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Acronyms

AfDB	African Development Bank
AfCFTA	African Continental Free Trade Area
ASAL	Arid and Semi-Arid Land
BMO	Business member organisations
CAK	Communications Authority of Kenya
CBC	Competence Based Curriculum
CBK	Central Bank of Kenya
CET	Common External Tariff
CIDP	County Integrated Development Plan
CUE	Commission for University Education
DRS	Duty Remission Scheme
ICT	Information Communication Technology
ICTA	Information Communication Technology Authority
EAC	East African Community
EACC	Ethics and Anti-Corruption Commission
EAPP	Eastern Africa Power Pool
EDS	Export Delivery Structures
EGPSP	Essential Goods Production Support Programme
EOI	Export-Oriented Industrialisation
EPRA	Energy and Petroleum Regulatory Authority
EPZ	Export Processing Zones
ESQAC	Educational Standards and Quality Assurance Council
FDI	Foreign Direct Investments
GDC	Geothermal Development Company
GDP	Gross Domestic Product
HCI	Human Capital Index
HELB	Higher Education Loans Board
HFO	Heavy Fuel Oil
HPCDP	Holistic Productive Capacities Development Programme
IATA	International Air Transport Association
ICT	Information and Communications Technology
ICTA	Information and Communications Technology Authority
ICT4D	Information and Communications Technology for Development
ICDC	Industrial and Commercial Development Corporation
ICIPE	International Centre of Insect Physiology and Ecology
ICRAF	International Council for Research in Agroforestry
ILRI	International Livestock Research Institute
IMF	International Monetary Fund
IPP	Independent Power Producers
ISI	Import-Substitution Industrialisation
JKIA	Jomo Kenyatta International Airport
KALRO	Kenya Agricultural and Livestock Research Organisation
KAM	Kenya Association of Manufacturers
KCAA	Kenya Civil Aviation Authority
KEBS	Kenya Bureau of Standards
KEFRI	Kenya Forestry Research Institute
KEMRI	Kenya Medical Research Institute
KenGen	Kenya Electricity Generating Company
KeNHA	Kenya National Highways Authority

KeNIA	Kenya National Innovation Agency
KEPC	Kenya Export Promotion Council
KEPSA	Kenya Private Sector Alliance
KeRRA	Kenya Rural Roads Authority
KETRACO	Kenya Electricity Transmission Company Limited
KFS	Kenya Forest Services
KIE	Kenya Industrial Estates
KIPI	Kenya Industrial Property Institute
KIRDI	Kenya Industrial Research and Development Institute
KMTC	Kenya Medical Training College
KNBS	Kenya National Bureau of Statistics
KNCCI	Kenya National Chamber of Commerce and Industry
KNQF	Kenya National Qualifications Framework
KPA	Kenya Ports Authority
KPLC	Kenya Power & Lighting Company Limited
KRA	Kenya Revenue Authority
KRB	Kenya Roads Board
KURA	Kenya Urban Roads Authority
KWS	Kenya Wildlife Services
LAPSSET	Lamu Port-South Sudan-Ethiopia-Transport
LNG	Liquified Natural Gas
MSEA	Micro and Small Enterprises Authority
MSMEs	Micro-, Small- and Medium-sized Enterprises
MTP	Medium Term Plan
NACOSTI	National Commission for Science Technology and Innovation
NESC	National Economic and Social Council
NGDC	National Geodata Centre
NHIF	National Health Insurance Fund
NIA	National Irrigation Authority
NITA	National Industrial Training Authority
NOCK	National Oil Corporation of Kenya
NPCGA	National Productive Capacities Gap Assessment
NRF	National Research Fund
ODC	Other Developing Countries
ORPP	Office of the Registrar of Political Parties
OTS	Open Tender System
PCI	Productive Capacities Index
PDU	Presidential Delivery Unit
PHC	Primary Health Care
PPP	Public Private Partnership
REREC	Rural Electrification and Renewable Energy Corporation
RMLF	Road Maintenance Levy Fund
SACCO	Saving and Credit Cooperative Organisations
SSA	Sub-Saharan Africa
TVET	Technical and Vocational Education and Training
TVETA	Technical and Vocational Education and Training Authority
UHC	Universal Health Coverage
UNCTAD	United Nations Conference on Trade and Development
VDS	Vision 2030 Delivery Secretariat
WASREB	Water Services Regulation Authority
WPP	Water Purification Points
WRMA	Water Resources Management Authority

Executive summary

Productive Capacities Development: Challenges and Opportunities – The Case of Kenya is part of a series of publications produced by the United Nations Conference on Trade and Development (UNCTAD), and designed to document data-driven and evidence-based assessments of gaps and limitations in the development of productive capacities in developing countries, together with proposed intervention strategies. The publication examines the challenges and opportunities in Kenya's productive capacities to advance structural transformation and economic diversification, as well as the related gaps and necessary policy responses.

The publication consists of two parts. Following the Introduction, which provides the conceptual background and a comprehensive assessment of the recent performance of Kenya's economy and development, is Part I – the National Productive Capacities Gap Assessment. The NPCGA of Kenya examines the state of the country's national productive capacities and binding constraints to its structural transformation, economic diversification and overall sustainable development. It uses the Productive Capacities Index (PCI), which relies on eight components – Natural Capital, Human Capital, Transport, Energy, ICT, Institutions, Private Sector and Structural Change – to measure gaps in productive capacities. It then proposes specific, tailored policy interventions to address these challenges. Part II – the Holistic Productive Capacities Development Programme (HPCDP) – provides details on how best to address the gaps and limitations and key binding constraints to the country's development through a comprehensive programme. The HPCDP is tailored to specific domestic circumstances, comparative advantages, and national institutional frameworks and provides strategic orientation and action-oriented, step-by-step approaches to tackle these key binding constraints. It is designed to address Kenya's deep-rooted development challenges, as articulated in the NPCGA, by moving away from the practice of short-term, sectoral and fragmented, project-based interventions towards long-term, integrated, and programme-based approaches to development.

Kenya has been perceived as a regional leader in Africa in terms of development, having achieved above-average growth rates and having become a lower middle-income economy in 2014. However, the country continues to face important economic challenges, with two thirds of the population living on less than US$ 3.20 per day, with the majority of the workforce still employed in agriculture, and the country experiencing "reverse structural transformation".

As far as building productive capacities is concerned, Kenya's overall PCI score has been gradually improving from 24.6 in the year 2000 to 37.8 in 2022. This progress enabled the country to remain with a higher ranking than the average for Sub-Saharan Africa (SAA) (31.6) and its neighbours, such as Ethiopia (30.5), Tanzania (31.9) and Uganda (21.4). Nevertheless, the country has remained below such African economies as South Africa (PCI score of 52.2 in 2022) and Egypt (44.1) and below the average of other developing countries (ODCs) (46.8). As compared to the average values for SSA, Kenya has performed better in most of the components of the PCI, namely, Human Capital, ICT, Private Sector, Institutions and Structural Change. However, it has lagged behind in Transport and Energy components. In most components the country has performed worse than South Africa, Egypt (with the exception of Institutions) and the average for ODCs (with the exception of Natural Capital and Structural Change).

The assessment, thus, reveals substantial potential to advance the country's socio-economic development (as per scores concerning Institutions and Structural Change), but also profound challenges (as per scores concerned with the infrastructure-related components of the PCI, such as Transport and Energy), which may impede the development process.

This is particularly pertinent in the context of Kenya Vision 2030 – the country's flagship overarching development strategy which stipulates that Kenya aims to become a *newly-industrialising, [upper] middle income country providing a high quality of life to all its citizens in a clean and secure environment by 2030*. To achieve that, the country needs to build domestic, economy-wide productive capacities.

To do so, the development policies need to: (a) prioritise productive capacities for structural transformation, (b) enhance industrialisation and structural change, and incentivise developing manufacturing, (c) transform and modernise agriculture, (d) ensure preservation of natural environment by sustainable use of resources, (e) build human capital to respond to the changing needs of the labour market, (f) address infrastructure deficiencies, particularly in transport and energy, (g) enhance the role of ICT in production transformation and promote innovation and R&D, (h) strengthen the private sector through adjusting regulatory and fiscal policies, (i) strengthen institutions. It is imperative to kickstart a paradigm shift in development policy formulation and implementation, away from the current practice of traditional, fragmented and short-term interventions, towards multi-sectoral, comprehensive and long-term, programme-based approaches to development.

The Holistic Productive Capacities Development Programme for Kenya, developed by UNCTAD in consultation with key national institutions, is designed on the basis of such a paradigm shift in development policy formulation and implementation. This includes the need for key actors to participate in the policy making processes, to consider mainstreaming productive capacities' development as a necessary enabler for boosting overall national capacity to ensure inclusive growth and sustainable development and to resiliently respond to and recover from shocks. Thus, macroeconomic and sectoral policies should prioritise structural economic transformation, diversification, and competitiveness as tools for ensuring sustainability. This should be supported by designing a sustainable financing framework to ensure that the means necessary to progress towards long-term sustainable development are consistent with the country's aspirations, as well as the objectives of the 2030 Agenda for Sustainable Development and the African Union's Agenda 2063 "The Africa We Want". Kenya also needs to put in place the necessary structures, institutions, policies, and resources to undertake mission-oriented, and purpose-built interventions to improve productive capacities for sustainable development.

The HPCDP for Kenya is, therefore, designed to accelerate the implementation of Kenya Vision 2030 and the Medium-term Plan 2022-2027 (The Plan) and lay the foundation for the country's successor development agenda beyond 2030. It consists of five interlinked pillars and cross-cutting issues for intervention during the period 2025-2035: (I) Economic diversification, industrialisation and value addition; (II) Infrastructure (including energy) and natural environment; (III) ICT for digitalisation and transformation; (IV) Private sector development; and (V) Skills formation and improved policy coordination. The overall focus of the proposed Holistic Programme is to assist Kenya in responding to the key challenges and binding constraints identified by the NCPGA and to contribute to the delivery of "The Plan" and, ultimately, the achievement of Kenya Vision 2030 and the Sustainable Development Goals (SDGs).

Kenya needs to prioritise the fostering of productive capacities and structural economic transformation to realize the objectives of its Vision 2030 and SDGs


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1. Introduction

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

To operationalise the concept of productive capacities in the context of development policies, UNCTAD developed the Productive Capacities Index (PCI), which relies on eight components to measure different elements of productive capacities – natural capital, human capital, transport, energy, ICT, institutions, private sector and structural change. The PCI is a composite index measuring productive capacities based on 42 indicators. The overall PCI index is obtained by computing a composite index from the eight component scores; and it provides a summary of the state of productive capacities in an economy. The index ranges between 0 and 100, with higher numbers indicating a higher level of development of productive capacities.

The estimates of PCI values together with an integrated assessment of the micro and macroeconomic fundamentals of an economy, form the basis of its National Productive Capacities Gap Assessment. (NPCGA) – the Part I of this report. This NPCGA of Kenya closely examines the country's socioeconomic challenges, opportunities, and prospects. It identifies key binding constraints to socioeconomic development. It recommends a series of policy actions at the domestic level aimed at fostering productive capacities and achieving structural economic transformation. The ultimate objective of the NPCGA is to support Kenya's policy makers and other national stakeholders in identifying developmental gaps and, subsequently, devising holistic policies to advance sustainable development. These are captured in the Holistic Productive Capacities Development Programme (HPCDP), which constitutes Part II of this report. Indeed, assessing productive capacities through a robust framework helps to understand the sources of a country's systemic vulnerabilities and to identify the enablers of economic growth, including progress towards national and global development goals (UNCTAD, 2020).

The publication starts with the examination of the micro- and macro-economic fundamentals of Kenya's economy. Using the Productive Capacities Index, it then progresses to the examination of the gaps in productive capacities and the identification of key binding constraints to structural economic transformation and development. Subsequently, policies to be implemented by national stakeholders

The NPCGA is designed to identify and articulate gaps in Kenya's productive capacities and, subsequently, devise holistic interventions to advance sustainable development

[1] https://unctad.org/system/files/official-document/ldc2006_en.pdf; https://unctad.org/topic/least-developed-countries/productive-capacities-index

and international partners are listed to address these constraints and challenges. To operationalise the necessary actions, pillar interventions are identified and examined. This is followed by a stakeholder analysis and capacity assessment, sections on financing, modalities and implementation, and on sustainability, risks and performance monitoring.

Why do productive capacities matter for Kenya's development?

Kenya – a country in East Africa of 55 million people (in 2021) that covers an area of 582,646 sq. km – has been perceived as a regional leader in Africa in terms of development, having achieved above-average growth rates, which exceeded 5% for the 15 years preceding the COVID-19 pandemic (2.7 % in per capita terms).[2] This growth enabled the country to achieve lower middle-income status in 2014 and reach an estimated Gross Domestic Product (GDP) per capita of US$ 2,082 in 2021 (World Bank, 2023). Kenya also progressed in poverty reduction efforts. As such, the proportion of the population living in extreme poverty decreased from 43.9% in 2005 to 36.1% in 2015 (World Bank, 2022b).

Kenya experienced “reverse structural transformation”- the GDP share of value-added of services & manufacturing declining while that of agriculture increasing

However, Kenya continues to face important economic challenges, with two thirds of the population living on less than US$ 3.20 per day. The majority of the workforce is employed in agriculture. Industry, including mining, construction, and manufacturing employs a fraction of the population and the share of manufacturing in GDP is decreasing. Overall, Kenya has therefore experienced “reverse structural transformation” over the last 15 years, with the share of value added in GDP shifting steadily away from services and manufacturing, towards primary sectors, including agriculture. Kenya also remains dependent on the export of primary commodities, such as tea and vegetables, as well as some oil and minerals. Moreover, the country imports a bulk of intermediary goods for domestic production. The COVID-19 pandemic and the related demand shock adversely affected the economy, particularly the delivery of services such as transport, tourism, and urban services. The private sector, particularly micro-, small- and medium-sized enterprises were amongst the hardest hit.

Kenya Vision 2030 – the country's flagship overarching development strategy – stipulates that Kenya aims to become “a newly-industrialising, middle income country providing a high quality of life to all its citizens in a clean and secure environment by 2030.” To achieve that, the country needs to build domestic, economy-wide productive capacities.

Indeed, viewing them from a holistic perspective, the fundamental and overlapping challenges facing the country's development stem from the underdevelopment of its domestic productive capacities. Further building of a robust and increasingly modern and resilient national economy, one that generates a steady flow of new and productive jobs, is unlikely to transpire without the development of the country's productive capacities. These can facilitate structural economic transformation in favour of higher productivity sectors such as manufacturing. The development of productive capacities through targeted investments and smart policy interventions is critical for the country to achieve its economic and social objectives, including those contained in Kenya Vision 2030, because they lay solid economic foundations by fostering structural economic transformation, diversification, inclusiveness, and productive employment generation. Thus, it is crucial that the development of productive capacities be placed at the centre of holistic, economy-wide policy design and institution building processes.

[2] The NPCGA uses internationally comparable data from international institutions for the calculations. This data may be supplemented by data provided by national sources.

Productive capacities are particularly needed for achieving inclusive and sustained growth, which will facilitate the acceleration of poverty reduction and expand employment opportunities. They are necessary for breaking the country's dependence on commodities and escaping, in the long run, the middle-income trap. They also address existing economic vulnerabilities and contribute to improving resilience against external shocks and growth fluctuations.

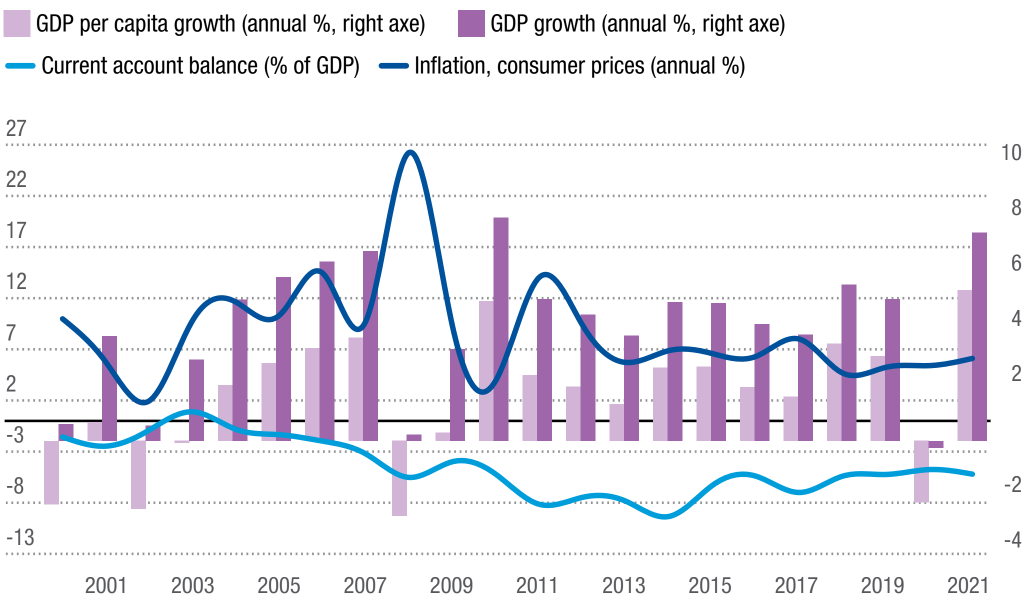
An overview of Kenya's economy and development

Kenya is a leading economy in the East African region in terms of its GDP, which stood at US$ 110.35 billion in 2021 (World Bank, 2023). The country achieved lower middle-income status in 2014 and in 2021 GDP per capita stood at US$ 2,082 (World Bank, 2023). **GDP growth** has, however, been erratic with the country registering high GDP growth rates in 2007, 2010 and 2021 at 6.9%, 8.1% and 7.5%, respectively (World Bank, 2023).

Inflation has largely been stable, averaging 6% between 2013 and 2021, conforming with the Central Bank of Kenya's (CBK) annual inflation target of between 2.5% and 7.5%. However, it surpassed a single digit in some years, reaching 26.2% in 2008 – the highest level registered in the twenty-first century. This coincided with the period immediately after the post-election violence of 2007-2008, which resulted in a shortage of goods and resources. Otherwise, inflation in Kenya has mainly been driven by drought and famine conditions resulting in the increase in food prices. Over the years, the country has recorded a negative current account balance, owing to the country's faster growth in merchandise imports, relative to exports.

In 2020, economic activities were disrupted by **the COVID-19 pandemic** which saw the economy contract by 0.3% (World Bank, 2023). The economy rebounded in 2021 to record a GDP growth rate of 7.5% (World Bank, 2023), mostly driven by services on the supply side and by private consumption on the demand side and benefiting from supportive domestic policies and the easing of COVID-19 restrictions and positive growth rates in agriculture, forestry and fishing.

Figure 1.1.
Kenya's GDP growth, inflation and the current account balance



Source: World Bank (2023).

Kenya's post-pandemic recovery has been strong although sustainability of growth remains a concern due to weak productive capacities

Specifically, the COVID-19 pandemic and related shocks adversely hit the Kenyan economy by disrupting international trade, services (transport, retail trade, tourism, events, leisure, etc.), industry (manufacturing and construction), and agriculture. The health system faced an unprecedented challenge to contain the spread of the virus and care for the infected. In addition, measures taken to slow down the rate of infection, including home confinement, travel restrictions, the closure of schools and entertainment venues, the suspension of public gatherings and conferences, and night curfews, negatively affected both production and consumption across the economy. Despite most sectors recording a contraction in growth, the economy was somewhat supported by accelerated growth in agricultural production (4.8%), construction activities (11.8%) and financial and insurance activities (5.6 %) (KNBS, 2022), which helped to limit the contraction of GDP to only 0.3% overall. As indicated, in 2021, the economy staged a strong recovery, although some sectors, such as tourism, remained under pressure. Sectors that were affected more severely by the pandemic, such as education, and the hospitality industry subsequently grew faster than those that were less severely affected.

In terms of its **structural composition**, on the one hand, the manufacturing sector contributed 8.7% to GDP at the moment of the country's independence in 1963. This share later declined to 7.2% in 2021. On the other hand, the agricultural sector's contribution to GDP declined from 38.5% in 1963 to 22.4% in 2021 (KNBS 2022). Increasingly, the Kenyan economy has become more service sector oriented.

In terms of **international trade**, the value of Kenya's merchandise exports increased from US$ 198 million in 1963 to US$ 6.7 billion in 2021, while merchandise imports increased from US$ 232 million in 1963 to US$ 19.56 billion over the same period (World Bank, 2023). Kenya is thus a net importing country and has not recorded a positive trade balance since 1963. In 2021, the country's trade imbalance amounted to US$ 12.82 billion. This may not be sustainable in the long term and should be an issue of concern for policymakers.

The top three export products in 2021 were food and beverages, industrial supplies and consumer goods, accounting for 43.1%, 25.5% and 27.6% respectively of total exports. The Economic Survey 2022 revealed that in 2021, horticulture, tea and coffee accounted for 24.8%, 19.6% and 3.9% of total exports by value, respectively. This amounted to 48.3% of total exports by value over the same period. Other major food exports include animal and vegetable oils and fats (KNBS, 2022).

Table 1.1.
Share of total exports, by broad economic category (%)

Category	2017	2018	2019	2020	2021
Food and beverages	47.8	47.6	44.2	46.4	43.1
Industrial supplies (non-food)	23.7	23.6	24.0	23.8	25.5
Fuel and lubricants	1.3	1.0	1.2	1.0	1.0
Machinery & other capital equipment	1.3	1.3	1.9	1.8	1.8
Transport equipment	0.8	1.1	1.2	0.8	1.1
Consumer goods not elsewhere specified	25.2	25.4	27.5	26.2	27.6
Goods not elsewhere specified	0.00	0.00	0.00	0.00	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: KNBS (2022).

Food and agricultural raw materials are primary commodity exports and jointly contributed to 55.4% of Kenya's exports in 2021 (KNBS, 2022). A major limitation of primary commodity exports has been the significant volatility of international prices. This has created considerable uncertainty about export earnings. It is for such reasons that policymakers have been advocating for export diversification in commodity-dependent countries to improve their external position and overall, enhance economic performance and welfare (DeRosa, 1991). Export diversification in favour of manufactured goods would be preferred as these products are less vulnerable to price fluctuations in international markets.

In contrast to its balance on international trade in merchandise goods, Kenya exports more services than it imports. Nevertheless, there was a sharp decline in services export from US$ 5.6 billion in 2019 to US$ 3.7 in 2020 billion, a decrease of 33.5% (KNBS, 2022). This was most likely caused, in substantial part, by the COVID-19 pandemic. Exports subsequently recovered in 2021.

Transport and travel (see Table 1.2) are among the leading services exports for Kenya, contributing an estimated 30.5% and 17.3% of the total export of services in 2020 (UNCTADstat, 2022), respectively. International trade in services recovered in 2021 partly due to the 60.6% increase in travel receipts attributed to the recovery of international travel following gradual easing of travel restrictions, which had earlier been imposed to contain the spread of the COVID-19 pandemic.

Table 1.2. Export of services, by main category

(Percentage of the total export of services)

	2015	2019	2021
Transport	40.3	38.9	30.5
Travel	16.1	17.9	17.3
Other services	43.6	43.2	52.2

Source: UNCTADstat (2022).

As far as international **investment** is concerned, Kenya registered comparatively substantial FDI inflows between 2007 and 2020, peaking at US$ 2.2 billion in 2011 (WIR, 2022) with the inward stock reaching US$ 10.5 billion in 2021 (WIR, 2022). The trend has, however, been negative since 2012.

Overall, Kenya has made **substantial gains in socio-economic development**. In addition to becoming a lower middle-income economy in 2014, it recorded positive trends across several key social indicators. For example, Kenya's life expectancy in 2020 was 67 years, higher than Africa's average of 64, marking a significant improvement from 51 years in the year 2000 (World Bank, 2022a). Improved economic conditions and the availability of healthcare services to the population has resulted in the reduction of mortality in under 5-year-olds to 32.9 per 1,000 live births. The mortality rate for under 1-year-olds was reduced from 98.5 in 2000 to 41.9 in 2020 (KNBS 2022). The country's literacy levels improved from 72% in the year 2000 to 82% in 2021 (KNBS 2022). This is a major stride compared to the Africa's average of 70%. The World Bank's Macro Poverty Outlook (2022b) estimates that the share of the country's extreme poor (those who live below $1.90 per day) fell from 45.2% in 2009 to 34.4 % in 2019. This trend is expected to continue in the coming years and the extreme poverty rate is projected to fall to 32% by 2025. This will, indeed, be an achievement, considering Africa's average poverty level is 40%, with around 422 million people (30% of the continent's total population) living in extreme poverty in 2019 (Hamel, et al., 2019).

However, the country continues to face some **key challenges**, including poverty, inequality, corruption, climate change, continued weak private sector investment and the vulnerability of the economy to internal and external shocks.

The combination of weak productive capacities, mounting public debt, infrastructure gaps and high levels of unemployment pose further challenges for Kenya

Other challenges impacting the economy include mounting **public debt**, which currently stands at 65% of GDP (KIPPRA, 2022), large infrastructure gaps and limited employment opportunities especially among the youth.

Moreover, the gradually **declining share of manufacturing in GDP** illustrates Kenya's difficulties in advancing structural transformation. The process has been constrained by various factors, such as the high cost of electricity, inefficient logistics supply chains, high-cost credit and a lack of long-term financing, high taxation and macroeconomic challenges, among others. Past industrialisation policies and programmes have proven inadequate to trigger the country's industrial take-off. Additionally, there has been a weak link between the agricultural sector and industry. The agricultural sector is suffering from prolonged years of underinvestment.

With increasing population growth, **unemployment** remains a key challenge. ILO (2023) estimates that although the overall unemployment rate for people 25 years old and older is 3.6%, the youth unemployment (15–24-year-olds) is 13.4%.

