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Poverty and Distributional Impacts of Fiscal Policy in Kenya:

A Commitment to Equity Assessment with Extensions to Gender and Children

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Poverty and Distributional Impacts of Fiscal Policy in Kenya:

A Commitment to Equity Assessment with Extensions to Gender and Children

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Foreword

Kenya's long-term development blueprint, the Kenya Vision 2030 places equity, shared prosperity, and human dignity at the centre of national progress. Sound fiscal policy is one of the most powerful instruments to translate growth into broad-based improvements in living standards. Economic progress over the past two decades has brought about significant gains; yet, persistent poverty, widening inequality, evolving demographic challenges, and increased fiscal pressures call for the need for bold, evidence-driven policy choices. The social contract demands that public investments not only fuel growth, but also tangibly improve the welfare of all Kenyans especially the most vulnerable.

This report, *Poverty and Distributional Impacts of Fiscal Policy in Kenya: A Commitment to Equity Assessment with Extensions to Gender and Children*, comes at an important moment for our country's fiscal policy. The report assesses how taxes and public spending are redistributing income, reducing poverty, and addressing disparities across regions, gender, and children.

These insights generated by this report are timely and invaluable for policymakers and development partners. With growing calls for equity in public resource allocation and heightened scrutiny of the efficiency and inclusivity of fiscal policies, policymakers require rigorous empirical evidence. This report serves this crucial role by offering invaluable guidance as Kenya charts a path toward shared prosperity, and realisation of the aspirations anchored in the Kenya Vision 2030 and the Sustainable Development Goals.

I commend the Kenya National Bureau of Statistics, the Kenya Institute for Public Policy Research and Analysis, the World Bank, the United Nations Children's Fund, and the African Centre of Excellence for Inequality Research at the University of Nairobi for this collaborative effort, and all stakeholders who contributed data, expertise, and review. I call upon all the relevant actors across the government and non-state actors to play active roles in implementing the recommendations emanating from this report.

Hon. FCPA John Mbadi Ng'ongo, EGH

Cabinet Secretary, The National Treasury & Economic Planning

Preface

This report, *Poverty and Distributional Impacts of Fiscal Policy in Kenya: A Commitment to Equity Assessment with Extensions to Gender and Children*, presents a significant milestone in the use of robust analytical tools to inform inclusive policies in Kenya. Anchored on the approach, with extensions to gender and children, this report is the result of a rich collaboration and synergy among government institutions, development partners and the academia.

This assessment goes beyond previous analyses of fiscal incidence in Kenya by incorporating gender and child-centered lenses, considering the importance of these dimensions in inclusive and equitable socio-economic progress. The findings provide nuanced evidence: fiscal policy continues to play a central role in reducing inequality primarily through in-kind investments in education and health, but there are also gaps, such as the limited coverage and adequacy of social protection and the disproportionate burden that taxes place on the poor and vulnerable.

The report's policy simulations and comparative perspectives with peer economies reinforce the transformative potential for reforms: expanding targeted social transfers, improving the equity of public spending, and addressing structural barriers in access to services can deliver tangible gains in poverty alleviation and equity. The evidence presented in this report provides policymakers with actionable recommendations to promote fiscal policies that work better for all Kenyans.

I commend all the institutions which collaborated in preparing this report, including KNBS, KIPPRA, the World Bank, UNICEF, ACEIR, and various Ministries. The analytical depth shown in this report shows commitment to evidence-based policymaking. I am confident that this report will serve as a vital resource to support Kenya's development aspirations and the prosperity of its people.

Dr. Bonface B. Makokha

Principal Secretary, State Department for Economic Planning

Acknowledgements

This report is the result of a collaborative effort among government institutions, development partners and academia, including the Kenya Institute for Public Policy Research and Analysis (KIPPRA), the Kenya National Bureau of Statistics (KNBS), the World Bank, the United Nations Children's Fund (UNICEF), and the African Centre of Excellence for Inequality Research (ACEIR) at the Department of Economics and Development Studies, University of Nairobi. The collaboration is part of an ongoing analytical and capacity-building initiative focused on evaluating the poverty and redistributive impacts of Kenya's fiscal policy, building on previous fiscal incidence analyses.

Special recognition is extended to the following institutions and individuals:

- **KIPPRA:** The KIPPRA team was led by the Executive Director and comprised of Melap Sitati, Adan Shibia, Boaz Munga, Violet Nyabaro, Hillary Wakhungu, Samuel Kaunde, Jecinta Ali, Laureen Karima, Elvis Kiptoo, Martha Naikumi, Dire Dika Bilala and Silvanus Opiyo. KIPPRA provided technical input for the policy simulation scenarios.

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- **Government of Kenya:** Contributions from multiple departments, including the National Treasury and Economic Planning, Ministry of Education, Ministry of Health, Kenya Revenue Authority, Ministry of Agriculture and Livestock Development, State Department for Social Protection, Ministry of Energy and Petroleum, and the Council of Governors. These institutions supported the compilation of administrative data and shared critical insights that informed the analysis. The team specifically wishes to acknowledge the following officers: Walter Omwenga, Andrian Mwai, Terry Watiri, Alex Muriuki, Maliyun Abdiwahed Hassan, Maureen Libwob, Purity Mukami, Stephen Njogu, Priscilla Shiroko, Naomi Shalli, Agnes Musyoka, Stephen Momanyi and Tom Kataka.

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Dr. Macdonald G. Obudho, EBS, MBS

Director General

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Dr. Eldah Onsomu,

Executive Director

Kenya Institute for Public Policy Research and Analysis

Abbreviations and Acronyms

ACEIR	African Centre of Excellence for Inequality Research
ASAL	Arid and Semi-Arid Lands
CDF	Constituency Development Fund
CEQ	Commitment to Equity
CEQ4C	Commitment to Equity for Children
CIT	Corporate Income Tax
CPI	Consumer Price Index
CSPS	Civil Servants Pension Scheme
EAC	East African Community
eCEQ	Engendered Commitment to Equity
FIA	Fiscal Incidence Analysis
GDP	Gross Domestic Product
GOK	Government of Kenya
HSNP	Hunger Safety Net Program
KCHS	Kenya Continuous Household Survey
KDHS	Kenya Demographic Health Survey
KIHBS	Kenya Integrated Household Budget Survey
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
KRA	Kenya Revenue Authority
KSh	Kenya Shilling
MDCP	Multidimensional Child Poverty
MTP	Medium Term Plan
NHIF	National Health Insurance Fund
NICHE	Nutrition Improvement through Cash and Health Education
NSNP	National Safety Net Programme
NSSF	National Social Security Fund
NVCSP	National Value Chain Support Program
OPTC	Older Persons Cash Transfer
CT-OVC	Cash Transfer for Orphans and Vulnerable Children
PAYE	Pay As You Earn
PIT	Personal Income Tax
PSSS	Public Service Superannuation Scheme
PwSD-CT	Persons with Severe Disabilities Cash Transfer
SDG	Sustainable Development Goal
SHA	Social Health Authority
SHIF	Social Health Insurance Fund
UNICEF	United Nations Children's Fund
VAT	Value Added Tax

Key Definitions

CEQ framework: The Commitment to Equity (CEQ) framework is a standardized methodology for conducting fiscal incidence analysis. It assesses the redistributive and poverty-reducing effects of taxes and transfers using a sequence of income concepts (e.g., market income, disposable income, final income).

CEQ4C (Commitment to Equity for Children): An extension of the CEQ framework that focuses specifically on children under 18. It integrates public finance, child poverty measurement, and fiscal incidence analysis to assess how taxes and public spending affect child welfare. CEQ4C evaluates both monetary and multidimensional poverty and uses child-relevant budget data and household-level microdata to determine the impact of fiscal policy on children's well-being.

eCEQ (Engendered Commitment to Equity): An extension of the CEQ framework that incorporates a gender lens into fiscal incidence analysis. The eCEQ approach examines how taxes and public spending affect men and women differently, considering intra-household dynamics, labour market participation, caregiving responsibilities, and access to public services. It uses gender-disaggregated data and household typologies to assess whether fiscal policies reinforce or reduce gender inequalities.

Fiscal: Relating to government finances, particularly taxation, public spending (such as social protection, education, and health spending), and revenue management.

Fiscal Incidence Analysis (FIA): A method used to evaluate the impact of government taxation and spending on income distribution and poverty. It involves comparing income or consumption levels before and after fiscal interventions to determine who benefits or bears the burden of fiscal policy.

Fiscal space: The capacity of a government to provide additional budgetary resources for a desired purpose without jeopardizing fiscal sustainability. It reflects the government's ability to increase spending or reduce taxes without undermining macroeconomic stability or debt sustainability.

Multidimensional Child Poverty (MDCP): A measure of child poverty that goes beyond income to capture deprivations across multiple dimensions of well-being, such as nutrition, health, education, water, sanitation, housing, and access to information. In this report, MDCP is assessed using a composite index based on the Kenya Demographic and Health Survey (KDHS), identifying children who experience multiple simultaneous deprivations, even if they are not income poor.

Progressivity: A measure of how a fiscal instrument (tax or transfer) affects income distribution. A tax is considered progressive when higher-income individuals or households pay a larger share of the total tax than their share of pre-fiscal income. A transfer is considered progressive when lower-income individuals or households receive a larger share of the total transfer than their share of pre-fiscal income.

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Executive Summary

Kenya's economic growth has contributed to poverty reduction, but progress has slowed and remains uneven. Poverty is now less responsive to growth, and although rates were declining before the COVID-19 pandemic, the crisis reversed many of these gains, leaving poverty levels above pre-pandemic levels. Disparities persist, with higher poverty rates among rural populations, counties in Arid and Semi-Arid Lands (ASALs), female-headed households, and children—particularly in terms of multidimensional poverty among children. While inequality declined from a Gini index of 47 per cent in 2005/06 to 38.4 in 2022, inclusivity in economic growth remains limited and contributes to the slow pace of poverty reduction. High unemployment, labour underutilization, and weak formal job creation continue to hinder broad-based economic progress. Unemployment rose from 2.6 per cent in 2014 to 5.6 per cent in 2023, disproportionately affecting youth and women. Despite a high labour force participation rate of 73.7 per cent in 2021, most employment remains informal and is characterized by low productivity.

As a result, achieving Kenya's Sustainable Development Goals (SDGs) targets of ending extreme poverty, halving poverty and ensuring equal rights and access to resources for all, especially the poor and vulnerable by 2030, remains a challenge. Fiscal space is further constrained by rising public debt, increased interest costs, slowing economic growth and persistent poverty. These constraints have heightened public pressure for tax relief, as demonstrated by the Generation Z-led protests of 2024, which led to the withdrawal of the Finance Bill 2024. Despite these challenges, the current context underscores the urgent need for a fiscal strategy that restores public finances, rebuilds confidence, promotes inclusive growth, and drives social progress.

Reducing inequality and poverty is also a national priority as underscored in the Kenya Vision 2030 and its successive Medium-Term Plans. Through its long-term development blueprint, the Kenya Vision 2030, Kenya has committed to realize equity and poverty eradication by promoting broad-based access to public services and income-generating opportunities, while ensuring fairness in resource distribution and political representation, especially among vulnerable and marginalized groups. In line with this long-term development agenda, Kenya has over the years implemented fiscal policies—including personal income and indirect taxes, as well as investments in education, healthcare, and social protection programmes such as cash transfers—to address poverty and inequality. Despite these efforts, the inclusivity of growth remains limited, and the impact of fiscal policy on poverty and inequality reduction is mixed. This report assesses the distributional impact of taxation and public spending at both national and, where data allows, subnational levels, with extension to gender and children.

The broad objective of this report is to inform fiscal policy design by assessing the poverty and distributional impact of taxes and public spending. It addresses the following key policy questions:

i) How do taxes and public spending in Kenya redistribute income between the rich and the poor?

ii) What is the impact of taxes and public spending on poverty and inequality rates?

iii) What fiscal reform options could enhance poverty and distributional outcomes?

iv) How do fiscal policy actions influence gender-based differences in poverty and inequality?

v) How does fiscal policy affect child welfare and inequality?

Methodology: The Commitment to Equity (CEQ) framework

The analysis employs the Commitment to Equity (CEQ) approach to assess the impact of fiscal policy on poverty and inequality in Kenya. This approach is extended to examine the differential impacts of taxes and public spending on poverty and inequality related to gender and children. The assessment is based on a sequence of income concepts that reflect the effects of specific fiscal policy interventions, allowing for comparisons of poverty and inequality before and after these interventions (Figure E.1). The analysis is based on data from the 2022 Kenya Continuous Household Survey (KCHS) and corresponding administrative records for the same year.

The prevalence and persistence of regional disparities in poverty and inequality make the extension to regions important. Accordingly, and where data allows this report extends the analysis to rural and urban areas as well as to ASAL and non-ASAL counties. Of the total 47 counties in Kenya, 23 are classified as ASAL.[1] Out of the 23, nine are classified as arid (Baringo, Garissa, Isiolo, Mandera, Marsabit, Samburu, Tana River, Turkana and Wajir) and the remaining 14 as semi-arid (Embu, Kajiado, Kilifi, Kitui, Kwale, Laikipia, Lamu, Makueni, Meru, Narok, Nyeri, Taita Taveta, Tharaka Nithi and West Pokot).

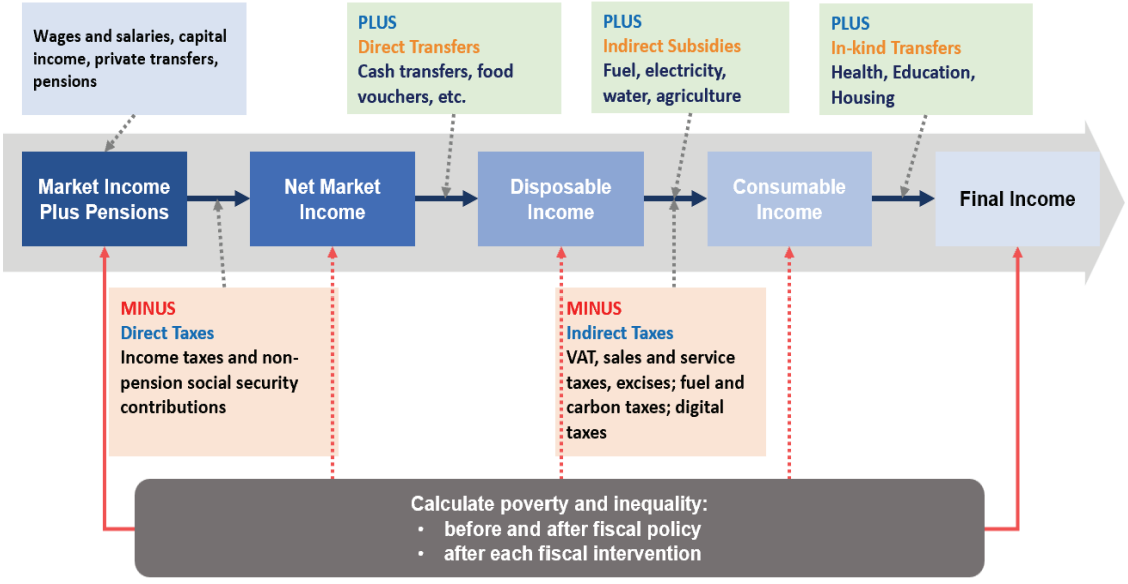
Extending the analysis to gender is critical, as gender equity is essential for achieving inclusive growth. Kenya is committed to gender equity, as enshrined in the 2010 Constitution and supporting

[1] While there are discussions in Kenya on increasing the number of ASAL counties to 29 counties, this study is based on those 23 ASAL counties as defined by the National Drought Management Authority (NDMA).

legal frameworks. However, despite this commitment, evidence reveals persistent gender disparities in income, poverty, inequality, and employment, among other aspects. This raises a key question: how do fiscal policy actions influence gender-based differences in poverty and inequality? The gender analysis in this report categorizes households based on household headship, gendered contributions to household income (representing intrahousehold roles and bargaining power), and a composite typology that combines income contribution with care needs and domestic responsibilities. Incorporating a gender perspective in fiscal incidence analysis helps highlight the extent to which fiscal policies may either reinforce gender inequities or fall short in addressing them.

The analysis is further extended to assess the impact of government taxation and spending on the welfare of children, defined as all individuals under the age of 18. It examines the extent to which income redistribution and poverty changes achieved through fiscal policy translate into improved outcomes for children. The approach integrates three analytical frameworks—public finance, child poverty measurement, and fiscal incidence analysis—to provide a comprehensive view of how fiscal policy affects child welfare. Using child-relevant budget data and household-level microdata, the analysis evaluates the role of fiscal interventions in reducing both monetary and multidimensional child poverty.

Figure E.1: CEQ framework for fiscal incidence analysis



Source: Lustig (2018) - Commitment to Equity (CEQ) Institute at Tulane University.

Though it reduces inequality, Kenya's fiscal system has minimal or adverse effects on poverty

Kenya's fiscal system reduces inequality but has limited—and even adverse—impact on poverty. In 2022, Kenya's tax and spending system reduced inequality by 4.6 Gini points (from 40.1 to 35.5), primarily through in-kind transfers in health and education. Inequality levels were higher in urban and non-ASAL counties compared to rural and ASAL regions, and these areas also saw greater reductions in inequality following the application of taxes and transfers. However, fiscal policy actions increased poverty by 2.7 percentage points, as the burden of direct and indirect taxes outweighed the benefits provided through cash transfers and indirect subsidies. Notably, although pre-fiscal poverty is higher in rural and ASAL areas, the poverty-increasing effect of fiscal policy is more pronounced in urban and non-ASAL areas.

A comparison of Kenya's results with other countries reveals important insights: **the inequality reduction achieved through fiscal policy in Kenya is lower than in most comparator countries, suggesting untapped potential for more progressive fiscal measures.** Taxes and cash transfers contribute to inequality reduction almost as much as in-kind transfers, whereas in many other countries, in-kind transfers are the dominant driver. Importantly, while fiscal policy in some countries reduces both inequality and poverty, Kenya's fiscal system increases poverty.

Assessing the net fiscal position of households reveals that most households, particularly the first nine deciles, are net receivers from the tax-benefit system. However, excluding in-kind transfers, only the poorest decile benefits, highlighting the significant role of in-kind transfers, especially in education, in supporting lower-income households. Taxes, particularly indirect ones, have a broad impact across all income groups. Rural and ASAL residents are the primary beneficiaries of the system, largely due to in-kind education transfers, while urban and non-ASAL residents are net payers, contributing more through taxes and social insurance contributions. Without the inclusion of in-kind transfers, households across all regions would shift to being net payers.

The incidence of taxes and benefits reveals significant disparities in their distribution. Direct and indirect taxes, along with social security contributions, are primarily borne by the richest households, particularly those in the top two income deciles. Among taxes, personal income tax is the most progressive. The poor benefit more from transfers. In-kind education benefits are pro-poor at lower education levels but become less equitable at the tertiary level, partly due to disparities in school attendance and education quality.

Fiscal policy narrows gender income gaps and reduces inequality, but its impact varies by household type, especially with care and domestic responsibilities

There are notable gender-based differences in income and poverty across household types. On average, male-headed households tend to earn more than female-headed ones, except in cases where women contribute a larger share of household income and there are no dependent children or elderly members. Poverty rates are generally higher in female-headed households and in those households where women are the main income contributors, compared to their male-type counterparts. In mixed household typologies, poverty is highest in male-type households with both dependent children and elderly members. On the other hand, income inequality is generally similar between male- and female-headed households.

Fiscal policy plays an important role in narrowing gender income disparities in most household types, particularly between male- and female-headed households, in households in which women or men contribute a large share to household income, and in mixed households with dependent members. However, this impact is uneven across households, with some widening of the income gap occurring in households without dependent children or elderly members. Similarly, fiscal measures also contribute to reducing inequality across all household types, with female-type households experiencing slightly greater reductions than male-type households. The most significant reduction in inequality is seen in female-type households without dependents. In-kind transfers are particularly effective in reducing inequality, although the impact varies by household type.

Transitioning from pre-fiscal to consumable income generally results in an increase in poverty across all household types, with the largest rise seen in households without dependents and the smallest in those with only elderly members. The poverty increase is typically higher in male-headed households. While direct and indirect taxes contribute to rising poverty, cash transfers help offset this effect—though not sufficiently to prevent a net increase. Consequently, the poverty gap between male- and female-type households narrows in some cases due to a sharper increase in poverty among male-type households, while in others, it widens due to a relatively higher increase among female-type households.

Child poverty is high and persistent

A significant proportion of children, approximately one in three, experience poverty in both monetary terms and across multiple dimensions of well-being, with nearly a third of monetarily poor children facing three or more deprivations simultaneously. The current fiscal system of taxes and transfers in Kenya has the unintended consequence of increasing child poverty, raising it from 41.8 per cent to 44.7 per cent. However, it does contribute to reducing child inequality by 5 Gini points, indicating a positive redistributive effect. While health and education are universal public services, the poor and non-poor capture approximately equal benefits which may indicate the presence of structural barriers that limit the ability of the poor to fully access and benefit from these services. In contrast, direct cash transfers under the National Safety Net Programme (NSNP) demonstrate better targeting towards poor children, particularly through initiatives like Nutrition Improvement through Cash and Health Education (NICHE), Cash Transfer for Persons with Severe Disabilities (CT-PWSD), and Older Persons Cash Transfer (OPCT).

Although programmes like the Cash Transfer for Orphans and Vulnerable Children (CT-OVC) and Hunger Safety Net Programme (HSNP) also largely reach poor households, some leakage to wealthier households underscores the need for periodic recertification. Furthermore, the limited benefit levels of these cash transfers, which have remained stagnant for about a decade, constrain their overall capacity to alleviate child poverty as has been achieved in many other countries through similar programmes.

Illustrative policy simulations suggest Kenya can boost fiscal redistribution by reforming indirect taxes, broadening the tax base, improving social transfers, and redesigning subsidies

Illustrative policy simulations using the CEQ and CEQ4C frameworks suggest that changes to VAT rates (±2 percentage points) have minimal impact on poverty and inequality but significantly affect government revenue. These findings, however, may differ from results using economy-wide models like CGE, as CEQ does not account for behavioral or general equilibrium effects. Expanding the HSNP to cover all poor households has a stronger effect on reducing poverty and inequality but places significant pressure on the budget, while adjusting transfer amounts by ±20% yields minimal change. Achieving universal pre-primary and primary education substantially reduces inequality, particularly for out-of-school children from poor households, but requires addressing structural barriers such as income constraints, transport, and child labor. This calls for a mix of education investment and targeted social protection, like cash transfers or school feeding programs. Better targeting of fertiliser subsidies could enhance the redistributive effects of fiscal policy, though they are less cost-effective than direct transfers.

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Introduction and Context

1.1 Why this study?

Kenya has emerged as a leading and dynamic economy in East Africa, achieving lower-middle income status in 2014. This progress has been driven by strategic investments, industrial growth (albeit with fluctuations), and financial inclusion. Since attaining independence in 1963, Kenya has promoted rapid economic growth through public investment, agricultural production, and incentives for private (often foreign) industrial investment. The country has also established itself as a regional transportation hub, serving as a gateway to the larger East African market. In addition, Kenya is a financial hub in the region with a vibrant, well-developed, and diversified financial sector, boasting one of the highest levels of financial inclusion both regionally and globally.

Despite facing significant fluctuations caused by various shocks, Kenya has, on average, experienced favourable economic growth. From 1963 to 1973, the economy grew at an average rate of 8.2 per cent per annum before declining to 5.2 per cent between 1974 and 1979, and further to 2.8 per cent in the first half of the 1980s. These declines were attributed to oil price shocks in 1973 and 1979, an attempted military coup in 1982, and a drought in 1983/84. The latter half of the 1980s saw a rebound in economic growth to 5.7 per cent due to a coffee boom in 1986 and lower oil prices coupled with favourable weather conditions. However, economic growth in the 1990s was unstable, declining to 1.9 per cent in the first half and then increasing to 2.9 per cent in the second half, with slow growth linked to the market liberalization in early 1990s that exposed local industries to foreign competition, 1991/92 and 1999-2000 droughts, oil price increases due to the Gulf War, and ethnic clashes during the 1992 and 1997 general elections. Economic growth deteriorated further between 2000 and 2002 to 1.6 per cent, before increasing to 4.0 per cent in 2003-2004 and then to 4.8 per cent from 2005 to 2019 supported by policy reforms that catalyzed private sector activities. The growth momentum was interrupted by the COVID-19 pandemic, causing GDP growth to contract by 0.3 per cent in 2020. However, it rebounded to 7.5 per cent in 2021 before returning to the earlier growth momentum, with rates of 4.8 per cent and 5.7 per cent in 2022 and 2023, respectively, while in 2024, the economy grew by 4.7 per cent, a slowdown from the revised growth of 5.7 per cent in 2023. The slowdown was attributed to 0.7 and 9.2 per cent contraction in the construction and mining and quarrying activities (KNBS, 2025).

Kenya has historically succeeded in translating some of its economic growth into poverty reduction and improved well-being. However, over time, poverty has become less responsive to economic growth, raising concerns about inclusivity of growth. Poverty fell from 46.7 per cent in 2005/06 to 33.6 per cent in 2019, but gains were partially reversed by the COVID-19 pandemic. As of 2022, poverty affected over 20 million Kenyans, with arid regions like Turkana experiencing extreme poverty rates of 82.7 per cent, compared to Nairobi's 16.5 per cent. Several factors contribute to the challenge of inclusive growth in Kenya (World Bank, 2023): (i) while the services sector has been driving growth, returns for skilled workers are higher than those for unskilled and low-skilled workers, leading to unequal benefits from growth; (ii) the creation of productive jobs, especially for the poor, is limited, with most of the jobs in the informal sector. Unemployment has worsened as more people join the labour force each year in an economy that does not generate enough jobs to absorb the growing youth population; (iii) inequality, though reduced,

persists, with the Gini index fluctuating from 39.1 per cent in 2015/16 to 38.4 per cent in 2022, contributing to the slow reduction of poverty; (iv) adverse weather shocks, such as frequent droughts and floods, disproportionately affect the poor and vulnerable. The weakening relationship between economic growth and poverty reduction underscores the need to improve the inclusivity of economic growth. This means ensuring that the benefits of growth are widely shared across all segments of society. This would lead to more widespread income growth and increases in purchasing power, fostering a more equitable and resilient economy.

