengthen the implementation of the IPR Recordation Programme to reduce the importation of counterfeit goods by checking against a robust database of intellectual property rights. Further, there is a need to strengthen border controls to mitigate the smuggling of illicit goods from neighbouring countries.
2. Enhance price competitiveness, the Kenya Export Promotion and Branding Agency, Kenya Investment Authority, and Micro and Small Enterprises Authority could develop capacity building programmes for MSEs with a focus on support towards compliance with standards, exploiting market access opportunities through existing trade agreements, and ensuring compliance with non-tariff measures.
3. Promote cost competitiveness. The National Treasury and Parliament could develop a predictable tax regime for raw materials and intermediate inputs that is cognisant of the duty remission scheme and the EAC Common External Tariff. Further, the State Department for Energy and the Energy and Petroleum Regulatory Authority could fast-track the revision of the time-of-use tariff to allow more manufacturing firms to

enjoy reduced electricity costs during off-peak hours.

To revitalize job creation in the domestic trade sector:

1. Simplify business registration, offer tax incentives, and develop trade hubs in secondary cities and rural areas to expand job opportunities. Strengthening linkages between agriculture, manufacturing, and wholesale trade could boost structured employment.
2. Establish structured trading zones with sanitation and security. Strengthen labour law enforcement, increase union membership (currently 1%), and expand social protection (NSSF, NHIF) to enhance job security.
3. Lower production costs in agriculture and manufacturing to reduce retail prices. Provide tax relief on essential goods and expand consumer credit to stimulate spending. Invest in infrastructure to improve market access and lower distribution costs.
4. Expand vocational training in wholesale and specialized trade. Prioritize digital literacy to support e-commerce. Establish apprenticeships and integrate trade management courses into tertiary education.
5. Lower interest rates, ease collateral requirements, and implement credit guarantee schemes for SMEs. Promote digital lending and simplify taxation and licensing to support business growth. Introduce reskilling programmes to help workers adapt to automation.

To promote youth employability through TVET there is need to:

1. Strengthen implementation of CBET by TVETA by prioritizing and enforcing the Competency Based Education and

Training (CBET) framework to align TVET programmes with industry demands. This includes regular updates to curricula based on occupational standards provided by industry actors.

2. Incentivize students to enrol in ICT and engineering courses by offering scholarships, grants, or subsidized tuition fees, and increasing investment in ICT infrastructure across TVET institutions through the Kenya Education Network and the National Research and Education Network.
3. Establish agribusiness incubation centres within TVET institutions to help graduates develop business ideas, secure funding, and connect with markets to increase the employability of TVET graduates in agriculture. Additionally, develop programmes to support TVET graduates in transitioning to formal agriculture employment, such as entrepreneurship training alongside technical training.
4. Expand TVET financing by increasing development funding for the TVET sector, allocate resources to upgrade infrastructure, provide modern equipment, enhance instructor training, and increase capitation grants in line with the enrolment rates.
5. Establish a national RPL awareness and accessibility campaign. This campaign would involve multi-channel communication (radio, TV, community forums, digital platforms) to promote the benefits of RPL certification for informal sector workers.
6. Create a national TVET industrial attachment fund and placement platform. This fund would provide financial assistance (stipends, transportation allowances, medical cover) to TVET students from low-income backgrounds to cover the costs of industrial attachment.

To harness the potential of decent jobs in the e-mobility sub-sector:

1. Enhance access to financing and reduce the cost of EV adoption by developing targeted financial instruments such as low-interest loans, lease-to-own models, and tax incentives for two- and three-wheeler users. Further, encourage the expansion of green financing mechanisms, including carbon credit schemes and impact investments, to lower the upfront costs of electric motorcycles and public transport vehicles.
2. Strengthen workforce development to support the e-mobility transition by integrating EV-related courses into TVET institutions, universities, and apprenticeship programmes. Further, establish specialized training centres in high-demand areas such as battery technology, high-voltage systems, and EV diagnostics to ensure a steady supply of skilled labour for the growing sector.
3. Support retrofitting of ICE vehicles to electric by developing clear technical standards and certification processes for vehicle conversions. Further, introduce incentives for businesses investing in retrofitting technologies and create training programmes for mechanics and technicians to build local capacity in vehicle electrification.
4. Promote local manufacturing and supply chain development by incentivizing investment in battery pack assembly, electronic control unit production, and local mineral processing to reduce dependence on imports. Further, establish Special Economic Zones (SEZs) dedicated to EV component manufacturing to attract foreign and domestic investors, leading to greater job creation in the sector.
5. Expand charging infrastructure and battery-swapping networks to create employment opportunities by partnering with the private sector to deploy affordable and accessible charging points across urban and rural areas. Further, develop policy frameworks that mandate EV-friendly infrastructure in public transport hubs, highways, and new building developments to boost adoption and create operational jobs in infrastructure management.