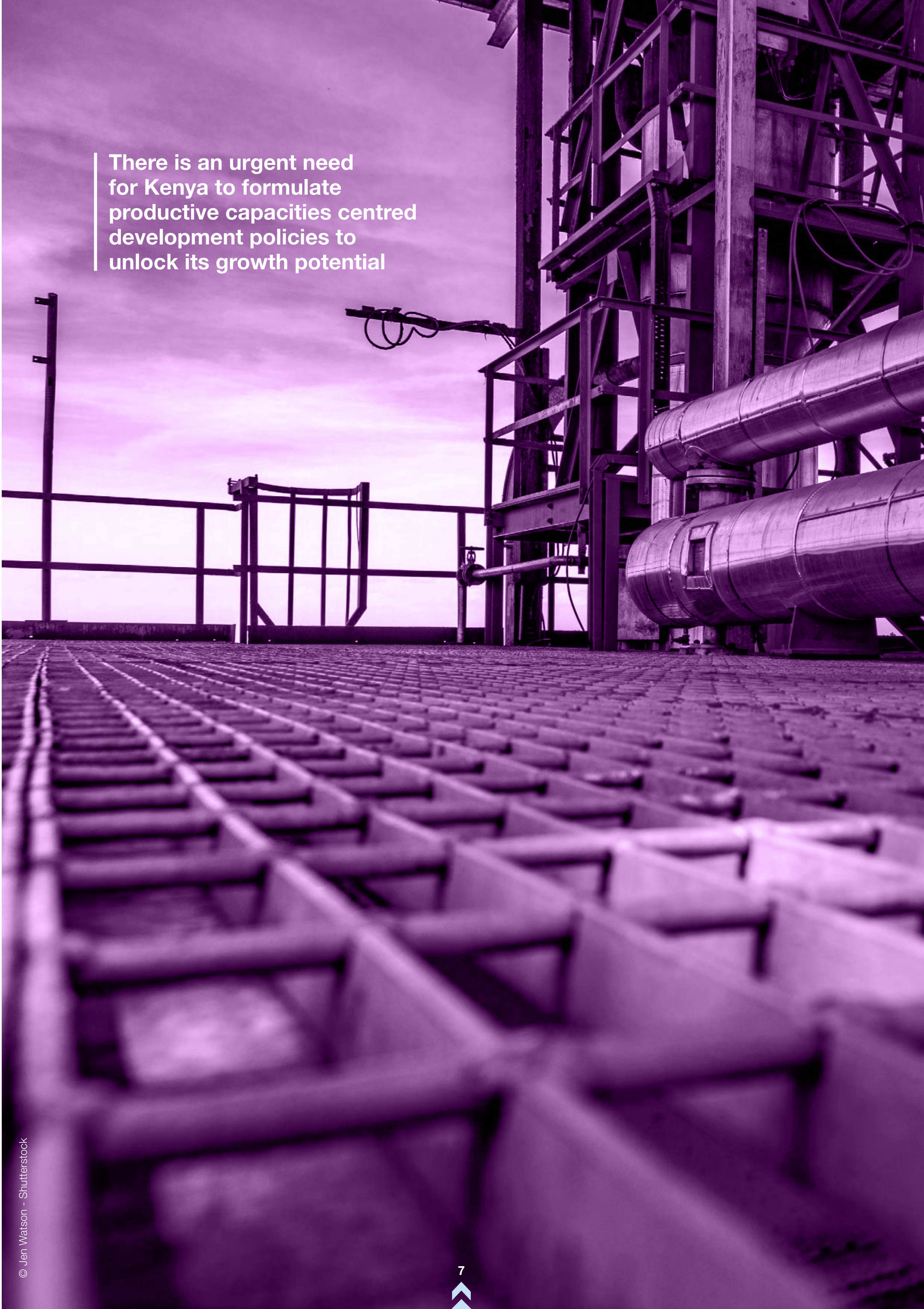
Kenya continues to witness high levels of **income inequality**, mainly reflected by the share of income and social services varying among different segments of the population. The country's Gini coefficient was 50.82 in 1961 and 55.38 in 2016 (Bigsten, et al., 2014; CRA 2022). This implies that a very unequal distribution of income has persisted through time.[3] According to the World Bank (2021), the share of income held by the lowest 20% of the population stood at 6.2%, while the income share held by highest 20% stood at 47.5% in 2015. The distribution of wealth has had an effect on the population's overall welfare and remains a contributing factor to social conflict, violence and crime, social instability and poverty.

According to UNICEF, only 59% of Kenyans have improved access to drinking water and only 29% of the total population has access to improved sanitation facilities. Since 2000, access to safe drinking water has increased by 12%, while access to basic sanitation has fallen by 5% (UNICEF, 2021). In addition, educational spending remains low at 5.3% of the GDP (World Bank, 2022d).

Therefore, there is an urgent need for the country to adopt both macroeconomic and microeconomic reform measures to unlock its growth potential. These need to focus on building domestic, economy-wide productive capacities. The overall necessary strategies are already considered. Kenya's development trajectory is guided by the country's long-term blue-print – **Kenya Vision 2030**, which seeks to create a globally competitive and prosperous nation with a high quality of life by 2030. Kenya Vision 2030 aims to transform Kenya into "a newly industrialising, upper middle-income country providing a high quality of life to all its citizens in a clean and secure environment" (Kenya Vision 2030). The Vision is implemented through 5-year medium term plans (MTPs). In order to accelerate socio-economic development, in 2017 and as part of Kenya Vision 2030, the Kenyan Government adopted a development blueprint, known as the "The Big 4 Agenda" clustered around four pillars: food security, affordable housing, universal health care and manufacturing. For the 2022-2027 period, the policy direction is determined by "The Plan: The Bottom-up Economic Transformation Agenda 2022-2027, henceforth "The Plan". "The Plan" is premised on five pillars, agriculture; micro-, small- and medium-sized enterprise' (MSME) economy; housing and settlement; healthcare; and digital superhighway and creative economy. Building productive capacities is critical for achieving these endeavours.

[3] The *Gini index* (Gini ratio or Gini Coefficient) is a statistical measure of economic inequality in a population. The higher the Gini index, the higher the level of inequality.

There is an urgent need for Kenya to formulate productive capacities centred development policies to unlock its growth potential



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2.

Part I: National productive capacities gap assessment

Kenya's overall PCI score has been gradually improving from 24.6 in the year 2000 to 37.8 in 2022. This progress enabled the country to remain with a higher ranking than the average for Sub-Saharan Africa[4] (31.6) and its neighbours, such as Ethiopia (30.5), Tanzania (31.9) and Uganda (21.4). Nevertheless, Kenya is only ranked 141st out of 194 economies in the world, remaining below such African economies as South Africa (the PCI score of 52.2 in 2022) and Egypt (44.1) and below the average of other developing countries' (ODCs) at 46.8.[5]

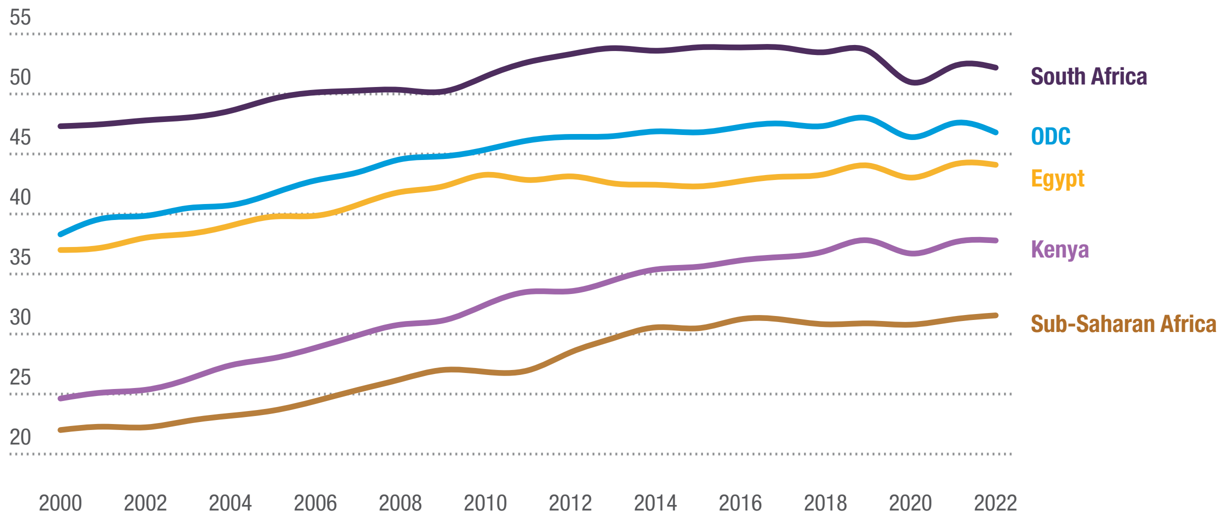
Natural capital

Kenya is endowed with substantial natural capital, including natural resources, environmental and ecosystem resources, and land. The natural resources include arable land, forests and land for livestock rearing, lakes and seashores with potential for fishing, as well as significant deposits of minerals.

Kenya's PCI score for the Natural Capital component (44.1) is significantly higher than that of ODCs as a group (38.4), but substantially lower than that of South Africa (53.4), the average of economies in SSA (50.2), and Egypt (49.7). Interestingly, it is lower than Kenya's neighbours such as Ethiopia (46.4), and Uganda (54.5), but slightly higher than that of Tanzania (43.5) (UNCTAD, 2023).

Although Kenya's productive capacities improved during the last two decades, the country is ranked 141st out of 194 economies, below regional comparators

Figure 2.1.
Kenya's overall PCI in comparison

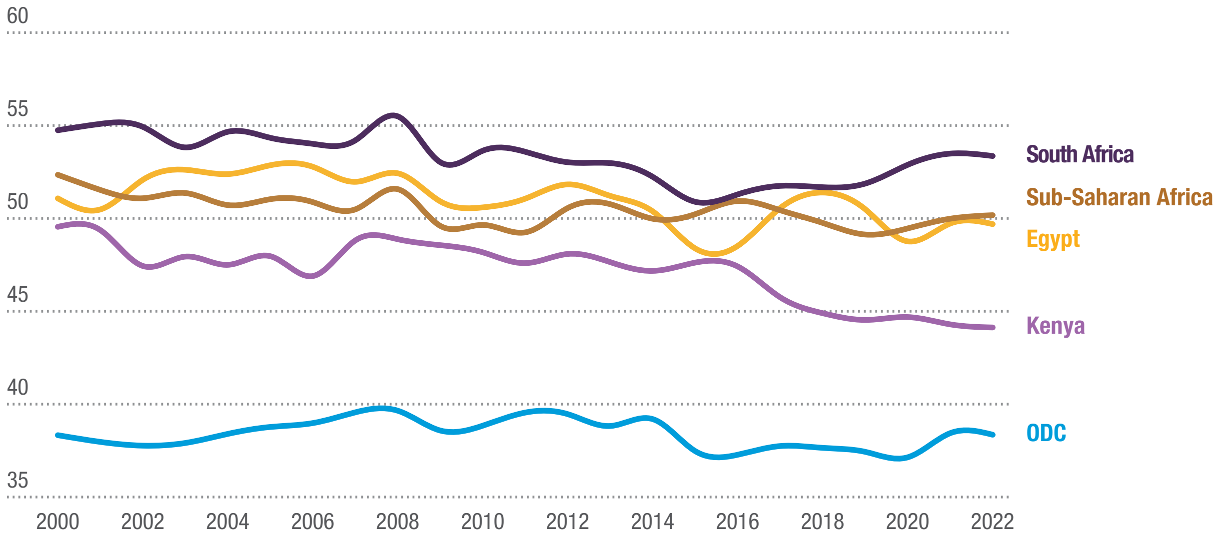


Source: UNCTADstat (2023).

[4] Sub-Saharan Africa (SSA) is defined as per definition used in the statistics of the United Nations institutions.

[5] For the purpose of calculations, ODC are considered developing economies as designated by the UNCTAD's Handbook of Statistics 2022 (https://unctad.org/publication/handbook-statistics-2022) without however Least developed Countries (as of 2023).

Figure 2.2.
Natural Capital (PCI)



Source: UNCTADstat (2023).

Nevertheless, the country's natural resources are depleting, and biodiversity is decreasing. The main causes are a growing human population, poverty, inequality in access to resources and a lack of regulatory capacity to address the related predicaments. Natural habitats are being converted to cropland, urban areas and other human-dominated landscapes. More than 60% of land with more than 900mm of annual rainfall has already been converted to agriculture (Houdet, et al., 2015). There is overexploitation and the illegal harnessing of renewable resources such as water, forests, fish and wildlife. Forest and woodland cover has been severely depleted by cutting wood for fuel and charcoal. Fish stocks are falling due to unsustainable overexploitation and wildlife is under threat due to poaching. Water, soil and air pollution are being experienced especially in urban areas, including in the industrial areas of Nairobi and Mombasa (Houdet, et al., 2015).

Transforming agriculture, the backbone of Kenya's economy, is vital for the country's inclusive growth and sustainable development

Of the total 582,646 square kilometres of Kenyan **land**, only 17% is suitable for rain fed agriculture (in the absence of developed irrigation infrastructure) supporting the production of tea, coffee, pyrethrum, horticulture and floriculture, and food crops such as maize, wheat, potatoes, pulses, and dairy farming. About 2.2% of the arable land is covered by forest reserves. Arid and semi-arid lands (ASALs) comprising grassland and savannah rangelands cover the remaining 80.8% (Kenya Land Alliance, 2015). The rangelands are home to 85% of the total wildlife population, and 14 million people who practice dry-land farming and pastoralism.

Agriculture remains the backbone of the Kenyan economy contributing 22.4% of the country's overall GDP (in 2021) (KNBS, 2022). The sector accounts for 60% of employment and 65% of exports (World Bank, 2018). Over 80% of the Kenyan population live in the rural areas and derive their livelihoods, directly or indirectly, from agriculture. The development of the sector is thus key to alleviating poverty and transforming the economy. The sector is dominated by smallholder production on farms of between 0.2 and 3 hectares, which account for 78% of total agricultural production and 70% of commercial production (World Bank, 2015).

Although the livestock subsector remains largely unexploited, its GDP contribution has stagnated at around 10-13% since independence, and at around 40% of the country's total agricultural output (KNBS, 2022). The sector supplies the domestic market with meat, milk, dairy products and other livestock products, and accounts for 2% of Kenya's total exports. These exports include live animals, hides and skins, dairy products and processed pork products. In addition, the sector provides raw materials for agro-processing industries. Kenya's livestock subsector is located mainly in the ASAL where it employs 90% of the local population. Thus, the development of the livestock subsector is critical in enhancing incomes and welfare of majority in the ASALs.

The policy towards the agriculture sector is a devolved function, in which the National Government is mandated to develop and implement the overall agricultural policy, while the county Governments tasks are related to crop and animal husbandry, livestock sale yards, county abattoirs, plant and animal disease control and fisheries. The Government has been pushing for the growth and transformation of the sector as outlined in the *Agricultural Policy 2021*, and the *Agricultural Sector Transformation and Growth Strategy 2019- 2029*, which envisions a vibrant, commercial and modern agricultural sector (MALD, 2022). Agriculture is also a key pillar of "The Plan", which identifies key areas in which the national Government, in collaboration with the counties, will pursue to transform agriculture. The policies include: providing small scale farmers with subsidised fertilizers and seeds and working capital; providing farmers with intensive agricultural extension support; adopting climate smart agriculture technologies (micro-irrigation, precision irrigation, hydro and aquaponics technologies) and the deployment of modern agricultural risk management instruments (crop and livestock insurance schemes and commodity market instruments such as forward contracts, futures contracts and price stabilisation schemes).

Another major use of land concerns **forestry**. The country has been witnessing a decline in forest cover due to deforestation and the conversion of forestland to farmland since the 1990s. By 2015, the forest cover stood at around 7%. In recent years, the Government has pursued deliberate measures to increase the forest cover. By 2021, the national forest cover stood at 8.3%, 1.7% short of the constitutionally accepted level of 10%. According to KNBS (2022), the forestry sector contributes 1.3% to the country's GDP, with an approximate economic output estimated at US$ 1.14 billion.

Forests provide a wide range of ecosystem goods and services that support the growth of Kenya's economy. Forests play a significant role by sustaining water catchments, supporting biodiversity and wildlife resources. They prevent soil erosion and provide habitats for many plant and animal species. Forests also provide raw materials to the timber and furniture industries. According to the Ministry of Energy, 93.2% of rural households use wood fuel (fuelwood or charcoal) as their primary fuel (MoE, 2019). To reduce reliance of rural and urban low-income population on wood fuel, the Ministry of Petroleum and Mining through National Oil Corporation of Kenya (NOCK) rolled out a National LPG enhancement initiative dubbed "*Mwananchi Gas Project*" in 2017. Under this project, the Government has been distributing 6 kg cylinders, trading under the brand name "Gas Yetu", at a discounted price of US$ 17 to poor households. The project seeks to enhance LPG penetration from approximately 10% to 70%. Under "The Plan", the Government also aims at establishing five million acres (20,000 km2) agro-forestry woodlots in drylands and modernise and commercialise the charcoal value chain through the adoption of modern kilns (The Plan, 2023).

Currently, it is the Kenya Forest Service (KFS), a state corporation, which is in charge of conservation and management of all forest resources in the country.

> Key policies to modernise agriculture and enhance productivity include: fostering R&D, developing climate smart agriculture, providing farmers with inputs and capital, expanding extension services and rural infrastructure, including irrigation

The National Forest Policy 2020 proposes, however, clear division of responsibilities between the national Government and county Governments where the Ministry responsible for forestry be in charge of national forest policy formulation and implementation while the county Governments are responsible for the implementation of national policies and county forest programmes, including the delivery of forest extension services to communities. The county Governments are also responsible for community forest conservation and management and deepening community participation through introduction of benefit-sharing arrangements.

Kenya faces enormous challenges in the management of its limited **water resources**. Natural endowment of freshwater is highly limited, with an annual renewable freshwater supply of about 647 cubic meters per capita, significantly below the 1,000 cubic meters per capita set as the marker for water scarcity (Mogaka, et al., 2005). Hence, the country is classified by the UN as a water-scarce country. At the same time, water plays a key role in the economy as a resource for urban and rural consumption, energy generation, agricultural development, industrial growth and livestock and tourism development.

Water resources are also unevenly distributed throughout country, 33% originates outside the country, whereas the surface water resources account for 90% of Kenya's total annual renewable supply. An estimated 75% of surface water originates as precipitation runoff from five "water towers" in Central and Western Kenya. The Lake Victoria Basin is the most productive, accounting for 59% of surface water and 54% of total renewable freshwater (USAID, 2021). Other sources of water include Tana River, Athi River and Ewao Ng'iro. In the Rift Valley Basin, the Mau Forest Complex accounts for 14% of Kenya's surface water, and includes Lake Turkana, the world's largest permanent desert lake, and Lake Baringo, Lake Naivasha, and Lake Magadi.

Renewable groundwater constitutes less than 12% of total renewable supply. At the same time, groundwater is critical in the arid and semi-arid areas where surface water is less available, including the Ewaso Ng'iro Basin and the north-western Turkana County.

Water Act 2002 guides water sector management in Kenya. The Ministry responsible for water heads the sector with the role of policy formulation, planning and resource mobilisation. The Water Resources Management Authority (WRMA) manages the water resources while the Water Services Regulation Authority (WASREB) manages water services.

To resolve the problem of water shortage, the Government embarked on the construction of various dam projects since 2013. The main dams which are in different levels of completion include Thwake (at a cost of US$ 715 million), Itare (US$ 243 million), Karimenu (US$ 209 million), Thiba (US$139 million), Muruny (US$ 45 million) and Nyeri (US$ 10.4 million) (Andeso, 2023). In addition, the Government, in collaboration with other stakeholders, is engaged in providing clean water through the drilling of boreholes and maintenance of modest water purification points (WPPs). According to KNBS (2022), the number of WPPs is expected to stand at 353 while the 4,241 boreholes were intended to be drilled in 2021/22 financial year. The private sector is expected to account for 89% of the total number boreholes drilled.

Under "The Plan", the Government seeks to achieve universal access to safe water by 2027, partly by shifting the infrastructure policy focus from the provision of large dams to household/community water projects, with an emphasis on harvesting and recycling. Where large reservoirs are viable, the Government will adopt a PPP model to develop water resources. The Government will also use modern technologies, including for desalination to develop aquifers using a PPP model.

Finally, Kenya is rich in mineral resources with known deposits of soda ash, fluorspar, titanium, gold, coal, manganese, iron ore, gypsum, diatomite, chromite, limestone, and silica sand. Indications are that the country is also potentially rich in rare earth minerals, and increased exploration is expected to lead to new mineral discoveries. According to KNBS (2022), the leading minerals in terms of volume include titanium (440 thousand tons), followed by soda ash (254.6 thousand tons). The total value of minerals produced increased recently by 33% from US$ 194 million in 2020 to US$ 258 million in 2021 (KNBS 2022).

The **mining and mineral resource** sector is a priority sector under the economic pillar of *Kenya Vision 2030*. Although underdeveloped, it holds significant potential. As the country is in the early stages of exploring its minerals wealth, including gas and oil, the mining sector currently contributes around 1% of Kenya's GDP. Nevertheless, the sector could in a foreseeable future contribute between 4% and 10% of the national output (MPM, 2013). The Government, through "The Plan" aims at creating a simple, stable, predictable, transparent, efficient, and unified regulatory framework for the mining sector and enhancing the collection of and access to geological data. In addition, the Government intends to develop a transparent licensing system and mechanisms for promoting investments in mining and value addition.

Key binding constraints

<u>Agriculture</u>:

- Small size of farms makes them uncompetitive.
- Declining performance of the sector in terms of growth, which is reflected in low yields per acre of land. Additionally, sector's development is challenged by being poorly institutionalised; high transportation costs emanating from dilapidated roads; the improper handling of agricultural output, including poor storage facilities, which leads to wastage.
- Limited high potential agricultural land and over-reliance on rain-fed agriculture. Only about 17% of the country's land is arable, which would enable its usage for rain-fed agriculture. The rest is arid and semi-arid and is not suitable for rain-fed agricultural production. Due to climate change, drought and floods are frequently becoming a common feature in the country, hence affecting agricultural production. Over reliance on rain-fed agriculture remains one of the challenges of increasing agricultural production and a major causes of food insecurity. According to the Ministry of Water and Irrigation, by 2021 only 600,000 acres across the country were under irrigation (NIA, 2019).
- Narrow base of products which limits its competitiveness. A handful of commodities (coffee, tea, dairy, maize, wheat, beef, and horticulture) provide livelihoods for over 85% of the population. In addition, the narrow base for agricultural exports renders the sector vulnerable to international market price fluctuations.
- Declining public expenditure in the sector. In the 2021/2022 budget, the sector was allocated 1.4% of the total state budget. This stands in contrast to the targets contained in the Maputo Declaration in which the Government should allocate at least 10% of its budget to the agriculture sector. In addition, there is limited investment in value-added activities, owing to the limited and inaccessibility of credit to farmers.

- Limited agricultural research and development and extension services. There are few officers delivering extension services and these mostly tend to favour wealthier farmers. There is also inadequate and declining funding to research institutions by the Government and development partners.
- Limited development of the livestock subsector. Despite its long-recognised potential, the subsector remains largely underdeveloped due to financial constraints.

Forestry:

- Population pressure due to increasing demand for agricultural land and wood products. Efforts to conserve natural forests and to ensure the sustainable provision of goods and services from the forests requires partnerships between local communities, the Kenya Forest Service and both levels of Government.
- Supply deficit of industrial raw materials because of the unsustainable management of forests. Currently the country is importing wood from the neighbouring countries. In 2018, the country spent US$ 83.4 million on wood imports. The KFS lacks enough resources to restock harvested industrial plantations.
- Lack of funds to hire labour for replanting forests. This has been a major challenge, especially after the discontinuation of the Shamba system in 1986. The Shamba system allowed communities to continue planting food crops for some time as they tend for trees, hence providing cheap labour for planting (UNEP, 2019).

Water resources:

- Lack of adequate funding for the water sector's development. The annual budget for the sector is approximately 2.8% of the national budget. This only covers around 44% of the required investment costs.

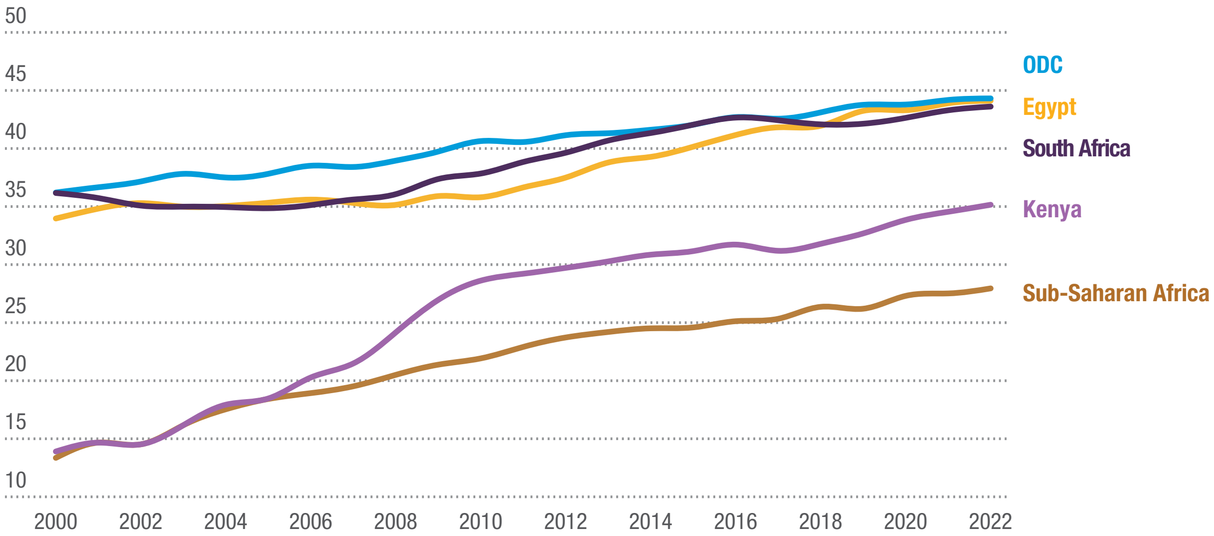
Mining:

- Lack of geological data and limited exploration efforts.
- Inadequate technological and human capacity – specialised skills, mineral processing industry and appropriate technology.
- No adequate policies in place: the sector is yet to formulate strategies for its marketing, promotion and value addition. Most minerals are exported in raw form.
- Inadequate funding: Mineral exploration has historically been funded by development partners and private investors, with the Government playing a limited role in exploration activities.
- Environmental degradation: The mining operations need to be undertaken in a sustainable manner so as to prevent harmful effects on the environment.

Human capital

Kenya's score in the Human Capital component of the PCI in 2022 stood at 35.2, a substantial improvement from 13.9 in 2000 (Figure 2.3). The score compares unfavourably with that of South Africa (43.6) Egypt (44.1) and ODCs (44.3). Nevertheless, it exceeds the values of neighbouring Least Developed Countries (LDCs) – Tanzania (27.8), Uganda (27.2) and Ethiopia (27.2). The country also scored better than the SSA average (28.0). The overall positive trend underscores the Government's commitment to strengthening its human capital for sustained and inclusive growth.

Figure 2.3.
Human Capital (PCI)



Source: UNCTADstat (2023).

Education and training are at the core of any effort to increase a country's productive capacities and to improve people's livelihoods. In recognition of this, the Government over the years has invested heavily in the sector, making it one of the few countries in Sub-Saharan Africa to sustainably fund education. The country spends on average 16% of its state budget on education; in 2021 that meant US$ 4.15 billion (KNBS, 2022). However, around 90% of this allocation goes into recurrent expenditures and only 10% is dedicated to the sector's development. A visible impact of the low development budget has been an overstretched infrastructure to cope with the growing number of students.

Education and training fall under various ministries and State agencies which can be segmented into three broad sectors namely: basic education, TVET (technical and vocational education and training) and university education, which are all coordinated by the Kenya National Qualifications Framework (KNQF). The External quality agencies include, the Commission for University Education (CUE), the Technical and Vocational Education Training Authority (TVETA), the Educational Standards and Quality Assurance Council (ESQAC) and the National Industrial Training Authority (NITA).