The declining inclusivity of growth, despite the substantial allocation of public resources to improve living standards, calls for an assessment of whether the government is optimizing fiscal policy to reduce poverty and inequality. It is a crucial instrument for equalizing opportunities and mitigating poverty, potentially offsetting some of the forces that weaken the relationship between growth and poverty reduction. The Government of Kenya (GOK) employs various fiscal measures, including progressive personal income taxes and investments in education, health, and social protection through cash transfers to vulnerable segments of the population, to address poverty and inequality.

This study uses fiscal incidence analysis, based on the Commitment to Equity (CEQ) framework, to evaluate the poverty and redistributive effects of Kenya's taxes and social spending at the national level, as well as by gender and for children. Using the 2022 KCHS and administrative data, the report decomposes the contributions of individual tax and spending measures. It provides a unified framework for assessing how much income redistribution and poverty reduction are achieved through taxes and social spending programmes and identifies who benefits from or bears the burden of each instrument. The analysis estimates the contribution of each major instrument to reducing the poverty headcount and the Gini index, a measure of inequality. Furthermore, this study conducts simulations on how potential fiscal policy reforms may affect poverty and inequality. Building on previous fiscal incidence analyses (World Bank, 2018; Manda et al, 2020), the report draws comparisons to other countries, offering insights into the effectiveness of Kenya's fiscal policies in fostering inclusive growth.

Fiscal incidence analysis on children and gender underscores the need for inclusive policies. For instance, poverty is higher in female-headed households (35.3 per cent) than male-headed ones (32.6 per cent), while child-focused spending significantly affects poverty and inequality outcomes. These analyses align with Kenya's Vision 2030, the United Nations Sustainable Development Goals (SDGs), and constitutional commitments to equitable development and elimination of extreme poverty. Therefore, the study findings aim to provide actionable insights for policymakers, civil society, and international organizations, emphasizing the need for reforms to tackle poverty, inequality, and unemployment. Inclusive fiscal policies and investments are critical for achieving sustainable development, fostering social cohesion, and ensuring no one is left behind in the development process.

Comprehensive fiscal incidence analysis offers valuable insights for informing policy decisions. First, Kenya adopted the SDGs 2030, committing itself to reducing poverty and inequality, and has increasingly implemented policies explicitly aimed at achieving these goals. Evidence from the analysis can be instrumental in monitoring the achievement of SDGs, shaping public debates over government fiscal interventions and reforms, and designing effective social programmes. Secondly, addressing inequality and poverty reduction can foster social cohesion and political stability. The analysis provides government policymakers, international organizations, and civil society with insights into how they can use fiscal policy

to effectively reduce child poverty, inequality, and poverty across genders and different regions along the rural-urban divide and ASAL-non-ASAL features.

1.2 Kenya's poverty and inequality challenge

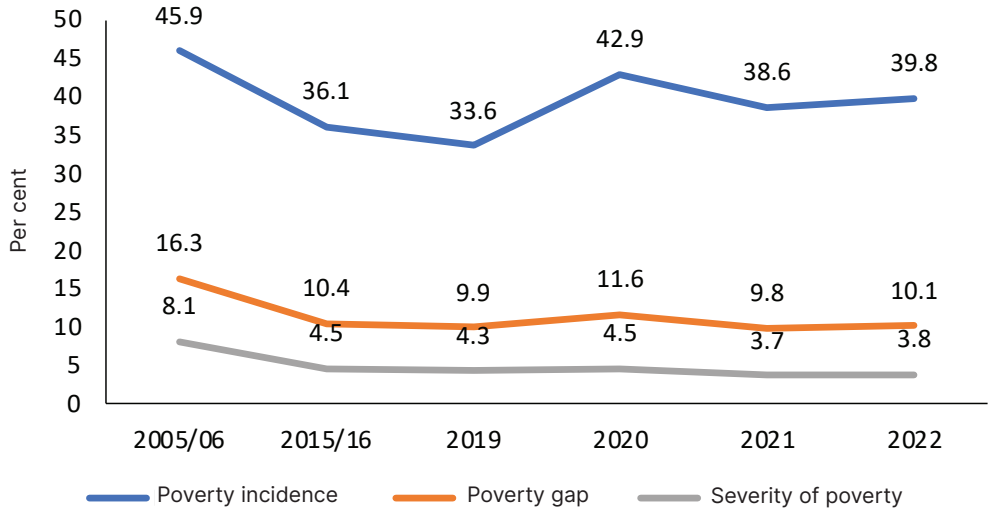
This section presents trends in poverty, inequality, unemployment, and labour force participation, comparing them across regions, demographic groups, and other countries.

1.2.1 Poverty in Kenya: Context, dimensions and disparities

Kenya has experienced periods of robust economic growth over the past two decades. However, this growth has not translated into widespread poverty reduction, particularly in rural areas and urban informal settlements. A substantial proportion of the population live in poverty with inadequate access to basic services such as healthcare, education, and decent livelihoods. This situation highlights the limitations of relying solely on economic growth metrics to assess national well-being and emphasizes the importance of a more nuanced understanding of poverty.

Two primary frameworks are commonly used to measure poverty: monetary poverty and multidimensional poverty. Monetary poverty typically refers to deprivation defined by income or consumption levels relative to a specified poverty line. It is an economic measure that focuses on a household's financial ability to meet basic needs such as food, shelter, and clothing. These thresholds are typically set by national or international authorities and capture income deprivation, without accounting for broader aspects of well-being (World Bank, 2020). In contrast, multidimensional poverty captures the range of deprivations individuals or households face across various dimensions of life. These may include income, education, health, housing, and access to clean water and sanitation. Multidimensional poverty indices assess these simultaneous deprivations, providing a more comprehensive view of poverty beyond income or consumption alone (Alkire et al., 2015).

Figure 1.1: Poverty trends, 2005 – 2022

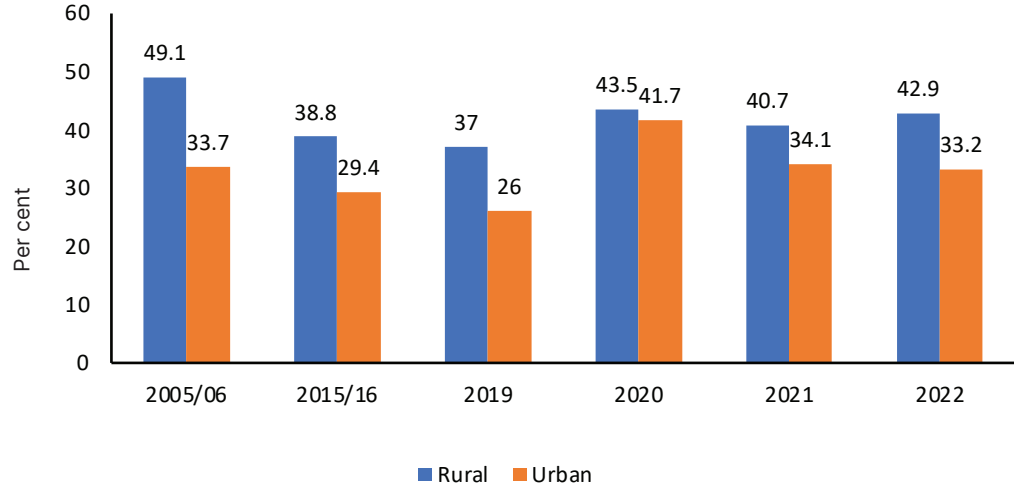


Source: Based on KIHBS 2005/06; 2015/16 and KCHS 2019, 2020, 2021 and 2022 poverty estimates.

Data illustrates Kenya's complex poverty dynamics. As shown in Figure 1.1, monetary poverty declined from 45.9 per cent in 2005/06 to 33.6 per cent in 2019. However, the COVID-19 pandemic led to a temporary reversal, with poverty rising to 42.9 per cent in 2020 before falling again to 38.6 per cent in 2021 and increasing to 39.8 per cent in 2022. The poverty gap and severity followed similar trends [2], declining steadily until 2019, increasing in 2020, and dropping again in 2021 and increasing slightly in 2022. Meanwhile, multidimensional poverty has remained relatively high. Based on the Kenya Demographic and Health Survey (KDHS) 2014 data, 37.5 per cent of the population was multidimensionally poor. This figure rose to 47.6 per cent in 2021 (World Bank, 2024b), underscoring the persistence of poverty-related deprivations even as incomes improved.

Poverty is disproportionately concentrated in rural areas, which contributes significantly to the national poverty rate. Although the COVID-19 pandemic temporarily narrowed the rural-urban gap in poverty in 2020, rural areas still experienced much higher poverty rates (Figure 1.2). Since then, poverty in urban areas has declined more rapidly than in rural area. Regional disparities across counties also remain stark. In 2022, arid and semi-arid counties such as Turkana (82.7 per cent) and Mandera (72.9 per cent) recorded the highest poverty rates, while more urbanized counties like Nairobi (16.5 per cent) and Kirinyaga (23.1 per cent) had significantly lower rates.

Figure 1.2: Trends in rural and urban monetary poverty, 2005 – 2022



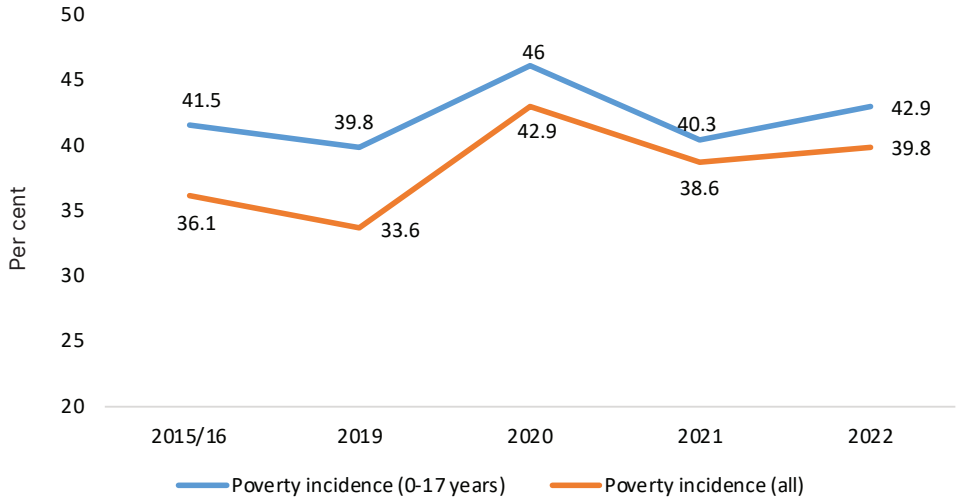
Source: Based on KIHBS 2005/06; 2015/16 and KCHS 2019, 2020, 2021 and 2022 poverty estimates.

Poverty varies across gender and age groups. Female-headed households consistently report higher poverty levels than their male counterparts, a trend observed from 2005/06 to 2022. In 2022, 35.3 per cent of female-headed households lived in poverty, compared to 32.6 per cent of male-headed ones. Children are particularly vulnerable to poverty, often experiencing higher poverty rates than the general

[2] The poverty gap measures how far, on average, poor individuals fall below the poverty line. By summing these shortfalls (zero for the non-poor) and dividing by the total population, it reflects the average income or consumption needed to lift the poor to the poverty line. The severity of poverty, or squared poverty gap, adds depth by weighting larger shortfalls more heavily, capturing both the average distance from the poverty line and inequality among the poor.

population (Figure 1.3). In 2021, 40.3 per cent of children aged 0–17 years were poor, compared to the overall population rate of 38.6 per cent. This increased in 2022 to 42.9 per cent for children, while the general population's rate rose to 39.8 per cent. Urban areas generally reported lower child poverty rates, but regional disparities remain significant. For example, in 2022, Kirinyaga County had the lowest child poverty rate at 19.4 per cent, while Turkana County had the highest at 81 per cent.

Figure 1.3: Child poverty in Kenya 2015/16 – 2022



Source: Based on KIHBS 2015/16 and KCHS 2019, 2020, 2021 and 2022 poverty estimates.

In terms of multidimensional child poverty (MDCP), the figures are more concerning. According to KDHS 2014 data, 45 per cent of children were multidimensionally poor, experiencing deprivation in three to six key areas such as health, nutrition, education, water, sanitation, and housing (KNBS & UNICEF, 2017). By 2022, this had increased to 52.5 per cent, with some children facing deprivation in up to seven dimensions (UNICEF, 2022). MDCP rates were significantly higher in rural areas (56 per cent) compared to urban areas (19 per cent) and varied drastically across counties. In 2014, Nairobi County had the lowest MDCP rate at 7 per cent, while Turkana County had the highest at 85 per cent. Counties like West Pokot, Wajir, and Tana River experience MDCP levels exceeding 80 per cent, highlighting deep inequalities in children's access to essential services.

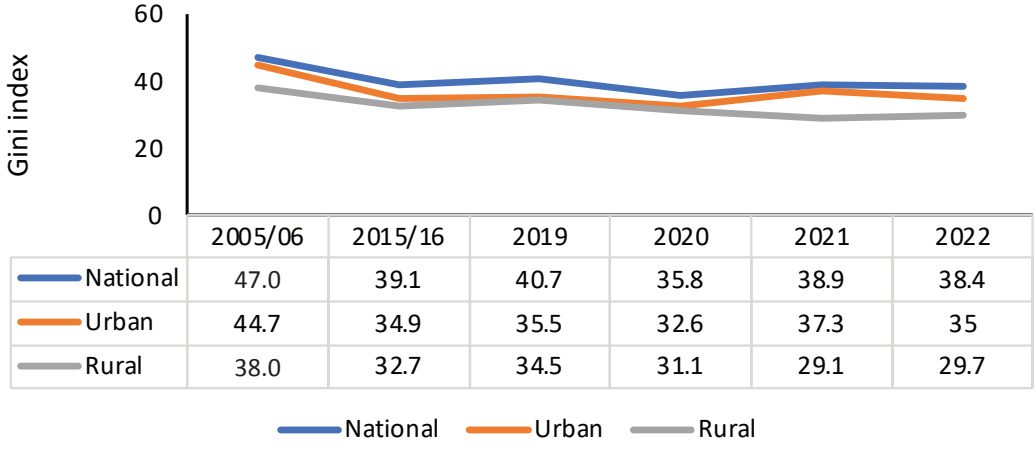
At the international level, in 2021, 36.1 per cent of Kenyans lived below the $2.15/day poverty line, closely aligning with the Sub-Saharan Africa average of 36.7 per cent in 2019. While Kenya's poverty incidence is lower than most countries in East Africa and the region, it is significantly higher than the average for lower-middle-income countries, which stood at 14 per cent in 2021 (World Bank, 2020). Many poor households in Kenya depend on subsistence farming, informal income sources, or external assistance such as cash transfers, contributions from relatives, and drought relief (Kenya Financial Diaries, 2014). However, these income sources are often irregular and insufficient, limiting their ability to sustainably lift families out of poverty. This reality underscores the urgent need for long-term, structural solutions to improve livelihoods and address poverty in a comprehensive and inclusive manner.

1.2.2 Inequality trends and spatial disparities

Kenya has made some progress in reducing inequality over time. However, significant disparities remain, both across regions and among different population groups. The Gini index, a widely used measure of income inequality, declined from 47 per cent in 2005/06 to 35.8 per cent in 2020. However, this trend was disrupted during the COVID-19 pandemic, with the Gini index rising to 38.9 per cent in 2021, before slightly falling to 38.4 per cent in 2022 (Figure 1.4). While income inequality has shown signs of improvement, asset ownership inequality remains considerably higher. For instance, in 2015/16, the Gini index for asset ownership stood at 55.0 per cent, compared to 39.1 per cent for income inequality, illustrating deeper disparities in the distribution of wealth (KNBS, 2020).

Inequality is not only economic but also geographically and demographically entrenched. Urban areas generally experience higher levels of inequality compared to rural areas particularly post 2020 in part due to disproportionately higher impacts and slow recovery from the COVID-19 pandemic in urban areas. Urban inequality declined steadily until 2020, after which it started increasing, while rural areas continued to record a downward trend through 2022 (Figure 1.4). Regional disparities are also pronounced. In 2022, Nairobi, Samburu, and Turkana counties recorded the highest Gini indices—each above 38 per cent—indicating greater inequality within those ASAL counties. In contrast, Nyandarua County had the lowest inequality level, with a Gini index of 24.2 per cent (KNBS, 2024).

Figure 1.4: Gini index, 2005/06 – 2022



	2005/06	2015/16	2019	2020	2021	2022
National	47.0	39.1	40.7	35.8	38.9	38.4
Urban	44.7	34.9	35.5	32.6	37.3	35
Rural	38.0	32.7	34.5	31.1	29.1	29.7

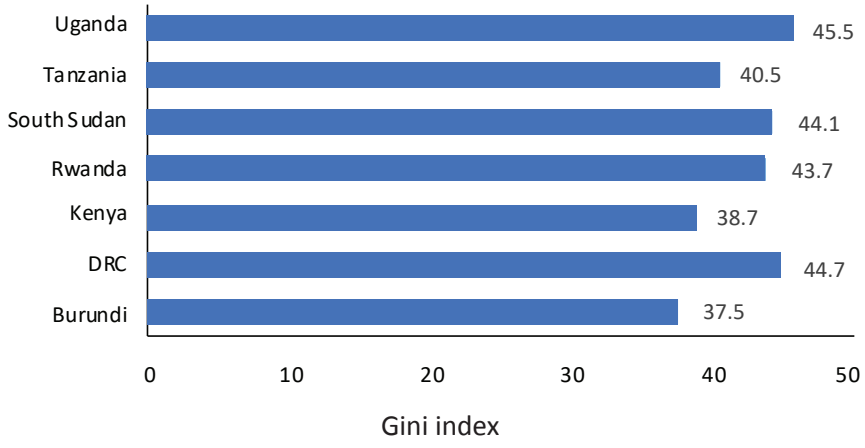
Source: Based on KIHBS 2005/06, KIHBS 2015/16 and KCHS 2019, 2020, 2021 and 2022 inequality estimates.

Beyond income and assets, inequalities in Kenya are structural and historical, reflected in unequal access to essential public services such as healthcare, clean water, sanitation, roads, electricity, and education. Much of this inequality has been attributed to the centralized planning and budgeting model that prevailed before the 2010 Constitution, which often neglected marginalized and remote regions in favour of more urbanized and relatively developed areas. In response, the 2010 Constitution of Kenya introduced a devolved system of governance aimed at promoting equitable development. Among its key provisions are the equalization fund, designed to accelerate progress in historically marginalized

areas, and the framework for equitable resource sharing across counties to ensure balanced national development.

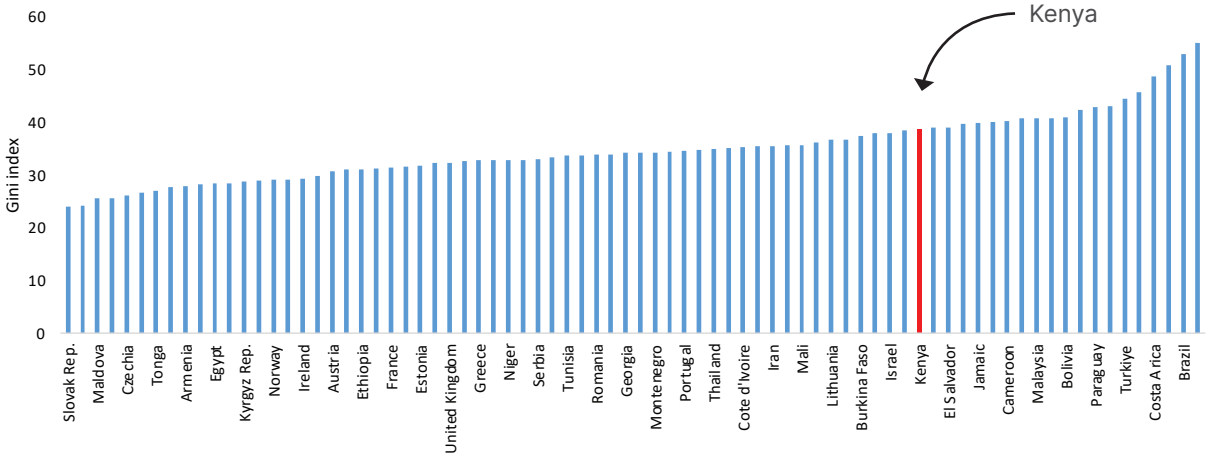
Regionally, Kenya has recorded relatively lower levels of inequality compared to its East African neighbours. Between 2018 and 2022, Kenya's Gini index averaged 38.7 per cent, which was lower than in Uganda, Tanzania, the Democratic Republic of Congo, South Sudan, and Rwanda, but higher than Burundi's (Figure 1.5). Internationally, based on countries that reported inequality (Gini index) in 2021 across the world, Kenya's inequality at 38.7 Gini index was higher than for most countries (Figure 1.6).

Figure 1.5: Gini index for selected East African countries, 2018 – 2022



Source: Construction based on World Development Indicators, World Bank, 2021.

Figure 1.6: Kenya's Gini index compared to other countries, 2021

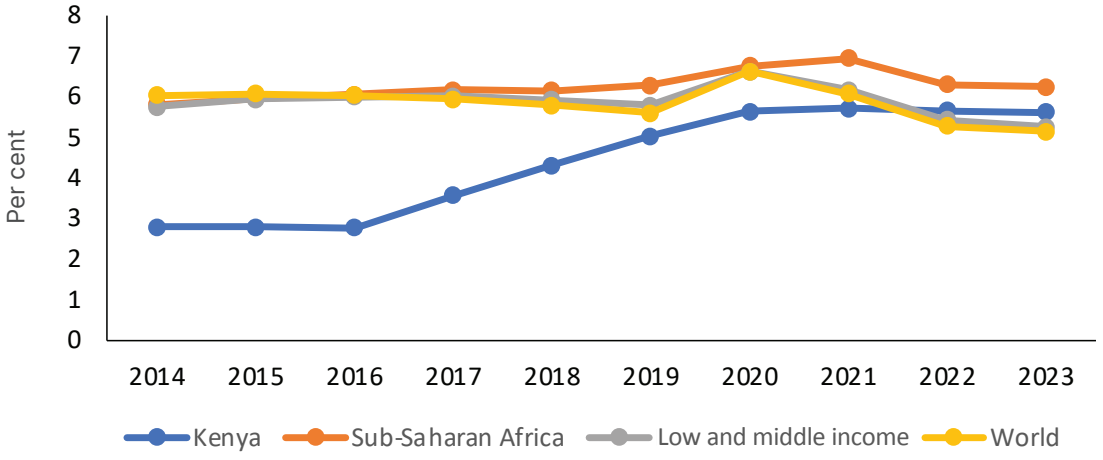


Source: World Development Indicators (WDI), accessed November 2025.

1.2.3 Unemployment and inadequate creation of decent jobs

Kenya has experienced a steady rise in unemployment since the early 2000s. The unemployment rate increased from 2.6 per cent in 2014 to 5.6 per cent in 2023 (Figure 1.7). Although historically lower than the average for Sub-Saharan Africa, Kenya's unemployment rate in 2022 and 2023 surpassed that of other low- and middle-income countries as well as the global average. The unemployment challenge is particularly acute among the youth and women, whose unemployment rates far exceed those of adult men. Youth unemployment is more than twice the national average, highlighting a structural issue in the country's labour market. Several factors contribute to this unemployment crisis, including rapid population and labour force growth, mismatches between skills and job market demands, sluggish or declining economic growth, and systemic issues such as inefficiencies and corruption that hinder investment and job creation.

Figure 1.7: Comparison to regional and global unemployment rates, 2014 – 2023

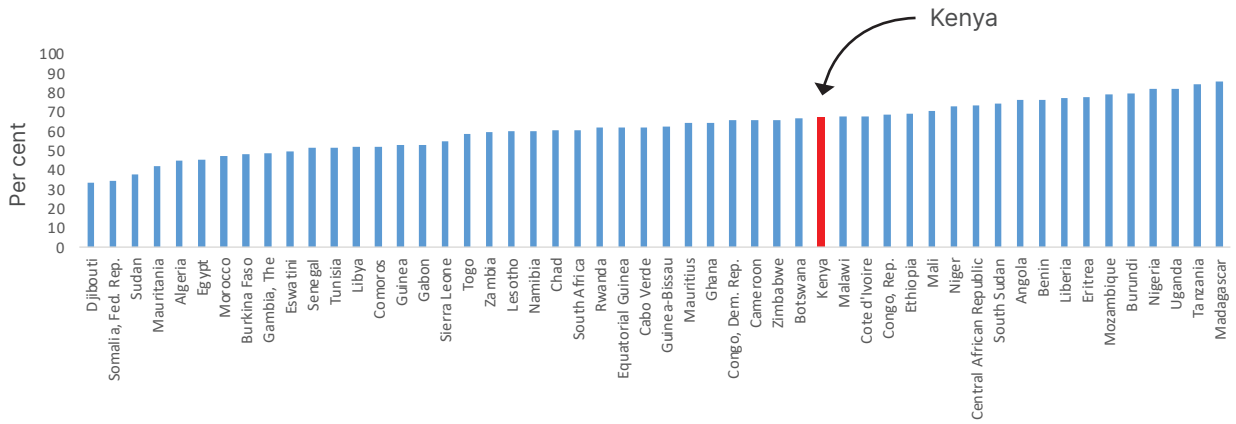


Source: World Development Indicators (WDI), accessed November 2025.

In addition to unemployment, underemployment poses a significant challenge. Many Kenyans are engaged in jobs that do not fully utilize their skills or time, leaving them underemployed and economically vulnerable. According to the KIHBS 2015/16 data, 20.4 per cent of the population was underemployed, with women disproportionately affected compared to men.

Despite these challenges, labour force participation (proportion of population aged 15-64 years to total population) is relatively high in Kenya compared to other African countries. In 2022, Kenya's labour force participation rate stood at 67.7 per cent which was higher than for many African countries as shown in Figure 1.8. This indicates a willing and available workforce, though not all are in decent employment.

