Comprehensive Public Expenditure Review

From Evidence to Policy

2017



REPUBLIC OF KENYA

THE NATIONAL TREASURY AND PLANNING STATE DEPARTMENT FOR PLANNING MONITORING AND EVALUATION DEPARTMENT



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ACRONYMS AND ABBREVIATIONS

ARUD	Rural and Urban Development	NALEP II	National Agricultural and Livestock Extension Programme II
ASALs	Arid and Semi-Arid Lands	NASMLA	National Assessment for Monitoring Learning Achievements
ASDSP	Agricultural Sector Development Support Programme	NCPB	National Cereals and Produce Board
BIA	Benefit Incidence Analysis	NEMIS	National Education Management Information System
BOM	Boards of Management	NER	Net Enrolment Rate
BPS	Budget Policy Statement	NG-CDF	Government Constituency Development Fund
CARA	County Allocation of Revenue Act	NGOs	Nongovernment Organizations
CASB	County Assembly Service Boards	NHIF	National Hospital Insurance Fund
CBA	Collective Bargaining Agreement	NMT	Non-Motorized Transport
CBC	Competency Based Curriculum	O&M	Operation and Maintenance
CBET	Competence Based Education and Training	OOSC	Out-Of-School Children
CBROP	County Budget Review and Outlook Papers	ОРСТ	Older Persons Cash Transfer
FDSE	Free Day Secondary Education	OPV	Offshore Patrol Vessel
FPE	Free Primary Education	OUT	Out of Pocket
GCI	Global Competitive Index	PBC	Performance-Based Contracts
GDP	Gross Domestic Product	PCA	Principal Component Analysis
GER	Gross Enrolment Rate	PCR	Primary Completion Rate
GHE	Government Health Expenditures	PCR	Pupil Class Ratio
GHRIS	Government Human Resource Information System	PE	Public Expenditure
GII	Gender Inequality Index	PEAS	Public Expenditures in Support of Agriculture Sector
GO	Global Output	PEPFAR	President's Emergency Plan for Aids Relief
GoK	Government of Kenya	PER	Public Expenditure Review
GPI	Gender Parity Index	PFM	Public Finance Management
HDI	Human Development Index	PHE	Private Health Expenditure
HELB	Higher Education Loans Board	PIT	Personal Income Tax
IFAD	International Fund for Agricultural Development	PPPs	Public Private Partnerships
IFMIS	Integrated Financial Management System	PSC	Public Service Commission
IPSAS	International Public-Sector Accounting Standards	ΡΤΑ	Parents and Teachers Associations
IUU	Illegal, Unreported and Unregulated	PTR	Pupil Teacher Ratio

KALRO	Kenya Agriculture and Livestock Research Organization	PWDs
KAPAP	Kenya Agricultural Productivity and Agribusiness Project	RAS
KARI	Kenya Agricultural Research Institute	RPLR
KCDP	Kenya Coastal Development project	RQI
KCPE	Kenya Certificate of Primary Examination	SACMI
KCSE	Kenya Certificate of Secondary Examination	SAGAs
KDHS	Kenya Demographic and Health Survey	SAGAs
KENHA	Kenya National Highway Authority	SCAC
KENIA	Kenya National Innovation Agency	SCOA
KeRRA	Kenya Rural Roads Authority	SDCP
KETRA- CO	Kenya Electricity Transmission Company	SDGs
KH- HEUES	Kenya Household Health Expenditure and Utilization Survey	SDI
KIHBS	Kenya Integrated Household Budget Survey	SFP
KNBS	Kenya National Bureau of Statistics	SMC
KNH	Kenyatta National Hospital	SPS
KURA	Kenya Rural Roads Authority	SSA
LARCs	Long Acting Methods	SSA
LCBP	Low Cost Boarding Primary	ST&I
LMIC	Lower Middle Income Countries	STEM
MDG	Millennium Development Goals	TFR
MLA	Mutual Legal Assistance	CMR
MMR	Maternal Mortality Ratio	UFMR
MoE	Ministry of Education	UHC
MOEST	Ministry of Education, Science and Technology	USAID
MOH	Ministry of Health	VAT
MoYAS	Ministry of Youth Affairs and Sports	VMS
MTEF	Medium-Term Expenditure Framework	VRS
MTRH	Moi Teaching and Referral hospitals	VSR
NAAIAP	National Accelerated Agricultural Inputs Access Programme	

PWDs	Persons with Disabilities
RAS	Re-circulatory Aquaculture System
RPLR	Regional Pastoral Livelihood Resilience Project
RQI	Road Quality Index
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SAGAs	Semi-Autonomous Government Agencies
SAGAs	Semi-Autonomous Government Agencies
SCAC	State Corporations Advisory Committee
SCOA	Standard Chart of Accounts
SDCP	Smallholder Dairy Commercialisation Project
SDGs	Sustainable Development Goals
SDI	Service Delivery Indicators
SFP	School Feeding Program
SMC	School Management Committees
SPS	Social Protection Secretariat
SSA	Sub Saharan African
SSA	Sub-Saharan Africa
ST&I	Science, Technology and Innovation
STEM	Science, Technology, Engineering and Mathematics
TFR	Total Fertility Rates
CMR	Child Mortality Rate
UFMR	Under Five Mortality Rates
UHC	Universal Health Coverage
USAID	United States Agency for International Development
VAT	Value Added Tax
VMS	Vessel Monitoring System
VRS	Variable Return to Scale
VSR	Volume Seal Roads

FOREWORD



The 2017 Comprehensive Public Expenditure Review (CPER) report has been developed by The National Treasury and Planning through the State Department for Planning in partnership with development partners and stakeholders. The 2017 CPER is aimed at providing critical assessment of past public spending, challenges, weaknesses and successes of our fiscal undertaking. In addition, it provides recommendations on enhancement and consolidation of gains made as well as addressing challenges observed in the country's public expenditure management. The CPER also assesses the extent to which

expenditure addresses national and county level priorities in order to strengthen the link between policies, planning and budgeting. Consequently, it informs current and future expenditure and budget decisions and is also a key input in the MTEF budget cycle.

This CPER is the second in the series after the government and development partners agreed to produce a public expenditure review report on a three year period that is well researched to replace the annual public expenditure review. This CPER presents a comprehensive analysis of public expenditure during the first three years of devolution thereby linking expenditure to achievements while taking cognizance of cost of achieving the results. The report covers several macroeconomic indicators at the county and national level to provide evidence on the outcomes for each and every expenditure at both levels of government.

The CPER provides the basis for anchoring our financial transformation at the national and devolved levels in the MTEF cycle. The Report highlights the recent policies developed to improve public financial management and identifies organizational structures that create efficiency in financial utilization. The expenditures of selected MTEF sectors with large budget allocations based on contribution to economic development and the social wellbeing of communities are presented. These are health, agriculture, education, energy and infrastructure. The 2017 CPER brings on board other sectors that were not previously included in other CPERs namely; fiscal incidence analysis, evolution of devolved fiscal governance, and public wage bill analysis.

The Report comes at a time when the country is embarking on the implementation of the third Medium Term Plan of the Kenya vision 2030 and the "Big Four" agenda as well as the Agenda 2030 on Sustainable Development Goals (SDGs). The lessons learned during the period under review provides evidence to spur and maintain the targeted annual economic growth as well as the realization of the "Big Four". This Report provides the Government, development partners and stakeholders with the much needed fiscal management evidence for policy formulation in order to implement the budget in an efficient, effective, timely and relevant manner in line with Kenya's Constitution. It is my sincere hope that this report will be useful in providing insights to Kenyans on the use of public funds. It is the governments' intention to work with stakeholders to embrace monitoring and reporting using the Public Expenditure Review Reports to support accountability.

Henry Rotich, EGH Cabinet Secretary The National Treasury and Planning

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Julius Muia, PhD, EBS Principal Secretary State Department for Planning

EXECUTIVE SUMMARY

omprehensive Public Expenditure Review Report of 2017 was prepared to provide a critical assessment of public spending, challenges, weaknesses and successes in the past four years (2013/14 to 2016/17). The report serves as key input to the MTEF budget cycle policies that influence budget decisions. It links public expenditure to performance of key sectors in the economy and provides updates on the implementation of devolution. This report tries to establish the facts about Kenya's public expenditures, presenting trends over time and analysing the composition across sectors and the two levels of government. The report presents comprehensive information on key sectors. Based on these facts, the report answers the following: Who benefits from these substantial amounts of public resources? Where are the gaps? In addition to these questions, this report also tries to respond to key concerns that are in the minds of many ordinary Kenyans, such as: How efficient are we in utilizing the available resources? Is the current level of say education and health spending sufficient? Why is it so difficult to disburse funds through the government budget system?

The Macro-Fiscal Performance Chapter provides Kenya's macroeconomic policy that has been pursued through monetary and fiscal policies. Kenya's economic growth averaged 5.6 per cent between 2013 and 2017 compared to an average growth rate of 4.7 per cent between 2008 and 2012. This was above Sub-Saharan Africa and World average GDP growth of 3.3 and 3.4 per cent respectively. The review shows that the economy expanded by 4.9 per cent in 2017 compared to 5.9 per cent in 2016. Other factors included adverse weather patterns, uncertainties associated with elections and slowdown in credit growth to the private sector. However, the rebound in tourism, strong public investment, and resilient remittance inflows partially mitigated some of the headwinds the economy faced in 2017.

The Fiscal Incidence Analysis Chapter helps to identify the beneficiaries of government expenditure and the distribution of the tax burden when the government imposes taxes. Overall, the analysis shows that direct taxes and transfers reduce inequality and are almost exactly off-setting in their effect on poverty. Both direct taxes on individual incomes and Indirect taxes were found to be progressive. Direct transfer programs were well-targeted but reach only a small fraction of the population, resulting in only a modest effect on poverty and inequality. Additionally, the report establishes public spending on education to be pro-poor, while public health spending on outpatient care is considered progressive. Overall, changes in inequality and poverty were like those observed in other countries in the region.

The Chapter on the Evolution of Devolved Fiscal Governance reviewed the effectiveness and responsibility in budget implementation for devolved functions by national and county governments between the period 2013/14 to 2016/17. The analysis showed that the percentage of budget executed at the National, County, and Ward levels remained relatively unchanged over the review period. However, expenditures within the devolved programs have continued to grow since 2013 with Health, Agriculture, and Energy & Infrastructure growing at a faster rate. The responsibility for service delivery and for administrative functions has been devolved at different rates. Most programs have devolved more administrative expenditure responsibility to the county level than service delivery responsibility. Overall, the report identifies the need to improve the clarity of the role of National and county level governments in implementing different types of expenditures.

The Chapter on Wage Bill Analysis presents findings from a public-sector wage bill management study at 126 government institutions, covering the national, county, and state corporation level. Kenya's wage bill is seen as considerably high and potentially crowding out other important socio-economic and developmental expenditure. During the last five years, the wage bill to revenue ratio has consistently exceeded 50 per cent, which is higher than the 35 per cent threshold required by the PFM Act 2012. The persistent growth in unchecked employee numbers, especially at the counties, has largely contributed to the increased growth in the wage bill. Several options are presented to address the identified challenges, which, if implemented, could contribute significantly to the affordability, equity, and competitiveness of the public wage bill.

The Health Chapter presents a sector performance review and achievements for the 2013/14 to 2016/17 financial years. Kenya's health indicators over the period of analysis have revealed mixed results. Population trends indicate a gradual increase in population size and rising life expectancy, both of which have implications on health care service demand. The largest portion of the population is youthful, with over half (61.5 per cent) ranging from 0-24 years of age. Ensuring a healthy workforce and an opportunity to contribute to economic growth remains critical to tapping into this demographic dividend. At the same time, although the overall population size has risen, the country's Total Fertility Rates (TFR) has been improving since 2003. The improvement in TFR is associated with a growing contraceptive prevalence rate (CPR) and reduction of unmet need for Family Planning. Kenya's Maternal Mortality Rate decreased from 520/100,000 to 362/100,000 during the period under review. The infant and child mortality rates have declined rapidly in recent years. Despite the above achievements, there are huge disparities of progress among counties.

The Chapter on Education presents performance and spending in education sector during the period. Spending on education and training by all stakeholders expanded from KSH325.7 billion in 2010 to KSH641 billion in 2016/7. Public education and training spending as a percentage of GDP was 5.6 per cent in 2013/14 and 4.7 per cent in 2016/17. These investments resulted in substantial expansion in access to education at all levels. Despite the extensive off-budget education spending by non-government agencies, the private sector and households at both the national and county levels, these off-budget flows are rarely reported in the national education accounts. The recurrent education budget constantly dominated the total education budget. Underfunding of development spending has had a negative effect on educational institutions and school infrastructure. International comparisons of education financing indicate that Kenya spends significantly more than most of its peers and has the highest achievement levels at the primary education level, but educational attainment at the secondary and tertiary level generally underperforms. Retention of students in the system is low and the drop-out rates highest in standard 7 and form 3 respectively.

The Agriculture Sector remains the backbone of Kenya's Economy in terms of its contribution GDP, employment creation, foreign exchange earnings and linkage to other productive sectors. The growth rate were low due to poor performance realized in the sector because of adverse weather, pest and disease prevalence, and effects of climate change. The sector is anticipated to grow at a minimum of 7 per cent yearly towards the realization of the Kenya Vision 2030. However, the annual growth rate of the sector for the review period remained on average at 5.5 per cent. The funding of the sector has remained below the Maputo and Malabo declarations threshold of at least 10 per cent of national budget. Despite the low budget allocated to the sector, absorption levels are also low thus compromising the sectors' growth. This calls for efficient and prudent management of funds allocated to the sector at the National and County levels.

The Transport and Infrastructure Chapter reviews the progress made on road networks, railways, ports, airports, and waterways. During the review period the government spent an average of 4.5 per cent of GDP (or 8 per cent of total government expenditure) on the transport and infrastructure sector. The major source of funding for transport and infrastructure was domestic revenue which contributed 58 per cent of the total sector funding. During the review period, 50 per cent of the sector's development expenditure was on railway transport, 40 per cent on road transport, 2 per cent on Marine transport and 1 per cent on air transport. Improving efficiency and effectiveness for road and rail transport will demand enhancing investments in the sector through PPPs and an increased focus on maintenance of the existing network. Port efficiency can be improved by strengthening connections to global shipping networks and adopting emerging technologies.

Regarding the Energy Sector, the GoK has identified the improvement of electricity generation, transmission and distribution as critical to bridging the energy gap and targeting universal access to electricity by the year 2020. In 2013, the rate of access to electricity in Kenya was only 31.6 per cent, which was below the Sub-Saharan Africa average of 36.5 per cent. This has risen to 70 per cent by June 2017. Total installed electricity generation capacity increased from 1,765 MW on June 30, 2013 to 2,333 MW by June 30, 2017. About 50.2 per cent of the sector spending was financed by loans from development partners. During the review period, 71.2 per cent of sector expenditure was on power transmission and distribution. This underscores the government's strategic intervention towards universal access and catalysing the industrial take-off in line with the MDG goals and Vision 2030. Power generation on the other hand was allocated 26.6 per cent of the budget with most of it funding geothermal development to diversify the generation mix and reduce dependence on hydro power which is often affected by drought.

Generally analyzing public expenditures can be a powerful tool. Indeed, such analysis and monitoring of public spending should be a natural and regular process. There is therefore need to implement the policy recommendations advanced in this CPER to realize efficiency and effectiveness in resources utilization.

CROSS-CUTTING ISSUES

PART I



MACRO-FISCAL PERFORMANCE

1.1 INTRODUCTION

This chapter presents a review of the Kenya macroeconomic framework for the period 2013/14- 2016/17. It covers real GDP growth, deficit and debt levels, and the performance of public expenditure both in the National and ounty Governments. The chapter also presents a global and regional overview of selected macroeconomic indicators.

1.1.1 Global and Regional Economic Performance

Global output expanded at an average of 3.3 per cent over the period 2013-2017. In 2017, world real GDP expanded to 3.7 per cent, which was the highest growth rate since the 2008 global financial crisis. This was attributed to a rebound in private and public investments, growth in international trade, improved business and consumer confidence, and declining effects from the fall in oil and commodity prices.

Sub-Saharan Africa (SSA) growth averaged 3.4 per cent in the 2013-2017 period, which was slightly above the global growth rate. SSA growth grew from 1.5 per cent in 2016 to 2.8 per cent in 2017 spurred by improved capital market access, and recovery in the growth of larger commodity exporters such as Angola, Nigeria and South Africa. The growth was also due to the stability in non-resource1¹ rich countries attributed to increased public investment in infrastructure and private consumption.

The East African Community (EAC) region Growth declined from 6.1 per cent in 2015 to stabilize at 5.4 per cent in 2016 and 2017. The decline was attributed to a slowdown in credit growth to the private sector and prolonged effects of drought which dampened agricultural output and GDP growth in Kenya, Uganda, Tanzania and Rwanda. However, the EAC region recoded an average growth rate of 5.6 per cent higher than the SSA regional average of 3.4 per cent during the review period.

¹ Countries without mineral resources.

1.1.2 Kenya Economic Performance

The Kenyan economy has been resilient. Kenya's economic growth averaged 5.6 per cent during the review period compared to an average growth of 4.7 per cent between 2008 and 2012. This was above the SSA and World average GDP growth rates of 3.4 and 3.3 per cent respectively. Figure 1.1 presents a comparative analysis of the growth trends in Kenya, EAC region, Sub-Saharan Africa and Globally. The Kenyan economy recorded a decline in growth to 4.9 per cent in 2017 from 5.9 per cent in 2016 Among the factors explaining the decline in growth were the slowdown in the growth of the manufacturing sector and the reduction in the share of Kenya's manufactured exports in the regional market. Other factors included adverse weather patterns, uncertainties associated with elections and a slowdown in credit growth to private sector. However, the rebound in tourism, strong public investment, and resilient remittance inflows partially mitigated the decline in economic performance.



FIGURE 1.1: GDP GROWTH FOR KENYA, SUB-SAHARA AFRICA AND THE WORLD (2013-2017)

Sources: Economic Surveys (Various) and IMF World Economic Outlook (2018)

1.1.3 Growth Performance by Sector

The sub section presents an analysis of the performance of the key sectors of the economy contributing to the GDP in Kenya. Figure 1.2 shows the contribution of the Agriculture, industries and services sectors to the overall GDP growth over the period 2012 to 2017. The services sector is the highest contributor to the GDP growth followed by the Industry sector.

The agricultural sector's contribution to real GDP growth averaged about 1.0 percentage points² over the 2013-2017 period (Figure 1.2). The sector on average grew by 4.3 per cent between 2013 and 2017. It registered declined growth of 1.6 per cent in 2017 from 4.7 per cent in 2016 because of drought, pests and disease incidence which resulted in reduced crops and livestock production.

Percentage point is the difference between two percentage growth rates.





Source: Economic Surveys (various)

The industrial sector comprises of manufacturing, construction, electricity and water supply sub-sectors and accounts for about 19 per cent of GDP. The sector contributed about 0.8 percentage points to real GDP growth in 2017 compared to an average of 1.2 percentage points between 2013 and 2017. The sector recorded an average growth rate of 5.4 per cent between 2013 and 2016. The sector's performance was supported by gradual recovery in both food and non-food manufacturing, stronger private investment in real estate and continued public infrastructural development.

The services sector comprises of ICT, finance and insurance, real estate, wholesale and retail trade, transport and storage and accommodation and restaurant. The services sector remained resilient growing at an average of 6.1 per cent over the review period contributing an average of 3.4 percentage points to real GDP growth. During the review period, growth in the sector was driven by accommodation and restaurant in 2012 and Information Communication and Technology in 2017. The growth in the sector was supported by reforms aimed at creating a conducive business environment in the country and improved security situation that led to removal of travel alerts from major tourist originating countries.

1.1.4 Contribution of factors of production to output

The average growth in output during the review period was estimated at 5.6 percent. Out of this, the growth in capital stock accounted for approximately 61.1 per cent of total growth, growth in employment accounted for 29.6 per cent of growth, while growth in TFP was responsible for 9.2 per cent (Table 1.1). Reinvigorating the contribution of TFP is extremely important for sustainable and inclusive growth.

	1992-2017	1992-2002	2003-2007	2008-2012	2013-2017
Average Growth	4.3	2.0	5.3	4.4	5.4
Total Factor Productivity	-0.4	-1.9	1.1	-1.1	0.5
Capital	2.9	1.9	2.6	4.0	3.3
Employment	1.7	2.0	1.6	1.5	1.6
Memo items:					
Gross Investment Rate	15.7	10.7	13.2	19.0	20.1

TABLE 1.1: CONTRIBUTIONS TO AVERAGE GDP GROWTH, 1992-2017

Notes: Capital is computed using perpetual inventory method. The share of Capital is 0.45 and the depreciation rate is 0.08.

On the demand side, growth has been driven largely by an increase in private consumption and government expenditure, while the contribution from private investment has contracted. Private sector investment is essential for replenishment of capital stock, adoption of frontier technology, boosting firm productivity and ultimately private sector led growth. However, the contribution to growth from Kenya's private sector investment has been falling over the review period, contracting by 2.8 per cent in 2016. Comparatively, in 2013, when the economy expanded by 5.9 per cent, the private sector contributed 25 per cent of that growth [Figure 1.3]. The slowdown in private sector investment, especially in 2016 and 2017, could be attributed to a "wait and see" attitude induced by uncertainties during the 2017 general elections. Over the same period, there has been a persistent slow-down in private sector credit since its peak in mid-2015. Re-igniting private sector investment is extremely important for sustainable growth and job creation.





Source: World Development Indicators (2018)

1.1.5 Performance of selected macroeconomic indicators

Inflation remained within the government's inflation target band of 5±2.5 per cent. The overall inflation rate averaged 6.3 per cent between 2012/2013 and 2016/2017. Inflation increased from 6.4 per cent in 2015/2016 to 6.9 per cent in 2016/2017 mainly due to a significant increase in oil and food prices during the review period.

Lending rates increased from 16.99 per cent to 18.3 per cent during the period between 2013 and 2015. However, lending rates declined to 13.69 per cent in 2016 and 13.64 per cent in 2017 respectively, mainly due to interest rate capping that was implemented in September 2016. The capping led to the narrowing of interest rates spread over the review period (Figure 1.4).

Credit advanced by commercial banks to various sectors grew by 61.4 per cent from KSH2.06 billion in 2013 to KSH3.32 billion in 2017. The share of credit to the public sector increased from 26 per cent in 2016 to 28.3 per cent in 2017, while share of credit to private sector declined from 59.1 per cent to 57.7 per cent during the same period (Figure 1.4). The slowdown was partly due to the interest rate capping that incentivized commercial banks to lend to the public sector and large corporations considered low-risk at the expense of Small and Medium Enterprises viewed as high-risk borrowers.





Source: Economic Survey 2018

The current account and balance of trade deficits widened over the review period. Imports as a percentage of GDP averaged 28.4 per cent between 2013 and 2017 while exports as a percentage of GDP averaged 16.5 during the same period (Figure 1.5). This was mainly attributed to the rise in imports as a percentage of GDP from 22.8 per cent in 2016 to 25.5 per cent in 2017 due to recovery of international oil prices, imports related to public infrastructure projects, and an increase in food imports.

The Kenyan Shilling remained generally stable against most foreign currencies between 2013 and 2017. Relatively lower oil prices, strong remittance inflows, a rebound in tourism and government borrowing in foreign currency continued to support a stable exchange rate with a moderate appreciation of the shilling against the US dollar over the period. The foreign exchange reserve grew from 3.8 months of import cover in 2012/13 to 6.5 months in 2016/17.



FIGURE 1.5: TRENDS IN CURRENT ACCOUNT AND BALANCE OF TRADE

Source: Economic Survey 2018

1.2 FISCAL PERFORMANCE BY THE NATIONAL GOVERNMENT

1.2.1 Fiscal Trends

Expansionary Fiscal Policy: The fiscal stance over the review period was expansionary, partly driven by implementation of the constitution 2010, roll-out of devolution and expenditure on key infrastructure projects.

Government spending grew on average by 18.6 per cent from KSH1,173.9 billion in 2013/2014 to KSH2,105.9 billion in 2016/2017 (Table 1.2). This increase in spending was driven by the implementation of the share of credit (%) CoK 2010 (establishment of county governments and establishment of independent offices), investment in capital intensive infrastructural projects, interest payments, elections and drought mitigation expenditures.

The size of government expenditure as a percentage of GDP in Kenya is above the SSA regional average of 20.1 per cent (Figure 1.6). However, compared with other countries in Sub Saharan Africa, the size of Kenya's government expenditure as a percentage of GDP is smaller than that of Botswana, Ghana and South Africa but higher than her neighbours in Uganda, Tanzania and Ethiopia. These comparisons are only illustrative of Kenya's expenditure trends as countries are at different stages of development facing different challenges and are guided by different development strategies.

Revenues have not kept pace with the expansion in government spending. Revenue collections decreased from 19.2 per cent of GDP in FY 2013/14 to 18.3 per cent in FY 2016/17 [Table 1.2]. The share of income tax to nominal GDP decreased from 8.9 per cent of GDP in 2013/14 to 8.2 per cent of GDP in 2016/17, while that of VAT decreased from 4.6 per cent of GDP in FY 2013/14 to 4.4 per cent of GDP in FY 2016/17.



FIGURE 1.6: KENYA'S AVERAGE EXPENDITURE AS PER CENT OF GDP (2012-2016)

Source: World Development Indicators (2018)

Revenue Mobilization: While Kenya's revenue mobilization is higher than that of EAC member states, it is lower relative to the SSA and lower middle-income country average. Over the period 2014-2016, Kenya's average revenue excluding grants (as per cent of GDP) was equivalent to 17.8 per cent of GDP, which is high compared to EAC member states but lower than the SSA average of 20.6 per cent (Figure 1.7). Furthermore, Kenya's revenue mobilization effort lags behind that of lower middle- income countries, which averages 28.9 per cent of GDP.

Kenya's fiscal deficit remained high compared to historical trends and to its middle-income peers. The fiscal deficit widened from 6.1 per cent of GDP in FY 2013/14 to 9.1 per cent of GDP in FY 2016/17 (Table 1.20. Over the four-year period leading to 2017, the fiscal deficit averaged 8.1 per cent of GDP compared to 4.8 per cent in the preceding four years (2010-2013). The fiscal deficit was financed through borrowing from both domestic and external sources.



FIGURE 1.7: AVERAGE REVENUE AS PER CENT OF GDP, EXCLUDING GRANTS (2014-2016)

Source: The IMF World Economic Outlook (2018)

	2010/11- 2012/13	2013/14	2014/15	2015/16	2016/17
Total Revenue and Grants	19.5	19.7	19.5	19.2	18.6
Total Revenue	19.0	19.2	19.0	18.7	18.3
Revenue	17.4	18.1	17.7	17.7	17.3
Income Tax	8.0	8.9	8.7	8.6	8.2
Vat	4.5	4.6	4.5	4.4	4.4
Import Duty	1.3	1.3	1.3	1.2	1.2
Excise Duty	2.1	2.0	2.0	2.1	2.2
Other Revenue	1.6	1.3	1.3	1.3	1.1
Grants	0.5	0.5	0.5	0.5	0.3
Expenditure and Net Lending	24.2	25.6	28.1	27.2	27.5
Recurrent	17.1	14.8	14.8	15.6	15.4
Wages and Salaries	5.8	5.5	5.1	4.7	4.4
Interest Payment	2.3	2.7	2.9	3.3	3.5
Domestic Interest	2.1	2.3	2.4	2.7	2.8
Foreign Interest	0.2	0.3	0.6	0.7	0.8
Pensions	0.7	0.6	0.6	0.8	0.8
Development	7.0	6.3	8.7	7.0	8.0
Adjustment to Cash Basis	0.1	-0.2	0.6	0.7	-0.2
Deficit Including Grants (Cash Basis)	-4.5	-6.1	-8.1	-7.3	-9.1
Primary Deficit	-2.2	-3.4	-5.1	-4.0	-5.6
Financing	4.5	6.1	8.1	7.3	9.1
Domestic Financing	2.7	4.0	4.3	3.1	4.0
Foreign Financing	1.8	2.1	3.7	4.1	5.0
Memo 1: Public Debt (% of Nominal GDP)	41.9	47.8	48.8	47.9	51.9
Memo 2: Nominal Gdp (Kshs. billion)	3982	5074	5828	6710	7658

TABLE 1.2: REVENUE, EXPENDITURE AND FISCAL BALANCE (IN % OF GDP)

Source: Economic Surveys (Various) and Budget Policy Statement (Various)

1.2.2 Public Debt

Public debt as a share of nominal GDP rose from 48 per cent in June 2014 to 57.2 per cent of GDP as of June 2017. In nominal terms, the outstanding total public debt, including publicly guaranteed debt, amounted to KSH4,406.9 billion as at end of June 2017 (Table 1.3) compared to KSH3,611.3 billion as at June 2016, an increase of 22 per cent. Domestic debt increased from KSH1,815.1 billion in June 2016 to KSH2,112.7 billion as at June 2017, an increase of 16.4 per cent.

On the other hand, external debt (including guaranteed debt) increased by 27.7 per cent from KSH1,796,198 million as of June 2016 to KSH2,294,153 million at the end of June 2017. The increase was largely because of a KSH77.8 billion commercial debt guarantees to the transport sector. Domestic and external debt accounted for 47.9 per cent and 52.1 per cent of total public debt at the end of June 2017, compared to 50.3 per cent and 49.7 per cent for June 2016 respectively.

DEBT TYPE	Jun-13	Jun-14	Jun-15	Jun-16	Jun-17
DOMESTIC DEBT					
Central Bank	39,170	65,700	63,335	99,856	54,506
Commercial Banks	524,505	617,221	730,419	927,307	1,142,889
Sub-total: Banks	563,675	682,921	793,754	1,027,163	1,197,395
Non-bank Financial Institutions	486,880	601,406	626,690	787,970	915,315
Total Domestic	1,050,555	1,284,327	1,420,444	1,815,133	2,112,710
As a % of GDP	23.3	25.5	24.9	27.9	27.4
As a % of total debt	55.5	53	50	50.3	47.9
EXTERNAL DEBT					
Bilateral	217,970	248,636	405,562	491,864	669,839.7
Multilateral	507,920	593,397	680,192	794,797.5	839,721.7
Commercial Banks	58,928	234,799	276,937	432,377	634,108.9
Suppliers Credits	15,207	16,452	16,628	16,628	15,303.1
Sub-Total	800,025	1,093,284	1,379,319	1,735,667	2,158,973.4
GUARANTEED DEBT					
Bilateral	39,667	41,278	39,495	56,487	52,728.8
Multilateral	3,870	3,943	4,439	4,044	4,667.0
Commercial	0.00	0.00	0.00	0.00	77,783.8
Sub-Total	43,537	45,221	43,934	60,531	135,179.6
Total External debt	843,562	1,138,505	1,423,252	1,796,198	2,294,153
As a % of GDP	18.8	22.5	25	27.6	29.8
As a % of total debt	44.5	47	50	49.7	52.1
GRAND TOTAL	1,894,117	2,422,832	2,843,696	3,611,331	4,406,863
Total debt as a % of GDP	42.1	48	49.9	55.5	57.2
Total Debt Service as a % of Revenue	16.5	18.7	17.5	24.6	21.7
Total External Debt Service as a % of Exports	6.3	6.6	7.9	21.6	12.8
Memorandum item					
GDP (in KSh million)	4,496,000	5,044,236	5,703,321	6,508084	7,710,947

Source: Budget Policy Statement and CBK reports (Various)

1.2.3 Debt Service

Total public debt service payments at the end of June 2017 amounted to KSH308.5 billion (4 per cent of GDP) compared to KSH145.2 billion in June 2013 (3.2 per cent of GDP). As a percentage of the total public debt service, external and domestic debt service was 31.0 per cent and 69.0 per cent by June 2017 compared to 31.3 per cent and 68.7 per cent respectively at the end of June 2016 (Table 1.3). The increase was largely because of costs associated with a higher debt stock.

The ratio of debt service to revenues reduced from 24.6 in June 2016 to 21.7 per cent in June 2017. This was attributed to the higher stock of debt that were not issued at concessionary terms.

1.2.4 Government Spending

The government expenditure on developments has increased over time. During the review period, the share of development expenditure increased from 27.2 per cent of total expenditure to 28.4 per cent. The government prioritized infrastructure development with the aim of creating a conducive environment for trade while raising the ability of firms to respond to global growth opportunities. Figure 1.8 presents the four-year moving average on the share of recurrent and development expenditures to total expenditure.





Source: National Treasury.

Development and net lending rose from 6.3 per cent of GDP in FY2013/14 to 8.4 per cent in FY2016/17. Development expenditures increased from KSH319 billion (6.3 per cent of GDP) in FY 2013/14 to KSH610 billion (or 8.4 per cent of GDP) in FY 2016/17, representing annual average growth of 22.7 per cent (Figure 1.9).



FIGURE 1.9: COMPOSITION OF EXPENDITURE ITEMS AS A PER CENT OF GDP

Source: National Treasury.

1.2.5 Government Recurrent Spending

Government recurrent expenditures remained stable during the review period. The share of recurrent expenditure to total expenditure decreased from 72.8 per cent in FY 2013/14 to 71.6 per cent in FY 2016/17³. The change in the share of recurrent expenditures over the five-year period was relatively small, indicating rigidities in recurrent expenditures, particularly in terms of the share of salary and wage expenditure, which dropped from 5.5 per cent to 4.4 per cent during the review period. Other recurrent expenditures, including operation and maintenance, rose from 6.6 per cent of GDP in FY2013/14 to 7.5 per cent in FY 2015/16 and remained constant at that level in FY 2016/17. Expenditure on interest payments has increased from 2.7 per cent of GDP in FY 2013/14 to 3.5 per cent of GDP in FY 2016/17 (Figure 1.9).

The transition of recurrent expenditures over time helps isolate rigid and increasing spending

items. Using a classification by function of Government, Table 1.4 examines the transition of recurrent expenditures between FY 2013/14 and FY2016/17. The rigid recurrent expenditure items include: public debt transactions, public services, public order and safety, and defence. Those that increased include: transfers to counties, and education at the pre-, primary, and secondary levels. Over the same period, there was a reduction of recurrent expenses on administration of education, tertiary education, health, social protection, agriculture, and transport. The overall share of recurrent expenditures decreased from 72.8 per cent of total expenditure in FY 2013/14 to 71.6 per cent of total expenditures in FY 2016/17.

1.2.6 Government spending by Sectoral Classification

Actual outturns have been lower than the allocated sectoral budget over the review period. Actual expenditures across all sectors were lower than the allocated budget in the review period. Table 1.5 presents the deviation of actual expenditure from allocated budget by sector. For instance, the agriculture sector underperformed the allocated budget by 15 percentage points over the review period. The average outturn figures indicate a low budget expenditure rate of 73 per cent for the health sector and a high of 94 per cent for the education sector.

³ We make use of the KNBS classification of recurrent expenditures to include recurrent transfers to County governments. The QBER classification by the National Treasury excludes recurrent transfers to Counties.

Rank	2013/14	%		2016/17	%
1	Public debt transactions	20.38 -		Pubic debt transactions	21.05
2	Education Administration	11.25		Transfers to County	9.47
3	General pubic service	8.66		General pubic service	6.43
4	Public order and safety	7.57 -		Public order and safety	6.28
5	Defense	5.95 -		Defense	5.91
6	Tertiary education	3.44	ι Λ,	Pre and primary education	4.54
7	Health	3.09	\bigvee	Secondary education	3.60
8	Social protection	2.63		Education Administration	3.12
9	Transport	2.24 💊	\mathcal{N}	Tertiary education	3.01
10	Agriculture, forestry and fishing	1.50 🔨		Social protection	2.61
11	Secondary education	1.18	$\land \lor$	Transport	1.60
12	Transfers to County	1.17		Health	1.28
13	Gen. economic, comm & labour	0.96 🗸		Agriculture, forestry and fishing	0.78
14	Pre and primary education	0.77		Gen. economic, comm & labour	0.54
15	Housing & community amen.	0.43 -		Environmental protection	0.43
16	Environmental protection	0.29 -		Housing & community amen.	0.23
17	Education expenditure nec	0.21 🔪		Recreation, culture and religion	0.17
18	Recreation, culture and religion	0.18 -	\times	Communication	0.14
19	Fuel and energy	0.17 -	\rightarrow	Fuel and energy	0.10
20	Communication	0.09 -		Education expenditure nec	0.10
21	Other industries	0.02		Other industries	0.03
	Total Recurrent	72.79		Total Recurrent	71.59

TABLE 1.4: TRANSITION IN RECURRENT EXPENDITURES BY SECTOR

Source: Economic Survey (Various).

The recurrent share is calculated as percentage of total expenditure equivalent to KSH1534 billion in FY2013/14 and KSH2496 billion in FY 2016/17.

TABLE 1.5: DEVIATION OF ACTUAL EXPENDITURE FROM ALLOCATED BUDGET PER SECTOR (%)

	2014/15	2015/16	2016/17	2014-2016
Agriculture and Rural Dev.	-17%	-10%	-18%	-15%
Social Protection, Culture and Recr.	-18%	-11%	-4%	-11%
Health	-31%	-32%	-20%	-27%
Public Admin. International Relations	-7%	-16%	-8%	-10%
Education	-5%	-7%	-6%	-6%
Governance, Justice, Law and Order	-11%	-9%	-7%	-9%
Environment, Water and Housing	-17%	-20%	-16%	-18%
Energy, Infrastructure, ICT	-22%	-31%	-22%	-25%
General Economics, Commercial and Labor	-9%	-8%	-3%	-7%

Source: MTEF sector reports 2014/15 – 2016/17, QEBR (various)

1.3 COUNTY FISCAL PERFORMANCE

This section discusses revenue and expenditure performance of county governments during the period 2013/14 -2016/17.

1.3.1 Revenue Performance

County government revenues comes mainly from three sources; equitable share (unconditional), conditional grants, and own-source revenue. Equitable share comprises of at least 15 per cent of the nationally collected revenue based on the last audited accounts. Own source revenues are generated through user and license fees levied on property titles, single business permits, and other rates and penalties. In the first year of devolution, 2013/14, county governments depended mainly on national transfers from the equitable share, which accounted for 84.8 per cent of county revenue. As a share of GDP, the equitable share for county governments gradually increased from 3.8 per cent in 2013/14 to 4.0 per cent in 2015/16 and declined to 3.7 per cent in 2016/17. It accounted for 78.1 per cent of total county revenue on average during 2013/14 – 2016/17 (Table 1.6).

Own source revenue declined steadily from 11.7 per cent in 2013/14 to 8.8 per cent in 2016/17 (Figure 1.10). The decline can be attributed to weak revenue collection systems at the counties and increased dependence on national government transfers.

KSh million	2013/14	2014/15	2015/16	2016/17
Revenue	223,996	304,782	343,183	369,454
Equitable share	190,000	226,660	259,770	280,300
Grants	3,400	2,604	12,292	19,441
Own source revenue	26,296	33,849	35,022	32,523
Balance brought forward	4,300	41,670	36,100	37,190
Expenditure	169,352	257,998	295,297	319,056
Recurrent	132,795	167,555	191,876	215,714
Development	36,557	90,443	103,421	103,342
Fiscal balance	54,644	46,784	47,886	50,398
Pending bills	2240	37,823	37,363	37,363
Fiscal balance after pending bills	52,404	8,961	10,523	13,035
GDP	5,073,777	5,828,115	6,508,084	7,658,100
Fiscal balance % of GDP	1.1	0.8	0.7	0.7

TABLE 1.6: FISCAL OUTTURN AT COUNTY LEVEL: 2013/14 – 2016/17 (KSH MILLION)

Source: Office of the Controller of Budget, Annual County Governments Budgets Implementation Review Report, FY 2013/14, FY 2014/15, FY 2015/16, and FY 2016/17.



FIGURE 1.10: SOURCES OF COUNTY REVENUE AS PERCENTAGE OF TOTAL COUNTY REVENUE

Source: National Treasury.

1.3.2 Trends in own source revenue

Own source revenue increased by 28.7 per cent from KSH26.3 billion in 2013/14 to KSH33.8 billion in 2014/2015 and by 3.5 per cent between 2014/15 and 2015/16 (Figure 1.11). This represented an improvement towards meeting the revenue target, from 48.5 per cent in 2013/14 to 67.2 per cent and 69.3 per cent against the target in 2014/15 and 2015/16 respectively.



FIGURE 1.11: TRENDS IN OWN SOURCE REVENUE COLLECTION (2013/14 to 2016/17)

Source: Office of the Controller of Budget, Annual County Governments Budget Implementation Review Report, various.