The country has witnessed an increased number of enrolments over the years. In 2021, enrolment in pre-primary, primary schools, secondary schools, TVET and universities stood at 2 million, 10.3 million, 3.7 million, 498 thousand and 562 thousand students, respectively. The increased enrolment is driven by the Government's policy of free primary and secondary education and the advancement of loans and bursaries for TVET and universities, through the Higher Education Loans Board (HELB). In the 2020/2021 fiscal year, the HELB provided US$ 23 million worth of loans to students. As a result of these polices, the completion and transition rates for primary and secondary schools stood at 87% and 85%, respectively, between 2017 and 2021, one of the highest achievements on the African continent (KNBS 2022). Overall, the number of educational institutions has been increasing over the years (Table 2.1). Between 2017 and 2021, the total number of TVET institutions and universities grew by 42% and 6.5%, to stand at 2,396 and 65, respectively.

Kenya's performance in the Human Capital component is impressive, with the score converging with top regional performers and other developing countries

Table 2.1.
Tertiary institutions, by category

TVET	2017	2018	2019	2020	2021
Public vocational training centres	899	982	1,149	1,156	1,156
Private vocational training centres	47	47	83	88	
Public technical and vocational colleges	91	101	191	230	255
Private technical and vocational colleges	627	628	742	820	885
National polytechnics	11	11	11	12	12
Total	**1 675**	**1 769**	**2 140**	**2 301**	**2 396**
Universities					
Public	31	31	31	31	32
Private	30	32	32	33	33
Total	**61**	**63**	**63**	**64**	**65**

Source: KNBS (2022).

On average, the country releases around 300,000 graduates from tertiary institutions and universities to the job market every year. The challenge, however, has been the absorption of this skilled labour force into the job market. As indicated, the ILO (2023) estimates that although the overall unemployment rate for people 25 years old and older is 3.6%, the youth unemployment (15–24-year-olds) is 13.4%.

To promote education, the Government in "The Plan" proposed to undertake the following: employ additional 116,000 teachers to bridge the current shortage in both primary and secondary schools; establish a National Skill and Funding Council to manage funding of higher learning; establish TVET institutions in the remaining 52 constituencies and set up a National Open University. To enhance skills development for recent graduates, the Government in collaboration with industry players, sought to establish a one-year paid national internship programme for all graduating students.

Another key aspect of human capital development is **health**. Health services in Kenya are devolved, meaning both the national Government and the 47 counties play a role in its provision. Under this arrangement, the county Governments are assigned the delivery of community health services, primary care services and county referral services, while the national Government is in charge of health policy, technical assistance to counties, and the management of national referral health facilities. In the 2021/22 financial year, the national Government expenditure on health services was US$ 821.7 million which was 3.3% of the total national Government expenditure. In the same year, the county Governments spend US$ 946.1 million which is approximately 23% of their total budgets. However, the largest share of the county health budget (82%) goes into recurrent expenditures and personnel expenses (MoH, 2022). Despite the significant increases in health sector budget allocations, the current allocation trends still fall short of the Government's pledged target of 15% of the total national budget to health as articulated in the 2001 Abuja Declaration (OAU, 2001).

The Government has made substantial progress in health services provision including making maternal healthcare free of charge in all public health facilities from 2013, and prioritising and piloting the universal health coverage (UHC) programme from 2019/2020. Another notable achievement is the scaling up of the National Health Insurance Fund (NHIF) to increase insurance coverage among the poor, in order to guarantee access to medical care and at minimal cost.

As a result, the NHIF membership increased from 8.5 million people in 2018 to 23.4 million in 2021, a growth of 175%. The members' contribution also increased over the same period from US$ 464 million to US$ 528.7 million (KNBS, 2022). This increase was achieved partly through greater enrolment and change of contribution structure from a flat rate of US$ 2.6 a month to a graduated contribution ranging from US$ 1.3 to US$ 15 per person. Between 2019 and 2021, the number of health facilities in the country increased from 13,790 to 14,600, while the number of hospital beds and cots increased from 91,037 to 100,183, a growth of 10% (KNBS, 2022).

In regard to the health professionals, the number of registered professionals increased from 200,912 in 2020 to 222,870 in 2021 (KNBS, 2022). The number of middle level medical graduates at the Kenya Medical Training College (KMTC) increased more than three times from 4,114 in the 2019/20 academic year to 12,437 in 2020/21. The total number of university undergraduate and postgraduate health science students increased by 4.3% to 23,164 while the total number of medical graduates and post-graduates increased by more than two-fold to 3,399 in 2021 (KNBS, 2022).

Despite these impressive figures, Kenya's health indicators continue to lag behind. The infant mortality rate in Kenya remains high at 33 deaths per 1000 live births, while the overall death rate stood at 5.09 per 1,000 people in 2021. In addition, the country had 26.3 registered medical officers per 100,000 people in 2020, 0.2 physicians per 1000 people, 14 doctors per 100,000 people, 42 nurses per 100,000 people and 1.4 hospital bed per 1000 people in 2018 (World Bank, 2022a). This does not meet the WHO recommended minimum of 21.7 doctors and 228 nurses per 100,000 people, respectively (Masibo, et al., 2019). The COVID-19 pandemic has exposed the weaknesses of the Kenyan health system, especially in financing and governance, including the limited capacity of healthcare workers, hospital infrastructure and the inefficiency and integrity of the public health sector's supply chain.

The Universal Health Coverage (UHC) system is a key pillar of "The Plan". The Government aims to achieve UHC by expanding NHIF coverage to the majority of the population and by employing an additional 20,000 healthcare workers. The county Governments plan to enhance the Primary Health Care (PHC) system by employing more community health workers. In addition, the National Treasury aims to allocate more funds for the improvement of health care facilities across the country. Other targets include: setting up an emergency medical treatment fund to cater for emergency, cancer treatment and referral hospitals and establishing a commission to manage health care human resources.

Key binding constraints

- <u>Mismatch between the supply of skills and demand</u>: According to the 2010/2011 National Manpower Survey Basic Report (NMS), each year, a substantial share of graduates end up in careers for which they were not trained. Federation of Kenya Employers Report (2018) shows that over 63% of recruited staff is at entry level. To bring these recruits to the adequate competence level, employers have to retrain the graduates, incurring additional costs.
- <u>"Brain drain" and shortages of health care professionals</u>: Professionals in nursing, teaching, engineering and health are leaving the country each year to seek better employment opportunities abroad. Indeed, every year, almost 40% of newly graduated doctors leave the country to seek more lucrative opportunities abroad.

Kenya's performance in the Transport component is better than the average for SSA. However, there is a need to improve institutional and regulatory frameworks, reduce cost and foster linkages with the rest of the economic sectors

The average Human Flight and Brain Drain Index[6] value for Kenya for the period 2007-2021 was 7.56, whereas for the year 2022 it was 6.7, positioning the country at 46th place out of 173 states (The Global Economy 2022).

- Infrastructure deficiency: This is particularly critical in terms of primary and secondary school education and concerns classrooms, access to water and electricity. It is likely to be aggravated with the implementation of a competence-based curriculum (CBC) which envisages a transition rate of 100% for pupils from primary to secondary education. Moreover, heath care infrastructure remains inadequate and the quality of existing infrastructure is poor. Most health care centres in the country do not have some of the vital equipment and medical products.
- Financing: The Government's budget for the healthcare sector is not adequate with only 3.3% of total Government expenditure dedicated to the sector.

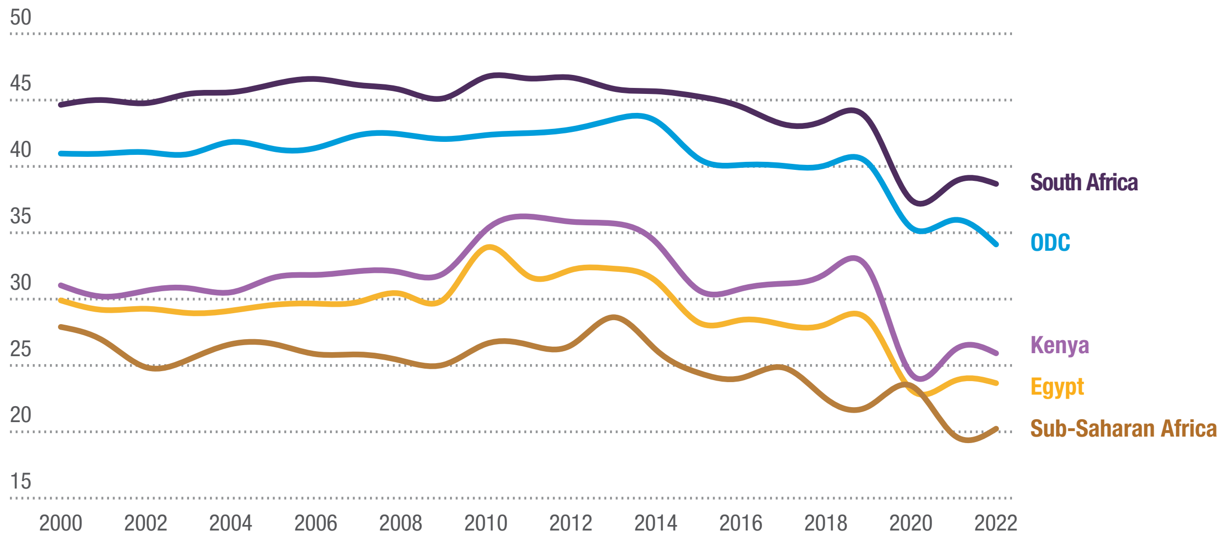
The challenge is worsened by the declining support by development partners in dealing with HIV/AIDS and tuberculosis (TB), which dropped by almost 35% since 2019.

- Policy and legislative barriers: Effective procurement and distribution of drugs and medical supplies, health financing for UHC and the provision of adequate essential health commodities remains a challenge.

Transport

The development and maintenance of transport infrastructure is important prerequisite for economic growth, as it influences production costs, employment creation, access to markets, and investment. Kenya's transport sector accounts for about 8.3% GDP and it covers all modes of transport; road, air (airports, water (ports), pipeline as well as other related services (GIZ, 2021).

Figure 2.4.
Transport (PCI)



Source: UNCTADstat (2023).

[6] The Human Flight and Brain Drain Index considers the economic impact of human displacement (for economic or political reasons) and the consequences this may have on a country's development. The Index's values range from 0 (low) to 10 (high).

Table 2.2.
Transport and storage – value of output
(US$ million)

	2017	2018	2019	2020	2021
Road transport	10 391	11 975	13 321	13 368	15 524
Railway transport	40.0	99.0	129	109.1	143
Water transport	399	458	477	475	495
Air transport	1 475	1 757	1 881	965	494
Storage and other services incidental to transport	1 422	1 619	1 836	1 775	2 197
Pipeline transport	233	261	277	231	243
Postal & courier services	169	261	182	162	168
Total	**14 130**	**16 354**	**18 103**	**17 085**	**19 264**

Source: KNBS (2022).

The PCI score for the Transport component in Kenya has remained largely constant, recording a slight contraction, as other countries did in 2020 (Figure 2.4). Egypt's score (23.7 in 2022) and the average for SSA (20.2) remain lower than Kenya's (25.9), while South Africa's (38.7) and the average for ODCs (34.1) remain higher.

According to KNBS (2022), the performance of the transport sector improved significantly following the easing of restrictions on the movement of persons that had been instituted by the Government to curb the spread of the COVID-19 pandemic in 2020. This included the resumption of both domestic and international flights and the lifting of a curfew that prevented night-time travel. Consequently, there was a marked improvement in passenger transportation by air, roads and rail. The transport sector recorded a 12.7% increase in the value of its total output from US$ 17,085 million in 2020 to US$ 19,264 million in 2021 (KNBS, 2022).

The main policy driving the transport sector is the *Integrated National Transport Policy, 2009*. It covers the legal, institutional and regulatory framework for the sector, as well as issues related to infrastructure planning, development and management.

Road transport

The road network is a key element of infrastructure development, representing a significant portion of the Government's investments in fixed assets. It accounts for over 80% of the country's land freight and passenger traffic, (Oguso, 2015). The value of output in the road transport subsector rose by 16.1% from US$ 13,368 million in 2020 to US$ 15,524 million in 2021 and accounted for 80.5% of the value of total output of transport sector (see Table 2.2).

The responsibility for the management of the road network in the country falls under the State Department for Roads in the Ministry of Roads and Transport. The Department delivers the road development and maintenance function through the Kenya Roads Board (KRB), which is responsible for the management of the Road Maintenance Levy Fund (RMLF). The RMLF is replenished from fuel taxes and transit toll collections. Other critical institutions for road development and management include the Kenya National Highways Authority (KeNHA), responsible for international trunk roads, the Kenya Rural Roads Authority (KeRRA), responsible for national trunk roads, the Kenya Urban Roads Authority (KURA), responsible for urban roads in cities and municipalities and the Kenya Wildlife Service (KWS), which is responsible for the roads in national parks and national game reserves. In addition, there are county roads which are managed by the county Governments.

The Government plans to position Kenya as a regional transportation hub in line with the African Union's Agenda 2063 goals. In this vein it has expanded the Northern Corridor which is a multimodal trade route linking the landlocked countries of the Great Lakes Region with the Kenyan maritime seaport of Mombasa. These countries, particularly Uganda, are Kenya's important trading partners with opportunities for trade expansion. Road networks have also been expanded to connect the country with Tanzania, Kenya's 5th largest export destination (KNBS 2022). In the North, the Government is developing the Lamu Port-South Sudan-Ethiopia-Transport (LAPSSET) Corridor to connect the Lamu port with Ethiopia and South Sudan. All these initiatives are meant to facilitate trade in the region. Moreover, in 2022 the Nairobi expressway was completed connecting Jomo Kenyatta International Airport (JKIA) to Nairobi's Central Business District. The US$ 648 million road was funded through a PPP, a new funding model for infrastructure projects in the country.

In "The Plan", the Government proposes to complete 3,800 km of roads currently under construction. In addition, it plans to rehabilitate or reconstruct a third of the 63,575 km of classified roads, which are in need of repair. The Government also intends to prioritise the upgrading and maintenance of rural access roads as well as roads in urban informal settlements and critical national and regional trunk roads that have the highest immediate economic impact.

Rail transport

Railway transport is the second most-used mode of transport after roads in the country, with 2,778 km of lines. Rail transport in Kenya consists of a meter-gauge railway (MGR) network and a new standard gauge railway (SGR). Even though rail freight has been in decline, it continues to play a critical role in the transport of export and import goods, which account for about 35% of the long-haul freight traffic handled in the port of Mombasa.

In 2017, Kenya opened the 579 km Nairobi-Mombasa SGR at a cost of US$ 3.8 billion. This line runs parallel to the old MGR Kenya/Uganda railway line. In 2019, the SGR was extended to the tourist hub of Naivasha (76 kilometres from Nairobi) at a cost of US$ 1.5 billion, where an inland dry port was established. It is expected that the inland dry port will open more trade opportunities between Kenya and trading partners in the region such as Uganda, South Sudan, the Democratic Republic of the Congo and Rwanda.

The value of output from the railway subsector grew by 31% from US$ 109.1 to US$ 143 million between 2020 and 2021. This is attributed to the increase in the revenue from cargo haulage and passengers from both SGR and MGR. The railway system is run by the Kenya Railways Corporation (KRC), a state corporation established in 1978 under the Kenya Railways Act Cap 397. The corporation currently carries a freight volume of approximately 2.5 million metric tons and has the potential to increase the volume to 5 million tons.

The Government is working on the extension of the SGR to the Uganda border. Moreover, to reduce the congestion in the capital city, Nairobi, it plans to upgrade the aging Nairobi commuter railway system by acquiring more Diesel Multiple Units (DMUs) trains, with an overall goal of constructing a new commuter railway system.

Air transport

Air transport is a major driver of Kenya's economy in boosting tourism and fostering trade, logistics and foreign investment in the country. The Kenya Civil Aviation Authority (KCAA) manages the air transport in the country. The authority mandate is to plan, develop, manage, regulate and operate a safe, economically sustainable and efficient civil aviation system. According to the International Air Transport Association (IATA), aviation accounts for 4.6% of Kenya's GDP (KIPPRA, 2020a).

The air transport subsector was among the most severely impacted by the COVID-19 pandemic, due to the restrictions of movement across borders. As a result, between 2019 and 2020, there was a marked decline in the number of passengers by 63% (Table 2.3). The sector has, however, made a remarkable rebound as the number of domestic passengers rose by 66% from 2.3 million to 3.8 million, while that of international passengers increased by 29% to 2.7 million between 2020 and 2021 (KNBS, 2022). IATA projects that in the next 20 years, the Kenyan market could more than double in size, resulting in an additional 11.3 million passenger journeys. Moreover, it could create over 449,000 more jobs, and boost GDP by US$ 11.3 billion (IATA 2018).

In addition to the direct contribution to the economy, the subsector contributes indirectly through the provision of airport operators, on-site enterprises (restaurants and retail at the airport), air navigation service providers and spending by tourists, among others.

The major players in the subsector include Kenya Airways and JKIA, one of the busiest airports in handling cargo in Africa. In 2021 it handled 363,204 tons of cargo. Kenya exports a wide range of horticultural products across the globe through the JKIA, including French beans, snow peas, sugar snaps, broccoli, avocados, passion fruit, mangoes and cut flowers. The airport serves more than 40 passenger airlines and 25 cargo airlines. However, the national carrier, Kenya Airways is believed to be struggling to take advantage of the cargo business. The airline recorded heavy financial losses which impacted negatively its operations over the years. Ultimately, the Government plans to develop a turn-around strategy for Kenya Airways to ensure that the airline does not depend on funding from the Exchequer beyond December 2023.

Maritime and inland waterways transport

The Kenya Ports Authority (KPA), a state corporation under the Ministry of Roads and Transport, is responsible for the management of maritime transport.

Table 2.3.
Passengers and cargo, by air traffic

	2017	2018	2019	2020	2021
Passengers (thousands)					
Domestic	3 997	4 781	4 865	2 318	3 838
International	6 121	6,940	7 148	2 132	2 747
Total	10 118	11 721	12 011	4 450	6 585
Cargo (tons)					
Landed	436.5	614	639	500.8	478.3
Loaded	180.5	223.6	450.1	883.7	1 195.1
Total	617	837.6	1 089.1	1 384.5	1 673.4

Source: KNBS (2022).

It is mandated to develop, maintain, operate, improve and regulate all scheduled seaports along Kenya's coastline. The KPA manages 15 ports in the country including Mombasa, Lamu, Malindi, Mtwapa and Kisumu.

The port of Mombasa is Kenya's busiest and largest seaport, serving the hinterland and countries such Burundi, the Democratic Republic of the Congo, Ethiopia, Rwanda, Somalia, South Sudan, Tanzania, and Uganda. It stands 117th among the world's best container ports and is ranked 5th on the African continent, according to the Marine Insight (2021), with a capacity of 2.1 million twenty-foot equivalent units (TEUs) as of 2022. Mombasa is the main port of exit and entry for Kenya – over 90% of imports and exports are conducted by sea through the port. The World Bank's global Container Port Performance Index (CPPI), however, ranked it 293rd out of the total 370 ports in 2021. The low ranking is associated with delays, congestion and management challenges. Nevertheless, it has undergone a major expansion in recent years; its equipment was modernised, the entrance channel dredged, and the basin broadened so as to enable the port to handle bigger ships. To consolidate the Mombasa port as a critical transport and logistics hub in the region, the Government also initiated and completed major infrastructure developments between 2018 and 2021. These include: (i) the Likoni floating bridge to connect the Mombasa port with the mainland; (ii) construction of second container Terminal (CT2) Phase II, which seeks to expand container handling capacity with an additional 450,000 TEUs; and (iii) Relocation of Kipevu Oil Terminal for safety reasons and to increase handling capacity.

The Lamu port is also a major infrastructure project that is under construction by the Government. Once completed, it will have 32 berths making it the largest deep-water port in SSA. One of the berths was fully operational in 2021 and two others were completed. The port seeks to open northern parts of the country in addition to providing a link to South Sudan and Ethiopia through the LAPSSET (Lamu Port-South Sudan-Ethiopia-Transport) Corridor project.

As far as inland water ways are concerned, the focus has been on the Kisumu Port. The port is connected to Mombasa port by road and rail lines and is used to export petroleum products to the East African region. Between 2019 and 2021, the Government refurbished the Kisumu Port and revitalised its wagon ferry. Moreover, it launched the Kisumu Shipyard to facilitate efficient repair and rehabilitation of ships for use in Lake Victoria. The inland waterways in the country remain largely unutilised. The port is expected to boost East African trade and enhance economic development in the region.

The Government plans to continue the modernisation and computerisation of Mombasa port facilities so as to improve its operational performance.

Key binding constraints

- Regulatory framework and bureaucracy: Fragmented nature of the institutional and policy framework, conflicting mandates of various regulatory bodies within the Ministry of Roads and Transport lead to poor coordination and inefficiency. In terms of air transportation, a lack of regulation and Government actions including proper policies, limited aviation experts and skills, high airport taxes and fees, weak connectivity and restrictions on transit visas and facilities constitute other challenges. At the same time, many institutions are involved in the clearance of goods at the water port including KRA, KBS, and KEPHIS, among others. The effect is: increased bureaucracy, delays and inefficiencies.
- Infrastructure deficiency: Most of the MGR infrastructure is outdated and the overall railway system has been neglected and left in disrepair. The MGR trains operate at a very low speed; it takes them approximately 12 hours to cover a distance of 264 kilometres. Moreover, most of the SGR system is disconnected from the existing rail network, and its

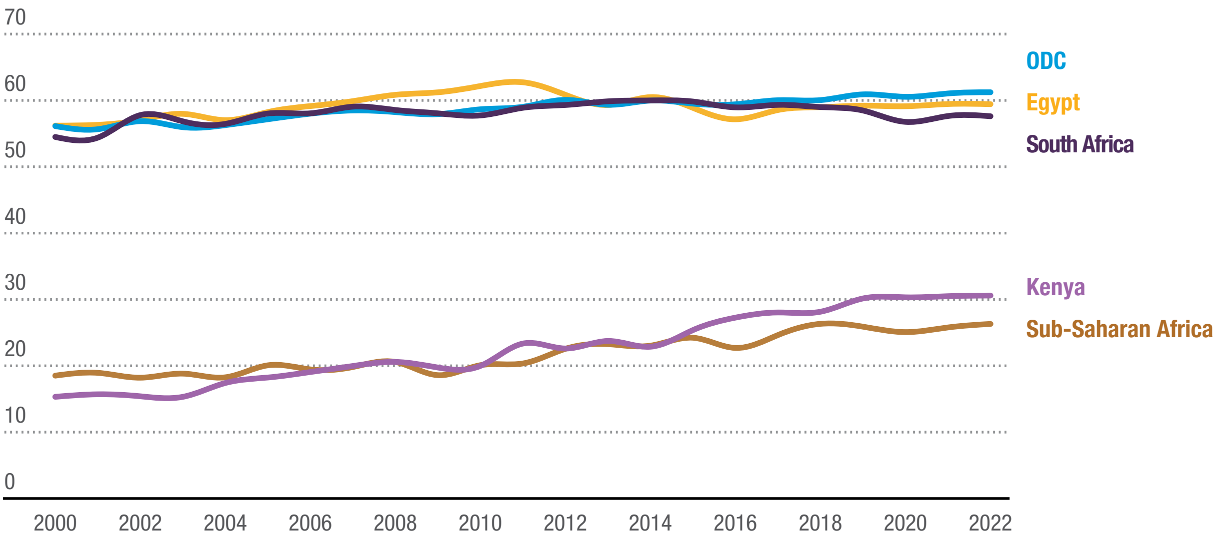
terminals and depots are often far from centres of economic activity or towns. Inadequate and poor airport infrastructure, lack of physical and human resources, limited connectivity, and a lack of transit facilities remain challenges. In terms of water transport, slow clearing and forwarding processes, poor education and training of clearing agents, poor pricing and a lack of automation are key bottlenecks in the subsector. These challenges cause the delay of goods at the port. Infrastructure deficiency is also illustrated by poor planning. For example, the transport network does not adequately serve the possible local centres of growth, such as agricultural production or others. Reliable transport links are needed to enable this production and other goods to be traded and exported.

- Cost: Kenya's railway transport system, like the rest in SSA, is a precarious and expensive venture mainly because of the difficult terrain, low demand, and the scarcity of human and financial resources.
- Financing: Securing appropriate public and private financing required for the development and management of roads network remains a challenge. Lack of funds to complete the Naivasha-Uganda section calls into question its long-term viability. The KRC is unable to raise funds from its current operations for the purpose of reinvesting due to the existing backlog of financial requirements. It needs a partner with the required financial resources and the technical know-how to back up its operations. Having been making losses over the years, Kenya Airways, the national carrier, experiences serious financial difficulties.

Energy

Kenya Vision 2030 identifies the need for reliable and affordable energy as an enabler for the country's socioeconomic development. Securing adequate, affordable and reliable energy supply to meet current and future demand is necessary to reduce the cost of doing business, spur the growth of enterprises and industries, and generally improve the overall welfare of the people. Despite its importance, the sector continues to perform poorly.

Figure 2.5.
Energy (PCI)



Source: UNCTADstat (2023).

Kenya's PCI score for the Energy component of the PCI increased from 15.3 in 2000 to 30.6 in 2022. However, it lags substantially behind that of South Africa (57.6), Egypt (59.4), and ODCs (61.2). It is higher than the average for SSA (26.3) and Kenya's LDC neighbours – Ethiopia (21.7), Tanzania (22.1) and Uganda (15.9). The trend is improving as the country has invested heavily in the sector in recent years.

In terms of access to electricity, the country has made tremendous progress in rural electrification. The rural population with electricity access increased from 38% in 2015 to 71% in 2020 (KNBS 2022), whereas the number of consumers connected under the rural electrification scheme grew from 1.5 million in 2019/20 to 1.91 million in 2020/21, mainly drawn from domestic and small commercial categories (KNBS 2022). According to the World Bank, (2021) Kenya is a leading country in the East African region in terms of electricity access. The rural electrification drive in Kenya has been pursued through the Government's "Last Mile Project". For the urban population, 95% had access to electricity by 2020.

Despite the Government allocating substantial resources for the development of the energy sector, energy tariffs remain high. This is attributed mainly to expensive and uncompetitive power purchase contracts entered into with Independent Power Producers (IPPs) and high transmission and distribution losses. The high energy tariffs negatively impact enterprise development and the consumption at household level.

Indeed, one of the key factors that impacts the performance of the manufacturing sector – the main consumer of energy – is electricity supply and especially its cost, reliability and availability. The cost of power for the Kenyan manufacturing sector remains high in comparison. According to the Kenya Association of Manufacturers (KAM), domestic manufacturers pay an electricity tariff of US$ 0.16 per kWh, compared to South Africa' and Egypt's US$ 0.03, Ethiopia's US$ 0.05 and Uganda's US$ 0.12 (KAM, 2020).