To enhance decent jobs at the county level:

1. Support entrepreneurship by offering business development training, mentoring, seed capital, and incubators to stimulate job creation across the counties. Partnerships between Government and private sector can improve employment outcome and offer job training programmes tailored to specific needs of industrial and services sectors. Investing in sustainable practices and technology can help to mitigate the impacts of climate change and encourage young people to venture into the agricultural sector.
2. Education plays a pivotal role in achieving gender parity, particularly in arid counties where cultural and economic barriers often hinder girls' access to schooling, resulting in lower enrolment rates compared to boys. Sensitizing parents about the importance of educating girls can significantly enhance female literacy and female participation in the labour market.
3. The Government could raise the minimum wage and implement supportive wage policies. Well-designed minimum wage policies can boost workers' income, improve job prospects and stimulate economic

- growth. Investing in education and skills training can enhance workers' employability and facilitate their transition to better-paying jobs. The Government could provide tax credit for low-income earners.
4. Establishing comprehensive legal protections for informal workers can ensure access to social security benefits. Leveraging technology can facilitate access to social benefits across the counties. Advocating for universal social protection can address the needs of those currently lacking coverage. These strategies lead to job security and social benefits.
 5. Strengthening the role of trade unions particularly in the informal sector by addressing barriers to unionization, such as legal constraints and employer resistance to union activities. The Government could foster partnerships with businesses and civil society to enhance worker rights and conditions, ensuring that decent work principles are upheld in community development initiatives. Successful promotion of decent work often relies on grassroots movements and advocacy, which highlights the role of local actors in driving change.

- AfCFTA Secretariat (2022), Report on Africa's free trade and economic integration. African Continental Free Trade Area Secretariat.
- African Development Bank (2019), Creating decent jobs.
- Africa E-Mobility Alliance (2023), Kenya electric mobility policy paper: EV importation and industrialization - Gaps, opportunities, and policy interventions. Africa E-Mobility Alliance (AfEMA).
- African Development Bank - AfDB (2023), Africa's green economy transition: Opportunities in E-mobility. AfDB Publications.
- AfricaNEV (2023), Training for electric vehicle technicians in Kenya: A skills development approach. Africa New Energy Vehicles.
- Al-Majeed, H. (2024), Higher education and workforce readiness: A global perspective. Times Higher Education.
- Anti-Counterfeit Authority (2020), National baseline survey on counterfeit and other forms of illicit trade in Kenya.
- BMBF (2022), Germany's vocational training in electric mobility: A dual education approach. German Federal Ministry of Education and Research.
- Brown, E.K., Okore, M., Traore, M. and Boateng, G. (2024), Strengthening education and learning systems to deliver a 4IR-ready workforce: Synthesis report.
- Chaianong, T., Tsoi, K. and Remme, J. (2024), "Global trends in electric mobility and job creation". *Renewable Energy Journal*.
- COMESA (2019), *Export potentials of Intra-COMESA trade*.
- COMESA (2022), Tracking the resolution of non-tariff barriers in COMESA through the tripartite online NTBs mechanism.
- Competitive Industrial Performance Report (2022), United Nations Industrial Development Organization.
- Dean, J.M., Feinberg, R., Signoret, J., Ferrantino, M. and Ludema, R. (2006), Estimating the price effects of non-tariff measures. US International Trade Commission.
- East Africa Community (2024), *EAC Trade and Investment Report*.
- Energy and Petroleum Regulatory Authority (2024), *Energy and Petroleum Statistics Report*.
- Kenya National Bureau of Statistics – KNBS (2024), Economic Survey. Nairobi: Kenya National Bureau of Statistics.
- Editorial Staff (2023), "The benefits of TVET: Why technical and vocational education and training is a smart choice. <https://tvetjournal.com/tvet-systems/benefits-of-tvet>.
- Energy and Petroleum Regulatory Authority – EPRA (2022), Kenya's national electric vehicle charging and battery swapping infrastructure guidelines. EPRA Publications.
- Energy and Petroleum Regulatory Authority (2024), Energy and petroleum statistics report.