Own source revenue collection stood at an average of 60.3 per cent of targeted collections for the review period (Figure 1.12). This was mainly attributed to low capacity to collect revenues or determine optimal revenue levels leading to unrealistic own-source revenue forecasts. Most counties have not fully automated their revenue collection systems leading to underreporting of own source revenue and leakages.


FIGURE 1.12: OWN SOURCE REVENUE PERFORMANCE BY COUNTIES

Source: Office of the Controller of Budget, Annual County Governments Budget Implementation Review Report, FY 2013/14, FY 2014/15, FY 2015/16, and FY 2016/17

1.3.3 Conditional grants

Conditional grants received by County government as a share of total county revenue increased from 1.5 per cent (KSH3.4 billion) in 2013/14 to 5.3 per cent (KSH19.4 billion) in 2016/17. Much of these grants were aimed at improving health care and road maintenance (Figure 1.13).



FIGURE 1.13: SOURCES OF COUNTY REVENUE

Source: National Treasury, and Office of the Controller of Budget, Annual County Governments Budget Implementation Review Report, FY 2013/14, FY 2014/15, FY 2015/16, and FY 2016/17

1.3.4 Expenditure Performance

County expenditures increased during the period under review as a result of uptake of devolved function. In nominal terms total county expenditure expanded by 52.3 per cent in 2014/15 and by eight per cent in 2016/17. As a share of GDP total county expenditure rose from 3.3 per cent in 2013/14, 4.4 per cent in 2014/15 and 4.5 per cent in 2015/16 before dropping to 4.2 per cent in 2016/17 (Table 1.7). This was attributed to the slow growth in local revenue collection.

	2013/14		2013/14		2015/16		2016/17	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
Total Expenditure	261,000	169,352	326,280	257,998	367,440	295,297	399,250	319,056
Recurrent	160,600	129,088	181,380	167,555	208,820	191,876	240,890	215,714
Development	100,400	36,553	141,910	90,443	158,620	103,421	158,360	103,342

Source: Office of the Controller of Budget, Annual County Governments Budgets Implementation Review Report, various.

Most counties met the requirement to allocate at least 30 per cent of budget to development as per the PFM Act, 2012. However, most of these counties had low absorption rates. Only five county governments consistently spent 30 per cent and above of their total expenditure on development (Bomet, Murang'a, Turkana, Wajir, and West Pokot) during the review period. Eight counties namely; Baringo, Kiambu, Kirinyaga, Kisii, Nairobi City, Nakuru, Nyeri, and Taita Taveta consistently spent below the 30 per cent threshold in the review period (Figure 1.14).



FIGURE 1.14: ACTUAL DEVELOPMENT EXPENDITURE AS A PERCENTAGE OF TOTAL EXPENDITURE IN 2016/17

Source: Office of the Controller of Budget, Annual County Governments Budget Implementation Review Report, FY 2013/14, FY 2014/15, FY 2015/16, and FY 2016/17.

At the onset of devolution, recurrent expenditure constituted 78.4 per cent of total expenditure. This proportion went down in 2014/15 (to 64.5 per cent) as county governments increased development spending, before rising again to 65.0 per cent and 67.6 per cent in 2015/16 and 2016/17 respectively. Recurrent expenditure was mainly driven by salaries and allowances, transport cost, and other operating expenses (Figure 1.15).



FIGURE 1.15: COMPONENT OF COUNTY GOVERNMENT EXPENDITURE 2016/17

Personnel emoluments and development expenditures for all the counties during the financial year 2016/17 are illustrated in Figure 1.16. According to the PFM Act, 2012 all counties are required to allocate not less than 30 per cent of their total budget to development and not more than 35 per cent for personnel emoluments. Counties on the top left quadrant failed to meet the two thresholds while counties on the bottom right quadrant adhered to the PFM Act, 2012 provisions.





Source: Office of the Controller of Budget, Annual County Governments Budget Implementation Review Report, FY 2013/14, FY 2014/15, FY 2015/16, and FY 2016/17.

Source: Office of the Controller of Budget

1.3.5 Fiscal Balance at County Level

County governments' fiscal outturn showed a positive fiscal balance in the review period. The highest (KSh 54.6 billion) was realized in 2013/14 as county governments experienced low budget execution. The fiscal surplus declined in 2014/15 (to KSh 46.8 billion) before increasing again in 2016/17 (reaching KSh 50.4 billion). The surplus as a share of GDP, declined from 1.1 per cent in 2013/14 to 0.8 per cent in 2014/15 before stabilizing at 0.7 per cent of GDP in 2015/16 and 2016/17 (Figure 1.17).





Source: Office of the Controller of Budget, Annual County Governments Budget Implementation Review Report, various.

Large fiscal surplus indicates inefficiencies in the budget execution process. There are multiple reasons that cause fiscal surplus this include: inefficiencies in the budget process/procurement process, where actual work/service is completed after the closure of a fiscal year; inadequate capacity to spend the budgeted resources; and late disbursement of funds by the national government to the County Revenue Fund (CRF)/ and subsequent late approval from CRF to County Operational Account (COA).

1.3.6 Pending bills

Pending bills increased from KSH2.2 billion in 2013/14, to KSH37.8 billion in 2014/15, and marginally declined to KSH37.4 billion in 2015/16 and KSH35.8 billion in 2016/17 (Figure 1.18). This was attributed to delay in fund disbursements, and inadequate implementation and institutional capacity. These pending bills in turn affects the execution of planned activities in the following fiscal year.

Development and recurrent expenditure related pending bills averaged of 71.8 per cent and 28.2 per cent respectively during 2014/15 to 2016/17 period. If pending bills for development were paid in their respective fiscal year, the number of counties with actual development expenditure at/or above 30 per cent of total expenditure would go up.



FIGURE 1.18: COUNTY GOVERNMENTS FISCAL BALANCE AND PENDING BILLS (KSH BILLION)

Source: Office of the Controller of Budget, Annual County Governments Budget Implementation Review Report, various.

1.4 IMPLICATION OF GOVERNMENT EXPENDITURES ON SOCIO-ECONOMIC PERFORMANCE

This section presents an analysis of the outcomes from government expenditure for the period between FY 2013/14 to FY 2016/17. The analysis sought to examine the relationship between government expenditure and outcomes in government expenditures in selected socio-economic indicators for Kenya relative to peer in African countries.

The role of Public Expenditure is to spur and sustain an equitable and inclusive economic growth (Figure 1.19). Public expenditure also plays a crucial role in investments and savings through physical and human capital formation over time. For these expenditures to be effective they need to be targeted to productive sectors of the economy. This calls for efficient public financial management so as to achieve the desired outcomes. Kenya's Public expenditure averaged 26.39 percentage of GDP in the period under review. Implementation of the General Election of 2013 and coming into effect of the devolved system of Government increased expenditure in 2013/2014 to 25.6 per cent of GDP (Table 1.2). Despite the high public expenditure in the review period the targets for investment (30%) savings (24.8%) and economic growth (9.6%) were not achieved. Figure 1.20 compares public expenditure against investments, savings and economic growth for the period under review. As an economy that highly depends on the agricultural sector, widespread droughts and adverse climatic conditions negatively affected agriculture and the energy sectors leading to increased cost of production. The capping of interest rates in 2016 slowed down an already declining credit uptake thus affecting the growth outcomes. Whereas devolution was seen as an impetuous to growth, challenges during its implementation such as capacity constraints, resource leakages, low absorption levels and duplication of functions between national and county government continued to slow growth performance.



FIGURE 1.19: GDP, SAVINGS AND INVESTMENTS FOR KENYA

Source: National Treasury

Over the review period, government spending contributed towards development and reduction of poverty incidence. The Basic Report on Wellbeing in Kenya⁴ shows that Kenya has attained major improvement over the last decade across a wide variety of socio-economic indicators. The poverty incidence has declined from 46.8 per cent in 2005/6 to 36.1 per cent in 2015/16. At this level, poverty in Kenya is below the SSA average of 41 per cent and is amongst the lowest in the EAC region. According to the report, growth of agriculture sector contributed significantly to the decline in poverty levels, suggesting high returns on public spending from that sector.

Cross-country comparisons of poverty headcount as well as relationship between macroeconomic growth and poverty points to substantial progress in the fight against poverty. Figure 1.19 presents Kenya's poverty head count of 36.1 per cent in 2015/16 is lower compared to Rwanda (60 %), Tanzania (49 %), and the sub-Saharan African region average (41 %) but is higher relative to Uganda (35 %) and Ghana (14 %). More importantly, the correlation between GDP per capita and poverty headcount is visibly negative, indicating that progress in macro-growth may be translating into poverty reduction. Nevertheless, given Kenya's lower middle-income status, attaining a poverty headcount closer to that of Ghana and other Lower Middle Income Countries (LMICs) will require significant effort going forward.

The poverty trends in Figure 1.21 are also supported by improvements in the Human Development Index (HDI) for Kenya. The HDI measures progress in education, income and life expectancy. Kenya's overall score has improved from 0.48 in 2005 to 0.55 in 2015. This makes Kenya a top scorer within the EAC but still lags Ghana at 0.58. On education, the adult literacy rate has increased from 72 per cent in 2005 to 84 per cent in 2015, reflecting progress in enrolment in Kenya over the last ten years. However, looking at levels of education attainment, only about 14.4 per cent of adults aged 25 years and older have completed secondary education in 2015. This is

⁴ KNBS, 2018: Basic Report on Well-Being in Kenya (March 2018): of the KIHBS 2015/16and World Bank's Kenya Economic Update (April 2018).



FIGURE 1.20: REGIONAL COMPARISON OF POVERTY HEADCOUNT AGAINST GDP PER CAPITA

Source: KIHBS 2015, World Bank open data catalogue, WBG's Kenya Economic Update (April 2018).

an improvement from the 3 per cent in 2005 but still low in comparison to other LMICs, indicating a significant disadvantage. Kenya has also made significant progress in health indicators, showing that under-five mortality declined from 114.6 in 2003 to 52.4 deaths per 1000 live births in 2014 because of improved uptake in preventive health measures such as treated mosquito nets and immunization programmes.

Kenya is among the top globally competitive destinations in the SSA region. The latest global competitive index (GCI) 2018, ranks Kenya (3.9) at position six in Africa after Mauritius, South Africa, Rwanda, Botswana, and Namibia (Figure 1.21). The most competitive country globally is Switzerland with an index of 5.81. The index integrates the macroeconomic and the micro/ business aspects of competitiveness into a single index⁵. The cross-section comparison provides evidence in support of the investment done by the government over the last decade to provide high level of prosperity to its citizens.



FIGURE 1.21: KENYA'S GLOBAL COMPETITIVENESS INDEX COMPARISON TO SSA

Source: Global Competitiveness Index (2018)

⁵ The index is derived from scores in twelve pillars, namely: Institutions, infrastructure, stable macroeconomic framework, good health and primary education, higher education and training, efficient goods markets, efficient labour markets, developed financial markets, technology adoption, market size, production of new products, and innovation.

High government expenditure for Kenya has led to reduced poverty levels but disparities remain across counties. Some Counties remain with high poverty levels (Figure 1.22). Counties with poverty above 50 per cent include; Isiolo, West Pokot, Tana River, Wajir, Marsabit, Garissa, Busia, Samburu and Turkana. Over half of the counties have poverty rates above the national average. Turkana and Marsabit with poverty levels of over 50 per cent also have high public expenditures. This implies that public pro-poor expenditures are neither targeted nor effective in improving poverty reducing aspects such as food security, education and health. The non-effectiveness of public expenditures in these ASAL areas may be explained by periods of severe drought, insecurity due to cross border conflicts as well as cultural practices, among other factors.

Cross country comparison between Government Expenditure and Debt as Percentage of GDP to Poverty Levels (Figure 1.23). The figure shows that countries with low public expenditure have low poverty levels (Uganda, Ethiopia and Tanzania) while those with high expenditures have high poverty levels (South Africa, Burundi and Kenya). The low expenditure-low poverty scenario



FIGURE 1.22: TOTAL COUNTY GOVERNMENT EXPENDITURES (2013/14-2016/17) AGAINST POVERTY LEVELS (2015/2016)

Source: KIHBS 2015/16





Source: World Bank Development Indicators (WDI)

can be attributed to targeted pro-poor spending which has been effective in poverty reduction while the high expenditure-high poverty scenario may be explained as in the case for Kenya where public expenditures are high in recurrent and infrastructural development rather than the pro-poor.

Government expenditures have translated to better employment outcomes during the period under review. The KIBHS 2015/16 indicates that overall unemployment rate stood at 7.4 per cent, a decline from 12.7 per cent in 2005/6. Nonetheless about 85 per cent of the unemployed are youth below 35 years with female constituting 64.5 per cent of the unemployed. The decline in unemployment was attributed to government expenditures towards special interest groups that include Women, Youth and PWDs. The targeted initiatives include Access to Government Procurement Opportunities (AGPO), affirmative action funds (Uwezo, Youth and Women Funds) and Agricultural inputs subsidies.

According World Bank data, in comparison to other countries such as Botswana and South Africa, Kenya has better performance on unemployment against government expenditures as a proportion of GDP. On the one hand, Ghana and Burundi with similar ratios of government expenditures are performing better than Kenya with unemployment levels of about 2 per cent compared to Kenya's of 11.6 per cent. Furthermore, countries with lower government expenditures such Uganda, Tanzania and Ethiopia have better unemployment outcomes than Kenya. This can be attributed to good governance and effectiveness of public expenditures in these countries. Kenya's debt as a proportion to GDP is 2016/2017 is at 58 per cent. A comparison of several countries indicates that Ghana with the highest debt to GDP ratio of 65.46 per cent happens to have a relatively low unemployment rate of 2.2 per cent.

Kenya's efforts in improving income distribution through Devolution system of governance are laudable. To achieve better equality outcomes, country's public expenditures should be ideally well distributed across the economy. For example, Botswana and South Africa with public expenditures of above 32 per cent, the GINI coefficient is over 60 per cent indicating large inequality in income distribution across the population compared to Kenya (Figure 1.24). Kenyas inequality has declined from 45 per cent in 2005/06 to 39 per cent in 2015/16 indicating that public expenditure could have contributed to reducing income inequality.



FIGURE 1.24: GOVERNMENT EXPENDITURE AGAINST PUBLIC DEBT AND INEQUALITY

Source: World Bank Development Indicators (WDI)

Countries with high Human Development Index (HDI) indicate a high quality and standard of living for its citizens and the development of a country. The public expenditure towards a long and healthy life, being knowledgeable and having a decent standard of living translate to a high HDI. For Kenya, Life expectancy at birth improved from 58.0 in 2013 to 66.7 in 2017, there were also improved levels of education and living standards. Figure 1.25 compares Kenya's HDI's to other African countries. Whereas Kenya has a higher public expenditure than Tanzania, their HDI's are comparable. This suggests room to recalibrate public expenditure towards achievement of higher social economic outcomes.



FIGURE 1.25: HUMAN DEVELOPMENT PERFORMANCE AGAINST PUBLIC DEBT AND GOVERNMENT EXPENDITURE, 2013/14-2016/17

Source: UNDP Human Development Report various

1.5 ECONOMIC OUTLOOK

Global Economy

Global growth is projected at 3.9 per cent in 2018 and 2019 from an estimated growth of 3.7 per cent in 2017 (Table 1.8). Advanced economies are expected to grow at 2.3 per cent and 2.2 per cent for 2018 and 2019 respectively. Improved growth will be supported by improvements in investment, trade, and industrial production, coupled with strengthening business and consumer confidence and stabilizing commodity prices Growth is projected to remain subpar in several emerging market and developing economies, including in some commodity exporters that continue to face substantial fiscal consolidation needs.

	2015	2016	2017	2018	2019
World Economy	3.2	3.2	3.7	3.9	3.9
United States	2.6	1.5	2.3	2.9	2.7
Japan	0.5	1.0	1.7	1.0	0.9
China	6.9	6.7	6.9	6.6	6.4
Euro Area	2.0	1.8	2.4	2.2	1.9
Germany	1.5	1.9	2.5	2.2	2.1
France	1.3	1.1	2.3	1.8	1.7
United Kingdom	2.2	1.8	1.7	1.4	1.5

TABLE 1.8: GLOBAL ECONOMIC OUTLOOK AND GROWTH IN THE LEADING ECONOMIES, 2015-2019

Source: IMF World economic Outlook (July 2018) * Projections

Regional Economies and Sub-Sahara Africa

Economic activity in Sub-Saharan Africa is projected to improve to 3.4 per cent and 3.7 per cent in 2018 and 2019 from an estimated growth of 2.8 per cent in 2017 (Table 1.9). The improved growth in region will be aided by stronger global growth, higher commodity prices, and improved market access.

	2014	2015	2016	2017	2018*	2019*
SSA	5.1	3.4	1.4	2.8	3.4	3.7
Burundi	4.5	-4.0	-1.0	0.0	0.1	0.4
Kenya	5.3	5.6	5.9	4.9	5.7	6.0
Rwanda	7.0	6.9	6.0	6.1	7.2	7.8
Tanzania	7.0	7.0	7.0	6.0	6.4	6.6
Uganda	4.9	4.8	2.3	4.5	5.2	5.8

TABLE 1.9: ECONOMIC OUTLOOK FOR SSA AND REGIONAL ECONOMIES, 2014-2019

Source: IMF Regional Economic Outlook Sub-Saharan Africa (October 2018) * Projections

Kenya Economy Growth Forecast

Kenya's economy is projected to grow at 5.9 per cent in 2018/2019 (Table 1.10). The growth is forecasted to reach above 6 per cent by 2019 and possibly hit 7.5 per cent by 2020. The positive economic outlook in 2018/2019 will be supported by: improved performance in agriculture and manufacturing sectors as a result of favourable weather conditions; expected good returns from infrastructure spending and from the "Big Four" initiatives; and the opportunities arising from the signing of Continental Free Trade Area by African countries. In addition the growth forecast assumes that the proposed policy environment is fully implemented in the medium term including a review of the interest rate cap. To boost private sector credit and the fiscal consolidation path to maintain debt at a sustainable level.

Indicator	2018	2019	2020
GDP growth	5.8	6.4	7.5
Inflation	4.7	5.1	5.0
AS per cent of GDP			
Private Consumption	6.7	6.9	7.6
Government Consumption	7.5	6.6	7.4
Private Investments	8.6	9.1	8.8
Government Investments	6.8	7.1	8.3
Export goods & services	5.7	6.5	6.7
Import goods & services	5.8	6.8	7.5
current account balance	-6.5	-5.5	-5.8
Fiscal Deficit	-6.4	-6.3	-6.1
Public Expenditure	25.8	26.2	27.6

TABLE 1.10: MACROECONOMIC INDICATORS, 2018/19-2019/20

The projections show that the economic growth in Kenya in the medium term will be gradual. The private investments and Government investments are both expected to continue growing at higher levels in order to achieve high economic growth rates for Kenya. In addition inflation is expected to be stable and remain within the policy target of 5±2.5 per cent. The current account balance is also expected to be stable and improve as exports improve.

1.6 **RISKS TO THE ECONOMIC OUTLOOK**

- i. Continued uncertainty in the global markets due to US economic and trade policies and Geopolitical tensions;
- ii. Uneven and sluggish growth in advanced and emerging market economies as well as impact of low commodity prices on our exports;
- iii. Internally, public expenditure pressures, particularly wage-related recurrent expenditures;

- iv. Weather-related shocks that could impact on agricultural output, energy generation and higher inflation;
- v. Insecurity in the neighbouring countries, for example, South Sudan and Somalia;
- vi. Slower offtake of pipeline PPP projects;
- vii. High cost of servicing debts may affect allocation of expenditure to implement planned programmes and projects;
- viii. The rising oil prices.

1.7 CONCLUSION

This chapter has documented Kenya's economic performance between 2013 and 2017 which indicates that growth has remained stable, above the Sub Sahara Africa and World average GDP growth. This is largely attributed to increase in growth in the services sectors, private consumption and government expenditures. An expansionary fiscal policy during the period was driven partly by the implementation of Devolution and spending on key infrastructure projects. Besides this performance, the share of expenditure towards recurrent spending has been moderate, actual sectoral expenditure outturn have been lower than budget allocation, efforts for revenue mobilization have not been in tandem to increased government spending and the country's fiscal deficit has widened over the review period leaving room for significant improvement in the effectiveness of government spending.

Of importance to ensuring effectiveness and efficiency in government spending, a revenue mobilization effort to the level reported for the lower middle-income countries remains essential to create the needed fiscal space for adjustment to shocks while maintaining a growth friendly expenditure profile to achieve Kenya's development objectives, including the recently announced, the "Big four ".

This may be achieved through targeting debt and expenditure towards job creating sectors that employ women, youth and other marginalized groups. Targeting public expenditure towards areas that improve human development and pro-poor sectors such as commercial and highly mechanized agriculture, education and health particularly for vulnerable and marginalized groups; raising the share of government expenditure in poverty ridden counties; and encouraging such counties to allocate and spend their resources towards poverty reducing initiatives would promote sustainable and inclusive growth.





FISCAL INCIDENCE ANALYSIS

2.1 INTRODUCTION

Kenya has been able to reduce the share of people living below the national poverty line by more than ten percentage points between 2005/06 and 2015/16, consistent with the overall robust economic growth observed. The national poverty headcount rate dropped from 46.8 per cent in 2005/06 to 36.1 per cent in 2015/16, which corresponds to an annualized rate of poverty reduction of 2.6 per cent. Despite this successful reduction in the incidence of poverty, the absolute number of poor declined only marginally, from 16.6 million in 2005/06 to 16.4 million ten years later, due to growth of the population.

Inequality in Kenya has declined at the national level between 2005/06 and 2015/16, in line with a pro- poor pattern of economic growth contributing to the observed poverty reduction. The Gini index fell from 0.45 in 2005/06 to 0.39 in 2015/16, indicating that Kenya made considerable progress in terms of reducing inequality. The Gini index in rural areas declined from 0.37 to 0.33, a significant improvement for an indicator that is usually very stable over time. This suggests that redistribution contributed positively to the substantial poverty reduction observed in Kenya's rural areas during this period. The level of inequality in Kenya is moderate and comparable to inequality in Tanzania, Uganda, and Ghana.

2.2 TAXES AND SPENDING IN KENYA

In 2015/16, Kenya's total government revenue was in line with peer countries, but with a relatively higher share of tax revenues. A cross-country average over a sample of 31 low- and middle-income countries show revenue as a per cent of the GDP of 23 per cent. However, the observed share of total revenue in GDP in Kenya, 18 per cent, was rather typical of countries at Kenya's level of economic development (Figure 2.1a). Taxes accounted for 90 per cent of government revenue, pointing to the importance of taxes relative to other sources of revenue (Figure 2.1).

FIGURE 2.1: TOTAL REVENUE AND SHARE OF TAXES OF THE TOTAL REVENUE AGAINST GDP PER CAPITA (2011 PURCHASING POWER PARITY (PPP), LOG SCALE)



Source: Kenya Economic Survey 2017, World Development Indicators, and Commitment to Equity (CEQ) institute.

Both direct and indirect taxes account for about eight per cent of GDP. Kenya recently started to rely more on direct taxes than other countries at similar levels of economic development (Figure 2.2). In 2015/16, direct taxes were roughly equally split between income tax from individuals and corporate taxes. VAT contributed about 25.4 per cent of the total tax revenue while excise taxes contributed about 12.3 per cent. Taxes on international trade accounted for about 9.2 per cent of the total tax revenue.



FIGURE 2.2: SHARE OF DIRECT AND INDIRECT TAXES IN GDP AGAINST GDP PER CAPITA (2011 PPPS, LOG SCALE)EXPENDITURE, 2013/14-2016/17

Source: Kenya Economic Survey 2017, World Development Indicators, and CEQ Institute

Among indirect taxes, Value Added Tax (VAT) in Kenya accounts for about a quarter of total tax revenue, a lower share than in other low- and middle-income countries. The standard rate of VAT in Kenya has been 16 per cent, although, a considerable number of goods and services are either zero- rated or exempt. As a result, the share of VAT in Kenya's total tax revenue is at 25.4 per cent is lower relative to LMIC, where it accounts for around 60 per cent. The number of exempt

categories recently increased to more than 30, with a resulting loss in tax revenue of about two per cent of GDP in 20156⁶. Excise taxes account for 25 per cent of indirect taxes, a larger share than typically seen in LMIC.

Government spending in Kenya increased throughout the decade, outpacing revenues. From FY2005/06 to FY2015/16, the government increased deficit spending. Recurrent spending was the main driver of government expenditure, averaging about 17.1 per cent of GDP over the period. Wages and salaries were the largest component of recurrent spending, with interest payments picking up during the latter half of the period to 3.2 per cent of GDP in FY2015/16. Development spending nearly doubled from 4.5 per cent of GDP in FY2005/06 to 8.7 per cent of GDP in FY2014/15, a reflection of government policy to increase infrastructure development in a bid to remove supply-side constraints. Growth in expenditure was faster than growth in revenue collection, putting pressure on the fiscal deficit. As a result, the fiscal deficit increased by 3.5 percentage points from 4.7 per cent of GDP in FY2005/06 to 8.2 per cent of GDP in FY2015/16.

2.2.1 Public spending in education

Education expenditure accounts for a large fraction of total government expenditure, with health and social protection accounting for much smaller shares. The largest share of education expenditure is executed by the national government (Figure 2.3) since only minor functions of public education were devolved. Education expenditure accounts for a significant share of total government expenditure, at 20.3 per cent. Public health expenditure accounts for 22.3 per cent of the combined budget of the counties. Overall, it accounts for 6.4 per cent of total government expenditure. Social protection expenditure accounts for 4.7 per cent of total government expenditure and is mainly executed at the national level.



FIGURE 2.3: BUDGET SHARES OF PUBLIC EDUCATION, HEALTH, AND SOCIAL PROTECTION SPENDING BY LEVEL OF GOVERNMENT, 2015/16.7

Source: Own calculations based on KNBS (2017).

^{6 (}World Bank, 2017).

Public education spending has recently declined. While Kenya's government still spends a comparatively large share of its resources on education as compare to SSA, there is a clear downward trend observable since 2005, both in terms of spending as a share of GDP and spending as a share of total government expenditure (Figure 2.4). This is mostly due to the expansion of the economy relative to education and training spending coupled with a hiring freeze on civil-service teachers that was enforced in the late 1990s and was only lifted in 2010.





Source: Own calculations based on World Development Indicators data.

Close to three quarters of the Government's recurrent public education spending is directed to primary and secondary education. Kenya's education system comprises eight years of primary, four years of secondary, and four years of tertiary education. Early childhood education and some aspects of vocational education have recently been devolved to the counties, while public primary, secondary, and tertiary education remains under the national government. Public primary and public secondary account for 42.2 percent and 32.2 percent of total recurrent spending on education, respectively (Figure 2.5a). Tertiary education also accounts for a significant portion, around 14.8 percent.



FIGURE 2.5: DISTRIBUTION OF RECURRENT PUBLIC EDUCATION SPENDING BY EDUCATION LEVEL

Source: Own calculations based on and KIHBS 2015/16

Public education spending is expected to be pro-poor in Kenya for three reasons. The first is related to demographics: the share of school-age children is higher among the poor, nearly half of all children between the ages of 6 and 17 are among the bottom 40 per cent. Even without differences in public school enrolment, the poor would therefore stand to benefit disproportionately from public education spending. Second, the poor are more likely to be enrolled in public schools than their wealthier counterparts, particularly at the primary (Figure 2.6). The trend towards higher uptake of private education at the primary level is well documented and has been linked to the introduction of Free Primary Education (FPE) in 2003⁷. Differences in overall enrolment rates only materialize at post- primary levels, especially in tertiary education (World Bank, 2018b). The final reason relates to school financing. Public primary education is fully subsidized while post-primary education often requires substantial co-payments, even for public provision (World Bank, 2018b). This arrangement is expected to further increase the effect of higher uptake of primary public education among the poor and to mitigate the benefits of public secondary that would otherwise accrue to richer families.





The combined net benefits of public education expenditure are progressive in absolute terms but become regressive at higher levels of education. The bottom 40 per cent capture 14.3 per cent of per capita market income but 51.7 per cent of the net benefits of public education spending (Figure 2.7). This result is driven by early childhood education and primary education spending, of which the poorest 40 per cent capture 67.8 and 58.2 per cent, respectively. While public spending on early childhood education and primary and special education are progressive in absolute terms, spending on secondary public education and technical and teacher education is progressive only in relative terms. Spending on public universities, on the other hand, is regressive, due to low levels of enrolment among the poor (World Bank, 2018b).

Source: Own calculations based on KIHBS 2015/16.

⁷ Se Lucas & Mbiti (2012) and Bold, Kimenyi, Mwabu, & Sandefur (2014).



FIGURE 2.7: PER CAPITA MARKET INCOME AND NET BENEFIT OF PUBLIC EDUCATION EXPENDITURE

Source: Own calculations based on KIHBS 2015/16 and administrative data.

2.2.2 Public health spending

The share of total government budget allocated to the health sector dropped with the devolution of health service delivery to counties but has since recovered. Devolution of health service delivery makes accounting for public health expenditure more challenging. The total public health spending in Kenya is depicted in Figure 2.8.





Source: Ministry of Health (2016).

While the poor are less likely to seek health services in general, they are more likely to consult with public providers. As in the case of public education spending, there are several factors that determine the incidence of public health spending in Kenya. One is simply the difference in the propensity to seek care. The poor are typically less likely to seek care and this holds for all types of care: curative outpatient visits, inpatient care, and preventive care, with the exception of preventive care for children below 15 years across all age groups (Figure 2.9). But conditional on uptake, the poor are more likely to consult government-run facilities. This is true for health canters and dispensaries, but not for government hospitals (Figure 2.10). Reliance on public services is high in rural areas and less so in urban areas.





Source: Own calculations based on KIHBS 2015/16.





Public spending on outpatient care in lower level facilities is pro-poor, while user fees and over-the- counter purchases associated with outpatient case in public facilities are regressive. The overall incidence of public spending on outpatient care is nearly neutral: the bottom 40 per cent account for 36.6 per cent of the benefits (Figure 2.11 a). The result follows from a combination of effects. The poor are less likely to consult health providers. But conditional on uptake, they are more likely to consult public facilities, particularly lowerlevel facilities such as dispensaries and health centres. Consequently, the bottom 40 per cent capture 41.2 and 50.3 per cent of the gross benefits associated with health centres and dispensaries but only 30.6 per cent of the gross benefits associated with government hospitals. Globally, public spending on outpatient care in health centres and dispensaries is progressive in absolute terms while public spending on outpatient care in government hospitals is still progressive. However, the poorest 40 per cent have a share of 16.1 per cent in market income but account for 25.9 per cent of all fees and over-the-counter purchases associated with public outpatient health services (Figure 2.11b).

Source: Own calculations based on KIHBS 2015/16.

FIGURE 2.11: INCIDENCE OF OUTPATIENT VISITS, PUBLIC EXPENDITURE ON OUTPATIENT VISITS, AND USER FEES BY FACILITY



Source: Own calculations based on KIHBS 2015/16 and information tabulated in Flessa, et al (2011).

2.3 DIRECT TAXES AND TRANSFERS

2.3.1 Personal income tax

Personal income is taxed based on a progressive rate structure with six tax brackets. Personal income tax (PIT) is governed by the Income Tax Act Cap 470 and increase progressively from ten per cent to 30 per cent. Every individual is entitled to an allowance, known as 'personal relief,' which was KSh 13, 944 in 2015/16. The present analysis uses the tax brackets as applied in 2015 and 2016. Direct taxes are progressive. The poorest 40 per cent of the population in terms of per capita market income account for 14.3 per cent of market income but less than one per cent of direct taxes (Figure 2.12a). In contrast, 80 per cent of the incidence is borne by the richest ten per cent of the population. On average, direct individual taxes account for only 1.2 per cent of total household expenditure among the poorest quintile (Figure 8b), with their share increasing to 4.5 per cent in the fourth quintile and to more than eight per cent in the top quintile. This is a result of both the progressivity of the tax system and limited access to formal-sector jobs among the poor. Less than five per cent of all formal sector jobs are held by individuals in the bottom 20 per cent while 48 per cent are held by individuals in the top 20 per cent.

The distribution of taxpayers across tax brackets suggests that a large share-one third-of those that pay income tax end up paying the highest marginal tax rate of 30 per cent. Approximately, 2.8 per cent of individuals have taxable income falling below the personal relief threshold⁸. Around 20 per cent fall into the two subsequent tax brackets, with marginal tax rates of ten and 15 per cent, respectively. On average, they pay 7.4 and 9.4 per cent of their gross income in taxes. The estimated average tax rate in the top bracket range is 18 per cent (Figure 2.12b).

Data sourced from people who pay NSSF due but do not pay PIT.



FIGURE 2.12: LORENZ AND CONCENTRATION CURVES FOR PER CAPITA MARKET INCOME AND DIRECT TAXES ON INDIVIDUAL INCOME AND SHARE IN TOTAL EXPENDITURE BY QUINTILE

Source: Own calculations based on KIHBS 2015/16. Note: 95-per cent confidence intervals indicated in panel (b).

2.3.2 Cash transfers

The Government of Kenya (GoK) recently introduced a series of direct Cash Transfer (CT) programs whose fiscal incidence is analysed here. The direct cash transfer programs considered here are the Cash Transfer for Hunger Safety Net Program (CT-HSNP), the Cash Transfer for Orphans and Vulnerable Children (CT-OVC), the Older Persons Cash Transfer (OPCT), and the Cash Transfer for Persons with Severe Disabilities (CT-PwSD). Transfer programs not considered in this analysis include the Urban Food Subsidy (UFS) program and bursary fund programs.

Cash transfer programs have different objectives but are unified administratively under a common operating framework. The OPCT and the CT-PwSD aim at reducing poverty among specific demographic groups, namely the elderly and persons with severe disabilities. The CT-HSNP aims to reduce hunger and vulnerability in specific geographic areas while the CT-OVC aims to build human capital among orphans and vulnerable children and to encourage civil registration. In 2013, the Kenya National Safety Net Programme (NSNP) was established to improve and coordinate social protection delivery providing a common operating framework for the government's cash transfer programs including a unified beneficiary registry.

Cash transfer programs differ in terms of coverage, pay-outs, and their targeting mechanism. Three of the four programs (OPCT, CT-PwSD, CT-OVC) are unrestricted in terms of their geographic coverage. The HSNP is targeted exclusively at households in Mandera, Marsabit, Turkana, and Wajir. Both the HSNP and the CT-OVC use Proxy-Means Tests (PMTs) for targeting. The OPCT and the CT-PwSD targeting is based on a combination of poverty status, demographic characteristics, old-age and disability. Amounts payable for CT-OVC, OPCT, and CT-PwSD is KSH2,000 per month per household while that for HSNP is KSH2,550 per month. All four cash transfer programs are progressive and pro-poor. The four cash transfer programs appear well-targeted to the poor. Overall, 60.2 per cent of the benefits are captured by the poorest 40 per cent of the population (Figure 2.13). There is some variation across programs. CT-HSNP, which uses a combination of geographic targeting and a PMT, directs 74.3 per cent of the benefits distributed to the poorest 40 per cent and is thus the best-targeted program among the four. It is followed by the CT-PwSD with 64.5 per cent targeted to the bottom 40 per cent, the OPCT with 60.8 per cent, and finally the CT-OVC with 51.6 per cent.





Source: Own calculations based on KIHBS 2015/16 and administrative data.

The targeting performance of Kenya's cash transfer is comparable or slightly better than the targeting performance of similar programs elsewhere. One study that assembles a dataset of 122 interventions finds that the mean and median among 68 programs for which this indicator is available are 59.2 and 52.5 per cent captured by the bottom 40 per cent, respectively, and similar–56.3 and 61.8 per cent– among the eight programs in that sample that are based on PMTs (Coady, Grosh, & Hoddinott, 2004). Hence, the targeting performance of Kenya's cash transfer programs seems typical or even slightly above average among programs of this type.

Because of its size, the OPCT is the most important program for the poor. The OPCT transfers appear more important to the poor than the other CT programs as it is the largest programme in terms of coverage and has a good targeting performance. On average, Cash Transfers accounts for almost two per cent of total household expenditure among the poorest quintile, decreasing to 1.0 and 0.6 per cent among the second and third quintiles (Figure 2.14). The HSNP program is also marginally significant for the poor with an average budget share of around one per cent among the poorest 20 per cent. Overall and on average, cash transfers account for close to 1.5 per cent of household expenditure across the entire population and 3.8 per cent among the bottom 20 per cent.



FIGURE 2.14: SHARE OF CASH TRANSFER RECEIPTS IN TOTAL EXPENDITURE BY QUINTILE

Source: Own calculations based on KIHBS 2015/16 and administrative data.

2.4 INDIRECT TAXES

2.4.1 Value Added Tax

Goods and services in Kenya's VAT regime are either standard-rated, zero-rated, or exempt. The standard VAT rate in Kenya is 16 per cent. Exclusion from VAT appears in two different ways, zero- ratings and exemptions. Of the 460 items for which expenditure was recorded in the survey data, 311 were taxed at 16 per cent, 29 were zero-rated, and 120 were exempt. Most exempt goods and services were found in the agricultural sector and extended to agricultural inputs such as seeds, fertilizers, and tractors⁹.

In this analysis exempt items were either treated as taxed at the 16-per cent rate or zerorated items. While the actual tax rate will typically fall somewhere in-between, it turned out that the distributional implications of these assumptions do not differ substantially. Given that many exempt items in the data pertained to the agricultural sector, in which inputs are often also exempt, it was decided to proceed with the assumption that exempt goods carry no VAT.

VAT is mildly progressive but close to neutral, regardless of how exempt goods are treated. The burden of VAT is distributed almost proportionally to market income (Figure 2.15a). For instance, the bottom 40 per cent account for between 12.4 and 14.1 per cent of the VAT burden, depending on whether exempt items are treated as zero-rated or taxed at 16 per cent, compared to a share in market income of 14.3 per cent. The average share of VAT in total household expenditure is 8.4 per cent if exempt items are assumed to be zero-rated and 9.0 per cent if they are assumed to carry 16 per cent VAT. The expenditure share among the bottom 20 per cent increases from 7.2 to 8.4 per cent in going from zero-rates to the full 16-per cent tax rate and falls from 10.3 to 9.7 among the richest 20 per cent (Figure 2.15b).

⁹ World Bank, 2017.





Source: Own calculations based on KIHBS 2015/16 and administrative data (KNBS, 2017).

Exemptions could be eliminated or replaced by zero-rates for merit goods without major distributional consequences. Exemptions do not have a large effect on the relative distribution of welfare because they are both applied to merit goods and other goods that could be considered luxury goods and services, such as air ticketing services supplied by travel agents. The removal of exemptions would boost tax collection without major impacts at least on the relative distribution of welfare. A revenue- neutral removal of some exemptions for luxury items and a concomitant shift of merit goods into the category of zero-rated goods would have positive effects for the poor. Alternatively, additional revenue from the removal of exemptions and zero rates could be redistributed in ways that are less distortive, e.g. through cash transfers. However, greater in-depth analysis of this question is called for to identify exemption and zero-rates that appear poorly targeted to the bottom of the distribution.

2.4.2 Excise taxes

The analysis of excise tax in this report accounts for more than 80 per cent of revenue from this tax. Beverages and cigarettes are taxed based on quantities whereas consumption of airtime is taxed at ten per cent. Excise tax on financial transactions and other commodities (jewellery, cosmetics, and locally assembled vehicles) is not considered. However, the items included in the analysis account for 87 and 82 per cent of total revenue from excise tax in 2015 and 2016, respectively.

Excise taxes are progressive except for tobacco products. The bottom 40 per cent, which account for 14.3 per cent of market income, account for only 6.6 per cent of all excise taxes, rendering the overall tax highly progressive (Figure 2.16a). This is driven mainly by excise taxes on beer (3.9 per cent), wine and spirits (4.4), non-alcoholic beverages (3.9), and air time (6.6). Excise duty on tobacco is initially mildly progressive but then turns regressive around the median household. The bottom ten per cent account for only 2.2 per cent of per capita market income

yet 1.4 per cent of tobacco excise tax. However, the concentration curve for tobacco excise duties eventually crosses the Lorenz curve so that the poorest 60 per cent already account for 30.7 per cent of tobacco excise tax, a larger share than their 27.5 per cent in market income. This suggests lower relative spending among the poor and higher relative spending among the middle quintiles. The expenditure shares of excise taxes are small (Figure 2.16b). Across the entire population, excise tax duty accounts for little more than one per cent of total household expenditure. The share rises from 0.6 per cent among the poorest quintile to 2.3 per cent among the richest 20 per cent of the population.