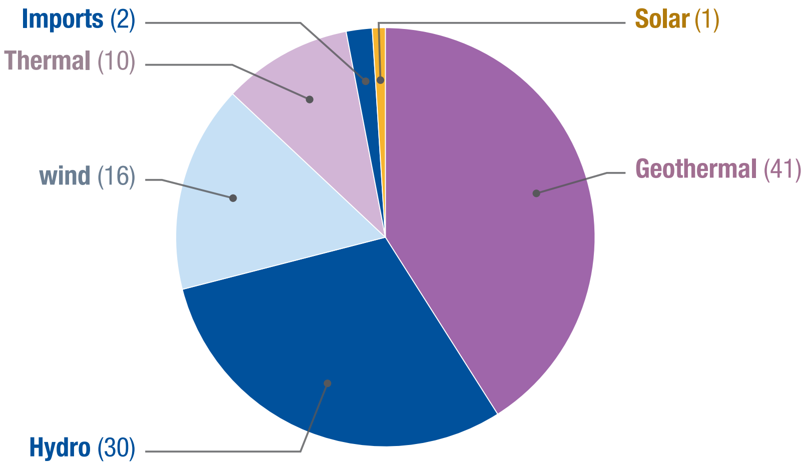
The high cost of electricity results in a high cost of production, hence affecting the competitive advantage of locally produced goods.

64.7% (8.1 million) of households in Kenya use wood as their primary cooking fuel, followed by LPG at 19% (2.4 million) of households, and charcoal –10% (1.3 million). Only 3% of households own an electric cooking appliance such as a mixed LPG-electricity stove, electric coil stove or a microwave (MoE, 2019).

The main policies guiding the sector include the National Energy Policy of 2018, the Energy Act of 2019, the Petroleum Act 2019 and the Renewable Energy Auction Policy (REAP) of 2021. The latter outlines the approach to renewable energy procurement based on competitive auctions. Another guiding document is the Least Cost Power Development Plan (LCPDP), a multiagency planning document intended to guide investment decisions in the power sector. The World Bank and the African Development Bank (AfDB) are supporting the establishment of the futures market under the Eastern Africa Power Pool (EAPP), to guide long term bilateral contracts.

The Ministry of Energy (MoE) is responsible for setting sector policies and overseeing their execution. The institutions in charge of power generation include the Kenya Electricity Generating Company Plc (KenGen), the Geothermal Development Company Limited (GDC)**,** as well as IPPs. The transmission of power is the mandate of the Kenya Electricity Transmission Company Limited (KETRACO) and the Kenya Power & Lighting Company Limited Plc (KPLC). The organisations assigned the role of distribution of power include Rural Electrification and Renewable Energy Corporation (REREC) and KPLC. KPLC therefore acts as a transmitter, distributor and retail of power to the consumer. Other key institutions within the Ministry include the Energy & Petroleum Regulatory Authority (EPRA), which is responsible for regulating the entire energy sector, including petroleum.

Figure 2.6.
Power generation, by source, 2021
(Percentage)



Source: KNBS (2022).

The electricity sector relies largely on renewable energy sources such as hydropower and geothermal, with the supplement of imported fossil fuels. Between 2017-2021, 89.6% of electricity was produced from renewable sources, while in 2021 geothermal remained the leading source of electricity generation accounting for 40.6% of the total, followed by hydro generation at 29.6% and wind at 16% (Figure 2.6) (KNBS, 2022). The generation of electricity from thermal sources – oil/diesel/kerosene generators – the only non-renewable source, accounted for 10.2% of the total national production. Thermal power plants have been charging the highest price in excess of US$0.20 per unit of electricity produced and injected into the national grid. Nevertheless, although pricy and polluting, thermal plants have over the years offered Kenya a crucial backup option as standby plants that swing into action at a moment's notice during downtimes in geothermal and weather-dependent hydropower production.

Table 2.4.
Demand and exports of electricity (GW)

Category	2017	2018	2019	2020	2021
Domestic and small commercial	5 928.3	3 665.9	3 780.1	3 829.1	4 088.6
Large & medium (commercial and industrial)	4 199.0	4 336.5	4 441.0	4 281.0	4 728.4
Off-peak	42.2	30.4	-	-	-
Street lighting	60.1	68.2	63.9	74.5	99.6
Rural electrification	580.6	601.3	569.0	611.9	648.80
Total demand	**8 410.1**	**8 702.3**	**8 854.0**	**8 796.4**	**9 565.4**
Exports to Uganda and Tanzania	12.3	13.6	16.2	16.52	18.22

Source: KNBS (2022).

The country's total electricity generation increased by 17.5% between 2017 and 2021, from 10,359.9 GW to 12,126.7 GW (KNBS, 2022). The country also imports electricity from Tanzania, Uganda and Ethiopia through bilateral or cross border agreements. The importation of electricity increased from 229.6 GW in 2017 to 288 GW in 2021 (KNBS, 2022). On the other hand, the demand for electricity has been increasing overtime, from 8,410 GW in 2017 to 9,565 GW in 2021, an increase of 13.7% (Table 2.4). This increase is accounted for by the rise in demand for electricity by domestic and small commercial users (15.8%), medium and large (commercial and industrial) users (12.7%) and rural electrification (11.7%).

One of the main challenges facing the electricity sector is transmission and distribution losses. Between 2017 and 2021, the losses increased by 46% from 1937.5 GWh to 2831 GWh. Overall, the transmission and distribution losses amount to almost 22.8% of the total power generated in the country each year (KNBS 2022).

"The Plan" proposes a number of measures to be undertaken to reduce the cost of power. These include: reforming KPLC to delink the Government from operations; eliminating KPLC dominance in power distribution; modernising transmission and distribution network; and phasing out power generation from heavy fuel oil (HFO). Additionally, the Government plans to enhance the development of geothermal resources; establish an LNG storage facility in Mombasa; institute a policy, regulatory and financing framework for off-grid community-owned development projects (mini and micro-grids); and enforce transparency and accountability in the electricity sector.

As far as oil and gas are concerned, petroleum products are predominantly used in transport, commercial and industrial sectors. Kenya imports its petroleum, mainly from the United Arab Emirates (UAE) and Saudi Arabia. The Ministry of Energy and Petroleum coordinates this activity with oil marketing companies through the process known as the open tender system (OTS). The Kenya Pipeline Company provides product movement infrastructure, including storage and oil pipeline services. Between 2020 and 2021, the total volume of petroleum products imported into the country rose by 12% to 6.4 million tons leading to an increase in the import bill from US$ 1.78 to US$ 2.97 billion (KNBS, 2022). This was mainly attributed to the recovery of the road transport and aviation sectors, which pushed up the demand for petroleum products following the easing of COVID-19 containment measures. In the same period, the value of total exports of petroleum products declined by 30.6% to US$ 252.1 million (KNBS, 2022). Kenya also exports refined petroleum products to the UAE, the Netherlands, Uganda and Malaysia, among others.

As far as domestic oil and gas resources are concerned, exploration began in 1956 and currently the country has four petroleum exploration areas: Lamu Basin, Anza Basin, Mandera Basin and Tertiary Rift Basin. By December 2015, seventy-four wells had been drilled with twelve hydrocarbon discoveries to date, nine of which are in the Turkana County. The other three are in Anza Basin and Offshore Lamu (KPC, 2020). Oil and gas exploration is coordinated by the National Oil Corporation of Kenya (NOCK).

In 2012, the Tullow Oil company discovered oil in the Lokichar sub-basin of the Turkana County (Tertiary Rift Basin) and estimated its volume at 560 million barrels of oil. In 2019, Kenya exported its first 200,000 barrels of crude oil valued at US$ 104.3 million to ChemChina company (KIPPRA, 2020b). Though small in volume, exports may grow as the country continues to explore its sectoral opportunities. This will be critical for economic transformation, as oil imports constitutes a major share (15.6%) of the total value of all imports.

To develop the sector, "The Plan" outlines the following measures: creating a good environment to attract investors to the sector; intensifying oil and gas exploration in Lamu Basin; and constructing an oil pipeline to connect Lokichar sub-basin to Lamu port; and taming the increasing petroleum prices in the country. The Government will set up a legal framework to enhance the management of the Fuel Stabilisation Fund.

Key binding constraints

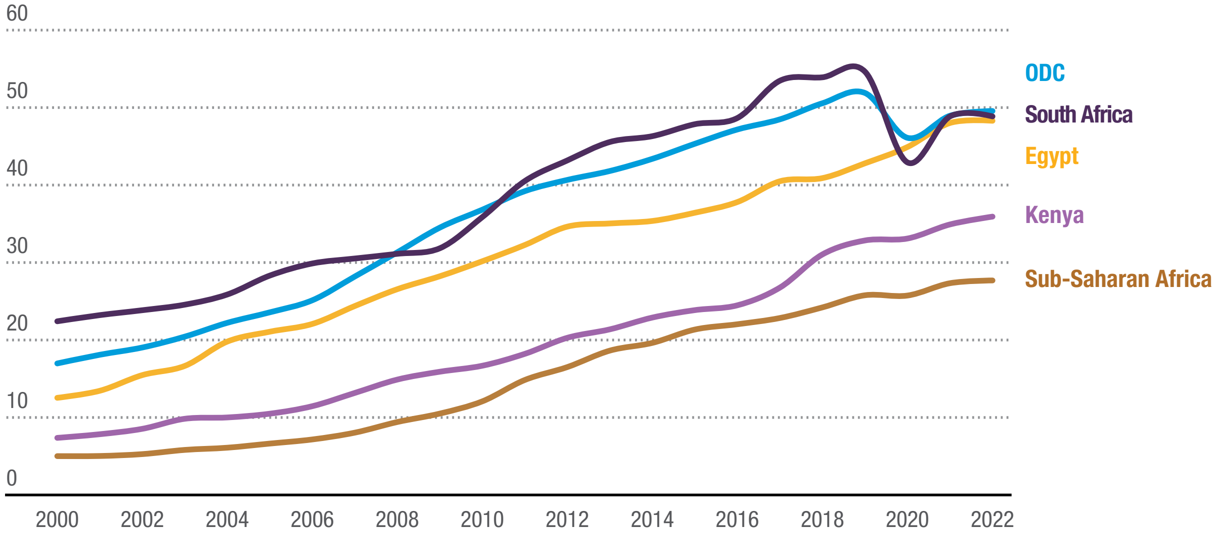
- Cost: High cost, unreliability and poor quality of service. Electricity tariffs faced by firms are high in comparison with other countries in the region. This makes Kenya uncompetitive in attracting investment, particularly in the manufacturing sector.
- Transmission and distribution losses: Kenya experiences an approximately 16% system loss of generated power due to aging transmission and distribution networks.
- Policy and regulatory uncertainty: The Energy Policy 2018 has never been fully implemented across various institutions in the Ministry, hence limiting its effectiveness. In addition, there are many institutions created to manage the sector, but which have overlapping mandates.
- A lack of expertise in exploration and the development of resources in the oil and gas sector.
- Infrastructure deficiency: The poor condition of roads and a lack of pipelines to transport the oil from Lokichar to Lamu/Mombasa ports for export. The country transports 2000 barrels of oil by road to the port of Mombasa.

Information and communication technologies

Kenya's Information and Communications Technologies (ICT) sector has shown positive growth since the year 2000 (PCI component score of 7.4). Although at 35.9 (in 2022), the country's score in the ICT component overtook the average for SSA (27.7), it lags behind Egypt (48.3), South Africa (48.9) and ODCs (49.6). The positive trend is attributed to increased broadband connectivity, improvements in general ICT infrastructure, and the development of value-added services, including mobile money and mobile banking and FinTech services.

Kenya's score in the ICT component exceeds SSA's average. However, the sector lacks skilled manpower, R&D & investment in digital infrastructure, such as broadband & secure internet connectivity

Figure 2.7.
Information and Communication Technologies (PCI)



Source: UNCTADstat (2023).

Kenya's ICT sector has grown at an annual average rate of 10.8% since 2016, becoming a significant source of economic development and job creation with spillover effects in almost every other sector of the economy. Currently, the sector is estimated to contribute around 7% of GDP. The value of output in the ICT sector rose by 32% from US$ 3.9 billion in 2019 to US$ 5.14 billion in 2021, driven by the digital economy (KNBS, 2022). The COVID-19 pandemic forced improvements to digital connectivity as the markets sought alternative means of procuring goods and services. Consumers and businesses opted for online channels resulting in a faster growth of the ICT sector. The number of mobile money subscribers increased by 8.5% between 2020 and 2021 to stand at 35.2 million users. Over the same period, the total amount of mobile money transfers grew by 31.7% to stand at US$ 5.17 billion. Nationally, total fixed-wired internet subscriptions increased by 16.1% to 672,672, with fibre optic growing by 19.4% to stand at 477,962 in 2021. The bandwidth capacity in Kenya increased by 34.6% between 2020 and 2021 to stand at 10.9 million Mbps (KNBS, 2022).

With population network coverage of around 96%, the mobile money transfer platform in Kenya has revolutionised the financial sector and significantly increased financial inclusion, as well as opened up the possibilities of new business models and opportunities. The country subsequently witnessed growth in e-mobile commerce transactions to reach the value of US$ 84 billion in 2020, representing a 35% growth from 2019 (Kamer, 2022). According to Ndung'u, (2021), mobile money growth has triggered a wider financial services revolution, including the development of an e-money platform by Kenyan banks, the disbursement of loans by banks and cross-border payment and international remittances.

The ICT sector is coordinated by the Ministry of Information, Communications and the Digital Economy and is regulated by the Communications Authority of Kenya (CAK), while Information Communication Technology Authority (ICTA) manages all of the Government of Kenya's ICT functions. Overtime, the Ministry has developed various policies to guide the development of the sector including: the National ICT Policy, 2019, the Digital Economy Blueprint, 2019, and the Kenya National Digital Master Plan 2022–2032. At the regional level, the African Union Agenda 2063 and the Digital Transformation Strategy (2020-2030) provide the regional focus and direction for the sector. The ICT sector is guided by various Acts: Kenya Information and Communications Act, 1998, The Competition Act, the Science, Technology and Innovation Act of 2013, Computer Misuse and Cyber Crimes Act of 2018 and the Data Protection Act of 2019.

The ICT sector is a key pillar of "The Plan". The Government under "The Plan" proposes to undertake the following: installation of 100,000 km of high-speed fibre optic infrastructure; establishment of 25,000 internet-hotspots across the country; digitisation and automation of all Government critical processes and the making of 80% of Government services available online and the establishment of an African Regional Hub. Additionally, the Government intends to establish a Presidential Advisory Council on Science and Technology Policy to guide the use and development of ICT capacities and fast-tract the establishment of Konza Technopolis – a project to build a world-class city powered by a thriving information, communications and technology (ICT) sector, superior reliable infrastructure and business friendly governance systems.

Innovation

Innovation plays a pivotal role in the industrialisation, sustainable development and growth of a country. In a knowledge-based economy, the capacity to compete in the global market is highly dependent on the ability to innovate and to apply the relevant technology to industries and productive sectors.

Global experience shows that countries that leveraged production management and the application of knowledge achieved sustained economic growth rates, with significant improvements in quality of life. Good policies on innovation are therefore critical to increase a country's global competitiveness, enhance employment creation and drive improvements in productivity. To drive innovation and research in the country, a pool of highly qualified and skilled professionals is a key factor.

The Global Competitiveness Report 2016-17 places Kenya in the 36th position among 138 countries in innovation. With a score of 3.83, Kenya is ranked as the number two country in Africa, followed by South Africa which has a score of 3.85. Kenya, however, scores poorly globally in terms of higher education and training. The country is ranked at the 97th position, with a score of 3.86, coming second in Africa after South Africa, which is ranked 46th with a score of 4.80 (WEF, 2017).

Kenya currently has 64 universities and their collaboration with industry is critical for driving innovation. To ensure that the training of graduates from universities fits well within the activities and goals of the industrial sector, a number of structures have set up such as incubators, accelerators, and hubs over time. For example, the University of Nairobi runs the annual Nairobi Innovation Week; Kenyatta University has the Chandaria Business Innovation and Incubation Centre which hosts entrepreneurship programmes that have strong links with industry; Jomo Kenyatta University of Agriculture and Technology is engaged with the Nairobi Industrial and Technology Park, providing infrastructure that supports growth companies; the United States International University (USIU) Africa is involved in agribusiness management and entrepreneurship while Strathmore University hosts ICT for Development (ICT4D) activities (Mikko, et al*.,* 2021). These initiatives are necessary to ensure that universities design relevant academic programmes and produce graduates who meet the changing needs of industry.

On technological readiness, which is a key factor in driving innovation, Kenya is ranked 5th in Africa and 89th globally, with a score of 3.55. South Africa is ranked 1st in Africa, followed by Mauritius, with scores of 4.7 and 4.17, respectively (WEF, 2017). Technological development presents tremendous opportunities for economic growth, poverty reduction, and human development. Kenya is ranked highly in firm-level technology transfer and internet users, but mobile-broadband subscriptions remain low as compared to the global average (WEF, 2018).

The institutional framework guiding and coordinating innovation, research and technology falls under the National Commission for Science Technology and Innovation (NACOSTI); the National Research Fund (NRF); the Kenya National Innovation Agency (KeNIA) and the Kenya Industrial Property Institute (KIPI). These organisations regulate and fund research in the country. Kenya has around ten public research institutions and over ten private research institutions, including the Kenya Industrial Research and Development Institute (KIRDI), the Kenya Agricultural and Livestock Research Organisation (KARLO), the Kenya Forestry Research Institute (KEFRI), and the Kenya Medical Research Institute (KEMRI), among others. Kenya also hosts many international research organisations including the International Centre of Insect Physiology and ecology (ICIPE), the World Agroforestry Centre (ICRAF), and the International Livestock Research Institute (ILRI).

Research and development

Kenya spends 0.8% of GDP on research and development (R&D) which is below the target of 1%, but higher than any other country in the SSA (UNESCO, 2020). International donors and business stakeholders contribute 47% of domestic R&D expenditure (UKAID, 2019).

Kenya performs better on research diffusion, with international collaborations playing a key role in the international dissemination of local research. The World Bank Report on Global Competitiveness ranks Kenya 36th out of 137 countries with a score of 3.9 on company spending on R&D. This places Kenya second in Africa after South Africa which is ranked 32nd with a score of 4.3. The report also places Kenya at 32nd in collaboration between universities and industry on research.

Going forward, the Government intends to seek to increase funding for research and development from the current 0.8% of GDP to 2%, in accordance with the Science and Technology Innovation (ST&I) Act 2013. Additionally, the Government intends to increasingly incentivise the private sector to contribute towards research.

Key binding constraints

- Human capital: Kenya has low number of digitally skilled experts, with only a few professionals possessing advanced digital skills. High-end ICT skills are essential to facilitate a vibrant digital economy, design and support complex digital systems, as well as to spur innovation.
- Cybersecurity remains a real challenge, as it does globally. Cybercrime has increased significantly in the last few years due to the rapid digitalisation of the financial sector and increased online payment transactions. According to KNBS 2022, the total number of cyber threats in Kenya more than doubled from 139.9 million in 2020 to 339.1 million in 2021.
- Overregulation and a lack of adequate coordination: The ICT sector is predominantly regulated by the CAK. Other Government authorities are also involved and include Companies Registry, Kenya Revenue Authority (KRA), county Government bodies. Excessive bureaucracy discourages investment.

  At the same time, weak linkages and ineffective coordination between the Government, private sector and researchers is a challenge. Moreover, there is a lack of a clear policy framework to facilitate effective integration of research and innovation into the economy, as well as a lack of a skills inventory and inadequate alignment of the planning of human resource to development needs, mainly due to a lack of reliable and timely data on the demands of the labour market.
- Infrastructure deficiency: The country is grappling with the digital divide. The scarcity of frequency spectrum, a resource necessary for the operationalisation of some of the infrastructure is an issue. The high demand this scarce resource, coupled with high fees make access difficult for prospective service providers. Other deficiencies include: low internet connectivity and its high cost; inadequate and unreliable power supply, especially in the rural areas; the limited number of computers in schools; limited or no computer laboratories; poor maintenance of submarine cables for the region, due to a lack of a regional maintenance depot; and inadequate broadband coverage. Poor state of infrastructure and equipment, especially in universities, as most universities lack science equipment to carry out experiments, is another challenge.
- Funding and investment: Low investment in high-level technical human resources and research causes human capital deficiencies. This is because education and training do not adequately meet the needs of industry and there is limited development of technological capabilities in industry. The funding for research and innovations is inadequate. Currently, it is mainly donor-driven, fragmented, and uncoordinated, which partly results in uncoordinated priority setting at both the national and international levels.

Private sector

The potential success of Kenya Vision 2030 is largely premised on the role of the private sector in achieving the country's growth objectives and, thereby, creating greater wealth and employment opportunities. The six key priority sectors to drive the Vision – (i) tourism, (ii) agriculture, livestock and fishing, (iii) wholesale, retail and international trade, (iv) manufacturing, (v) business process outsourcing, and (vi) financial services are largely dominated by the private sector.

The private sector in Kenya is split into two segments: (i) a formal, large business sector which is relatively healthy and productive, and (ii) a massive, informal small business sector that is poorly organised. Agriculture, manufacturing, trade, tourism, transport and communication, and financial services account for over 80% of the private sector's contribution to total GDP. Agriculture remains the most important sector in terms of the contribution of the private sector to GDP and employment, though its importance is declining, relative to other sectors. Private sector-driven manufacturing remains stagnant. Growth in the private sector is increasingly driven by trade, transport, ICT and financial services (AfDB, 2013).

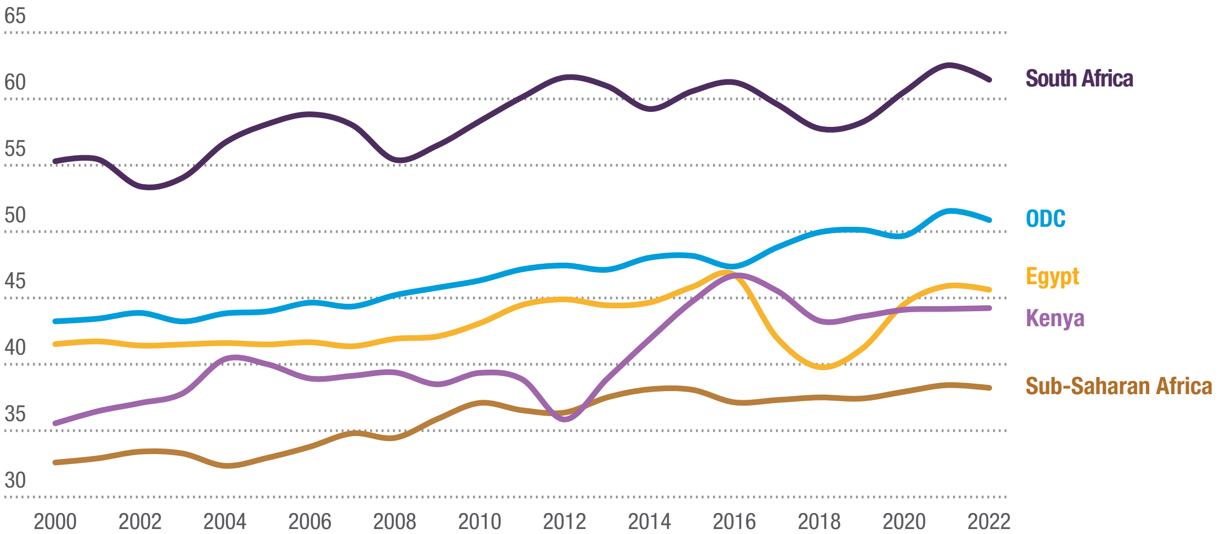
The private sector in Kenya (the PCI component score of 44.2 in 2022) is better developed than the average for SSA (38.2), though less developed compared to the average for ODCs (50.9), South Africa (61.4), and Egypt (45.6).

The key business member organisations (BMOs) supporting and coordinating the functions of the private sector in the country include: the Kenya Private Sector Alliance (KEPSA), Kenya Association of Manufacturers (KAM) and Kenya National Chamber of Commerce and Industry (KNCCI).

In recognition of its importance in driving growth, Kenya's Government had previously created the Private Sector Development Strategy (PSDS) 2006-2010 and the Private Sector Development Strategy Implementation Plan (PIP) 2007-2012, in order to address the poor business environment and improve the competitiveness and productivity of the private sector (AfDB, 2013).
The Government also made efforts to institutionalise engagement with the private sector. For example, the Prime Minister's roundtable meetings with the private sector sought to address policy, institutional and operational challenges that affected business

Kenya is open to private sector development, but its unfavourable domestic business environment, including regulatory burden, high cost of electricity, unpredictable tax policies & macroeconomic instability, remain systemic constraints

Figure 2.8.
Private Sector (PCI)



Source: UNCTADstat (2023).

environment. Presidential Roundtables (PRTs) served the same purpose. The private sector is also represented in the National Economic and Social Council. A key challenge to these engagements has been that they have tended to be predominantly *ad hoc*, rather than firmly institutionalised. The Government has also been increasingly appointing private sector members to Boards of different Government institutions. Such initiatives provide an opportunity for the private sector to have their issues of concern addressed at a policy level. Additionally, it is a constitutional requirement that the private sector is engaged in public policy decision making.

Through "The Plan", the Government seeks to transform and improve the productivity of key sectors of the economy which are largely driven by private sector. Specifically, for MSMEs, the Government, in collaboration with county authorities, plans to facilitate the provision of trading licenses and trading locations; provide one-street trading premises for every 50 urban residents and review and rationalise all business licenses. Additionally, the Government plans commit Sh50 billion a year to provide MSMEs with 100% access to affordable finance through Saving and Credit Cooperative Organisations (SACCOs) and to establish a MSME Business Development Centre in every Ward[7] and an industrial park and business incubation centre in every TVET institution.

Key binding constraints

- <u>Business environment and the tax regime</u>: An unfavourable domestic business environment remains a challenge, specifically – the regulatory burden, characterised by unstable and unpredictable tax policies and an unstable macroeconomic environment. For example, there are multiple agencies in charge of business conduct, some with overlapping mandates.
- The situation generates additional costs for businesses in terms of fees and levies and makes the business environment confusing to operate within. The national tax regime is perceived as a challenge for firms, in particular, frequent changes to the tax laws effected through the Finance Act. This impedes long-term business planning.
- <u>Fiscal and other economic policies:</u> Major macroeconomic variables with implications on the private sector's development include the stock of debt, especially methods of procuring debt, the fiscal deficit and the stability of the exchange rate regime. If the Government procures debt in the domestic economy, there is a likelihood of crowding out the private sector in the domestic economy. Increasing the fiscal deficit may lead to increased taxation on the private sector. The introduction of a 16% value added tax (VAT) on imported plant, machinery and equipment, a reduction of the investment deduction allowance by 50% in 2020 and a reduction of tax expenditures are all examples of the increasing tax burden on the private sector. Moreover, the stability and availability of foreign exchange is of significant importance to the manufacturing industry in Kenya. This is because the sector is heavily dependent on imported inputs for processing and capital goods for investment. Thus, the weakening of Kenya shilling against major foreign currencies makes domestic manufacturing expensive. Finally, access to long-term finance for businesses is also a major constraint, especially for MSMEs.
- <u>Limited institutionalisation of mechanisms and uncertainty:</u> Platforms by the Government to engage the private sector tend to be *ad hoc* and are not institutionalised. Other challenges include: political uncertainty, usually around elections and the associated volatility; widespread perception of corruption; and political interference and patronage in business.