- EuropeOn (2019), The European electric mobility job market: Challenges and prospects. European Electricians Network.
- COMESA (2019), Export potentials of Intra-COMESA trade (2019).
- Fabregas, R., Harigaya, T., Kremer, M. and Ramrattan, R. (2022), “Digital agricultural extension for development”. In *Introduction to development engineering: A framework with applications from the field* (pp. 187-219). Cham: Springer International Publishing.
- Fombo, A.S. (2024), “Challenges and opportunities in teacher training and professional development in Cameroon: A comprehensive analysis”. *International Journal of Research and Innovation in Social Science*, 8(9): 880-890.
- Government of Kenya (2012), *Sessional Paper No. 9 of 2012 on the National Industrialization Policy Framework for Kenya 2012-2030*.
- Government of Kenya (2023), Kenya Agricultural Sector Extension Policy (KASEP). Nairobi: Government Printers. <https://kilimo.go.ke/wp-content/uploads/2024/10/KENYA-AGRICULTURAL-SECTOR-EXTENSION-POLICY-2023.pdf>.
- Government of Kenya – GoK (2017), *Kenya Vision 2030: Towards a Sustainable Transport System*. Nairobi: Ministry of Transport.
- Government of Kenya – GoK (2020), *National Electric Mobility Strategy 2020-2030*. Nairobi, Kenya.
- Government of Kenya – GoK (2023), *Kenya’s Updated Nationally Determined Contributions (NDC) Report*. Nairobi: Ministry of Environment and Forestry.
- Government of Kenya – GoK (2024), *Draft National E-Mobility Policy 2024*. Nairobi, Kenya.
- ICT Authority (2022), The Kenya National Digital Master Plan 2022–2032. Nairobi: <https://cms.icta.go.ke/sites/default/files/2022-04/Kenya%20Digital%20Masterplan%202022-2032%20Online%20Version.pdf>
- OECD (2016), *Illicit trade: Converging criminal networks*.
- IMF (2024), World Economic Outlook: Policy Pivot, Rising Threats. IMF: Washington, DC.
- United Nations Industrial Development Organization (2024), *Industrial Development Report*.
- UN Trade and Development (2015), *International Classification of Non-Tariff Measures*.
- International Energy Agency – IEA (2022). *Global Electric Vehicle Outlook 2022*. IEA Publications.
- International Energy Agency – IEA (2023), *Tracking clean energy progress: Electric vehicles 2023*. IEA Publications.
- International Labour Organization (2019), *ILO Centenary Declaration for the Future of Work*. Geneva.
- International Labour Organization – ILO (2018), *The Future of Work in the Automotive Sector: Impacts of E-Mobility*. ILO Research Paper.
- International Trade Centre (2019), *Creative Industries in Rwanda: Digital Paths to Global Markets*.

- Kenya Association of Manufacturers (2024), *Manufacturing Priority Agenda*.
- Kenya Institute for Public Policy Research and Analysis (2021), *A Study on Power Outages Study in Industries and Its Impact on Production Costs and also Tracking Production Costs Trends Versus Cost of Goods at Ex-Factory Price for the Last Five Years*.
- Kenya National Bureau of Statistics – KNBS (2022), *Kenya Continuous Household Survey 2022*. Nairobi, Kenya.
- Kenya National Bureau of Statistics (2025), *Economic Survey*. Nairobi: Kenya
- Kenya National Bureau of Statistics – KNBS (2024), *Kenya Economic Survey 2024*. Nairobi, Kenya.
- Kenya National Bureau of Statistics - KNBS (2024), *Statistical Abstract 2024*. Nairobi, Kenya.
- Kenya Power (2024), *Kenya Power's E-Mobility Infrastructure Development Plan*. Nairobi, Kenya.
- KIPPRA (2021), *A Study on Power Outages Study in Industries and Its Impact on Production Costs and also Tracking Production Costs Trends Versus Cost of Goods at Ex-Factory Price for the Last Five Years*. (2021). Kenya Institute for Public Policy Research and Analysis.
- KNBS (2024a), *Economic Survey 2024*. Nairobi: KNBS
- KNBS (2024b), *Census of agriculture: 2024 pilot survey*. Nairobi: KNBS
- Luxembourg: Publications Office of the European Union (2021), *The Benefits of Vocational Education and Training*, https://www.cedefop.europa.eu/files/5510_en.pdf
- Luxembourg: Publications Office of the European Union (2021), *The Benefits of Vocational Education and Training*, https://www.cedefop.europa.eu/files/4184_en.pdf
- Manufacturing Priority Agenda*. (2024). Kenya Association of Manufacturers.
- McKinsey & Company. (2021). *Electric Vehicle Battery Recycling: Market Trends and Investment Opportunities*. McKinsey Reports.
- Ministry of Health (2023). *Health Labour Market Analysis for Kenya* https://labourmarket.go.ke/media/resources/Final_Kenya_HLMA_Report_2023_v8.pdf
- Misaki, E. (2021). Mobile technology for enhancing the flow of agricultural information between small-scale farmers and other crop farming stakeholders in Chamwino, Tanzania. *IFIP Advances in Information and Communication Technology* (Vol. 551). Cham, Switzerland: Springer.
- Morikawa, M. (2021). Price competition vs. Quality competition: Evidence from firm surveys. *Journal of Economics and Business*, 116, 106007. <https://doi.org/10.1016/j.jeconbus.2021.106007>
- Muller, G. (2020). *Bridging the Gap between Academic Research and Industry Needs in Emerging Technologies*. *Technology and Innovation Journal*.
- Mwatu, S. M., Mbaka, C. K., Karanja, J. G., & Muriithi, G. M. (2024). *Trade Agreements, Technical Regulations, and Standards:*