(b) Share of excise taxes in total expenditure by quintile

Adverse economic effects of tobacco consumption that arise only in the medium- and longterm have the potential to alter the assessment of the progressivity of excise duty on tobacco. Tobacco taxes are often assessed as regressive as low-income household tend to allocate a

larger share of their budgets to the purchase of tobacco products. On the other hand, tobacco consumption is associated with Cumulative share shorter life expectancy, higher medical expenses and added years of disability. There are also negative externalities through second-hand smoke. This necessitates imposition of tobacco taxes as an effective policy tool to reduce tobacco consumption¹⁰. Recent evidence from extended cost-benefit analyses in developing countries suggest that the aggregate net effect of immediate negative income variations and long-term benefits of reduced uptake can result in positive benefits that can be more pronounced among low-income households¹¹.

2.5 EFFECTS ON POVERTY AND INEQUALITY

Direct taxes and transfers have virtually no effect on poverty but an attenuating effect on inequality. The poverty headcount ratio increases with direct taxes by around 0.6 percentage points and decreases with direct transfers by almost the same amount (Figure 2.17). While poverty effects of these interventions are small, the Gini index decreases by 2.3 percentage points with direct taxes and by another one third of a percentage point with cash transfers (Figure 2.18a). The analysis suggests that the top ten per cent account for 80 per cent of the income tax burden which is reflected here in a sharp drop in their share in income (Figure 2.18b).

FIGURE 2.17: COMBINED EFFECTS OF TAXES AND TRANSFERS ON POVERTY (BASED ON THE NATIONAL POVERTY METHODOLOGY) – HEADCOUNT RATIO AND POVERTY GAP INDEX



Source: Own calculations based on KIHBS 2015/16 and administrative data as detailed in the text.





Source: Own calculations based on KIHBS 2015/16 and administrative data as detailed in the text.

¹⁰ Lewit & Coate, 1982.

¹ Fuchs & Meneses, 2017a; Fuchs & Meneses, 2017b; Fuchs, Del Carmen, & Kechia Mukong, 2018.

VAT and excise tax increase poverty and have a small, negative effect on inequality. The poverty rate increases by more than five percentage points after VAT is accounted for. However, because VAT is mildly progressive, and the burden is high across all income groups, it also has a sizable, negative effect on the Gini index (0.6 percentage points; Figure 2.19a). Excise taxes, which generate only half of the revenue that VAT generates, have a similar effect on poverty and inequality. They further increase poverty, by about one percentage point, and lower the Gini index by 0.3 percentage points (Figure 2.19a).

The net benefits of public education spending have a large, negative effect on inequality. Public education spending is large and progressive in absolute terms, primarily through spending on pre-primary, primary, and secondary. Inequality measured by the Gini index drops to only 0.297 after the net benefits of public education spending are accounted for and the income shares of the top ten per cent and the bottom 40 per cent converge significantly.

As in other countries in Sub-Saharan Africa, the effects of direct transfers and taxes on poverty are moderate in Kenya. Cross-country comparisons suggest that the change in the poverty headcount ratio using the World Bank's \$1.25-poverty line based on 2005 PPPs in going from market income to disposable income is often limited in Sub-Saharan Africa (Figure 2.19a). They range from a reduction by only a tenth of a percentage point in Tanzania to one percentage point in Ethiopia. Kenya falls roughly in the middle of this range with a reduction in the poverty headcount by half a percentage point. Using the \$2.50-poverty line, the positive effect on poverty of direct taxes even dominates the poverty-reducing effect of direct transfers in Ghana, Uganda, Kenya and Tanzania but the overall effect remains small (Figure 2.19b). It seems plausible that the same factors are at play that are also observed in Kenya, namely a small effective tax base due to high levels of informality and direct transfers programs that are small in terms of coverage. The major exception to this pattern is South Africa, which achieves significant poverty reduction in going from market to disposable income, mainly because of large direct transfer programs.





Source: Own calculations based on KIHBS 2015/16 and administrative data as detailed in text as well as data from the CEQ institute.

As in Kenya, indirect taxes and transfers often increase poverty in Sub-Saharan Africa substantially. In going from disposable to consumable income, poverty rates increase in most countries, including those in Sub-Saharan Africa. The increase in the poverty headcount using the \$1.25-poverty line ranges from three tenths of a percentage points in Uganda to 7.9 percentage points in Tanzania. With an increase in poverty by 5.9 percentage points, Kenya is close to the upper end of this range. However, it should be noted again that indirect subsidies in Kenya, while likely negligible, were not included in this study.

Kenya achieves little poverty reduction through direct taxes and transfers while indirect taxes contribute significantly to poverty. Among countries for which similar distributional impact analyses have been completed, poverty reduction (based on the \$1.25-poverty line) in going from market income to disposable income varies widely (Figure 2.20a). For instance, almost one fifth of South Africa's population are initially lifted out of poverty at this stage, compared to almost basically no one in Ghana and Armenia. While South Africa is an outlier here, countries like Brazil and Mexico, which were among the first to adopt large-scale cash transfer programs, are also among those that achieve significant reductions in extreme poverty at this stage. Kenya's reduction of half a percentage point ranks among the upper end of the distribution. Only seven out of a total of 29 countries in the dataset achieve less poverty reduction. On the other hand, only two countries, Tanzania and South Africa, register a larger effect on poverty of indirect taxes and transfers (Figure 20b). Results are qualitatively similar when the \$2.50-poverty line is used.



FIGURE 2.20: DENSITY DISTRIBUTION OF POVERTY EFFECTS IN GOING FROM MARKET TO DISPOSABLE AND FROM DISPOSABLE TO CONSUMABLE INCOME (BASED ON THE WORLD BANK'S \$1.25-POVERTY LINE USING 2005 PPPS).

Source: Own calculations based on KIHBS 2015/16 and administrative data as detailed in text as well as data from the CEQ institute. Note: The observation for South Africa is removed from panel (a) as an outlier (see text).

The inequality-reducing effect of direct taxes and transfers between market income and consumable income in Kenya is similar to other countries in the region. Ethiopia, Ghana, Tanzania, and Uganda all reduce inequality through direct taxation and transfers, ranging from a decline in the Gini by 1.3 percentage points in Ghana and Uganda to 2.5 percentage points in Tanzania (Figure 2.21). With 2.6 percentage points, the reduction in Kenya is at the upper end of

this range but not very different from that of Tanzania. As in Kenya, inequality barely changes in these countries between disposable income and consumable income. Only Tanzania achieves a reduction by 1.5 percentage points.





Source: Own calculations based on KIHBS 2015/16 and administrative data as well as data from the CEQ institute.

The negative effect of public education spending on poverty and inequality is substantially more pronounced in Kenya relative to benchmark countries. The effect of public education spending on inequality is pronounced in Ghana, Tanzania, and Uganda, at 2.1, 1.3, and 1.7 per cent. However, it is much larger in Kenya, at 3.1. It should be noted that the estimates for Kenya do not include public health spending. Again, there are major concerns about allocating public education spending to households based on the production-cost approach, maybe more so than in other countries.

2.6 SUMMARY AND POLICY IMPLICATIONS

Overall, taxes and transfers have mostly an attenuating effect on inequality while their effect on poverty is more mixed. This report considers the combined effect of taxes and transfers in Kenya on poverty and inequality. Direct taxes and transfers reduce inequality and are almost exactly off-setting in their effect on poverty. Indirect taxes are progressive and thus reduce inequality, but they increase poverty by definition. Initial analysis on public spending on education and health are pro-poor. Overall, changes in inequality and poverty are similar to those observed in other countries in the region.

The Government of Kenya could consider further expanding direct cash transfer programs. Cash transfer programs are well targeted such that a large fraction of the benefits capture the poor. This is particularly true for the HSNP, which is restricted to northern counties in which poverty is heavily concentrated. However, cash transfer schemes in Kenya cover only a small fraction of the population. Noting the positive effects of cash transfers on poverty and inequality, there is need to further expand the programmes in coverage and benefits. Overall, exempt and zero-rated items within Kenya's VAT regime benefit the poor only marginally. The report finds that the variation in consumption shares of these items across the welfare distribution is small. A review of the VAT code might help to make VAT more progressive or, alternatively, increase revenue that could then be employed in progressive transfer programs, while also addressing other concerns about exemptions. However, a more detailed follow-up analysis of exemptions and zero- rates would be necessary to determine item-level incidence.

Shifting public resources from higher-level health facilities to lower-level facilities is likely to benefit the poor. The analysis of the incidence of public health expenditures has important limitations, particularly with regard to the effect of public spending on poverty and inequality. However, the relative incidence across different levels of the health system can be readily assessed. Results suggest that redirecting spending from higher-level health public health facilities to primary care facilities has the potential to benefit the poor and might increase access. However, it is important to also assess in this case the absorptive capacities of these facilities.

Investments in education leads to higher uptake of primary public education among the poor population. The combined net benefits of public education expenditure are progressive in absolute terms but become regressive at higher levels of education. Public spending on early childhood education and primary and special education are progressive in absolute terms while spending on public universities, is regressive, due to low levels of enrolment among the poor. There is need for targeted public spending and subsidies at post-primary to ensure access by the poor.



EVOLUTION OF DEVOLVED FISCAL GOVERNANCE

3.1 INTRODUCTION

Devolution is arguably the most far reaching of many reforms defined under the Constitution of Kenya, 2010. Kenya's devolution involves large scale political, fiscal and administrative decentralization. It attempts to address decades old inequalities and disparities between regions by transferring both additional resources and discretion over the resources and decision making power to decentralized levels. The Constitution also envisages a more inclusive role of citizens through social accountability mechanisms at all stages of the county planning and budgeting processes.

The first elections after the promulgation of the Constitution of Kenya, 2010 marked the creation of 47 county governments. The rollout of devolution has highlighted the major implications devolution has had on poverty reduction, service delivery and economic growth in Kenya. The roles of the National Government and the County Governments are clearly spelt out in fourth Schedule of the Constitution. The early years of Kenya's devolution were characterized by an accelerated devolution timetable leading to with the National Government transferring functions faster and providing funding at a higher level than the minimum set under the Constitution.

The magnitude and pace of Kenya's devolution was remarkable by global standards. Even though many countries, both rich and poor, have transferred power and resources to lower levels of government, few did so to entirely new sub national units of government. In addition, functions were transferred to counties faster (in the first year) and the proportion of total revenues allocated to counties was larger (via the equitable share), than envisioned under the Constitution. The equitable share formula addresses the economic disparities within and among counties. Devolution took place within a broader restructuring of government in line with the Constitutional provision of limiting the number of Ministries, a new Senate and Independent Constitutional Offices. This led to the creation of a Ministry in charge of Devolution and an umbrella body, Council of Governors that coordinates the affairs of the Counties.

3.2 OVERVIEW OF THE PUBLIC SECTOR AND GOVERNMENT PROGRAMS

Over the review period, total government expenditures as a share of GDP has risen from 26 per cent in FY2013/14 to 32 per cent in FY2016/17. The largest drivers of this growth have been the Energy, Infrastructure and ICT program, followed by Health and Consolidated Fund Services (CFS). On the other hand, Social Protection and Education Sectors show a decline. Table 3.1 shows total government spending as a per cent of GDP by program, including CFS expenditures.

TABLE . 5.1. GOVENIMENT STENDING AS A FER CENT OF GDF								
As a share of GDP	2013-14	2014-15	2015-16	2016-17				
Energy, Infrastructure and ICT	3.82%	6.78%	4.08%	6.65%				
Education	5.68%	5.94%	5.21%	5.25%				
Default - Non Programmatic (CFS)	3.29%	3.92%	4.47%	4.84%				
Public Administration and International Relations	4.23%	5.32%	4.54%	4.48%				
Governance, Justice, Law and Order	2.44%	2.55%	2.23%	2.91%				
Health	1.15%	1.92%	1.74%	1.92%				
National Security	1.65%	1.83%	1.86%	1.90%				
Agriculture, Rural & Urban Development	1.24%	1.69%	1.42%	1.33%				
Environment Protection, Water and Natural Resources	1.03%	1.17%	0.81%	1.23%				
Social Protection, Culture and Recreation	1.02%	0.48%	0.51%	0.61%				
General Economic and Commercial Affairs	0.41%	0.39%	0.40%	0.40%				
Grand Total	25.96%	31.97%	27.27%	31.53%				

TABLE: 3.1: GOVERNMENT SPENDING AS A PER CENT OF GDP

Source: Own calculations, IFMIS data

Expenditures on grants and compensation of employees constitutes roughly 50 per cent of total government expenditures as illustrated in Figure 3.1. Total grants rose to over 10 per cent of GDP in 2016/17 [but are utilized differently] depending on the program. The expenditure allocations have been volatile within economic categories save for the interest payments and social benefits that have recorded growth in each year over the review period. The other categories have also increased in absolute terms but have experienced ups and downs as a per cent of GDP.

Table 3.2 shows grants as a per cent of total expenditures by programs for the 2013/14 – 2016/17 period. Approximately 99 per cent of national security expenditures are categorized as grants, followed by 62 per cent for social protection, and only 4 per cent for Governance, Justice, and Law and Order.

Grants are the largest single expenditure item for the National Government followed by compensation of employees, whereas for County Governments Compensation of Employees is the largest expense followed by goods and services as shown in Figure 3.2.

Row labels	2013-14	2014-15	2015-16	2016-17	Total 2013/14- 2016/17
National Security	99%	99%	99%	99%	99%
Social Protection, Culture and Recreation	49%	62%	69%	70%	62%
Energy, Infrastructure And ICT	59%	32%	52%	58%	49%
General Economic and Commercial Affairs	40%	42%	53%	46%	46%
Environment Protection, Water And Natural Resources	25%	20%	14%	54%	31%
Health	38%	27%	25%	34%	30%
Public Administration And International Relations	30%	26%	31%	27%	28%
Agriculture, Rural & Urban Development	32%	24%	21%	18%	23%
Education	19%	24%	18%	27%	22%
Governance, Justice, Law and Order	2%	4%	5%	4%	4%
Default - Non Programmatic (CFS)	0%	0%	0%	0%	0%
Grand Total	31%	27%	29%	34%	30%

TABLE: 3.2: GRANTS AS A PER CENT OF TOTAL PROGRAM EXPENDITURE

Source: Own calculations, IFMIS data



FIGURE 3.1: EXPENDITURE BY ECONOMIC CLASSIFICATION

Source: Own calculations, IFMIS data

FIGURE: 3.2: NATIONAL AND COUNTY LEVEL EXPENDITURE BY ECONOMIC CLASSIFICATION



Source: Own calculations, IFMIS data

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3.2.1 Flow of Funds from National to County to Ward Level

The percentage of budget executed at the National, County and Ward levels has remained relatively unchanged over the review period. However, when looking at only the funding streams (domestic resources) and reviewing the programs that involve counties, both total funding and an increasing percentage of recurrent and development funds continue to be decentralized. As figure 3.3 illustrates, county level execution of domestic resources of recurrent expenditures has marginally increased from 22 per cent to 26 per cent over the review period. Likewise, development expenditures have increased from 18 per cent in 2013/14 to 24 per cent in 2016/17 even though the share were higher in 2014/15 and 2015/16 at 27 per cent and 30 per cent respectively.



FIGURE 3.3: EXPENDITURES AT DIFFERENT LEVELS OF GOVERNMENT



Source: Own calculations. IFMIS data

3.2.2 Decentralization within the Sub-Saharan African Region

Decentralization of expenditure authority from the central governments to Sub National Governments (SNGs) has been happening throughout SSA to different extents. Table 3.3 illustrates how expenditure authority has been decentralized in Ethiopia, Uganda, Mozambique and Kenya, but should not be viewed as a strict comparison of similar systems. Each country has different SNGs administrative structures as well as different laws and constitutional arrangements on what functions are decentralized. For example, in Ethiopia, the SNGs are responsible for many functions that are not decentralized in Kenya, including education, local police and courts. Education has become a primary focus of SNGs in Mozambique and Uganda whereas the provision of health care is more devolved in Kenya than in any of the other countries.
Ethiopia	2010/11	2011/12	2012/13	2013/14	SNG's have role in most	
National	60.77%	57.01%	52.35%	45.85%	functions, including police,	
Sub National	39.23%	42.99%	47.65%	54.15%	education and courts.	
Uganda	2011/12	2012/13	2013/14	2014/15	SNG's play a prominent role	
National	79.81%	77.67%	78.84%	81.11%	in education, health, and	
Sub National	20.19%	22.33%	21.16%	18.89%	public administration.	
Mozambique	2013	2014	2015	2016	SNG's have lead role in	
National	64.58%	64.22%	57.13%	62.68%	education and support	
Sub National	35.42%	35.78%	42.87%	37.32%	and social services.	
Kenya	2013/14	2014/15	2014/15	2015/16	SNG's have service delivery	
National	84.30%	81.53%	80.26%	81.73%	role on several programs and	
Sub National	15.70%	18.47%	19.74%	18.27%	police, and courts.	

TABLE 3.3: DECENTRALIZATION OF EXPENDITURE AUTHORITY

Source: Authors

After initial decentralization efforts, the percentage of funds flowing to sub national bodies from the national governments stabilizes. Ethiopia provides the exception in regional comparisons by having increased sub-national expenditure authority by 15 per cent over the four year period while none of the other three countries attained a change of more than 3 per cent. For the countries where the sub After initial decentralization efforts, the percentage of funds flowing to sub national bodies from the national governments stabilizes. Ethiopia provides the exception in regional comparisons by having increased sub-national expenditure authority by 15 per cent over the four year period while none of the other three countries attained a change of more than 3 per cent. For the countries more the four year period while none of the other three countries attained a change of more than 3 per cent. For the countries where the sub national expenditure authority by 15 per cent over the four year period while none of the other three countries attained a change of more than 3 per cent. For the countries where the sub national percentage remains the same, it suggests that governments are not continuing to devolve new programs and responsibilities on a year to year basis.

3.3 THE EVOLUTION OF EXPENDITURE AUTHORITY IN DEVOLVED FUNCTIONS

3.3.1 Expenditure Analysis by Program

Expenditures within each program have continued to grow since 2013 with Health, Agriculture, and Energy and Infrastructure growing at a faster rate. Public Administration remains the largest program category at the county level but no longer accounts for half of all county expenditures as demonstrated in Figure 3.4. While county level expenditures in Public Administration have continued to increase, other programs have been receiving additional funding at a faster rate and now account for 63 per cent of all county level expenditures.

FIGURE 3.4: TOTAL COUNTY EXPENDITURES BY PROGRAM



Percent of County Level Expenditures by Program

The responsibility for service delivery and for administrative functions have been devolved at different rates¹². The Fourth Schedule of the Constitution of Kenya, 2010 identifies functions to be undertaken at the National and County government level. Examining this list against actual government expenditures allows insight into how decentralization has progressed and how much of the responsibility for these functions has transitioned over the past four years. Figure 3.5 shows how much expenditure authority has been devolved to counties for each program.





Source: Own calculations, IFMIS data

Within each program, roles and responsibilities are not always clearly defined. To determine if an activity is a function of either the national government or county government, expenditures were broken down by sub-item and a scheme developed for separating the two. If at least 75 per cent of an item was spent by either the national government or the county,

Source: Own calculations, IFMIS data

Expenditures on Consolidated Fund Services, Law, Order and Justice, and National Security are responsibilities of the national government and are excluded from the analysis on how service delivery has devolved.

it was classified as a national or county responsibility. If neither the county nor the national government committed at least 75 per cent of the expenditures, the item was classified as a shared responsibility. Figure 3.6 replicated the National/County split from figure 3.5 but now includes the category of shared responsibility.



FIGURE 3.6: EXPENDITURE AUTHORITY BY PROGRAM

Source: Own calculations, IFMIS data

Roles and responsibilities are clearly defined in programs considered as a national government or county led program. In programs such as health and education, there is little ambiguity as to who spends on which items and there are only limited instances where neither the national or county government executes 75 per cent of the expenditure. To determine the level of decentralization, administrative and service delivery functions were used. The weighting of administrative functions was determined by grouping together all expenditures related to compensation of employees. Service delivery functions were determined by grouping all expenditures related to goods and services and acquisition of non-financial assets (i.e. capital expenditures). After creating the administrative and service delivery classifications, itemized expenditures were identified within each of these classifications over the last three financial years (2014/15 – 2016/17) and labelled as either national, County or shared responsibility (Table 3.4).

The Health program is the most devolved of all programs for both service delivery and administrative functions¹³. While programs such as education and social protection are mainly the responsibility of the National Government, the majority of expenditure for remaining programs is increasingly done at the county level or is a shared responsibility. Figure 3.7 shows how programs have devolved expenditure authority for both service delivery and administrative categories. In the chart below, a positive 1 value is 100 per cent of county expenditure, a negative 1 value is 100 per cent of national expenditure and a zero value (centre of graph)

¹³ Service delivery is being defined by economic expenditure categories Goods & Services and Acquisition of Non-Financial Assets; Administrative responsibility is defined by Compensation of Employees.

Total Expenditure (2014/15 - 2016/17)	County Responsi- bility	National Responsi- bility	Shared Responsi- bility
Health	78.99%	13.74%	7.27%
Administrative	93.16%	6.84%	0.00%
Service Delivery	60.56%	22.72%	16.72%
Public Administration And International Relations	20.30%	33.84%	45.87%
Administrative	24.06%	31.88%	44.06%
Service Delivery	17.78%	35.14%	47.08%
Energy, Infrastructure And ICT	8.85%	78.81%	12.34%
Administrative	19.15%	6.93%	73.92%
Service Delivery	8.64%	80.26%	11.10%
Agriculture, Rural & Urban Development	20.44%	39.01%	40.54%
Administrative	13.81%	2.77%	83.42%
Service Delivery	22.08%	47.99%	29.93%
Environment Protection, Water And Natural Resources	17.63%	51.88%	30.49%
Administrative	21.52%	0.00%	78.48%
Service Delivery	17.13%	58.58%	24.29%
Education	3.34%	83.62%	13.04%
Administrative	1.54%	92.20%	6.26%
Service Delivery	12.59%	39.69%	47.73%
General Economic and Commercial Affairs	29.55%	22.83%	47.63%
Administrative	18.75%	0.00%	81.25%
Service Delivery	32.84%	29.79%	37.37%
Social Protection, Culture and Recreation	16.54%	61.81%	21.65%
Administrative	9.69%	90.31%	0.00%
Service Delivery	19.46%	49.65%	30.89%
Grand Total	20.31%	54.80%	24.90%

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TABLE 3.4: DECENTRALIZATION ON	ADIVITINI STRATTVE AIND	SERVICE DELIVER	FUNCTIONS

Source: The National Treasury

represents a shared responsibility. For example, the value for health on service delivery (positive .38) represents 61 per cent of expenditures that were county responsibility, 22 that were National responsibility, and a remaining 17 per cent that was a shared responsibility. Education and Social Protection have remained primary responsibilities (as the graph shows) and public administration, which is a national and county level function sits near the axis which indicates that it is mainly a shared function.

Most programs have devolved more responsibility for administrative expenditure to the county level than responsibility for service delivery. Administrative (i.e. employee compensation) has become a county led function in five of the eight programs examined but the responsibility for service delivery is only a primary county function in two of those five. Simply stated, funding for service delivery has not devolved as rapidly as funding and responsibility for administrative personnel.



FIGURE 3.7: DEVOLUTION OF EXPENDITURE AUTHORITY FOR BOTH SERVICE DELIVERY AND ADMINISTRATIVE

Source: Own calculations, IFMIS data

A small number of disproportionately large sub items can determine if service delivery will be a national or county government function. For example, expenditure on railways is large enough so that whichever level of government has expenditure authority (in this case central government) on railways will control a significant majority of service delivery for related Energy, Infrastructure and ICT programs. Additionally, a separate subset of these large sub items such as fertilizer subsidies, food security, and irrigation are deemed strategic and are required to be administered by the National Government. The sub items listed in table 3.5 demonstrate expenditures currently controlled by the National Government and where service delivery will remain largely a national government function unless it is deemed more beneficial, either in terms of efficiency or service delivery quality, to transfer those items to the county governments.

Sector	County Re- sponsibility	National Responsi- bility	Shared Re- sponsibility	Program Total
Agriculture, Rural & Urban Development	1.35%	-2.22%	-1.00%	-0.39%
Energy, Infrastructure and ICT	1.52%	0.00%	-13.77%	-0.23%
General Economic and Commercial Affairs	-0.87%	-0.26%	1.61%	1.81%
Health	-5.24%	15.30%	-14.63%	-4.71%
Education	-21.32%	-0.26%	-21.98%	-5.04%
Public Administration And International Relations	-3.44%	-1.67%	1.09%	-0.60%
Social Protection, Culture and Recreation	-1.40%	7.61%	-4.29%	0.75%
Environment Protection, Water And Natural Resources	-1.22%	-4.09%	-25.52%	-4.55%

TABLE 3.5: SUB ITEMS DETERMINING SERVICE DELIVERY AS NATIONAL OR COUNTY FUNCTION

Source: The National Treasury

TABLE 3.6: PROGRAMS FALLING INTO SHARED RESPONSIBILITY CATEGORY

	Acquisition of non-financial assets Sub-item	Total Expenditure over Three year period from 2014/15-2016/17	Primary Responsibility
Energy, Infrastructure and ICT	Major roads	9,290,342,407	County responsibility
Agriculture, Rural &Urban Development.	Major roads	4,341,903,031	Shared responsibility
Health	Non-Residential Buildings (Offices, Schools, Hospitals, etc.)	13,232,958,539	County responsibility
General Economic and Commercial Affairs	Non-Residential Buildings (Offices, Schools, Hospitals, etc.)	2,475,834,957	County responsibility
Education	Non-Residential Buildings (Offices, Schools, Hospitals, etc.)	27,895,546,315	Shared responsibility
Public Administration and International Relations.	Non-Residential Buildings (Offices, Schools, Hospitals, etc.)	11,215,881,926	Shared responsibility
Agriculture, Rural & Urban Development	Non-Residential Buildings (Offices, Schools, Hospitals, etc.)	6,618,736,471	Shared responsibility
Energy, Infrastructure and ICT	Non-Residential Buildings (Offices, Schools, Hospitals, etc.)	1,481,133,633	Shared responsibility
Social Protection, Culture and Recreation	Non-Residential Buildings (Offices, Schools, Hospitals, etc.)	1,320,704,266	Shared responsibility
Environmental Protection, Water and Natural Resources	Non-Residential Buildings (Offices, Schools, Hospitals, etc.)	877,016,146	Shared responsibility
Agriculture, Rural &Urban Development	Other infrastructure and Civil work (rehabilitation).	1,797,516,415	County responsibility
Health	Other infrastructure and Civil work (rehabilitation	474,947,358	County responsibility
Social Protection, Culture and Recreation	Other infrastructure and Civil work (rehabilitation	417,894,676	County responsibility
General Economic and Commercial Affairs	Other infrastructure and Civil work (rehabilitation	328,660,923	County responsibility
Public Administration and International Relations	Other infrastructure and Civil work (rehabilitation	15,693,730,244	National responsibility
Energy, Infrastructure and ICT	Other infrastructure and Civil work (rehabilitation	5,889,994,173	Shared responsibility
Environmental Protection, Water and Natural Resources	Other infrastructure and Civil work (rehabilitation	2,123,372,852	Shared responsibility
Health	Refurbishment of non-Residential Buildings	835,141,305	County responsibility
Education	Refurbishment of non-Residential Buildings	713,329,288	County responsibility
Agriculture and Urban Development	Refurbishment of non-Residential Buildings	689,224,328	County responsibility
General Economics and Commercial Affairs	Refurbishment of non-Residential Buildings	476,706,804	County responsibility
Public Administration and International Relations	Refurbishment of non-Residential Buildings	4,336,464,609	Shared Responsibility
Public Administration and International Relations	Refurbishment of Residential Buildings	1,112,382,388	National Responsibility
Agriclture, Rural & Urban Development	Refurbishment of Residential Buildings	400,738,250	Shared Responsibility
Environment Protection, Water and Natural Resource	Water Supplies and Sewerage	3,535,192,880	County responsibility
Energy, Infrastructure and ICT	Water Supplies and Sewerage	644,738,250	County responsibility
Environment Protection, Water and Natural Resource	Water Supplies and Sewerage	51,627,051,507	National Responsibility
Agriculture, Rural & Urban Development	Water Supplies and Sewerage	7,473,329,727	Shared Responsibility
Agriculture, Rural & Urban Development	Water Supplies and Sewerage	1,556,608.837	Shared Responsibility
Public Administration and International Relations	Water Supplies and Sewerage	634,615,799	Shared Responsibility
Source: The National Treasury			

The fertilizer subsidy program was identified as an example of a program that falls within purview of counties under devolution and could be more effectively administered at the county level. Several interviewees at the county level stated that the current fertilizer subsidy program, which is delivered by the national government, does not always align county demand with supply and does not consider the specific mix of fertilizer that is required locally. However, any move by the national government to decentralize the fertilizer program would need to first consider both economic efficiencies achieved through bulk fertilizer purchases and the need to revise current restrictions on counties importing goods from international markets.

Additional gains in efficiency and devolution responsibilities can be achieved. The National government should examine areas where spending has largely become a county level function and relinquish control over spending to maximize efficiency and limit duplication. Areas such as Construction of Non- Residential Buildings, Other Infrastructure and Civil Work (Rehabilitation), and Water Supplies and Sewerage are all items that appear mostly as the county level or as a shared responsibility (per program). These are also aligned with devolved functions of counties according to Fourth Schedule and are already being executed by counties.

Programs falling into the shared responsibility category (i.e. neither the county nor the national level is spending at least 75 per cent of the total on the economic item) masks high risk of duplication of roles and responsibilities. Table 3.6 below highlights several examples under the acquisition of financial assets spending category where certain programs have devolved expenditure authority to the county and where other programs continue to have that same expenditure item as either a shared or national responsibility. Appendix A has the full list of sub-items by primary responsibility level for all administrative and service delivery expenditures.

Expenditures classified as shared responsibility have had a larger drop in the percentage of expenditures spent on service delivery. Most of these programs have had an increase in administrative costs and a corresponding decrease in service delivery over the past three years with Economic and Commercial Affairs and Social Protection being the exception. This has been the result of increasing wages over the same period. What is notable about table 3.7 is that within most programs, county and national led expenditures have shown a smaller drop (or slight increase) in service delivery. For items where it is not clear which level of government should be doing the spending, i.e. shared responsibility, there is generally a larger drop in spending on service delivery.

	County responsi- bility	National responsi- bility	Shared responsi- bility	Program Total
Agriculture, rural and Urban Development.	1.35%	-2.22%	-1.00%	-0.39%
Energy, Infrastructure and ICT	1.52%	0.00%	-13.77%	-0.39%
General Economics and commercial affairs	-0.87%	-0.26%	1.61%	1.81%
Health	-5.24%	15.30%	-14.63%	-4.71%
Education.	-21.32%	-0.26%	-21.98%	-5.04%
Public Administration and International Relations	-3.44%	-1.67%	1.09%	-0.60%
Social Protection, Culture and Recreation.	-1.40%	7.61%	-4.29%	0.75%
Environmental Protection, Water and Natural Resources	-1.22%	-4.09%	-25.52%	-4.55%

TABLE 3.7: CHANGE IN AMOUNT SPENT ON SERVICE DELIVERY

Source: The National Treasury

On average, the execution rate on expenditures remains low both at the national and county level. A review of expenditure outturns reveals a sup-optimal execution rate as seen in Figure 3.8. Further, neither the national nor the county governments hold an advantage in terms of budget execution. Most programs have a budget execution rate falling between 70 and 80 per cent. This is the case both at the national and county level. Education at the national level is the exception with an execution level above 95 per cent greatly aided by the national government's disbursement of teachers' salaries through the Teachers Service Commission.



FIGURE 3.8: BUDGET EXECUTION BY PROGRAM

Source: Own calculations, IFMIS data

Administrative expenditures outperform service delivery expenditures in nearly every program. Administrative expenditures, comprising mostly of salaries and wages, are far more easily executed than service delivery which includes capital projects. In addition, when revenues are down, service delivery is often the first category to get delayed or reduced and thus will result in a lower execution rate against the budget.



FIGURE 3.9: BUDGET EXECUTION BY SERVICE DELIVERY AND ADMINISTRATIVE CATEGORY

Source: Own calculations, IFMIS data

3.3.2 County Level Expenditure Reporting

County level expenditure totals reported by the Controller of Budget and by National Treasury are not fully aligned. Part of the reason for the discrepancy is the different reporting methods. Controller of Budget (COB) has officers in each county collecting expenditure information and National Treasury relies on what counties are entering into the IFMIS system. For each of the last four years, COB reports higher recurrent and lower development expenditures than Treasury reports as seen in Figure 3.10. In three out of the four years, the difference in expenditure reporting from National Treasury and the Controller of Budget varies by 3 per cent or less as noted in Table 3.8.



FIGURE 3.10: DIFFERENCES BETWEEN IFMIS AND COB EXPENDITURE REPORTING

Source: Authors Calculations

	County Government Expenditure				
FY	Recurrent	Development	Total		
BOOST 13-14	116.70	44.37	161.07		
COB 13-14	129.09	36.55	165.64		
Difference	(12.39)	7.82	(4.57)		
Percentage difference	-11%	18%	-3%		
BOOST 14-15	159.87	106.43	266.30		
COB 14-15	167.56	90.44	258.00		
Difference	(7.69)	15.99	8.30		
Percentage difference	-5%	15%	3%		
BOOST 15-16	156.26	113.08	269.34		
COB 15-16	191.84	103.43	295.29		
Difference	(35.58)	9.63	(25.96)		
Percentage difference	-23%	9%	-10%		
BOOST 16-17	197.79	114.53	321.32		
COB 16-17	215.71	103.34	319.06		
Difference	(17.93)	11.19	(6.74)		
Percentage difference	-9%	10%	-2%		

TABLE 3.8: DISCREPANCIES IN THE DIFFERENT REPORTING METHODS

Source: The National Treasury and COB Data

Information provided by National Treasury, the Controller of Budget and individual counties points to several reasons for the reporting discrepancy. The main reason is counties implementing supplementary budgets which shift expenditures between votes and economic codes without updating the supplemental information within IFMIS. Another issue identified is the reporting of items marked as development expenditure in IFMIS but are reported as recurrent expenditures to COB. In addition, there is under reporting of expenditures from local revenue in IFMIS whereas they are fully reported through the COB reports.

Figure 3.10 depicts the percentage difference between IFMIS and COB expenditure reporting for all counties indicating the existence of wide discrepancies in expenditure reporting between the National Treasury and COB.

Most of the counties showing the largest differences between National Treasury and COB reporting have experienced reporting discrepancies in multiple years. Of the 13 points that were excluded from Figure 3.10, seven counties make up those points. Of those, only two (Tana River and Machakos) appeared in one instance and both of those were in 2014/15. For the other five counties, each appeared in at least two different years with Turkana having the largest discrepancies between COB and National Treasury reporting in each of the years under review. Figure 3.11 shows the per cent difference in reporting for the seven counties with the largest reporting differences.





Source: Authors Calculations

County governments do not find that the current revenue chart of accounts meets their needs. Counties do not currently report revenue through IFMIS, leaving COB as the only information source for county revenue. Counties have stated that the current Standard Chart of Accounts (SCOA) does not meet their needs and they need additional codes added to the SCOA before they are able to enter local revenues into the IFMIS system.

3.4 KEY CHALLENGES RELATED TO DEVOLUTION

Coordination and capacity challenges emerged during the initial period when devolution was being rolled out as counties sought to put in place administrative and financial structures while striving at the same time to deliver improved services and necessary capital investments.

County governments faced a set of common institutional challenges related to devolution, including:

- **Delivering tangible results in investments and services.** Maintaining county service delivery of devolved sectors and initiating new investments were among huge challenges experienced by counties given the rapid transition to devolution and their limited institutional capacity.
- Getting core county PFM and planning systems in place was a prerequisite for managing county finances and service delivery. Challenges included: lack of clear guidelines and training on PFM, especially budgeting and procurement; weak relationships between county plans and budgets; weak linkages between automated accounting systems and IFMIS; dealing with huge wage bill; poor revenue collection and administration; and low auditing capacity.
- Mitigating the fiscal impacts of revenue sharing under the vertical and horizontal formulas for counties with urban and marginal areas. Urban counties have faced a double squeeze on their financial resources due to huge inherited wage bill and debt obligations from the defunct local authorities. At the same time, revenue transfers

from the National government has not been adequate to cater for the needed service delivery given the high population density in counties with many urban areas. For counties with large marginalized areas, they receive a larger per capita transfer but often face limited absorption and implementation capacity.

- Building focus on performance and results. The initial years of devolution focused primarily on preparation of plans and budgets, staff issues and capacity building. Building systems to track county performance on key indicators against a suitable baseline remains a key challenge identified. In addition, capacity gaps, incentivizing results, and giving citizens information on how their counties perform still remains a challenge.
- Setting up county systems that enabled responsiveness and accountability to citizens. Many county governors seek to reach out to their constituents, but they often lack systems to make information available and to efficiently garner citizen feedback.
- Creating favourable county investment climates, while boosting revenue enhancement. In their efforts to boost local revenues, some counties levy new fees that prompted criticism from their stakeholders necessitating the dropping of the proposed levies thus affecting revenue collection.

3.5 CONCLUSIONS AND POLICY RECOMMENDATIONS

The Government must determine the extent to which each individual program should devolve both administrative and service delivery functions. For example, if agriculture, environment and water programs are intended to be devolved to the extent that Health has been, it can only be accomplished by devolving, either partially or fully, certain expenditures currently categorized as a national government responsibility. These expenditures include the fertilizer subsidy program and irrigation.

Improve the clarity of the role of county governments in implementing different types of expenditures. Multiple examples were highlighted in Table 3.6 under acquisition of financial assets where certain programs have devolved expenditure authority for items to the county while other programs continue to have that same expenditure item as either a shared or national responsibility. The data shows that items that are either national or county led can spend more on service delivery versus those items that are classified as a shared responsibility.

County governments must be required to enter any changes to county budgets, including supplementary budgets, in the IFMIS system before being allowed to spend funds. Unless this change is implemented, the Controller of Budget will continue to be required to approve expenditures that do not align with the county budget in IFMIS. In the near term, COB should work with National Treasury to identify misaligned expenditures reported on a quarterly basis and work with counties to correct the differences observed.

The Standard Chart of Accounts (SCOA) should be updated to meet the revenue reporting needs of counties. Once complete, a new policy requiring all counties to add revenue information into the IFMIS system should be implemented. This change is critical for improved, accountability, enhanced own source revenue collection and ensure accurate and timely reporting.

Provide continuous and comprehensive training to county personnel on the use of IFMIS. Special focus should be given to counties with large differences between National Treasury and COB reporting. This could be done by identifying counties with large differences between the two reporting mechanism by providing additional peer to peer learning programs to align the two reporting methodologies.

County governments should ensure that conditional grants transfers are reflected in county revenue, expenditure budgets and reports in a consistent way. Given that the conditional grants funding for specific county expenditure programs and services are increasing in scale, it is important that these funds are allocated and reported on effectively within county revenue and expenditure reports.



CHAPTER 4 PUBLIC WAGE BILL MANAGEMENT IN KENYA

4.1 WAGE BILL AFFORDABILITY

In the recent years, there have been increasing concerns about the fiscal affordability of the public- sector wage bill. Statistics from budget policy statements indicate that the wage bill is persistently high and potentially crowding out other important socio-economic and developmental expenditure. For instance, During the period between 2012/2013 and 2016/2017, the wage bill to revenue ratio has consistently exceeded 50 per cent, which is significantly beyond the 35 per cent target stipulated in the PFM Act 2012¹⁴ (see Figure 4.1).





Source: Budget Policy Statements (various)

At the County level, the wage bill relative to domestic revenue in 2016/17 averaged 36 per cent, exceeding the 35 per cent target set in the PFM Act 2012 (Figure 4.2). The lack of adherence to this target suggests that it is not enforced. Available data shows that counties are consistently over-estimating their projected revenue suggesting a deliberate effort to circumvent the target.

¹⁴ The PFM Act 2012 Section 2 (a) and (b) states that wage bill relative to domestic revenue should not exceed 35 per cent.



FIGURE 4.2: WAGE BILL AS A SHARE OF COUNTY REVENUE

Source: Office of the Controller of Budget

The ratio of wage bill to expenditure was lower compared to the ratio of wage bill to revenue during the period under review (Figure 4.3). This can be attributed to the rapid increase in deficit financing, which is fiscally unsustainable. A course correction will need to be taken soon to restrain the growth of the wage bill, which increased to its highest share in 2017/18. Globally, however, issues relating to the public wage bill tend to be rigid since it can be politically challenging for any government to disengage employees or reduce compensation. Therefore, limiting future growth of the wage bill would be the least disruptive option to help the Government meet its fiscal targets identified in the medium-term fiscal framework.