[7] Kenya is divided into 290 constituencies and 1450 Wards, which are represented by members of the County Assembly.

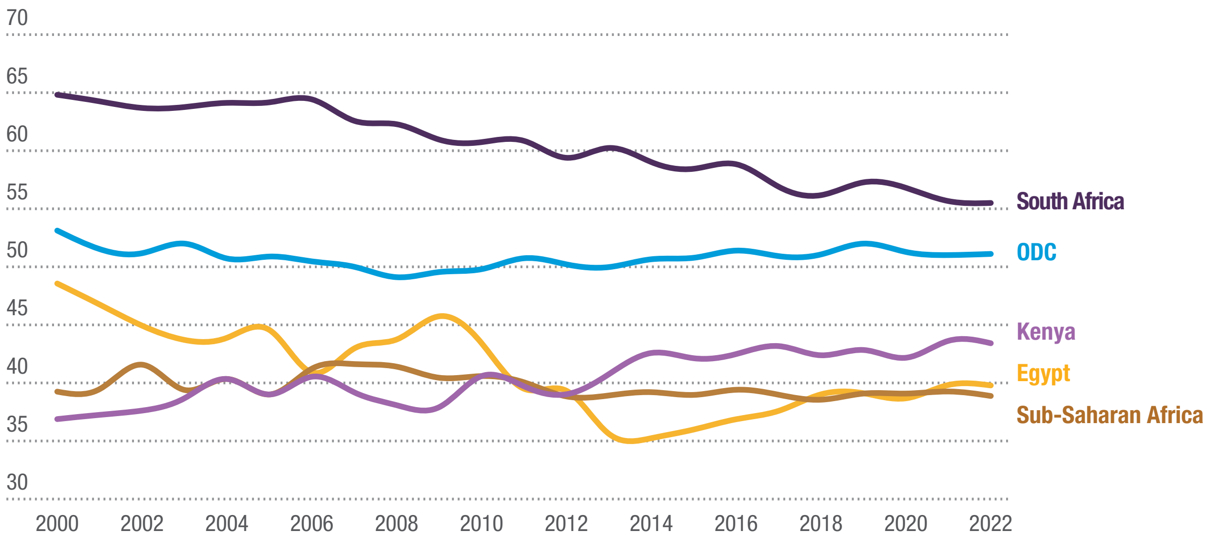
- Infrastructure deficiency: Poor infrastructure, including transport infrastructure and logistics systems, generate costs or even prohibit business activities. High energy costs and an unreliable power supply contribute to the burden. An inadequate water supply and non-functional waste management systems are additional obstacles, whereas a lack of an extensive broadband network impedes business activities.

Institutions

North (1990) defines institutions as “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction” and adds that “in consequence they structure incentives in human exchange, whether political, social, or economic”. The Institutions component of the PCI is measured by indicators referring to control of corruption, political stability and Government’s effectiveness, regulatory quality, rule of law, and voice and accountability. Institutions matter for development. South Africa (55.5) and ODCs (51.1) perform much better in terms of the functioning of their institutions compared to Kenya (43.4), as measured by the PCI. Nevertheless, the country’s institutions’ quality is higher than the average for SSA (38.9) and Egypt (39.8).

Kenya’s 2010 Constitution has been instrumental in creating independent institutions which act as critical pillars for enhanced governance, accountability, democracy, equality and inclusive growth.

Figure 2.9.
Institutions (PCI)



Source: UNCTADstat (2023).

Kenya boasts strong institutions in SSA, although poor policy coordination and implementation, and governance related challenges hinder the fostering of vibrant and dynamic institutions

The Constitution emphasizes the sovereignty of the people and provides for checks and balances between the legislature, the executive, and the judiciary. Some of the key independent institutions include: the Office of the Auditor-General, the Office of the Controller of Budget, the Independent Electoral and Boundaries Commission (IEBC) and the Supreme Court of Kenya. The IEBC has proven critical in ensuring free and fair elections, while the Supreme Court has been instrumental in resolving election disputes and hence contributing to political stability. The office of the Auditor-General and the Office of the Controller of Budget have been critical in enhancing accountability and the proper use of the country's resources. The strengthening of institutions is still a work in progress, though this progress has been significant.

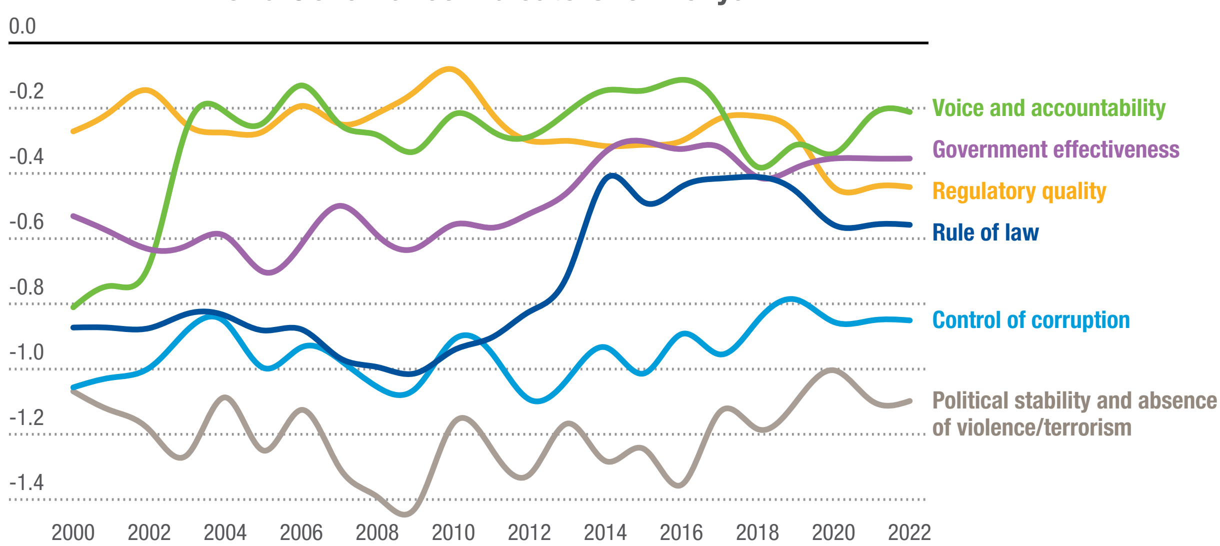
Nevertheless, the establishment of the two-level Government structure created coordination challenges. Key functions such as those related to agriculture, health, and some aspects related to education, among others, have been devolved, as per the 4th Schedule of the Constitution. The Constitution also recognises that the two levels of the Government are distinct but interdependent.

The Intergovernmental Relations Act of 2012 was enacted to create coordination mechanisms between the two levels. However, the last decade has proven that it is not functioning properly. The joint secretariat has not been able to discharge its mandate; for instance, in ensuring joint policy formulation, planning, budgeting and the implementation of projects.

A close look at the World Bank's World Governance Indicators (WGI), which range from -2.5 to +2.5, shows that at no point in time did Kenya report a positive score for all of the six indictors, revealing the prevalence of rather weak institutions.

Political stability and the absence of violence/terrorism are believed to be the weakest link in Kenya's governance indicators. This is the result of Kenya's significant exposure to international and cross border terrorism. Subsequently, issues concerned with border control and better security systems need to be looked at to enhance domestic stability. At the same time, politically, there is a reason for optimism given the peaceful general election carried out in August 2022 and the Supreme Court petition on the Presidential election outcome that was accepted by all parties involved.

Figure 2.10.
World Governance Indicators for Kenya



Source: World Bank (2022c).

Moreover, the country appears to be performing relatively well in terms of regulatory quality and voice and accountability.

"The Plan" identifies various measures the Government plans to undertake to strengthen institutions. These include: bolstering the financial and technical capabilities and independence of all independent institutions (EACC, the National Police Service; Judiciary etc.), equipping the Office of the Attorney-General with additional resources; and strengthening the Office of the Registrar of Political Parties (ORPP) by opening county offices. In addition, the Government plans to seek to promote accountability and openness in the management of public affairs and intends to publish an annual State of Openness Report, while building a highly-skilled, agile and responsive public sector workforce.

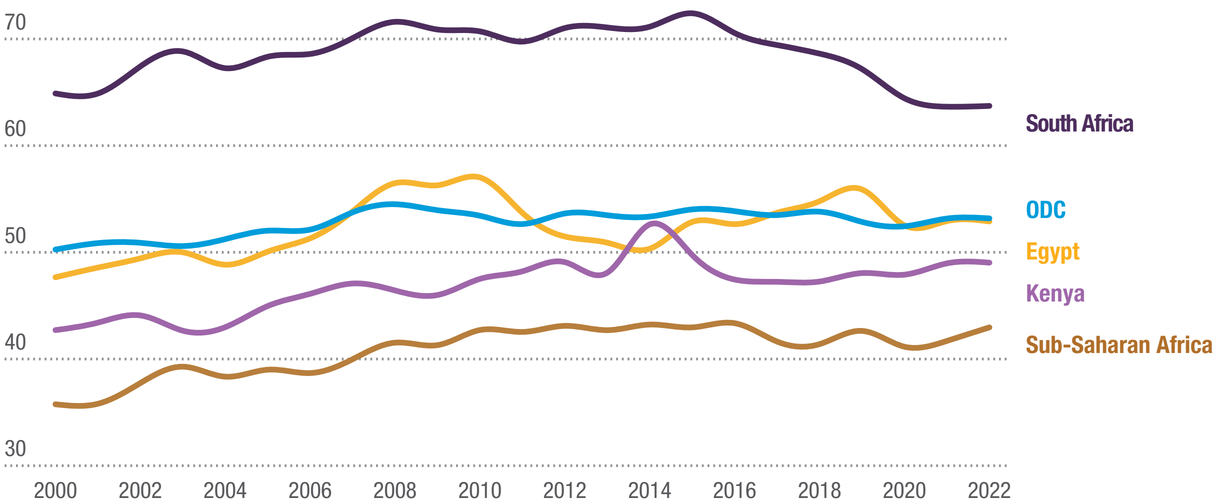
Key binding constraints

- Coordination mechanisms: Poor coordination between the national Government and county authorities and among ministries persists. Disconnect in terms of planning is apparent. Related to this challenge is the overlapping of institutions' mandates. A case in point is the Kenya Vision 2030 Secretariat and the Board, the PDU and the NESC.
- Poor governance: A particular governance related challenge that Kenya faces is corruption. In 2022, Kenya ranked 123rd out of 180 countries as regards to the Corruption Perception Index (CPI) produced by Transparency International (TI, 2022). Thus, independent constitutional institutions such as the Judiciary, the National Police Service Commission, the Office of the Director of Public Prosecution, and the Ethics and Anti-Corruption Commission (EACC), among others have not together been successful in taming corruption.

Structural change

The Structural Change component of the PCI measures the ability of a country to undergo structural transformation; the latter referring to the movement of labour and other productive resources from low-productivity to high-productivity economic activities. Since independence, Kenya has implemented various policy strategies to promote structural transformation.

Figure 2.11.
Structural Change (PCI)



Source: UNCTADstat (2023).

Kenya's production sophistication and economic complexity portrays a typical structure of natural capital-driven economy, "servicification" and "premature deindustrialization

Examples include ISI (import-substitution industrialisation) and EOI (export-orientated industrialisation) strategies and contemporarily the Kenya Vision 2030, as well as the "Big Four" agenda, where manufacturing is one of the pillars. "The Plan" also places great importance on agro-processing, pharmaceuticals, leather and textile industries with the aim of mass job creation. Past policy efforts have not yielded many of the desired outcomes. Over the period 2000-2022, there has been some change as captured by the Structural Change component of the PCI in Kenya (from 42.7 to 49.0). Kenya performs worse than Egypt (52.9) and ODCs (53.2), and significantly worse than South Africa (63.7). However, its score is higher than the average for SSA (43.0).

The Export Concentration Index and the number of products exported can shed some additional light on why structural change in Kenya has not materialised. The Index ranges from 0 to 1, with 0 referring to perfect diversification and 1 implying that exports are concentrated in one product. Kenya's export de-concentration improved marginally over time, from 0.23 in 1995 to 0.19 in 2021 (UNCTADstat, 2022). The inability to expand the national export basket can be explained through the country's continuous reliance on a limited number of commodities. Table 2.5 shows that agricultural exports accounted for 59% of total exports in 2020. Primary commodity exports (agriculture, stone, minerals and metals) accounted for 78% of the total. One disadvantage of primary commodity exports is that they are highly vulnerable to price volatility in international markets. As a result, realisable foreign exchange receipts become uncertain.

In terms of the technological classification of exports, 78% of these exports are resource-based, while textiles (low-tech manufacturers), chemicals, vehicles and machinery (medium-tech manufactures) and electronics (high-tech manufacturers) comprise 8%, 12% and 2% of the total, respectively.

Economic integration of the African continent provides an opportunity to create a large market, reduce trade barriers, allow for the free movement of people and permit manufacturing specialisation, thereby, fostering industrial competitiveness (Signé, 2019). It is anticipated that the successful implementation of the African Continental Free Trade Area (AfCFTA) will double the size of Africa's manufacturing sector with annual output expected to reach $1 trillion by 2025. It is also anticipated to create more than 14 million jobs (Signé, 2019).

The AfCFTA provides an opportunity that Kenya is well positioned to use to increase both the value and volume of its exports. Kenya can also leverage the opportunities of the AfCFTA to diversify its export basket, in particular, through the AfCFTA's Guided Trade Initiative (GTI). The AfCFTA's GTI seeks to allow commercial trading and to test the AfCFTA's operational, institutional, legal and trade policy environment (Rao, 2022). Kenya has been among eight pioneer countries of the initiative, including Cameroon, Egypt, Ghana, Mauritius, Rwanda, Tanzania and Tunisia, representing five regions of Africa.

Key binding constraints

- Limited economic diversification: A lack of product diversification leads to exports being concentrated in only a few commodities. This can be taken to mean that various export development and promotion programmes such as EPZs and export promotion institutions such as the KEPROBA among other initiatives have not yielded much of the desired results. Overreliance on a few primary commodity exports exposes the economy to external shocks, especially through price and exchange rate volatility.
- Low technology content of exports: About 78% of Kenyan exports are primary commodities. According to the IMF (2021), these are signs of the eroding competitiveness of Kenya's exports internationally leading to weak export performance. In particular, "export product composition is

concentrated in products characterised by low technological intensity, low value added, and low market growth".

- Imported input's dependency of manufacturing: The manufacturing sector in Kenya is heavily dependent on imported inputs in the form of raw materials, intermediate inputs and capital goods for investment.

The value of industrial imports as a share of the total value of imports increased from 45.90% in 2017, to 48.02% and 47.31% in 2020 and 2021, respectively (KNBS 2022). Overdependence on imported inputs and capital goods poses major risks related to exchange rate fluctuations, global supply chain challenges and price movements in international markets.

Table 2.5.
Kenya's exports, by category (2020)

Product name	Technology classification	Value (US$ million)	Percentage
Agriculture	Resource based manufactures	3 520	59
Stone	Resource based manufactures	290	5
Minerals	Resource based manufactures	629	10
Metals	Resource based manufactures	245	4
Textiles	Low technology manufactures	508	8
Chemicals	Medium technology manufactures	528	9
Vehicles	Medium technology manufactures	60	1
Machinery	Medium technology manufactures	126	2
Electronics	High technology manufactures	60.7	1
Other	-	23.9	0
Total		**5 990.60**	**100**

Source: The Atlas of Economic Complexity (2020).

3. Policies to enhance productive capacities

Policies and strategies at the national level

1. Prioritise productive capacities for structural transformation: Kenya needs to prioritise developing new productive capacities, while simultaneously utilising and maintaining existing ones, which should be carefully sequenced both in timeframe, prioritisation, and resources allocation. That is, while the medium- to long-term priority should be to build new productive capacities, in the short term, the focus should be on how to maintain and utilise existing capacities. This also means that the country's macroeconomic, industrial, agricultural and infrastructure policies should be geared towards these processes. This approach also applies to the introduction of specific curriculum courses focusing on productive capacities and the PCI, including methodologies in selected universities to ensure a long-lasting impact. It would also enhance domestic capabilities to design and implement policies and strategies centred on productive capacities.

2. Adopt a holistic approach: Looking at how to adjust the country's development trajectory, it is essential for policy makers in Kenya to kickstart a paradigm shift in development policy formulation and implementation, away from the current practice of traditional, fragmented and short-term interventions towards multi-sectoral, comprehensive and long-term, programme-based approaches to development. This should include efforts to break free from old mindsets organised around traditional productive sectors and established institutions and policies.

Some of these mindsets hold back the envisioned transformation of the Kenyan economy. Breaking away from traditional and disjointed efforts will involve applying new ideas, drawing lessons from successful experiences and practical approaches in evaluating where Kenya has fallen short in its industrialisation agenda, and in designing a new path forward.

3. Enhance industrialisation and structural change, and develop manufacturing: Export diversification, value addition and manufacturing should remain on the top of the development agenda and the process of industrialisation to ensure the "right" type of structural transformation by avoiding jobless growth, the development of sectors with limited poverty reduction potential and indeed other challenges. The solution lies in a dynamic industrial policy that taps the comparative advantages of the country, together with regional and global opportunities, with a focus on labour-intensive manufacturing. Fostering industrialisation and technological upgrading are critical for building productive capacities and accelerating structural transformation in Kenya, as much as elsewhere in the developing world. The Government needs to play a central role in the industrialisation process by taking on a more proactive and catalytic function to stimulate productive activities, including through creating enabling environments for business and investment.

A key feature of the industrial sector is its low level of industrial diversification and reliance on imported inputs and capital goods. Consequently, Kenya needs to redesign industrial policies to increase the variety of domestically produced goods, including intermediary goods, also for exports.

For example, the development of agro-industrial value chains and the attraction of foreign investments in the manufacturing sector will not only reduce imports but also diffuse imported technology into the economy. This can, through time, also increase the technological content in products produced by local industries. Evidence from the East Asian growth miracle has shown that structural transformation requires an outward orientation through the increased export of manufactured goods.

As part of its industrial development plans, Kenya has developed a legal framework and undertaken the construction of numerous industrial parks, export processing zones (EPZs) and special economic zones (SEZs). However, the country has had mixed success in implementing projects. Construction lead times are long and some industrial parks struggle to fill their capacity, while others remain viable only until the expiration of temporary fiscal incentives. A new, more strategic approach is, therefore, needed to link the industrial parks with the full range of necessary productive capacities, to shorten the lead times, and to develop long-term marketing and financial plans for the parks based on their competitiveness, as well as to engage in other promotion strategies, beyond simply creating temporary fiscal incentives.

4. Transform and modernise agriculture: Agriculture is the main economic activity and a source of livelihoods for the majority of Kenyans. The sector faces a number of constraints which limit its performance including low investment, low financing, few trained agriculture researchers and extension officers among other constraints. Considering that small scale farming in Kenya accounts for over 70% of agricultural production and meets about 75% of the national food demand, the focus needs to be on smallholders. The Government needs to focus on transforming agriculture so as to increase its productivity. To achieve this, small scale farmers need to have access to cheap and quality inputs, including fertilizers, seeds, pesticides and animal feed.

To ensure that agriculture is profitable and predictable, crop and livestock insurance schemes must be initiated. Moreover, the deployment of climate smart agriculture technologies (including expansion of irrigated land) is needed. In this context, the training of enough agricultural researchers and extension officers is critical for increasing agricultural productivity.

In addition, the low level of financing in the sector limits production and investment in value-added activities. Towards this end the Government needs to provide farmers with affordable finance through SACCOs so as to be able to acquire agricultural inputs and take care of other direct production expenses such as the ploughing of land and the hiring of labour. Additional and affordable financing can be channelled to farmers through the Agricultural Finance Corporation, which is a state corporation. However, policies to regulate the operations of these organisations to serve farmers effectively is necessary.

5. Preserve natural environment by sustainable use of resources: In terms of existing forests, for them to continuously provide adequate wood products, there is need to reform forestry practices by adopting innovations that increase the efficiency of the production and management systems. The conservation of forests is connected to the management of water resources in Kenya, particularly water towers. One way to achieve this is to reduce the heavy reliance by low-income households on wood fuel by intensifying the "*Mwananchi* LPG project", where the Government provides low-income households with liquefied petroleum gas (LPG) cylinders at subsidised prices. To achieve universal access to water by 2027, the development of water resources should focus more on household/community water projects (water harvesting, recycling and drilling more boreholes) as opposed to construction of large dams which are costlier.

The focus should also be on the diffusion and application of modern technologies on desalination to develop aquifers. Overall, more resources should be put into environmental conservation.

6. Build human capital: Two key constraints affecting the human capital sector are the skills mismatch and the national brain drain. To address the skills mismatch, the Ministry of Labour and Social Protection developed the National Skills Development Policy (NSDP, 2020). The policy seeks to promote sustainable socio-economic growth through the development of a skilled workforce that is employable, productive, enterprising, innovative, adaptable and competitive. This policy should be fully implemented. To address the skills mismatch, universities and other training institutions should review their academic programmes to align them with the demand in the job market and its possible shifts. This calls for the constant engagement of universities and stakeholders in the labour market when developing and reviewing courses. Moreover, universities need to develop degree programmes in mining and engineering (Taita Taveta University pioneered in developing such a programme in 2021), as a major challenge in the mining and minerals sector is the inadequate level of expertise and the lack of geological data. In addition, the internship programme for students graduating from training institutions should be rolled out as proposed in the "The Plan".

Key issues that require urgent attention concerning the educational system include its cost, a lack of an adequate number of teachers (an additional 116,000 are needed), the insufficient skills of teachers and infrastructure deficits in both primary and secondary schools. To increase access and reduce the cost of university education, the Government should set up a National Open University**.** Inadequate funding to TVET and universities also requires urgent attention. Moreover, Kenya, like other developing countries, continues to lose trained human capital through the brain drain of professionals in nursing, teaching, engineering, doctors and other professions to developed countries. To stem this, the Government needs to improve the working conditions of workers and provide incentives.

To achieve UHC, the national and county Governments should expand the NHF coverage by paying for poor households who cannot afford monthly subscriptions. There is also a need to allocate more funds to this sector so as to train and employ more health professional and develop the health infrastructure in the country. And to manage and incentivise the health human resources, there is need to establish an independent institution at the national level to be in charge of the employment, remuneration and deployment of health workers.

Finally, on the geological data, the Government has established a National Geodata Centre (NGDC) as a repository of Kenyan Geoscientific data. This should be fully operationalised. More funding should be channelled towards mineral resource exploration and an up-to-date geological database should be created that can be used to engage prospective investors.

7. Address infrastructure deficiencies: Energy remains one of the key inputs in production process and hence it affects directly all other productive sectors of the economy. Despite the country having one of the world's largest geothermal power capacities and the continent's largest wind farm and a vibrant off grid energy market, the country still faces challenges with regard to power availability, affordability and reliability.

In response to the outcry of individual consumers and businesses about the high cost of power, in Mach 2021, the President appointed a Task Force to look at key factors driving high prices in the sector. The task force concluded that the main cause of high power costs is the overpriced contracts signed between KPLC and IPP. The taskforce recommended the reduction of power tariffs by 30%.

This has not been fully achieved and therefore the recommendations of the taskforce should be fully implemented.

Other initiatives by the Government to reduce prices and enhance the reliability of the power supply may include: reform of the institutional and regulatory framework governing the sector to enhance efficiency and to reduce the overlapping mandates of various institutions managing the sector; further liberalisation to eliminate the monopoly in the distribution and retail of power; and renegotiation of contracts entered with IPP.

Kenya also experiences power transmission and distribution loses averaging 16%. The rise in the customer base over the years has been accompanied by increased system losses both at the technical and commercial levels. KETRACO and PLLC need to rehabilitate and modernise their distribution and transmission networks. Due to the high cost of modernising the distribution and transmission infrastructure, KETRACO and KPLC can engage private sector through a PPP arrangement.

The "paradox" of excess power generation capacity against unmet or frustrated demand requires proper planning of the countries power needs. This problem arises from low consumption by households and low connection capacity. Kenya should strive to achieve 100% connectivity to reduce excess capacity in consumption of generated electricity.

The rise in captive power, although may be seen as an opportunity, poses the problem of planning and providing policy direction. Towards this end, the country needs to come up with a clear policy on how to regulate the financing, licensing and installation off-grid companies and community-owned development projects (mini and micro-grids). A lack of such a policy result in some investors using dirty fuels such as coal at a time when the country is committed to reduce carbon emissions levels.

Moreover, the oil and gas sector has not yet matured. The exploration and development of resources is critical and it is imperative to attract investment in the development of oil infrastructure in addition to developing skills and expertise. There is, however, a need for openness when designing and awarding contracts so as to stamp out corruption.

There is also a need to modernise and expand transport infrastructure in the country, including extending the SGR to the Ugandan border, modernising the Port of Mombasa and JKIA to reach international standards so as to meet the demands of a growing and increasingly integrated East African Community. Efficient and good infrastructure not only promotes production and consumption in the local market but also promotes regional and international trade. To train experts in the construction sector, the National Construction Authority (NCA) needs to engage universities to increase the number of professionals in this field. This will call for a close supervision by the CUE and the Engineers Board of Kenya to ensure quality and international standards of the courses and graduates.

There is a perception that the public does not get value for money in infrastructure projects; in particular, the high unit cost of infrastructure projects such as roads. Infrastructure projects are believed to culminate with inflated prices, poor quality execution, excessive time and cost overruns, inadequate maintenance and low returns. Measures should, therefore, be put in place to ensure that value for money is given through enhancing transparency in the tendering process.

The high cost of fuel is a major challenge in the transport sector. Apart from cost of oil in the global market, fuel levies in Kenya take approximately 40% of total fuel price. To stabilise and manage oil prices, the Government introduced a fuel subsidy in October 2021 to cushion consumers from high fuel prices. However, the mechanism is inefficient, unsustainable and crowds out public spending in productive sectors. The Government has also introduced fuel levy meant to stabilise fuel prices. Therefore, to cushion households and businesses from the high cost of fuels, the Government should create a national strategic reserve for stabilising prices when there is a price shock in the international market. A proper policy should be developed on the use and management of fuel levy.

8. Enhance the role of ICT in production transformation: Overall, Kenya is grappling with a digital divide with an uptake of digital devises, a gap in mobile network coverage, inadequate access to reliable and affordable electricity, as gap in last-mile broadband connectivity, relatively high costs of data, and high cost of essential infrastructure hardware (UNCTAD, 2022). Indeed, a key challenge to the ICT sector is inadequate internet infrastructure particularly in the rural areas. This also impacts on the cost of internet which remains high by regional standard. To alleviate these challenges, internet infrastructure should be developed throughout the country. The Government should roll out high speed fibre optic infrastructure to provide internet to all schools and other government institutions/offices. This will not only enhance internet use but also reduce internet cost. At the same time, access to finance for e-commerce activities should be broadened by using various forms of financing, including banks, SACCOs, mobile loans, government funds, venture capital firms, private equity firms, and development partners. Overall, the development of an e-commerce strategy for the country is needed and the setting up of a national task force on e-commerce to coordinate activities would be favourable (UNCTAD, 2022).