- Competitiveness Implications for Kenyan Exporters to European Union. *The European Journal of Development Research*, 36(2), 381–410. <https://doi.org/10.1057/s41287-023-00606-9>
- National Baseline Survey on Counterfeit and Other Forms of Illicit Trade in Kenya. (2020). Anti-Counterfeit Authority.
- Nechifor, V., Boysen, O., Ferrari, E., Simola, A., Nandelenga, M., Laichena, J., and Malot, K. (2021). *The Impacts of the Africa Continental Free Trade Area on the Kenyan Economy*. KIPPRA.
- Non-Tariff Measures (NTMs) applicable to Biodiversity and Bioproducts: Personal Care, Food and Phytopharma Sectors. (2016). UN Trade and Development.
- Non-Tariff Measures and Deep Regulatory Intergration in the African Continental Free Trade Area. (2024). UN Trade and Development.
- Norwegian Electric Vehicle Association. (2021). *The Future of EVs in Norway: Policies and Market Trends*. Oslo, Norway.
- OECD (2016), *Illicit Trade: Converging Criminal Networks*.
- Office of the Principal Scientific Adviser. (2024). *India's E-Mobility Research and Development Roadmap*. Government of India.
- Oiro, M., Wanjala, B., Ngugi, R., and Naudé, D. (2019). *An Export-led Growth for Kenya: Where is the niche?* [Working Papers]. University of Cape Town, Development Policy Research Unit. <https://EconPapers.repec.org/RePEc:ctw:wpaper:idrcdprukenya>
- Osiemo, J.; Girvetz, E.; Hasiner, E.; Schroeder, K.; Treguer, D.; Juergenliemk, A.; Horst, A.; Jarvis, A.; Kropff, W. (2021) *Digital Agriculture Profile: Kenya*. Rome (Italy): FAO. 19 p
- Roam. (2023). *The Roam Rapid: Kenya's First Locally Assembled Electric Bus*. Roam Press Release.
- Roser, M. (2021). What is economic growth? And why is it so important?. *Our World in Data*.
- Sessional Paper No. 9 of 2012 on the National Industrialization Policy Framework for Kenya 2012-2030. (2012). Government of Kenya.
- Siemens Stiftung. (2023). *Supporting E-Mobility Innovation in Africa: A Funding Approach*. Siemens Stiftung Reports.
- Simionescu, M., Pelinescu, E., Khouri, S., and Bilan, S. (2021). The Main Drivers of Competitiveness in the EU-28 Countries. *Journal of Competitiveness*, 13(1), 129–145. <https://doi.org/10.7441/joc.2021.01.08>
- Snilstveit, B., Stevenson, J., Menon, R., Phillips, D., Gallagher, E., Geleen, M., ... & Jimenez, E. (2016). The impact of education programmes on learning and school participation in low-and middle-income countries.
- Statistical Abstract. (2024). Kenya National Bureau of Statistics.
- Szirmai, A. (2012). Industrialisation as an engine of growth in developing countries, 1950–2005. *SI: Firm Dynamics and SI: Globelics Conference*, 23(4), 406–420. <https://doi.org/10.1016/j.strueco.2011.01.005>