Figure 1.8: Labour force participation: Kenya vs. selected African countries, 2022

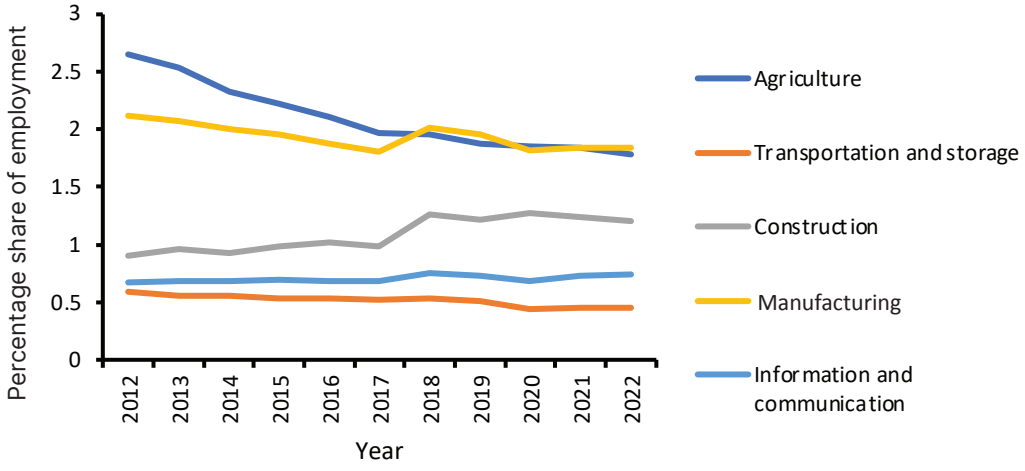


Source: World Development Indicators (WDI), accessed November 2025.

The structure of employment is largely composed of small-scale agriculture, pastoral activities, and employment in the informal sector, with a smaller share in formal private and public sector jobs (KNBS, 2023). Employment is concentrated in agriculture, manufacturing, construction, and services (Employer Skills and Occupations Survey (ESOS), 2022). However, the informal sector continues to dominate the labour market. Its share of total employment increased from 73.0 per cent in 2001 to 83.4 per cent in 2022, reflecting limited formal sector job creation. The policy implication of this is that informality limits the tax base and the reach of contributory social protection. Over the same period, the share of formal wage employment declined from 21 per cent in 2001 to 12.0 per cent in 2017, before recovering slightly to 15.7 per cent in 2022. The proportion of self-employment in the formal sector remains negligible at around 1 per cent.

The main sectors driving economic growth were transportation and storage, information and communication, and agriculture (Kenya Economic Survey, 2023). Despite their role in GDP, employment in key sectors such as agriculture, manufacturing, and transport and storage has declined, while construction has seen some gains and employment in information and communication is rising slowly (Figure 1.9). These trends suggest limited structural transformation in the labour market, with minimal sectoral shifts in employment. Given the dominance of unstable, low-productivity jobs in agriculture, pastoralism, and the informal sector, coupled with the decline in formal employment opportunities, job quality appears to be deteriorating. Addressing this issue by creating decent, sustainable jobs remains a critical challenge for reducing poverty and fostering inclusive growth.

Figure 1.9: Employment in sectors within the formal sector, as shares of total employment



Source: Construction based on data from Economic Survey 2017- 2023.

1.3 Reducing inequality and poverty: national priorities and policy approaches in Kenya

Reducing inequality and poverty is a national priority in Kenya. This is evident in the country's 5-year development plans, the long-term development blueprint—Kenya Vision 2030, and Kenya's commitment to achieving the SDGs by 2030. Through its economic and social pillars, Kenya Vision 2030 aims to achieve an average economic growth rate of 10 per cent per annum and to build a just, cohesive, and equitable society within a clean and secure environment (Government of Kenya, 2007). The Kenya Vision 2030 emphasizes equity and poverty eradication by promoting broad-based access to public services and income-generating opportunities, while ensuring fairness in resource distribution and political representation, especially among vulnerable and marginalized groups.

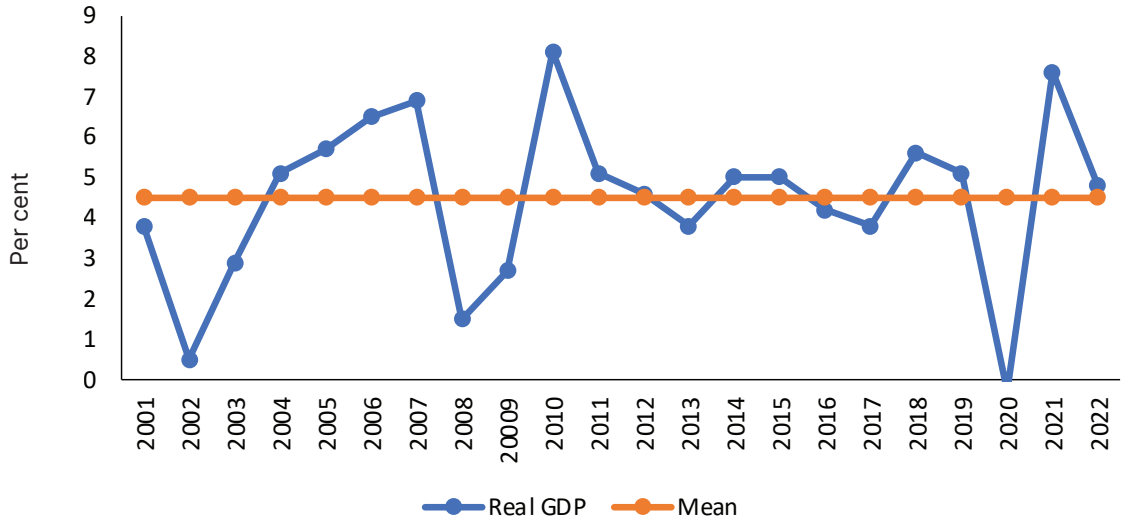
Since gaining independence in 1963, Kenya has primarily pursued growth-led strategies to reduce poverty and inequality and create employment. Under Kenya Vision 2030, three successive Medium-Term Plans (MTPs) have been implemented. The third MTP incorporated the Big Four Agenda, which prioritized food security and nutrition, universal healthcare, manufacturing, and affordable housing. Its focus was to achieve inclusive economic growth by increasing the share of manufacturing and exports, thereby expanding employment opportunities and reducing poverty.

The Fourth MTP (2023–2027) builds on these efforts and seeks to accelerate economic recovery and achieve sustainable, inclusive growth. The plan is anchored in the Bottom-Up Economic Transformation Agenda (BETA), which aims to increase productivity across all sectors, enhance public service delivery, and promote environmental sustainability. Across all development plans, the government consistently underscores economic growth as the primary strategy for tackling inequality, poverty, unemployment, and poor health, with the expectation that the benefits of growth will trickle down to households and individuals (World Bank, 2018a).

Kenya's economic performance has been moderately strong but uneven. It recorded an average real GDP growth rate of 4.5 per cent per annum between 2001 and 2022 (Figure 1.10). The economy peaked in 2010 at 8.1 per cent growth, buoyed by the gains of the Economic Recovery Strategy for Wealth and

Employment Creation over the period 2003-2007, which was associated with improved governance, infrastructure, public investment and private sector activities. The growth in 2010 also reflected the recovery from effects of the 2008-2009 global financial crisis. Key sectors such as agriculture and tourism, combined with a government stimulus package, were instrumental in driving this growth, job creation, and regional economic rebalancing. The sharp decline in 2020 was largely due to the COVID-19 pandemic.

Figure 1.10: Real GDP growth, 2001 – 2022

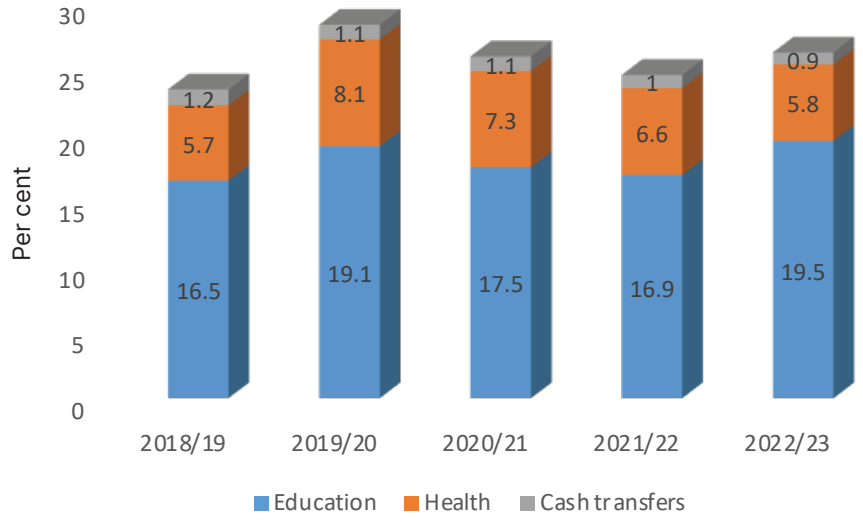


Source: Construction based on data from the KNBS Economic Surveys, various editions

Despite this progress, Kenya still faces relatively high poverty and inequality, as well as increasing unemployment, posing a significant challenge. The rate at which economic growth translates into poverty reduction has been slower than in comparable African countries (World Bank, 2018b). As a result, recent development plans have shifted toward promoting pro-poor and inclusive growth to enhance the poverty-reducing effect of economic expansion. The growth rate of 4.5 per cent between 2001 and 2022 falls short of the Vision 2030 target of 10 per cent, suggesting that economic growth has not yet reached the momentum required to significantly impact poverty and inequality. Nonetheless, Kenya has recently emerged as one of the fastest-growing economies in Sub-Saharan Africa (World Bank, 2020). To complement economic growth, the country has increasingly relied on targeted empowerment programmes focused on supporting enterprise development, job creation, and income-generating activities, particularly among youth, women, and persons living with disabilities. While job creation remains a key pathway out of poverty, economic growth has not generated sufficient employment to absorb the growing number of job market entrants.

Beyond growth, fiscal policy has played a key role in efforts to reduce poverty and inequality. The government has adopted a progressive tax system and directed significant public spending toward education, health, and social protection, which collectively represent a substantial share of total government expenditure (Figure 1.11). These investments aim to protect vulnerable populations, including children, the elderly, and internally displaced persons, and ensure a decent standard of living for all.

Figure 1.11: Share of total government expenditure on education, health and social protection



Source: Construction based on expenditure data from the Kenya Economic Survey, 2023 and 2024.

Kenya has also made strides in fiscal decentralization through mechanisms such as the Constituency Development Fund (CDF) and the devolution of resources and functions to county governments. These reforms are intended to correct historical imbalances in service delivery and promote equitable regional development. Despite ongoing debate over the extent and mechanisms of redistribution, there is a broad consensus that reducing poverty and inequality benefits society, and that governments have a role in redistributing income through taxation and public expenditure. Therefore, empirical studies assessing the impact of Kenya's fiscal policies on poverty and inequality are important in informing evidence-based policymaking.

1.4 Why now?

Amid limited resources, rising debt repayments, and declining household welfare due to high commodity prices, fiscal consolidation has emerged as a key strategy for the Kenyan government. This approach reveals the challenge of balancing fiscal consolidation with poverty and inequality reduction. For years, Kenya has struggled to balance its budget as expenditure pressures continue to mount while revenue growth remains sluggish. Addressing these challenges requires stronger governance, alongside a more equitable, transparent, and progressive fiscal policy. The urgency of these reforms was highlighted by the Generation Z-led protests in 2024, which pushed back against proposed tax increases aimed at boosting domestic revenue mobilization.

Unfolding against a backdrop of mounting public debt, rising interest costs, a slowing economy, and stalled poverty reduction, the protests underscored that Kenya needs a fiscal approach that restores public finances while fostering inclusive growth and driving social progress. Fiscal consolidation requires a holistic approach to achieving sustainable development and poverty reduction. Through prudent fiscal management, strengthened governance, and enhanced economic competitiveness, Kenya aims not only to lower its debt burden but also to build a more inclusive and resilient economy. However, the path forward is complex, marked by persistent challenges such as high poverty, income inequality,

and growing unemployment. These issues are compounded by the rising demand for public investment in critical sectors such as healthcare, education, and infrastructure, and growing public dissatisfaction with government spending efficiency.

Considering these dynamics, Kenya stands at a critical crossroads. The government's continued commitment to Kenya Vision 2030 and evolving global economic conditions underscore the urgency of evaluating the impact of fiscal policies on various population groups. In this context, conducting a fiscal incidence analysis becomes essential. This analysis provides vital insights into how tax and public spending affect different income brackets and social groups, helping to ensure that reforms are equitable, efficient, and aligned with national development goals. Further, the Medium-Term Revenue Strategy (MTRS), introduced in 2023, emphasizes the balance between revenue mobilization and its impact on people and businesses. The MTRS aims to "balance the need for revenue to finance socioeconomic development while supporting businesses and individuals to thrive and surmount economic challenges."

The broad objective of this report is therefore to inform fiscal policy design by assessing the poverty and distributional impacts of taxes and public spending. It specifically addresses the following key policy questions:

i) How do taxes and public spending in Kenya redistribute income between the rich and the poor?

ii) What is the impact of taxes and public spending on the rates of poverty and inequality in Kenya?

iii) What fiscal reform options could enhance poverty and distributional outcomes?

iv) How do fiscal policy actions influence gender-based differences in poverty and inequality?

v) How does fiscal policy affect child welfare and inequality?

1.5 Content of the report

This report is organized as follows: Chapter 2 provides an overview of Kenya's tax system and public social benefit programmes. Chapter 3 outlines the fiscal incidence analysis methodology, detailing the data sources, methods, assumptions, and analytical choices, as well as limitations arising from data gaps. Chapter 4 presents the results of the basic CEQ analysis, assessing the progressivity or regressivity of selected taxes and public spending, and evaluating the overall impact of fiscal policy on poverty and inequality at national level and where data allows, at regional levels. The chapter also includes illustrative policy simulations. Chapter 5 analyses the gendered poverty and inequality impacts of fiscal policy. Chapter 6 focuses on the CEQ results for children, including policy simulations aimed at improving child welfare. Chapter 7 concludes and provides policy implications.

02

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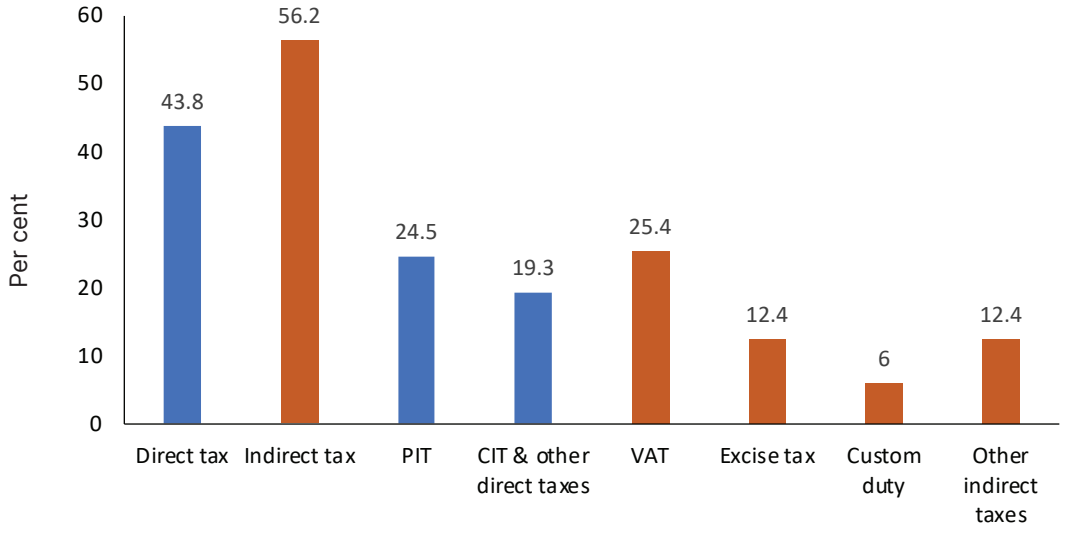
Kenya's Tax and Public Benefits System

As the fiscal incidence analysis is carried out for a particular period, this chapter focuses on an assessment of the tax and benefit system in FY2022/23 and assesses the redistributive impact of fiscal policy in that period.

2.1 Structure of taxes

Taxes in Kenya are broadly classified into two main categories: direct and indirect taxes. Direct taxes include Personal Income Tax (PIT)[3] and Corporate Income Tax (CIT), among other forms of taxable income. On the other hand, indirect taxes are imposed on the consumption of goods and services and are collected at the point of purchase. Examples include Value Added Tax (VAT), excise duty, and customs duty. Indirect taxes are the major source of government tax revenue, accounting for 56.2 per cent of the total tax revenue in the fiscal year 2022/23. VAT contributed 25.4 per cent, followed by PIT at 24.5 per cent (Figure 2.1).

Figure 2.1: Contribution of major taxes to total tax revenue, 2022/23



Source: Construction based on data from KRA and KNBS (2024).

In the fiscal year 2022/23, total government revenue accounted for 18.4 per cent of GDP (Table 2.1). Indirect taxes—comprising VAT, excise duty, customs duty, and other taxes on goods and services—formed the largest share, contributing 56.2 per cent of total tax revenue and 9.0 per cent of GDP. Direct taxes, which include taxes on income, profits, rent, and other forms of income, made up 43.8 per cent of total tax revenue and 7.0 per cent of GDP. Within direct taxes, PIT was the leading contributor, followed by CIT. Non-tax revenue accounted for 2.4 per cent of GDP.

[3] Personal income tax includes pay-as-you earn (PAYE) and other taxes on property.

Table 2.1: Kenya government revenue collection, 2022/23

Revenue item	KSh (million)	% of GDP	% of tax revenue
Total Government revenue (tax and non-tax)	**2,485,721**	**18.4**	
Tax revenue *of which*	**2,166,321**	**16.0**	
Direct taxes	**948,289**	**7.0**	**43.8**
Personal income tax (PIT)	530,232	3.9	24.5
Corporate income tax (CIT)	263,819	2.0	12.2
Withholding tax	154,238	1.1	7.1
Indirect taxes	**1,218,032**	**9.0**	**56.2**
Value added tax (VAT)	550,440	4.1	25.4
Excise tax	267,965	2.0	12.4
Customs duty plus levies	130,123	1.0	6.0
Other taxes on goods and services	269,528	1.9	12.4
Non-tax revenue	**319,400**	**2.4**	
Not included in general revenue: Contribution to social insurance	68,017	0.5	
Total included in the CEQ analysis	1,348,637	10.0	62.3

Source: Calculations based on tax revenue data from KRA and data from KNBS (2024).

2.1.1 Direct taxes

Under PIT, Pay As You Earn (PAYE) is the primary direct tax levied on the income of employed individuals—both residents and non-residents—working for resident Kenyan employers. It applies to all forms of income, including wages, salaries, dividends, interest, allowances, and employment benefits such as commissions, bonuses, fees, and gratuities, with specific tax treatments applied to fringe benefits.[4] However, bona-fide reimbursements for business-related expenses—such as entertainment, travel, and car-related costs—are excluded from taxable income. As shown in Table 2.2, the PAYE system in 2022 applied progressive marginal tax rates, ranging from 10 per cent to 30 per cent, with deductions made by employers and remitted to the Kenya Revenue Authority (KRA) on a monthly basis. The Finance Act 2023 introduced significant changes by increasing the number of tax bands from three to five. As of July 2023, PAYE rates now range from 10 per cent to 35 per cent, enhancing the system's progressivity.

[4] It is important to note, however, that in Kenya, the first KSh 2,000 per day of subsistence, travelling, and entertainment allowances are excluded from the calculation of one's employment gains. The application of these tax measures also depends on the firm policy on allowance.

Table 2.2: The income tax schedule (January 2021 to June 2023)

Annual tax bands (KSh)	Rate of tax (%)
Up to 288,000	10
288,001 – 388,000	25
Above 6,000,000	30

Source: https://www.kra.go.ke/news-center/public-notices/1042-change-of-tax-rates

In addition to PAYE, employees are required to contribute to the National Health Insurance Fund (NHIF). As of 2022, NHIF contributions were capped at a maximum of KSh 1,700 per month for employees earning over KSh 100,000, while self-employed individuals contributed a flat rate of KSh 500 per month. In October 2024, the NHIF was replaced by the Social Health Insurance Fund (SHIF), which introduced a new contribution structure, deducting 2.75 per cent of an employee's gross monthly salary. SHIF has a minimum monthly contribution of KSh 300, but no upper limit and it is applied on an individual gross salary or income.

In addition to income tax, employees are subject to several other statutory deductions, including contributions to the National Social Security Fund (NSSF), which supports retirement benefits. The contribution rates for NSSF were revised in 2023 and 2024, with employers now required to match employee contributions. Individuals working in the informal sector can also make voluntary contributions to the fund. NSSF contributions are structured into two components: Tier I and Tier II. For lower limit (Tier 1), the earnings limit is KSh 8,000 per month with the minimum contribution floored at KSh 480 (6 per cent of KSh 8000). For the upper limit (Tier 2), the earnings is limit KShs 72,000 per month with the maximum contribution ceiling of KSh 4,320 per month. Organizations may opt out of Tier II contributions if they have an alternative, approved pension scheme in place for their employees.

For public servants and state officials, social security provisions were initially governed by the Civil Servants Pension Scheme (CSPS), established under the Pensions Act of 1950. This was later replaced by the Public Service Superannuation Scheme (PSSS), which was enacted in 2012 and became operational in January 2021 (see Republic of Kenya, 2020). The PSSS covers civil servants, teachers, the National Police Service, the Prisons Service, and the National Youth Service. Under the PSSS, both employees and the government contribute toward retirement benefits. Employees contribute 7.5 per cent of their basic salary, phased in gradually—2 per cent in the first year, 5 per cent in the second, and the full 7.5 per cent in the third year. The government contributes 15 per cent of the employee's basic salary. Employees also, have the option to make additional voluntary contributions beyond the mandatory 7.5 per cent.

The PAYE system includes provisions for specific tax reliefs. Personal relief is granted to all resident employees at a rate of KSh 28,800 per annum (or KSh 2,400 per month). Additionally, insurance relief is available at 15 per cent of premiums paid, up to a maximum of KSh 5,000 per month (or KSh 60,000 annually), provided, there is proof of payment. The Finance Act 2021 amended Section 31(1) of the Income Tax Act to include National Health Insurance Fund (NHIF) contributions as eligible for insurance relief, effective 1st January 2022. Moreover, since January 2017, interest payments on mortgages have been considered tax-deductible. Individuals who borrow from registered financial institutions to

purchase or improve a home—provided they occupy the residence—are eligible for a mortgage interest deduction of up to KSh 300,000 annually. This measure aims to promote home ownership. The allowable mortgage interest is deducted from gross employment income when calculating taxable income under the PAYE system.

CIT is another key direct tax, levied on the profits of corporate bodies, including limited liability companies and co-operatives. Resident companies pay tax at a rate of 30 per cent, while branches of non-resident companies are taxed at 37.5 per cent. Business losses can be carried forward indefinitely, allowing companies to offset future profits and reduce future CIT liabilities. The CIT framework also includes preferential tax regimes for firms operating in export processing zones, special economic zones, and newly listed companies on approved securities exchanges. In addition to PAYE and CIT, other direct taxes include withholding/retention tax (on fees, dividends etc.), residential rental income tax (10 per cent on gross rental income up to KSh 15million), capital gains tax (15 per cent of the net gains), advance tax, betting tax (15 per cent of Gross Gaming Revenue), digital service tax (1.5 per cent of the gross transaction value exclusive of VAT), individual tax, turnover tax (3 per cent on gross sales between KSh 1 million and 25 million in a year) among others. Further, in 2023, the Finance Act 2023 introduced the digital assets tax which applies a rate of 3 per cent on cryptocurrency transactions and the Tax Law Amendment 2024 introduced the Significant Economic Presence Tax to replace digital service tax with effect from 27th December 2024.

This study focuses on direct income taxes such as PIT that are linked to households for the fiscal incidence analysis. In 2022, PIT contributed 24.5 per cent of total tax revenue and 3.9 per cent of GDP while CIT and withholding tax accounted for 2.0 per cent and 1.1 per cent of GDP, respectively. However, due to the lack of a comprehensive methodology to assign the corporate income tax burden to households in the survey, CIT is excluded from the fiscal incidence analysis.

2.1.2 Indirect taxes

VAT is a consumption tax levied on the supply of taxable goods and services, whether produced or provided in Kenya or imported into the country. It is applied at each stage of the supply chain where value is added. The general VAT rate is 16 per cent, though three VAT rates were in effect during 2021 and 2022: 16 per cent for standard-rated goods and services; 8 per cent for fuel, and zero per cent for zero-rated goods and services (e.g., ordinary bread, maize flour, LPG gas, wheat and milk among other) consumed by the poor and considered essential. Some goods and services are VAT exempt (e.g. health care services, education and security), and all others are considered vatable unless explicitly exempted under the VAT Act. VAT on imported goods is collected at the point of entry by the Commissioner of Customs and Border Control. For locally supplied goods and services, businesses are required to remit VAT by the 20th day of the month following the transaction. Kenya's VAT system operates on the destination principle, which allows exports to be zero-rated. In the fiscal year 2022/23, VAT accounted for 25.4 per cent of total tax revenue and 4.1 per cent of GDP (Table 2.1).

Excise duty is the second-largest contributor among indirect taxes with alcoholic products and tobacco/cigarette being the main source of revenue. It is imposed on excisable goods manufactured in Kenya by licensed producers; excisable services supplied in Kenya; excisable goods imported into Kenya. In addition to revenue generation, excise duty serves as a regulatory function by discouraging the consumption of goods and services associated with negative externalities. These include petroleum products, motor vehicles, alcoholic beverages, tobacco products, soft drinks, bottled water, airtime, financial transfers, and betting services. The Finance Act 2023 introduced excise on advertisement at the rate of 15 per cent. Excise duty is charged either at specific rates or ad valorem rates, and it applies to a selective base of goods and services. Exports and goods or services expressly exempt under the Excise Duty Act are not subject to excise duty. For imported goods, excise duty is collected by the Commissioner of Customs Services at the point of importation. In 2022/23, excise duty accounted for 10.8 per cent of total government revenue and 2.0 per cent of GDP.