Moreover, cybersecurity is another key challenge in the ICT sector. A major gap of ICT experts in critical areas like data protection, coding, mobile application development, cyber security, artificial intelligence and big data among others, exists. To address this, there is a need for the Government to develop a policy to guide it in the use and development of ICT capacities.

Additionally, the development of Konza Technopolis should be fast-tracked so as to bring together industry, academic institutions and other innovators to invest in emerging technologies and create high-quality jobs.

9. Promote innovation and R&D: The lack of adequate funding to support innovation, research and development remains a challenge. The Government spends only 0.8% of its total budget on R&D. The lack of funding limits the capacity of national actors, the effectiveness of policy implementation, the performance of research organisations and the options available to individual researchers. Increasing research funding to 2% of the national budget would improve research at universities and the overall research infrastructure and would increase the incentives to perform high-quality research. Moreover, increasing education budgets for higher education to train scientists and enhance digital skills and R&D, will go a long way to increase the innovative capacity of the country. The Government should also consider giving incentives to the private sector to invest in R&D. Indeed, critical for the strengthening and expanding of the R&D base will be closer collaboration between universities, the Government of Kenya and the private sector. The Government should take the lead in facilitating such cross fertilisation.

10. Strengthen the private sector through adjusting regulatory and fiscal policies: A major challenge facing the private sector in Kenya is related to the business environment. The regulatory burden and associated formalities, fees, charges and levies impose substantial costs on businesses. There is, therefore, the need to carry out reforms, and reduce and consolidate the functions of institutions with overlapping mandates and functions. The tax burden is increasing on businesses where investments, capital goods and industrial inputs are taxed. There is, therefore, the need to address the root cause of the problem, which lies in the ever-increasing fiscal deficit and the associated accumulation of public debt.

One of the means of funding a budget deficit is increasing taxes which is detrimental to the accumulation of domestic capital. This is why the private sector has been advocating for a fiscal deficit of about 3% of GDP. Related to the fiscal deficit and public debt is the crowding out of the private sector from the domestic credit market through increased domestic borrowing by the Government. Thus, a reduction of fiscal deficit should be prioritised.

The availability and stability of the exchange rate is also critical for the survival of the private sector which is heavily dependent on imported inputs and capital goods. Also important is the need to address costs related to logistics and electricity. Logistics in the supply chain can be improved through enhanced clearance of cargo at the ports of entry and better coordination of relevant Government agencies.

Mechanisms such as the Presidential Roundtables (PRTs) should be institutionalised to allow the private sector to share policy and operational challenges facing their businesses at a given point in time. Deliberation Councils in the Asian economies can be cited as good examples, as they played a critical role in the facilitation of the growth miracle.

To develop the MSMEs, the Government, in collaboration with county Governments, should seek to facilitate the provision and rationalisation of all business licenses, establish MSME business development centres and industrial parks. Access to affordable and long-term funding should be availed.

11. Strengthen institutions: Institutions are the foundations of a stable and prosperous country. Effective institutions promote transparency and accountability which are key in attracting investment in the productive sectors of the economy. The performance of all the productive sectors of the economy is guided by many polices. However, in many cases these policies are not coordinated, there are overlaps, policy gaps, and in some cases the proposed policies are not fully implemented. Evidence based policies backed by findings from research undertakings lay good foundations for the transformation of productive sectors. Policies should be designed in such a way as to produce synergy or at a minimum reduce conflicts between Government departments/agencies. The full implementation of the policies designed in various sectors, including Kenya Vision 2030, calls for the collaboration between the public and the private sector to mobilise domestic resources and expertise.

Kenya's 2010 Constitution established a number of bodies and independent commissions which nevertheless has increased the coordination problems of Government functions. These independent institutions are meant to enhance governance, ensure democratic processes and foster economic growth. However, most are not fully financially independent and they have to rely on the Treasury for financial support. In addition, the appointment of their members lies with the members of the Parliament. This means that they are often exposed to political manoeuvres. The independent constitutional offices therefore should be properly funded.

Another institutional challenge concerns overlaps in the roles of some of Government agencies, delays in developing regulatory frameworks for related Acts of Parliament; weak monitoring of implementation of key strategies; inadequate capacity at county level to implement the reform agenda; corruption; and the fact that some of the institutions have not devolved their services to county level (Ong'era, et al., 2019). To enhance coordination between various ministries, department, agencies, and other Government institutions, there is a need to create a key ministry in charge of coordination. There are a plethora of good examples among Asia's success development stories. For the national and county Governments, strengthening of the coordination mechanisms provided under Intergovernmental Relations Act 2011 would be useful in creating synergies between them as required under the Constitution. This should be prioritised to ensure the effective implementation and coordination of national plans and policy coherence. Corruption is still a major impediment to productivity occasioning loss of public funds. Transparency of public finance through public financial management reforms and institutionalising open governance in all state organs and agencies can reduce impact of corruption.

International support and global partnership

National policies and actions alone are not sufficient to effectively address challenges facing Kenya in fostering productive capacities and structural economic transformation. Global actions and policies are equally crucial for building productive capacities and accelerating diversification and structural transformation. These should include support for regional economic integration and technology transfer, among others. The following specific measures and actions can be undertaken at the international level in support of Kenya's efforts to build productive capacities for achieving sustained and inclusive growth.

1. Enhance strategic engagement in regional integration: Kenya's development strategies should go hand-in-hand with fostering regional cooperation, particularly in the context of the establishment of the African Continental Free Trade Area (AfCFTA). Indeed, Kenya has enormous market opportunities under trade regimes in the EAC, the COMESA, the AfCFTA, the EU and the US under AGOA. However, exploitation of such markets has been limited by a narrow export basket dominated by primary and low technology exports. Thus, development partners should support export diversification strategies and increasing the technology content of manufactured goods. There are also other trade facilitation initiatives which development partners can gain interest in ,for example, aid-for-trade measures.

Additionally, development partners can support in the development of untapped potential in agro-industry value chains; support private sector to become more integrated into regional and global-value chains and support logistical supply chains through digitalisation and integration of different institutions that are responsible for clearing of goods at the ports. As is the case elsewhere in Africa, capitalising on new productive and trade opportunities under the AfCFTA will depend, in part, on Kenya's ability to develop a critical mass of medium and large enterprises and entrepreneurs capable of competing and tapping regional and global opportunities. MSMEs' development and particular sectors' international expansion must be supported by the international community (capacity building, financing, creating enabling international environment for cooperation) and aided by foreign companies (transfer of know-how and technology, investment, financing, facilitating access to markets and participation in regional and global production value chains) for mutual benefits.

2. Facilitate technology transfer and fostering R&D: Skill development, research and technical knowhow are critical for the economic transformation of a country as they support innovation. Research and development (R&D) need strengthening to facilitate the development of an innovation-driven economy and one which will be competitive in the 4.0 industrial era. This calls for supporting technology transfer, mainly through the acquisition of technologies and technology adoption transition, aligning the education and training strategy of the country with the skills required, evaluating the structure, capabilities, and relevance of technology institutes, including R&D support, regional technology centres, and technology financing, incentivising local manufacturers and assemblers of digital technologies by making these technologies affordable and available. Given the high costs involved in research and development (R&D), a tax incentive can be used as a way of indirectly subsidising research and development.

International financial and technical support can be directed to public research institutions and universities. Attracting FDI can also go a long way in reducing the technological gap in the country. To this end, technical support can be directed towards improving the general business environment.

Kenya is considered an important actor in innovation related to ICT in the African continent such as mobile-money transfer, and fintech, among others. However, there are challenges that require the support of international partners such as the rolling-out of a 5G network and the capacity to deal with cybercrime.

4.
Part II: Holistic productive capacities development programme

The Holistic Productive Capacities Development Programme for Kenya (Kenya Programme) is designed to accelerate the implementation of the Kenya Vision 2030 and the Medium-term Plan 2022-2027 (The Plan) and lay the foundation for the country's successor development agenda beyond 2030. The Programme is holistic, multi-dimensional and multi-annual and emanates from a careful assessment of the country's gaps and limitations in fostering productive capacities and structural economic transformation. It builds on evidence-based and data-driven assessments using the Productive Capacities Index (PCI), which serves as the basis for the formulation of the National Productive Capacities Gap Assessment (NPCGA) of Kenya. The Holistic Programme is designed to tap the comparative advantages of Kenya and relieve the key binding constraints to the country's development as articulated in the NPCGA. It aims at building economy-wide, national productive capacities, accelerating economic and export diversification and advancing structural transformation, in order to enable the achievement of the objectives of Kenya Vision 2030, the country's long-term development strategy and to ensure inclusive, sustainable and green development.

Strategic orientation

The Holistic Productive Capacities Development Programme for Kenya is aligned with and in-tended to support the realisation of Kenya Vision 2030 and it lays the foundation for the successor post-2030 development agenda of the country. For the 2022-2027 period the policy di-rection is determined by the national five-year MTP, "The Plan: The Bottom-up Economic Transformation Agenda 2022-2027". "The Plan" is premised on five pillars, agriculture; micro-, small- and medium-sized enterprise' (MSME) economy; housing and settlement; healthcare; and digital superhighway and creative economy. Building productive capacities is critical for those endeavours.

Specifically, under "The Plan", agriculture is identified as, "the sector that will lead the economic recovery". It is identified as the sector with the highest employment multiplier, "owing to its strong forward and backward linkages to other sectors of the economy".

Kenya's Holistic Programme is designed to build economy-wide productive capacities, accelerate industrialisation, facilitate structural transformation and the realization of the objectives of its Vision 2030 and SDGs

Table 4.1.
Programme identification

Project Code and Title:	Holistic Productive Capacities Development Programme for Kenya
Start date:	1 March 2025
End date:	28 February 2035
Budget:	US$ 20,000,000
Target countries:	Kenya
Executing Entity:	UNCTAD
Implementing counterpart institution in Kenya:	Office of the Prime Cabinet Secretary
Development partner(s):	TBC in consultation with counterpart institutions in Kenya and donor(s)

Table 4.2.
Programme objective and description

The Programme has the following specific areas of focus and related activities:

(a) Seeking ways and means of harnessing Kenya's comparative advantage in agriculture, including in the livestock and fisheries subsectors to boost productivity and value addition, particularly in agro-processing, through integrated rural development, targeted investment in infrastructure (e.g. irrigation) and by creating backward and forward linkages in labour intensive agro-processing and agro-services.

(b) Strengthening the capacity of Kenya's institutions and policymakers to reorient domestic policies towards a holistic approach, with economy-wide productive capacities building at the core of policy design and implementation, including through mainstreaming productive capacities and the PCI in university curricula and at centres of higher education and training.

(c) Improving national policy coordination and implementation mechanisms and enhancing the effectiveness of institutions to safeguard and facilitate the process of sustainable development.

(d) Enhancing the benefits of regional integration within the African Continental Free Trade Area (AfCFTA) for the Kenyan economy, ensuring the country's role as an anchor in the process of deepening regional and continental economic integration.

(e) Industrialising the country through a focus on value-addition and building a robust manufacturing sector based on the country's identified comparative advantages. This should include a focus on special economic zones (SEZs), export processing zones (EPZs), and industrial parks (IPs), to enable the country's greater participation in global and regional value chains and inter-national trade.

(f) Enhancing protection of the natural environment to tap the potential of biodiversity, marine bioprospecting and the Blue Economy, which are also key to advancing sustainable development.

(g) Addressing the economy's physical infrastructure deficiencies, including in transport and energy, to enable sectoral development.

(h) Building human capital to effectively respond to the changing needs of the market through linkages with universities, technical and vocational education and training (TVET) and other institutions, as well as through the delivery of sectoral trainings, and strengthening and equipping the civil service with relevant expertise.

(i) Facilitating private sector development through the creation of an enabling business environment and the creation of mechanisms to support micro, small and medium-sized enterprises (MSMEs') financing needs and the sharing of technical expertise.

(j) Accelerating ICT development as a facilitator of sectoral development, as well as an integral part of the national economy, through the modernization of domestic infrastructure and its expansion, as well as through technical skills-building.

The above-mentioned objectives will be operationalised through five interlinked pillars: (I) Economic diversification, industrialisation and value addition; (II) Infrastructure (including energy) and natural environment; (III) ICT for digitalisation and transformation; (IV) Private sector development; and (V) Skills formation and improved policy coordination.

Agriculture sector income is noted as having the highest income multiplier effect, as well as serving as the basis for lowering the cost of living, given the inordinate share of food in household expenditures. Kenya's manufacturing sector is also largely agro-based, "with food processing and beverage manufacturing contributing 40% and 48% of manufacturing employment and GDP respectively".

Similarly, enhancing the productive capacities of the MSMEs sector is considered a game changer, with the potential to substantially increase the size of the national economy, by generating an additional Sh6 trillion per year. The commitments under "The Plan" include efforts to review and rationalize all business licenses and allocate Ksh 50 billion per year "to provide MSMEs with 100% access to affordable finance".

Other measures include the establishment of a "MSME Business Development Centre in every ward and an Industrial Park and business incubation centre in every TVET institution".

"The Plan" acknowledges state of Kenya's digital economy and acknowledges that the heavy investment in ICT infrastructure over the past two decades has not engendered the anticipated take off for the industry. For example, the business process outsourcing (BPO) industry did not turn out to be a leading generator of jobs and services exports. However, the critical role of the sector for economy-wide benefits is recognized. Its enabling role for the other four pillars of "The Plan" and for the automation of, inter alia, revenue collection, makes the sector key for the achievement of Kenya's development objectives. To that end, one of the key commitments is the establishment of a Presidential Advisory Council on Science and Technology Policy that will "ensure a whole of Government approach to technological developments".

Flowing from the recognition that Kenya experienced "reverse structural transformation" in the past 15 years, with the share of value added in GDP shifting steadily away from services and manufacturing, towards primary sectors, "The Plan" identifies significant potential in leather, building products (inputs in the construction industry), pharmaceuticals and medical supplies and garments and textiles, as the first steps in reversing the decline in manufacturing's contribution to Kenya's GDP. In addition, "The Plan" has undertaken far reaching commitments to address high electricity costs that continue to undermine the country's manufacturing sector and the overall investment and export competitiveness of Kenyan enterprises.

Priority interventions

The priority areas for policy interventions are captured in five main pillars, depicting the key processes to advance sustainable development, structural transformation and economic diversification, and foster productive capacities in Kenya:

Pillar I: Economic diversification, industrialisation and value addition

<u>Pillar I(a): Harnessing Kenya's comparative advantage in agriculture</u>, including in the livestock and fisheries sub-sectors to boost agricultural productivity and value addition, in particular in agro-processing, through integrated rural development, targeted investment in infrastructure (e.g. irrigation) and by creating backward and forward linkages in agro-processing and agro-services.

As with most countries in Africa, Kenya's productive capacities are linked strongly to its natural capital, including agriculture. The potential of the country's natural capital and agriculture to address the challenges of unemployment, food-security and capital accumulation, as well as diversify exports and foster backward and forward linkages in the economy is, thus far, largely untapped. Efforts aimed at improving agriculture should include enhanced production, storage, processing and marketing systems, the diffusion of technology and the dissemination of information, as well as efforts to assist the country in establishing acceptable practices in agriculture to meet international standards, with an aim to move towards sectoral upgrading and value addition, thus countering the economy's trend of "reverse structural transformation". Business and other social linkages with agro-business, hotel chains and other catering service providers are also effective ways of increasing farm production, productivity and income.

> Kenya must harness its comparative advantages, including maximizing the development gains from agriculture by creating virtuous circles between investment in rural economy, increased productivity, employment & aggregate domestic demand

Furthermore, agriculture is key to promoting growth with employment. In this context, public investment in priority areas (particularly in rural infrastructure, irrigation and electrification, as well as high quality rural extension services and community service centres) is required to set in motion a virtuous circle. In the virtuous circle, investment boosts productivity in the agriculture sector, and overall economic growth creates employment, which, in turn, entails increased income for workers, giving rise to increased consumption that supports the expansion of aggregate demand. Import leakages apart, expanded aggregate demand ideally creates incentives for new or additional investment to meet the growing demand. Sectoral upgrading and value addition, together with supporting policy measures help to ensure an improved quality of jobs created, leads to development gains. This circle could then be reiterated at a higher level of investment, growth, employment, and income.

This means that holistic programmes such as this one should enable Kenya to valorise the rural economy and maximize the development gains from agriculture by creating virtuous circles between investment in agriculture, improved productivity, employment opportunities and aggregate domestic demand to enhance economy-wide productive capacities and structural economic transformation. Practical policy and operational lessons from successful economies in Africa, Asia and Latin America will be brought to the Kenyan policymaking and programme management processes. Similarly, training and capacity building activities will be delivered in critically important areas of agro-processing, ensuring a robust National Quality Infrastructure and to facilitate the meeting of international food safety and quality standards. Opportunities for revamping Kenyan institutions to meet the challenges facing the agriculture sector will also be explored.

For this purpose, unlocking the value of land as a bankable asset through provision of titles, with full respect and recognition of traditional rights and customs, should be made a matter of priority to invigorate economic activities concerned with the cycles of production and with trade. At the same time, legal and institutional mechanisms should be put in place to prevent further arable land fragmentation and its reclassification wherever the process is deemed unnecessary. Moreover, farmers should have broad options for insurance against crop failure, which is increasingly caused by erratic weather patterns and climate change. The insurance should also be available in the context of losses generated by unreliable energy supply, for example, while storage conditions are subsequently inadequate.

Transforming and modernising agriculture through targeted investment in infrastructure (e.g. irrigation) and the creation of backward and forward linkages in labour intensive manufacturing, agro-processing and agro-services is critically important for Kenya. So is adaptive research in agriculture to enable productivity gains, hence the necessity to engage agriculture research institutions in optimising the variety, type and sequence of agricultural production. Agricultural R&D is key to increased productivity in agro-value chains, thus investment in research – extension linkages to leverage on research outputs (innovations and technologies) that can address critical challenges in the agricultural sector including low productivity and climate change related risks (climatic variability, emerging pests and diseases, among others) is needed. Supporting the commercialisation of research outputs through seed multiplication and bulking is critical for public breeders to make innovations and technologies available to actors along the agro-value chains. Investment in market research is important to link production to markets that trigger in-creased productivity, and thus employment and increased incomes.

Moreover, considering that Kenya is almost 82% arid and semi-arid, making Kenya's arid and semi-arid lands (ASALs) the next frontiers for the country's s development, climate change is a critical factor in agricultural production. Therefore, there is a need for developing climate-smart agriculture.

Structural transformation can also be achieved in the agriculture and services sectors, if productivity can be increased, e.g., through the addition of basic processing to agricultural production. A key focus, as outlined in the National Export Development and Promotion Strategy (NEDPS), would be on the agro-processing sector as low hanging fruit in the quest to achieve economic diversification, industrialisation and structural economic transformation. Suffice to mention that any reversal of the declining share of manufacturing's contribution to Kenya's GDP will, in all likelihood, be achieved by expanding growth in the agro-processing sector, including in the livestock sector, as well as in the leather and leather products and fisheries subsectors, mainstays of a large segment of Kenya's population. The livestock subsector offers ample opportunities for the country to launch a modern beef industry, alongside a labour-intensive manufacturing sub-sector in leather and leather products, integrating actions to effectively address emerging sustainability challenges regarding the livestock-environment and livestock-public health nexuses; responding to national demand expected to increase for beef and milk by over 170% between 2010 and 2050; and exploring export opportunities. In line with environmental sustainability, other potential value chains which may be explored can also utilise hooves, bones and horns.

Addressing the livestock sector must start by clustering breeders and herders to maximize scale economies and improving the quality and quantity of livestock by investing in improved extension services, veterinary and training and capacity building in animal husbandry.

Such efforts should include addressing the poor state of livestock infrastructure, limited availability of processing facilities and bottlenecks in the supply chain, which hinder efficient movement of livestock and its product downstream, thus preventing reciprocal livelihood. If properly developed and harnessed, the livestock subsector can go beyond improving food and nutrition security, and can increase exports, create jobs and income and help the country to link into regional and global value chains in leather and leather products. The Programme will assist in mobilizing private and public investment to the sector, as well as in instilling operational lessons from successful countries in Africa, Asia and Latin America, with the aim to boost the productivity, quality and safety of Kenya's livestock subsector, as well as develop market entry mechanisms for labour-intensive leather and leather products.

Another focus area is the fisheries subsector within the context of the broader Blue Economy. The priority subsector identified for implementation during the fourth medium term plan is key to support poverty eradication, enhance food security, create employment and to help realize Kenya Vision 2030 and achieve the Sustainable Development Goals (SDGs). Currently, the ocean economy accounts for approximately 4% of Kenya's total GDP, with coastal and marine tourism as the largest contributors to the subsector. The fishing industry itself contributes about 0.5% to national GDP and about 2% of national export earnings, which is well beyond its actual potential. The industry employs over 60,000 fishermen and women directly, and an estimated 1.2 million people directly and indirectly within the supply chain. Once fully harnessed, the sector's contribution to Kenya's GDP is expected to increase.

> Harnessing Kenya's Blue Economy potential must be viewed in a broader development context, including poverty eradication, enhancing food security, creating employment opportunities, and protecting the marine ecosystem

The Programme will support the development of aquaculture and mariculture in Kenya by mobilising national and international finance (investment) and fostering regional cooperation and experience sharing in developing commercial aquaculture. It will also support Kenya in the implementation of the WTO Fisheries Subsidies Agreement adopted at the June 2022 12th WTO Ministerial Conference and the implementation of the outcome of the 2022 UN Ocean Conference co-hosted by Kenya and Portugal. Vast opportunities arising out of the disciplines introduced by the new Agreement call for appropriate national response strategies. It will, thus, require the Programme to play a catalytic role to ensure marine resources are sustainably harnessed to contribute to Kenya's structural economic transformation. Besides fish and seafood, niche products such as sea ornaments provide opportunities for export diversification. As such, support in identifying such products and key markets will be integral to the Programme of support. Considering the central importance of Marine Spatial Planning (MSP) as a fundamental tool to manage a sustainable Blue Economy, the Programme will contribute to efforts to set up necessary national and local MSPs.

Kenya also has untapped potential in nutraceuticals and health foods (super foods), technically known as "functional foods" and food supplements, which have or are alleged to have health-enhancing properties beyond their nutritional value. This includes food supplements that are derivatives from plants and fruits processed into concentrated forms such as liquids, tablets or capsules. More broadly the term 'nutraceutical' is used to describe both of these aspects, including fruits, vegetables, roots, leaves, and grains that are known or considered to have health/related benefits. In Kenya, while there is no comprehensive study, some localised surveys reveal that nearly 34% of the population in urban areas consume indigenous foods (especially pulses and nuts, leafy vegetables such as cowpea leaves, spider plant, jute, pumpkin leaves, Bacella alba, amaranthus, crotolaria and black night shade). However, there has always been underproduction and underutilisation due to supply side constraints, a lack of efficient distribution systems, including poor rural transportation networks and limited knowledge about the existence of such foodstuffs that are rich in micronutrients with lost opportunities to improve the functioning of the health system. Improved seed varieties that can withstand weather shocks, better awareness about the health benefits as well as improved production, storage and distribution systems supported by scientific research and regulations are key for harnessing the potential of nutraceuticals in Kenya. Kenya can also tap the global nutraceutical market, which was estimated at US$382.5 billion in 2019. Consumer demand is rapidly increasing in many regions including the United States of America, Europe, Asia and the Pacific, Latin America and the Middle East, with the market estimated to have reached US$412.7 billion in 2020.

The United States, Europe and Japan account for more than 90% of the global nutraceuticals market. Greater product awareness, higher disposable income levels and the evolution of specific wellness diets in society have contributed to this significant growth in consumer demand. In addition, the Internet has provided an abundance of information regarding the aetiology, prevention and treatment of various ailments and diseases. With the often unwanted side effects of prescription medication, consumers seek to derive medicinal benefits from food by way of supplementing their diet with herbal and dietary supplements. According to the recently published UNCTAD (2022) study, the rising demand for nutraceuticals is driven by several factors, including higher incomes, growing consumer awareness of health issues as populations age, greater focus on preventing rather than curing illness, wariness about modern medicine's invasive procedures and severe side effects, greater interest in and knowledge about traditional cures in other cultures and concerns about environmental and social sustainability (notably in the case of organic produce). The global market for plant-based food is changing fast, supported by a shift in the public belief in the capability of plant-based food to assist in treating their health issues. A new holistic approach recognising that whole plant diets can work across a range of medical issues is now underpinning the growth in this type of product. However, to effectively benefit from the increasing global demand, Kenya needs to build its capacities to improve the international food safety and quality standards, in parallel with developing the supply capacity. This is because that major markets have introduced a multitude of standards – both public and private – which makes it extremely difficult for exporters to penetrate unless they meet the required standards. This issue is particularly pertinent to nutraceuticals, which are products sold for their contributions to health and human wellbeing. This Holistic Programme is designed to help Kenya to address supply and demand side constraints facing the agriculture sector to be able to maximize developmental gains of the agriculture potential that the country holds.

Specialty products such as nutraceuticals require effective and market-friendly labelling, packaging, and branding. Added to this, Geographical Indications (GIs) can help add value to the products by supporting the branding and marketing of locally produced nutraceuticals. Kenyan producers also need to set up Codes of Practice, establishing marketing and surveillance mechanisms with the potential benefits in terms of greater economic profits, fostering quality production, strengthening collective action, as well as improved management of biodiversity resources. Ideally, efforts to register GIs or trademarks should be part of a broader marketing and sustainability strategy. This requires establishing a reputation for quality and reliability and, very likely, partnering with foreign firms who have the marketing expertise and connections to successfully establish a brand. Branding and trademarks should also be linked to improving the safety and quality of nutraceutical products with the aim of meeting international standards. With the right marketing and improved trade infrastructure, selling nutraceutical products directly to international markets would greatly benefit Kenyan producers and the overall export capabilities of the country. The implementation of the Kenya Programme will be key to addressing the demand side challenges and market entry requirements, while protecting specialty products through trademarks or GIs and by fostering partnership with leading global brands and trademarks.

Furthermore, effectively harnessing the potential of the agriculture sector, particularly livestock, fisheries and nutraceuticals for jobs creation, poverty reduction and sustainable growth and development of Kenya requires the full access of the whole population, including women and marginalised groups, to productive assets such as land and capital. Deliberate policies and concrete actions are necessary to promote gender equality, improve the productivity and growth prospects of the agriculture sector for jobs creation, income generation, development, and value-addition. To move towards a level playing field, it is necessary to remove gender-based obstacles in agriculture and entry barriers to the poor. These should include legal reform of land tenure; bans on gender-based discrimination in marketplace settings; establishment of well-resourced funds to address gender inequality, including providing capital funding for female-led projects; creation of land-purchasing cooperatives for women; subsidies for female farmers to reduce dependence on male family members; targeted training for women, adjusted to their time-poverty and schedules dependent on reproductive and care responsibilities; creating platforms and networks supporting linkages and provision of market intelligence for female entrepreneurs, among other actions. These actions are also necessary to target poor households and other vulnerable sections of society who lack productive assets due to unequal distribution of land and capital.