- Tracking the Resolution of Non-Tariff Barriers in COMESA through the Tripartite Online NTBs Mechanism.* (2022). COMESA. documents1.worldbank.org/curated/en/099541405222456804/pdf/1e05da9bb1a07914f1d1aba518b70035ffcd1.pdf
- TVETA, (2023). TVET Institutions Annual Returns. <https://www.tveta.go.ke/wp-content/uploads/2025/01/Annual>Returns-Report-2023.pdf>
- TVETA, (2024). The TVET Eye. Thinking Without a Box. <https://www.tveta.go.ke/wp-content/uploads/2023/12/THE-TVETA-EYE-2023-issue-4-final.pdf>.
- United Nations Industrial Development Organization (2022), *Competitive Industrial Performance Report*.
- United Nations Industrial Development Organization (2024), *Industrial Development Report*.
- UN Trade and Development (2020), *Assessing Cost-Effectiveness of Non-Tariff Measures a Tool Kit: A Case Study of Kenya*. (2020).
- UN Trade and Development (2024), *Non-Tariff Measures and Deep Regulatory Intergration in the African Continental Free Trade Area*.
- UN Trade and Development (2020), *Assessing Cost-Effectiveness of Non-Tariff Measures a Tool Kit: A Case Study of Kenya*.
- UN Trade and Development (2016), *Non-Tariff Measures (NTMs) Applicable to Biodiversity and Bioproducts: Personal Care, Food and Phytopharmaceutical Sectors*.
- UN Trade and Development (2015), *International Classification of Non-Tariff Measures*.
- World Bank (2024). Financing for Technical and Vocational Education and Training. <https://documents1.worldbank.org/curated/en/099541405222456804/pdf/1e05da9bb1a07914f1d1aba518b70035ffcd1.pdf>
- World Bank. (2024). *Kenya Economic Update: Jobs and the Green Economy*. World Bank Group.
- World Economic Forum. (2022). *The Future of Sustainable Transport: E-Mobility and Job Creation*. WEF Reports.
- World Resources Institute (WRI). (2022). *Decarbonizing Transport: The Role of E-Mobility in Climate Action*. WRI Publications.
- World Resources Institute (WRI). (2023). *Green Jobs and E-Mobility: How the Transition to EVs Can Drive Employment Growth*. WRI Research Paper.
- Xinhua. (2025). *Kenya's Transition to Electric Mobility: Investments and Market Growth*. Xinhua News Agency.
- Zhang, Y., Li, W., & Chen, H. (2021). *Electric Vehicle Technology Education in China: Case Studies from Leading Universities*. Beijing Institute of Technology Journal.
- Zizi Afrique, (2019). Technical and Vocational Education and Training in Kenya. <https://ziziafrique.org/wp-content/uploads/2024/12/Technical-and-Vocational-Education-and-Training-in-Kenya-March-2019.pdf>

Appendices

Annex 6.1: Wholesale trade activities in counties

County	Total Employment	Wholesale on a fee or contract basis	Agricultural raw materials and Live animals	Food Beverages & Tobacco	Household goods	Machinery Equipment and Supplies	Pharmaceuticals and other specialized goods	Non-specialized wholesale trade	Sale and Repairs of Motor vehicles
Mombasa	481750.4	2047.334	270.6606	2344.063	0	0	6544.179	0	15184.46
Kwale	284566.5	0	847.9692	0	509.9668	254.8353	254.8353	254.8353	2267.72
Kilifi	599113.7	0	579.6259	1827.376	4753.709	0	568.0334	0	1827.376
Tana River	101701.9	0	270.66	0	0	0	385.521	0	812.1212
Lamu	57862.83	0	2664.059	550.5429	0	0	0	0	217.2707
Taita Taveta	176119.4	0	267.5013	622.7752	0	0	2298.996	0	812.1212
Garissa	156297.5	0	847.969	0	0	0	0	0	1427.338
Wajir	93956.2	0	0	1236.151	0	0	0	0	0
Mandera	124830.6	0	0	0	0	0	677.1696	677.1696	0
Marsabit	30974.83	0	2,664.00	0	0	0	0	0	531.0479
Isiolo	69581.08	0	267.501	0	0	0	0	0	532.517
Meru	787823.8	0	2583.443	2126.751	0	0	1319.302	0	3796.013
Tharaka Nithi	199168.9	0	0	288.4955	0	0	288.4955	288.4955	695.1947
Embu	340800.7	0	2216.88	207.6364	176.4909	0	176.4909	893.211	844.48
Kitui	573259.2	0	0	947.5724	0	0	0	0	1266.574
Machakos	576681.4	0	2,583	2240.997	4009.324	0	884.2135	4706.328	2210.279
Makueni	568404.7	0	0	0	0	0	1259.503	1259.503	0
Nyandarua	349042.3	0	1,075.00	1392.999	941.9344	0	1680.024	941.9344	3793.233
Nyeri	358400.1	0	0	1383.206	513.7616	0	513.7616	0	1405.499