FIGURE 4.3: WAGE BILL AND DEFICIT FINANCING

Source: National Treasury; Budget Policy Statement 2018

The expanding wage bill may be contributing to the crowding out of important government development expenditure. In 2017/18, wage expenditures are projected to increase to 26.8 per cent of total expenditure, while investment expenditures are projected to decrease to 15.90 per cent of total expenditures (Figure 4.4). It should also be noted that

transfers (which include counties and all semi-autonomous government agencies) have also increased each year since 2014/15 and are now the largest share of expenditure at 40 per cent of the budget.



FIGURE 4.4: EXPENDITURE BY ECONOMIC CLASSIFICATION

Growth in public wage bill has been driven by Teachers' Service Commission (TSC), ministries and other extra budgetary institutions and counties (see Figure 4.5). Over the review period, TSC formed the largest overall block, comprising on average 34.4 per cent of the total wage bill, followed by ministries (20%) and counties (17.5%). Devolution required new administrative structures created by the 2010 Constitution to fulfil newly assigned government functions at the county level. Since 2013, the total wage bill has increased on average by 10 per cent while those of TSC, parastatal bodies, and ministries and other extra budgetary institutions grew on average at the same rate of 8 per cent. County governments wage payments increased on average by 18 per cent during the same period.



FIGURE 4.5: PUBLIC SECTOR WAGE BILL COMPOSITION (KSH BILLION)

Source: Kenya National Bureau of Statistics (Economic Survey 2018)

4.2 INSTITUTIONAL FRAGMENTATION COMPLICATES WAGE BILL MANAGEMENT

Fragmentation of the wage bill management function across various institutions creates challenges for fiscal control. The wage bill is a function of employee numbers and the amount compensated for each role. Whereas the Salaries and Remuneration Commission (SRC) has control of the compensation for each role, responsibility for employment numbers lies with the respective employing institutions. The following institutions are involved in regulating wage bill management in Kenya:

Function	Institutional Responsibility
Remuneration and Benefits Policy	 Salaries and Remuneration Commission (SRC) – Control of the compensation of employees The National Treasury – Approves availability of funds
Establishment Control	 Public Service Commission (PSC) - Permanent and contractual Ministries, Departments and Agencies (MDAs) – Casual County Assemblies Service Board (CASB) – Permanent and contractual County Public Service (CPSB) – Permanent and contractual TSC - Teachers Constitutional Commissions – Permanent and contractual State Corporations Boards of Management - Permanent and contractual
Recruitment, Promotions, and other HRM policies	 PSC – Recruitment within MDAs CPSBs – Recruitment of Public Service employees in respective Counties CASB - Recruitment of County Assembly employees in respective Counties
Payroll Management	 Directorate of Public Service Management (DPSM) – IPPD and GHRIS which covers the entire Public Service TSC – Teachers' payroll National Police Service Commission – Police payroll State Corporations Boards of Management – State Corporations' payroll
Oversight	 SRC – Compliance with remuneration and benefits policy TNT Internal Audit Department – Conducts internal audits Office of the Auditor General – Audit all Government expenditure

TABLE 4.1: INSTITUTIONAL ROLES IN WAGE BILL MANAGEMENT

Good practice requires that governments wage bill is managed by one institutional body.

The current fragmentation of the wage bill control function inhibits the Government's ability to achieve its policy objective of containing wage bill growth. While control of hiring for permanent and contractual employees in MDAs is a well-defined process and managed by the PSC, this function is not harmonized across government. For example, MDAs have their own discretion to hire casual workers and budget for this cadre through a separate budget vote. At the County level, the CPSB also follow the same rigorous process mandated by the PSC. The other institutions identified in Table 4.1 each have their own processes for managing employee levels.

Reforms in wage bill management have been ongoing in recent years. To realize the intended impact, there is need for enhanced institutional collaboration and coordination. Table 2 summarizes these reforms:

Name	Financed By	Scope
Job Evaluation	The National Treasury	Determine the true worth of public service jobs
Capacity Assessment and Rationalization of the Public Service (CARPS)	The National Treasury	Ensure that Government functions are properly structured and staffed to facilitate transformation of Public Service for efficient and effective service delivery at the National and County Government levels.
Kenya Governance for Enabling Service Delivery and Public Investment Management in Kenya (GESDeK)	World Bank	Consolidate Human Resource Staff data and interfacing Government Human Resource Information System with IFMIS
Wage Bill Forecasting	World Bank	Develop a wage bill forecasting model to inform policy options

TABLE 4.2: RECENT WAGE BILL REFORMS

Strengthening and harmonizing human resource and payroll management will support wage bill management. Decisions on recruitment and promotions carry fiscal implications that typically have a long time horizon. This is due to uncoordinated human resource management policies and practices across government. In addition, a robust payroll system that covers all public employees will prevent leakages, facilitate better analysis and forecasting, and allow the Government to make more informed human resource policy decisions.

4.3 PUBLIC WAGE BILL MANAGEMENT

Public wage bill management study carried out jointly by the SRC and the World Bank across 31 counties (Including County Assembly and Executive) and 70 State Corporations in June 2018; covered wage bill management, human resource policies and procedures, payroll management, and performance management by using a combination of qualitative and quantitative data collection approaches. The findings of the study are summarized below:

4.3.1 Composition of Wage Expenditures

Base salary contributed only 52 per cent of total compensation in the studied institutions, which is low by international standards (Table 4.3). Allowances contributed 37 per cent with the balance made up by pensions, medical insurance, day labourers, and other small categories. Within the IPPD, there are currently 83 codes for allowances, though not all are active.

Category	FY 2016/17 (billions)	Percent
Basic salary	66.74	51.82
Remunerative allowance	36.06	28.00
Other allowance e.G. Sitting allowance	10.40	8.08
Pension	5.74	4.46
Medical cover	3.59	2.79
Wages to casual	3.21	2.49
Gratuity	0.99	0.77
Arrears	0.83	0.65
Bonus	0.44	0.34
Group life cover	0.33	0.25
Others (specify)	0.28	0.22
Group personal accident	0.09	0.07
Top-up salary	0.09	0.07
Total	128.79	100.00

TABLE 4.3: COMPOSITION OF WAGE BILL FROM INSTITUTIONS UNDER THE STUDY

Source: SRC Public Wage Bill Management Study, June 2018

4.3.2 Recruitment

The approved staff establishment was ranked as the most important criteria for recruitment by 55 per cent of respondents (Table 4.4). Most institutions indicated that there was an effective recruitment and selection procedure in place. However, several institutions indicated that they did not have an approved staff establishment and therefore used the annual budget process (informed by existing staff and projected hires) as the most important recruitment criteria, which could promote arbitrary hiring.

Criteria	County Executive	County Assembly	Commercial Sector State Corporations	Service Sector State Corpo- rations	Total
Approved Staff Establishment	15	15	10	29	69
Strategic Plan Provisions	4	6	5	10	25
Budget Allocation	8	4	0	6	18
Human Resource Plan	1	2	3	7	13
Special Project	0	1	0	0	1

TABLE 4.4: CRITERIA RANKED AS MOST IMPORTANT TO GUIDE RECRUITMENT

Source: SRC Public Wage Bill Management Study, June 2018

4.3.3 Promotions

The frequency of promotions varied significantly across the studied institutions, particularly at the county level where the number of staff promoted ranged from 8 to 14 per cent per year during the period under review (Figure 4.6). This finding suggests that the criteria for promotions, managed by the County Public Service Boards (CPSB) and

County Assembly Service Boards (CASB) in the counties, may not be systematic. It was noted that there is also a lack of career progression guidelines (or schemes of service) and performance management systems which in many instances form the basis of promotions. The study also revealed that some boards ignored the technical input of human resource staff during the promotion process. Furthermore, there is currently no policy in managing the cost of promotions to the public service.





Source: SRC Public Wage Bill Management Study, June 2018 Note: Policy Makers (Job Groups S-V); Senior Managers (Job Groups P-R); Technical Staff (Job Groups K-N); and Support Staff (Job Groups A-J)

4.3.4 Differences in Terms of Service

At least 66 per cent of employees covered by the study were on a permanent and pensionable employment status. Contractual employees constituted 15 per cent and employees on probation, casual, and temporary terms of service constituted approximately 17 per cent (Figure 4.7). This makes it difficult to do wage projections, plans and budgets.



FIGURE 4.7: DIFFERENT TERMS OF SERVICE

Source: SRC Public Wage Bill Management Study, June 2018

At the county level, the terms of service for the defunct local authorities was found to be a major source of inequity. Counties have three categories of permanent employees: those recruited by CPSB/CASB, those devolved or seconded from the national government, and those inherited from the defunct local authorities. Staff in certain grades from defunct local authorities earn salaries and allowances that are higher than the other two categories because they are covered in the Collective Bargaining Agreement for the county pay structures. In addition, the skills and qualifications of most employees from the defunct local authorities are lower on average compared to those recruited by the county boards and those employees devolved from the national government. This higher pay, lower skilled conundrum has caused a challenge in the absorption of these staff into the current grading and salary structures. Furthermore, these differences have led counties to incur excess costs, and low morale and performance.

4.3.5 Challenges in Implementing SRC Circulars

There is inconsistency in the implementation of SRC wage bill circulars advisories. Several cases were noted where SRC issued circulars with certain objectives, however, these were then implemented differently, causing unintended fiscal implications. The predominant reason for non-compliance was a different understanding of the Commissions' circulars, which suggests that there is scope for enhanced sensitization and dissemination.

4.3.6 User Challenges with Human Resource Management Information System (HRMIS)

55 per cent of institutions studied indicated that the Human Resource Management Information System (HRMIS) they adopted met their expectations (Figure 4.8). Many institutions found the automated systems to be ineffective because most of the modules were not functional such as attendance monitoring, leave application, performance management, training, and recruitment. For example, these modules are not functional in the Government Human Resource Information System (GHRIS). Consequently, these functions are run on manual systems. Furthermore, the study also observed frustrations with the IPPD system. Officials noted that it was cumbersome, did not adequately capture provisions in the income tax laws, and had delays in data provision for those recruited from the Civil Service. Moreover, IPPD is integrated with GHRIS. Overall, these weaknesses adversely affect human resource planning and limit the ability to make sound decisions on wage bill management. Many of the studied institutions stated a strong preference for full automation and integration of payroll systems, HRMIS, and IFMIS (e.g. IPPD to GHRIS to IFMIS). The first stage of this reform is being implemented through the World Bank's GESDeK project and it is recommended that these reforms be accelerated to improve wage bill management.



FIGURE 4.8: HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEM MEETS EXPECTATIONS

Source: SRC Public Wage Bill Management Study, June 2018

4.3.7 Payroll Management

The predominant form of payroll in use was a mixed system, incorporated electronic payroll with manual payments, which suggests the integration of GHRIS, IPPD and IFMIS was yet to be fully implemented. Furthermore, there are 10 manual systems, the highest incidence, in place among Service Sector State Corporations. The absence of a fully operational electronic payroll integrated with IFMIS weakens payroll controls. In 2016/17, 8 per cent of wage expenditures were processed manually through the institutions studied.

4.3.8 Auditing and Control Functions

The study found that internal and external audits were mostly undertaken regularly, but there were a few exceptions and varying time frames. The study found that while 80 per cent of institutions carried out internal audits for payroll, the timing ranged from monthly, to quarterly, to annually. This variability is because many institutions have their own timelines as to when internal audits should take place. It was further established that 98 per cent of institutions studied had an external audit carried out by the Office of the Auditor General as a mandated annual function.

4.4 POLICY OPTIONS

The Government has undergone large structural reforms in recent years, which have brought challenges and opportunities for wage bill management. Deriving from the analysis presented in this chapter, the following policy options are suggested to ensure the affordability, equity, and competitiveness of the public wage bill.

Wage bill forecasting to provide evidence-based policy options: A robust wage bill forecasting model will allow the navigation of different policy options over the medium-term to bring the wage bill to revenue ratio down to the prescribed 35 per cent of domestic revenue.

Strengthen Establishment Control: Approved establishment lists should be enforced and monitored or created for all institutions so that all hiring can only occur within this process to fill approved vacant positions. There is also a need for annual justification for hiring within the approved establishment to increase predictability in managing the salary cost of employment (often referred to as manpower or human resource policy hearings). Furthermore, a strengthened central coordinating mechanism for establishment control would improve the current fragmented institutional approach and enhance wage bill management.

Eliminate or systematically reduce employees on the manual payroll: Eliminating manual wage payments will increase payroll controls, be more efficient, and lessen the opportunity for leakages. This would include developing modules for casual workers and any other cadres of employees who are currently paid outside the system.

Full automation and integration of payroll systems, HRMIS, and IFMIS: These reforms should be accelerated to improve payroll controls, efficiency, and overall wage bill management.

Transition employees from the defunct local authorities into the same terms of service as those recruited by CPSB/CASB: Harmonization of all schemes of service at the county level will lead to efficient wage bill management.

PART II

SECTORAL ANALYSIS



CHAPTER 5 HEALTH

5.1 INTRODUCTION

This chapter presents health sector outcomes and expenditures, including sources of financing for health care, its multiple provider-payment mechanisms; and the various methods of allocating funds by government, development partners and the private sector. It presents an analysis on how the health sector budget translates policy priorities into actual choices and interventions, and how the health sector budget and expenditures align with national health priorities. It considers all budget contributions from state and non-state actors including off-budget contributions, with the view to inform opportunities for strengthening complementarity and in some cases joint resource allocation and use in high impact biomedical and behavioural interventions to address the country's priorities in disease prevention and health-systems strengthening.

5.2 HEALTH FINANCING: COMPOSITION AND TRENDS

5.2.1 Size, sources and levels of Total Health Expenditures (THE)

Total health expenditure (THE) has expanded in nominal terms but has decreased as a per cent of GDP over the 2012/13 to 2015/16 period. The government, donors and the private sector, including households through out-of-pocket payments, are the main financing sources for health care in Kenya. According to the National Health Accounts (NHA) report of 2015/16, THE expanded nearly threefold from KSH125 billion in 2001/02 to about KSH346 billion in 2015/16 but has remained relatively stable as a per cent of GDP. A decrease in total health spending as a share of GDP is however observed between 2012/13 and 2015/16, from 6.8 per cent to 5.2 per cent (Figure 5.1).

Though the current level of per capita spending should ensure Kenyans a minimum package of essential health services, the structure and composition of healthcare spending is inefficient. Per capita spending on health increased from KSh 4,022 in 2001/02 to KSh 7,822 in 2015/16, an increase of about 54 per cent.

FIGURE 5.1: TOTAL HEALTH EXPENDITURE (THE) AND AS A SHARE OF GDP



Source: Kenya National Health Accounts, 2015/16

The decomposition of 2009/10 per capita healthcare spending by sources of financing indicates that about KSh 1,478 per capita in health spending was contributed by households in FY 2009/10. This increased to about KSh 2,577 in 2015/16. The government's contribution was about KSh 1,357 per capita in 2009/10 and increased to KSH2,596 per capita during the same period. Employers' contribution to per capita health spending remained low at below KSH925 for the same period. Donor contributions in per capita terms increased from KSh 1,600 per capita in 2009/10 to KSH1,741 per capita in 2015/16 (Table 5.1).

Fiscal years	THE per capita	Households	Government	Employers	Donors	Others
2009/10	5,027	1,478	1,357	569	1,600	8
2012/13	6,602	2,098	2,047	665	1,672	77
2015/16	7,819	2,577	2,596	925	1,741	0

TABLE 5.1: TOTAL HEALTH EXPENDITURE PER CAPITA (KSH) BY SOURCE

Source: Kenya National Health Accounts, 2015/16

Despite recent health financing reforms implemented by the country that include removal of user fees in public primary health facilities and Free Maternity Health Policy, households, through Out of Pocket (OOP) contributions, still remain one of the major financiers of health care. The high reliance on OOP payments to finance health care has significant implication to both access and equity. Over the years, households have continued to account for a significant share of total health expenditures which were mostly in form of OOP payments. In 2015/16, households accounted for about 33 per cent of total health expenditure up from 30 per cent in 2009/10. The current household contribution to THE (33 per cent) is considerably above the "15–20 per cent benchmark" suggested in World Health Report (2010) and is comparable to the LMIC average (30%) but lower than SSA average (50%). As a per cent of GDP, household contribution increased from 1.7 per cent in 2009/10 to about 1.9 per cent in 2012/13 but later declined to 1.7 per cent in 2015/16.

The role of the government in financing health care in Kenya has been low for some time but has recently increased and now constitutes a greater share of total available resources for health. Government contribution to total health spending increased from 27 per cent in 2009/10 to about 33 per cent in 2015/16, an increase of about 22 per cent between the two periods. The increase is partly driven by the contribution of counties that are emerging as major financier of health judging from the growth in county budget allocation to healthcare.

For decades, donor support has been an important part of financing health care in Kenya. The role of donors is however declining, a trend that has also been observed in many donor dependent countries, particularly those transitioning to lower middle-income status. In 2009/10, development partners accounted for about 32 per cent of total health expenditures. The share of development partners' contribution however declined to about 22 per cent of total health spending in 2015/16.

A substantial proportion of donor support to the health sector is off-budget¹⁵, despite recent improvement to the Public Financial Management (PFM) law. Off-budget donor contributions are however declining. In 2009/10, off-budget donor spending in the health sector accounted for about 27 per cent of total health expenditure (Figure 5.2). This translates to about 84 per cent of the total donor support to the health sector. Off-budget donor contributions however decline to about 16 per cent of total health expenditure or an equivalent of about 73 per cent of total donor contribution to the health sector in 2015/16. In absolute values, off-budget donor support to the health sector increased marginally from KSH52.4 billion in 2009/10 to about KSH55.4 billion in 2015/16, an increase of about 6 per cent.



FIGURE 5.2: OFF-BUDGET AND ON-BUDGET DONOR SPENDING ON HEALTH

Source: World Bank

¹⁵ Donor support to the health sector that is not inscribed on the Kenya budget system nor channeled through the national treasury.

The largest source of off-budget donor financing was from the United States Government through its President's Emergency Plan for Aids Relief (PEPFAR) program, amounting to KSh 34.9 billion in 2015/16. A major concern with off-budget donor support is the inherent challenges that relate to accurately tracking the volume of off-budget support. Off- budget donor funds are also, in most cases, not properly aligned to the health sector priorities to ensure maximum benefits and are mainly in the form of earmarked project support primarily for disease-or intervention-specific programs. In Kenya, like in many countries where government health expenditure appears to increase, donor financing flows primarily through non-governmental organizations (NGOs).

Private health expenditures account for a significant share of total health expenditures. Private health expenditures accounted for about 40 per cent of total health spending in 2015/16, an increase from 37 per cent in 2009/10. Public sector accounted for 37 per cent of total health spending in 2015/16, an increase from 29 per cent in 2009/10, demonstrating the increasing role of government (national and county level) in financing health care. The proportion of total health expenditure attributed to donors declined from 35 per cent in 2009/10 to about 23 per cent in 2015/16.

A larger proportion of private spending is born by households through out of pocket payments. The private sector's contribution to financing health care increased from 37 per cent of total health spending in 2009/10 to about 40 per cent in 2015/16 although this was a slight decline from what was reported in 2012/13 (41%). As a share of private health spending, households' contribution through out of pocket payments has remained high at about three-quarters of total private health expenditure. Household health expenditures are largely out-of-pocket expenditures incurred by individuals seeking care in public or private facilities - private for profit or faith based as well as for over the counter purchases of medicine. Household health expenditures have increased since 2009/10 mainly fuelled in part by a widening choice of private health providers and over-the-counter medicine purchases. Recent 2015/16 NHA estimates show out of pocket payments accounting for about 65 per cent of total private health expenditure (PHE), an equivalent of 26 per cent of THE. This was a decline from 68 per cent in 2009/10 or an equivalent of 25 per cent of THE.

5.2.2 Overview and trends in Government Health Expenditures (GHE)

Government's spending on health includes several different elements: (i) budgetary spending by the national government through the Ministry of Health (MoH) (ii) budgetary spending at the county level mainly through County Departments of Health (CDoH) and other departments spending resources on health-related activities (iii) budgetary spending on health at the national level through other ministries such as education and defence and (iv) social security spending on health through the National Hospital Insurance Fund (NHIF). In this section, government spending is assessed by looking at national government spending at the

Ministry of Health and by assessing county government spending at County Departments of Health (CDoH).

Total government health expenditures (GHE), post devolution, have increased in absolute terms mainly driven by government's commitment to improve quality and access to health care services. In fiscal year 2016/17, Government health expenditures (GHE) was estimated at KSH139 billion, up from KSH92 billion in fiscal year 2014/15, an increase of about 51 per cent (Table 5.2). In 2014/15, budgetary allocation to health at the county level accounted for about 56 per cent of the total public health sector budget (approved budget). This however increased to about 59 per cent in 2016/17.

Budgetary Spending categories	2014/15		2014/15		2016/17	
	Approved budget	Actuals	Approved budget	Actuals	Approved budget	Actuals
MoH expenditure (KSh million)	4,329	37,276	60,673	41,543	71,434	57,474
County level expenditure (KSh million)	68,224	56,873	87,710	67,905	96,014	81,674
Government Expenditure on Health - MoH + County (KSh million)	122,553	94,148	148,383	109,448	167,449	139,148
Total Government Expenditures (KSh million)	1,862,753	1,444,995	2,063,300	1,485,579	2,453,180	2,020,023
Health as a % of Total Government Expenditure (%)	6.58	6.52	7.19	7.37	6.83	6.89
Nominal GDP (KSh Million)		5,402,410		6,260,646		7,158,695
Government spending on health as a % of GDP (%)		1.92		1.74		1.92

TABLE 5.2: GOVERNMENT BUDGETARY SPENDING ON HEALTH (MOH AND COUNTIES) - (2014/15 - FY 2016/17)

Source: The National Treasury

Devolution has changed the structure and composition of government spending on health with counties now assuming a bigger proportion of government health expenditures following transfer of health functions and the related health budget to counties. MoH spending increased from KSH61 billion in 2011/12 to KSH81 billion in 2012/13, an increase of about 33 per cent. However, following transfer of devolved health functions to the counties, MoH spending declined to about KSH31 billion in 2013/14. During the same period (2013/14), total county health expenditure was estimated at KSH42 billion, which was lower than the KSH54 billion estimated as the equivalent of devolved health sector functions in 2012/13.

Spending on health by counties increased from KSH42 billion in 2013/14 to KSH82 billion while spending by MoH increased from KSH31 billion in 2013/14 to KSH57 billion over the same period, clearly demonstrating the dominant role of counties in the public financing of health care in Kenya relative to the national government through MoH (Figure 5.3).

FIGURE 5.3: GOVERNMENT SPENDING ON HEALTH (MOH + COUNTY)



Source: National Treasury

Even though Kenya's economic growth, as measured by GDP (in nominal terms), has been expanding of late, Kenya's spending on health as a per cent of GDP has remained low. Despite the recent increases in overall total government expenditures triggered by expanded economic growth, public financing of health has remained very low at less than 2 per cent of GDP in the last decade.

5.2.3 Composition of government health expenditures

Breaking down the government spending on health into recurrent and development shows that recurrent expenditure takes the largest share of health expenditure. A review of overall health budgetary allocations (MoH and counties combined) shows that recurrent vote took about two third of the health resources. Recurrent health actual spending averaged 73 per cent of total health expenditures for the three years of devolution of the health services under review. Recurrent health expenditure as a per cent of total health expenditure however declined from 73 per cent in 2014/15 to about 70 per cent in 2016/17 (Figure 5.4).



FIGURE 5.4: COMBINED GOVERNMENT BUDGETARY AND ACTUAL HEALTH EXPENDITURES BY RECURRENT AND DEVELOPMENT

Source: National Treasury

The recurrent share of total MoH expenditures has consistently remained higher than development for the three years under review. Recurrent vote accounted for about 65 per cent, 60 per cent and 53 per cent of total MoH expenditure in 2014/15, 2015/16 and 2016/17 respectively. The share of development vote to total MoH expenditure has remained lower than recurrent expenditure but increased from 35 per cent in FY 2014/15 to about 47 per cent in FY 2016/17 (Figure 5.5).





Source: National Treasury

Composition of county health budget and expenditures: The share of development expenditure in total county level health expenditures has consistently remained low and averaged 19 per cent for the three years of devolution under review. In FY 2016/17, development expenditure accounted for about 18 per cent of total health spending, down from 21 per cent in FY 2014/15. Recurrent health spending has remained relatively high and averaged 81 per cent of total spending for the three fiscal years under review. Recurrent health spending increased from 79 per cent of total county health spending in FY 2014/15 to about 82 per cent in FY 2016/17 (Figure 5.6).



FIGURE 5.6: COUNTY HEALTH BUDGET AND EXPENDITURES BY RECURRENT AND DEVELOPMENT

Source: National Treasury

5.2.4 MoH spending by economic classification

Since devolution, expenditures on grants/transfers now account for the largest share of MoH budget and expenditures. The distribution of recurrent and development MoH expenditures across key economic classifications over the 2014/15 – 2016/17 period reveals that expenditures on grants/transfers to government agencies and other levels of government consumed the largest share of MoH resources at an average of 62 per cent followed by use of goods and services during the same period.

Spending on compensation of employees remained low at an average 11 per cent of total MoH spending during the period under review mainly because of the effects of devolution that moved a large share of human resources costs to the county level. This is evident by the large share of resources that are spent on compensation of employees by MoH before devolution for instance, in FY 2011/12, MoH spent 44 per cent of its resources to pay staff, which rose to 48 per cent in FY 2012/13¹⁶ (Figure 5.7).



FIGURE 5.7: MOH SPENDING BY ECONOMIC CLASSIFICATION

Source: National Treasury

5.2.5 County health expenditures by economic classification

Compensation to employees consumed the largest proportion of county health expenditures on average (62%) of total health spending during the period under review. In FY 2016/17 compensation to employees consumed 64 per cent of total county health spending, an increase from 59 per cent reported in financial year 2014/15. The high expenditure on employee compensation was as a result of large workforce and improvement in salaries and allowances awarded to doctors and nurses. Allocating such a high share of health budget to a large labour force implies curtailed funding for drugs and other medical supplies as well as for operation and maintenance (O&M) and critical medical equipment.

⁶ Health Sector Working Group Report, 2014.

The levels of spending on operations and maintenance (O&M) are insufficient to maintain assets and provide goods and services for effective delivery of health services. Spending on O&M has remained low, at an average of 16 per cent of total county health expenditure. O&M should however be based on norms related to the act of delivering quality services and maintaining assets at targeted levels. Spending on O&M declined from 20 per cent of total county health expenditures in 2014/15 to around 17 per cent in 2016/17.

Capital spending on health has remained relatively low during the three years of devolution under review. Capital expenditures in the form of acquisition of non-financial assets which include expenditure on construction, purchase of equipment and other physical assets remained low at an average of 14 per cent of total county health expenditures. In FY 2016/17, the proportion of county total health spending that was attributable to capital expenditures was estimated at 11 per cent, a sharp decline from 17 per cent reported in FY 2014/15 (Figure 5.8).



FIGURE 5.8: COUNTY HEALTH EXPENDITURES BY ECONOMIC CLASSIFICATION

Source: National Treasury

5.2.6 Government health expenditures by functional classifications

Classification of the health budget and related expenditures into curative versus preventive categories allows tracking of primary health care and public health programmes. This was however only possible at the MoH and county level.

5.2.6.1 MoH budget and expenditures by functional classifications

The distribution of recurrent and capital health expenditures for MoH by functions over the 2014/15 – 2016/17 period reveals that expenditures on curative service absorbed between 39 – 46 per cent of all MoH expenditures. Relative to the large share of curative health services, preventive and promotive services as well as research and development appeared to have received little allocation. Both of these services showed a declining trend as preventive services declined sharply from 20 per cent in FY 2014/15 to 10 per cent in FY 2016/17 and research from

11 per cent in FY 2014/15 to 8 per cent in FY 2016/17. On the other hand, maternal health, which was created to track government contribution to financing free maternal health services, increased from 7 per cent of total MoH expenditures in FY 2014/15 to about 10 per cent in 2016/17 (Figure 5.9).





Source: National Treasury

5.2.6.2 Execution of MoH budget

In general, performance of the MoH budget has been fair throughout the period under review, with an average annual execution rate of about 73 per cent (Figure 5.10). The execution of the budget in FY 2014/15 and FY 2015/16 was below average at 69 per cent in both financial years but increased to about 81 per cent in FY 2016/17. Execution of the recurrent budget has consistently exceeded 80 per cent throughout the period under review. Execution performance of the development budget has been generally lower than for the recurrent budget, partly attributable to the lengthy and difficult procurement procedures which cause delays in the implementation of the development budget and delays in release of funds by the national treasury.



FIGURE 5.10: MOH BUDGET EXECUTION BY RECURRENT AND DEVELOPMENT

Source: National Treasury
5.2.6.3 MoH budget execution by economic classifications

The data analysis reveals major variations in the spending of allocated funds. Analysis by economic classifications depicts a mixed trend in budget execution (Figure 5.11).



FIGURE 5.11: MOH EXECUTION RATE BY KEY ECONOMIC CATEGORIES

5.2.6.4 County level health execution by recurrent and development

The overall performance of the county level health budget is average with a considerable disconnect between the approved budget and actual spending. The overall approved county level health budget performance was estimated at 79 per cent in 2014/15 but increased to about 83 per cent in 2016/17 (Figure 5.12). The performance of the recurrent budget was high and has generally been much higher than the development budget, at about 90 per cent, 87 per cent and 92 per cent in FY 2014/15, 2015/16 and 2016/17 respectively. The performance of the development budget was below average for both periods under review. The performance of development budget declined from 66 per cent in FY 2014/15 to about 63 per cent in FY 2016/17.





Source: National Treasury

5.2.6.5 County level health budget execution by economic classifications

A look at budget execution in key economic categories shows some notable variations in execution with compensation to employees, a non-discretionary budget item, continuing to demonstrate high levels of performance (Figure 5.13).





5.3 LINKING PUBLIC HEALTH SPENDING TO OUTCOMES: EFFICIENCY ANALYSIS

Kenya has made progress in improving several health outcomes and utilization of health services. This is as a result of increased government spending on health sector relative to total government expenditure over the review period.

5.3.1 Progress in improving health outcomes

Data on population trends reveals a gradual increase in population size and rising life expectancy, both of which have significant implications on demand for health care services. Kenya's population size increased from 38.6 million in 2009 to an estimated 46 million in 2016 and is projected to reach 52.2 million by 2020¹⁷. Life expectancy has steadily increased to about 63.4 years (male 61.1 years and females 65.8 years) in 2015, up from 53 years in 1997 and is now comparable with those of its peers in the region. However, disparities still exit across counties (Figure 5.14) with more than 50 per cent of the counties reporting life expectancy rates that are less than the national estimate of 63.4 years. These may be attributed to differences in socio-economic development across counties including employment, education, socio-cultural practices, economic well-being, quality of health system and the ability of people to access it, and poor nutrition.

⁷ Kenya Bureau of Statistics.

70 60 50



Bungoma Bomet

Kisii Nyamira West Pokot Kilifi Samburu

Elgeyo Marakwet

Garissa Murang'a Kajiado

Embu haraka Nithi Nairobi

Kirinyaga Kiambu Marsabit

Meru Narok lachakos

Nyandarua Nyeri

FIGURE 5.14: LIFE EXPECTANCY, KENYA

Source: Census 200918

Turkana Mandera

Nakuru

ita Taveta Busia

Homa Bay

Migori

Kakamega Laikipia

asin Gishu Tana River

Lamu

Baringo Kericho Nandi rans Nzoia

Mombasa Kwale

Although Kenya's overall population size has increased over the last two decades, the country's Total Fertility Rates (TFR) has steadily declined during the same period. TFR declined to about 3.9 children per woman in 2014, down from 6.7 children per woman in 1989. The decline in fertility rate is associated with a dramatic increase in modern contraceptive prevalence rate (CPR) among married women, estimated at 58 per cent in 2014, up from 46 per cent in 2008-09, and with a reduction of unmet need for Family Planning (FP) which dropped from 26 per cent in 2008 to 21 per cent in 2014¹⁹. The unmet need is however highest for women in the poorest wealth quintile.

Despite the overall progress in TFR and CPR, disparities exist across counties as well as across socio- economic groups. For instance, the CPR for Kirinyaga is 81 per cent while that of Mandera is at a very low of 1.9 per cent²⁰. Disparities in CPR across counties can be attributed to cultural believes and low literacy levels.

Kenya has made substantial progress in improving new born and child survival, however, the burden of child health services varies across counties as well as socio-economic groups. Infant mortality rates declined to 39 deaths per 1,000 live births, down from 53 deaths per 1,000 live births while the under-five mortality rate decreased from 74 deaths to 52 deaths per 1,000 live births between 2008 and 2014. Neonatal mortality rate stood at 21 deaths per 1000 live births in 2014, down from 28 deaths per 1000 live births in 1998 (Figure 5.15).

¹⁸ Ministry of Health in collaboration with World Health Organization, Statistical Review of Progress Towards the Mid-Term Targets of the Kenya Health Sector Strategic Plan 2014-2018.

¹⁹ Kenya Demographic and Health Survey, 2014.

²⁰ Kenya Demographic and Health Survey, 2014.





Source: KDHS, several editions

The improvements in child health outcomes are attributed to intensified immunization activities including mass campaigns, early detection and case management of malaria, proper use of long lasting insecticidal mosquito nets as well as a significant increase in the number of children being exclusively breastfed during the first six months from 32 per cent in 2008/09 to 61 per cent in 2014. The increase in the proportion of births assisted by skilled health providers during delivery, deliveries performed at health facilities and incidence of postnatal care have also contributed to lower neonatal mortality and child mortality.

Despite the overall progress in child related outcome indicators, significant geographical and socio- economic disparities remain. While there has been significant progress in the child related outcome indicators, this masks serious geographical disparities that are demonstrated by huge variations in child indicators between counties. For instance, huge variation in under five mortality rates are experienced across counties (Figure 5.16). For example, Siaya County's under-five mortality rate is 227 deaths per 1,000 live births, which is 4.5 times higher than that of Nyeri County.



FIGURE 5.16: DISPARITIES IN UNDER FIVE MORTALITY RATES ACROSS COUNTIES

Source: KDHS, 2014

The roll out of the Free Primary Healthcare programme and Free Maternity Services (FMS) has resulted to a major increase in the utilization of health services. The implementation of the FMS has further enhanced maternity services utilisation improving skilled birth attendances and institutional deliveries. This has contributed to the reduction of maternal and neonatal deaths related to childbirth. Data from District Health Information System Version 2, shows a 40 per cent increase in the utilization of medical facilities in the last four years thus greatly increasing access to quality healthcare.

Kenya's Maternal Mortality Rate (MMR) has declined but still lags its peers and the SSA average. Although maternal mortality is reported to have declined from 590 deaths per 100,000 live births in 1998 to 362 deaths per 100,000 live births in 2014, the progress is however not fast enough to reach the SDG target of 70 deaths per 100,000 live births by 2030. The maternal mortality rate is high when compared to the average of low middle-income countries but is however comparable to the average of SSA countries. Despite modest improvement in the MMR, disparities and inequities in access to health among women remain excessively high.

The modest decline in the maternal mortality rate has been aided by implementation of Free Maternal Services in 2013. Routine data from the Ministry of Health's (MoH) Health Information System (HMIS) suggests significant improvements in skilled birth attendance since devolution, with the estimated number of skilled deliveries increasing from 44 per cent in 2012 to 57 per cent in 2016. This was largely attributed to free maternity services and to improved access to comprehensive obstetric maternal and new born services.

5.3.2 Health seeking behaviour and utilization of health care services

Utilization of outpatient services has increased over the 15-year period with public facilities being the most frequented source of services. The total number of visits made during the 4-week recall period to all providers (in millions) increased from 4.8 million in 2003 to 9.1 million in 2018. The average number of visits (utilization rate) made also increased from 1.9 visits per person per year in 2003 to 2.5 visits per person per year in 2018 (Figure 5.17). Dependence on public health facilities for outpatient services is significantly higher among rural populations than urban populations.

Utilization of inpatient services has also increased over the same period with public facilities being the dominant provider although use of public inpatient services is declining. Admission rates increased from 1.5 per cent of the total population in 2003 to 3.3 per cent of the population in 2018 with public facilities ranking as the preferred provider of inpatient services. The unmet need for inpatient services declined from 0.5 per cent in 2003 to 0.3 per cent in 2018 (Figure 5.18).



FIGURE 5.17: TRENDS IN TOTAL NUMBER OF OUTPATIENT VISITS AND UTILIZATIONS (CONTACT) RATES - 2003 TO 2018

Source: KHHUES, several editions





Source: KDHS, several editions

The proportion of admissions in public facilities has declined while admission rates in private facilities have increased (Figure 5.19). This could be the result of substitution effects from those previously seeking admission in public facilities that are now consuming the same services in private facilities because of increased income. The KHHUES, 2018 findings show variations in admission rates by socioeconomic characteristics over the same period with individuals in the wealthy quintile being more likely to seek admission than those in the poor quintiles suggesting inequalities in accessing inpatient services.

2.6 100 0.8 1.8 80 60 Percent 40 20 0 2007 2003 2013 2018 Public facilities Private facilities Faith Based facilites Nursing home Others

FIGURE 5.19: TRENDS IN UTILIZATION OF INPATIENT SERVICES

5.3.3 Technical Efficiency

Source KHHUES 2018

The analysis shows that Kenya falls in the northeast quadrant with other under achievers, where their Under Five Mortality Rate (U5MR) is higher than expected and a Government Expenditure on Health that is lower than expected. The other countries considered to be least efficient include: Botswana, Ethiopia, Ghana, Lesotho, Mauritania, Mauritius, Namibia, Philippines, Tanzania, Uganda, Vietnam and Zambia. The overachievers include; Gabon, Indonesia, Nigeria, South Africa and Sub-Saharan Africa (Figure 5.21).

Efficiency for the counties is presented as the relationship between health outcomes and per capita government spending on health. The county health budget per capita and Under Five Mortality per 1,000 live births is presented in Figure 5.21. The analysis reveals that counties with both low under five mortality rates and are low spending include: Kajado, Bomet, Kwale and Kilifi, whereas Isiolo, Lakipia, Embu, Elgeyo Marakwet, and Nyeri are spending more per capita and achieving almost the same under five mortality rates hence, deemed inefficient.



FIGURE 5.20: CROSS-COUNTRY COMPARISON ON HEALTH EXPENDITURES ON U5MR

Source of Basic Data: World Bank, 2018

Note: The labelling of under achievers means that they are under spending and underperforming whereas over achievers are over-spending to over perform



FIGURE 5.21: UNDER FIVE MORTALITY PER 1,000 LIVE BIRTH AND COUNTY HEALTH BUDGET PER CAPITA, 2014/15

Source: County Health Fact Sheets, 2016

5.3.4 Equity in health spending

Achieving universal health coverage (UHC) is one of the goals that is being pursued by many countries as a way of ensuring that everyone has access to quality promotive, preventive, curative and rehabilitative health care services at an affordable cost. One of the major goals of public health expenditure is to promote equity in access and use of health care services. Adjusting public health expenditure patterns to ensure that poor and vulnerable segments of the population benefit is one of the most effective tools at the disposal of a government to improve the welfare of the poor and marginalized.

Evidence from several Benefit Incidence Analysis (BIAs) undertaken in Kenya shows government spending on health before devolution was generally regressive, albeit with some minimal improvements between 2003 and 2013. Using data from the Kenya Household Health Expenditure and Utilization Surveys (KHHUES) of 2003, 2007 and 2013, benefit incidence analysis of government health spending for the respective years was undertaken to assess whether its distribution across socio-economic categories (consumption quintiles) is regressive; this means that it mostly benefits the rich, or progressive, mainly benefitting the poor.

The results of the three BIAs showed that the poorer Kenyans benefited less from overall government spending on health in 2003, 2007 and 2013. Government subsidies at the hospital level were mainly pro-rich for the three periods reviewed, while government spending on primary health care facilities was progressive. Government spending on health is skewed in favour of high-end curative care which benefits mainly the richest households. The pattern of public health spending across the two levels of care – curative vs. preventive health care – has remained largely unchanged over the last 10 years. The share of public resources allocated to hospital care has remained significant with fewer resources going to lower level facilities despite being the first point of contact for patients.