> With the right marketing and improved trade and quality infrastructure, the production and export of nutraceutical products would greatly benefit Kenyan producers and the overall export capabilities of the country

It is important for Kenya to improve the regulatory framework, including updating its international investment agreements (AIIs)

<u>Pillar I(b): Industrialising the country through a focus on value-addition and building a robust manufacturing sector based on domestic comparative advantages.</u> This should include a focus on special economic zones (SEZs), export processing zones (EPZs), and industrial parks (IPs), to enable the country's greater participation in global and regional value chains, foreign direct investment (FDI) and international trade.

The rationale for pursuing structural transformation is to achieve faster productivity growth, attract FDI and move towards higher value-added activities. This is usually associated with the industrial/manufacturing sector, which plays a key role in a country's development.

The Kenya Programme will seek to expedite the achievement of the vision of the Kenya National Export Development and Promotion Strategy (NEDPS) to "Transform Kenya's economy through export-led industrial, agricultural and trade in services development." It will further aim at identifying other sectors of the Kenyan economy which have potential for expansion, with a view to achieving productivity gains and export diversification. The Programme will also take into account the recommendation by Kenyan Association of Manufacturers (KAM) in its "Manufacturing Manifesto 2022-2027", to revise the NEDPS with a focus "on a monitoring target (12-15%) of GDP by 2027".

A strategic focus of this component will be on labour intensive manufacturing, such as in the textiles, apparel, and leather and leather products sectors. The preponderance of Kenya's apparel and textile exports have been destined for the US market. Kenya is considered a success story of the African Growth and Opportunities Act (AGOA), the US preferential scheme for eligible sub-Saharan African countries. But with uncertainty regarding the future of the scheme that is earmarked to lapse in 2025, the Kenya Programme will aim at crafting strategies forestalling any post-AGOA market access shocks arising therefrom, as well as improving the utilisation of the AGOA scheme in the remaining years of the AGOA legislation.

Programme activities will also include identifying possible export markets and defining investment agreements, including International Investment Agreements (IAAs), trade policies and measures that can help to strengthen links with regional and global value chains. This can help Kenya overcome the challenges of its small market size, paucity of FDI, and generate economies of scale in production. The Programme will also focus on measures to reduce the costs of transport and alleviate non-tariff measures.

The Government of Kenya, like many developing countries, has used the EPZ programme as a key economic development programme for the generation of employment opportunities, the promotion and diversification of exports, the attraction of new productive investments, and the development of backward and forward linkages, and skills and technology transfer.

As with most developing countries, attracting and benefiting from foreign direct investment (FDI) is critically important for Kenya, given the huge investment and productive capacities gaps articulated in the NPCGA. This calls for improving the overall institutional and regulatory frameworks, including modernizing Kenya's current international investment agreements (IIAs) regime, which is largely composed of so-called "old generation" treaties, lacking sustainable development-oriented provisions and failing to facilitate the flow of FDI to the country's sectors of comparative advantages. Moreover, Kenya's current IIAs often feature unrefined investment protection provisions and include few exceptions or safeguards for legitimate regulatory measures. Therefore, there is an urgent need to modernize Kenya's IIAs to create a forward-looking international investment framework that is consistent with the "new generation" of investment policies. In this regard, UNCTAD can support Kenya's efforts to make IIAs more conducive to inclusive growth and sustainable development.

It seeks to do so by reforming treaties to ensure: (i) safeguarding the right to regulate for pursuing sustainable development objectives, while maintaining protection; (ii) reforming investment dispute settlement; (iii) promoting and facilitating investment flows; (iv) ensuring responsible investment; and (v) enhancing systemic consistency".

According to the Export Processing Zones Authority, the EPZ programme, comprising 82 Gazette Zones and 145 enterprises across Kenya has led to, inter alia, the direct employment of 65,000 people and the attraction of US$ 1.1 billion worth of investments. A notable feature of the Kenya EPZ scheme is the level of locally owned firms' participation in the zones accounting for 40% of the enterprises present. Such high level of participation by local enterprises augurs well for the quest to achieve backward linkages with concomitant economy-wide positive effects. Enterprises operating in the EPZ are mainly in agro-processing, pharmaceuticals and textiles industries.

Furthermore, the textiles and apparel exports to the USA under the AGOA unilateral preferential programme is one of the success stories of the EPZ programme as an instrument for investment promotion. The textile and apparel exports to the US account for 70% of Kenya's exports to the US and, indeed, has singularly catapulted the US to the position of the most important destination for Kenyan exports. However, key challenges remain. These include high cost of doing business in Kenya, specifically high energy and transport costs, the availability of ready "plug and play" industrial sheds, limitations of regional market access and the availability of capital are key challenges, especially for local MSMEs. In addition, the export products out of these zones are predominantly for the mass market. In this regard, a longer-term view that will lead to high-end products through, inter alia, the scaling up of training and access to capital needs to be pursued.

To address these challenges, there has been a conceptual and policy evolution towards the model of Special Economic Zones (SEZs). The most notable shifts under the SEZ model include the provision of 100% access to the East African Community (EAC)/domestic market, unlike the provisions under the EPZ regime of only allowing 20% access to the EAC and domestic market, as well as the multipurpose activities allowed under the SEZ. The proactive and targeted SEZ policy framework looks beyond manufacturing for exports and provides similar incentives to other sectors such as tourism, Science and Technology, ICT and agricultural zones.

To buttress the policy evolution, the activities under this Holistic Programme will draw on UNCTAD's expertise in investment policy, entrepreneurship, trade logistics, and overall institutional and human resources capacity building. This know-how will be combined to help organize and manage EPZs and SEZs and will include support for the development of policy-frameworks and regulations. This, in turn, will contribute to the country's industrial development, economic trans-formation and the building of productive capacities.

The Programme will develop tailored business plan(s) for EPZs and SEZs and will also address specific challenges related to the medium- to long-term management of specific zones. It will also include developing a business plan for all EPZs and SEZs, as well as Industrial Parks, organising study tours, targeted training and capacity-building activities on best practices and les-sons learnt from the management of Industrial Parks and Special Economic Zones in other developing countries.

Kenya can become a creative economy hub in East Africa, not only competing against but also collaborating with reginal powerhouses such as South Africa and Nigeria

Pillar I(c): Developing and investing in the creative economy

Kenya's creative economy provided over 5% of the country's GDP in the last decade. It has been estimated to have the capacity to increase its share to 10% by 2025, contributing to job creation and the formation of more sustainable livelihoods for young women and men across the country, especially when linked and harnessed in the context of the tourism industry. Creative economy goods exports from Kenya stood at 53 million USD (current prices) in 2021, whereas imports stood at 244 million USD (current prices) in the same year. Kenya's interna-tional trade in creative services was estimated at 54 million USD (current prices) in 2020.

Kenya is considered a creative economy hub for East Africa, and in a continent-wide sense, competing against and potentially also collaborating with South Africa and Nigeria. Established strengths include film making; theatre and performing arts; music; street, township and community arts; as well as TV and radio. Areas of potential include social enterprises (start-ups); digital messaging and targeting; efficient use of ICT hubs; visual arts and fashion. Identified weaknesses for the sector include gaps and inefficiencies in policies and programmes; lack of education and training in ahead-of-the-curve visual and other arts sectors; lacking linkages from hubs and clusters to international arena; and limited finance.

Kenya is trading in an increasingly competitive marketplace, both in the region and globally, and must take strategic actions to establish a dynamic framework for the sustainable growth of local creative industries: build market-oriented educational institutions to inspire and equip the next generation of talent, help creative businesses to start-up and grow, and maintain Kenya's competitiveness against other regional and international markets.

In this sense, Kenya could benefit from a comprehensive mapping of its cultural and creative industries – building on the pilots started by other partners as well as assistance in developing a Cultural and Creative Industries strategy to help guide policy and programme efforts towards optimally supporting the creative economy. Training and capacity building are a cornerstone of such policy-level support, both with a view to elaborating the strategies and to implementing them efficiently. Creative economy working groups already operational in the country could be tasked to lead the development of such activities, with UNCTAD's support. A central issue in implementing the strategy will be to address enabling factors (such as the legal and policy frameworks) and capacity gaps within the private sector, both in terms of ahead-of-the-curve training and linkages to finance, and networks at the regional and international levels, as well as dedicated business development services.

The Konza Technopolis project is a move in the right direction. Considered as a business pro-cess outsourcing (BPO) project and dubbed "where [the] African silicon savannah begins", the project wants to attract business process outsourcing, software development, data centres, disaster recovery centres, call centres and light assembly manufacturing industries; and build a university campus focused on research and technology as well as hotels, residential areas, schools and hospitals. It is also intended to include a science park, a convention centre, shopping malls, hotels, international schools, and a health facility.

Pillar I(d): Enhancing the benefits of regional integration within the African Continental Free Trade Area (AfCFTA) for the Kenyan economy, ensuring the country's role as an anchor in the process of deepening regional and continental economic integration.

Kenya is a founding Member of the World Trade Organization (WTO). The country has also been an active player in the continental and regional integration arena through its membership in the EAC, COMESA and the African Union. Most noteworthy is the tremendous progress in regional integration embodied by Kenya's membership of the EAC Customs Union/Common market and the developments in the continental integration exemplified by the AfCFTA.

The launch of the AfCFTA on 21 March 2018 in Kigali and the subsequent commencement of trading under the AfCFTA on 1 January 2021 is a game changer. An integrated continental market of 1.2 billion people growing to 2.5 billion by 2050 with an estimated GDP of US$ 2.6 trillion, provides immense opportunities for export diversification, industrialisation and structural transformation for the Kenyan economy. Kenya has been selected, at the 9th session of the AfCFTA Council of Ministers held in July 2022, as one of the initial pilot countries to start trading under the AfCFTA. This decision underscores Kenya's role as an anchor State for regional integration and the Programme will support developments in the integration agenda.

Kenya has also engaged on the bilateral front most notably in the initiation of talks on the post-AGOA arrangement with the United States, the Implementation of the EU-ECA Economic Partnership Agreement (EPA) under the principle of variable geometry and the Kenya-UK EPA. Participation in multiple trade negotiations brings forth unique challenges and thus requires a well-functioning institutional mechanism for ensuring synergy and coherence across the various trade negotiating fora.

The Kenya Programme will provide support to the Kenya National Trade Negotiations Council and the Staff of the relevant Oversight Parliamentary Committees. Such support will include dissemination of briefs and studies on trade topics under negotiations at the WTO and the AfCFTA.

Since Kenya is negotiating in the AfCFTA under the aegis of the EAC Customs Union and the WTO Trade Policy review is also conducted as an EAC Customs Union, there exists scope for widening this Programme' pillar to include other EAC Partner States.

Pillar II: Infrastructure (including energy) and natural environment

Pillar II(a): Addressing the physical infrastructure deficiency, including in transport and energy to enable sectoral development

Kenya's below-par performance under the critical infrastructure components of the PCI, including Transport and Energy is extremely worrisome. For example, Kenya's overall investment and export competitiveness and, in particular, the manufacturing sector continues to be undermined by high electricity costs. Access to quality, affordable energy is sine qua non for a competitive manufacturing sector. Building on its impressive transition to renewable energy – which accounted for 90% of electricity consumption in 2021 – Kenya needs further investments and policies to reduce the relatively high cost of energy and electricity, to improve the competitiveness of its industries and exports.

At the same time, as a major transport hub in the region, an efficient and seamless movement of goods from the port of Mombasa would contribute to the business environment by inter alia reducing trade costs, boosting trade flows and facilitating regional trade. In particular, trade facilitation would be vastly improved if the inefficiencies within the Standard Gauge Railway (SGR) and the accreditation processes are streamlined. Further, the development of the new regional transport corridor, the LAPSSET, linking Kenya, Ethiopia and South Sudan is expected to lead to the opening up of Kenya's northern regions and, ultimately, addressing intra-regional disparities in economic development since Kenya's independence.

> Kenya must improve investments & policies to reduce the costs of electricity & transportation to improve its competitiveness, while continuing to be a regional transit hub- boosting trade flows & regional integration

It will also provide a new platform for advancing regional integration in Eastern and the Horn of Africa region. The Programme will support the Government of Kenya in strategizing the transport infrastructure modernisation, development and expansion to ensure it serves the potential centre of growth such as agricultural production and processing, and their enhanced connectivity to enable trading and export. An integrated transport logistics strategy should include the focus on development of logistic hubs to cater for the country's economic development and export diversification.

In terms of energy, the critical predicament is the inefficiency in distribution. The Programme component will seek to integrate the recommendations contained in the Presidential task force report in the elaboration of the Programme of assistance. It will further provide support to activities aiming at disseminating best practice in other countries that have performed well under the Energy component of the PCI and to ensure the policies are implemented to increase the efficiency of distribution through the reform of the energy system. These will include study tours and trade missions for key players in the energy sector including the relevant Coordinating Committee at the Council of Governors and Oversight Committees in the National Assembly and the Senate.

Pillar II(b): Enhancing the protection of the natural environment, biodiversity, bioprospecting, and the blue economy, being also key to advance sustainable development

In terms of existing forests, for them to continuously provide adequate wood products there is need to reform forestry practices by adopting innovations that increase the efficiency of the production and management systems. The conservation of forests is connected to managing water resources in Kenya, particularly water towers.

One way to achieve this is to reduce the heavy reliance by low-income households on wood fuel by intensifying the 'Mwananchi LPG project', where the Government provides low-income households with liquefied petroleum gas (LPG) cylinders at subsidized prices. To achieve universal access to water by 2027, the development of water resources should focus more on household/community water projects (water harvesting, recycling and drilling more boreholes) as opposed to construction of large dams which are costlier. The focus should also be on modern technologies on desalination to develop aquifers. Overall, more resources should be put into environmental conservation.

Kenya holds significant potential for sustainably harnessing biodiversity and biogenetic resources for socioeconomic development. Well-regulated bioprospecting can generate revenues for conservation projects, protected areas, and indigenous people and local communities; build scientific and technological capacity to study a wide variety of plant and animal species and other microorganisms; raise awareness of the commercial importance of biodiversity; and create business and entrepreneurial potential. Nevertheless, available evidence shows that even with well-regulated measures in place the financial and bargaining power of large multinational corporations involved in biological prospecting often expose uneven power relations between local resource users living near or in collection sites.

Kenya also has a coastal and marine ecosystem with a potential for marine bioprospecting and the development of Blue Economy, the sustainable use of which involves ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem. This requires a well-functioning institution, regulatory and environmentally friendly development policies which require carefully designed and well-crafted Marine Spatial Planning, which promotes multi-uses and identifies sites for new and emerging uses through the ecosystem-based approach, applying key principles such as sustainability and equity. Marine Spatial Planning can be used as a tool for increasing investor confidence by introducing transparency and predictability, facilitate transfer of technologies and foster collaboration across borders for regional development. The Kenya Programme will assist the country in how to best tap biodiversity resources through bioprospecting including marine bioprospecting. It will enable Kenya to develop "ahread-of-the-curve" Marine Spatial Planning for sustainably harnessing its blue economy and marine resources for its socioeconomic development.

Pillar III: ICT for digitalisation and transformation

Accelerating ICT development as facilitating component of sectoral development, as well as an integral part of the national economy, through infrastructure's modernisation and expansion, technical skill-building.

Targeted public investments in infrastructure coupled with policies and regulations to boost access to broadband, has enabled Kenya to emerge as a key digital economy player on the African continent. A progressive regulatory environment has also facilitated the emergence of Kenya as a hub for digital financial services helping Kenya achieve one of the highest levels of financial inclusion on the continent. According to the 2020 UNCTAD B2C Commerce Index, Kenya was also ranked 88th fastest growing e-commerce economy worldwide. Kenya was ranked 4th in Sub Saharan Africa (behind Mauritius, South Africa, Nigeria).

In furtherance of the enabling role of ICT in Kenya's Vision 2030, the Government of Kenya developed the Digital Economy Blueprint (2019); a framework to transform Kenya into a digital economy and harness the benefits of a digitalized society. Together with the National Information, Communications and Technology Policy, they provide the framework guiding Kenya's quest to become the Silicon Savannah.

The Konza Technopolis project is another sign of the Government's dedication to advance ICT- related development.

However, Kenya has a low number of digital skilled experts, with only few professionals possessing advanced digital skills. High-end ICT skills are essential to facilitate a vibrant digital economy, design and support complex digital systems as well as to spur innovation. Cybersecurity remains a real challenge. Cybercrime has increased significantly in the last few years due to the rapid digitalisation of the financial sector and increased online payment transactions. According to KNBS 2022, the total cyber threats in Kenya more than doubled from 139.9 million in 2020 to 339.1 million in 2021. Moreover, overregulation is a predicament. The ICT sector is predominantly regulated by the Communication Authority of Kenya (CAK). Other government authorities are also involved and include Companies Registry, Kenya Revenue Authority (KRA), the ICT Authority, the Office of the Data Protection Commissioner, and county government bodies. Excessive bureaucracy discourages investment. At the same time, weak linkages and ineffective coordination between the Government, private sector and researchers is a challenge. Moreover, there is lack of a clear policy framework to facilitate effective integration of research and innovation into the economy as well as a lack of a skills inventory and inadequate alignment of the planning of human resource to development needs, mainly due to lack of reliable and timely data on the demands of the labour market. Scarcity of frequency spectrum, a resource necessary for the operationalisation of some of the infrastructure is an issue. The high demand for the scarce resource, coupled with high fees make access difficult for prospective service providers. Other deficiencies include: low internet connectivity and its high cost, inadequate and unreliable power supply especially in the rural areas, limited number of computers in schools, limited or no computer laboratories, poor maintenance of submarine cables for the region due lack of regional maintenance

Kenya holds significant potential for sustainably harnessing biodiversity, marine bioprospecting and biogenetic resources for socioeconomic development depot, inadequate broadband coverage. Poor state of infrastructure and equipment especially in universities, as most universities lack science equipment to carry out experiments, is another challenge. Low investment in high-level technical human resource and research causes human capital deficiencies. This is because education and training do not adequately meet the needs of industry and there is limited development of technological capabilities in industry. In connection, inadequate funding of research and innovations, which is mainly donor-driven, fragmented, and uncoordinated, partly results in uncoordinated priority setting at both the national and international levels.

The Programme will be aligned with other existing support measures being provided to Kenya under the UNCTAD E-commerce and Digital Economy Programme. In addition to supporting the development of an e-commerce strategy to propel the growth of e-commerce in the country and an eTrade strategy, as well as setting up a national task force on e-commerce to coordinate engagements on e-commerce, the Programme will focus on harnessing the business potential of information and communication technologies for development and expanding digital trade sup-port services, including aforementioned e-commerce strategies and platforms for enhanced sales, purchases and procurement. This will include all aspects related to e-commerce, e.g., policy-frameworks, standards, security, and intellectual property rights. UNCTAD can also assist in mainstreaming ICT into national sectors. For instance, UNCTAD can support the establishment of a Regional Centre of Excellence for Science, Technology and Innovation, to promote the application and productive use of the ICT sector. This will facilitate the forging of linkages and partnerships with different sectors to build the necessary skills for the practical application of new technologies in health, education, agriculture and industry.

> Tapping business and development potential of ICT and expanding digital trade support services, including e-commerce and related platforms, is critically important for Kenya

Pillar IV: Private sector development

Facilitating private sector development through creating an enabling business environment and creating mechanisms to support the financing of MSMEs and enhance the sharing of technical expertise.

A strategic approach towards building productive capacities and structural transformation requires effective institutional and coordination mechanisms that encourage robust private sector engagement, including micro, small and medium-sized enterprises (MSMEs) who are normally responsible for effective job creation, as well as innovation. There are believed to be untapped business opportunities in Kenya and Africa deriving from latent comparative advantages, which private sector should be in a position to explore and exploit. These can be tapped through close cooperation between the Government and the Private Sector, as indicative through the successful experiences in East Asia.

The Programme component will support the Business Management Organizations (BMOs) in their advocacy role with a view to giving voice to private sector input in all the coordination mechanisms foreseen under all the Programme components. These will include the National Trade Coordination mechanism, the National Trade Negotiations Council, and the National Trade Facilitation Committee, etc.

Activities will include information and knowledge sharing under the rubric of the UNCTAD re-search and analysis work on contemporary questions in the WTO, AfCFTA work programme. Policy briefs on developments on other trade and development questions will no doubt empower the private sector as it seeks to influence Kenya's agenda in all fora.

Activities will, in particular, focus on MSME policy and capacity building, and special entrepreneurship training through UNCTAD's Empretec Programme.

They will also aim to boost linkages between MSMEs, improve business intelligence and take advantage of export markets in the various sectors of the economy. The Empretec Programme identifies and reinforces personal business competencies through a process of dynamic product innovation and market penetration, as well as self-assessment skills. Participants in such capacity building activities develop clear ideas about what they want to do with their businesses in the short and the long run. With these goals in mind, Empretec helps business owners to improve their core business behaviours, innovation potential and competitiveness. This influences the operations, and above all, the results of their businesses. Entrepreneurship skills development is also required for economic diversification, product transformation, job creation, improved market access and greater trade opportunities.

Pillar V: Skills formation and improved policy coordination

Pillar V(a): Strengthening the capacity of policymakers to reorient policies towards a holistic approach with the economy-wide productive capacities building at the core of policy design and implementation, including through mainstreaming productive capacities and PCI in universities' curricula

Looking at how to adjust the country's development strategy, it is essential for Kenya's policymakers to espouse a paradigm shift in development policy formulation and implementation away from the current practice of traditional, fragmented and short-term interventions towards multisectoral, comprehensive and long-term programme-based approaches to development. This should include efforts to break free from old mindsets, organized around traditional productive sectors and established institutions and policies, some of which hold back the envisioned transformation of the economy.

Breaking away from traditional and disjoint efforts will involve applying new ideas, lessons from successful experiences and practical approaches in evaluating where Kenya has fallen short in its industrialization agenda, and in plotting a new path forward.

The PCI provides a framework for evidence-based policy formulation. The potential for Kenya to improve tremendously on its PCI performance is evident. However, such a potential must be effectively harnessed though pragmatic and forward-looking policies and strategies. In promoting the placing of the PCI at the centre of the policy discourse, there should be continuous engagement of Kenyan key institutions in the processes on which to anchor the PCI. The recent launch of the Kenya Vision 2030 Fourth Medium Term Plan (MTP) 2023-2027 preparatory process by the National Treasury is an opportune moment for dovetailing the PCI work into a process that will guide Kenya's development agenda. Having shown that key Kenya Vision 2030 goals have not been met thus far, the case for new generation policies is very strong. But Kenya must equip PCI "Ambassadors" in the relevant Sector Working Groups for the Vision 2030 MTP4. Mainstreaming the PCI in the MTP4 process will place it in pole position when engaging development partners and in the allocation under the domestic resource envelope.

Placing the fostering of productive capacities at the centre of Kenya's trade and development policies would require political commitment matched by actions. The architecture for engaging the Kenya state has been made user friendly by the 2010 Constitution, specifically, the public participation provisions. The high-level policy dialogue has created a network of PCI "Ambassadors" including leading Kenyan academic institutions that must be harnessed as we embark on the journey of new generation policies and strategies that would support Kenya's industrialisation, exports diversification, ultimately meeting Kenya's Vision 2030 and sustainable development.

> The Holistic Programme espouses a paradigm shift by breaking free from old mindsets focusing on traditional sectors, institutions and old policies, some of which may hold back the envisioned transformation of the economy

In order to facilitate the mainstreaming of productive capacities and the PCI, Programme component will include support to institutions of higher learning in the development of a cadre of experts on the statistical and technical underpinnings of the PCI methodology. Such support will lead to sustainable in-country capacity that will facilitate the formulation of data-driven, evidence-based new generation holistic trade and development policies. It will also support mechanisms for engendering direct linkage of skills development to the requirements of the industry.

Pillar V(b): Improving State coordination mechanisms and enhancing the effectiveness of institutions to safeguard and facilitate the process of sustainable development

Under Schedule 4 of the 2010 Constitution of Kenya (COK) 2010, functions are distributed be-tween the National and County Governments. Of particular note is the trade function wherein function of international trade is reposed with the National Government and Trade Development and Regulation falls under the purview of County Governments.

It could be argued that lack of coordination between the two levels of Government on the trade function has led to the inadvertent proliferation of multiple fees, charges and levies by various National Government Agencies and regulatory bodies coupled with those administered by County Governments that have been disruptive and increased the cost of doing business in Kenya. As a matter of urgency, the downside of the devolution experience including the regulatory burden on manufacturing requires deeper analysis for Kenya to reap the benefits of devolution.

A review and alignment of overlapping mandates and roles needs to be conducted. The Programme will thus aim at reviewing these institutional and coordination mechanisms. It will entail provision of support to the relevant Committee of the Council of Governors, National Government Trade Coordination mechanism and the relevant Oversight Committee in the Senate. Other tailored support measures will aim at positioning Counties as the fulcrum of Kenya's offensive and defensive trade negotiations agenda and empowering Oversight Committees in the Senate as they perform the envisaged Constitutional role of the Senate in protecting the interests of the Counties.

The Programme activities will include regular sensitization on developments on multilateral, regional and bilateral trade negotiations, Study tours on coordination and oversight best practice in other jurisdictions with comparable systems for the relevant Committees in the Council of Governors and the relevant Oversight bodies. As a way of encouraging a whole-of-government and a whole-of-society approach to trade and other economic policy formulation and implementation, lessons can be learned from management structures put in place in other countries implementing holistic productive capacities support programmes. Consideration could also be given to developing a ranking system wherein Counties are ranked on their performance on the PCI categories and Indicators relevant to the devolved functions for documentation and dissemination of best practices.

Pillar V(c): Building human capital to effectively respond to the changing needs of the market through universities, TVET and other institutions, as well as sectoral trainings

Skills and capacity development, integral to the Human capital PCI category, will require fostering better linkages between industry, academia and the Government. Existing architecture for engagement does not seem to address questions surrounding curriculum development with a view to ensuring development of skills relevant to enhanced economy wide competitiveness. The reshoring decisions anticipated, in the aftermath of the supply chain disruptions witnessed during the pandemic, will require, inter alia, skilled workforce if Kenyan enterprises are to be plugged more effectively into the global value chains. In this regard, the Programme will support mechanisms for fostering better linkages between academia, industry and the Government.