Several changes have been introduced through recent finance acts: The Finance Act, 2021 reintroduced excise duty on betting and gaming at 7.5 per cent of the amount wagered or staked; The Finance Act, 2022 exempted horse racing from excise duty; The Finance Act, 2023 amended several excise duty rates, including: a reduction from 20 per cent to 15 per cent for telephone and internet data services, and for money transfer fees charged by banks and financial service providers; an increase from 12 per cent to 15 per cent on money transfers conducted by mobile service and payment providers. In addition, the annual inflation adjustment of excise duty rates, previously required under the Excise Duty Act, was removed, effective 1 July 2023. The Tax Law Amendment 2024 provided for taxation of alcoholic products (beer, cider, perry, mead, opaque beer and mixtures of fermented beverages with non-alcoholic beverages and spirituous beverages of alcoholic strength not exceeding 6 per cent) based on alcoholic content. It also changed the rates for tobacco and nicotine. Excise duty on imported goods is calculated based on the customs value (adjusted for depreciation) plus import excise duty. However, due to the challenge of attributing import duty directly to households, it is excluded from this fiscal incidence analysis.

Customs duty is levied on the importation and exportation of goods across international borders. As a member of the East African Community (EAC) and Common Market for East and Southern Africa (COMESA), Kenya aligns its customs policies with the EAC Customs Management Act (2004), the EAC Common External Tariff (CET), the EAC Rules of Origin, and most recently the four band CET – to have been applied by the partner states from 1st July 2022. The four-band CET has a minimum rate of zero (0) per cent for raw materials and capital goods; 10 per cent for intermediate goods not available in the region; 25 per cent for intermediate goods available in the region, and 35 per cent for imported finished products available in the region (EAC, 2023). Kenya also adheres to international trade rules and agreements under the World Trade Organization (WTO) and the World Customs Organization (WCO). Customs duties are charged on an ad valorem basis (a percentage of the import value) or at specific rates, depending on the product type: raw materials and capital goods typically attract 0 per cent duty; intermediate goods are taxed at 10 per cent, and finished goods attract the highest rate, usually 25 per cent. Sensitive items may attract duties higher than 25 per cent to shield local industries from foreign competition. Certain firms benefit from duty exemptions, particularly those operating in Export Processing Zones (EPZs), Special Economic Zones (SEZs), and under the Manufacturing Under Bond (MUB) programme. These firms are generally exempt from customs duty, fees, and levies, except for a few specified commodities. In the fiscal year 2022/23, customs duty and related levies accounted for 1.7 per cent of GDP (Table 2.1).

2.2 Structure of the public social benefits system

Kenya implements a range of social spending programmes, including direct transfers, indirect transfers, and non-social expenditures (Table 2.3). These programmes play a critical role in reducing poverty and income equality. Direct social spending primarily comprises social protection programmes, such as: CT-OVC; OPCT; PWSD-CT; HSNP, and NICHE. Indirect transfers are provided in-kind, mainly through government spending on education and health. These in-kind transfers represent the largest share of social spending, accounting for 32.3 per cent of total government expenditure and 7.5 per cent of GDP in FY2022/23 (Table 2.3). Within this category, education dominates, constituting 4.6 per cent of GDP, while cash transfer programmes account for 1 per cent of total government expenditure (0.2 per cent of GDP).

In comparative terms, Kenya's education spending (4.5 per cent of GDP in 2022) is higher than the Sub-Saharan Africa average (3.4 per cent); above the average for lower-middle-income countries (3.7 per cent); and higher than for Tanzania and Uganda while comparable to that of Rwanda and Burundi whose education spending stands at 4.8 per cent of GDP (World Bank, 2024c). As in many countries, education spending constitutes the largest portion of Kenya's social expenditure, followed by health spending (1.3 per cent of GDP) and direct cash transfers (0.2 per cent of GDP), reflecting a typical distribution pattern of social spending.

Table 2.3: Kenya government social spending share of GDP and total government expenditure

Expenditure item	KSh (million)	% of GDP	% of total government expenditure
Total government spending	**3,147,132**	**23.3**	
Social spending *of which*	**1,016,562**	**7.5**	**32.3**
Direct transfers (Total cash and near cash)	**30,079**	**0.2**	**1.0**
Hunger Safety Net Program (HSNP)	4,557	0.03	0.1
Cash Transfer for Orphans and Vulnerable Children (CT-OVC)	6,677	0.05	0.2
Older Persons' Cash Transfer (OPCT)	17,944	0.13	0.6
Persons with Severe Disabilities Cash Transfer (PwSD-CT)	901	0.01	0.03
Nutrition Improvement through Cash and Health Education (NICHE)	23	0.00	0.00
Total in-kind transfers	**796,937**	**5.9**	**25.3**
Education	613,300	4.5	19.5
Health	183,637	1.4	5.8
Non-social spending	**189,546**	**1.4**	**6.0**
Fuel	146,095	1.1	4.6
Fertiliser	17,147	0.1	0.6
Electricity	26,304	0.2	0.8
Total included in CEQ analysis	**990,258**	**7.34**	**36.5**

Source: Calculations based on expenditure data from the Kenya Economic Survey, 2023 and 2024.

2.2.1 Social protection

Social protection, as enshrined in the 2010 Constitution, is a fundamental tool for supporting vulnerable populations and promoting inclusive growth. The State Department for Social Protection and Senior Citizen Affairs is responsible for the implementation of these programmes. A core pillar of Kenya's social protection system are the social cash transfer programmes under the National Safety Net Programme. These include the CT-OVC, OPCT, PwSD-CT, HSNP, and the complementary NICHE. These programmes aim to enhance the livelihoods and well-being of targeted groups by providing regular cash payments to the most vulnerable segments of society.

- **CT-OVC,** launched in 2004, provides KSh 2,000 monthly to poor households caring for orphans and vulnerable children. Eligibility criteria being adjusted in 2024/25 but previously households must have had either an orphan or a caregiver that is chronically ill. Households should not also benefit from another social assistance programme (except OPCT). In FY2022/23, the programme supported 278,188 households across all 47 counties.
- **OPCT,** initiated in 2007, provides KSh 2,000 monthly to individuals aged 70 years and above providing they do not already have a government pension. The programme covered 756,485 households in 2022/23, aiming to enhance the dignity and welfare of the elderly.

- **PwSD-CT,** which began in 2010, provides KSh 2,000 monthly to poor individuals living with severe disabilities who require the assistance of a caregiver. In 2022/23, 37,553 households participated in the programme across all counties.
- **HSNP** operates in drought-prone, arid, and semi-arid regions—Mandera, Wajir, Marsabit, Garissa, Isiolo, Samburu, Tana River and Turkana—providing KSh 2,700 every month to chronically poor households. In 2022/23, 123,928 households benefited from the programme.
- **NICHE** targets vulnerable households already enrolled in one of the four above cash transfer programmes. Operating in Kitui, West Pokot, Turkana, Marsabit, Kilifi and recently expanded to Garissa, Isiolo, Samburu, Tana River, Wajir and Mandera, NICHE aims to improve maternal and child nutrition outcomes. It provides a monthly top-up of KSh 500 per child under 36 months or KSh 500 per pregnant woman (up to a maximum of KSh 1,000 per household). However, the benefit amount varies depending on who is eligible in the household. For example, if a child grows older than three years or there is no pregnant woman, the monthly top-up may reduce from KSh 1,000 to KSh 500 or cease altogether. This dynamic entry and exit conditions mean that households may receive varying amounts from month to month. In 2022/23, 24,604 beneficiary households received support at a total cost of KSh 23 million.

In FY2022/23, the combined beneficiaries of CT-OVC, OPCT, PwSD-CT, and HSNP reached about 1.2 million households, representing 1 per cent of total government expenditure and 0.2 per cent of GDP (Economic Survey 2023).

2.2.2 In-kind transfers: Education

Education is a fundamental right enshrined in the Constitution of Kenya (2010), which guarantees every child access to free and compulsory basic education and ensures that persons living with disabilities have access to educational institutions and facilities. Guided by this constitutional mandate, Kenya's education policy and legislative framework emphasize the provision of equitable, quality, and relevant education for all children under the age of 18, aligned with the country's development goals.

The government prioritizes education in its budget, allocating an average of 17.9 per cent of total government expenditure (equivalent to an average of 4.8 per cent of GDP) to the sector between 2018/19 and 2022/23. This is in line with United Nations Educational, Scientific and Cultural Organization (UNESCO)'s recommended benchmark of allocating 4–6 per cent of GDP or 15–20 per cent of public expenditure to education. However, it is worth noting that education spending as a share of GDP has declined from 5.7 per cent in 2018/19 to 4.2 per cent in 2021/22 and slightly increased to 4.5 per cent in 2022/23 (Figure 2.2).

123,928

Households in drought-prone, arid, and semi-arid regions benefited from the HSNP programme in 2022/23.

17.9%

Of total government expenditure (equivalent to an average of 4.8 per cent of GDP) went to education between 2018/19 and 2022/23.


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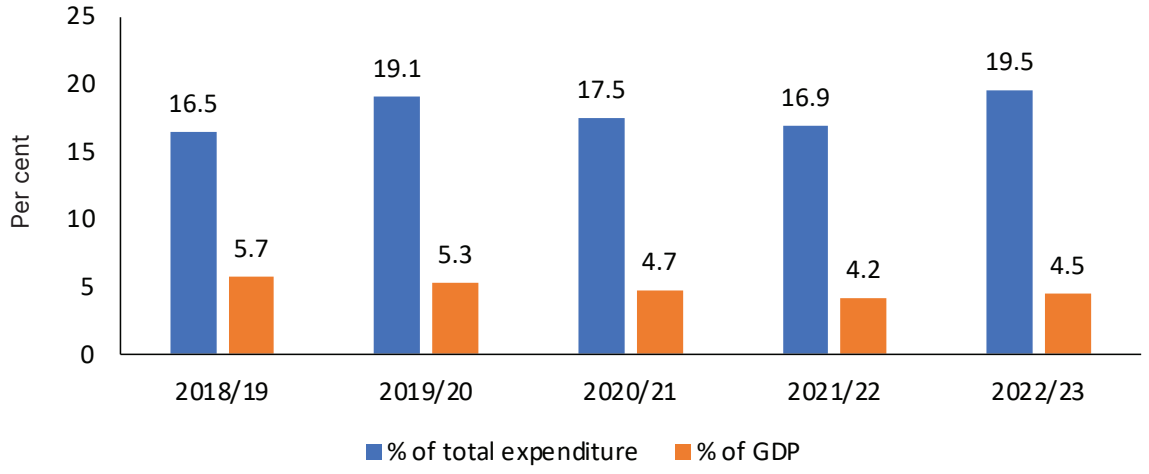
Figure 2.2: Share of government expenditure on education



Source: Own construction based on expenditure data from the Kenya Economic Survey, 2023 and 2024.

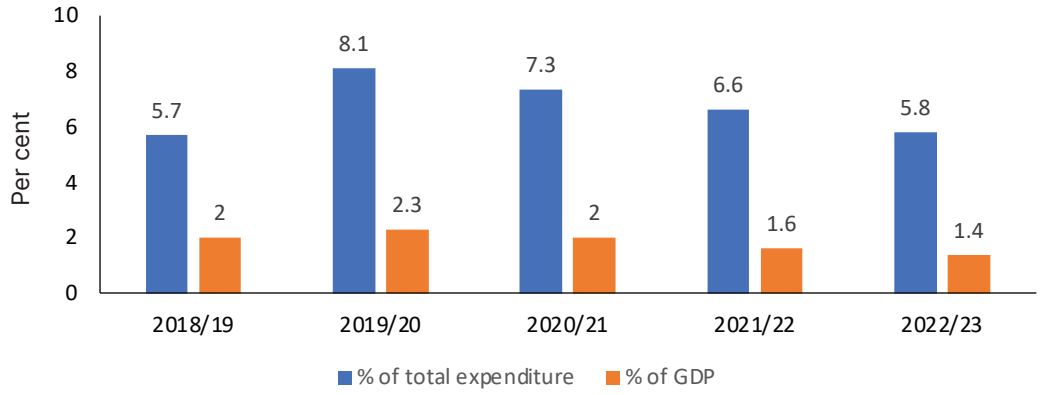
Government funding supports several key initiatives, including free primary education (introduced in 2002) and free day secondary education (since 2008), with a current capitation grant of KSh 22,244 per learner. Public resources are also allocated to pre-primary education, colleges (including Technical and Vocational Education and Training—TVET, and Teacher Training Colleges—TTC), and public universities. According to the Kenya National Bureau of Statistics (2020), public investment in education and health services plays a critical role in reducing poverty and inequality, making these services central to the country's broader social protection and development strategy.

2.2.3 In-kind transfers: Health

The Constitution of Kenya 2010 introduced a devolved system of governance, including the devolution of health services, with 70 per cent of health functions managed by county governments, while the national government retains responsibility for the remaining 30 per cent. The devolution of functions and funding began in 2013/14, when the National Treasury initiated direct transfers to county governments. Each county independently determines its health budget allocation based on local priorities and needs. Both national and county governments play a central role in health service provision, collectively owning more than 50 per cent of health facilities across the country. However, despite this significant public sector involvement, government health expenditure averaged 1.9 per cent of GDP between 2018/19 and 2022/23. In 2022/23, government spending on health declined further to 1.4 per cent of GDP (Figure 2.3).

Kenya's health system is financed through four primary sources: (i) government spending, (ii) out-of-pocket payments by households, (iii) donor funding, and (iv) private sector funding. These funds support both outpatient and inpatient services, among other health interventions, forming the backbone of service delivery across the public and private sectors.

Figure 2.3: Share of government expenditure on health



Source: Construction based on expenditure data from the Kenya Economic Survey, 2023 and 2024.

2.3 Non-social spending benefits

Fiscal incidence analysis also considers subsidies. In 2022, key subsidy programmes in Kenya included the electricity subsidy, fuel subsidy, and fertiliser subsidy—all of which fall under the agriculture and energy sectors.

The fertiliser subsidy is implemented through the National Value Chain Support Program (NVSP), which was launched in September 2022 to increase food production and reduce food prices. During the 2022/23 short rains, the government subsidized 71,000 metric tons of fertiliser, offering it to farmers at half the commercial price (KSh 3,500 per 50-kilogram bag). A total of 3.5 million bags of subsidized fertiliser were distributed across 41 counties. The total expenditure on the subsidy in 2022/23 amounted to KSh 17.1 billion, which represents 0.1 per cent of GDP or 0.5 per cent of total government expenditure (see Table 2.3).

Kenya generates about 87.5 per cent of its electricity from renewable sources, including geothermal (43.6 per cent), hydro (24.0 per cent), wind (16.9 per cent), and solar (3.0 per cent). In June 2022, the government introduced an electricity subsidy that reduced power costs by 15 per cent for Kenya Power customers (covering approximately 98 per cent of consumers, or around 8.8 million customers, most of whom are domestic users consuming 100 kWh or less). However, the subsidy was removed in April 2023, leading to a 77 per cent price increase. The total cost of the electricity subsidy in 2022/23 was KSh 26.3 billion, which is 0.2 per cent of GDP or 0.8 per cent of total government expenditure.

The fuel subsidy was introduced in April 2021 to mitigate the rising cost of living caused by increasing fuel prices. However, the subsidy was discontinued in May 2023 due to budgetary constraints, leading to immediate price hikes of KSh 3.40 for petrol, KSh 6.40 for diesel, and KSh 15.19 for kerosene per litre respectively. In addition, fuel prices were further impacted by a doubling of VAT on fuel to 16 per cent, aligning it with the VAT rate for other goods to raise revenue. The total expenditure on the fuel subsidy in 2022/23 was KSh 146.1 billion, representing 1.1 per cent of GDP or 4.6 per cent of total government expenditure.

Box 2.1: Kenya fiscal policy changes since 2022

Given that this analysis uses data from 2022, it is important to highlight changes in fiscal policy that took place between then and now and their possible implications on the incidence of fiscal policy. The reforms span direct and indirect taxation, social contributions, and subsidy programs, aimed at enhancing revenue collection, broadening the tax base, and improving social welfare.

Tax reforms

- ***Personal Income Tax (PIT):*** *Expanded* from 3 to 5 bands in July 2023; the top rate increased to 35%.
- ***Corporate Income Tax (CIT):*** Rate for non-resident companies reduced from 37.5% to 30% effective January 2024.
- ***Turnover Tax:*** Threshold lowered to KSh 25 million; the rate increased to 3% effective July 2023.
- ***Digital Asset Tax:*** Introduced at 3% on crypto and Non-Fungible Tokens (NFT) transactions effective September 2023.
- ***Residential Rental Income Tax:*** Rate reduced from 10% to 7.5% effective January 2024.
- ***Capital Gains Tax:*** Increased from 5% to 15% effective January 2023.

New levies

Affordable Housing Levy (AHL): Enacted March 2024; 1.5% of gross salary from both employee and employer.

Indirect tax adjustments

- ***Excise duty:*** Inflationary adjustment removed; rates revised for telecom, banking, and gaming services.
- ***Import Declaration Fee (IDF):*** Reduced from 3.5% to 2.5%; exemptions expanded.
- ***Export and Investment Promotion Levy:*** Introduced in 2023 at 10% or 17.5% on selected imports.

Social contributions

- ***National Hospital Insurance Fund (NHIF):*** Insurance relief extended to NHIF contributions effective January 2022.
- ***Post-Retirement Medical Fund Relief:*** Introduced January 2024; 15% of contributions or max KSh 60,000 per year.
- ***National Social Security Fund (NSSF):*** Monthly contributions increased to KSh 2,160 effective January 2024.

Box 2.1: Kenya fiscal policy changes since 2022

Subsidy programs

- ***Fertiliser subsidy:*** *Launched September 2022; subsidized prices cut by about 50%.*
- ***Electricity subsidy:*** *Removed in April 2023; prices rose by 77%.*
- ***Fuel subsidy:*** *Discontinued in May 2023; later reintroduced.*

Relevance of 2022 fiscal incidence analysis

Despite the extensive fiscal reforms implemented since 2022, the fiscal incidence analysis based on 2022 data remains highly relevant for several reasons:

- ***Baseline comparisons:*** The 2022 data provide a critical baseline for evaluating the distributional impacts of subsequent tax and benefit changes. It enables policymakers to assess whether reforms have improved equity and efficiency.
- ***Structural continuity:*** Many core components of Kenya's tax and benefit system such as VAT, PAYE, and NHIF, remain structurally similar. This continuity allows for meaningful extrapolation of 2022 findings to current conditions.
- ***Lag in behavioural adjustments:*** Economic agents often adjust slowly to fiscal changes. The behavioral responses to reforms enacted after 2022 may not yet be fully reflected in current data, making the 2022 analysis a useful proxy.
- ***Policy evaluation:*** The 2022 incidence analysis helps identify which population groups were most affected by the pre-reform fiscal system. This insight is essential for evaluating the effectiveness of recent reforms in addressing inequality and poverty.
- ***Data availability and quality:*** The 2022 dataset is more complete and more validated compared to more recent data, which may still be undergoing collection and verification. This makes it a reliable foundation for policy analysis.

The changes since 2022 suggest that fiscal policy is likely to have assumed an increased role in poverty and inequality reduction, particularly considering high unemployment.

03

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Methodology and Data

The fiscal incidence analysis in this study uses the CEQ assessment, as outlined by Lustig and Higgins (2013). The CEQ assessment utilizes a comprehensive fiscal incidence analysis and a diagnostic framework to evaluate the poverty and redistributive impacts of taxes and public spending benefits. This section provides an overview of the methodology, including its extension to analyse the effects of fiscal policy actions on poverty and inequality by gender and for children, as well as a description of the data used.

3.1 Fiscal incidence analysis using the CEQ framework

The CEQ assessment simultaneously measures the impact of fiscal actions on poverty and inequality. This analysis involves allocating the burdens of taxes and the benefits of public spending to households or individuals, allowing for a comparison of poverty and inequality estimates based on income before and after taxes and transfers. The allocation of tax burdens and benefits of public spending is performed using household-level micro-data complemented by administrative data. Transfers include cash transfers and in-kind transfers via the monetized value of free public service consumption. These allocations are then analysed to determine how a government's revenue generation and expenditure actions redistribute income among the population and affect poverty (Ferreira and Robalino, 2010; Lustig and Higgins, 2013; and World Bank, 2009). In addition, with sufficient information in the household survey, the CEQ can assess the impact of fiscal actions on poverty and inequality by regions and for different social groups, such as gender and children. This study carries out the basic CEQ assessment and extends it to gender and children, and where data allows, to regions.

The CEQ assessment uses an "accounting" approach to carry out fiscal incidence analysis, starting from a "before" or "pre-fiscal" income and allocating taxes or transfers to each household or individual. Similar to Lustig and Higgins (2013), per capita income before and after each fiscal intervention set is measured. The "before" and "after" measures are referred to as income concepts. The construction of income concepts is a fundamental building block in the CEQ assessment. The income concepts include market income, net market income, disposable income, consumable income (post-fiscal income), and final income (Figure 3.1).

i) *Market income:* All earned and unearned income from any source before any direct taxes have been applied.

ii) *Net market income:* Market income minus any direct taxes paid, yielding a measure of the resources households control after direct taxes but before any direct transfers.

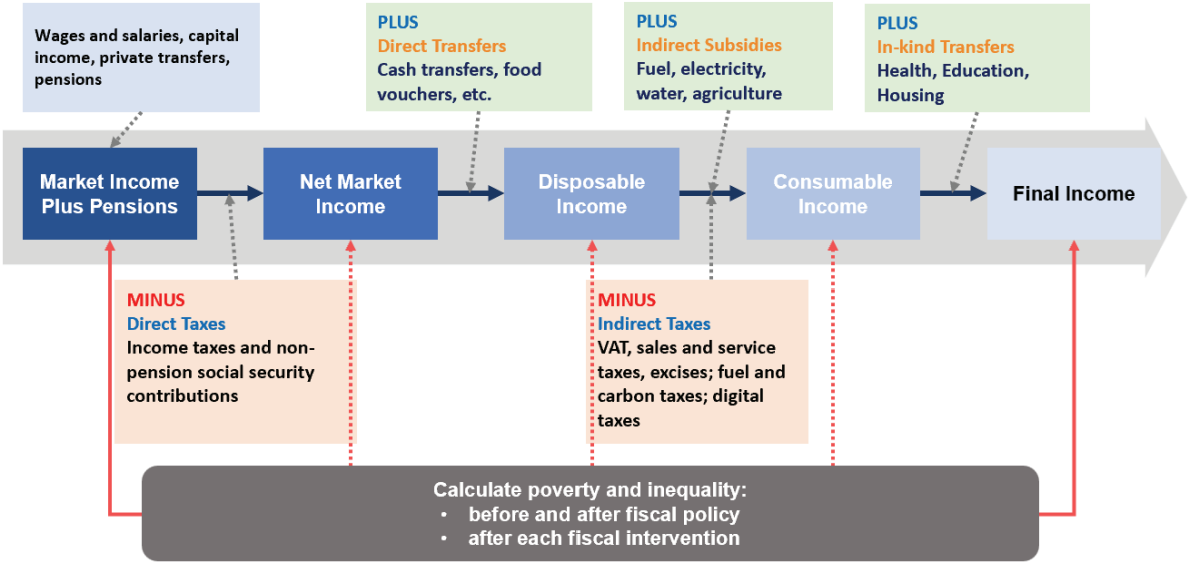
iii) *Disposable income:* Net market income plus direct transfers.

iv) *Consumable income:* Disposable income minus indirect taxes plus indirect subsidies.

v) *Final income:* Consumable income plus in-kind transfers, less copayments and user fees.

Fiscal incidence analysis can be comprehensive or partial. This study provides a comprehensive assessment of Kenya's fiscal system actions on poverty and inequality. A comprehensive fiscal incidence analysis simultaneously covers the impact of taxes and spending, thereby measuring the overall impact of taxes, transfers, and subsidies. This is vital because a fiscal system could have a regressive tax and still be equalizing if it is implemented along with other progressive taxes and transfers. Similarly, a poverty-increasing fiscal instrument could still be equalizing because poverty depends on absolute income and inequality on relative income (Higgins and Lustig, 2016).

Figure 3.1: CEQ framework for fiscal incidence analysis



Source: Lustig (2018) - Commitment to Equity (CEQ) Institute at Tulane University.

The CEQ assessment allows for the simulation of distributional impacts across different years, with the baseline being the survey year, which in this case is 2022. Statutory parameters for direct and indirect taxes and cash transfers are used to calculate gross incomes and net expenditures. Subsequently, the gross market income and net expenditures are nowcasted to the policy years, in this case, 2024. Results for the present year can be obtained by applying the actual statutory or reform parameters for direct and indirect taxes, cash transfers, and in-kind benefits.

However, the CEQ assessment has important limitations. It employs an "accounting" approach for fiscal incidence analysis, which does not consider behavioural, life cycle, or general equilibrium effects. Since the analysis is conducted at a specific point in time, it cannot evaluate the long-term impacts of alternative policy interventions, such as comparing the long-term effects of increased spending on education versus social protection. In addition, the analysis excludes essential categories of taxes and spending, such as corporate income taxation and expenditure on certain public infrastructure. Finally, household surveys typically fail to capture information on the wealthiest households, potentially underestimating income and consumption taxes.

3.2 Construction of income variables

3.2.1 Disposable income

In Kenya, official poverty and inequality measures are based on consumption expenditure. Household disposable income is assumed to be equal to total consumption expenditure, as it best reflects permanent income and is conceptually closest to disposable income. The primary motivation for using household expenditure in this study is practical: consumption expenditures tend to be better captured than incomes due to the high degree of informal and self-employment in the country. The KNBS used the 2022 KCHS data to estimate household consumption expenditure, which serves as the measure of disposable income in this analysis. The construction of other CEQ income concepts begins with disposable income and works backward to market income and forward to final income (Figure 3.1).

3.2.2 Market income plus pensions

The "pre-fiscal" income used in the analysis is the market income plus pensions (public servants' pension in the analysis) less social insurance contribution. Market income is net market income plus direct taxes. The market income plus pensions is the pre-fiscal income. For the simulation of the alternative scenarios, the constructed market income plus pensions is assumed to be unchanged and all the income concepts starting from disposable income are affected by the simulations.

3.2.3 Net market income and gross income

Net income is calculated by subtracting direct transfers received from the disposable income (or by subtracting direct taxes from the market income plus pensions). Gross income is calculated as disposable income plus all direct taxes paid. The direct transfers included in the analysis are HSNP, CT-OVC, OPCT, CT-PwSD and NICHE which have significant numbers of respondents in the 2022 KCHS.