County	Total Employment	Wholesale on a fee or contract basis	Agricultural raw materials and Live animals	Food Beverages & Tobacco	Household goods	Machinery Equipment and Supplies	Pharmaceuticals and other specialized goods	Non-specialized wholesale trade	Sale and Repairs of Motor vehicles
Kirinyaga	328307.3	440.2401	1,128.40	1159.418	0	655.7136	0	776.7516	3966.672
Murang'a	602263.6	0	1,804.00	0	370.1187	370.1187	0	902.07	2736.666
Kiambu	1242750	0	997	10339.27	0	0	6029.741	4417.633	21865.02
Turkana	283474.4	0	997.6247	0	0	0	0	0	1954.08
West Pokot	258999.1	0	2,216.00	0	0	0	4823.841	0	0
Samburu	76820.62	0	361.6172	216.2809	0	0	0	0	150.3828
Trans Nzoia	509116	0	678.213	2359.244	315.2776	0	995.4824	347.6893	3001.762
Uasin Gishu	420893.5	0	108.6353	1356.706	1639.324	1721.29	678.3532	0	2946.712
Elgeyo Marakwet	166758.7	0	2123.304	0	340.3674	0	0	0	431.2213
Nandi	424058.2	0	661.23	0	219.1193	0	1870.549	0	840.6161
Baringo	322684.7	0	0	219.1193	219.1193	0	467.4545	0	772.1556
Laikipia	222363.1	0	1075.958	0	239.8621	0	390.9684	0	2766.689
Nakuru	977618.7	0	1128.415	0	4316.776	0	3379.338	0	6214.497
Narok	474982.9	0	1804.14	361.6172	2337.195	0	0	0	2630.876
Kajiado	618496.9	0	678.2135	0	5326.63	834.8685	3766.159	0	3922.501
Kericho	438013.4	0	24,410	1330.878	1419.099	0	1098.387	2392.588	0
Bomet	393442.7	0	661.2358	193.7382	0	0	193.7382	387.4763	686.7276
Kakamega	680199.7	911.531	2441.449	3371.917	4577.698	170.9121	1860.731	0	6665.992
Vihiga	303360.2	721.91	1092.751	0	0	0	0	0	462.8927

County	Total Employment	Wholesale on a fee or contract basis	Agricultural raw materials and Live animals	Food Beverages & Tobacco	Household goods	Machinery Equipment and Supplies	Pharmaceuticals and other specialized goods	Non-specialized wholesale trade	Sale and Repairs of Motor vehicles
Bungoma	686537.5	0	721.9103	3365.41	3129.985	0	0	2070.697	1201.873
Busia	352956.7	0	0	0	151.8138	264.2685	1169.322	0	528.5369
Siaya	481169.8	0	0	0	0	0	0	0	504.9347
Kisumu	424087.4	0	0	1298.373	690.1263	0	691.0695	0	3927.922
Homa Bay	442008.8	0	2,123.30	1973.773	273.5541	0	1365.832	753.2257	1026.78
Migori	442905.4	0	820.7414	839.6513	1679.303	0	0	0	553.6163
Kisii	537533.4	0	427.7379	867.3744	0	0	0	640.035	3149.153
Nyamira	253134.4	0	3229.396	285.983	1309.265	0	0	0	1925.651
Nairobi	1968475	0	2464.947	14961.51	13570.47	13059.54	17837.98	0	52884.33

Source: KNBS (2021), KCHS Sur

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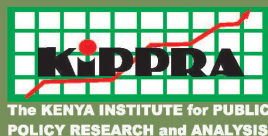
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