Figure 5.22 shows that for the three years of devolution under review, the poorest quintile had the greatest share of health care need (27 per cent in 2003, 22 per cent in 2007 and 23 per cent of share of the health care need), yet it received the lowest share of the subsidy (15 per cent in 2003, 17 per cent in 2007 and 9 per cent in 2013). The richest quintile on the other hand had the lowest share of need (16 per cent in 2003, 17 per cent in 2007 and 13 per cent in 2013) but received more subsidies (25 per cent in 2003, 25 per cent in 2007 and 20 per cent in 2013). This observation suggests that public health subsidies in Kenya are not being distributed in a manner that is consistent with need.





Source:

5.4 CONCLUSIONS AND RECOMMENDATIONS

5.4.1 Conclusions

Despite notable progress in selected key health indicators, maternal mortality and the prevalence of communicable diseases remain higher than what is reported by regional peers. Access to quality maternal and child health services remains a challenge across all levels of care, while geographic, population sub-groups, and economic inequities persist due to supply and demand side barriers.

Total health expenditure (THE) has expanded over the last 15 years but has however remained stable as a per cent of GDP. Per capita spending on health has also increased and currently stands at KSH7,900 a level that should guarantee Kenyans a basic package of health care. The structure and composition of per capita spending is however inefficient because a larger share is contributed by households.

Government spending on health is relatively low and has stagnated at below 2 per cent of GDP and at around 7 per cent of total government expenditures. One of the key bottlenecks to achieving UHC is the relatively low levels of public spending on health. Evidence from other

countries demonstrates that adequate public financing is critical to ensuring equity on the path to UHC. For Kenya to achieve UHC, the country will need to raise spending on health to around 5 per cent of GDP so that it can provide much-needed resources to finance UHC. Spending resources efficiently should also be a top priority. Inefficiencies in the health sector include skewed health expenditures towards curative services and an excessively large allocation of the heath budget to wages and other personnel costs. Pressure to increase spending on wages and salaries has recently been upped with doctors receiving a rather large salary increase and nurses and other cadres also pushing for more increments.

The public health spending structure is skewed towards high recurrent expenditures where salaries and wages account for a larger share. High recurrent expenditures are crowding out capital development expenditures. Total health expenditure is skewed towards curative at the expense of preventive and public health services may negatively affect prevention and control of priority interventions that include HIV/AIDS, TB, Malaria and the upsurge of NCDs.

Despite recent health financing reforms implemented by the country that include removal of user fees in public primary health facilities and Free Maternity Health, Out of Pocket (OOP) fees born by households still remain one of the major financiers of health care. The high reliance on OOP payments to finance health care has significant implications to both access and equity. Over the years, Households have continued to account for a significant share of total health expenditures which have mostly been in form of OOP payments. The high levels of OOP spending are mainly the result of low government budgetary spending on health both at the central and county level as well as low financial protection offered by health insurance including NHIF. High OOPs will therefore pose a threat to Kenya's proposal of achieving UHC by 2020. For OOPs to be substantially reduced, government expenditure on health must increase at a faster rate than the increase in OOPs.

Donor support has been a very important source of financing health care in Kenya but has shown a declining trend. Even though the role of donors in financing health care is declining, it still accounts for a large share of total health spending and is especially critical in financing vertical and intervention-based programs like HIV and AIDS among others. A substantial proportion of donor support to the health sector is off-budget and is also declining. As the country move towards achieving UHC, a concern that will need to be navigated is how to integrate delivery and financing of vertically implemented and managed programs into the proposed Social Health Insurance Fund (SHIF) within the context of a devolved system of government. The smooth transitioning of donor financed vertical programs to ensure gains made recently should not eroded.

The review has raised serious concerns about inefficiencies that affect the health system both at the central government and county level. As Kenya struggles to raise adequate resources to finance UHC, it is important to ensure that mobilized resources are spent well so that health expenditures lead to the greatest improvement in health outcomes. Even at the current levels of health spending, Kenya can achieve improved health outcomes by addressing inefficiencies and inequities associated with health spending. Spending on health at the national level (MoH) is dominated by curative care which is contrary to MoH policy of shifting resources from curative to preventive and promotive health care.

Benefit incidence analysis (BIA) shows the regressive nature of government budgetary health spending before devolution albeit with some minimal improvements between 2003 and 2013. Government subsidies at the hospital level are mainly pro-rich for the three years of devolution reviewed while government spending on primary health care facilities was found to be pro-poor. Government spending on health is skewed in favour of high-end curative care which benefits mainly to the richest households. The pattern of public health spending across the two levels of care; curative vs. preventive health care has remained largely unchanged in the last 10 years.

5.4.2 Recommendations

The following policy recommendations are derived from the findings of health public expenditures.

Increase government spending on health

Government spending on health is low when compared to its peers in the region and is insufficient to ensure an optimal balance between health inputs. Reliance on OOP to finance health care is regressive. To achieve the goal of UHC by 2022 through expanding coverage to quality health service as well as by increasing financial protection, Kenya needs to increase spending on health to around 5 per cent of GDP so as to be able to generate adequate resources. The government can explore measures to increase fiscal space for health by exploring potential domestic sources as well by leveraging existing public private partnerships to expand the private sector's role in financing health care.

Increase Efficiency of Health Inputs

In a cross-country analysis of health outcomes and spending, Kenya was grouped as a least efficient country due to higher than expected government expenditure. This highlights the need to improve efficiency and resource utilization. The efficiency analysis revealed that it is possible to increase outputs without increasing inputs. There is need to determine imbalances in allocation of inputs and to initiate redistribution to areas that have need. This applies to all inputs including human resources.

Reallocate Expenditures to Increase Counties' Spending on Health

There is need to increase government spending and reallocation of expenditures to and within the counties. Government health expenditures as a percentage of total government expenditures has remained low when compared to other countries in the region. The structure of public spending on health has changed with devolution with counties now assuming a bigger share of public health expenditures following transfer of health functions and the related health budget to the counties.

Redistribute Health Workers to achieve equity and efficiency

Kenya has not been able to fill the approved positions in all the health facilities; the gap is much worse in primary health facilities than tertiary care. There is need to redistribute health workers from tertiary facilities to primary healthcare facilities.

Phase down off-budget spending given improved PFM process

Off-budget donor support to the sector may not be properly aligned to the sector's priorities for maximum benefits, hence the need to phase down off-budget spending given improved PFM process.

Reform the National Health Insurance Fund and the entire health delivery architecture

Reform of the NHIF and the entire health delivery architecture to support UHC objective under the Big 4 agenda.

Tackle low execution of the budget

Tackle low execution of the budget in the sector through improved prioritization, procurement planning and execution.



CHAPTER 6 EDUCATION AND TRAINING SECTOR

This chapter focuses on Kenya's education system, the government initiatives, and support from stakeholders. Further, the chapter explains the expenditure review that gives an overview of education and training allocations, trends from all sources and expenditure analysis. It highlights areas for efficiency and effectiveness with specific focus on utilization of available sector financial, human and capital resources. Other sections of the chapter cover sector performance and equity dimensions, and interventions that should be put in place to improve the sector.

6.1 EDUCATION AND TRAINING CONTEXT

Kenya's youthful population requires sustained investment in human development. Recent population projections show that Kenya's population growth rate was 2.6 per cent in 2016, with a population estimated at 45.4 million. The proportion of youth between 15 and 34 years of age was 35.2 per cent, while the total school age population (age 4-17) was estimated at 18.3 million, representing 40.3 per cent share of the population.²¹The tertiary education (colleges, technical institutions and universities) age group between 18 and 25 was 6.9 million, representing 15.3 per cent share of the total population. This calls for a review in education spending to maximize its benefits to the country.

The Government with support from stakeholders has continued to improve access, quality, relevance and equity in education and training. The government is committed to national development priorities that impact the education and training sector through Vision2030, the successive implementation of the medium-term plans, and the "Big 4" agenda. Notably, the 2003 introduction of Free Primary Education (FPE) and the 2008 launch of the Free Day Secondary Education (FDSE) have significantly improved access and transition in Basic Education²². The Teachers Service Commission (TSC) introduced a teacher performance appraisal system in 2016, aimed at assessing teacher performance and promoting their professional development.

²¹ KNBS 2016. Kenya Population projections.

²² Basic Education' is defined to include pre-primary, primary and secondary education.

Technical and vocational education and training (TVET) has been rebranded and repositioned to raise its profile, while university education recorded substantial expansion, with the mandate of the Higher Education Loans Board (HELB) expanding to cover private universities, as well as TVET students. The Ministry of Education (MoE) is also revamping the National Education Management Information System (NEMIS) to improve data credibility in the sector, as a basis for policy formulation and planning. The Government has reformed the text book policy and centralized procurement of books for schools to improve availability of instructional material in both primary and secondary schools.

Kenya has been implementing an 8-4-4 system of education to be succeeded by the Competency Based Curriculum (CBC). The 8-4-4 system consists of 8 years of primary schooling for 6 to 13-year old, 4 years of secondary schooling for 14 to 17-year-old, and at least 4 years of university education. The new CBC system (2-6-6 -3) consists of: 2 years of pre-primary for ages 4 to 5;3 years each of lower and upper primary for ages 6 to 11; 3 years of junior secondary and 3 years of senior secondary for ages 12-17 years; and 3 years higher education. The system seeks to nurture every learner's potential by ensuring acquisition of core competencies. CBC shall emphasize formative rather than summative evaluations. At the TVET level, implementation of the Competence Based Education and Training Curriculum (CBET) aims at ensuring that skills produced are in tandem with the needs of the labour market.

The government has also initiated targeted initiatives to support the provision of education through alternative mechanisms. Some of the initiatives include the establishment of mobile schools in nomadic areas; provision of additional support to low cost boarding schools in the arid and semi-arid lands (ASALs) counties; capitation grants for special needs education learners; support to non-formal education institutions offering the primary school curriculum in slum areas; and improvement of school health and nutrition in collaboration with Ministry of Health (MOH). To improve access and equity at the tertiary level, the government has initiated conditional grants for youth at Vocational Training Centres (VTC) in the counties; and youth from disadvantaged families are set to benefit from HELB loans.

6.2 EDUCATION AND TRAINING FINANCING AND EXPENDITURES

6.2.1 Flow of funds in the education and training sector

The flow of public and private funds into the education and training sector is complex and involves various stakeholders. The main source of funds for the sector is the national budget, with the largest public funding flows going from the National Treasury to the MOE, TSC, the 47 County Governments, and the 291 Constituencies. These resources provide inputs for public pre-primary, primary and secondary schools, and for TVET, universities, and the sector's Semi-

Autonomous Government Agencies (SAGAs).²³ The MOE allocates and disburses the FPE and FDSE capitation grants directly to schools based on individual school enrolment numbers. Additionally, a Constituency Bursary Fund Committee identifies needy students for whom bursaries are provided at respective schools and tertiary institutions. A further sector funding flow is through the Constituency Development Fund, mostly targeting school infrastructure projects and some local bursaries. The County Governments receive their Equitable Share of National Revenues allocated by the Commission on Revenue Allocation, which they aggregate with locally-generated revenues to support the devolved functions, including pre-primary education and youth polytechnics.

6.2.2 Overall education and training financing

Education and training spending expanded over the review period. In 2016/17, overall education financing was estimated at KSH641.6 billion, a near doubling of the KSH325.7 billion in 2010. However, the total sector financing as a share of GDP declined from 12.7 per cent in 2010 to 8.9 per cent in 2016/17 as indicated in Table 6.1. The decline can be attributed to the overall expansion of the economy relative to education and training spending, and the government effort to maintain strong macroeconomic framework for fiscal sustainability given increased government outlays across most sectors.

Government and household spending on education almost doubled between 2013/14 and 2016/17. National government allocations increased from KSH264.9 billion 2013/14 to KSH339.1 billion 2016/17; and household financing estimated at Ksh196.4 billion 2013 rose to KSH245.9 billion 2016/17.

Government financing covers major sector inputs, including the FPE and FDSE capitation grants, higher education financing funds, personnel emoluments at all education institution levels, acquisition of instructional materials, some operations and maintenance (O&M) costs, and the provision of bursaries for needy students. At the secondary education level, government subsidies to both public day and boarding secondary schools cover instructional materials, school repairs and maintenance, local transport and travel, administration costs, activity fees, personnel emoluments for a minimum number of non-teaching staff, and basic medical costs. At the tertiary level, grants to universities and technical training institutions cover personnel emoluments for teaching staff and a limited number of non-teaching staff.

²³ Education sector SAGAs include: Education Standards and Quality Assurance Council; Kenya Institute of Curriculum Development; Kenya National Examinations Council (KNEC); Kenya Education Management Institute (KEMI); Kenya Institute of Special Education; Jomo Kenyatta Foundation; Kenya Literature Bureau; Centre for Mathematics, Science and Technology in Africa; Kenya National Commission for UNESCO; National Council for Nomadic Education in Kenya (NACONEK); National Education Board; Technical and Vocational Education and Training Authority (TVETA); TVET Funding Board (TVETFB); TVET Curriculum Development, Assessment and Certification Council (TVET CDACC); Kenya National Qualifications Authority (KNQA); National Commission for Science, Technology and Innovation (NACOSTI); Kenya National Innovation Agency (KENIA); National Research Fund (NRF); Biosafety Appeals Board (UFB); Kenya Universities and Colleges Central Placement Service Board (KUCCPS); Universities and Constituent Colleges; and The Pan African University of Science, Technology and Innovation (PAUSTI).

Sector financing through the CDF and County Governments spending was estimated at 4.8 per cent of aggregate education and training expenditures in 2016/17. The National Government Constituency Development Fund (NG-CDF) resources were mainly invested in infrastructure development and bursaries for needy students at post-primary education level.²⁴ County governments financing of education inputs, focused primarily on pre-primary education and youth polytechnics,²⁵ increased from 0.3 per cent of their aggregate resources in 2013/14 to 3.8 per cent in 2016/17. Internally generated resources, such as fees, amounted to 2.9 per cent of the entire education financing portfolio at the end of the review period, down from 4.7 per cent in 2010; but the nominal amount grew by 20 percentage points. External financing accounted for an average 0.5 per cent of education resources in 2016/17.

	2010/11	2013/14	2014/15	2015/16	2016/17	Percent- age share (2016/17)	Change 2016/17 over 2010/11
Central Government	188,584.4	264,901.0	290,691.9	307,743.5	339,117.8	52.9	79.8
Constituency Development Fund	4,885.6	5,636.6	5,862.0	6,096.5	6,340.4	1.0	29.8
County Governments	1,954.2	1,228.7	19,952.4	21,685.1	24,609.4	3.8	1159.3
Household (Parents)	109,111.8	196,354.1	213,995.0	230,424.0	245,869.3	38.3	125.3
NGOs and religious bodies	3,257.1	3,522.8	3,663.8	3,810.3	3,962.7	0.6	21.7
Private sector and companies	97.7	105.7	109.9	114.3	118.9	0.02	21.7
External loans and grants	2,377.7	1,499.0	1,500.8	1,500.8	2,996.0	0.5	26.0
Internally Generated Funds	15,308.2	16,557.4	17,219.7	17,908.5	18,624.8	2.9	21.7
Total Education Financing	325,707.0	489,805.2	552,995.5	589,283.0	641,639.3	100	97.0

TABLE 6.1: SOURCES OF EDUCATION FINANCING (KSH MILLION)

Source: MOEST, UNESCO and Authors' Computations.

Notes: (a) Household spending was computed on basis of total enrolment in public and private learning institutions, TVET institutions and universities, multiplied by the respective fees as reported in KIHBS (2015/16). Unreported levies are not included. (b) Computations for the other sources of education funds flows is based on the 2010 Education sector national accounts estimates extrapolated for the subsequent years.

While National government resources have aimed at reducing household education burdens, household financing increased by 30 percentage points during the review period. Parents pay user fees to cover boarding costs and other indirect, non-tuition costs. In 2016/17, household spending was estimated at KSH245.8 billion, representing 38.3 per cent of total education expenditure. These resources are raised through user fees, mainly directed to private education provision, financing of pre-primary, boarding costs and non-salary inputs at various levels as illustrated in Table 6.2. Households also finance all indirect costs (such as

²⁴ CDF is a 2003 fund originally managed by parliamentarians for grassroots development in their constituencies. Based on 2.5 per cent of national revenues, ring-fenced for grassroots infrastructural and socio- economic development, the resource is now governed by the National Government CDF Act (2016). For operational details, see http://www.ngcdf. go.ke/index.php/about-ng-cdf

²⁵ While primary and secondary education are National Government functions, county governments have nonetheless invested in infrastructure for these levels of education.

uniforms, transportation, accommodation and meals, amongst other costs). In the context of rapid education expansion, the provision of education has led to the escalation of direct and indirect schooling costs, especially at the post-primary level, increasing demands on household resources. This could undermine sustainable financing of education as a basic human right given Kenya's poverty rate of 36.1 per cent which has implications for household affordability of direct education costs.

	Pre-pr	imary	Prin	nary	Seco	ndary	Technical		University	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Tuition fees	30.3	57.2	16.1	53.2	38.6	51.6	48.8	58.7	54.4	55.5
Text books	0.9	1.5	5.5	4.7	4.0	3.3	2.5	2.2	1.3	1.0
Excise books	3.8	2.4	7.1	2.5	1.3	1.3	1.4	1.8	1.1	0.8
Uniform	11.6	8.6	14.6	5.2	4.5	3.7	1.3	0.8	0.1	0.0
Boarding	0.5	0.1	2.4	1.9	7.5	4.7	4.0	4.8	4.8	2.5
Transport	1.8	5.8	2.2	4.4	2.5	3.8	4.1	5.5	3.9	3.5
Development	1.0	0.4	2.5	0.3	1.6	0.7	0.3	0.2	0.2	0.1
Extra tuition	1.2	1.3	5.9	1.9	1.9	1.6	0.2	0.3	0.0	0.1
PTA & BOM	5.5	0.9	11.9	0.6	2.3	0.9	0.2	0.4	0.1	0.1
Pocket money	0.8	1.2	2.9	2.0	4.9	5.0	7.2	8.5	10.2	6.9
Caution money	0.0	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.3	0.1
Medical fees	0.1	0.1	0.1	0.2	0.4	0.3	0.4	0.3	0.6	0.1
Activity fees	0.5	0.3	3.5	0.4	0.8	0.4	0.3	0.1	0.3	0.2
Exam fees	2.5	1.4	7.2	1.3	1.1	1.1	2.0	3.0	1.1	1.3
Feeding	4.9	5.0	4.3	3.0	2.9	1.1	0.7	1.3	0.5	0.2
Other charges	34.6	13.7	13.7	18.3	25.4	20.3	26.4	12	21.1	27.6
Total (KSh.)	2,972	9,400	3,271	19,265	35,393	49,960	60,565	61,920	113,526	187,251

TABLE 6.2: PERCENT SHARES OF AVERAGE HOUSEHOLD EDUCATION SPENDING PER CHILD BY EDUCATION LEVEL

Source: Author's computation based on KIHBS 2015/16.

Private sector financing remains low despite the need for public private partnerships (PPP), especially at technical and university education levels. The private sector and individual institutions financed 0.02 per cent of education respectively, by providing and operating learning institutions at various levels of education and training, and/or direct funding of education and training inputs. NGOs and development partners' external grants and loans financed shares of 0.6 per cent and 0.5 per cent respectively. NGOs, FBOs, individuals, and corporate organizations support education through the improvement of school infrastructure and support to needy students; but their contribution has always remained below 1 per cent.

Despite the extensive off-budget education spending by non-government agencies and households at both the national and sub-national levels, these flows are rarely reported in the national education accounts. Further, off-budget expenditures are susceptible to weak financial management and are poorly documented in the National Integrated Education Management Information Systems (NIEMIS). The limited reporting of government and

non-government spending undermines transparency and accountability, and the efficient management of sector spending. Further, there is limited reporting and monitoring of activities implemented using the on-budget and off-budget resources.

6.2.3 The structure of public spending on education

Public education and training spending as a percentage of GDP was 5.6 per cent in 2013/14 and 4.7 per cent in 2016/17, indicating that the economy expanded at a higher rate than that of education spending. MoE receives one of the largest portions of the national budget, averaging 21 per cent between 2013/14 and 2016/17, amounting to KSH1.15 trillion, as reflected in Table 6.3. Expenditure increased by 25.6 per cent points, from KSh.264.9 billion in 2013/14 to KSH339.1 billion in 2016/17. Recurrent education spending as a share of recurrent national spending declined from 40.1 per cent in 2013/14 to 24.5 per cent in 2016/17; but development spending experienced a large change, from a 5.7 per cent share to an 8 per cent share.

	2013/14	2014/15	2015/16	2016/17
Total MOE % of GDP	5.6	5.4	4.9	4.7
Total MOE % of GOK spending	26.9	20.1	20.7	16.7
Total MOE Recurrent % of GOK Recurrent	40.1	33.5	30.1	24.5
Total MOE % of total GOK	26.9	20.1	20.7	16.7
MOE development % of GOK development	4.2	2.9	2.9	3.6
MOE recurrent % of MOE expenditure	94.3	93.7	95.2	92.0
MOE development % of MOE expenditure	5.7	6.3	4.8	8.0
AIA (External financing) % of MOE	0.6	0.5	0.5	0.9
Total MOE (KSh Million)	264,901.0	290,691.9	307,743.5	339,117.8

TABLE 6.3: TRENDS OF ACTUAL PUBLIC EDUCATION EXPENDITURE, GOVERNMENT OUTLAYS AND GDP (%)

Source: Ministry of Education

6.2.4 Recurrent and development spending

Recurrent education budget constantly dominated the total education budget, as illustrated in Figure 6.1. The recurrent share was consistently above 90 per cent, but the share declined from 94.4 per cent in 2013/14 to 90.3 per cent in 2016/17, with the resulting increase in the development budget likely arising from infrastructure improvement at the various education levels. Under funding of development spending has negative effect on school infrastructure, including the inadequate provision of water and sanitation in schools.

The sector's absorption rate was high averaging 94.9 per cent of the allocated funds. It increased from 95.4 per cent in 2013/14 to 98.5 per cent in 2016/17, with a record low of 91.8 per cent in 2014/15 (Figure 6.2). The average recurrent absorption rate was 96 per cent compared to 78 per cent for the development budget. Absorption declined due to the long down-time of the Integrated Financial Management System (IFMIS) during the last quarter



FIGURE 6.1: RECURRENT AND DEVELOPMENT PUBLIC SPENDING SHARES (%)

Data source: Ministry of Education



FIGURE 6.2: PUBLIC SPENDING ABSORPTION (%), 2013/14 -2016/17

Data source: Ministry of Education

of 2014/15, and to late exchequer releases and budget cuts which undermined project implementation. The key challenges affecting low budget execution and disbursement include: delays in Exchequer transfers, limited monitoring and evaluation feedback data that advise on subsequent disbursements, budget cuts and rationalization, delays and incomplete submission of appropriate projects' documents, closure of requisition module of the IFMIS system and inaccuracy of schools' enrolment data for capitation.

6.2.5 Education expenditure by functional classification

Under the development budget Primary Education and secondary education averaged 14.5 per cent and 17.1 per cent respectively during the review period. Secondary Education's share reflected a significant increase in the final year, attributable to FDSE's increased spending on infrastructure expansion. Figure 6.3 and Table 6.4 show that primary education dominated aggregate spending, accounting for at least 40 per cent of total spending across the period 2013/14-2016/17, followed by secondary and university education respectively. Primary education's aggregate share dropped by 10 percentage points, the shares for secondary and university education rose by 5 per cent and 4 per cent respectively.

In terms of the functional classification of the recurrent budget, primary education dominated public spending declined from 54.8 per cent in 2013/14 to 44.2 per cent in 2016/17. Secondary and university education had respective shares of 28.5 per cent and 19.7 per cent in 2016/17, while the pre-primary allocation increased from 0.5 per cent share in 2013/14 to 1.4 per cent share in 2016/17. Pre-primary education is a constitutionally devolved function, meaning that it has also benefitted from growing County government resources since 2013/14.

Under the development budget Primary Education and secondary education averaged 14.5 per cent and 17.1 per cent respectively during the review period. Secondary Education's share reflected a significant increase in the final year, attributable to FDSE's increased spending on infrastructure expansion. Figure 6.3 and Table 6.4 show that primary education dominated aggregate spending, accounting for at least 40 per cent of total spending across the period 2013/14-2016/17, followed by secondary and university education respectively. Primary education's aggregate share dropped by 10 percentage points, the shares for secondary and university education rose by 5 per cent and 4 per cent respectively.





Source: Ministry of Education

The University Education share was consistently high, averaging 32.2 per cent over the review period. This is attributed to increased demand for university education.

		Recu	irrent		Development				Total			
	2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17
General Administration and Planning	2.7	2.8	2.5	3.3	22.8	10.5	11.7	1.6	3.9	3.3	3.0	3.1
Primary Education	54.8	48.8	46.4	44.2	10.0	18.3	12.2	17.3	52.3	46.8	44.8	42.0
Teacher Education	0.1	0.1	0.2	0.2	0.7	2.3	3.5	2.0	0.2	0.3	0.3	0.3
Special Education	0.3	0.2	0.3	0.3	0.0	0.1	1.1	0.6	0.3	0.2	0.3	0.3
Pre-primary	0.5	0.7	1.5	1.4	0.3	0.4	0.1	0.1	0.5	0.7	1.4	1.3
Secondary Education	23.9	27.7	30.4	28.5	24.3	12.3	5.5	26.3	23.9	26.7	29.2	28.3
Technical Education	2.3	2.3	2.5	2.5	22.1	22.2	25.8	17.3	3.4	3.6	3.6	3.7
University Education	15.3	17.3	16.2	19.7	19.8	34.0	40.1	34.8	15.5	18.4	17.3	20.9
Total (KSh billions)	249.9	272.3	292.9	312.1	14.9	18.4	14.8	27.0	264.9	290.7	307.7	339.1

Source: Ministry of Education

6.2.6 Education expenditure by economic classification

The economic classification of education spending is dominated by current spending on compensation or remuneration of employees. Overall, such compensation accounted for 61.9 per cen education budget in 2016/17, followed by current grants and transfers at 26.2 per cent as shown in Table 6.4. There was a variance between budget estimates and actual spending execution or budget absorption levels. The absorption rate stood at 83.8 per cent for the total education budget, 85.7 per cent and 69.7 per cent respectively for the recurrent and development budgets. There were variations in absorption across the different economic activities, the highest rate being compensation of employees at 61 per cent while the lowest was use of goods and services at 3 per cent. These variances can be attributed to various factors, such as non-disbursement of funds, or the existence of vacant positions in the ministry relative to establishment norms in the case of compensation.

The second part of Table 6.5 shows trends in the respective approved and actual recurrent and development shares of the total budget, as well as the trends in the shares of the various economic classifications of the recurrent and development budgets. Thus, the approved recurrent budget share of the total budget decreased from 93 per cent in 2013/14 to 91.5 per cent in 2016/17, while the actual recurrent share was 94.9 per cent to 92.0 per cent, respectively. For the development budget, the respective movements were from 7.0 per cent to 8.5 per cent, and 5.7 per cent to 8 per cent. The last two columns of the table show the change in resources between 2013/14 and 2016/17. While the approved and actual development budgets doubled, the largest period changes were in the approved and actual grants and transfers of the development budget.

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	Average spending per learner (KSh)					je spend GDP per prio	ing as p Capita (ces)	er cent current	Average spending as multiple of primary per capita spending			
	2013	2014	2015	2016	2013	2014	2015	2016	2013	2014	2015	2016
Pre-primary education	2,380	4,446	4,760	4,766	2.1	3.5	3.3	3	0.2	0.3	0.3	0.3
Pre-primary education	2,380	4,446	4,760	4,766	2.1	3.5	3.3	3	0.2	0.3	0.3	0.3
Secondary education	34,434.40	37,794.20	37,246.20	35,008.60	30.3	30.1	26.2	22.1	3.1	3.7	5.9	6.1
Technical education	47,242.90	53,710.80	86,603.60	89,162.20	41.6	42.7	60.9	56.2	9.8	8.9	8.5	8.8
University education	147,248.90	130,100.40	125,753.90	128,166.10	130	104	88.4	80.8	0.2	0.3	0.3	0.3
GDP per Capita (current prices)	113,539	125,757	142,316	158,576								

TABLE 6.7: AVERAGE SPENDING PER LEARNER

Source: Ministry of Education

Education unit spending is high for both the government and households. As Table 6.7 shows, spending at the pre-primary level doubled between 2013 and 2016, compared to a modest 1.3 percentage point change for the primary level. However, average spending fell for all the other education levels, even as GDP per capita experienced a 40-percentage point change. Aggregating the percentage point changes suggests that some of the pre-primary spending growth arose from improved resource allocation across counties.

Despite the increase in unit spending at market prices in education and training at all levels, real per capita spending declined over the review period except for pre-primary education which increased by 29 per cent. At constant 2014 prices, per student spending at the primary, secondary, technical and university levels declined by 35 per cent, 42 per cent, 45 per cent and 50 per cent, respectively. These per capita public spending rates could relieve the household education spending burden, thereby releasing resources for other household expenditures, improving livelihoods.



FIGURE 6.4: REAL AND CONSTANT UNIT SPENDING BY LEVEL, 2013-2016 (KSH)

Source: Authors' computations

6.3 RETURNS FROM EDUCATION EXPENDITURE

This section provides a broad analysis of the Kenyan education sector's performance and internal efficiency and answers the question: What does the money buy? The analysis centres on the following main areas: i) cross national analysis and Labour productivity; (ii) access (school enrolment and out of- school); iii) internal efficiency including progression, dropout, repetition, delayed entry; (iv) equity based on socio-economic status, (v) learning outcomes; (vi) transition to secondary and tertiary education; vii) university enrolment and graduation; viii) access to technical and tertiary education; and ix) external efficiency-education and labour market. The section also examines returns to education and future human capital needs to assess linkage between investment on education and outcomes, which may inform policy on future implications of current education sector spending.

6.3.1 Education outcomes

International comparisons on education financing indicate that Kenya spends significantly more than most of its peers and has the highest achievement at primary education level. Table 6.8 presents a summary of selected countries' education spending as a share of their GDPs, their primary completion rates, and respective efficiency indices. The expenditure was compared to the similar spending from neighbouring countries with similar education systems (countries with primary education of 7 or 8 years), including Ethiopia, Malawi, Mozambique, Tanzania and Uganda. The primary education efficiency index measures the average share of the GDP that each country spends to achieve its primary completion. On average, the selected countries spend 5 per cent of their GDP on education. Only Malawi and Mozambique spend higher than Kenya at 6.9 per cent and 6.7 per cent respectively. All the countries except Tanzania and Uganda spend above the average for Africa.

Country	Education of C	as per cent GDP	Complet (per	ion rates cent)	Efficiency index		
Country	Percent (a)	Relative to average (b)	Grade 6 (c)	Grade 9 (d)	c/a	d/a	
Kenya	5.6	1.1	99.6	63.1	20.3	12.8	
Ethiopia	4.5	0.9	50.7	33.0	10.3	6.7	
Malawi	6.9	1.4	75.0	17.1	15.2	3.5	
Mozambique	6.7	1.3	56.4	24.0	11.5	4.9	
Uganda	3.3	0.7	79.7	33.3	16.2	6.8	
Tanzania	3.5	0.7	83.7	45.9	17.0	9.3	
Average selected countries	5.0	1.0	74.2	36.1	15.1	7.3	
Average Africa	4.3	0.9	67.0	37.0	13.6	7.5	

TABLE 6.8: INTERNATIONAL COMPARISON FOR EDUCATION SPENDING AND COMPLETION RATES, 2013

Source: Unesco Institute for Statistics (UIS), International Institute for Educational Planning (IIEP) 2013.

Of the selected countries, Kenya has the highest grade 6 completion rate, 25 percentage points more than the average for the selected countries and 34 percentage points more than the average for the continent. At grade 9 – for Kenya this is the completion of Form `1, Kenya still does better than its neighbours by similar margins. It is noted that for every percentage of GDP spent on education, Kenya achieves 20.3 points of grade 6 and 12.8 points of grade 9 completion. Comparatively, Malawi, which spends more of their GDP on education, achieves 15.2 points completion of grade 6 and 3.5 points of grade 9 completion. Mozambique on the other hand achieves 11.5 points for grade 6 completion and 4.9 points for grade 9 completions for every percentage of GDP spent on education.

Analysis indicates that Kenya performs comparatively well in pre-primary and primary education access levels while the secondary and tertiary education attainments are low. For instance Ghana, Malaysia and Vietnam spent 20 per cent of their respective GDPs on education and attained respective secondary enrolment rates of 60 per cent, 85 per cent and 110 per cent respectively, while Kenya's rate was 58 per cent (Figure 6.5). However, Kenya's tertiary level attainment (13 per cent) was lower than that of Malaysia (44 per cent) and Ghana (16 per cent).

The international analysis presented in Table 6.9 shows mixed trends in tertiary education financing. The selected countries spent an average 16 per cent of government spending on education compared to Kenya's 20.6 per cent share. For tertiary education, Kenya's 81 per cent spending per tertiary education student as percentage of GDP per capita was lower than the group average of 139 per cent. Indeed, tertiary education was much cheaper in Mauritius and Indonesia despite spending an equivalent share of GDP on education as Kenya does.

Literacy among Kenyan adults aged 15 and over was better than that of Egypt and the East Africa Community (EAC) countries, except Tanzania. On literacy among the youths aged 15 to 24, the Kenyan female share (86.6 per cent) marginally outperformed males (85.2 per cent); but there was a mixed gender picture across comparable countries, with females dominating in six of the 12 countries. The literacy rates generally stood above 70 per cent; but the adults over age 24 with some secondary education only rose above 60 per cent in 3 cases. While literacy in Tanzania and Rwanda averaged 87 per cent and 80 per cent respectively, their secondary education rates each stood at 13 per cent.

Despite the low education attainments, about 9.2 per cent of university graduates are unemployed. In 2005/6, the unemployment rate for university graduates was 7.5 per cent, as seen in Table 6.10, with the rate being higher for female graduates compared to male graduates. The highest unemployment rate was recorded among those who had attained secondary education followed by those that had attained only primary education. The overall unemployment rate decreased from 12.7 per cent in 2005/6 to 7.4 per cent in 2015/16; but

FIGURE 6.5: CROSS COUNTRY COMPARISONS



- Ghana Education spending as % of GDP — Malaysia Education spending as % of GDP — Vietnam Education spending as % of GDP









Source: Authors' computations

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The slow growth of jobs in Kenya's formal economy combined with the preference of graduates for formal employment, partly explain the observed unemployment of graduates in Kenya. Formal sector employment opportunities do not match the ever-growing number of graduates averaging 5.3 per cent between 2013 and 2017. Formal sector employment prospects for fresh graduates, measured by the ratio of the expansion in formal sector employment each year to the number of graduates from the secondary and tertiary institutions, was generally low. However, there is growth in new formal- sector jobs which can be explained by the expansion of the public sector resulting from the devolved government structure.

The phenomenon of slow growth in the formal sector partly explains the relatively high growth of the informal sector as individuals strive to earn a living in a sector characterized by ease of entry. In 2017, for example, 88 per cent of the 897,800 new jobs created were in the informal sector. Thus, for every 10 jobs created in the country, nearly 9 were created in the informal sector²⁶. Informal sector employment is highest in the wholesale and retail trade, and in the hotels and restaurants industry, which absorbed 60 per cent of those employed. Most informal sector employment is concentrated in rural areas which account for almost two thirds of the total jobs. Figure 6.6 shows that the share of informal sector employment in all jobs has been between 82 per cent and 90 per cent between 2013 and 2017.



FIGURE 6.6: SECTOR SHARES IN TOTAL EMPLOYMENT (%)

Source: Economic Survey, 2018

Various skills audits reveal that Kenya has large skills gaps in nearly all the sectors earmarked to drive growth and development, including agriculture (food security), health, housing, and manufacturing. With respect to health, the National Manpower Survey Basic Report of 2011/12 and other audits identified human health and social work activities as areas of shortages. Specific skills gaps were closely related to established and emerging health needs in the country such as nephrology, orthopaedic and trauma medicine specialists. Skills gaps have also been reported in sectors that are identified as "key enablers" of growth and development.

²⁶ Economic Survey, 2018.

One example is the geothermal energy subsector where UNEP (2015)²⁷ noted that among the challenges to achieve the strategic objective of expanding geothermal energy is inadequate skilled manpower in the areas of geothermal science and technology. This is consistent with the National Manpower Survey Basic Report findings indicating that chemical engineers and technologists were among the specific skills in greatest shortage.

Besides provision of entrepreneurship education in formal educational institutions, Kenya has a diverse landscape of programs in support of entrepreneurship. A significant number of the programmes are entirely or partly funded and implemented by private organizations, which include local and international NGOs and companies. In addition, entrepreneurship education is part of the formal education curriculum in basic education and the TVET. There is little or no systematic evidence on the effectiveness of the programmes in increasing entrepreneurial attitudes. The general perception is that significant implementation challenges exist, caused by shortage of qualified staff, lack of business experience of entrepreneurship teachers, and curricular problems.

6.3.2 Internal Efficiency

Skills gaps can be attributed to persisting internal inefficiencies in the system. The intake rate in primary education was generally high; but the system cannot retain most learners towards the end of the cycle. Figure 6.7 shows the percentage of a cohort of students enrolled in Standard (Std) 1 in years 2003, 2004 to 2005 respectively, who eventually reach Form 4 in 2014, 2015 and 2016, respectively. The figure shows that the Kenyan system is characterized by a relatively high gross intake into Standard 1 with learners generally staying in school up to Standard 7, before considerable proportions drop out in Standard 8, and Form 4.



FIGURE 6.7: COHORT SURVIVAL RATES REACHING FORM 4 (%)

Source: Economic Surveys 2016 and 2017

²⁷ UNEP (2015). A skills audit and gap study for the geothermal energy subsector in African countries.

One possible explanation for the decline in transition from Std 7 to Std 8, and from Form 3 to Form 4, is the schools' desire to perform well in rankings of the respective high-stakes, end of cycle Kenya Certificate of Primary Examinations (KCPE) and the Kenya Certificate of Secondary Examinations (KCSE). While the examinations restrict progression to secondary and university education respectively, the schools often hold back students whose anticipated weak performance would undermine the school's mean grades.²⁸ It would therefore be important to continually support skills development pathways for youth who might not be enrolled in any level of education.







Source: Uwezo household surveys of 2012 and 2014

Another measure of internal efficiency is the phenomenon of Out-Of-School Children (OOSC). Estimates from the 2014 Kenya Demographic and Health Survey (KDHS) (Figure 6.8) show that close to 1 million children, aged 6-17 years, are out of school, either because they have never attended or they dropped out.²⁹ Panel (a) in Figure 6.8 shows the distribution

²⁸ For a detailed analysis of the role of high-stakes exams in restricting student progression in sub-Saharan Africa, see Sajitha, Lockheed, Ninan, and Tan, (2018) Facing Forward: Schooling with Learning in Africa, World Bank Document.

²⁹ See pages 27 to 29 of Kenya National Bureau of Statistics *et al* (2015), Kenya Demographic and Health Survey 2014. Nairobi: KNBS.

of OOSC by gender, location and quartile based on the Uwezo surveys of 2012 and 2015.³⁰ The share of OOSC increased between 2012 and 2014 at the national level and across the different social-economic categories shown, and in the ASAL parts of the country. Being OOSC is marginally greater among boys relative to girls, in rural areas compared to urban areas, and in ASAL areas. Across the reporting years, OOSC was three and two times greater in the bottom quartile compared to the top quartile. However, to address the out of school challenge, the education sector has put in place major interventions including cash transfers for vulnerable children and school feeding programmes using multi sectoral approaches and collaborations with other sectors.

Panel Figure 6.8 shows a county distribution of OOSC based on the Uwezo surveys of 2012 and 2014. The rates for 2012 ranged from Murang'a's 2 per cent share to Samburu's 32 per cent share, while the 2014 rates ranged from 4 per cent for Kirinyaga to Samburu's 33 per cent. All counties except 7 experienced an increase in OOSC shares, the exceptions being Lamu, Kajiado, Narok, Wajir, Tana River, Baringo and West Pokot. All these OOSC-reduction counties are ASAL ones, with most them having been among the 10 highest rates. Conversely, the greatest increases in OOSC rates occurred among the more developed, least poor counties, such as Embu, Bomet, Kiambu and Nairobi. There is need to review the policy on out of school children to make it more comprehensive and inclusive. The direct and indirect costs involved in education remain a hindrance to access, especially at secondary levels.

6.3.3 Learning outcomes

Evidence from government and civil society led student assessments (measure of cognitive skills) show that learning achievements in Kenya remain low, as is the case in other sub-Saharan African countries.