3.2.4 Consumable income

To calculate consumable income, indirect subsidies are added while indirect taxes paid are subtracted from the disposable income. The analysis considers only VAT and excise taxes. It is assumed that households report the value of purchases, which includes the taxes. VAT is allocated only to formally purchased goods—those bought in formal stores, supermarkets, etc., with the place of purchase simulated into the 2022 KCHS data using information from the 2015/2016 KIHBS data. Excise taxes are estimated based either on the value of consumption or quantities. Most items are taxed a fixed sum per quantity, while a 10 per cent excise tax is imposed on mobile phone airtime, financial services, cosmetics, and beauty services. In addition, a fertiliser subsidy is covered.

The assumed order of indirect taxes and transfers is that subsidies are applied first, followed by VAT, and then excise taxes. Besides the direct effects, the model includes indirect effects of the indirect taxes and subsidies. These indirect effects result from higher prices for other goods (not directly affected by the simulated taxes or subsidies) that use the taxed/subsidized inputs. For VAT, indirect effects occur through exemptions when exempt items cannot claim VAT for inputs, leading to a cascading effect.

3.2.5 Final income

Final income is estimated by adding in-kind transfers associated with public provision of education and health care to consumable income. These in-kind transfers are significant as they constitute a large portion of social spending in Kenya. For education, administrative data for 2022/23 is used to calculate per-student spending by dividing the expenditure for basic and tertiary education by the estimated number of students at each level. For pre-primary and vocational training, county-level data are utilized since these functions are devolved. Benefits are estimated by school level—pre-school, primary school, secondary school, TVET, and university. The 2022 KCHS survey data identify individuals benefiting from public education to calculate the benefits accruing to households. However, this method assumes that the value of services is constant across users, which may not be the case, especially for poorer households likely to attend public schools with limited resources.

For health, budget data was not collected by type of service due to the budget being at the county rather than national level. Therefore, the unit costs used in prior CEQ analysis for Kenya, originally from the unit cost study by Flessa et al. (2011), were adopted. These unit costs were adjusted using the Consumer Price Index (CPI) to reflect changes in prices and inflation between 2006/07 (the year the unit-cost study was conducted) and 2022 (the survey year).[5]

[5] This approach will miss any differences in incidence brought about by different spending in different counties following decentralization.

The impact of any fiscal component on poverty and inequality depends on its magnitude and progressivity. This study measures the progressivity of fiscal policy components (taxes and transfers) by comparing the cumulative concentration of the component before and after it has been applied. The "before" income serves as the reference income. A tax (or transfer) is progressive when the cumulative share of a tax paid (or transfer received) by the bottom or poorest "x" per cent of the population is lower (or higher) than that group's share in the pre-tax (or pre-transfer) reference income. If the share of a transfer received by the bottom "x" per cent of the population (ranked by reference income) is higher than its share of income in the population, the transfer is considered absolutely progressive. This means that transfer shares are higher for the poorest populations, and the shares decline as income rises.

3.3 Extension to regions, gender and children

Taxes and transfers may have differential impacts on inequality and the welfare of people in different regions/locations and groups of individuals within a society (Kolovich, 2018). It is important to conduct an analysis to assess their impact on individuals in different regions/locations and social groups. In this study the analysis is extended to regions (urban and rural areas as well as ASAL and non-ASAL regions) and social groups and by gender and children.

3.3.1 Extension to regions

Following the construction of income concepts at the basic CEQ analysis at the national level, the analysis can be extended to rural and urban areas depending on available survey data and administrative data. In this study we extend the analysis to rural and urban areas as well as to ASAL and non-ASAL regions only. Of the total 47 counties in Kenya, 23 are classified as ASAL [6]. Out of the 23, nine are classified as arid (Baringo, Garissa, Isiolo, Mandera, Marsabit, Samburu, Tana River, Turkana and Wajir) and the remaining 14 as semi-arid (Embu, Kajiado, Kilifi, Kitui, kwale, Laikipia, Lamu, Makueni, Meru, Narok, Nyeri, Taita Taveta, Tharaka Nithi and West Pokot). To carry out, for instance, rural versus urban comparison, the dataset is separated into urban and rural areas and then the fiscal incidence analysis is done within each region (Santos et al. 2023). Inequality and poverty indicators such as the Gini coefficient, poverty headcount and poverty gap index among others are used in analyzing the effects of intervention on poverty and inequality in each region (see e.g. Bridi et al. 2023).

3.3.2 Extension to gender

The CEQ assessment can be extended to carry out fiscal incidence analysis with a gender lens. The approach is like the standard CEQ, but the analysis is conducted by gender. To implement this framework, an established criterion to define "gender" is necessary. In the literature, there are guidelines on how to define gender, with two main approaches being followed.

Gender can be defined using household types (e.g., household headship, main breadwinner, number of adults by gender) or the gender of individuals. Studies may use more than one definition (Greenspun, 2019). The categorization based on the gender of individuals is primarily used in studies examining the incidence of public spending on education and health due to its straightforward nature. In contrast, studies focusing on the impact of taxes and cash transfers rely on approximations, defining gender in terms of household headship and by share of income contribution to household by adult males and females among others. This study uses the latter approach to define gender.

[6] While there are ongoing discussions in Kenya to increase the number of ASAL counties to 29 counties, this study is based on 23 counties as defined by the National Drought Management Authority (NDMA).

3.3.3 Extension to children

The CEQ assessment can be extended to analyse the impact of government taxes and spending on the welfare of children. This extension is crucial as it evaluates how much income redistribution and poverty reduction achieved through fiscal policy actions are related to children's welfare. The CEQ for Children (CEQ4C) brings a child-focused perspective to fiscal incidence analysis (see Cuesta, Jellema, and Ferrone, 2020) and integrates three analytical frameworks: public finance, child poverty measurement, and fiscal incidence analysis (Save the Children Fund, 2021).

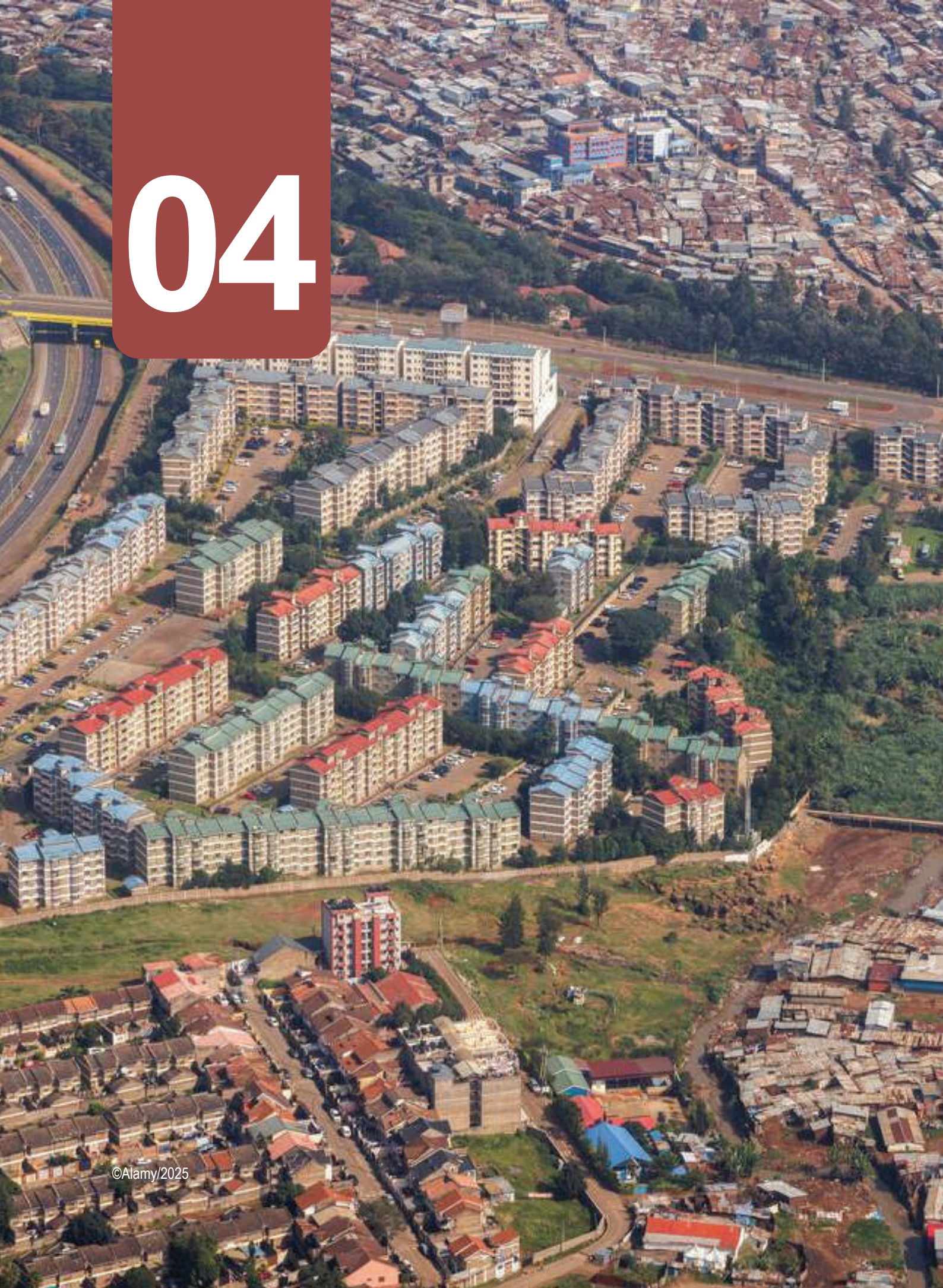
Unlike basic fiscal incidence analyses, the CEQ4C uses child-relevant budget and household microdata to examine the role of fiscal policy in mitigating child poverty, considering both monetary and multidimensional poverty. The CEQ4C analysis incorporates a multidimensional child poverty measurement to capture child-specific forms of poverty that may not be reflected in monetary poverty alone. The unit of analysis in the CEQ4C is everyone below the age of 18 years.

3.4 Data sources

The income concepts specified are constructed using the 2022 KCHS data collected by the KNBS and administrative data for the same year. The 2022 KCHS is a nationally representative survey. The survey sample was drawn from the newly created Kenya Household Master Sample Frame (K-HMSF), developed from the 2019 Kenya Population and Housing Census. Information was collected from a total of 17,894 households in 1,500 clusters. The clusters were randomized into four quarters, each comprising 375 clusters and about 6,000 households, covering all 47 counties. The 2022 KCHS data collection was undertaken using Computer-Assisted Personal Interviewing (CAPI) based on the Survey Solutions system. The Survey Solutions data collection application was programmed and loaded onto mobile devices (tablets). The CAPI system facilitated the assignment of sampled clusters and households to interviewers by survey supervisors. In addition, administrative data on tax and expenditure from the fiscal year 2022/23 is used to construct some of the variables needed for the analysis, such as the estimation of per beneficiary spending on public education and health services. The KCHS differs from KIHBS 2015/16 (used in previous CEQ analysis in Kenya) in several ways. KIHBS is a periodic survey conducted after every 10 years, with a 12-month period to collect data on various household characteristics including housing, education, health, income and consumption and provides comprehensive data on household budgets, poverty and welfare. On the other hand, KCHS is continuous and collects data quarterly, providing timely socio-economic indicators with primary focus on labour and household budget for monitoring SDGs and national development plans. The two datasets, therefore, differ in the information provided and details of data collected.

While as many taxes and transfers as possible should be included in the analysis, there are two limiting factors. First, many government expenditures are for public goods like national defence (the military), public law and order (the police and courts), and policy development and implementation (the civil service). It is not possible to apportion the value of these services to any particular individual or household because they are public goods and do not have prices that people reveal themselves willing to pay, unlike market goods and services. Therefore, a large portion of government expenditure is excluded from the analysis. Second, one can only study taxes and expenditures that can be observed or inferred from the 2022 KCHS data. While it is possible to infer who pays wage income tax and most indirect taxes, it is not possible to attribute corporate income taxes to survey respondents due to the lack of information in the 2022 KCHS data on corporate ownership. Appendix I shows comparison of survey and administrative data estimates while Appendix II provides detailed information on how the data from the 2022 KCHS and administrative sources are used to construct the various income concepts used in the analysis.

04



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Impact of Fiscal Policy on Inequality and Poverty

This section presents key results from fiscal incidence analysis using the CEQ methodology outlined in Chapter 3. It begins by examining the overall impact of taxes and social spending on inequality and poverty. Following this, the section discusses the net beneficiaries and those who bear the burden of taxes. It then explores the marginal contribution and progressivity of taxes and transfers. Finally, the section assesses potential changes or reforms in fiscal policy and their implications.

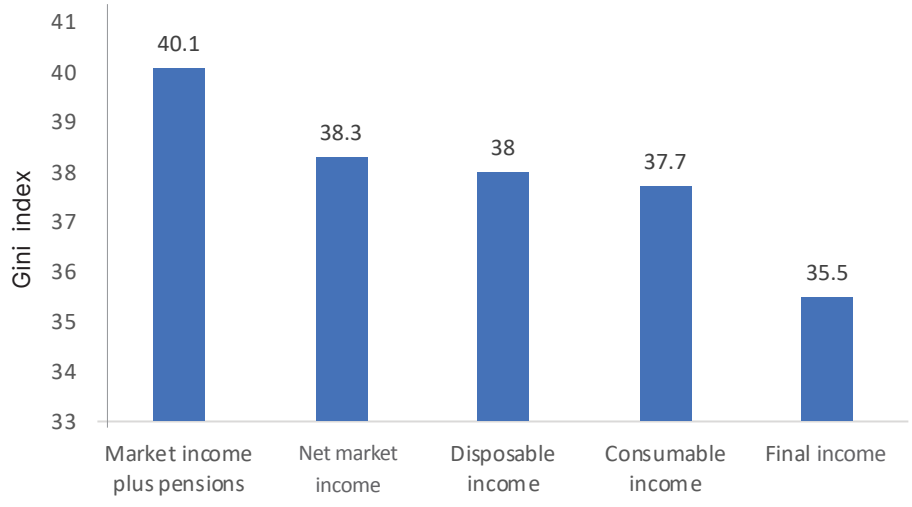
4.1 Overall impact of fiscal policy on inequality and poverty

The analysis of the impact of fiscal policy on inequality and poverty involves comparing measures at market income plus pensions (before taxes and benefits are applied) to those at post-fiscal income. For inequality, the Gini index at market income plus pensions is compared to the Gini coefficient at final income. For poverty, poverty rates at market income plus pensions are compared to those at consumable income. These comparisons also include a discussion on how inequality and poverty measures change as income progresses from market income plus pensions to final income. In addition, and where data allows within-country comparisons are conducted by regions to provide a more detailed analysis.

4.1.1 Overall impact on inequality

Kenya's tax and transfer system reduces inequality, mainly through in-kind health and education benefits. Figure 4.1 presents the Gini index calculated at different income concepts. The pre-fiscal Gini index is 40.1, which declines to 35.5 at the final income. The combination of taxes and public transfers modelled for 2022 reduces inequality in Kenya by 4.6 Gini points. Most of the inequality reduction is driven by in-kind benefits of health and education services, which account for 2.2 Gini points. Direct taxes contribute to a reduction of 1.8 Gini points, while cash transfers contributes 0.3 Gini points.

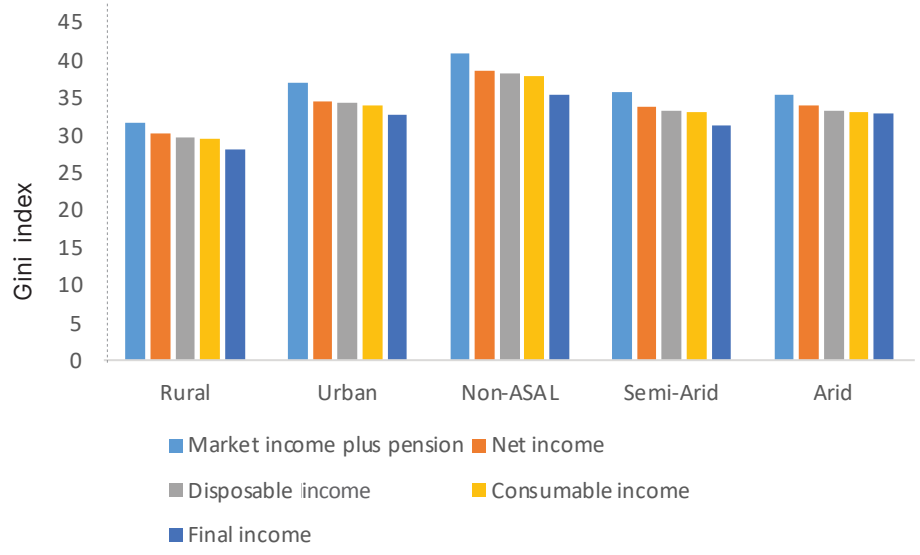
Figure 4.1: Inequality at pre-fiscal income to final income



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Inequality is higher in urban and non-ASAL areas compared to rural and ASAL areas, with greater reductions in inequality observed in the former regions after taxes and transfers. Inequality for market income plus pensions is higher in urban areas (37.0) compared to rural areas (31.7), as shown in Figure 4.2. The reduction in inequality from market income plus pensions to final income is also greater in urban areas (4.2 Gini points) than in rural areas (3.6 Gini points). Comparing non-ASAL counties with ASAL counties, inequality for market income plus pensions is higher in non-ASAL counties (41.0) than in ASAL counties, which range from 35.7 in semi-arid counties to 35.4 in arid counties. In addition, the reduction in inequality from market income plus pensions to final income is more significant in non-ASAL counties (5.6 Gini points) and lowest in arid counties (2.5 Gini points).

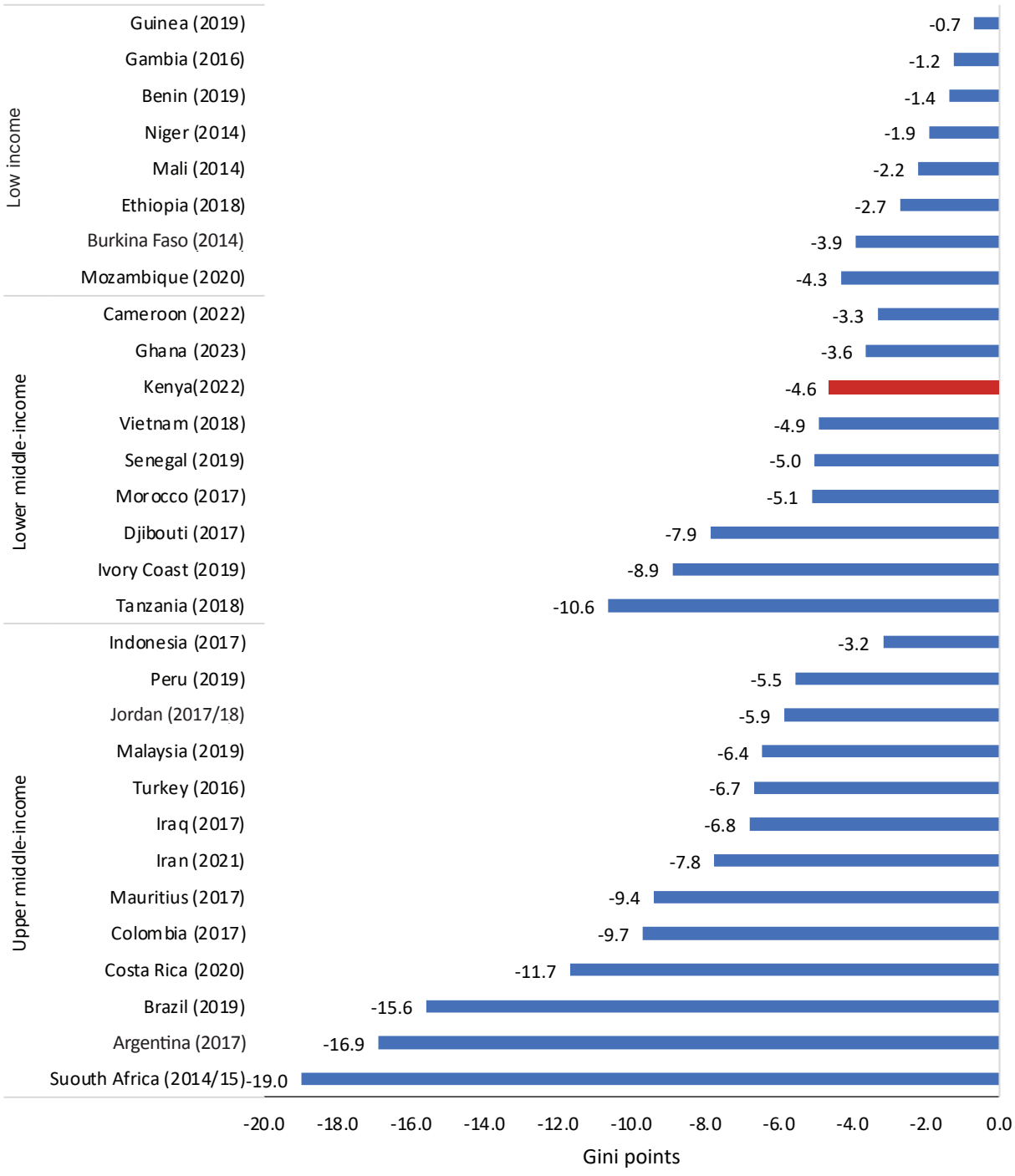
Figure 4.2: Inequality by geographical area



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Cross-country comparisons suggest Kenya has a potential for stronger inequality reduction through fiscal measures. Cross-country comparisons of the overall impact of fiscal actions on inequality from CEQ analyses conducted between 2013 and 2022 are shown in Figure 4.3. The figure illustrates that government taxes and spending reduce inequality to varying degrees across different countries. In Kenya, the combined effect of these fiscal actions reduced the Gini index by 4.6 points in 2022. This reduction is less than that observed in most of the upper and lower middle-income countries, but higher than that for low-income countries. This suggests that Kenya has a potential to use fiscal policy to achieve greater reductions in inequality. For instance, fiscal policy reduces inequality in South Africa by 19.0 Gini points compared to Kenya's 4.6 Gini points.

Figure 4.3: Overall impact of taxes and public spending on inequality across countries, 2013 - 2022

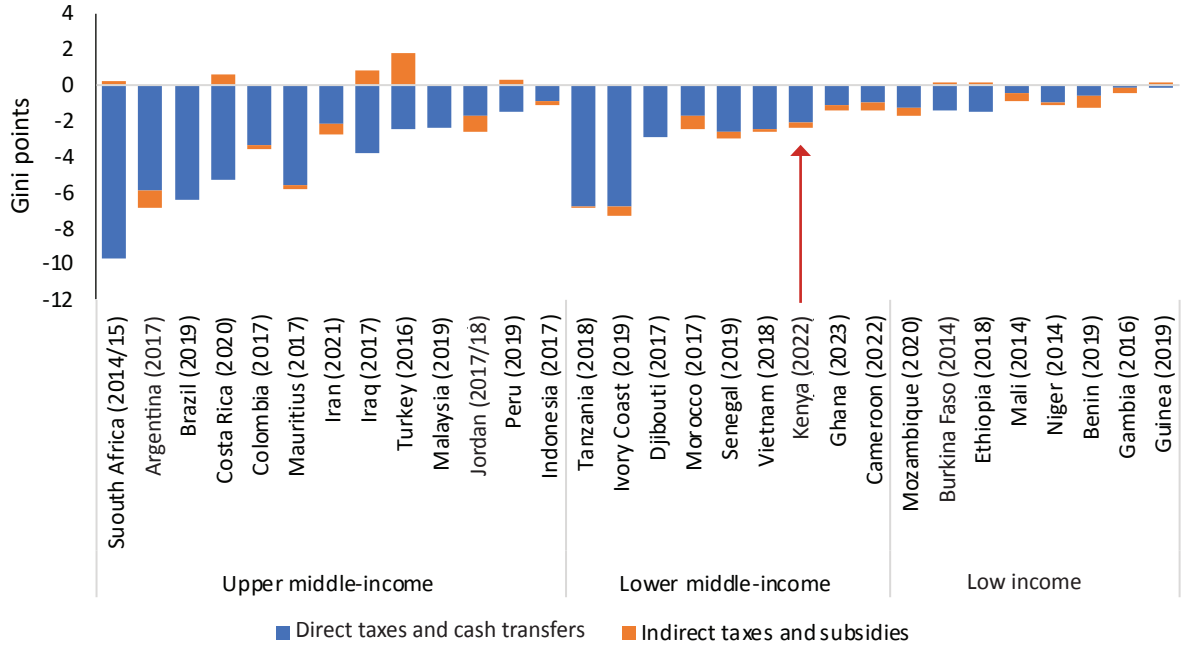


Source: Authors' construction based on the following CEQ studies: Amjad et al. (2023); Benicio et al (2021); Bridi et al (2023); Concho (2017); Foeli and Maynor (2022); Goldman et al (2021); Haydeeliz et al. (2022); Hounsa et al (2019); Jellema et al (2017); Lopez et al (2021); Malaeb et al (2023; Martínez-Aguilar et al (2017); Scott (2013); Tekgüç and Değer (2023); Younger et al (2017) and World Bank (2018).

In Kenya, taxes and cash transfers reduce inequality to a similar extent as in-kind transfers, whereas in many other countries, in-kind transfers are the dominant driver of inequality reduction. Further cross-country comparisons in Figure 4.4 show the extent of inequality reduction due to taxation and transfers. Kenya's reduction in inequality from direct taxes and cash transfers is much lower compared to most countries, except for Cameroon, Ghana, Indonesia, Jordan and all low-income countries included in the analysis. As shown in Figure 4.4a, direct taxes and transfers are the main drivers of inequality reduction in most countries. Indirect taxes and subsidies tend to increase inequality in Turkey and Iraq, but reduce it in the remaining countries, including Kenya. The reduction in inequality is much higher in countries such as South Africa and Brazil whose social assistance as a proportion of GDP is much higher compared to Kenya. Figure 4.4b compares the effects of taxes and cash transfers with in-kind transfers. In most countries, inequality reduction is primarily driven by in-kind transfers. In Kenya, the reduction in inequality due to taxes and cash transfers is slightly higher than that from in-kind transfers. However, in many other countries such as South Africa, Brazil, and Argentina, in-kind transfer benefits are the main contributors to reducing inequality. Already, Kenya is spending substantial resources on education and increasing access and quality of education can help enhance the impact of in-kind transfers on reduction in inequality.