Cross-cutting programme interventions

In addition to the components identified above, the Programme will undertake further complementary activities addressing a number of cross-cutting challenges that are presently inhibiting development progress in Kenya. These include:

- Providing support to standards setting bodies such as Kenyan Bureau of Standards (KEBS) and Kenya Plant Health Inspectorate Service (EPHIS) with a view to enabling Kenyan exporters to meet international standards as they diversify exports and export destinations. These standards include technical barriers to Trade (TBT); sanitary and phytosanitary standards (SPS) and other non-tariff measures (NTMs). This cross-cutting component will build capacity of Standards bodies as they guide Kenyan enterprises in their endeavour to meet the demands of an increasingly sophisticated export markets and ensuring the beneficial integration of Kenya into the global economy/multilateral trading system through, inter alia, the building block of regional integration.
- Providing support to the Trade Remedies Agency to ensure the benefits of regional integration and WTO commitments are not undermined by unfair trade practice and give assurance on the existence of legitimate trade policy instruments for effective participation in regional and international trade.
- Building the capacities of Kenya in exploring new products and sectors where Kenya has untapped export potential. The capacity building initiative in this area will make use of the latest economic methodologies, including the Product Space Approach, to identify products where Kenya is likely to enjoy a competitive advantage. This will be complemented by a mapping of Kenya's major export markets, which will explore the potential for expanding exports from the demand side.
- Enhancing the capacities of Kenya, one of the initial countries to pilot the AfCFTA guided trade initiative, in seizing the opportunities arising therefrom. When combined, these activities can serve as a basis for useful market intelligence for new business opportunities.

Financing, modalities and implementation

The total estimated budget for operationalizing the Programme is US$ 20,000,000 for the duration of the Programme (10 years). The estimates comprise all project support costs, except for UNCTAD's in-kind contribution for the substantive and technical implementation of the project, as well as for the coordination of the implementation across the identified areas and sectors of interest to Kenya. As the Programme is financed externally, Kenya is encouraged to mobilise the core resources from the country's development partners. UNCTAD will make available its expertise in the various components of the Holistic Programme. This has been the practice, so far, with Angola's Programme being supported by generous funding from the European Union. Experience to date shows that mobilising programme resources through bilateral donors ensures ownership of the Programme by the Government and enhances the long-term predictability and sustainability of the Programme.

Based on robust academic work and lessons learned from practical implementation, a comprehensive, programme-based approach should be adopted in the management of the Kenya Programme to ensure coherent and consistent implementation of policies and strategies.

Such an approach should be organically linked to national policies, and it should be seen as a viable way of addressing broader development objectives. The guideline is based on decades of experience in the challenges facing project-based approaches that have not resulted in economy-wide transformation with substantial impacts on job creation and unemployment reduction. Project-based approaches also lack predictable financial resources as the funding does not correspond to the timespan of the project, thus undermining its long-term impact and sustainability. Moreover, in most cases, project-based approaches focus on addressing only narrow aspects or a limited set of development challenges, and they do not adequately address wider development needs and aspirations. Sometimes, projects are not linked or realigned with national policies, strategies or vision documents with adverse impacts on national ownership capacities. As a cornerstone of the holistic programme approach, careful attention should be paid to ensuring that such a comprehensive approach is home-grown, and country driven. This is particularly important to improve the domestic absorptive capacities of developing countries and enhancing the allocation of development aid to productive sectors by shifting away from narrow project-based interventions towards addressing the potential of wider economic sectors, such as trade and development. Therefore, it is critically important that Kenya mobilizes resources from the country's development partners for the realisation of the Programme.

The implementation strategy of the Kenya Programme will be designed in consultation with the Government of Kenya. Actions will be carefully sequenced to ensure synergies with the institutional and policy focus of the Government. Interventions will be aligned and realised in an integrated fashion to support the overall implementation of Government policies and strategies.

Each of the Programme components will be implemented in holistic approaches shifting away from traditional project-based or sector specific interventions.

The Programme, combined with other national initiatives, will contribute to spurring Kenya's sustainable growth and development, anchored on the building of productive capacities and enhancing structural transformation. The implementation strategy will build on the experiences of Kenya in the implementation of Kenya Vision 2030 and will be anchored initially in the fourth term medium term plan MTP IV (2023-2027) and support delivery on the manifesto of the Kenya Kwanza administration. The implementation of the Holistic Programme beyond 2030 lays the foundation for Kenya's successor visions and medium-term development plans.

The Programme components and cross-cutting areas will draw upon the breadth of UNCTAD's expertise, and will be implemented to support institutional coordination, and the implementation of coherent trade and industrial policies, as well as supportive macroeconomic policies for Kenya including in the context of Kenya Vision 2030 and the current medium-term plan.

To this end, a National Steering Committee will be coordinated by the Office of the Prime Cabinet Secretary, with meetings at least twice a year, and with the objective to provide political guidance and overall supervision for the implementation of the Programme. The existing National Implementation Committee will be supported by an inter-ministerial and inter-institutional Technical Committee in the realization of Kenya Vision 2030 and the preparation of a successor post-2030 development agenda. The National Government Coordination Secretariat within the Office of the Prime Cabinet Secretary will serve as the national counterpart institution for UNCTAD's operational activities, overseeing the implementation of day-to-day activities and consisting of technocrats, including senior officials at the director level and principal secretaries. The Secretariat will mobilise all national stakeholders, including the private sector, academia and development partners at the technical level for the effective and coordinated implementation of the Kenya Programme. The Secretariat will also be the national focal institution for the Holistic Programme. Each year, throughout the lifecycle of the Programme, the Steering Committee will review the progress made, measure the results achieved, adjust the Programme interventions, if, and when necessary, and approve the workplan for the subsequent year of implementation. This will be done based on a yearly implementation plan, experiences, challenges encountered, lessons learned, and milestones achieved.

The Programme will have a dedicated team of project experts, consisting of one National Programme Coordinator and an administrative assistant to be designated by UNCTAD and embedded in the National Government Coordination Secretariat in the Office of the Prime Cabinet Secretary or any other relevant institution to be designated for such purposes by the Kenyan authorities, one Programme Coordinator and administrative assistant to be hosted at UNCTAD and one national officer to be assigned to the UN Resident Coordinator to mobilize actions and coordinate the Programme of Nairobi-based United Nations system entities and other international organizations. All project staff will be recruited, managed and administered in accordance with the United Nations staff rules and regulations governing country-based programmes, and in consultation with the Government of Kenya.

As part of its contribution, UNCTAD will designate a team of Programme implementation experts, consisting of professional staff from relevant Divisions, in accordance with Programme components, and the overall Programme objectives. An UNCTAD-wide task force, consisting of Directors from each Division, will oversee the UNCTAD-wide implementation of the Programme. The taskforce will interface with the National Steering Committee to guide the coordinated implementation of Programme components and the Programme as a whole. More specifically, UNCTAD, through the Division for Africa, Least Developed Countries and Special Programmes (ALDC) will mobilise the in-house expertise of UNCTAD. UNCTAD's key divisions with expertise and competences in the identified Programme components will be involved in the implementation of the Programme. UNCTAD will also bring operational, technical and substantive expertise, which it gained in the conception, design and successful implementation of other country-specific programmes, such as through its successful delivery of the EU-UNCTAD Joint Programme for Angola: Train for Trade II. In addition, UNCTAD will leverage its broad network of international partners and Centres of Excellence in various technical domains in the delivery of the substantive activities.

Stakeholder analysis and capacity assessment

The main stakeholders in the Kenya Programme will include policymakers, advisors, experts, relevant ministries, institutions, research and development centres, science and technology entities, and private sector and civil society actors and academia.

Table 4.3.
Stakeholder analysis

National stakeholders	Type and level of involvement in the Programme	Capacity assets	Capacity gaps	Desired future outcomes	Incentives
The Government of Kenya, including the following institutions: Office of the Prime Cabinet Secretary, Ministries of National Treasury and Planning, Investments, Trade and Industry; Agriculture and Livestock Development; Marine Resources and Blue Economy, Energy, ICT, Transport, Environment, as well as relevant parastatal bodies and Vision 2030 Delivery Secretariat	The Government of Kenya has the ownership of the Programme and has decisive voice on its sectoral direction and intensity. Consultations have already taken place with Government institutions and others as key stakeholders in Programme formulation and implementation. These stakeholders will be closely involved in the design and implementation of the Programme, highlighting priorities and needs, as well as facilitating contact on capacity building, as well as providing information on the potential involvement of civil society, private sector and academia.	The Government has the intimate and holistic knowledge of the economic situation, development challenges and needed interventions. Policymakers and experts have technical abilities and substantive sectoral knowledge.	The institutional capacities of public ministries of Kenya in formulating and implementing policies are significant. Their technocratic capacity is well recognised. However, they need support to foster productive capacities and structural economic transformation consistent with the aspirations of Kenya Vision 2030 in its remaining medium-term phases.	The ultimate outcome of the Programme is building productive capacities, export diversification and structural economic transformation. In the context of Government institutions, improved administrative and policy coordination and enhanced effectiveness of development policies institutions are the target.	Co-operation within the Kenya Programme will allow ministries to ensure greater effectiveness of their policies and will provide them with the appropriate tools to deliver on the objectives of the Vision 2030, as well as integrate the priorities of the manifesto of the Kenya Kwanza Government.
Private sector, Business Management Organizations (BMOs), including KAM, KNCCI, KEPSA	Stakeholders can provide crucial input in the needs of the private sector as key development actors, and inform Programme design by sharing their experiences on past and current sectoral development challenges, as well as to give voice to the private sector on trade and development policy formulation.	Knowledge of the institutional context of the beneficiary country, first-hand experience of the policy gaps that must be addressed in the Programme, and articulating key binding constraints on private sector development.	Private sector needs vibrant and dynamic entrepreneurs, business intelligence and capacity to expand business operations nationally, regionally and internationally. It also need access to finance and electricity and ability to use ICT. While there are many well-designed policies to support the private sector in place, these are sometimes incoherent, and could benefit from a more holistic approach.	Entrepreneurs improve their knowledge and expertise having taken advantage of targeted and tailored capacity building and improved educational/skills-programmes in innovation and market opportunities in domestic and export markets. Improved polices to support entrepreneurship enable the private sector to grow and provide employment for a growing population.	UNCTAD’s dynamic and modern entrepreneurship development programmes, business linkages and export opportunities. Skills formation (entrepreneurial skills) and the prospect of improved and more coherent implementation of development policy is in the interest of the private sector as it undergoes modernisation.

National stakeholders	Type and level of involvement in the Programme	Capacity assets	Capacity gaps	Desired future outcomes	Incentives
Civil Society	Kenya's civil society groups will be involved in all substantive steps of the Programme, including participation in implementation.	Kenya's civil society has knowledge of the economic conditions and the predicaments to development, including socioeconomic challenges.	Since the promulgation of the 2010 Constitution of Kenya (COK 2010), with explicit public participation provisions on governance questions, civil society has been active and vibrant in the formulation and implementation of policies and strategies. However, it needs continued support and incentives to build its capacities to play an important role in the country's socioeconomic progress.	The local knowledge and concerns of Kenya's civil society are taken into account and addressed by development policies and measures, including in the context of the current Programme.	Kenya's civil society will benefit from the opportunities to have their views taken into account in the design and implementation of the Programme as key to realise the aspirations of the country's visions, policies and strategies.
Universities and research institutions	Universities and research institutions will be involved in the implementation of the Programme and will provide insights to improve development policies and eventually the socioeconomic conditions of the country as envisaged by Kenya Vision 2030. Academia will be the conduit for mainstreaming the PCI in curricula of institutions of higher education.	Assets include technical knowledge of the obstacles to Kenya's trade and development, as well as the overall socioeconomic conditions of the country, including challenges to development.	Links between research institutions, the private sector, and government ministries are not always sufficient to ensure efficient policy formulation.	Universities and other research institutions provided expertise that government ministries require to ensure the sustainability of the Programme.Cadres of experts on the PCI and productive capacities are trained.	Better research and policy dialogue will contribute to improved policy formulation and implementationand create synergy between industry, Government and academia. In this scenario, a long-term role of the academia will be enhanced.

Sustainability

The sustainability of Programme interventions and outcomes is vital for a wider impact of the Programme beyond its lifespan. This requires realigning Programme objectives and implementation with each medium-term plan in the implementation of Vision 2030. This also needs to be looked at within the context of the progress Kenya makes towards achieving the Sustainable Development Goals (SDGs). In other words, throughout the implementation of the Kenya Programme, it will be important to consider the likelihood that the Programme will have a lasting effect on Kenya's development, including beyond the lifespan of the Programme. Relevant Kenyan institutions, donors and UNCTAD, as Programme executing agencies, should make all efforts to improve the likelihood that the outcomes of the Programme and its impact will be sustained into the future. Indeed, mainstreaming of PCI methodology in curricula of institutions of higher learning will contribute to the sustainability of data-driven, evidence-based development and trade policy formulation.

The proposed shift from traditional project-based approaches towards more comprehensive programme-based intervention allows to clearly identify immediate impacts (outcome) of the Programme, practical lessons learned in the implementation period, together with remaining gaps and limitations for future actions. A programme-based approach also provides implementing agencies and institutions, as well as donors with new tools, as it helps in policy operationalisation, experimentation and rediscovering of new ways and means of addressing binding constraints. Programme sustainability also depends to a great extent on national ownership and commitment at policy and political levels for an effective and coordinated implementation of the proposed Programme's content. Predictable funding is also key for the sustainability of the proposed Programme intervention and its components.

In this regard, many of the specific activities conducted within the Programme will have specific outputs and impacts to address binding constraints on development and trade, create institutional capacity to address these, and enable Kenya to ensure continuity. A fundamental aspect of this Programme is not only to address binding constraints on trade and development, but it is also to improve policy coordination mechanisms, analyse outcomes, including remaining challenges, and chart the future course of actions, consistent with Vision 2030 of the country.

UNCTAD aims to provide Kenya with the expertise the country needs to continue to increase its productive capacities to engage with the multilateral trading system in an increasingly beneficial way, even after UNCTAD's direct interventions have ceased. In this regard, a solid contribution to building the capacities of the National Trade Negotiations Council, private sector (Empretec and Business Linkage Programmes), the ICT platforms for ecommerce, a business strategy for EPZs and SEZs, academia engagement etc. – will lead to building the knowledge, skills and technical capabilities of Kenya's institutions and human resources. By building institutional and human resources capabilities, including through experience sharing and study tours, the Programme will also build national policy ownership capacities, which is critical for continuity and sustainability.

Risk and assumptions

Potential or perceived risks and mitigation strategies

During both the planning and implementation phases of this Programme, there may be risks that need to be mitigated to ensure the successful delivery of Programme's objectives. These risks vary in their likelihood, in their degree of impact on the Programme and the extent to which they can be controlled.

Table 4.4.
Risks and mitigation actions

Risk	Mitigating actions
Change in the structure and mandate of relevant government ministries (counterpart institutions) results in disruption of the Programmes' implementation.	Throughout the Programme, necessary actions will be taken by all of the key partners (UNCTAD, donors, and the Government of Kenya). Frequent exchange of information and communication will ensure that the actions necessary for the Programme's completion are understood by all parties. In the event that a rearrangement of the structure or responsibilities of Kenya's Ministries, Departments and Agencies (MDAs) occurs, the process of re-establishing the Programme's activities in the new structure should cause minimal possible disruption.
Entrepreneurs and trade officials trained and developed throughout the Programme do not continue to offer their expertise in Kenya.	The identification of key personnel to be trained though UNCTAD's various programmes will ultimately be made by Kenya's Government MDAs and business umbrella bodies. However, UNCTAD will communicate to the Government the necessity of selecting would be trainees with a view to the likelihood of those personnel remaining in the service of the country in the longer term. UNCTAD will stress the importance of providing appropriate incentives to the personnel and entrepreneurs trained in order to keep them in the service of Kenya's interests.
Training materials and curricula developed during the Programme are not accepted or implemented by the relevant Kenyan institutions.	UNCTAD will work closely with the relevant institutions in a partnership that ensures their needs are met and implementation guidelines provided. Such a partnership will involve joint determination of the goals and form of any materials and curricula, and close connection with the trainees from the relevant public and private sector institutions.
Lack of commitment to the Programme by local institutions hampers implementation.	Through recent activities UNCTAD has built considerable consensus within the Kenyan stakeholders regarding the importance of the proposed Programme. This is key in ensuring ownership for a coordinated implementation of the Programme content. UNCTAD will continue to emphasise the importance of efforts to improve Kenya's trade and development prospects with contributions to the realisation of Vision 2030. This ongoing engagement should create an enabling environment in the Kenyan policy making institutions, private sector and other stakeholders more broadly that will be supportive of the Programme's aims and implementation strategy. Furthermore, UNCTAD will ensure that the Programme's implementation involves sufficient in-country contact between key UNCTAD staff members and national stakeholders to create "Programme Champions" for Kenya.
Identified key international development partners fail to engage effectively with the Programme for funding.	Kenya has experience and credibility in dealing with its bilateral development partners to build consensus for securing funding for the Programme. Kenya will use its existing network of relationships and credibility with donors and institutions in the international development community, and regional partners, in particular, to advocate for the importance of this Programme and its sustainability. For each activity in the Programme that requires participation of international development partners, UNCTAD will also help in identifying potential funding nations or motivate reluctant donors or multilateral funding agencies.
The knowledge transmitted by UNCTAD through the training of entrepreneurs and experts is not put in full use in the process of formulation and implementation of national strategies, plans and visions.	UNCTAD will work to ensure that the training provided will help to develop key expertise and skills needed in the identified areas. UNCTAD will design the interventions in cooperation and collaboration with national stakeholders to ensure activities are specific to Kenya's context and meet the country's needs.
The change in Kenya's strategic and policy approaches to trade and development that hamper the realisation of envisaged Programme's activities and outcomes.	The Programme will be aligned with Kenya's development objectives and aspirations. For instance, addressing binding constraints on trade should be in sync with the ongoing trade diversification strategy, and regional integration strategies, and as such the Programme will work with the ongoing efforts to structurally transform the economy.

The table above briefly details some of the potential risks to the Programme's success, along with the actions that will be taken to mitigate such risks.

Assumptions

The Programme's success also relies on certain assumptions. The foremost key assumption is that appropriate and adequate funding is secured and released in a timely manner such that a National Programme Coordinator in Kenya and Geneva can be recruited and be on board in time for the Programme's implementation.

For the Programme to be completed as outlined, strong commitment and support from the Government of Kenya is critical. As the Government of Kenya is the key stakeholder in the Programme, full support and ownership of the Programme are considered as an assumption, and not a risk of the kind described above.

Linked to the above assumption, for the Programme to make progress it must be assumed that the Programme's participants, who will be drawn from Kenya's public and private institutions, as well as academia, will be available during the Programme's implementation phases, as well as during the evaluation of outcomes (results).

Performance monitoring

In addition to a comprehensive evaluation at the finalisation of the Programme, the Programme will be subject to mid-term evaluation based on the accomplished activities and results thereof. UNCTAD, as part of the day-to-day management of the Programme, will ensure that Programme implementation is in accordance with agreed terms and conditions. UNCTAD, through its Pro-gramme Coordinator, Programme Manager and the Evaluation and Monitoring Unit (EMU), and in consultation with the donor(s) and the Government of Kenya, will also document completed activities, record the outcomes and results, draw lessons from the implementation processes including identification of challenges, limitations and opportunities, which will form input to the evaluation and monitoring of the Programme implementation. The day-to-day management of the Programme will be handled by the implementing entity, UNCTAD, including the National Programme Coordinator and implementation staff. Other stakeholders and partners to this Programme will only be involved for periodic and end-of-life assessments. General oversight of the Programme will be assigned to key staff in UNCTAD, who may delegate this responsibility, as necessary. Programme staff will continuously monitor the implementation of the Programme and inform the Programme manager, counterpart Kenyan institution and donor country(ies) on whether key milestones are being met and whether resource use is appropriate.

Reporting on the Programme's implementation and its outcomes will follow standard project performance reporting, including information on implementation strategy, achievements (outcomes), lessons learned, challenges faced and the way forward.

Monitoring and evaluation (M&E)

Continuous technical and financial monitoring is the responsibility of UNCTAD in consultation with the relevant entity in Kenya. The beneficiary shall establish a technical and financial, monitoring system to the Programme, which will generate progress reports and safeguards related to internal control. Financial reporting will be in accordance with the financial regulations and rules of the United Nations as approved by the General Assembly.

Programme's Results Oriented Monitoring and Evaluation may take place twice during the Programme's lifecycle. That is, mid-way in the implementation process (mid-term review) and the final evaluation via independent consultant(s) starting from the sixth month of Programme activities, which will be finalised at the latest, in six (6) months before the end of the operational implementation phase.

The budget for independent evaluation will be borne from the overall Programme budget.

UNCTAD, the Government of Kenya, and donor(s) shall analyse the conclusions and recommendations of the mid-term evaluation and jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the Programme. Reports of the independent evaluation and monitoring will be submitted to UNCTAD, the Government of Kenya and donor in order to take into account any recommendations that may result from the M&E.

An independent external evaluator will be identified through consultations with key stakeholders. The Terms of Reference for Programme's evaluators and the timing for Programme's evaluation shall be determined by joint consultations between UNCTAD, the Government of Kenya and the donor(s).

The recruited evaluator shall inform UNCTAD at least 30 days in advance of the dates foreseen for the external evaluation. The beneficiaries shall collaborate efficiently and effectively with the monitoring and evaluation expert and provide him or her with all the necessary information and documentation, as well as access to the Programme's premises and activities.

A component of the performance monitoring and evaluation will also include feedback from participants involved in the training, seminars and workshops to be undertaken as part of the Programme. The feedback will be gathered in order to ensure that the activities of the Programme remain closely aligned with the needs of the beneficiary institutions and stakeholders.

ANNEX
Summary of policy interventions to improve productive capacities

Policy area	Short-term	Medium-term	Long-term
Natural capital development			
Agricultural sector development	• National and county Governments to consult and identify gaps that require funding. • Subsidise agricultural inputs (fertilizers, seeds, pesticides and animal feed). • Increase support and funding to agricultural research institutions.	• Identify agro-value chains to be developed. • Prioritise agricultural extension services. • Initiate crop and livestock insurance schemes and commodity market instruments. • Diversify into non-traditional agricultural and higher-value commodities. • Finance value addition, especially to agricultural exports.	• Create a sustainable coordination framework between the two levels of Government. • Expand the amount of land under irrigation. • Provide low-interest loans for farmers. • Allocate at least 10% of the total Government budget to the sector. • Develop rural infrastructure.
Forest cover	• Protect public forests. • Involve local communities in reforestation and afforestation. • Ban de-gazettement (easing restrictions) and the excision of forest.	• Increase funding towards environmental conservation. • Support the development and conservation of forests owned by private stakeholders. • Increase funding to the Kenya Forest Service • Improve the management of water towers. • Provide more funding to forestry research institutions.	• Diversify sources of energy for the poor population.
Protection of water resources	• Develop house-hold/ community water projects (water harvesting and recycling, boreholes).	• Increase funding to the sector from the current 2.8% of the State budget. • Protect water towers. • Ensure the conservation of forests.	• Construct large dams.
Exploitation of mineral resources	• Make the National Geodata Centre (NGDC) fully operational.	• Increase funding for mineral exploration to create the requisite geological data repository. • Develop policies to guarantee environmental protection.	• Up-scale relevant academic programmes in universities to address skills gaps especially in mineral exploration. • Enhance value addition through establishment of processing industries.

Policy area	Short-term	Medium-term	Long-term
Human capital development			
Skills mismatch	• Fully implement the National Skills Development Policy.	• Review academic programmes by tertiary institutions to ensure that they meet labour market needs. • Address key concerns raised by stakeholders on the CBC, especially the skill-sets of teachers and the number of teachers, infrastructure and costs. • Develop linkages between universities, training institutions and industry.	• Government to implement a mandatory one-year paid national internship programme for all students graduating from tertiary institutions.
Address the "Brain drain"		• Enhance the attractiveness of job opportunities in Kenya by improving pay and other benefits to workers.	• Ensure robust institutional set-up to support Kenyans leaving and working abroad.
Universal health coverage	• Expand NHIF coverage. • Increase donor support in addressing communicable diseases- TB & HIV/AIDS.	• Expand training and the employment of health professionals. • Incentivise the retention of health professionals.	• Harmonise polices on procurement and the distribution of drugs and medical supplies, and health financing between the two levels of Government.
Energy sector development			
Cost and reliability of electricity	• Implement fully recommendations made by the Presidential Taskforce of Purchasing Power Agreements (PPAs). • Remove levies and taxes on electricity.	• Develop a clear policy framework on how to regulate the licensing and installation of captive power (mini and micro-grids). • Fully implement the Energy Policy 2018 provisions.	• Modernise electricity transmission and distribution networks to limit system losses. • Drive towards realisation of 100% access to electricity policy. • Eliminate the monopoly in the distribution and retailing of power. • Develop geothermal, wind and solar power.
Exploration and development of oil and gas resources		• Attract investors into the sector. • Construct a liquified natural gas storage facility in Mombasa.	• Develop expertise in oil and petroleum exploration. • Build necessary infrastructure - roads, pipelines, etc.

Policy area	Short-term	Medium-term	Long-term
ICT sector development			
ICT infrastructure and the cost of Internet		• Develop a policy to guide the use and development of ICT capacities. • Develop an e-commerce strategy	• Roll out high speed fibre optic infrastructure to provide internet to all schools and other Government institutions/ offices. • Actualise the Konza Technopolis.
Cybersecurity		• Improve skills in areas such as data protection, coding, mobile application development, cyber security, artificial intelligence and big data, among others.	
Transport sector development			
Transport infrastructure		• Complete JKIA modernisation.	• Integrate and modernise the railway network.
Skill-gaps in the construction sector	• The Commission for University Education (CUE) and Engineers Board of Kenya to ensure quality and standards of the courses and graduates aligned with the international standards.	• The National Construction Authority (NCA) to work with universities to increase the number of professionals in the construction industry.	
Value for money in infrastructure projects	• Develop a cost template for different types and grades of infrastructure projects.		
High cost of petroleum products	• Remove levies and taxes on petroleum products.	• Exploit already discovered deposits. • Develop a policy to guide in the use and management of fuel levies.	• Devote more resources towards exploration of oils and gas.
Promoting innovation and R&D			
Promoting public and public sector innovation	• Incentivise private sector investment in R&D.	• Increase budgetary allocation to public sector R&D to at least 2% of the total State budget.	• Design and implement a long-term policy of skills development.

Policy area	Short-term	Medium-term	Long-term
Facilitating structural change			
Diversification of exports basket		• Attract foreign investments in the manufacturing sector.	• Develop agro-industrial value chains. • Add value to primary exports.
Private sector development			
Business environment	• Ensure the availability and stability of the exchange rate. • Improve logistics supply chains through the enhanced clearance of cargo at the ports of entry and better coordination of relevant Government agencies.	• Ease the tax burden on the private sector. • Institutionalise public-private dialogue forums that allow the private sector to share policy and operational challenges facing businesses at a given point in time. • Reduce legal formalities for businesses especially the MSMEs. • Avail affordable and long-term funding to the private sector.	• Carry out reforms, reduce and consolidate functions of institutions with overlapping mandates and functions. • Progressively reduce the fiscal deficit over time to 3% of GDP.
Strengthening institutions			
Autonomy of independent institutions	• Ensure their financial independence. • Strengthen their capacity.	• Implement clear policies and guidelines on appointing members of independent institutions.	• Create a permanent institutional framework that will work for both levels of Government.
Corruption	• Promote accountability and openness in the management of public resources.	• Build a highly-skilled and responsive public sector workforce.	

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