Figure 6.9 shows trends in KCSE performance between 2011 and 2017. For the 2016 and 2017 academic years, parts (a), (b) and (c) of the figure show that less than 20 per cent of the total candidates, boys alone, and the girls alone achieved a C+ and above score, which is the minimum result for entry into a university course. This was a general drop from the average 30 per cent 'pass' rate of the 2011 to 2015 period. Figure 6.8 (d) shows that in year 2016 and 2017, more than half of the candidates obtained grades D and below. The system is expected to absorb the KCSE graduates not enrolled into universities to the middle level colleges as part of the strategy to equip the learners with appropriate skills that will propel the country to achieving vision 2030 and sustainable development.

³⁰ See Uwezo (2015). Uwezo defined OOSC as children aged 6-16 who were classified as having dropped out of school and never enrolled during the survey.



FIGURE 6.9: TRENDS IN KSCE PERFORMANCE, 2011 TO 2017

Source: Kenya National Examination Council, 2017

Learning outcomes vary substantially by regions/sub-nationals (counties). Figure 6.10 shows the proportion of the combined grades 2 to 4 children in the Uwezo 2014 survey that met the specific grade 2 level competencies by county. The children's ability to read a paragraph was consistently greater than their ability to read a story. More than half of the children in 41 counties, that is, 87 per cent of all, could not read a grade 2 story. Poor literacy skills are mainly among children from ASAL counties, which occupied 13 of the 15 lowest reading competency counties.

Panel (b) data reflect average numeracy skills across the counties, showing that children were consistently better able to multiply than to divide. Numeracy competence was lower in ASAL counties.

According to a 2017 analysis of citizen perceptions on other challenges facing education in the country, non-education challenges include poverty, peer pressure, malnutrition and drug abuse among students, child labour and early marriages, inhibitive cultural and religious practices³¹. About nine in every 10 respondents cited poor student performance and

³¹ TWAWEZA Kenya (2017).



FIGURE 6.10: KNOWLEDGE OF SECOND, THIRD AND FOURTH-GRADE LEARNERS ACROSS COUNTIES IN KENYA

Source: Uwezo 2014

weak student discipline as major challenges affecting learners across the country. Other school related factors included poor school infrastructure, poor implementation of school curriculum, low parental involvement in children's schooling, and inability of schools to attract and retain good teachers.

Further, nine in every 10 citizens did not know how much FPE funding was available to schools either because the schools did not divulge the information to the public, and/or the parents had limited interaction with the school. Without this basic accountability relationship between schools and communities, it was impossible for Kenyans to hold head teachers to account for the public resources; and to also ensure that money was reaching all learning institutions on time and that the resources were being used efficiently to attain expected outcomes. It's a requirement for the BoM's through the Head teachers to display the funds disbursed on a public notice board for public consumption within the school. The learning and training institutions vote heads either lack or have low allocation for some critical components that are required by learning and training institutions such as expenses for safety measures, rehabilitation of critical infrastructure, and environmental management (maintenance). There was low allocation for maintenance and provision of sanitation and water in education institutions.

Despite the low learning achievements reflected above, the results from two regional assessments show that Kenyan children are more knowledgeable than their peers in other Sub-Saharan African countries. The regional assessments include the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) targeting sixth graders, and the World Bank's Service Delivery Indicators (SDI) for fourth graders.³² Figure 6.11 shows the performance of fourth-graders in a selection of African countries on 2012 SDI numeracy and literacy tests. The Kenyan fourth-graders do better on almost all tests items assessed than their peers in the other 4 countries, including the Anglophone Nigeria, Tanzania and Uganda, and Francophone Senegal.



FIGURE 6.11: KNOWLEDGE OF FOURTH-GRADE STUDENTS ACROSS SUB-SAHARAN AFRICAN COUNTRIES

Source: SDI survey, 2012

6.3.5 Access to higher education

Kenya's transition from the secondary education level to higher education is relatively low. In the 2011/12 academic year, as seen in Table 6.12, a modest 15 per cent of KCSE students were admitted to public and private universities locally, despite 32 per cent of the 373,053 candidates having qualified by attaining grade C plus and above. Non-university training institutions absorbed 16.1 per cent of the Form 4 graduates. The data shows that the situation had improved until 2015/16 when 33.4 per cent of KCSE candidates qualified to join university, but only 26.6 per cent of those who qualified were admitted to local universities. This represented 19.0 per cent (7.7 per cent public and 8.6 per cent private) of the total KCSE candidates during the previous academic year. Although, students who are not admitted to universities are expected to join other middle level colleges for certificate and diploma courses; only 19.2 per cent got admission to these middle level colleges.

³² SAQMEC is at http://www.sacmeq.org/, while SDI is at http://blogs.worldbank.org/education/category/tags/sdi
Academic Year	Form 4 enrol- ment	% Qualified (C+ and above)	Universi- ty admis- sion (% of Form 4 enrol- ment)	Public Universi- ty admis- sion (% of Form 4 enrol- ment)	Private university admis- sion (% of Form 4 enrol- ment)	Propor- tion of Students admit- ted to technical training institu- tions (%)	Propor- tion of Students admit- ted to teacher training colleges (%)	Potential Non-Place- ment (%)
2011/12	373,053	32.1	15.4	10.5	4.9	13.6	2.5	68.4
2012/13	411,330	30.1	19.9	14.1	5.8	15.5	2.3	62.3
2013/14	448,700	27.5	22.3	14.3	8.0	16.5	4.1	57.0
2014/15	466,700	32.1	25.9	17.3	8.6	15.8	4.3	54.0
2015/16	507,400	33.4	26.6	19.0	7.7	15.1	4.1	54.2
2016/17	578,900	15.4	22.7	15.4	7.4	17.5	3.6	56.2

TABLE 6.12: TRENDS IN THE DESTINATIONS OF FORM 4 LEAVERS

Source: Economic Surveys, 2017; and authors' own computations

The proportion of learners attaining C+ and above declined substantially between 2015/16 and 2016/17. The proportions were estimated at 33.4 per cent and 15.4 per cent in 2015/16 and 2016/17 respectively, the drop from the 33.4 per cent share of 2015/16 occurring in the context of extensive reforms at the Kenya National Examination Council (KNEC). This means that only 15 and 12 out of 100 secondary education finalists were able to attain the minimum qualification for direct admission into university education. Out of the 578,901 Form 4 finalists, 565,553 representing 87.9 per cent did not transit into Kenyan public or private universities. However, technical training institutions and teacher training colleges respectively absorbed 23.6 per cent (136,621 graduates in number) and 3.6percent (20,840 graduates), making a total of 157,461 graduates placed alongside the numbers admitted to university.

Access to technical, vocational, education and training improved during the review period. The total number of TVET institutions under the ministry of education grew by 21 per cent over the review period having increased from 754 in 2013 to 1,962 in 2017. Public TVET institutions grew by 71 per cent over the review period while Vocational Training Centres, which are managed at the devolved level, grew by 69 per cent over the same period. TVET enrolments rose from 148,009 in 2013 to 275,139 in 2017³³. The data shows a significant (137 per cent) change in national polytechnic enrolments comparing 2017 with 2013, and an 86 per cent change in overall TVET institutions' enrolments over the same period. Vocational training colleges' numbers grew by 46 percentage points; but enrolment in public technical and vocational colleges fell as its private sector counterparts saw an increase. Teacher training colleges experienced modest change in their numbers; but they stood out for women consistently dominating the student numbers. The improvement in enrolment could be

³³ Economic Surveys, 2013-2018

attributed to the fast pace of reforms in TVET, which far outstrips the pace of provision. The data also shows that there are more female students enrolled in private TVET institutions relative to public institutions. This can be explained by women-friendly set of courses that private TVCs offer, such a home economics, beauty, among others.

TVET institutions are spread across different ministries resulting in the lack of uniformity in the categorization of their institutions. For example, some TVET trainers were employed by TSC while others are employed directly by the ministries offering TVET courses. Certification was often based on completion of courses and passing examinations rather than demonstration of competence. TVET programs in Kenya were generally regarded as being inferior to general academic education and are therefore considered second tier destinations of students with lesser academic abilities and lower aspirations. Additionally, there is a persisting inadequacy of resources for prioritized programmes such as the provision of specialized training facilities as well as Infrastructure for technology and innovation. To address this, the government has embarked on rebranding and repositioning TVET to make it a premier lucrative career choice.

Enrolments in University education has increased significantly since 2013, partly due to the growth in the number of public and private universities. University enrolments grew by 44 percentage points between 2013/14 and 2017/18, from 361,379 to 520,863. Public universities account for the largest share of enrolment, averaging 83 per cent throughout the review period. The growth in enrolments is also partly driven by the increase in the number of new courses that are appealing to students of both genders, as well as accreditation of popular courses by the relevant professional bodies. Enrolments in private universities have also been driven by a policy change allowing government sponsorship of students to such institutions through the Higher Educations Loans Board (HELB).

6.4 EFFICIENCY AND EFFECTIVENESS IN EDUCATION AND TRAINING SPENDING

This section focuses on the status of education and training on human and capital resource utilization relative to set norms and standards. Focus areas include: i) the technical efficiency of basic education; and ii) utilization of schools, classrooms and teachers as captured through school size, class size and student teacher ratio. The Kenya government's target for primary school pupil teacher ratio (PTR) is 40, while that for the pupil class ratio (PCR) is 50. At the secondary level, the PTR and PCR targets are 35:1 and 45:1, respectively.

6.4.1 An aggregative education and training efficiency measure

An efficiency score was computed as an aggregate measure of the relationship between education and training inputs and outputs. The key inputs considered for the measure included a county's per capita spending on education and training, its average PTR, and its average class size. The summative evaluations and net enrolment rates were used as composite measure of education and training outcomes. Technical efficiency was estimated for the 2014-2016 period based on respective levels of education and training inputs (PTR; average class size; and pupil/textbook ratio) and outputs (performance in summative evaluations, and the net enrolment rate). Part (i) of Figure 6.12 shows that technical efficiency at the primary level ranged from Trans Nzoia's 0.50 score to Kajiado's 0.84 score,³⁴ with the national rate standing at 0.70. Part (ii) of the figure provides the county efficiency scores for secondary schools, ranging from Kitui's 0.64 to a perfect score of 1.00 for 9 counties. The national average stands at 0.90. The efficiency levels can be attributed to the fact that most schools were operating below desired level.

FIGURE 6.12: COUNTY DISTRIBUTION OF THE EDUCATION AND TRAINING EFFICIENCY MEASURE, AVERAGE FOR 2014-16







Source: Ministry of Education

³⁴ The expansive Kajiado is essentially an ASAL one; but its northern reaches provide accommodation for large numbers of Nairobi's day commuters, uplifting their host county's performance.

6.4.2 Average county public and private school size

In most of Kenya's counties, schools were on average operating below their optimal size. Given the primary school level's optimal size of 50 pupils per class, assuming a single stream school from grade 1 to 8, which is the minimum of 400 learners. All public primary schools fall under the FPE scheme, but private schools set their school fees independently. The intervention of FPE means that on average, public schools are likely to attract more pupils. This review divided the total number of public and private schools in the counties to arrive at the county average public and private school size. Part (i) of Figure 6.13 shows that in 2016, only 14 counties' average public primary school size met the 400-student target with the remaining 33 counties' averages falling below. The national average of 275 pupils per school is also well below the national norm. There was low enrolment in private primary schools as depicted by the county average standing at less than 50 per cent of the 400-student target. However, the private primary school averages for 2 counties, Garissa and Turkana were disproportionately high.



FIGURE 6.13: COUNTY DISTRIBUTION OF AVERAGE LEARNERS PER PRIMARY AND SECONDARY SCHOOL, 2016

(ii) Average public and private secondary school size per county



Source: Ministry of Education

Most secondary schools were operating below optimal level. The recommended average secondary school size is 540 students, assuming least 3 streams per class of 45 pupils. However, part (ii) of Figure 6.13 shows that all counties except Nairobi had average public secondary sizes of less than 540, with 7 of the 10 counties with the lowest averages being ASAL counties. The national average was 289 students. Among the lowest 10 were the 3 comparatively 'developed' counties of Embu, Nandi and Meru. Smaller-than-optimal size was also the case for private secondary schools, where average sizes per county were generally less than one-fifth of targets. But as with private primary schools, the Turkana private secondary school average was an exceptional 700, with the rates for 2 other ASAL counties – Elgeyo Marakwet and Garissa – competing with the public secondary school rates. The analysis indicates the need for infrastructure and associated funding assessment and the need to deal with issues of equity in the education sector.

6.4.3 Average county public and private pupil class ratio

The majority of the counties' average public-school pupil class ratio (PCR) was also lower than the optimal PCR for both the primary and secondary levels. The national average public primary school PCR was 34, while that at the secondary level was 39, compared to the respective norms of 50 and 45. Across the counties, the average primary class size varied from a low of 22 students for Tharaka-Nithi to a high of 77 in Turkana, as reflected in part (i) of Figure 6.14. The county averages at the secondary school level performed better against the relevant norm, as seen in part (ii) of the figure. While the averages run from 29 in Isiolo to 57 in Turkana, with 24 counties' averages touching the 45 PCR mark.





Source: Ministry of Education



6.4.4 Average county pupil-teacher ratios

The data presented in Figure 6.15 shows that most counties have a lower PTR than the targeted rate of 40 at the primary level and 35 at the secondary level. Considering TSC employees alone, the national primary level PTR of 34 is well below the target of 40. Part (i) of the figure shows that for TSC teachers alone, there are wide PTR disparities across counties with rates below the norm for about half of them. The ratios varied from 92 for Turkana to 25 in Nyeri. ASAL counties accounted for 7 of the 15 counties with ratios exceeding 40, including Turkana, Mandera, Garissa, West Pokot, Wajir, Narok, Kilifi and Kwale; but non-ASAL counties also breached the ceiling, including Bungoma, Kakamega and Trans Nzoia. The inclusion of non-TSC or the Parents Association (PA) – teachers reduced the average PTR for all counties, leaving only 8 in breach of the ceiling.

Part (ii) of Figure 6.15 presents the average county secondary school PTRs, which show that when only TSC staffing is considered, then 12 counties do not meet the ministry's 35 students per teacher benchmark. Among that group are 2 ASAL counties, i.e. neighbours Turkana and West Pokot. The figure shows that the inclusion of BoM teachers alongside the TSC ones lowers the PTR significantly: while the TSC ratios lay between 20 and 45, the combined TSC/BoM range is much narrower, with Isiolo's 15 being lowest while some 17 counties narrowly reaching 20. As with the primary school level, teachers are, on average, under-employed, which raises questions over the common practice of BoMs requiring parents to finance additional non-TSC teachers.

Counties operate with sub-optimal pupil/student teacher ratios, while most counties experience shortage of teachers in some public primary and post primary institutions. According to the TSC, the shortages are mainly driven by the increased establishment of new 'small', under enrolled schools and/or classrooms, driven by the National Government-Constituency Development Fund (CDF) and other community initiatives; and the poor distribution of teachers across regions and schools.



FIGURE 6.15: AVERAGE COUNTY SCHOOL PTRS FOR TSC AND PA TEACHERS, 2016



(ii) Average county secondary school PTRs

Source: Calculations based on EMIS data of 2016.

Other factors that undermine the equitable distribution of teachers in Kenya include, amongst others: insecurity especially in the northern parts of Kenya causing teachers to flee their stations; external interference in the distribution of teachers; the preference of teachers for schools in urban and high potential areas; the unwillingness of teachers to be separated from their families and medical considerations. Besides the primary school deployment criterion, the secondary schools' Curriculum-Based Establishment means that teachers of elective subjects will have low workloads. Additionally, there is always the risk of teacher deployment being based on unreliable school level enrolment data.

6.5 CONCLUSIONS AND RECOMMENDATIONS

Increases in education spending during the review period resulted into substantial sector expansion.

However, main challenges affecting the education and training sector stem from the weak link between the inputs, outputs and outcomes of education and training resources, which leads to a mismatch between demand and supply of skills. Although substantial effort is being made to strengthen National Integrated Education Management Information System (NIEMIS) and TVET Management Information System (TMIS), the system does not capture micro data especially on utilization of on-budget and off-budget finances and individual school needs.

Further, there are quality assurance gaps in the data management functions for both education and training. Progression of enrolled learners is unsatisfactory given the drop-out rate in grades 7 and form 3. There were regional inequalities in the distribution of teachers and infrastructure across schools in the country. There was a weak link between education and training delivery and other relevant sectors such as health, security, agriculture and economic services. The sector recommends improving efficiency in utilization of the resources.

Institutionalize National Education Accounts and improve the practice of public financial management at the school level. It is necessary to institutionalize a National Education Accounts system, building on the one-off 2010 attempt to analyse the sector's accounts. The government should design a system to capture off-budget resources into the education and training sector at all levels and undertake annual Education Sector Accounts Analysis. Such initiative should incorporate the harmonization of the education budget's structures, providing relevant vote heads at the national, county and institutional levels. The education sector is also in need of deeper audits, greater instance of value for money analysis and more regular tracking of public expenditure.

Link expansion of education infrastructure to demand across all levels. Efficiency in the utilization of education resources can be enhanced by linking school infrastructure development with the geographical demand for schools, thus addressing the issue of small schools operating at sub-optimal levels.

Strengthen teacher development for effective curriculum delivery and address the existing uneven or regional inequities in teacher distribution by ensuring that teacher deployment is based on both curriculum and enrolment. A critical action for tertiary education institutions, universities and TSC is to strengthen pre-training, in-service training programmes and deploy teachers according to school enrolments. Potential strategies include: Regulate and establish a framework for starting new schools, or at best, set minimum enrolment thresholds for new schools to qualify for TSC teachers with a view of ensuring optimal teacher utilization; establish enrolment-based criteria for teacher allocation by ensuring that the deployment of teachers to schools is based on reliable school level enrolment data; ensure effective engagement of stakeholders in teacher deployment across schools, based on agreed norms and periodically maintain and review incentives for teachers in marginal counties, enhance security especially in the northern parts of Kenya; and address issue of BOM and PA teachers in schools and cost burden arising.

Strengthen consultations between national and county governments in delivery of ECDE and vocational training. The devolution of ECDE and VTCs calls for regular consultative forums between county education administrators, national government and other stakeholders to deliberate on issues of devolved education and training funds. The forums could be convened by the Council of Governors and could involve the Intergovernmental Committee. Counties should implement free capitation programmes for ECDE. The money can be ring-fenced then allocated to counties for spending. Currently, TSC is already registering ECDE teachers. MoE should engage with County governments on the modalities of initially introducing capitation grants for public ECDEs.

Strengthening TVET and life skills for youth with education deficits. The significant drop of learners from the formal education system at standard seven and form three implies wastage if corrective measures are not put in place. Disengaged youth at this level deserve skills which are offered at the TVET level. The sector should initiate policies and programs to revamp and reposition TVET as a premier choice and career path for disengaged youth. Considering the increasing demand for training at this level, investment in infrastructure and modern equipment is a priority to meet the Labour market's skills mix requirements of 1: 4: 12: 60 for Engineers, Technologists, Technicians and Artisans respectively. The TVET sub-sector should continue investing in the construction and equipping of TVET institutions to meet the required capacities at the four levels.

There is also need to: Conduct an assessment on the capacity of physical facilities in VTCs; Provide capitation grants to VTC trainees through the County Revenue Fund account; Ensure that the vocational curriculum is skills oriented; Developing and implementing a policy and guidelines for co-curricular activities in VE; Developing the capacity of trainers both at pre-service and in-service on CBET; Develop and implement a framework for VET trainer management; Develop industrial attachment framework for trainers/instructors and trainees; Undertake a mapping of all VTCs; Build capacity of managers in VET institutions on governance, financial management and accountability and the improvement of infrastructure through Donor funds; Diversify sources of funding for TVET and University education, especially through sustainable public private partnerships; and finally, despite recent expansion in TVET enrolment, there is need for institutional improvement including improvements in the quality of equipment in TVET institutions.

Development and operationalization of a formal comprehensive and coherent ST & I national policy shall improve efficiency in university education delivery. In addition it will address the sector's fragmented governance approach. It is also necessary to strengthen enforcement of science and technology linkages among government, academic, research and training institutions, industry, financial sector and professional groups. This will lead

to increased uptake of the Public-Private Partnership as a financing model to incubate research and innovation outputs into goods and services. Establishment of the National Physical Sciences Research Laboratory is key for research in the areas of physical sciences while improving productivity of relevant graduates. Other interventions include: Increased enrolment in Science, Technology, Engineering and Mathematics (STEM) to attain the goals set by Vision 2030 and skills development for high technology manufacturing required by the "Big 4 Agenda"; strengthened institutional capacity of the Kenya National Innovation Agency (KENIA) to facilitate the actualization of the knowledge- based economy as envisioned in the Kenya Vision 2030; develop framework for capturing, developing, sharing and storing National ST&I information for decision making and the National Skills Inventory and Audit for ST&I; and develop highly skilled human resources to address gender disparity in ST&I.

Develop and institutionalize effective Labour market placement systems to ensure that youth graduating from tertiary education are effectively placed in productive economic activities. The Commission for University Education (CUE) could improve efficiency in public universities by limiting duplication of degree programmes. Institutions of higher learning can be supported to run academic programmes given that they have adequate resources, including infrastructure, while encouraging specialization. Education stakeholders would need to invest in high technology and specialized programmes including related infrastructure development. Approved academic programmes that do not attract adequate students within a given period should be discontinued and/or replaced. Tertiary education institutions should also continue to invest in online infrastructure for digital delivery and management of programmes.

Strengthen quality assurance structures, audit, monitoring and evaluation. The school audit directorate has few personnel compared to number of schools to audit. Under Governance and accountability, the sector seeks to review governance and accountability action plan that will entail developing reporting structures, enhance quality assurance and Implement risk-based approach on accountability of resources.

Adopt multi-agency approach in education delivery. The sector needs to work towards a synergized multi-disciplinary and multi-agency approach in policy planning and budget execution. On the other hand, the two levels of government will improve intergovernmental collaboration to improve service delivery in the sector while addressing emerging inequalities and inefficiencies. Although at the national level policies and plans are well developed, at the institution level, dissemination of the same has not been done adequately. This therefore hinders the institutions from linking their plans to the priority programs articulated in national plans. National education sector goals are not always incorporated into learning institutions' goals and plans.

CHAPTER 7 AGRICULTURE SECTOR

7.1 BACKGROUND

This chapter reviews public expenditures in the agricultural sector from 2013/14 to 2016/17 financial years. During this period the sector departments in the Agriculture, Rural and Urban Development sector, as defined in the Medium-Term Expenditure framework, were the State Departments for Agriculture, State Departments for Livestock, State Department for Fisheries and the Blue Economy, the Ministry of Lands, Housing and Urban Development, and the National Lands Commission.

The chapter focuses on two broad areas (i) budget allocation and composition in the agricultural sector, and (ii) efficiency and effectiveness of agricultural expenditure. Therefore, the review seeks to understand the trends in agriculture expenditures and key priority programs implemented in the sector, appraise the influence of agricultural expenditures on outcomes, and identify actions that the government could undertake to strengthen public policy-expenditure linkages for greater sectoral impact. The chapter contains suggestions on how to overcome constraints (institutional, technological, and capacity) that affect spending in the sector and improve the efficiency and effectiveness of public expenditures in the sector. The findings of the review will go a long way to inform key policy decisions towards the attainment of Food and Nutrition security, which is one of the 'Big 4' Agenda development objectives prioritised by the National government.

The sector plays a major role in attaining food and nutrition security, poverty alleviation, employment creation, foreign exchange earnings and has a significant multiplier effect on other sectors such as manufacturing, wholesale and retail, and the informal sector. This role is exemplified in global commitments that Kenya is a signatory to, such as the Sustainable Development Goals, the first two goals of which are to eradicate poverty and hunger.

The sector currently contributes about one-third to the country's Gross Domestic Product (GDP). It accounts for approximately 60 per cent of export earnings, source of 18 per cent of the country's formal employment, an estimated 60 per cent of informal employment, and accounts for 66 per cent of total household income in the country.

In Kenya, the agriculture sector is dominated by the crops sub-sector, of which a majority of producers are smallholder farmers under rain-fed systems. In recent years, the sector has faced several shocks such as unpredictable and unreliable weather, pest and disease prevalence and effects of climate change and variability. The sector also faces declining soil quality, uneconomical land sizes due to population pressure, low levels of financing, suboptimal level of investments, and ineffective policies not backed by evidence among other constraints. These challenges have contributed to the sluggish performance registered by the sector.

Despite the sluggish growth in the agricultural sector, Kenya is at par with neighbouring countries in the region. Figure 7.1 shows the agricultural GDP growth rate for East African Countries (EAC), Ethiopia and the Sub Saharan African (SSA) region from 1990 to 2017. On average, Ethiopia registered higher agriculture GDP growth rates for agriculture compared to the EAC countries. On the other hand, the agricultural GDP growth rate in the region has remained relatively low and constant at below five per cent over the past two decades.





Source: (World Bank, 2018)

During the period under review, Kenya had targeted an average annual agriculture GDP growth rate of 6.4%. The closest the country came to achieving this target was in 2013 and 2015 when the agriculture GDP growth rate was five per cent. Since 2015, the growth rate has fallen owing to poor performance realised in the sector as a result of adverse weather, pest and disease prevelence, and effects of climate change and variability.

The Kenya Constitution 2010 established a two-tier governance system which transferred some administrative functions and mandates from the National government to County governments. Under the devolved system, County governments have now been allocated significant responsibilities in agriculture, health, trade, roads, and county planning among other functions. Under the devolved system, county governments are expected to develop

programs that are more responsive to local needs. The principal objectives for the devolution of functions were to enhance efficiency in public service delivery and have a more responsive government. However, several concerns persist including (i) allocation of resources to the sector, (ii) matching resource allocation to functions of the two levels of government, (iii) composition of public expenditure in the agricultural sector, (iv) policy coherence between the two levels of government, (v) budget absorption rate and accountability mechanisms, and (vi) the participation of private sector in providing services such as market facilitation, extension, and financial services in the agricultural sector.

7.2 STATUS OF THE AGRICULTURE SECTOR IN KENYA

Agricultural production in recent years has been below average mainly as a result of production shocks, ineffective policies, and low investment resulting in low productivity levels among farmers. In this section, we describe some of the major challenges affecting the sector and recent policy changes that are expected to affect the sector moving forward.

7.2.1 Declining land for agriculture

Figure 7.2 shows the trends in per capita arable land in Kenya and selected countries in EAC and south-east Asia. As expected, because of population increases per capita arable land in the country declined by more than 50 per cent from about 0.7 acres in the mid-1970s to 0.3 acres in 2015. The trend in declining land sizes underscores the need to improve agricultural productivity to ensure that the country attains food security and that agricultural producers have a profitable enterprise. Given that this trend was similar to Asian Countries n, realising a green revolution is paramount for the agricultural sector.



FIGURE 7.2: TRENDS IN PER CAPITA ARABLE LAND

Source: World Bank, 2018

7.2.2 Input use

Use of yield-enhancing inputs such as improved seed varieties and fertilisers is essential for improving agricultural productivity. At the peak of the green revolution in Asia, fertiliser consumption in many Asian countries was over 100kgs/ha on average³⁵. However, fertiliser use in SSA countries has been hampered by high fertiliser prices and financial constraints that limit their ability to purchase fertiliser and under-developed private sector fertiliser retail markets³⁶ Figure 7.3 shows the trends in fertiliser consumption in Kenya and the region from 2002 to 2015. Fertilizer consumption was highest in Kenya at 30kgs/ha, and although the trend in fertiliser use is rising, there is high variability in its utilisation by crop and region. Ethiopia recorded a higher percentage increase although there was high variability over the past five years as well. There was a modest increase in fertiliser utilisation in Tanzania, while Uganda had the least utilisation and remained relatively constant during this period. In the SSA region, fertiliser utilisation have mainly been credited to public support programs such as the input subsidy programs that was reintroduced in the 2000s, after being discontinued during the structural adjustment period.



FIGURE 7.3: TRENDS IN FERTILISER CONSUMPTION FROM 2002 TO 2015

Source: World Bank, 2018

Although the country utilises fertiliser more than most countries in the region, it is important to note that the use varies across commodities and agro-ecological zones. For example, a study by Tegemeo Institute in 2014 shows that while about 66 per cent of farmers used inorganic fertiliser, 11 per cent used organic fertilisers, while 23 per cent did not use any fertiliser at all. Further, there were variations on inorganic fertilizer used by commodity. Tea, coffee and wheat farmers who used inorganic fertilizers used closer to the recommended application rates. However, maize farmers only used about one-third of the recommended rate on average. The low application rates had a less than desired effect in raising the levels of productivity.

³⁵ David & Otsuka, 1994).

³⁶ Morris, *et al.*, 2007.

In efforts to boost fertiliser utilisation among smallholder farmers, the government has spent KSH1.1 billion since 2008 to supply at subsidised prizes 30 Million Metric Tons of fertiliser. This level of spending meant that the government spent an average of KSH3 billion each financial year for the past ten years.

There has been varied improvement in the use of complementary inputs. However, this improvement varies by commodities and agro-ecological zones. For instance, over 72 per cent of the area under maize had improved varieties, however, it was very substantial (98 percent) in high-potential maize growing regions and low (38%) in the lowland areas. Farm mechanization in Kenya is still low compared to Asian countries during the green revolution. Farm mechanization is useful in improving labour productivity and efficiency of small farms. Tractor utilization in Kenya was 25 tractors per 100 sq Km of arable land by 2015, increasing by two-thirds from mid-1970s.

7.2.3 Agricultural Productivity

Cereal productivity in Kenya has stagnated and has been highly volatile. Currently, Kenya has the lowest yields in East Africa despite being a leader in the 1980s and 1990s. Yields for cereal grains in Kenya have been greatly affected by production related stocks such as adverse weather and prevalence of pest and diseases. Among neighbouring countries, Ethiopia has registered the most significant improvements in their cereal yields since the turn of the century. The low productivity underscores the importance of transforming agriculture in Kenya. Importantly, there is need to learn from own experiences and successful countries to unlock the barriers that have constrained increases in yield improvement.

Ethiopia managed to increase its cereal productivity growth by seven per cent for the past decade. Key to this was increase in use of yield-enhancing inputs such as improved seed and fertilizer. The improvement in yield-enhancing inputs was driven by high public expenditure in the agriculture sector, especially on extension services. The percentage of farmers reached by extension services in Ethiopia rose from 30 per cent in 2004 to 74 per cent in 2013 In addition, Ethiopia also invested in improving market access, and provided local and international price incentives to farmers.





7.3 ALLOCATION AND EXPENDITURE REVIEW FOR THE AGRICULTURE SECTOR

7.3.1 National level allocation and expenditures

The allocation of functions between national and county governments is established in articles 185, 186 and 187 of the Constitution and the Fourth Schedule. Agriculture, except agricultural policy, is a function of county governments, including (i) Crop and animal husbandry, (ii) Livestock sale yards. (iii) County abattoirs, (iv) Plant and animal disease control, and (v) Fisheries. For the period under review, the public-sector expenditures in the country are discussed at the two levels.

Budget allocation in the sector at the national level is undertaken through the Medium-Term Expenditure Framework (MTEF). Figure 7.5 shows the trends in budget allocation at the national level between 2013/14 and 2016/17 financial years for the Agriculture, Rural and Urban Development Sector.



FIGURE 7.5: AGRICULTURE SECTOR ALLOCATION AND EXPENDITURES AT THE NATIONAL LEVEL BETWEEN 2013/14 AND 2016/17 FINANCIAL YEARS

Source: The National Treasury

Allocation based on approved estimates to the sector increased from 2013/14 to 2015/16 before declining in 2016/17. Expenditures followed a similar trend, although the gap between approved and actual expenditures narrowed in 2016/17. The decline in the allocation and expenditure is partly explained by the reorganization of government departments. The State Departments of Housing was delinked from the Ministry of Lands, Housing and Urban Development, while Irrigation was moved to the Ministry of Water in 2015.

Figure 7.6 shows the recurrent allocations based on approved estimates and expenditure for the agricultural sector at the national level between 2013/14 and 2016/17 financial years. Recurrent allocations increased slightly in 2014/15 before declining, then increasing significantly in 2016/17 financial year. On the other hand, recurrent expenditures dipped in 2015/16 then rose significantly in the 2016/17 financial year. Conversely, development allocations increased in 2014/15 before declining through the remaining period. The largest decline was in the 2016/17 financial year. The expenditure patterns followed the same trend.



Figure 7.7 shows the allocation and expenditures in the agriculture sector at the national level as a percentage of national estimates between 2013/14 and 2016/17 financial years. The allocation as a percentage of the national budget increased from 2.3 per cent to 3.6 per cent in 2015/16 but dropped to 2.8 per cent in 2016/17 financial year. The allocation to the sectors is way below the committed level of funding, i.e. 10 per cent under the Malabo Declaration.

Agriculture expenditures as a percentage of total expenditures at the national level declined through the period from a peak of 4.3 per cent in 2013/14 to 1.9 per cent in 2016/17. The trend in agriculture allocations and expenditures needs to be raised significantly to return to a path of high productivity and growth for the sector.





Source: The National Treasury

During the period under review, there were deviations from the budget for all the years.

Table 7.1 shows the budget and expenditures at the national level for the period under review. The supplementary budget reduced the approved budget by an average of 15 per cent each year. Further, sector departments received 14 per cent less than the final approved budget. This deviation was highest in 2013/14 and 2014/15.

	2013/14				2013/14				2013/14				2016/17			
	Printed Estimates	Approved Estimates	Exchequer Issues	Dev from approved	Printed Estimates	Approved Estimates	Exchequer Issues	Dev from approved	Printed Estimates	Approved Estimates	Exchequer Issues	Dev from approved	Printed Estimates	Approved Estimates	Exchequer Issues	Dev from approved
Recurrent	17.9	16.8	16.3	-3%	18.4	17.9	15.9	-11%	15.1	14.6	14.4	-1%	23	23	22.1	-4%
Development	47.8	42.4	33	-22%	60.8	50.5	38.7	-23%	55.7	43	37.2	-13%	28.7	18.7	16.4	-12%
Total	65.7	59.2	49.3	-17%	79.2	68.4	54.5	-20%	70.8	57.7	51.5	-11%	51.7	41.6	38.4	-8%

TABLE 7.1: BUDGETARY ALLOCATIONS AND EXPENDITURES AT THE NATIONAL LEVEL (KSH BILLION)

Source: Controller of Budget

Table 7.2 shows the absorption rates for recurrent and development expenditures for the period under review at the national level. The absorption rates are calculated from approved budgets and from received funding released through the exchequer. Sector departments utilized more recurrent funds than development funds. The absorption levels for both recurrent and development expenditures improved over the review period. In 2013/14 and 2014/15 a key concern was the pending bills that occurred as a result of budget variations as shown in Table 7.1, where these years had significant variations in development allocations.

	201	3/14	201	4/15	201	4/15	2016/17		
	From Ap- proved	From Ex- chequer issues							
Recurrent	89	91	84	95	91	95	95	100	
Development	80	103	83	108	83	92	88	99	
Total	83	103	83	104	85	95	92	100	

TABLE 7.2: ABSORPTION RATES IN THE AGRICULTURE SECTOR AT NATIONAL LEVEL BETWEEN

Source: Controller of Budget

7.3.2 County level allocation and expenditures

County governments make independent decisions on how to finance their sectors from their revenues. The budget cycle is synchronized with the budget cycle for the national government. However, county governments are yet to adopt sector-based planning, with the common practice being planning and budgeting as county departments.

Figure 7.8 shows the allocations and expenditures to the agriculture sector made by county governments between 2013/14 and 2016/17. A key distinction between county government and national government expenditures was that county governments did not follow the sector approach. Instead, they constituted the ministry trying to mirror the national government although there were many variations where a county added other departments to the agriculture, livestock, fisheries and veterinary departments. These departments included cooperatives, trade and irrigation.





Source: Commission on Revenue Allocation and Controller of Budget

County governments only allocated the development budget for agriculture in their first year in office. At this time, recurrent expenditures were budgeted under the governor's office and it was not possible to isolate the budget by departments. On average, total allocation to the sector was six per cent. The nominal level of funding rose slightly for county governments

between 2014/15 and 2016/17. On average, county governments allocated 45 per cent to the recurrent budget and 55 per cent to the development budget. Agriculture sector expenditures by county governments increased during the period under review.

Figure 7.9 shows the recurrent allocations based on approved estimates and expenditure for the agricultural sector between 2013/14 and 2016/17 financial years for county governments. Recurrent allocations increased throughout the period with the largest increase being in the 2016/17 financial year. Recurrent expenditures rose slightly each year over the period. On the other hand, development allocations increased in 2016/17 although the development expenditures rose each year.



FIGURE 7.9: AGRICULTURE SECTOR RECURRENT ALLOCATION AND EXPENDITURES FOR COUNTY GOVERNMENTS

The increases in agriculture expenditures at the county levels is partly attributed to increases in allocation, especially for development expenditures, and improvement in absorption rates. Table 7.3 shows the budgetary allocations and expenditures at the county level between 2014/15 and 2016/17 The sector received an average 18 per cent less than was approved between 2014/15 and 2016/17. The development expenditure had the largest deviation, averaging about 30 per cent less during the period. The reason for such deviation was, among others, low revenues raised by county governments and also cuts in exchequer releases from the national government.

TABLE 7.3: BUDGETARY ALLOCATIONS AND EXPENDITURES AT THE COUNTY LEVEL (KS	H BILLION)
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		2014/15			2014/15		2016/17			
	Ap- proved Esti- mates	Exche- quer Issues	Dev from ap- proved	Ap- proved Esti- mates	Exche- quer Issues	Dev from ap- proved	Ap- proved Esti- mates	Exche- quer Issues	Dev from ap- proved	
Recurrent	9.7	9.5	-3%	10.9	10.6	-2%	12.4	12.0	-3%	
Development	13.0	9.6	-26%	16.6	10.8	-35%	16.2	12.2	-25%	
Total	22.7	19.0	-16%	27.5	21.4	-22%	28.6	24.2	-16%	

Source: Controller of Budget

Source: Controller of Budget

Table 7.4 shows the absorption rates for agriculture expenditures at the county level. The levels of absorption for agriculture expenditures were lower compared to that observed at the national level. In part, county governments were setting up their systems and infrastructure at the beginning of the period under review. The utilisation of development expenditures improved even as that for recurrent expenditures declined. A key concern remains that county governments were unable to fully utilise the funds received during the financial year for both recurrent and development expenditures.

	2014	4/15	201	4/15	2016/17		
	From Ap- proved quer issues		From Ap- proved	From Ap- proved From Exche- quer issues		From Exche- quer issues	
Recurrent	90	93	89	92	80	83	
Development	59	79	57	88	64	85	
Total	72	86	70	90	71	84	

TABLE 7.4: ABSORPTION RATE	S IN THE AGRICULTURE	SECTOR AT COUNTY	LEVEL (KSH BILLION)

Source: Controller of Budget

7.3.3 Decomposition of agricultural expenditures at national level

Figure 7.10 shows a breakdown of cumulative agriculture sector recurrent expenditures for the period 2013/14 to 2016/17. Transfers to Semi-Autonomous Government Agencies (SAGAs), staff salaries and emoluments, and expenditures on other assorted operating expenses made up for the key expenditure items accounting for 95percent of the recurrent expenditures. Of the three major expenditures, there were huge variations on other assorted expenditures within the period. However, expenditures on staff emoluments kept rising except for the last year under review, with the expenditures on transfers to SAGAs fairly constant except for the last year when they doubled (Table 7.5). The huge increase in transfers to SAGAs was to support SAGAs following revenue gaps that were occasioned by implementation of the Crops Act, 2013. The Crops Act, 2013 abolished levies charged by SAGAs, which accounted for a significant proportion of their revenue streams.