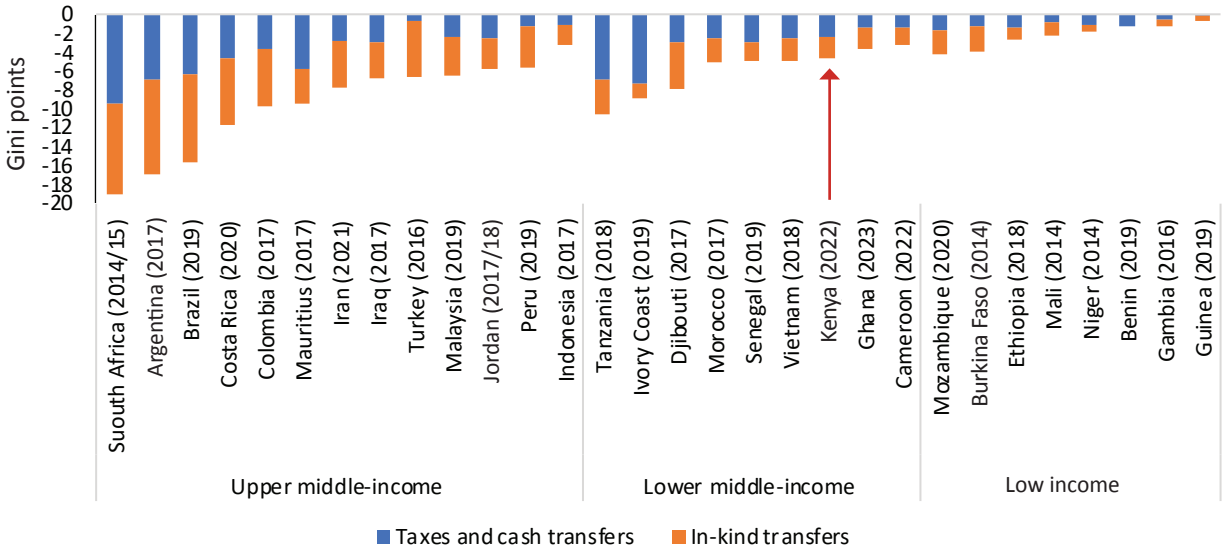
Figure 4.4: Change in inequality at pre- and post-fiscal income concepts, selected countries (Gini points)

a. From market to consumable income



Source: Authors' construction based on the following CEQ studies: Amjad et al. (2023); Benicio et al (2021); Bridi et

b. From market to final income

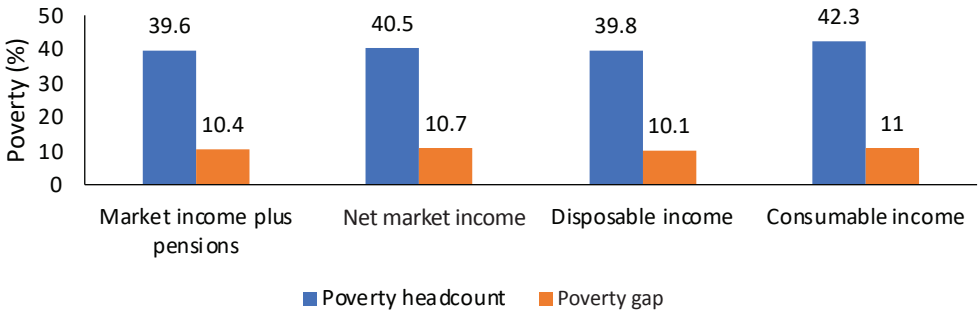


Source: Authors' construction based on the following CEQ studies: Amjad et al. (2023); Benicio et al (2021); Bridi et al (2023); Concho (2017); Foeli and Maynor (2022); Goldman et al (2021); Haydeeliz et al. (2022); Hounsa et al (2019); Jellema et al (2017); Lopez et al (2021); Malaeb et al (2023; Martínez-Aguilar et al (2017); Scott (2013); Tekgüç and Değer (2023); Younger et al (2017) and World Bank (2018).

4.1.2 Overall impact on poverty

Fiscal policy increases poverty due to the heavier burden of indirect and direct taxes outweighing the benefits of subsidies and cash transfers. Figure 4.5 shows that fiscal actions increase the poverty headcount by 2.7 percentage points and the poverty gap by 0.6 percentage points. This increase is primarily driven by the burdens of indirect taxes outweighing the subsidy benefits. Similarly, while cash transfers reduce poverty, the impact of direct taxes surpasses the benefits of these transfers, resulting in a slightly higher poverty headcount and poverty gap compared to market income plus pensions.

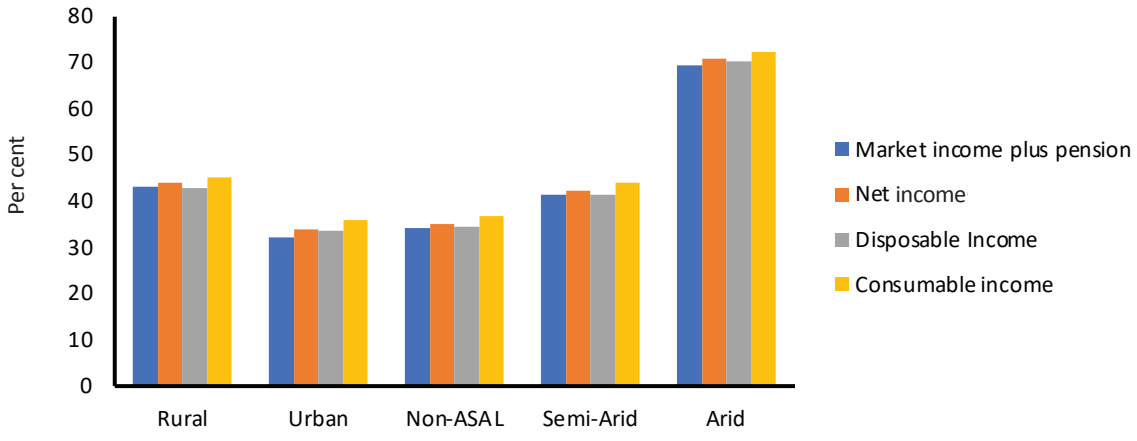
Figure 4.5: Poverty headcount and poverty gap at pre-fiscal income to consumable income



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Fiscal policy increases poverty more in urban and ASAL areas. Fiscal interventions have varied impacts on poverty across regions (Figure 4.6). Pre-fiscal poverty rates are higher in rural areas compared to urban areas, but the increase in poverty headcount from market income plus pensions to consumable income is greater in urban areas (3.7 percentage points) than in rural areas (1.9 percentage points). Similarly, pre-fiscal poverty is higher in ASAL counties, followed by semi-arid counties, compared to non-ASAL counties. The increase in poverty headcount from market income plus pensions to consumable income is also significant in arid areas (3.0 percentage points), followed by semi-arid areas (2.7 percentage points) and non-ASAL counties (2.5 percentage points). Overall, poverty is higher in ASAL counties, which also experience increased poverty due to fiscal actions. While rural areas have higher poverty rates than urban areas, urban areas see a greater increase in poverty due to fiscal actions.

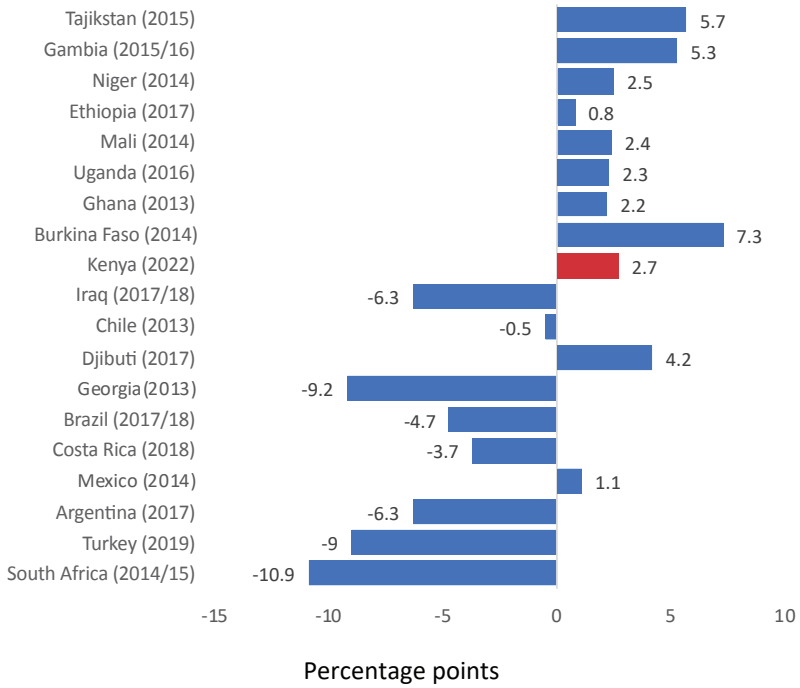
Figure 4.6: Poverty headcount (share of population below poverty line) by geographical areas



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Unlike in countries where fiscal policies reduce poverty, Kenya's taxes outweigh the benefits of cash transfers, leading to a poverty increase. Turning to cross-country comparisons for poverty, the combined effect of government taxes and spending increased poverty in Kenya by 2.7 percentage points in 2022. Among the 19 countries included in Figure 4.7, the transition from market income plus pensions to consumable income reduces poverty in Argentina, Brazil, Chile, Costa Rica, Ethiopia, Georgia, Iraq, South Africa and Turkey, while it increases poverty in Kenya, Tajikistan, Mexico and other African countries. In Kenya, this increase is primarily due to cash transfers not being strong enough to counteract the impoverishing effects of taxes. Overall, fiscal policy actions in some countries help reduce poverty, suggesting that well-structured fiscal actions in Kenya could potentially achieve poverty reduction. Box 4.1 highlights how Brazil's cash transfer programme contributes to poverty reduction.

Figure 4.7: Overall impact of taxes and spending on poverty headcount for selected countries, 2013 - 2022



Source: Authors' construction based on the following CEQ studies: Amjad et al. (2023); Benicio et al (2021); Bridi et al (2023); Concho (2017); Foeli and Maynor (2022); Goldman et al (2021); Haydeeliz et al. (2022); Hounsa et al (2019); Jellema et al (2017); Lopez et al (2021); Malaeb et al (2023; Martínez-Aguilar et al (2017); Scott (2013); Tekgüç and Değer (2023); Younger et al (2017) and World Bank (2018).

Box 4.1: How Brazil's Bolsa família cash transfer programme reduces poverty

Bolsa Família Programme is Brazil's flagship conditional cash transfer programme created in October 2003. It pays monthly cash benefits to poor families and has education and health conditionalities. The programme aims at alleviating poverty and inequality by providing monthly financial support to low-income families, especially those with children. The programme has three main goals: reducing poverty and hunger, increase school attendance and reduce dropout rates, and improve access to health services for children and for pregnant and breast-feeding women.

To be eligible, households must meet specific income thresholds that categorize them as living in poverty or extreme poverty. Under the updated rules, families earning up to BRL 218 (US$ 38.5) per person are now eligible for support. To be considered, families must also have current information in the Cadastro Único (Brazil's unified social registry). Selection into the programme considers poverty estimates, the number of beneficiary families in each municipality, and the available budget.

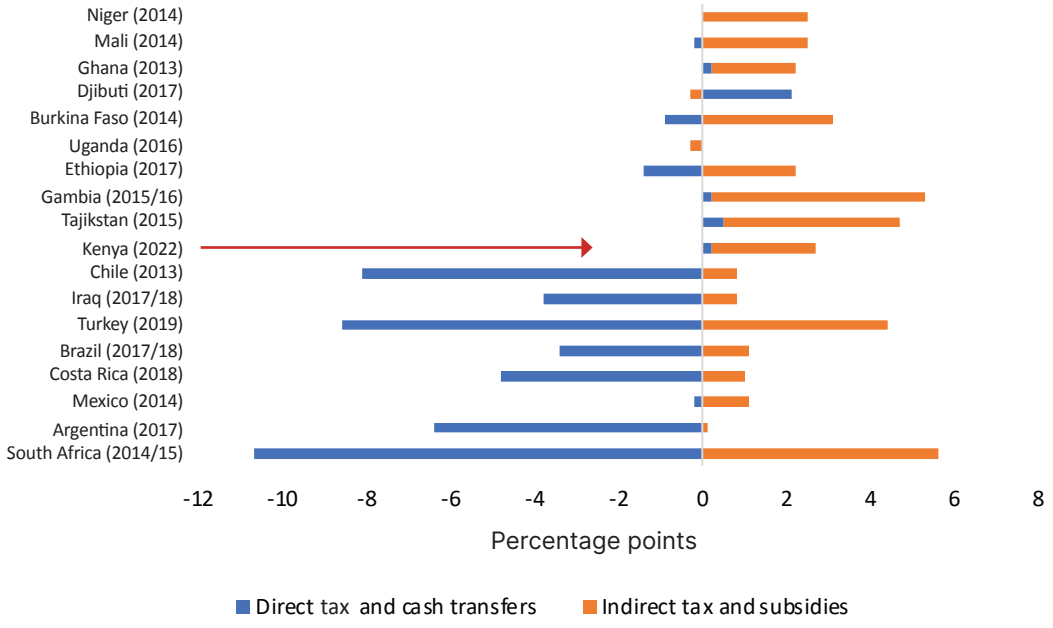
The programme operates as follows: Payment made preferentially to women; Benefit varying with family composition with additional benefits per child; "Active Search" for potential beneficiaries to reduce exclusion errors; Priority access to the benefit for indigenous populations, quilombolas (former slave communities), people rescued from work in situation analogous to slavery, recyclable material collectors and family with members in child labour situations; Special module for traditional and specific populations on the single registry to capture the needs of specific populations, besides the five groups with priority access, the special module includes the homeless, family farmers, artisanal fishers, imprisoned persons, people displaced by infrastructure investment (e.g. dams); gypsies, and distinct set of rules to enrol indigenous peoples respecting ethnic characteristics.

In 2024, over 20.8 million families (55 million people and approximately 26 per cent of Brazilian population) were supported through the programme, reaching Brazilian citizens from all municipalities (Government of Brazil, 2025). The coverage rate (total number of families served compared to the programme's estimated service) was 155 per cent-percentage of beneficiary families based on the poor population estimate from the 2010 Census. The total budget for the programme in 2024 was around U$ 33 billion (3.1 per cent of Brazil's Federal budget) while the average amount received per family per month approximately U$135 (Global Alliance Against Poverty and Hunger).

The Bolsa Família programme has had a strong positive impact, including poverty reduction, increasing school attendance and access to health care primary services, reducing child mortality; increasing access to food, with improvement in the nutritional status of beneficiary families; higher school attendance and reduced dropout, contributing to women's empowerment leading to positive impact on local economies, including increase in overall formalization. For example, the programme is known to reduce poverty by approximately 1-1.5 percentage points per year. Based on 2017 numbers, this meant a 15 per cent reduction in the number of poor people and more than 25 per cent of the extremely poor people. The programme transfers in the same year led to a total of 3.2 million and 3.4 million people climbing out of poverty and extreme poverty respectively.

Kenya's fiscal system increases poverty due to both direct and indirect tax impacts. Figure 4.8 provides a cross-country comparison of the impact of direct taxes and transfers on the poverty headcount. In Kenya, the fiscal system increases poverty by 2.7 percentage points, primarily due to indirect taxes and subsidies. Unlike Kenya, Ghana, Gambia, and Tajikistan where both direct taxes and cash transfers, as well as indirect taxes and subsidies lead to increased poverty, most other countries included in Figure 4.8 experience poverty reduction from direct taxes and cash transfers, while indirect taxes and subsidies tend to increase poverty to varying degrees.

Figure 4.8: Changes in poverty headcount (percentage points)



Source: Authors' construction based on the following CEQ studies: Amjad et al. (2023); Benicio et al (2021); Bridi et al (2023); Concho (2017); Foeli and Maynor (2022); Goldman et al (2021); Haydeeliz et al. (2022); Hounsa et al (2019); Jellema et al (2017); Lopez et al (2021); Malaeb et al (2023; Martínez-Aguilar et al (2017); Scott (2013); Tekgüç and Değer (2023); Younger et al (2017) and World Bank (2018).

In summary, the cross-country comparison demonstrates that fiscal policy actions can effectively reduce both poverty and inequality. For instance, South Africa successfully uses fiscal policy to achieve reductions in both areas. Box 4.2 highlights how South Africa's fiscal interventions reduce poverty and inequality. However, in countries like Kenya and Gambia, fiscal policy actions reduce inequality but increase poverty. Therefore, it is essential for Kenya to optimize fiscal policy to ensure they can simultaneously reduce both poverty and inequality.

Box 4.2: Fiscal interventions, poverty and inequality in South Africa

Cash transfer programmes

Social assistance is stipulated in Section 27(1) of South Africa's Constitution. It clearly indicates that everyone has access to social security, particularly those who are unable to support themselves. Social grants target those who are unable to provide for their own needs such as the elderly, the disabled, and children. South Africa has a Child Support Grant (CSG), the largest social protection programme in the country. The CSG was initiated in 1998 and is available to children who meet age requirements and whose caregivers satisfy a means test, serving as a substantial source of income for beneficiary households. As of 2010, the grant's monthly value was around 40 per cent of the median per capita income (Woolard & Leibbrandt, 2013). For the poorest families, the CSG contributes about 40 per cent of total household earnings. Initially, the grant was only available to children under 7 years old, but the eligibility age has gradually increased, covering all children under 18 years as of 2010. The CSG programme has a widespread reach, by 2020, 12.5 million children, 63 per cent of South Africa's child population, were receiving this grant.

Public spending on education

Education is compulsory for all children aged 7-15 years. The vast majority (96 per cent) of school-goers attend public schools. Schools in poor regions are designated 'no fee' schools which receive a slightly higher state subsidy to compensate for the absence of school fees. Many no fee schools also provide free meals through the National School Nutrition Programme (NSNP) and free textbooks and learning materials. Although some public schools charge fees, parents whose children attend these schools can apply for a full or partial reduction of fees. On application, beneficiaries of the CSG should automatically be exempted from the payment of school fees. Tertiary education is not free but is subsidized. In 2023, South Africa came up with a law making, among other provisions, one year of pre-primary education compulsory, further strengthening the right to education for South Africa's children.

Public spending on health

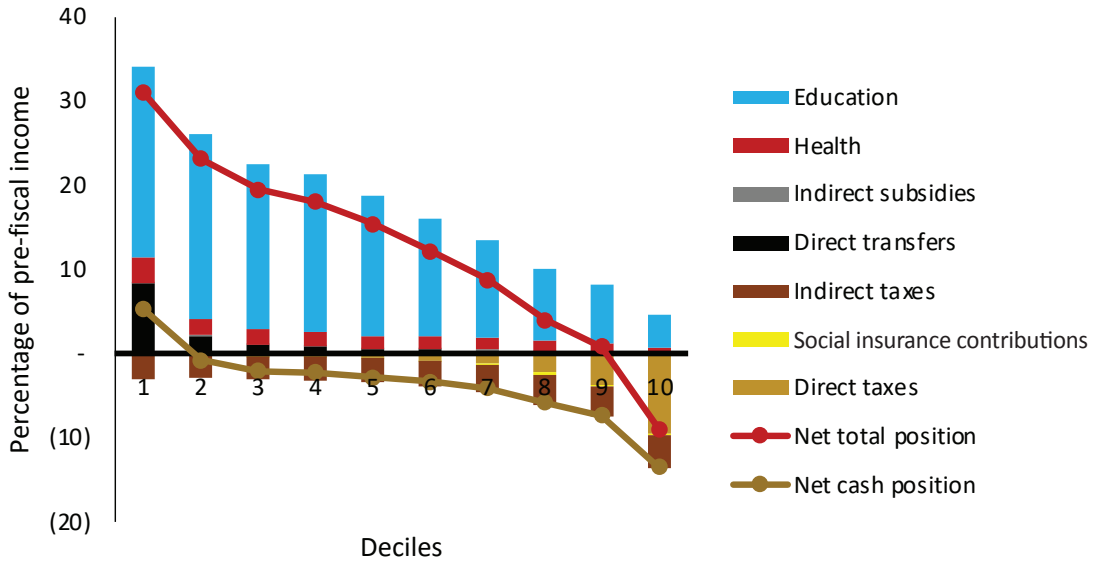
South Africa has a two-tier healthcare system: a public system managed by the Department of Health and a private system operated by private providers and funded through private insurance and out-of-pocket payments. The public health system provides services to more than 80 per cent of the population, while the private care provides services to those who can afford. Primary health care is available free of charge to everyone, while hospital services are provided at relatively low cost, with a sliding tariff scale calculated according to income level. Individuals living in households with an income of less than R 6,000 (US$566) per month, children under six years, pregnant women and social grant beneficiaries are automatically exempt from paying for any public health services. HIV/AIDS, TB, and maternal health services are also provided free of charge.

4.2 Net benefit position

Most households in Kenya are net receivers from the tax-benefit system, but excluding in-kind transfers shows that only the poorest decile benefits, meaning that in-kind transfer, particularly in-kind education transfers play a significant role, while taxes, especially indirect ones, affect nearly all income groups. In 2022, individuals in the first nine deciles were net receivers of the tax and social spending system, while those in the top two deciles were net payers (Figure 4.9). However, when considering the net cash position, only those in the first decile were net receivers, with the next nine deciles being net payers. This highlights the importance of in-kind transfers, particularly in-kind education benefits which is the main source of the benefits followed by direct transfers and in-kind health benefits. The average burden of direct tax is higher followed by that for indirect taxes, with social contributions accounting for the least burden. Direct taxes primarily affect individuals in the upper deciles, whereas indirect taxes impact almost everyone, including those in the poorest deciles.

Individuals in poorer deciles tend to be net beneficiaries of the tax-benefit system, while those in the highest deciles are net payers. The reliance on the system varies with income levels. The poorest decile depends almost entirely on transfers and in-kind education benefits, receiving a higher percentage of their final income as net benefits. Conversely, the top deciles contribute 18 per cent of their final income as net taxes into the redistributive system.

Figure 4.9: Net benefit position as a percentage of pre-fiscal income by decile



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Rural and ASAL residents in Kenya are the main beneficiaries of the tax-benefit system, primarily through in-kind education transfers, while urban and non-ASAL residents are net payers, contributing more through taxes and social insurance. Geographically, the net benefits for rural and urban areas, as well as non-ASAL and ASAL regions, are shown in Figure 4.10 and Figure 4.11, respectively. Rural residents are the main beneficiaries, receiving about 9 per cent of their final income as net benefits, primarily in the form of education (10 per cent). Urban residents, on average, are net payers, contributing about 6 per cent of their final income to the tax-benefit system. Urban residents benefit less from in-kind transfers and pay more through direct and indirect taxes and social insurance contributions. ASAL region residents are the main beneficiaries, while non-ASAL residents are net payers. The largest benefits come from in-kind education transfers. Without in-kind transfers, households in both rural/urban and ASAL/non-ASAL areas would all be net payers.

Figure 4.10: Net benefits position as a percentage of pre-fiscal income: rural/urban areas

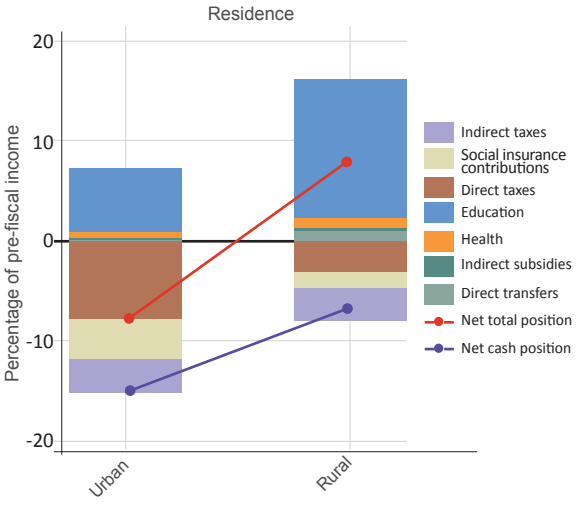
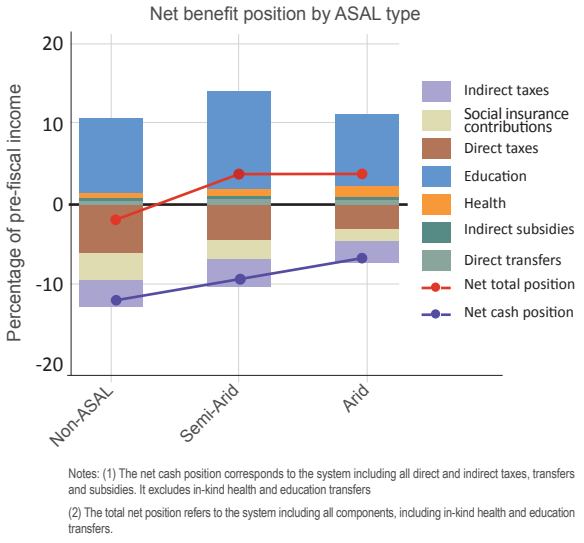


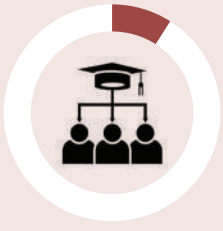
Figure 4.11: Net benefits position as a percentage of pre-fiscal income: ASAL/non-ASAL areas



Notes: (1) The net cash position corresponds to the system including all direct and indirect taxes, transfers and subsidies. It excludes in-kind health and education transfers

(2) The total net position refers to the system including all components, including in-kind health and education transfers.

Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

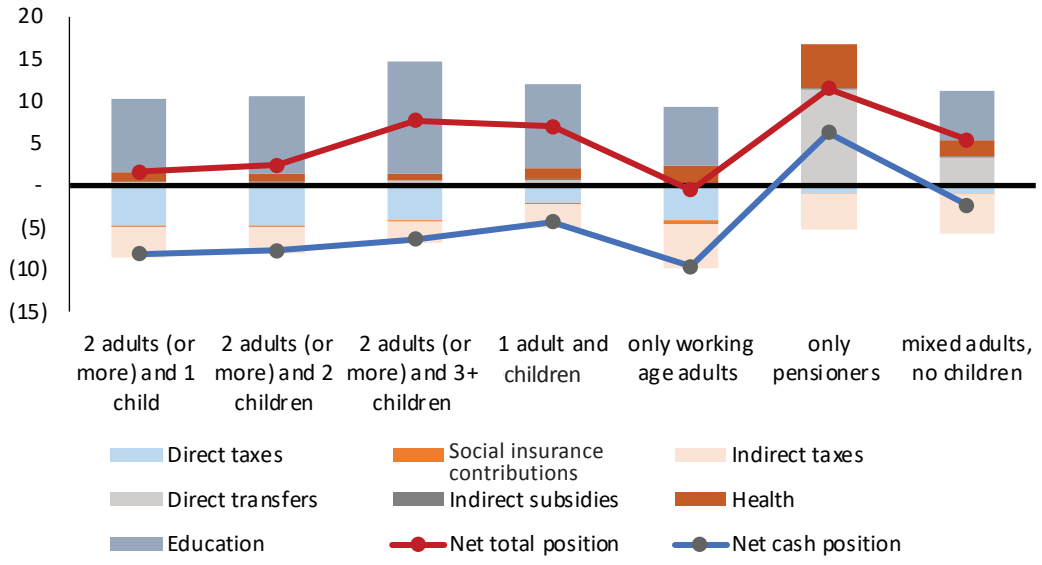


9%

Rural residents are the main beneficiaries, receiving about 9 per cent of their final income as net benefits, primarily in the form of education transfers (10 per cent)

All households except those with only working age adults are net beneficiaries, receiving significant in-kind transfers and direct transfers benefits. Examining net benefits by household type (Figure 4.12) shows that all households are net beneficiaries except households consisting of only working-age adults. The main sources of benefit are direct transfers and in-kind health and education. All households become net payers in the absence of in-kind transfers except those with retirees only which remain net beneficiaries. Other important beneficiary categories include households with three or more children and incomplete families with one adult and children.

Figure 4.12: Net benefits position as a percentage of pre-fiscal income by household type



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

4.3 Marginal contribution

Marginal contribution measures the change in poverty and inequality indicators with and without the tax or transfer (or group of taxes and transfers) of interest. Unlike the sequential calculation of changes in the Gini index and poverty headcount discussed earlier, marginal contributions are independent of the sequence in which they are included in the system (Lustig, 2018). They provide a summary statistic of the incidence of taxes or transfers, indicating the benefit or burden of the tax as a share of income. Marginal contributions consider both the progressivity and size of an instrument or group of instruments. A positive marginal contribution signifies that the instrument increases inequality or poverty, while a negative marginal contribution indicates that the instrument reduces inequality or poverty. The marginal contributions for taxes and transfers are displayed in Figure 4.13 and arranged by their contribution to reducing inequality and poverty.

Cash transfers are the main contributors to reducing poverty, while taxes, particularly VAT, contribute most to increasing poverty. The left panel of Figure 4.13 presents the marginal contributions of fiscal interventions on poverty headcount, evaluated using final income. Taxes, led by the direct and indirect effects of VAT, contribute more to increasing poverty followed by PIT. The highest contributor to reducing poverty is cash transfers, particularly OPCT, followed by CT-OVC and CT-HSNP.

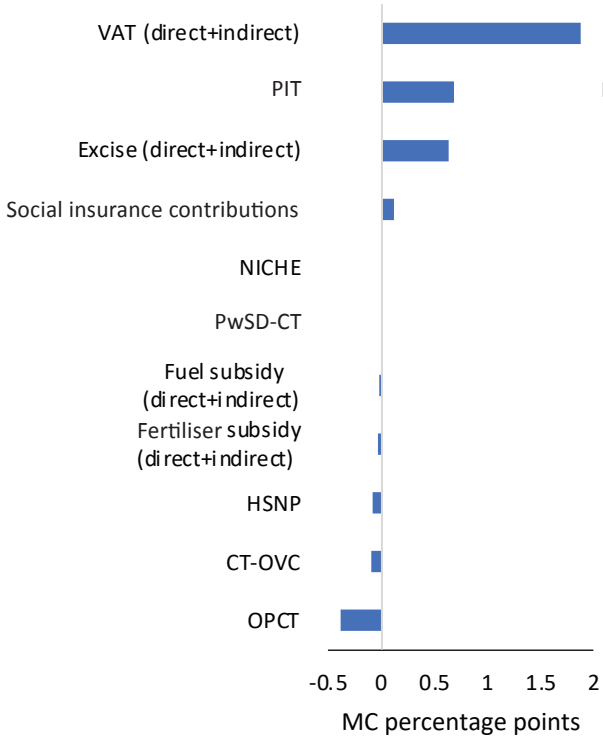
PIT is the key driver of inequality reduction, followed by secondary education benefits and primary education, while tertiary education contributes to increasing inequality. The right panel of Figure 4.13 presents the marginal contributions of fiscal interventions on inequality, evaluated using final income. PIT reduces inequality, reducing the Gini index by 1.8 Gini points, followed by secondary education (1.7 points) and primary education benefits (0.7 points). This means that inequality would be 1.8 points higher without PIT and 1.7 and 0.7 points higher without secondary education and primary education benefits, respectively. To a lesser extent, outpatient and inpatient health contributes to reducing

inequality. In terms of cash transfers, OPCT contributes more to reducing the Gini index by 0.2 points, followed by CT-OVC at 0.1 points, with the remaining three cash transfers reducing inequality to a much lesser extent. Tertiary education in-kind transfers increase by 0.4 Gini points, because benefits are concentrated among higher-income groups.

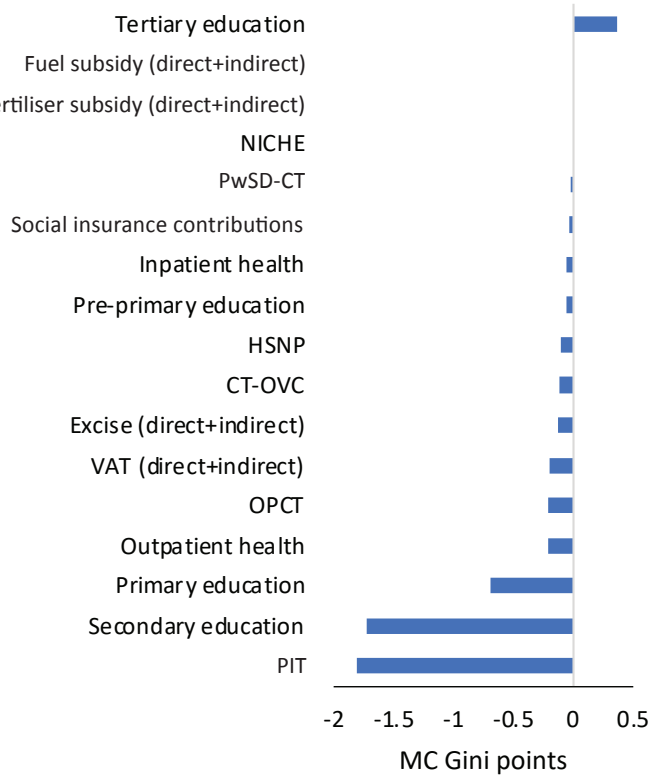
This analysis shows that, except for in-kind transfers which reduce poverty, imposing taxes increases poverty. While tertiary education increases inequality, taxes and all other in-kind transfers (education and health), as well as cash transfers, reduce inequality. Social insurance contributions reduce inequality but contribute to increasing poverty.

Figure 4.13: Marginal contribution of each of the tax and transfer components to poverty and inequality

a. Marginal contribution to poverty



b. Marginal contribution to inequality



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

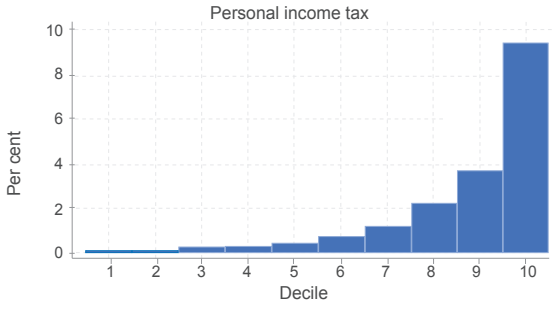
4.4 Incidence and progressivity of taxes

Personal income tax and social insurance contributions

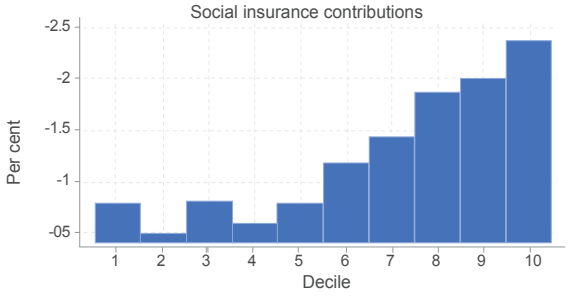
PIT and social insurance contributions (SIC), are progressive, i.e. compared to the poor, the rich pay a larger share of direct taxes compared to their share in total pre-fiscal income. PIT and SIC are concentrated in richer households: the first eight income deciles pay less share in PIT than their pre-fiscal income share, while the ninth decile contributes proportionally (Figure 4.14). The top decile pays a higher share of PIT than their pre-fiscal income share, with the top two deciles accounting for over 80 per cent of the total PIT. A similar pattern is seen with SIC, where lower deciles pay a lesser share than their pre-fiscal income share, and the top two deciles contribute around 60 per cent of the total. This shows that the burden of both PIT and SIC falls primarily on higher-income groups. The analysis is based on the proportion of market income paid in taxes by each income decile.

Figure 4.14: Incidence curves and concentration shares: Personal income tax and social insurance contributions

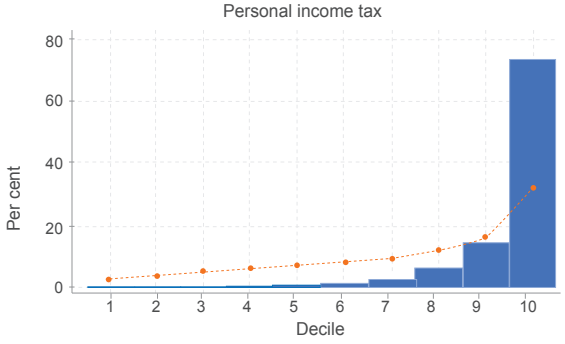
a. Incidence curve (PIT paid as percentage of pre-fiscal income, by decile)



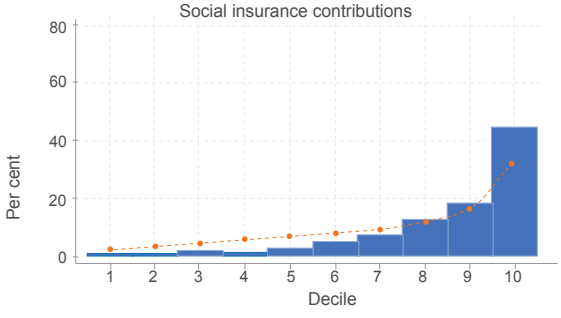
b. Incidence curve (SIC as percentage of pre-fiscal income, by decile)



c. Concentration curve (share of total PIT by pre-fiscal income deciles)



d. Concentration curve (share of total SIC by pre-fiscal income decile)



Source: Calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Note: Deciles are ranked by pre-fiscal income. The incidence curve plots the percentage of pre-fiscal income paid in PIT by each income decile. For the concentration curves: The bars represent the share of PIT allocated to each decile, while the dotted line indicates the share of pre-fiscal income held by each decile.

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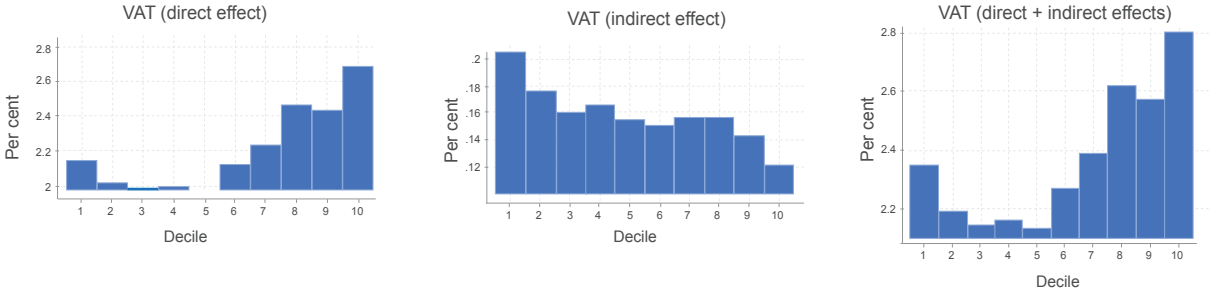
Indirect taxes

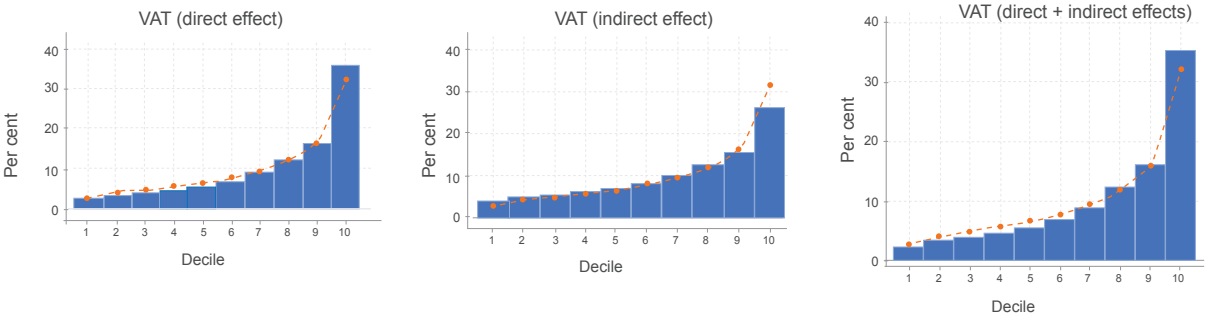
Indirect taxes which mainly include VAT and excise duties are mildly progressive in their combined direct and indirect effects. While their direct effects are mildly progressive, the indirect effects are close to distributionally neutral, limiting the overall redistributive impact.[7] Figure 4.15a shows that the total VAT burden—as a share of pre-fiscal income—increases with income, with richer households paying a larger proportion. However, the bottom deciles, particularly the poorest, still bear a relatively high burden. This reflects the disproportionate impact of indirect VAT effects on low-income households, which results from price increases that reduce their real purchasing power. Because poorer households spend a larger share of their income on VAT-taxed basic goods, they are more exposed to these price effects. Figure 4.15b further illustrates this: although VAT appears mildly progressive overall, with the top decile contributing a disproportionately large share relative to its pre-fiscal income, the pattern is less progressive when isolating indirect effects. In fact, under the indirect incidence, the richest decile pays a smaller share of VAT relative to its income, underscoring the heavier relative burden on the poor. This is compounded by the limited substitution options available to low-income households for taxed goods. A similar dynamic holds for excise duties (Figure 4.16). While they are more concentrated among higher-income households due to their greater consumption of excisable goods such as fuel, alcohol, and luxury items, the price effects on basic goods can still weigh heavily on the poor.

Figure 4.15: Incidence and concentration share of value added tax (VAT)

a. Incidence curves (VAT paid as a percentage of pre-fiscal income, by decile)



b. Concentration curves (share of total VAT paid by pre-fiscal income decile)



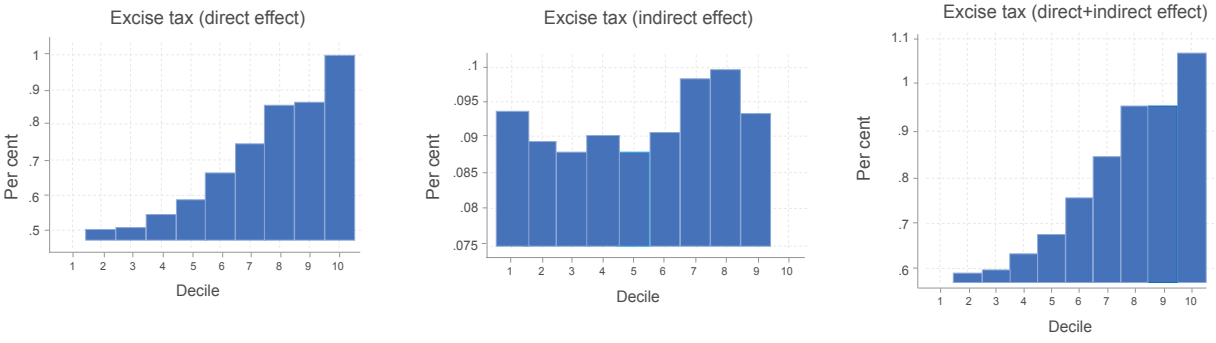
Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Note: Deciles are ranked by pre-fiscal income. Panel a: The incidence curve plots the percentage of pre-fiscal income paid in taxes by each income decile. Panel b: The bars represent the share of VAT allocated to each decile, while the dotted line indicates the share of pre-fiscal income held by each decile.

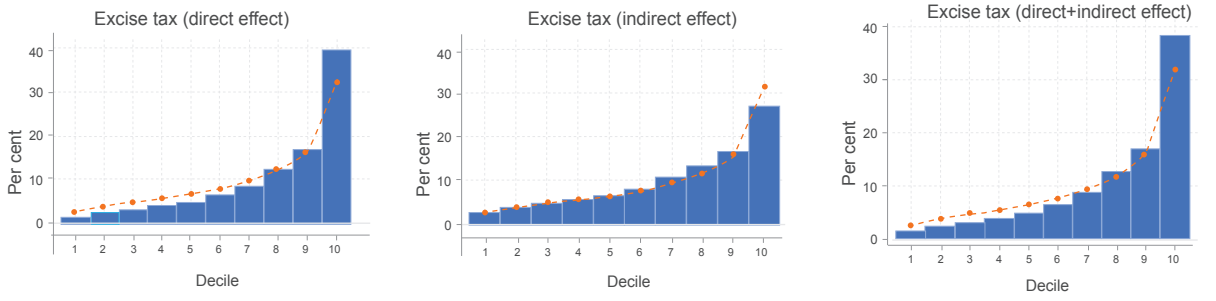
[7] The difference between the direct and indirect effects of VAT and excise duty lies in how households are affected. Direct effects occur when households pay tax on their own purchases. Indirect effects arise when taxes raise input costs, causing price increases even on untaxed or exempt goods—like food prices rising due to VAT on fuel. These indirect effects often hit poorer households harder, as they spend more on essentials.

Figure 4.16: Incidence and concentration share of excise duty

a. Incidence curves (excise tax as percentage of pre-fiscal income, by decile)



b. Concentration curves (share of total excise tax by pre-fiscal income decile)



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Note: Deciles are ranked by pre-fiscal income. Panel a: The incidence curve plots the percentage of pre-fiscal income paid in taxes by each income decile. Panel b: The bars represent the share of excise duty allocated to each decile, while the dotted line indicates the share of pre-fiscal income held by each decile.

Overall, the incidence of taxes and social insurance contributions mainly falls on the wealthy, particularly those in the top two income deciles. This pattern is consistent with global trends, where taxes are predominantly concentrated in the higher income deciles. PIT and social insurance contributions show a significant concentration in the highest income deciles. While indirect taxes are also concentrated in the upper income deciles, their impact is less pronounced compared to that of direct taxes.

Progressivity of taxes based on Kakwani Index

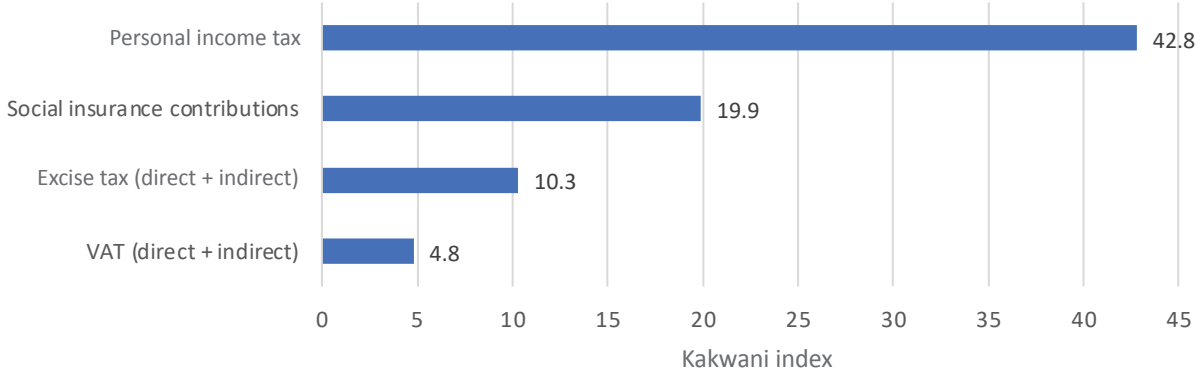
Further analysis of tax and social security contribution progressivity using the Kakwani Index reinforces the earlier discussion.[8] The Kakwani index measures the degree of progressivity by comparing the distribution of taxes or transfers to the distribution of income. For taxes, the index is calculated for taxes by subtracting the concentration coefficient from the Gini coefficient of a reference income (in this case, market income plus pensions). For transfers, it is calculated by subtracting the Gini coefficient from the concentration coefficient. A positive value indicates a progressive tax or transfer, while a

[8] Given that the overall objective of this study is to estimate the effect of fiscal policy on poverty and redistribution, this analysis does not fully assess the desirability of specific taxes and expenditures. However, it is important to note that an effective fiscal policy includes a range of revenue collection instruments that achieve the desired revenue level with minimal distortions and administrative costs, while public spending should provide essential state functions (e.g., security) and invest in public goods necessary for prosperity.

negative value indicates regressivity. Figure 4.17 illustrates the Kakwani index (on a scale of 0-100) for each tax instrument analysed.

Most tax instruments are progressive. PIT is the most progressive among taxes analysed, reflected by a Kakwani index of 42.0, followed by social insurance contributions with an index of 19.9. The combined effects of indirect taxes such as VAT and excise duty are slightly progressive. These findings suggest that Kenya's tax system relies heavily on direct taxes to achieve equity, while the limited progressivity of indirect taxes underscores the need for careful policy design to avoid burdening lower-income households.

Figure 4.17: Kakwani index for taxes and social insurance contributions



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

4.5 Incidence and progressivity of transfers

The incidence of transfers is on the poor if the share of transfers received is higher than the share of income in the lower deciles, and vice versa for the upper deciles. This means that the poorer population benefits more from the transfers than the richer population. A transfer is deemed pro-poor if the poorer deciles receive a larger share of the transfer relative to their share of income, while the richer deciles receive a lower share of the transfers relative to their income share. In this section, the incidence and progressivity of transfers is examined by analyzing the distribution of benefits across each income decile. This approach helps to understand how effectively transfers are targeted towards the poorer segments of the population and whether they contribute to reducing inequality and poverty.