FIGURE 7.10: COMPOSITION OF AGRICULTURE SECTOR RECURRENT EXPENDITURES AT NATIONAL LEVEL

Source: Controller of Budget

	Personnel Emoluments	Domestic Travel	Foreign Travel	Hospitality Conferences and Catering Costs	Training	Purchase of Motor Vehicles	Printing and Advertising	Rentals and Rates - Non-Residential	Maintenance Expenses- Motor Vehicles	Maintenance Expenses Other Assets	Current Transfers	Scholarships and Other Educational Benefits	Other expenditures	Total Recurrent Expen- diture
2013-14	4250.1	156.9	91.2	69.9	133.7	99.9	75.7	210.6	83.6	55.6	4446.2	5	5227.7	14906.2
2014-15	5326.6	151.4	36.1	145.4	60.3	0	72.6	201.6	51.5	52.5	4774.1	0	4248.1	15120.3
2015-16	5646.5	204.5	68.6	155.1	64.6	0	95.2	178.8	50.1	54.9	4383.9	0	2386.5	13275.3
2016-17	4864.3	189.8	52	239	76.1	0	55.3	105.6	42.5	15.2	8612.4	0	7629.4	21872
Total	20087.5	702.6	247.9	609.4	334.7	99.9	298.8	696.6	227.7	178.2	22216.6	5	19491.7	65173.8

TABLE 7.5: BREAKDOWN OF AGRICULTURE SECTOR RECURRENT EXPENDITURES AT NATIONAL LEVEL (KSH MILLION)

Source: Controller of Budget

Figure 7.11 shows a breakdown of cumulative agriculture sector development expenditures for the period 2013/14 to 2016/17. Capital transfers to SAGAs, expenditures on other assorted operating expenses, and refurbishment of buildings, infrastructure and other civil works were the key expenditure items accounting for 88 per cent of the development expenditures. Transfers to SAGAs reduced throughout during the period, while expenditures on refurbishment of buildings, infrastructure and other civil works were highest in 2014. Expenditures on other assorted operating expenses, and refurbishment of buildings were highest in 2014/15 (Table 7.6).



FIGURE 7.11: COMPOSITION OF AGRICULTURE SECTOR DEVELOPMENT EXPENDITURES

Source: Controller of Budget

	Contracted Technical and Professional Services	Maintenance of Motor Vehicles	Maintenance of Other Assets	Capital Transfers	Non-Residential (Offices, Schools, Hospitals etc.)	Residential (Including Hostels etc.)	Refurbishment of Bldgs./ Infrastructure and Civil Works	Purchase of IT Networking/ Communication related Equipment and Soft ware	Pre-feasibility, Feasibility and Appraisal Studies	Construction of Building	Purchase of Specialized Plant, Equipment and Machinery	Other Expenditures	Total Development Expen- diture
2013/14	722.8	7.1	103.7	17,652.6	2,929.0	7.0	7,206.1	9.3				5,449.8	34,087.4
2014/15	800.0	1.5	148.3	15,480.7	2,111.9	1,149.6	12,487.1	1,222.5	573.7			10,151.5	41,763.9
2015/16		0.4	204.8	11,401.0	35.2	194.5	8,498.4	-	1,119.7	1,899.3	68.9	14,312.7	35,547.6
2016/17	-	1.9	12.3	5,783.5	731.3	-	92.3	-	715.4	164.0	-	8,901.1	15,869.2
Total	1,522.8	10.9	469.1	50,317.8	5,807.4	1,351.1	28,283.9	1,231.8	2,408.8	2,063.3	68.9	38,815.1	127,268.1

TABLE 7.6: BREAKDOWN OF AGRICULTURE SECTOR DEVELOPMENT EXPENDITURES FROM 2013/14 TO 2016/17 (KSH MILLION)

Source: Controller of Budget

7.3.4 Agricultural expenditures by programs at the national level

The Public Expenditures in Support of Agriculture Sector (PEAS) analysis shows the weights of expenditures on agricultural subsidies, knowledge production and dissemination, infrastructure, multipurpose projects and administrative costs. They have been calculated for national level expenditures only, as county-level data quality would not allow such granular analysis. Both recurrent and development expenditures have been considered. On average, infrastructure has the highest share of national PEAS, at 26 per cent, versus 22 per cent for subsidies, 21 per cent for knowledge expenditures and 20 per cent for multipurpose projects.

Infrastructure expenditures are driven by spending on irrigation (21 per cent of PEAS). The government has pursued several massive irrigation schemes over the period, especially the Mwea, Bura and Galana Kulalu food security projects. These projects are geared towards protecting Kenya's agriculture from droughts, as experienced in 2017, and limit its dependence on erratic rainfall.

On the subsidy program, subsidies were channelled through the National Accelerated Agricultural Inputs Access Programme (NAAIAP), the fertiliser subsidy program and the agricultural insurance program. Farmers targeted under the NAAIAP are provided with free fertilizer and maize seeds for one acre regarding the fertiliser subsidy program, farmers paid the difference between the purchase price and subsidy at the NCPB stores. The national government also subsidised agricultural insurance by paying 50 per cent of the premium for crop insurance and 100 per cent of the premium for coverage of livestock. The locus of private transfers of public resources (subsidies) is therefore on seeds and fertilizers rather than capital (e.g. machinery, on-farm irrigation). They are renewed every year to a similar extent, except for a small surge in 2015/16. Storage subsidy expenditures, on the other hand, are

	2013-14	2014-15	2015-16	2016-17	Average
Subsidies	21%	23%	21%	25%	22%
Capital subsidies	0%	0%	1%	0%	0%
Input subsidies	12%	13%	16%	13%	13%
Storage subsidies	8%	10%	4%	12%	8%
Knowledge	12%	24%	26%	22%	21%
Research	6%	15%	20%	15%	14%
Extension and advisory services	3%	4%	1%	1%	2%
Training	0%	1%	1%	2%	1%
Inspection/quality control	3%	5%	3%	5%	4%
Infrastructure	34%	21%	25%	24%	26%
Feeder Roads	0%	0%	0%	0%	0%
Irrigation	26%	20%	23%	18%	21%
Other infrastructure	3%	0%	0%	2%	1%
Processing and marketing	5%	1%	2%	4%	3%
Multipurpose	26%	18%	14%	22%	20%
Multipurpose projects	14%	6%	8%	10%	9%
Multipurpose - SAGA	12%	12%	7%	13%	11%
Administrative costs	7%	14%	15%	7%	10%
Total	100%	100%	100%	100%	100%

TABLE 7.7: HEAT MAP TABLE OF THE SHARE OF AGRICULTURAL FUNCTIONS AT THE NATIONAL LEVEL

Source: National Treasury

almost synonymous to the budget for the Strategic Food Reserve (SFR). This contingency fund, managed by the National Cereals and Produce Board (NCPB), is used to subsidize producers (buying over market price maize and beans in particular) and consumers (selling below market price). It accounts for a very sizeable share of the total agricultural budget despite not representing an investment towards the sector rather a food security measure which helped, for instance, mitigate the effects of the 2017 drought. This calls for scrutiny on the efficiency with which the reserve is managed.

The share of spending on knowledge is substantial at 14 per cent, although it accounts for 0.1 per cent of Kenyan GDP over the period, on average, ten times below the 1 per cent figure decided upon by the Executive Council of the African Union in the 2006 Khartoum Decision for Agriculture and Technology (African Union, 2006). Multipurpose projects often include research components, but they are by and large funded by donors (80 per cent). In addition, the 2 per cent share of spending on extension and advisory services and the 1 per cent share on training leaves knowledge dissemination activities somehow underfunded. In the period before devolution, Kenya spent 25 per cent of the agricultural budget on the provision of extension services the drastic drop in spending on extension services is attributed to changes in governance structure, however, county governments also spent less on agriculture resulting in low services delivery.

Public goods (infrastructure plus knowledge) represent between 43 per cent and 67 per cent, depending on how multipurpose project expenditures are to be considered. Over the years, infrastructure PEAS have also remained the top spending function as illustrated in Figure 7.12. Identifiable administrative costs are low, at 10 per cent on average, but they are a fraction of the actual administrative costs, which pervade every function of expenditure to a certain, incommensurable extent.





Source: The National Treasury

Half of the multipurpose expenditures are spent through SAGA, although they spend on other functions, such as irrigation and research. Figure 7.13 shows the functional analysis of SAGA transfers. Budget records for transfers to SAGAs are unpredictable, with administrative, economic and functional names changing from one year to another, making tracking difficult. The main takeaways are the surge in transfers to the National Irrigation Board in 2014/15 and 2015/16 to finance large irrigation schemes and the appearance of "multipurpose SAGA" in the budget of 2015/16, which is representative of the Agriculture and Food Authority (AFA)³⁷. Although it was established in the Agriculture, Fisheries and Food Authority Act of 2013, it was not found in IFMIS records before 2015-16. In that very year, budget lines for the aforementioned crop SAGAs disappear, except for the Pyrethrum Board. In 2016/17, only the AFA persists, showing an effective integration of the Act into the budget. Expenditures on livestock SAGAs increased in 2016/17, perhaps reflecting an important transfer to the Kenya Meat Commission.

It should also be noted that the fertilizer subsidy programme accounting for 5 per cent of total PEAS is counted under development expenditures (sub-item "fertilizer clearance"). Transfers to SAGAs, on the other hand, are labelled as recurrent, even if they arguably contribute to expanding the sector's productive base, such as the case of transfers to the Kenya Agriculture and Livestock Research Organization (KALRO).

³⁷ The AFA was created as a merger of the Kenya Sugar Board, the Tea Board of Kenya, the Coffee Board of Kenya, the Horticultural Crops Development Authority, the Pyrethrum Board of Kenya, the Sisal Board of Kenya, the Cotton Development Authority and the Kenya Coconut Development Authority.



FIGURE 7.13: TRANSFERS TO AGRICULTURAL SAGAS, FUNCTIONAL BREAKDOWN (KSH BILLIONS)

Source: The National Treasury

Overall, research (KALRO) and multipurpose SAGAs (driven by AFA), as well as storage (SFR), constituted the major recurrent expenditures, whereas irrigation (National Irrigation Board), input subsidies and multipurpose projects (donor-funded) dominate development spending (Figure 7.14). The analysis shows that the Government by and large invested in irrigation, whereas development partners contributed the largest share to multipurpose projects and processing/marketing infrastructure.





Source: The National Treasury

*for development only, recurrent expenditures being 100percent domestic.

7.3.5 Development Partners Funding

The share of development partner funding is calculated at the national level only since donor funding mostly goes to the national level (96 per cent) and county-level data contains minimal information on externally funded PEAS. On-budget external resources³⁸

³⁸ Off-budget expenditures are not recorded in the IFMIS and are therefore not analysed here. Budget aid is not counted either, since it cannot be attributed to a specific economic sector like agriculture.

represent an average 39 per cent of budgeted PEAS at the national level but 23 per cent of actual PEAS (Figure 7.15).



FIGURE 7.15: SHARE OF EXTERNAL RESOURCES IN TOTAL BUDGETED AND FINAL PEAS (DEVELOPMENT EXPENDITURE AT NATIONAL LEVEL %)

Source: The National Treasury

These administration's difficulty in following multiple and diverse donor public financial management procedures and meeting donor conditionality for disbursement of budgeted funds could explain the wide variation between allocation and expenditure. Disbursement rates are higher for loans (38 per cent) than grants (28 per cent). There is an important budgeted final donor expenditure gap in 2015/2016, with final donor expenditures representing only 12 per cent of national PEAS (9 points below average). This can be traced to two irrigation projects, the Galana Kulalu Food Security Project and the Mwea Irrigation project. These have been budgeted for a combined KSh 4.8 billion in 2015/2016, with no final expenditure recorded. The unspent budget broadly accounts for the variance between the 2015/2016 budgeted-final donor expenditure gap and the average budgeted- final gap for the 2013/14-2017/18 period.

7.3.6 Distribution of donor funding

The IFMIS database records the name of donors funding development projects. The set is remarkably complete, with the source of funding identified for 95 per cent of external PEAS. The International Development Association (World Bank/IMF) dominates, with 43 per cent of identifiable donor support to the sector. Other key donors are the International Fund for Agricultural Development (IFAD), Sweden, the African Development Bank and Japan (all close to 10 per cent). In spite of its large agricultural development projects (KAVES, PREG, ISPP, REGAL), the United States Agency for International Development (USAID) spends mostly off-budget and is almost absent from the dataset (0.04 per cent).

Denmark funds alone display a high absorption rate, at 109 per cent on average over the 2013/14 to 2016/17 period. This is followed by World Bank funds (68 per cent), African Development Bank (66 per cent), United Nations Development Programme (58 per cent), Spain (54 per cent), and Sweden (53 per cent). Other donor funds are below 50 per cent, with an average execution rate of 39 per cent. The Mwea Irrigation project was largely funded by Japan and the freeze in disbursements in 2014/15 and 2015/16 results in average execution rates of 20 per cent.

Donor funding can also be broken down into development projects (Figure 7.16). The main ones (over 5 per cent of donor funding) over the period have been the Kenya Agricultural Productivity and Agribusiness Project (KAPAP), the Kenya Coastal Development project (KCDP), the Agricultural Sector Development Support Programme (ASDSP), the Mwea Irrigation project, the Regional Pastoral Livelihood Resilience project (RPLR), the East African Agriculture Productivity Project (EAAPP) and the Smallholder Horticulture Marketing Programme (ShoMaP), the Smallholder Dairy Commercialisation Project (SDCP), Drought Resilience and Sustainable Livelihood Project (DRSLP).



FIGURE 7.16: DONOR PEAS, BY KEY PROJECTS PERIOD 2013/14-2017/18 AS A PERCENTAGE OF TOTAL DONOR FUNDING

Source: The National Treasury

Donor projects have been multipurpose in essence (KAPAP, RPLR, KCDP, EAAP), at 52 per cent of total donor funding, with some focus on processing and marketing (ShoMaP, Dairy Commercialization Program, part of the ASDSP funding), at 15 per cent, and irrigation at 11 per cent.

While domestic resources are concentrated on irrigation, both semi-autonomous government agencies, such as KALRO and SFR, and donors tend to focus on multipurpose projects in research and agricultural processing/marketing infrastructure as indicated in Figure 7.17.



FIGURE 7.17: FUNCTIONAL BREAKDOWN OF PEAS, DOMESTIC AND EXTERNAL (%)

Source: The National Treasury

7.3.7 Factors affecting Expenditures

- i. **Funds flow:** Exchequer releases come in late at both national and county levels. The trend for having heavy expenditures towards the end of the financial year persisted during the period under review. In part, delay in exchequer releases from the national treasury arises from slow revenue generation by the National Government. Conversely, county governments are expected to submit returns each quarter to trigger the release of the next quarter's allocation. However, when departments are slow in spending their budgets, it implies that county governments are still holding funds.
- ii. **Procurement processes:** At the county level, procurement was centralised at the county treasury. The departments highlighted that the process was slow and inefficient. This affected the rate at which they could carry out activities and utilise allocated budgets. Further, there were cases where the county treasuries prioritised which expenditure to process, based on among other reasons, political pressure. This implied that expenditures that were considered not to be urgent were kept on hold. The slow processes for the agriculture sector is a significant disadvantage due to the nature of activities. However, the delays in procurement process also affect the national governments. For key programs such as the input subsidy programs, late delivery of the subsidised inputs was a key challenge during the period under review.
- iii. **Pending bills:** Both national and county governments accumulated pending bills, although the situation is more severe at the county level. Pending bills arose from cases where county departments made commitments and where budgets were subsequently cut in addition to slow processes that led to expenditures not being paid at the close of the financial year. Late receipt of funds and weak financial controls also contributed to this challenge.

Weak budget systems: this is a key issue at the county level. Many county governments made several revisions to the budget through supplementary budgets. In most cases, the supplementary budget moved funds from the agricultural sector to other sectors. This meant that while at the beginning of the financial year, the sector appeared to be well resourced, the situation could change during the financial year that affected implementation of activities within the sector. In addition, budget oversight was weak. At the county level, this in part could be explained by the fact that county assemblies did not hire technical staff for advice on the budget.

At the national level, this was mainly because the budget implementation committees were inactive.

7.4 EFFECTIVENESS AND EFFICIENCY OF EXPENDITURE

7.4.1 Key Programmes implemented

Under the State Department of Agriculture, key programs implemented included: policy development, input subsidy and cost reduction programs for fertilizer and seed, agricultural mechanisation, construction of markets, crop insurance, irrigation programs, and youth empowerment programs.

Under the State Department of Livestock, key programs included the livestock insurance program, livestock breed improvement, livestock health programs, pasture improvement, rehabilitation of rangelands, livestock marketing and resilience programs.

Under the State Department of Fisheries and the Blue Economy, key programs included policy development, aquaculture and mariculture promotion, marine research, and marketing programs.

The overall effectiveness in attaining targets set by the State Departments was mainly hampered by lack of funding mainly owing to budget cuts and late release of funds. For example, under the input subsidy program, seed for some crops i.e. potatoes were not produced as planned due to late receipt of funds and budget cuts later on. However, under the same program, the target for fertiliser subsidy was surpassed following additional budget support provided by the National Treasury. On the policy arena, a number of policies and Acts of Parliament were developed but were not enacted or approved by the end of the period under review.

7.4.2 Socio-economic impacts

Overall, effectiveness of the programs being implemented, and public expenditures is seen through outcomes such as improved productivity and income for farmers. However, such impacts take time to be realized and the success or effectiveness of agricultural programs is best evaluated over the long term.

The fertiliser cost reduction programs were completed with the capacity to undertake fertiliser blending up to 300,000 MT annually. This will lead to effectiveness for farmers using fertiliser and reduce their costs of production through enhanced yields. Similarly, farmers who received subsidised fertiliser were able to reduce their costs of production, however, their yields remained largely unchanged. Mechanisation programs will also lead to reduced costs of production for farmers by enhancing farm level efficiency.

Insurance programs have largely helped livestock farmers build resilience against adverse weather. Additionally, vaccination and livestock improvement programs have increased access to key services and have improved animal health at reduced costs. Marine fishing has been boosted by the purchase of patrol and fishing vessels as well as investment in marine research. In addition, support for fish marketing locally and in international markets has stimulated farmers to boost productivity to raise their incomes.

7.5 KEY FINDINGS

7.5.1 Share of Public Expenditure in Agricultural Sector

- The share of Public Expenditure in Agricultural Sector (PEAS) in terms of total Public Expenditure (PE) has remained very stable over the period, with an average of 5.5 per cent. This is well below the 10 per cent target agreed by the Government of Kenya during the Maputo (2003) and Malabo (2014) declarations of the African Union.
- The share of PEAS in agricultural GDP is also constant, with an average of 4.8 per cent. This denotes steady nominal PEAS, keeping pace with the 23 per cent nominal sectoral growth Apart from a bump in 2014/2015 (67 per cent), final real PEAS have stayed constant at KSh. 107 billion during the review period.

7.5.2 National and county level expenditure

- Devolution has shifted the administrative balance of PEAS between the national government and counties. Over the 2013/14-2016/17 period, counties account for 47 per cent of total agricultural expenditures (24 per cent in 2013/14) and Ministry of Agriculture Livestock and Fisheries (MALF) 38 per cent (65 per cent in 2013/14). In addition 64 per cent of county PEAS are located under county Ministries other than the Ministry of Agriculture, often under an administrative function with an agricultural label (crop management, fisheries etc). By contrast, 61 per cent of counties' Ministries of Agriculture PEAS are labelled under administrative functions that have no direct link with agriculture (county health, sanitation, pollution control etc).
- A programmatic analysis of county-level expenditure was not possible since 93 per cent of expenditures reported under county Ministries' of Agriculture or agricultural heads fall outside the Agriculture, Rural and Urban Development sector.

7.5.6 County level efficiency

- Analysis of County and national level PEAS execution rates were at 75 per cent were similar for recurrent which is higher than development expenditures. This is linked to the stickiness of wage and remuneration commitments. When allotted budgets are inferior to what was planned, both at national and county level, development expenditures get the first cut.
- Key constraints leading to low disbursement rates includes late release of funds by the exchequer (most being released on third and fourth quarter of the financial year), and inefficient procurement processes.
- Counties allocate and spend far more budget on PEAS development than the 30 per cent required in the Public Finance Management Act of 2012. However, counties allocated and spend a lesser share of their agricultural budget on development than the National Government.
- Overall, 17 counties spend under the 10 per cent of the Maputo/Malabo threshold, 20 Counties spend between 10 per cent and 20 per cent and 10 counties spend between 20 per cent and 30 per cent. The median county is at 11 per cent, right above the target.
- PEAS for development is higher than recurrent with respective mean shares of 55 per cent and 45 per cent.

7.5.7 Development Partners' Funding

- On-budget external resources represent an average 39 per cent of budgeted PEAS at the national level but only 23 per cent of actual PEAS.
- Disbursement rates are higher for loans (38 per cent) than grants (28 per cent).
- The International Development Association (World Bank/IMF) dominated donor funding, with 43 per cent of identifiable donor support to the sector. Other key donors are the International Fund for Agricultural Development (IFAD), Sweden, the African Development Bank and Japan (all close to 10 per cent). In spite of its large agricultural development projects (KAVES, PREG, ISPP, REGAL), the United States Agency for International Development (USAID) spends mostly off-budget and is almost absent from the dataset (0,04 per cent).
- On average, absorption rates of domestic and external funds stood at 80 per cent and 39 per cent respectively. This compromises investment in the agricultural sector, since all donor-funded PEAS are considered developmental, against 51 per cent for domestic expenditures.

7.5.8 Economic indicators

The execution rates of PEAS and general personal emolument were comparable, with respective means of 77 per cent and 74 per cent. The performance could be due to technical inefficiencies, delays in exchequer releases and execution of capital investment projects. This is besides stringent donor conditions.

7.5.9 Functional indicators

- Agriculture accounts for 74 per cent of total PEAS, forestry 12 per cent and fishery 5 per cent. Two per cent of PEAS is in support of multiple sectors. The livestock subsector, counted as part of agriculture, attracts 15 per cent of PEAS against 34 per cent for crops and 25 per cent for mixed crops/livestock support.
- Infrastructure has the highest share of national PEAS, at 26 per cent, versus 22 per cent for subsidies, 21 per cent for knowledge expenditures and 20 per cent for multipurpose projects. Infrastructure expenditures are driven by spending on irrigation (21 per cent of PEAS).

7.6 CHALLENGES AND CONSTRAINTS

National

Inadequate funding to the sector and delays in disbursement of exchequer. Over the review period, sector funding has been inadequate in comparison to the realistic resource requirements to develop the sector. Delayed and non-disbursement of exchequer funds also impacts negatively on the implementation of sector programmes resulting into pending bills. This compounds the problem of programme/ project implementation for pending bills from the first charge at the beginning of the financial year.

Low absorption of donor funds. This is due to stringent donor conditions and delays in procurement leading to delayed implementation of programmes and projects.

Weak Institutional framework:

Monitoring and Evaluation: Monitoring and evaluation has been weak and mainly limited to donor projects and programmes. This is due to:

- i. Inadequate funding the M&E function is poorly funded and the budget items that could be utilized for M&E are often prone to austerity measures by the National Treasury. This could be due to lack of a National Policy to guide on matters of M & E in Ministries, Departments and Agencies (MDAs).
- ii. Inadequate tools and equipment (vehicles, computers, ICT systems) .The tools are necessary to facilitate field visits and analysis, storage and retrieval of information.

- iii. Limited skills There has been a general assumption that all staff have capacity to undertake M&E, yet few officers have the basic skills for undertaking M&E, creating a need for continuous capacity building.
- iv. M&E is usually misconstrued with audit services. Some management structures may therefore suffocate it deliberately. Whereas audit services may result in reports directed towards potential criminality, M&E is meant to identify any impediments to achieving the desired objectives thereby informing the management on the need to take timely corrective measures.

Budget Implementation Committee (BIC): The Budget Implementation Committees have not been fully operational to guide budget execution in Ministry/State Departments. This has affected budget execution/implementation in the Agriculture sector.

County

The County Departments handling agriculture are organized differently from county to county. This makes is difficult to analyse budget and expenditure in the agriculture sector.

Weak budget making process and implementation: The key challenges and constrains included the following:

- a. Inadequate technical capacity: The budget process is negotiated between the county executive and legislature. However, there are inadequate technical capacities in terms of skills and numbers in the agriculture sector. Further, most of the members of the County Assemblies have limited skills in budget making and oversight. A good case to demonstrate this, is low or no allocation of funds towards Agricultural Extension Services which is a critical devolved function;
- b. Weak public participation in the budget making process in most counties resulting in lack of ownership and poor implementation of agricultural programmes and projects; and
- c. Centralization of funds at County Treasuries: This affects implementation of agricultural programmes/projects negatively, since processing and authorization of payments is done by one person and prioritization of payments is determined by the Chief Officer in charge of finance.

Low absorption of funds is particularly an issue for development budgets as delays in releasing of funds to the counties by The National Treasury negatively impacts the implementation of programmes/projects and sometimes results in pending bills.

Weak Financial Controls: The counties are operating a dual system of financial management (Manual and IFMIS). This limits analysis of public expenditure in the agriculture sector.

Bureaucracy in budget execution: In most counties there are three expenditure ceiling levels. This first level relates to approvals by County Executive Committee (CEC) Members, second level is by County Secretary and the third is by the Governors. The threshold varies from county to county. In case of absence of key officers for whatever reason, budget implementation is compromised.

7.7 POLICY RECOMMENDATIONS

National

- The Government should enhance funding to the Agriculture sector towards the recommended 10 per cent of the Country's budget as per the Maputo Declaration. This will facilitate realization of the "Big 4" agenda and in particular food and nutrition security.
- ii. Embrace alternative financing mechanisms such as PPPs to supplement the increasing budget gap for implementation of the sector's projects and programs.
- iii. The National Treasury to build capacity of the in technical procurement personnel on procurement matters with a view to enhancing the efficiency of E procurement and the robust use of IFMIS.
- iv. Promote and build capacities for the Agriculture Sector to undertake M & E with a view to facilitating informed decision making in programme and project implementation.

County

- i. Align all County Departments dealing in agriculture to the relevant National Ministry / State Departments to facilitate future budget and expenditure analysis.
- ii. The relevant National Government MDAs to build County capacities on budget making and implementation for efficient and effective execution of agricultural programmes and projects. This would include: full operationalization of the IFMIS in all the Counties; Capacity on M & E; and the implementation of the Public Finance Management Act, 2012 among others.
- iii. County Governments to decentralize funds allocation to the line ministries/ Departments to avoid delays and bureaucracies in procurement and implementation of programmes and projects while at the same time ensuring proper utilisation of funds.

7.8 CONCLUSION

The agriculture sector still remains the backbone of Kenya's economy in terms of GDP contribution, employment creation, foreign exchange earnings, and in terms of supporting other productive sectors. These is one of the key sectors in the economic pillar of the Kenya Vison 2030 and it is expected to contribute to national food and nutrition security

as contemplated in the government's "Big 4" agenda. The sector will directly or indirectly contribute to the other Big 4 pillars namely: manufacturing; affordable universal health care; and affordable housing. Further, the sector is anticipated to grow at a minimum of 7 per cent yearly and thus contributing to the achievement of the Kenya Vision 2030. However, the annual growth rate of the sector for the review period has averaged a less robust 5.5 per cent.

The funding of the sector has remained below the Maputo and Malabo declarations threshold of at least 10 per cent of national budget. In addition to the low budget allocated to the sector, absorption levels are also low thus compromising the sectors' growth. This calls for efficient and prudent management of funds allocated to the sector at the National and County levels.

In view of the foregoing the sector requires adequate budget support at both National and County levels for agricultural investments and capacity development. This is in addition to creating a conducive environment for all stakeholders for the sector to thrive.


TRANSPORT AND INFRASTRUCTURE

8.1 OVERVIEW OF THE INFRASTRUCTURE SECTOR

The Transport and infrastructure sector is one of the enablers in the Kenya Vision 2030. The sector aspires to have a country that is interconnected through a network of roads, railways, ports, airports, and water ways, and telecommunications. To enhance the provision of safe, efficient and cost- effective transport, the Medium-Term Plan (MTP II) focused on expansion and modernization of railways, roads and ports, and airports. The main purpose of this Public Expenditure Review (PER) for the sector³⁹ is to review the performance and adequacy of expenditure in meeting the sector policy objectives for the period FY 2013/14 to 2016/17. The PER provides an analysis of the sector source of funds, overall expenditure trends, performance and efficiency.

The transport sector in Kenya encompasses a transport system comprising of rail, air and maritime while the infrastructure sector comprises mainly of roads. The sector also has several state corporations as shown in Table 8.1.

Authorities	Responsibilities
Kenya Railway Corporation	Develop an integrated rail network and provide efficient and safe rail services.
Kenya Ports Authority	Manage and operate the Port of Mombasa and all scheduled seaports along Kenya's coastline.
Kenya Airports Authority	Manage all airport resources in the country.
Kenya Civil Aviation Authority	Develop, regulate and manage a safe, efficient and effective civil aviation system in Kenya.
National Transport Safety Authority	Harmonize the operations of the key road transport departments and help in effectively managing the road transport sub-sector and minimizing loss of lives through road accidents.
LAPSSET Development Authority	Plan, coordinate and manage the implementation of the Lamu Port- South Sudan-Ethiopia Transport Corridor.
Kenya Maritime Authority	Regulate, coordinate and oversee maritime affairs.

TABLE 8.1: TRANSPORT & INFRASTRUCTURES AUTHORITIES AND RESPONSIBILITIES

³⁹ The sector covers; roads, air, rail and marine transport.

Authorities	Responsibilities
Kenya Roads Board	Oversee the road network in Kenya and coordinate the maintenance, rehabilitation and development of roads.
Kenya National Highways Authority	Manage, develop, rehabilitate and carry out maintenance of international trunk roads linking centres of international importance and crossing international boundaries or terminating at international ports (Class A road), national trunk roads linking internationally important centres (Class B roads), and primarily roads linking provincially important centres to each other or two higher-class roads (Class C roads).
Kenya Rural Roads Authority	Develop, construct and maintain the rural road network in the country.
Kenya Urban Roads Authority	Management, Development, Rehabilitation and Maintenance of National urban trunk roads.

Source: Controller of Budget

8.1.2 Context and Policy Framework

The infrastructure sector remains a key driver of Kenya's goal of becoming a middle-income economy by the year 2030 and aims to attain and sustain a 10 per cent GDP growth rate. The government plans to develop cost effective, world-class infrastructure facilities and services to promote a favourable investment climate for industry, agriculture and business.

In MTP II, The transport and infrastructure sector had several priorities: Expansion and modernization of air transport facilities to enhance the air transport capacity to handle an estimated 45 million passengers and to position Kenya as the aviation hub of the African region; Expansion of maritime facilities to increase the port capacity to handle 50 million tonnes; construction and rehabilitation of about 5,500 km of roads; and construction of the standard gauge rail line from Mombasa to Malaba; from Lamu, Isiolo to Juba (South Sudan) and from Isiolo, Moyale to Addis Ababa (Ethiopia).

During the review period, there are several policies, laws and regulations that guided the development of infrastructure sector in Kenya (Box 8.1).

BOX 8.1: INFRASTRUCTURE SECTOR LAWS AND REGULATIONS

Nairobi Integrated Urban Development Master Plan (NIUPLAN) 2014-2030; Draft National Integrated Transport Policy; Metropolitan Transport Authority Bill, 2017; National Spatial Plan 2015-2045; Public Private Partnerships Act. no. 15 of 2013; Sessional Paper No. 1 of 2017 on Non-Motorized Transport (NMT) Policy; Traffic Amendment Act, 2017; Road Investment Policy, Kenya Roads Act no. 2 of 2007; Kenya Roads Bill 2015; Road Traffic Act, 2012; National Transport Safety Authority Act, 2012; Roads Sector Policy, 2016; Urban Areas and Cities Act, 2011; Merchant Shipping (Fees) Regulations, 2011; Merchant Shipping (Port State Control) Regulations, 2011; Maritime Policy; Merchant Shipping Act, 2009; Ferries Act, 2018, Marine Pollution Act, 2012; Carriage of Goods by Sea Bill; Marine Insurance Bill; Kenya Ferry Corporation Bill; Kenya Coast Guard Service Bill 2016; Admiralty Court Jurisdiction Bill; Amendment Bill; Civil Aviation (Aircraft Accident and Incident Investigation) Regulations, 2013; Aircraft Accidents and Incident Regulations, 2013; Draft Civil Aviation Regulation, 2017; Aircraft Accident and Incident Investigation Bill, 2018; Aircraft Accident and Incident Investigation Draft regulations 2018; Civil Aviation (Amendment) Act, 2016; and Civil Aviation, Act 2013.

8.2 SECTOR PERFORMANCE

The transport and Infrastructure sector comprises four sub sectors: road, air, maritime and rail. This section focuses on performance of these sub-sectors for the period 2013/14 to 2016/17.

8.2.1 Roads

Overall, construction of roads using bitumen increased by 23 per cent from 11,200km in 2013 to 14,500km in 2016 against a target of 16,700km. The use of earth/gravel for road construction also increased by 12 per cent (20,000 km) from 52,500 km in 2013 to 72,200 km in 2016. In 2016, a new classification system based on the road function and covering the entire road network was adopted and gazetted as shown in Table 8.2. With the revised classification, National roads include; roads class A, B, C, and S while county roads include; road class D, E, F, G.

During the period under review, the sector undertook periodic and routine maintenance of roads and implemented the roads 2000 programme. The planned length to be covered under Road 2000 programme tremendously increased over time from a planned length of 284.5km in 2013, 429.1 km in 2014, 724.2km in 2015, 1416.9km in 2016 and 5,328 km in 2017 of which 24.3 per cent was completed. The government also initiated Public Private Partnerships to develop roads. In August 2014, the Road Annuity Fund for financing roads under the Roads Annuity Programmes was established.

Revised Road Classification	Road Class ⁴⁰	Paved (km)	Unpaved (km)	Total (km)
	S	80.9	-	80.9
	A	3,917.40	3,700.00	7,617.30
National Roads	В	3,226.40	7,625.00	10,851.40
	С	2,739.30	18,706.20	21,445.50
	Sub-total	9,964	30,031.20	39,995.10
	D	521.2	10,602.10	11,123.30
	E	771.2	13,276.40	14,047.70
County Roads	F	315.8	9,309.80	9,625.60
	G	1,461.40	85,198.40	86,659.80
	Sub-total	3,069.60	118,386.70	121,456.40
Entire Road Network	Sub-total	13,033.60	148,417.90	161,451.50

TABLE 8.2: REVISED ROAD NETWORK CLASSIFICATION

Source: Kenya Roads Board (2016)

8.2.2 Rail Transport

During the review period, the construction of the first phase of the SGR (472 km) was completed. The SGR phase 1 project had other accompanying investments including; the purchase of 56 locomotives, 1620 freight wagons, 40 passengers' coaches, and construction of 33 railway stations where 9 were state of the art passenger terminals. The second phase (2A) commenced in 2016/17 and will cover a track length of 120 km by 2020 running through Kajiado, Nairobi, Kiambu, Nakuru and Narok counties, at an estimated to cost of KSh. 150 billion.

Earnings from passenger traffic rose from KSh 181 million in 2013 to KSh 700 million in 2017 as shown in Figure 8.1. The inauguration of the Standard Gauge Railway led to an increase in passenger traffic and revenues in 2016 and 2017. The increase in passenger journeys was also as a result of the construction of commuter railway stations at Makadara and Imara Daima. Conversely, freight traffic decreased from 1,444 thousand tonnes to 1,147 thousand tonnes between 2013 and 2017, which consequently saw freight revenue decline from 4,638 million in 2013 to 3001 million in 2017 (Figure 8.2).

⁴⁰ A - International Trunk Roads - Link centres of international importance and crossing international boundaries or terminating at international ports. B - National Trunk Roads - Link nationally important centres. C - Primary Roads -Link locally important centres to each other and to higher-class roads. D - Secondary Roads - Link locally important centres to each other and to higher class roads. E - Minor Roads - Any link to a minor centre. F - Special Purpose Roads - Include Government access, Settlement, Rural access, Parks, township, agriculture, fish and strategic roads (statistical abstract, 2017).





Source: Economic Survey, 2018



Source: Economic Survey, 2018

8.2.3 Marine Transport

During the review period container traffic handled at the Mombasa port increased by 33 per cent from 894,000 to 1,189,957 Twenty-Foot Equivalents (TEU) as shown in table 8.3. Imports had the largest share of cargo throughput at 84 per cent, recording a Dead Weight Tonnage (DwT) of 19,150 thousand tonnes in 2013 and 25,604 thousand tonnes in 2017. Exports also recorded an increase in Dead Weight Tonnage (DwT) from 2,983 thousand tonnes in 2013 to 3,794 thousand tonnes in 2017. This was attributed to several policy developments in the sector. The localization of marine cargo insurance came into effect in FY 2015/16 through an Executive Order of 2016 which compels importers to purchase marine cargo insurance exclusively from local insurance companies.

Items	2013	2014	2015	2016	2017
Container traffic (TEUs)	894,000	1,012,002	1,076,118	1,091,371	1,189,957
Ships docking (Nos)	1,768	1,832	1,694	1,607	1,767
Imports (000' DwT)	19,150	20,777	22,681	23,116	25,604
Exports (000' DwT)	2983	3,366	3,533	3,679	3,794
Transhipment (000' DwT)	174	732	518	589	874
Grand Total	22,307	24,875	26,732	27,384	30,272

TABLE 8.3: TRAFFIC HANDLED AT MOMBASA PORT, 2013 – 2017

Source: Economic Survey, 2018

The increase in traffic handled at the Mombasa port was attributed to the completion of Berth No. 19 and Phase I of the Mombasa Port Development Program (MPDP) as indicated in table 8.3. In addition, port efficiency was enhanced through acquisition of the Rail Mounted Gantry cranes (RMGs) to operationalize the SGR resulting in reduced ship turnaround time.

8.2.4 Air Transport

During the review period both international and domestic air passenger traffic increased. The number of passengers travelling by air increased from 8.2 million in 2013 to 10.1 million in 2017. Jomo Kenyatta International Airport (JKIA) recorded an increase in air passenger traffic from 4.9 million to 5.5 million passengers between 2013 and 2016, with Moi International Airport (MIA) and other airports recording a decrease in air passenger traffic. On the other hand, the domestic air passenger traffic increased in all the airports, with JKIA recording an increase from 1 million to 1.6 million passengers, MIA recording an increase from 732 to 958 thousand passengers and other airports recording an increase from 862 thousand to 1.4 million passengers between 2013 and 2016. This was attributed to the on-going expansion at the JKIA arrival and departures terminal seeking to accommodate 7.5 Million passengers per annum. The airside capacity was improved by rehabilitating the existing runway to enhance serviceability and the number of aircraft parking bays expanded from 21 to 37. A Primary screening yard was established in 2015 to improve security.

Cargo traffic had a very low variation with the total volume of cargo traffic handled increasing from 261.7 million tonnes in 2013 to 290.8 million tonnes in 2017. Specifically, the volume of cargo handled at JKIA increased from 244.3 million tonnes in 2013 to 273 million tonnes in 2017. However, the volume of cargo handled at Moi airport dropped from 3.8 million tonnes to 3.5 million during the same period.

8.2.5 Sector challenges

The transport and infrastructure sector had several challenges during the review period. These include: land acquisition, encroachment on transport wayleave/reserves, huge capital requirements, inadequate financing, infrastructure vandalism, increased urbanization, inflation, inconsistent taxation, lengthy procurement procedures, inadequately skilled manpower in transport management and planning, and inadequate pathways for Non-Motorized Transport (NMT). In the aviation sub- sector, key challenges were; high staff turnover, inadequate skilled flight safety inspectors, and rapid technological changes for air navigation services equipment. Key challenges under the road sub-sector were; adherence to road specification and standards, conditionality of donor funded projects, poor enforcement of rules and regulations especially with regard to control of overloading, and road concessions.

8.3 SECTOR PUBLIC EXPENDITURE REVIEW

8.3.1 Sector source of funds

The sector financial resources comprised of both domestic and external resources. External resources from loans and grants contributed on average 41 per cent and 2 per cent respectively while the government contributed 58 per cent of the total sector funding (Figure 8.3). Government financing increased from 48 per cent in FY2014/15 to 61 per cent in FY2016/17 while loan financing decreased from 50 per cent to 39 per cent during the same period.





Source: The National Treasury, 2017

Road transport was financed by domestic resources. 67.3 per cent of the sector's domestic resources financed road transport, 15.7 per cent financing rail transport, 9.4 per cent financing general administration, planning and support services, 5 per cent and 2.6 per cent financed marine and air transport respectively. A significant share of loans (73.6 per cent) financed rail transport, 23.7 per cent financed road transport, and 1.5, 0.9 and 0.3 per cent financed, air, marine and general administration, planning and support services respectively (see Figure 8.4). The grants in the sector were used to finance road transport.



FIGURE 8.4: SHARE OF FUNDING SOURCE BY SUB-PROGRAMME

Source: The National Treasury, 2017

Transport and infrastructure sector at the county level was funded using domestic resources unlike at National level which had a mixed source of funding. All external resources (Loans and grants) were used to finance transport and infrastructure at National level (Figure 8.5).



FIGURE 8.5: SOURCE OF FUND BY LEVEL OF GOVERNMENT

Source: The National Treasury, 2017

8.3.2 Overall Expenditure by Level of Government

Overall, the transport and infrastructure sector expenditure at the National level increased from KSh 270 billion in 2014-15 to KSh 301 billion in 2016-17 and was on average 8 per cent of total government expenditure (Figure 8.6). At the county level, the expenditure increased from KSh 31 billion to ksh.38 billion in the same period.



FIGURE 8.6: TRANSPORT AND INFRASTRUCTURE EXPENDITURE BY LEVEL OF GOVERNMENT

Source: The National Treasury, 2017

The sector's development expenditure at both levels of government averaged 87 per cent for the period 2014/15 to 2016/17 (Figure 8.7). In 2014/15, 90 per cent of the KSh. 270 billion spent in the sector by the National government was on development expenditure and 10 per cent on recurrent expenditure. In 2016/17, 85 per cent of the KSh. 301 billion was spent on development and 15 per cent on recurrent. This trend was also reflected at the county government level.



FIGURE 8.7: DEVELOPMENT AND RECURRENT SPENDING BY LEVEL GOVERNMENT

County government spending on transport and infrastructure averaged 0.68 billion shillings. Expenditure of 21 counties was below the average spending (Figure 8.8). County governments that recorded the highest transport and infrastructure spending were Nakuru, Kakamega, Narok, Uasin Gishu and Machakos. Counties with the lowest sector spending include Taita taveta, Laikipia, Lamu, Kwale and Marsabit.

Source: The National Treasury, 2018



FIGURE 8.8: COUNTY EXPENDITURE ON TRANSPORT AND INFRASTRUCTURE

Source: The National Treasury, 2018

8.3.3 Expenditure by sub-programs

The total sector development expenditure for the period 2014/15 to 2016/17 was KSh 686 billion of which KSh. 365 billion (50 %) was spent on railway transport, KSh. 292 billion (40 %) on road transport, KSh. 16 billion (2 %) on Marine transport and KSh. 10 billion (1 %) on air transport. Road transport took the larger share of the recurrent expenditure at KSh. 99 billion (84 %), KSh. 3 billion (3 %) on air transport, and KSh. 2 billion (2 %) on Marine transport.

8.3.4 Expenditure by Economic Classification

Transfer to other government units in the sector increased from KSh. 91.37 billion in 2014/15 to KSh. 198.38 in 2016/17. Acquisition of financial non-assets was significant in 2014/15 at KSh.201.5 billion but declined to KSh 127.8 billion in 2016/17 as shown in Table 8.4.

Transport and Infrastructure	2014-15 Actual	2015-16 Actual	2015-16 Actual	2015-16 Actual
Transfers to other govt. units	91.37	106.47	198.38	199.43
Acquisition of non-financial assets	201.04	88.30	127.83	102.90
Use of goods and services	5.07	3.44	6.09	8.55
Compensation of employees	3.24	2.95	4.20	4.00
Acquisition of financial assets	0.13	0.12	0.29	1.19
Interest payments	0.24	1.13	1.90	0.29
Grand Total	301.12	202.62	338.74	316.44

FABLE 8.4: SECTO	R EXPENDITURE BY	ECONOMIC CL	ASSIFICATION

Source: The National Treasury, 2018

8.4 SECTOR EFFICIENCY ANALYSIS

A Countries comparison of efficiency in Infrastructure spending was done based on three key factors; quantity, quality and access. The analysis focused on Kenya's peer countries with a focus on; road, rail, air and marine. The indicator on quantity analysed were the length of road and rail network, number of airports, and types of airports. On quality, the indicators analyzed were on road condition, passenger and freight traffic. Data envelope analysis was used to compute the efficiency scores.

8.4.1 Road Transport

The Road Quality Index was used and is composed of two elements: a measure of the average speed of a driving itinerary connecting the 10 or largest cities in an economy accounting for at least 15 per cent of the economy's total population and a measure of road straightness. The quality of roads index captured the extensiveness and condition of road infrastructure, where 1 = extremely poor—among the worst in the world; 7 = extremely good—among the best in the world based on 2016–17 weighted average.

With only investment⁴¹ considered as an input variable for development of quality roads, Ghana (1.0) emerged as the most efficient, followed by South Africa (0.79) and Kenya (0.77) as shown in Figure 8.9. When inflation is considered, Ghana still tops as the most efficient, Singapore, South Africa also become efficient, while Kenya's efficiency scores improves to 0.98. The causes of delays and cost overruns reported include; delayed land acquisition, changes to the scope of work, delayed payments and high cost of capital Henceforth, as the government endeavours to increase efficiency in road expenditures for better road quality, there is need to ensure that projects are completed within the estimated time and cost.



FIGURE 8.9: EFFICIENCY AND QUALITY OF ROADS: COUNTRIES COMPARISON

*efficiency score 1 captures total investment while efficiency cost 2 captures inflation Source: Global Competitive Report, 2018 and WE0 (2018)

⁴¹ Total investment is used as proxy for the sector investment.

Expenditure on road maintenance in many African countries ranges between 20 – 50 per cent of the total roads expenditure. During the review period Kenya's expenditure on road maintenance averaged 26.8 per cent (Figure 8.10).





8.4.2 Rail Transport

A comparison of the cost of railway construction across countries showed that Nigeria had the highest cost per kilometre of rail constructed (205 km at a cost of USD 1.2 billion), followed by Kenya (472 km at a cost of USD 3.4 billion). Tanzania constructed 205 km at a cost of USD 1.2 billion while Morocco constructed 350 km at a cost of USD 2.0 billion and Ethiopia constructed 756 km at a cost of USD 3.2 billion (Figure 8.11).



FIGURE 8.11: COST OF RAILWAY CONSTRUCTION

Source: WDI, 2017

The high cost of rail construction in Kenya was attributed to the class 1 railway network design based on, the nature, speed, curvatures and the traffic volume. Ethiopia is Class 2 and was designed for freight of less than 10 million tonnes at the port of Djibouti compared to expected freight of 30 million tonnes anticipated for the Port of Mombasa. The SGR design has a double stack loading gauge and allows for automatic signalling compared to single stack of Ethiopia with semi-automatic signalling. Kenya's SGR was mainly constructed for cargo, though it accommodates passenger traffic.

In addition to technical factors, the high cost of rail in Kenya was explained by topography, terrain and hydrology of the route. The construction of the Kenya railway line had to consider urbanization and wildlife migration by developing 33 crossing stations with overpasses different from Ethiopia's level crossing. SGR phase I had 18 stations. The cost of acquiring land and resettlement increased the overall cost of constructing SGR phase I. However, in Ethiopia the cost of land was insignificant because tracks are laid parallel to existing track and land is owned by government.

8.4.3 Air Transport

The registered carriers, number of international airports, and freight was used to measure efficiency. The most efficient air transport from the analysis is Ethiopia, followed by South Africa, Kenya and Ghana with efficiency scores of 87.2 per cent, 54.6 per cent and 23.7 per cent respectively. The least efficient is Rwanda, Uganda, Zambia and Botswana in that order with efficiency score of less than 10 per cent.

South Africa, Kenya, and Ethiopia with five (5), four (4), and two (2) international airports respectively, had the highest number of registered carriers recorded compared to the peers (Figure 8.12). Egypt, Morocco, Nigeria, Tanzania, Zambia and Ghana had lower number of registered carriers recorded in relation to the number of international airports. Ethiopia and Zambia recorded more freight traffic in relation to the number of registered carriers when compared to their peers. Although Kenya ranked third in terms of register carriers, it ranked low in terms of freight traffic compared to peers. This implies that increasing the number of international airports may not significantly enhance air performance. Increasing the infrastructure efficiency and access may demand increasing the length of the runaway, the types of airports and the terminal gates.



FIGURE 8.12: INTERNATIONAL AIRPORTS AND REGISTERED CARRIERS

Source: WDI, 2017

8.4.4 Marine Transport

The Liner shipping index and container port traffic indicators was used to measure efficiency in use of resources and quality of service. Based on the indicators, South Africa emerged as the most efficient port followed by Egypt, Kenya and Nigeria with efficiency scores of 92.3 per cent, 73.7 per cent and 57.3 per cent respectively. Among the selected countries, the Kenya Liner shipping connectivity index was among the lowest with an average index of 12.1 per cent. During the review period, Morocco Liner shipping connectivity index was the highest with 63.2 per cent, followed by Egypt and South Africa at 60.8 per cent and 37.9 per cent respectively.

In general, higher ranking in Liner shipping connectivity index results reflected an increased container port traffic. Egypt, Morocco and South Africa had higher Liner shipping connectivity index and higher volumes of container port traffic. During the period under review, Kenya ranked low in both Liner shipping connectivity index and container port traffic compared to peers but higher than Tanzania, Nicaragua and Mauritania (Figure 8.13). With a liner shipping connectivity index of 60, Egypt had an average container port traffic of 6,434,572 TEUs. On the other hand, Kenya had a liner shipping connectivity index of 12, with an average container port traffic of 1,018,280 TEUs which is 6 times lower than that of Egypt.



FIGURE 8.13: CROSS COUNTRY COMPARISON ON LINER SHIPPING CONNECTIVITY

8.5 CONCLUSION AND RECOMMENDATION

This section presents the conclusions and recommendations based on analysis presented for the transport and infrastructure sector.

8.5.1 Conclusions

Government made significant efforts to enhance the sector financing during the period under review by financing 67 per cent of the sector spending. However, infrastructure spending in Kenya is still inadequate. Research studies show that globally the sector funding is approximately 14 per cent of GDP while Kenya spends only 4.5 per cent of GDP on sector funding.

In an effort to explore alternative sources of funding, the government has made efforts to enhance private sector funding through the annuity programme. However, the roads annuity projects had several implementation issues. This was attributed to the high unit costs of submitted bids i.e. cost per kilometre at twice the Government cost and high interests rates quoted by financiers that were out of the government's target range.

The government continues to promote Public-Private Partnerships (PPPs) in infrastructure development to enhance risk mitigation and transfer, innovation and optimal asset utilization, and service provision. Therefore, achieving a balance between the private companies participation and maintaining the transparency and efficiency gains is critical.

The performance based contracting (PBC) model used in the roads 10,000 programme has shown success as it presents win-win situation for the contractor, government and road users. The model provides better services to the users since the roads are maintained over time to the agreed levels compared to the traditional unit rate maintenance contract.

8.5.2 Recommendations

To enhance overall sector performance and efficiency, the following is recommended:

- a) Increased involvement of private sector through PPPs. Given the current fiscal environment, and with a large percentage of government spending on infrastructure at the national level, there is need to enhance alternative funding through the private sector such as PPPs.
- b) Enhance adoption of design-build type contract. There is need to upscale the use of PBC model in the design and construction of roads.

c) Increase spending on road maintenance

Significant savings can be made by focusing on road maintenance of the existing road network. To achieve this, there is need for government to increase funding for continuous road maintenance.

d) Strengthen project planning and management

Time and cost overruns are the major cause of infrastructure inefficiencies. To enhance efficiency in infrastructural development, the government should strengthen project planning and management to reduce time and cost overruns.

e) Facilitate land acquisition for public infrastructure projects

To ensure smooth acquisition of land for infrastructure projects, the government needs to strengthen the enforcement of legal and administrative systems. Government should also institute Legislative and administrative reforms to protect existing public land and facilitate compulsory land acquisition and involuntary resettlement.



CHAPTER 9 ENERGY SECTOR

9.1 INTRODUCTION

The Kenya Vision 2030 and SDG goal 7 seek to increase access to affordable, reliable and modern energy. Towards this the Energy sector has put in place several strategies which include: enhancing of power generation capacity; expanding transmission and distribution network; promoting renewable energy and introduction of new technologies in electricity generation. Further, during the period under review, the Petroleum sub-sector put in measures to address sufficiency and supply of petroleum products to reduce the total Import Bill.

This section reviews performance and expenditure of the energy sector which comprises of the electricity and petroleum subsectors for the period 2013/14 to 2016/17.

9.1.1 Electricity Sub Sector

Reliable electricity supply is a critical element to Kenya's economic growth and development. Sufficient and reliable electricity supply will promote capital investment by the private sector; reduce the cost of doing business, spur growth of enterprises and achievement of Kenya Vision 2030 aspirations and the "Big 4" agenda. During the period under review, the government made significant investment estimated at an average of 1.06 per cent of GDP.

To bridge the energy gap, the government increased electricity generation capacity from 1,765 MW to 2,333 MW while the demand increased from 1,354 MW to 1,656 MW during the period under review. Access to electricity was estimated at 70 per cent with 6.18 million households connected.

9.1.2 Petroleum sub sector

Kenya's petroleum sub-sector relies exclusively on imported oil to meet its petroleum requirements. The net- import of petroleum increased by 9.6 per cent from 4.4 million tonnes in 2015 to 4.8 million tonnes in 2016. The trend of imported petroleum products is in line with projected economic growth and is expected to increase as Kenya emerges as a middle-income status economy. However, dependence on oil imports implies that Kenya is vulnerable to oil price increases and fluctuations in the Kenyan Shilling exchange rate against the US dollar.

9.1.3 Policy and legal framework

Sessional Paper No.4 of 2004 and the Energy Act No.2 of 2006 aimed at improving access and affordability of quality and clean energy services in Kenya. These instruments establish structures with specific roles as indicated in Table 9.1. During the period under review, the National Energy and Petroleum Policy succeeded the Sessional Paper No. 4, the model Production Sharing Agreement was approved by the Cabinet and the Petroleum Exploration, Development and Production (Local Content) Regulations were prepared. Further, a review of the Feed in Tariff (FiT) policy was initiated and the National draft policy and strategy for the nuclear power programme developed.

Institutions	Responsibility/Role
Ministry of Energy & petroleum (MOEP)	In charge of policy for the sector
Energy Regulatory Commission (ERC)	Independent sector regulatory
Energy Tribunal	Adjudicates disputes arising from ERC rulings
Geothermal Dev't Co. (GDC)	100% GoK owned & is in change geothermal exploitation and devt
Kenya Electricity Generating Company (KenGen)	70% GoK owned & is dominant power generator
Kenya Nuclear Energy Board (KNEB)	Funded by GoK to coordinate implementation of Kenya's nuclear power programme
Independent Power Producers (IPPS)	Private power generators with 30% market share
Rural Electrification Authority (REA)	Funded by GoK & donors to expand rural electrification
Kenya Electricity Transmission Co (KETRACO)	100% GoK owned to develop power transmission network
Kenya Power & Lighting Co (KPLC)	51% GoK owned & is single buyer and distributor of electricity
National Oil Corporation (NOCK)	100% GoK owned & deals with oil & gas exploration upstream & petroleum retailing downstream
International Oil Companies (IOC)	Private companies involved in oil & gas exploration and production
Kenya Pipeline Company (KPC)	100% GoK owned & it involved in transportation of refined petroleum
Oil Marketers	Private companies who retail refined petroleum products including liquefied petroleum gas

TABLE 9.1: ENERGY SECTOR INSTITUTIONAL ARRANGEMENT

Source: Ministry of Energy & Petroleum MTEF Report, 2016

9.2 STATUS OF ENERGY ACCESS AND USAGE IN KENYA

The rate of access to electricity in Kenya rose from 31.6 per cent (2.33 Million customers) in 2013 to 70 per cent (6.18 Million customers) in 2017. Kenya ranks third to South Africa and Ghana in terms of electricity access as a percentage of its population (Figure 9.1). However, the electricity access is expected to improve with increased investment in rural electrification and implementation of the Last Mile Project initiated during the review period.



FIGURE 9.1: REGIONAL COMPARATOR ACCESS TO ELECTRICITY

Source: World Development Indicator, 2017

In spite of a significant increase in household connections to the national grid, demand for electricity only expanded by 300 MW. There is need to examine the factors behind the low usage of power and how demand can be created for the sector to recoup its investment. The expanded connections are expected to trigger establishment of micro-industries in the rural areas and urban centres that will increase electricity consumption.

In 2016, Kenya recorded 39.3 per cent electricity access in rural areas which surpasses the sub-Saharan average of 24.8 per cent.⁴² Rural electrification customers rose from 443,254 in 2013/14 to 1,338,849 in 2016/17. This increase was realised through extension of the distribution network which drastically reduced the cost of supply.

9.2.1 Supply and Demand for Electricity

As at 2017, Kenya had a reserve capacity of about 600 megawatts. The electricity peak demand was estimated at 1,656 megawatts and increased significantly during the period under review, showing an average annual growth rate of around 5.9 per cent. In the same period, the effective generation capacity rose from 1,652 MW to 2,259 MW. The electricity generation mix is mainly from hydropower, geothermal, thermal, wind and solar sources. Geothermal power

⁴² World Development Indicator.

production accounted for 39.26 per cent of the total power produced, hydro 37.9 per cent, thermal 21.1 per cent, wind 0.59 per cent and solar 0.005 per cent, with imports representing only 1.8 per cent of the total electricity generated within the country.

All through the review period, electricity supply exceeded demand as illustrated in Figure 9.2. Although this provides a reasonable reserve margin for contingency planning and catering for electricity demand growth in the short term, this could result in excess power without a market if the investments in power sector (generation, transmission, and distribution) do not pursue a strong and coordinated path of customer growth in the long term. The balance between supply and demand will depend on the extent to which effective megawatts are added to the system and how the transmission and distribution network is expanded in line with properly projected increases in number of electricity consumers within the network.



FIGURE 9.2: ELECTRICITY DEMAND AND SUPPLY

Source: Kenya Power & Lighting Annual Report, 2017

9.2.3 Transmission and Distribution

During the period under review, the government sought to increase electricity access through upgrading and expanding of the national power transmission and distribution network. The electricity transmission and distribution network grew by an average of 60 per cent from 56,797 km in FY 2013/14 to 213,700 km in FY 2016/17. A total of 1,224km of transmission lines and 28 transmission sub-stations were constructed. In particular, the medium voltage supply and distribution assets comprising of 33kV and 11kV lines increased exponentially in keeping with the accelerated rural electrification, street lighting programmes, and the Last Mile project implemented by the Government during the period.

Kenya has the second lowest cost of establishing new electricity connections and has significantly reduced the number of days required to connect electricity compared to sub-Saharan peers (Figures 9.3 and 9.4). It ranks second to South Africa with an average of 898.25 dollars of income per capita for getting electricity and reducing the number of days required to

connect to electricity from 133 days to 97 days during the review period. Uganda and Ethiopia have a significantly higher cost of electricity connection. From 2014 onwards South Africa, Uganda and Kenya significantly reduced the number of days required to connect to electricity.



FIGURE 9.3: COST REQUIRED TO CONNECT TO ELECTRICITY

Source: Ease of Doing Business, 2018



FIGURE 9.4: TIME REQUIRED TO CONNECT TO ELECTRICITY

9.2.4 Tariff Structure

Electricity tariffs reduced by 19 per cent from KSH21.46/KWh in 2013/14 to KSH17.40/KWh in 2015/16 (Figure 9.5). This was largely due to a combination of improved generation mix and reduction in international crude oil prices. There was a 9.8 per cent increase in average electricity tariffs in 2016/17 associated with increased generation from thermal plants because of drought. At the same time the sector recorded growth in tariff revenue (Figure 9.6).



FIGURE 9.5: ELECTRICITY TARIFF

Source: KPLC Annual Report, 2017





Source: KPLC Annual Report, 2017

The prevailing electricity tariff structure for Kenya and its peers does not cover costs. However, although Kenya, Uganda, Tanzania and Ghana charge a relatively high tariff per kilowatt of electricity, their tariffs are not significantly cost reflective. During the review period, Kenya recorded an average electricity tariff of USD 0.19/KWh and a net revenue collection/ KWh billed of -0.06, Uganda charged an average of USD 0.21/KWh and a net revenue collection of -0.01, Tanzania recorded an average of USD 0.16/KWh and a net revenue collection of -0.03 (Figure 9.7). Ethiopia and Sudan charge low electricity tariffs of USD 0.046/KWh and USD 0.058/ KWh, but they recorded a lower net revenue collection per KWh billed of -0.01 and -0.013 which is much lower compared to their peers in the region.

FIGURE 9.7: COLLECTION EFFICIENCY



Electricity Tariffs 2014-16 Average

Source: Africa Purse 2018, WDI Electricity tariff 2014-16

9.3 EXPENDITURE REVIEW

9.3.1 Sector Source of Funds

The budget allocation to the energy sector over the review period was guided by the MTP II priority to upgrade and modernise infrastructure services as an enabler to the county's Vision 2030. The total energy sector expenditure rose from KSH55.57 billion in FY 2014/15 to KSH79.56 billion in FY 2016/17 (Table 9.2). Development expenditure increased at an average of 1 per cent of the total spending from KSH53.55 billion to KSh.77.36 during the same period. Recurrent spending on average remained the same recording an actual expenditure of KSH2.01 billion in FY 2014/15 and KSH2.02 in FY2016/17.

	Actual Exp	penditure (K	sh. Billion)	Percent of the Total Expenditure				
Source of Fund	2014.15	2014.15 2015.16 2016.17 2		% of 2015/16	% of 2016/17	% of 2016/17	Year Average	
Total Recurrent	2.01	1.98	2.20	3.62	2.63	2.77	3.01	
AIA	0.21	0.22	0.25	0.38	0.30	0.31	0.33	
GoK	1.80	1.75	1.96	3.24	2.33	2.46	2.68	
Total Development	53.55	73.25	77.36	96.38	97.37	97.23	96.99	
GoK	19.64	28.81	36.68	35.35	38.29	46.10	39.99	
Loans	28.06	38.71	38.71	50.51	51.38	48.65	50.38	
Grants	0.24	-	0.06	0.42	0.00	0.07	0.17	
Local AIA	5.61	5.79	1.92	10.10	7.70	2.41	6.74	
Total Actual Expenditure	55.57	75.23	79.56	100	100	100	100	

TABLE 9.2: ENERGY SECTOR EXPENDITURE BY SOURCE OF FUND

Source: Ministry of Energy & Petroleum MTEF Reports, 2016 and 2017

Development expenditure accounted for on average 97 per cent of the sector expenditure with 50.2 per cent being financed from loans. The government financed 42.6 per cent of the total sector expenditure of which 39.91 per cent was development and 2.68 per cent recurrent. Local A-I-A financed 7.07 per cent of the sector expenditure accounting for 6.74 per cent of the total development expenditure and 0.33 per cent of the recurrent expenditure.

9.3.2 Overall Sector Expenditure by Sub-Programme

During the period under review, 71.2 per cent of sector expenditure was on power transmission and distribution. This expenditure signified government's commitment towards achieving universal access and catalyzing industrial growth in line the Kenya Vision 2030. A total of 26.6 per cent of the sector expenditure was on power generation with the highest amount being on geothermal development, while 1.3 per cent, 0.8 per cent, 0.8 per cent and 0.3 per cent was allocated to alternative energy technologies, oil and gas exploration, admin, planning & support services and distribution of oil and gas respectively.

9.3.3 Electricity Sub-Sector

Budgetary allocation to the Electricity Sub-sector during the review period rose by 53 per cent from KSH72 billion in FY 2013/14 to KSH111.4 billion in 2016/2017 (Table 9.3).

					· · ·		·	
Source of Fund	Budget 13/14	Actual 13/14	Budget 14/15	Actual 14/15	Budget 15/16	Actual 15/16	Budget 16/17	Actual 16/17
AIA	0.23	0.17	0.29	0.21	0.24	0.22	0.30	0.20
GoK	2.11	1.65	1.71	1.79	1.83	1.74	1.88	1.82
Total Recurrent	2.34	1.82	2.00	2.00	2.07	1.96	2.08	2.02
GoK	-	-	20.71	18.70	28.01	27.82	37.01	36.05
Loans	-	-	59.54	28.05	58.99	38.47	63.81	38.39
Grants	-	-	0.69	0.24	-	-	1.38	0.06
Local AIA	-	-	6.14	5.33	6.14	5.51	7.14	1.39
Total Development	70.31	51.91	87.08	52.32	93.14	71.80	109.34	75.89
Programme - Budget/ Expenditure	Budget 13/14	Actual 13/14	Budget 14/15	Actual 14/15	Budget 15/16	Actual 15/16	Budget 16/17	Actual 16/17
Power Generation	39.44	30.11	20.26	15.08	22.75	21.26	28.14	18.19
Transmission & Distribution	32.01	22.83	67.85	38.40	71.03	51.43	80.20	57.10
Alternative Energy Technologies	0.44	0.39	0.52	0.45	0.88	0.63	1.98	1.77
Admin, Planning & Support Services	0.45	0.41	0.44	0.40	0.54	0.45	1.11	0.86
Total Budget	72.34	53.73	89.07	54.33	95.20	73.77	111.43	77.91

TABLE 9.3: ELECTRICITY SUB-SECTOR BUDGET FINANCING IN (KSH. BILLION)

Source: Ministry of Energy & Petroleum MTEF Reports, 2016 and 2017

On average, 93 per cent of the development budget was financed by the Government and loans from development partners during the period under review. These accounted for 96 per cent of the budget in FY2013/14, 92 per cent in FY2014/15, 93 per cent in FY2015/16 and 92 per cent in FY2016/17. Loans from development partners supported the bulk of the capital budget accounting for about 67 per cent in 2014/15, 62 per cent in 2015/16 and 57 per cent in 2016/17. The development budget accounted for about 80 per cent of the Electricity Subsector budget and grew by a significant 55 per cent over the four-year period with recurrent budget accounting for about 2 per cent of this budget

Transmission and distribution of electricity accounted for 67 per cent of capital expenditure while power generation and alternative energy sources accounted for 32 per cent and 1 per cent of the total budget over the review period respectively. To stabilise the electricity supply and accelerate access to electricity, in FY 2014/15 the government increased allocation to transmission and distribution. From FY 2015/16 the government increased allocation to alternative energy technologies in order to accelerate development of wind and solar energy.

During the period under review, 96.7 per cent of the sector expenditure was on development.

On average, 62.2 per cent of the sector budget was spent on acquisition of fixed capital assets, 34.5 per cent on grants and other transfers to the implementing agencies, 1.6 per cent for purchasing goods and services, 1.2 per cent on other expenses, 0.5 per cent on wages and salaries and 0.1 per cent on routine maintenance. The expenditure by economic classification for the period is as illustrated in Figure 9.8.



FIGURE 9.8: EXPENDITURE BY ECONOMIC CLASSIFICATION

Source: National Treasury IFMIS and MOEP MTEF, 2017

9.3.4 Efficiency Analysis

One of the most widely used methods in assessing the efficiency of a set of Decision-Making Units (DMUs) is Data Envelopment Analysis (DEA).⁴³ DEA is a non-parametric method which identifies an efficiency frontier on which only the efficient DMUs are placed, by using linear programming techniques. The method uses linear programming and applies nonparametric techniques of frontier estimation such that the efficiency of a DMU can be measured by comparing it with an identified frontier of efficiency.

The DEA model may be either input or output oriented. An output-oriented DEA model aims at maximizing the outputs obtained by the DMUs while keeping the inputs constant, whilst the input- oriented models focus on minimizing the inputs used for processing the given amount of outputs. In the following section we apply the input-oriented DEA to assess the efficiency of energy spending for a selected group of countries.

As explained in Table 9.4, the efficiency scores (1/theta) range between 0 and 1. If it is equal to 1, it implies that the DMU is efficient, while if it is less than 1, the DMU is inefficient. We apply here a DEA model considering both the constant returns to scale (CRS) and variable returns to scale (VRS).

Country	Govtspend _Energy _GDP (%)	Access _Pop (%)
Angola	0.02	0.41
Benin	0.00	0.41
Burkina Faso	0.02	0.19
Burundi	0.01	0.08
Cameroon	0.00	0.60
Cape Verde	0.01	0.64
Equatorial Guinea	0.00	0.68
Guinea	0.01	0.34
Kenya	0.01	0.56
Liberia	0.08	0.20
Mali	0.01	0.35
Senegal	0.01	0.65
Sierra Leone	0.01	0.20
Tanzania	0.01	0.33
Uganda	0.02	0.27

TABLE 9.4: GOVT EXPENDITURE ON ENERGY AS % OF GDP & POPULATION ACCESS TO ELECTRICITY

Source: World Development Indicators, 2016

⁴³ Laura Asandului *et al* (2014).

The ratio between the efficiency scores in CRS and VRS gives the scale efficiency for the DMUs in the sample. If the scale efficiency is equal to one, it means a one per cent increase in input leads to one per cent increase in access rate (or output), while if the ratio is greater than one, a one per cent increase in inputs leads to a more than one per cent increase in output (access rate).

Table 9.5 provides both the efficiency scores (CRS and VRS) as well as the scale efficiency. Kenya, Uganda, Angola, Tanzania, Benin, and Cameroon all had a scale efficiency equal to 1, implying a one per cent increase in expenditure in energy leading to one per cent increase in the number of people connected to electricity. This indicates that the system was operating at an optimal level for these countries and there were no resource wastages.

Countries	CRS	VRS	Scale
Liberia	0.1	0.1	0.8
Burkina Faso	0.1	0.1	0.9
Uganda	0.2	0.2	1.0
Angola	0.2	0.2	1.0
Kenya	0.3	0.3	1.0
Burundi	0.3	0.4	0.7
Tanzania	0.4	0.4	1.0
Sierra Leone	0.5	0.9	0.6
Mali	0.5	0.6	1.0
Cape Verde	0.6	1.0	0.6
Senegal	0.6	0.5	1.1
Guinea	0.8	1.0	0.8
Benin	1.0	1.0	1.0
Cameroon	1.0	1.0	1.0
Average	0.5	0.5	
Std. dev	0.3	0.4	

TABLE 9.5: CRS, VRS AND SCALE EFFICIENCY FROM DEA, 2016

Source: Data Envelopment Analysis, 2016

9.3.5 Petroleum Sub-Sector

Kenya's Petroleum Sub-sector relies exclusively on imported oil and gas. The net import of petroleum increased by 9.6 per cent from 4.4 million tonnes in 2015 to 4.8 million tonnes in 2016 and by 16.2 per cent to 5.8 million tonnes in 2017.

During the review period, the Petroleum Sub-sector budget increased on average by 75 per cent from KSH1.038 billion in 2013/14 to 3.1 billion in 2016/17 (Table 9.6). The development budget accounted for 97 per cent of this budget. In terms of budget expenditure performance and absorption, the Sub- sector programmes performed well with the oil and gas exploration programme absorbing on average 85.3 per cent of the budget while the oil and gas distribution programme absorbed on average 100 per cent of the budget.

Source of Fund	Budget 13/14	Actual 13/14	Budget 14/15	Actual 14/15	Budget 15/16	Actual 15/16	Budget 16/17	Actual 16/17
AIA	-	-	-	-	-	-	0.05	0.05
Net	-	-	0.02	0.01	0.02	0.02	0.16	0.14
Total Recurrent	-	-	0.02	0.01	0.02	0.02	0.20	0.18
GoK	-	-	1.15	0.94	0.98	0.99	1.21	0.63
Loans	-	-	0.25	0.01	0.30	0.18	0.32	0.32
Local AIA	-	-	0.28	0.28	0.28	0.28	1.34	0.53
Total Development	-	-	1.68	1.23	1.55	1.45	2.87	1.47
Programme - Budget/ Expenditure	Budget 13/14	Actual 13/14	Budget 14/15	Actual 14/15	Budget 15/16	Actual 15/16	Budget 16/17	Actual 16/17
Oil and Gas Exploration	0.76	0.67	1.43	0.96	1.29	1.18	1.65	1.58
Oil and Gas Distribution	0.28	0.28	0.28	0.28	0.28	0.28	1.38	0.05
Admin, Planning & Support Services	-	-	-	-	-	-	0.04	0.03
Total Budget	1.04	0.95	1.71	1.24	1.57	1.46	3.07	1.66

Source: Ministry of Energy & Petroleum MTEF Reports, 2016 and 2017

The development budget for the Petroleum Sub-sector was sourced from the Government and Development Partners. Government support accounted for an average of 58 per cent of the development budget while grants accounted for an average of 15 per cent for the period under review. Unlike the electricity Sub-sector in which A-I-A accounted for an average of 6 per cent of the development budget, the Petroleum Sub-sector A-I-A accounted for an average of 27.3 per cent

During the period under review, 76 per cent of the Petroleum Sub-sector budget was allocated to oil and gas exploration and 24 per cent to oil and gas distribution. The budgetary allocation to oil and gas exploration was geared towards supporting the various activities in the sub-sector including accelerated development of critical assets to support early oil monetization programme (EOMP). The government cut its expenditure on oil and gas exploration and reallocated the fund to oil and gas distribution in FY2016/17. However, the programme absorbed 4 per cent of the budget due to procurements challenges. During the same period, the Mombasa-Nairobi refined Petroleum Products Pipeline (Line 5) was 95 per cent completed.

Using the allocated budget, 21 petroleum exploration blocks were marketed nationally and internationally resulting in 23 expressions of interest received from International Oil Companies and three agreements negotiated and signed. Exploration activities in the country continued to be affected by the sustained low crude oil prices in the global market. Further, 5 Exploration and Appraisal wells were drilled.

9.4 CHALLENGES

The electricity sub-sector heavily relies on government funding. The current policy of increasing access even to areas not economically viable subjects the sector to low returns on investment. Besides funding challenges, specific challenges facing efficient service delivery in the Kenyan power sector can be summarized as follows:- long incubation periods for major flagship projects and programmes outside their stipulated time (i.e. Konza City, SGR, LAPSET, and projected manufacturing growth); lack of reliable supply that remains an impediment to Kenya's economic growth and development; ambitious investment plans (especially for generation) occasioned by projected economic growth and major programmes; transmission and distribution network losses; weak supply and distribution network that causes poor quality of electricity supply to end users; significant costly thermal power in the generation mix in an environment of abundance cheap clean and mature energy resources such as geothermal, wind and solar; and high costs associated with resettlement and land compensation to secure way-leaves for infrastructure development.

Great strides have been made in energy infrastructure investment, but gaps remain. Despite investment in the power sector in recent years, lack of reliable supply remains a serious impediment to Kenya's economic growth and development. The cost of electricity remains high among enterprises.⁴⁴ Insufficient power generation, insufficient infrastructure, high initial investment costs, inadequate funding and weak distribution networks result in occasional power outages. Additional challenges in the demand and supply of electricity include inadequate generation and transmission capacity, higher transmission and distribution losses, and load shedding.

Droughts have impacted negatively on electricity generation as Kenya relies on hydropower generation for much of its power (up to 35 per cent). In periods of severe droughts, electricity generation has been switched from hydropower to more expensive thermal generation. This feeds directly to high costs of production, increases in prices of final products, uncompetitive products, and inflation pressures that erode the purchasing power of Kenyans, contributing to slowdown in domestic demand. Thus, power shortages occasioned by frequent droughts have contributed negatively to inclusive and broad-based economic growth, delaying attainment of goals to end extreme poverty and to promote shared prosperity in Kenya.

⁴⁴ Census of Industrial Production, 2011 and World Bank Enterprise survey 2013.

9.5 CONCLUSIONS AND RECOMMENDATIONS

The government commitment to achieve universal access to electricity by 2020 is is expected to accelerate economic growth. For this to be realized, the following measures have to be addressed: co-ordinated power planning; commitment to power generation projects in consideration of economic merit order ranking; lowering of electricity prices and transmission and distribution network losses; strengthening the supply and distribution network that causes poor quality of electricity supply to end users; reducing the component of thermal power in the generation mix in an environment of abundance cheap clean and mature energy resources such as geothermal, wind and solar; and seeking innovative ways to lower costs associated with resettlement and land compensation to secure way-leaves for infrastructure development.

The Government should invest more resources in the sector to diversify the power generation mix and to include commercially viable domestic alternative sources of energy including geothermal, wind, and solar to mitigate effects of drought and unstable global oil prices. Continued increases in budgetary allocation to energy as seen over the last four years should be sustained. This will help in achievement of the aspirations to promote aggressive investments in the Energy Sector to expand the primary energy resources base in the country, increase the proportion of cost effective and green energy in the country's generation mix, enhance the quality of supply through a modernized supply and distribution system and ultimately provide the economy with affordable and quality energy to support economic activities.

Implementation of power and petroleum projects has suffered delays and cost overruns due to issues associated with right of way issues. The Ministry of Energy in liaison with State Departments for Lands, Housing and Urban Development and NLC develops a framework for land acquisition. There should be a review laws and policies to guide acquisition of land and rights of way for public infrastructure projects. This will include involvement of communities, members of parliament and local county leaders to sensitize communities on the importance of granting right of ways for national projects.

Although the Kenyan economy has grown significantly over the last 15 years as demonstrated by increased budget allocation, the country still ranks low on the important electricity consumption per capita indicator, which suggests a large subset of the population with access to electricity does not use it much, likely due to the cost of accessories. The Government should promote regional electricity interconnections and power pools to stabilize electricity supply, optimize investments and lower power costs. Public Private Partnerships (PPP) in the energy sector should be promoted to increase investments in renewable energy. The Government is committed to continue development of renewable sources of energy, including geothermal, wind and solar. Geothermal potential is in excess 10,000MW, yet less than 10 per cent is currently developed. Sites with good potential for wind development have been identified and power developers are keen to tap this abundant resource which will help enrich the generation mix. Prices for solar power generation are on a downward trend, and it is expected that an increasing number of power generation entities will invest in this mode of generation. The Government should implement policies that will attract the private sector to develop energy projects with minimum delay.

There is need to increase budgetary support to programmes such as geothermal resources assessment, oil and gas exploration activities, transmission and distribution capacity enhancement and rural electrification expansion to fast track availability of clean energy resources to all Kenyans by 2020. The budgetary allocation and the actual contribution of Alternative Energy Technologies in the country Energy Sector was low during the review period. Increased budgetary allocation will assist to promote renewable energy technologies such as biomass and biogas which is key to meeting SDG 7.

The Electricity sub-sector should increase efficiency through reduction of system losses and improve revenue by optimizing on tariff and collection rates to recover costs. The efficiency gains will reduce the demand for public funding in the long term. There is also need for a balance between installed and effectively loaded power system with demand to ensure optimum tariffs.

Kenya does not have a hedging policy to manage oil price risk. The procurement of oil is done through an open tender system for the quantity of petroleum to be purchased every month. Oil marketing companies offer the lowest prices on freight and premium win the tender to supply the product. Since the oil prices are fixed at the time of tendering and for oil needed for the month, Kenya is not able to take advantage of any decrease in market prices in any given month. To address this, the government should prepare a hedging policy especially for thermal generators to stabilize the fuel cost passed through to consumers Research and development initiatives on solar energy and improved battery storage capacity may have implications for future power generation strategies. The cost of solar panels has gone down and improved technology in battery development is likely to extend battery storage capacity. Consequently, there is a likely to be a significant increase in the number of consumers with their own generation capacity. The Energy sector needs to take advantage of new technologies that will help bring the cost of generation down from renewable sources.



CHAPTER 10 CONCLUSION

The CPER 2017 presents a review of government sector expenditures and their performance over the period 2013/14 to 2016/17. It focuses on the following chapters: macro-economic performance, fiscal incidence analysis, evolution of devolved fiscal governance, public wage bill management, health, education and training, agriculture, transport, infrastructure and energy.

Government funding continues to dominate financing sources for the sectors under consideration. While this is the case, loans and donor support form an important source of funding for the various sectors. There is need to strengthen other financing mechanisms including the Public-Private- Partnership (PPPs). At the county level, own source revenue increased from ksh.26.3 billion in 2013/14 to ksh.32.5 billion in 2016/17, although target amounts were not attained. Further, there are off-budget sources of financing, which are not captured both at the national and county level budgets. To address this, there is need to strengthen budgeting systems to enable capturing off-budget expenditures. Enhancing revenue collection systems will reduce leakages and in turn increase resources from all revenue streams.

Expenditures on the various sectors increased over the period under review. The expenditures, both at the national and county levels, are skewed to recurrent expenditure as opposed to development expenditure. This is highly contributed by development net lending and the wage bill. The wage bill in the country has consistently been above the recommended 35 percent of domestic revenue. There is need therefore to develop a wage bill forecasting model to help manage the wage bill. However, it was observed that the recurrent expenditures as a proportion of the total expenditure declined slightly over the years from 72.8 percent in 2013/14 to 71.6 percent in 2016/17, while development expenditures increased from 27.2 percent in 2013/14 to 28.4 percent of the total expenditures in 2016/17.

The total budget outturns have been lower than the allocated budget over the review period at 93.2 percent, 90.3 percent and 91.5 percent in 2014/15, 2015/16 and 2016/17 respectively. This rate was lower at the county governments compared to the national government. This was attributed to the slow process of setting systems and infrastructure at the county level, following the implementation of devolved system of governance at the beginning of the review period. Delays in exchequer release from the national government to the counties might also have contributed to low absorption.

To enhance absorption, the report proposes building of county capacities on planning, budget making process and implementation of development projects and programmes. In addition, there need for timely release of funds and strong oversight functions. This is enhanced through improved public financial management, audit and robust Monitoring and Evaluation systems at all levels.

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