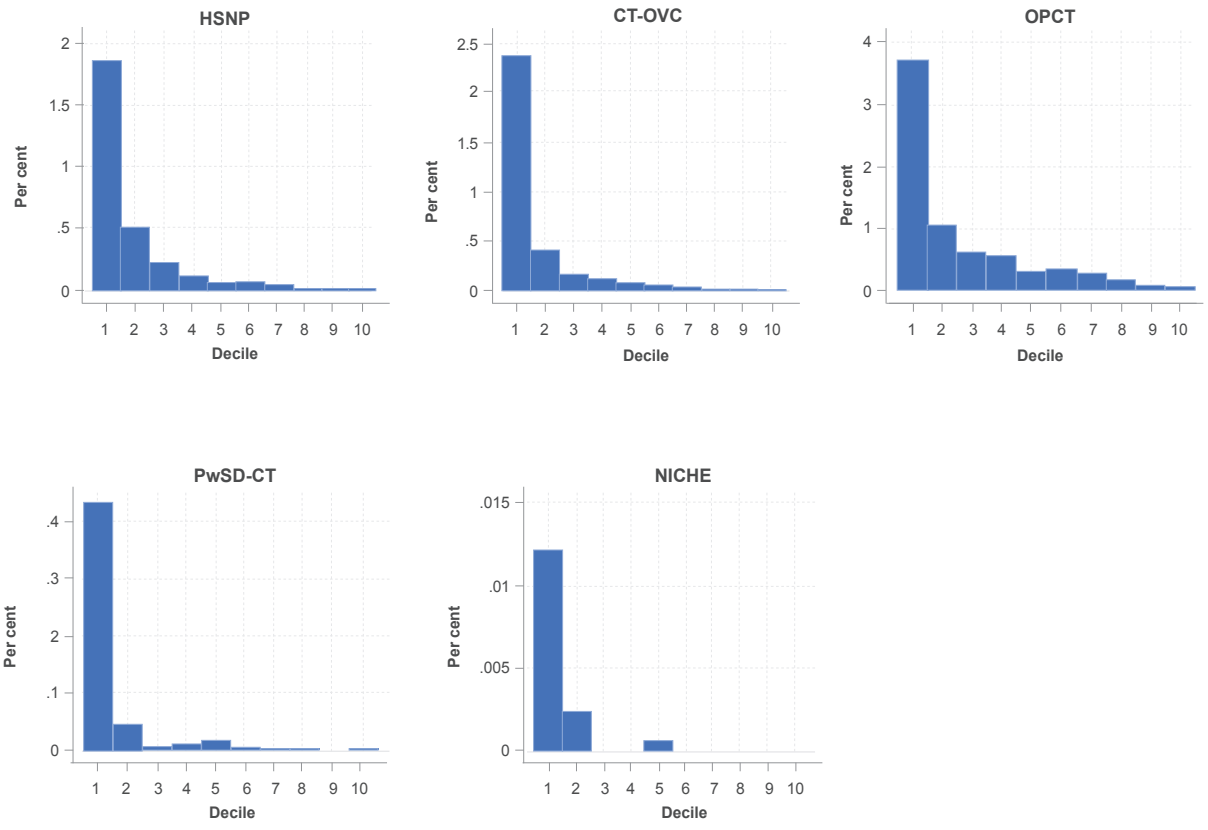
Cash transfer

Most of Kenya's direct cash transfer programmes are progressive, meaning they provide a higher share of benefits to poorer households relative to their income. Figure 4.18 shows the incidence and concentration share curves for cash transfers. It shows that all cash transfers are progressive and are pro-poor. This is consistent with the objective of social protection—to support the most vulnerable. Programmes like OPCT and NICHE are especially well-targeted, directing a greater proportion of benefits to households in the bottom three income deciles, which shows strong progressivity. Similarly, the CT-PwSD and the HSNP effectively reach lower-income groups, particularly those in the lower half of the

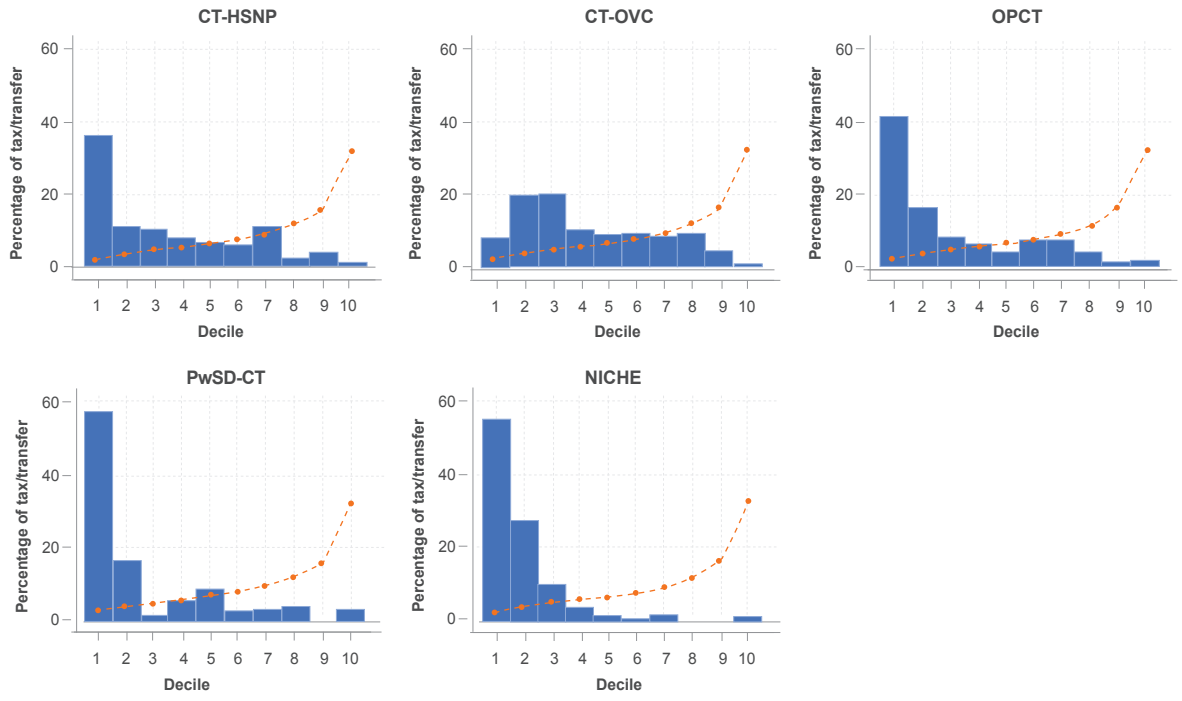
income distribution. However, although the CT-OVC reaches low-income households, it delivers less to the bottom decile than to some richer deciles, suggesting that some benefits are leaking upward—an issue of imperfect targeting. In contrast, NICHE demonstrates very strong targeting, concentrating support on those who need it most. The strong targeting is achieved through a combination of poverty-based and categorical targeting, specifically pregnant women and children under three years. These findings highlight both the strengths and limitations of Kenya's social assistance system. While most programmes are broadly pro-poor, there is room to improve coverage and benefit adequacy, especially for the poorest households. Strengthening the targeting of programmes like CT-OVC could significantly enhance the equity and impact of Kenya's social protection spending.

Figure 4.18: Incidence and concentration shares curves, direct transfers

a. Incidence curves (cash transfers received as percentage of pre-fiscal income, by decile)



b. Concentration curves (share of total cash transfers received by pre-fiscal income decile)



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

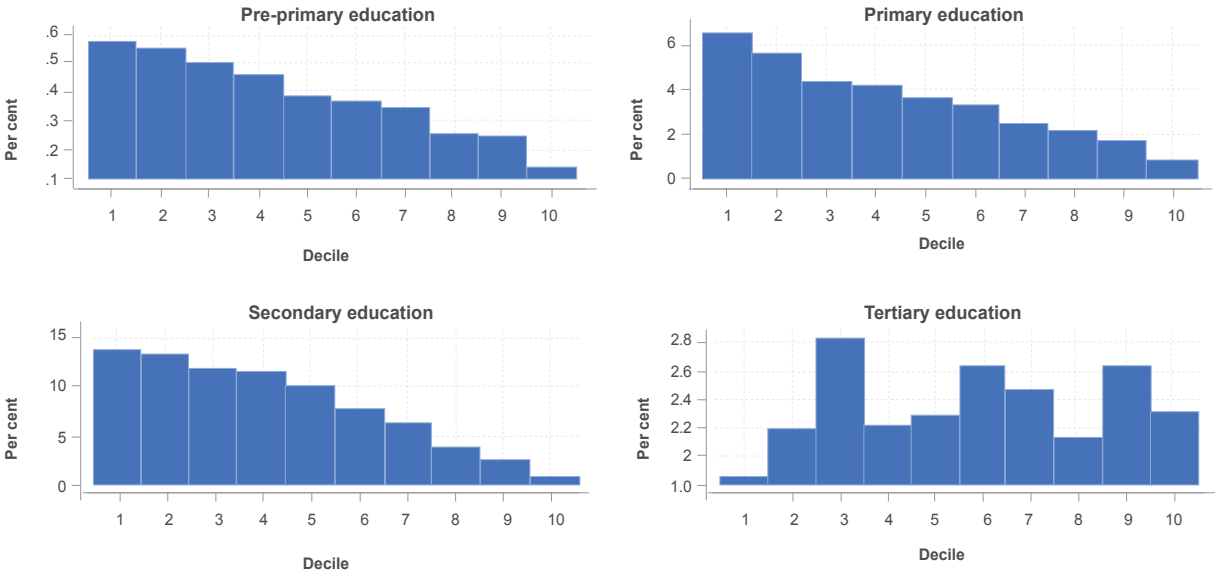
Note: Deciles are ranked by pre-fiscal income. Panel 1: The incidence curve plots the percentage of pre-fiscal income paid in taxes by each income decile. Panel b: The bars represent the share of each cash transfer received by each decile, while the dotted line indicates the share of pre-fiscal income held by each decile.

In-kind transfers: Education

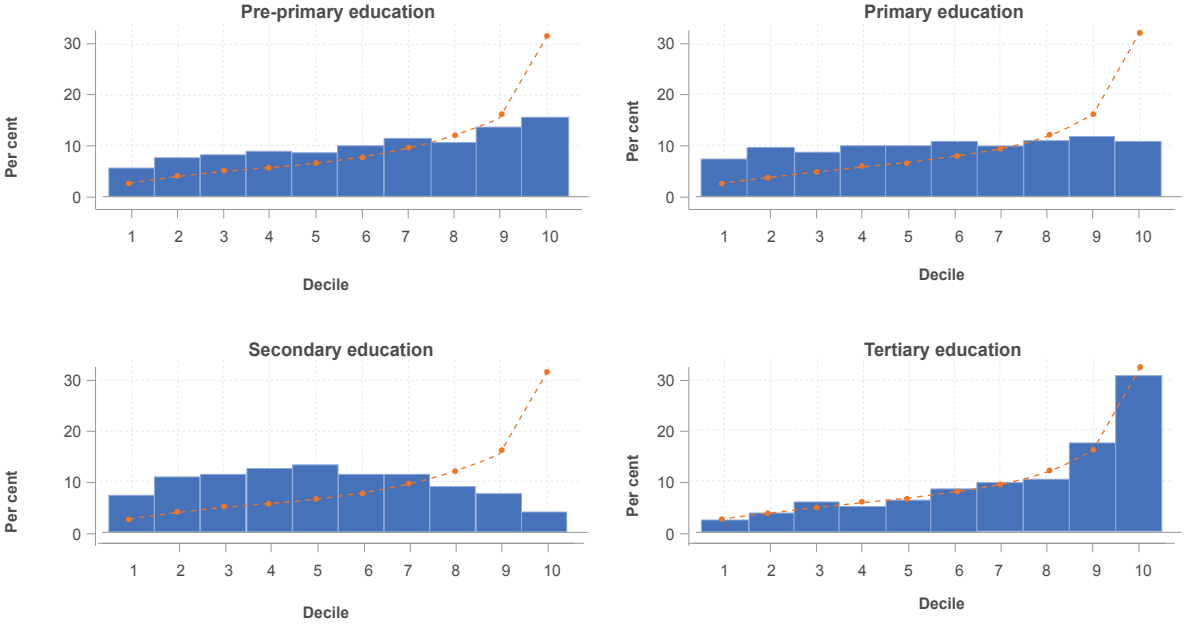
In-kind education benefits are progressive at pre-primary and basic education level, but become less progressive at the tertiary level, largely due to the financial and structural barriers that prevent poorer students from advancing through the education system. As illustrated in Figure 4.19, pre-primary, primary, and secondary education spending is pro-poor, with the poorest six income deciles receiving a larger share of these benefits relative to their income. This reflects the widespread access to basic education in Kenya, where policies such as Free Primary Education and Free Day Secondary Education have significantly improved access for lower-income households. However, this progressivity diminishes sharply at the tertiary level. The benefits of public spending on university education are more evenly distributed across the income spectrum, but the ninth decile—one of the richest groups—receives a disproportionately large share. This suggests that richer students are more likely to access and benefit from tertiary education, which is consistent with national trends. Students from poor households face significant financial and structural barriers to completing their education and advancing to university. These include the cost of transportation, school fees and materials, limited access to quality schools, and greater economic pressure to enter the workforce early. As a result, while public spending on tertiary education is substantial, it tends to benefit higher-income individuals and households who are more likely to complete secondary school and qualify for university admission. This pattern underscores the need for Kenya to improve equity in access to higher education—such as through better-targeted scholarships, increased support for disadvantaged students, and efforts to reduce dropout rates—so that tertiary education benefits can be shared more equitably across the income distribution.

Figure 4.19: Incidence curves and concentration share curves: In-kind education transfers

a. Incidence curves (In-kind education transfers as a percentage of pre-fiscal income, by decile)



b. Concentration curves (share of in-kind education benefits received by pre-fiscal income decile)



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Note: Deciles are ranked by pre-fiscal income. Panel 1: The incidence curve plots the percentage of pre-fiscal income paid in taxes by each income decile. Panel b: The bars represent the share of each in-kind education benefits received by each decile, while the dotted line indicates the share of pre-fiscal income held by each decile.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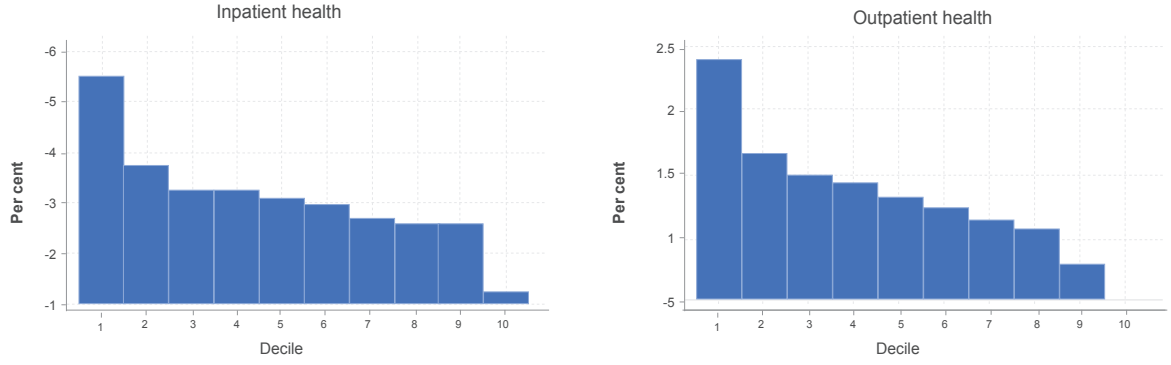
Disparities in school attendance and education quality contribute to unequal distribution of in-kind education benefits. The lower shares of in-kind benefits for pre-primary and primary education among the lower deciles can be attributed to several factors. One significant factor is the high number of children from poor families who are not attending school. According to UNICEF estimates for 2022, approximately 1.1 million children of primary school-going age (6-13 years) were not attending school in Kenya. If these children are predominantly from poor families, increasing school attendance among primary school-aged children could enhance the share of in-kind primary school benefits received by poor households. On the other hand, the quality of basic education plays a crucial role in explaining why richer households receive higher shares of tertiary education benefits. Wealthier families can afford to enrol their children in higher-quality schools, which better prepare them for tertiary education. Consequently, a larger proportion of children from rich households qualify for and benefit from tertiary education compared to those from poorer households. By improving the quality of basic education, especially in public schools, children from poorer families would have a better chance of qualifying for tertiary education, thereby benefiting more from the associated in-kind benefits.

In-kind transfers: Health

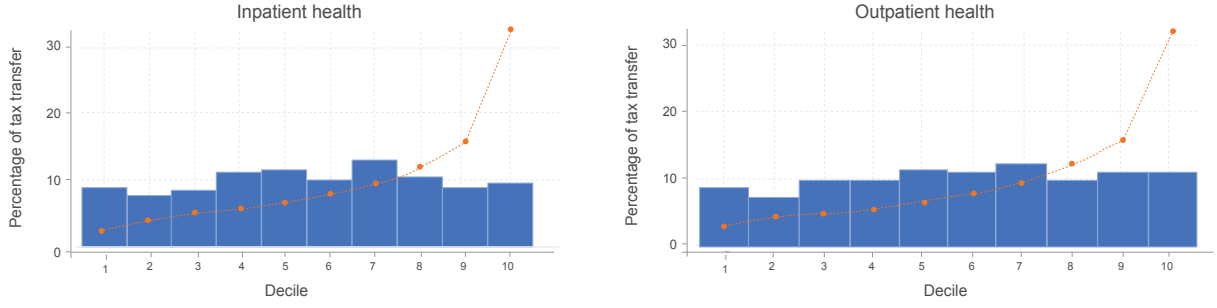
In-kind health benefits are generally progressive, meaning that public health spending delivers more support to lower-income households relative to their income. Figure 4.20 shows that the lowest seven deciles receive a higher share of in-kind health benefits (both in-patient and out-patient) relative to their income shares. On the other hand, the top three richest deciles receive a lower share of these benefits compared to their income shares. This indicates that in-kind health benefits are more concentrated among the poorer income deciles than the richer ones, consistent with equity goals in health service delivery. Consequently, health benefits appear to be pro-poor, with some middle-income deciles also benefiting, indicating a reasonably broad reach of the health system. Greater progressivity can be achieved not only through the distribution of spending, but also through improving on the quality and accessibility of services, especially in underserved rural and informal urban areas.

Figure 4.20: Incidence curves and Concentration shares curves: In-kind health transfers

a. Incidence of in-kind health benefits (in-kind health benefits a percentage of pre-fiscal income, by decile)



b. Concentration share of in-kind health benefits (share of total in-kind health benefits by pre-fiscal income decile)



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Note: Deciles are ranked by pre-fiscal income. Panel 1: The incidence curve plots the percentage of pre-fiscal income paid in taxes by each income decile. Panel b: The bars represent the share of each in-kind health benefits received by each decile, while the dotted line indicates the share of pre-fiscal income held by each decile.

Subsidies

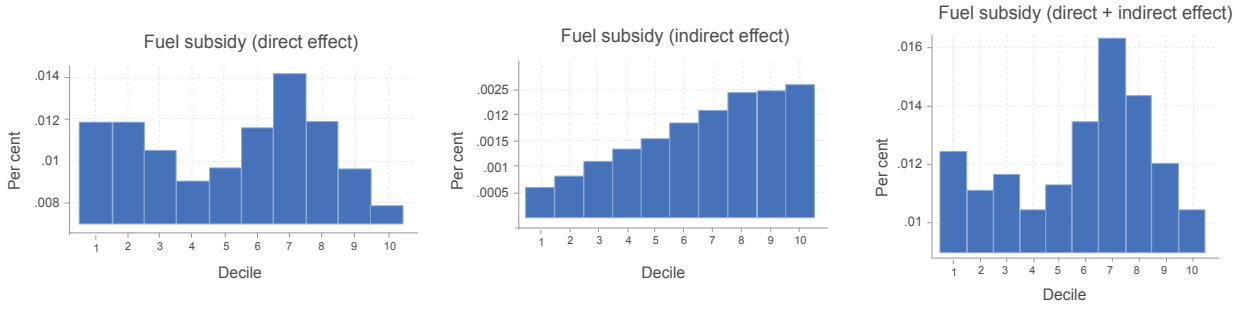
Direct subsidies are neutral to mildly regressive, while indirect subsidies are more evenly spread across all income groups.[9] Subsidies tend to primarily benefit middle- and upper-income households. For instance, illustrating using fuel subsidy, the poorest five deciles receive direct subsidies roughly in line with their share of income, while deciles six to eight—representing middle-income households—capture a larger share (Figure 4.21b). The richest decile receives less than their income share, but the overall pattern indicates that direct subsidies are not effectively pro-poor. This may stem from the fact that middle- and higher-income households are more likely to consume subsidized goods or services, in this case fuel, at higher levels than the poor. In contrast, indirect effects of subsidies—typically embedded in

[9] Direct subsidies provide financial support directly to consumers or producers, typically through grants, cash transfers or direct payments. Indirect consumption subsidies (e.g., fuel, electricity) lower prices for consumers. Indirect production subsidies (e.g., fertilizer support) benefit producers through market price support, direct payments, or input subsidies. These input subsidies often pass through to consumers by reducing the cost of final goods, both directly and indirectly. As with indirect taxes, the model captures both the direct and indirect effects of a subsidy. To illustrate: the direct component refers to the effect due to a change in the price of fertilizer because of the subsidy, while the indirect component refers to the effect due to changes in the prices of other goods and services that use fertilizer as an input. The direct component is calculated by applying the statutory subsidy rate to the retail price of fertilizer, while the indirect effect is calculated by employing Kenya's Input-Output (IO) table and a cost-push approach to capture the effect of the change in fertilizer price on the prices of other goods.

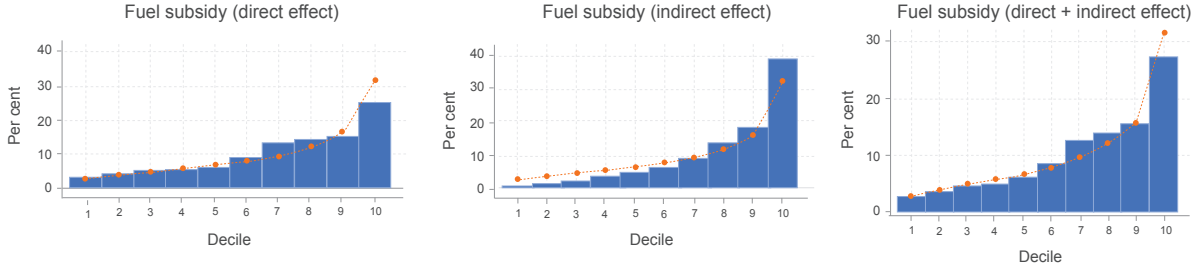
the prices of inputs or services like agricultural support—are more evenly spread across income groups, indicating a neutral distribution. Fertiliser subsidies provide a more nuanced picture. While most income groups from the first to ninth decile receive a share of the subsidy greater than their income share, some poorer deciles (1 and 5) are underrepresented (Figure 4.22b), suggesting leakage or barriers to access. The richest decile receives less than its income share, which partially offsets the regressive nature of the distribution. A similar trend is seen with indirect effects of fertiliser subsidies; they tend to be more evenly spread across all income groups with each decile receiving a share proportionate to their share in pre-fiscal income. However, these findings are based on early implementation data from the September 2022 rollout, when access was still limited, and should be interpreted cautiously. Overall, these results underscore the need to redesign subsidies and improve targeting mechanisms to better reach the poorest households. Without such reforms, Kenya risks spending substantial public resources on subsidies that reinforce inequality rather than reduce it.

Figure 4.21: Incidence curves and Concentration shares curves: Fuel subsidy

a. Incidence of the fuel subsidy (fuel subsidy as a percentage of pre-fiscal income, by decile)



b. Concentration share of the fuel subsidy (share of total fuel subsidy by pre-fiscal income decile)

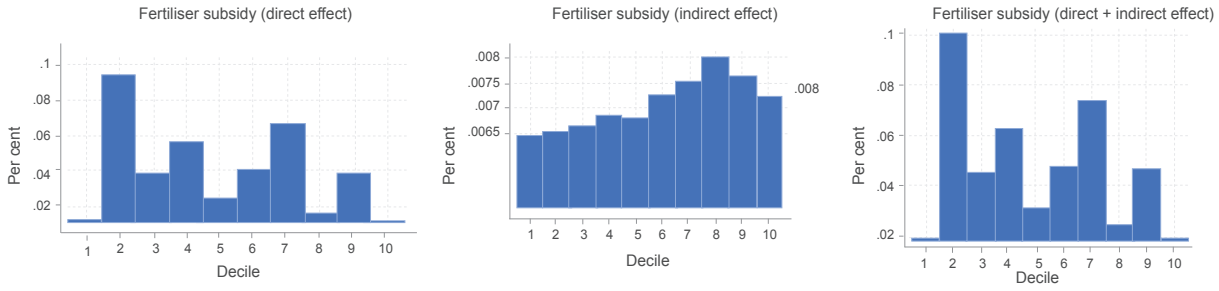


Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

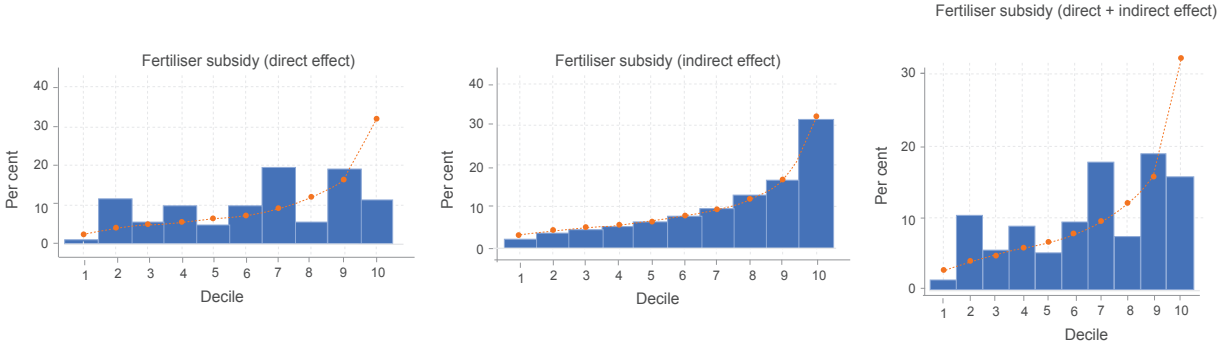
Note: Deciles are ranked by pre-fiscal income. Panel 1: The incidence curve plots the percentage of pre-fiscal income paid in taxes by each income decile. Panel b: The bars represent the share of each fertiliser subsidy received by each decile, while the dotted line indicates the share of pre-fiscal income held by each decile.

Figure 4.22: Incidence curves and concentration shares curves: Fertiliser subsidy

a. Incidence of the fertiliser subsidy (fertiliser subsidy as a percentage of pre-fiscal income, by decile)



b. Concentration share of the fertiliser subsidy (share of total fertiliser subsidy benefits by pre-fiscal income decile)



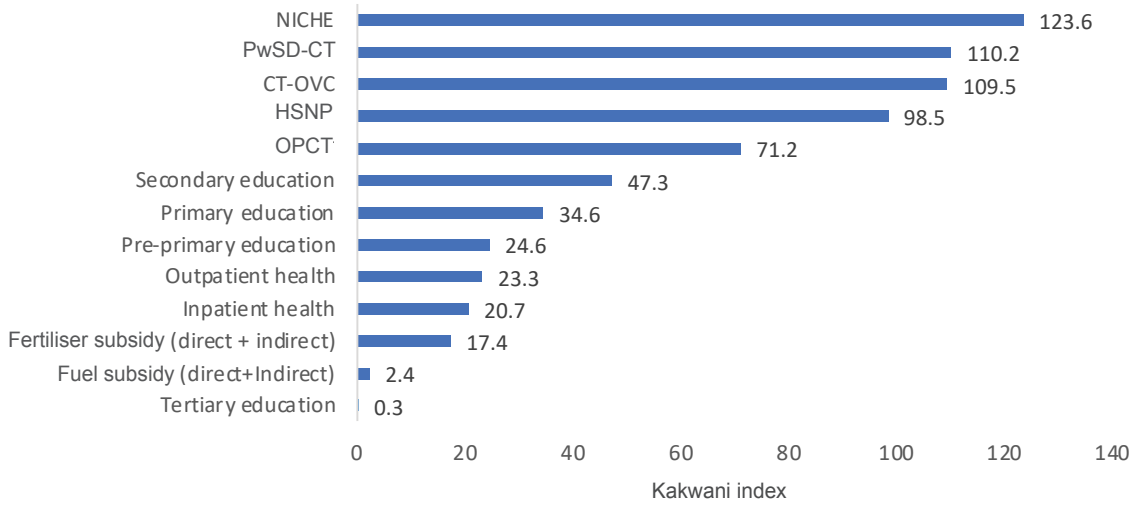
Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Note: Deciles are ranked by pre-fiscal income. Panel 1: The incidence curve plots the percentage of pre-fiscal income paid in taxes by each income decile. Panel b: The bars represent the share of each fertiliser subsidy received by each decile, while the dotted line indicates the share of pre-fiscal income held by each decile.

Progressivity of transfers based on Kakwani index

The Kakwani index confirms that transfers in Kenya are generally progressive, with cash transfers being the most progressive and subsidies only mildly so. Figure 4.23 presents the Kakwani index (scaled 0–100) for each transfer instrument analysed. Cash transfers rank highest, followed by in-kind transfers for secondary and primary education, outpatient and inpatient health services, and pre-primary education. An example is the NICHE program, which exhibits an exceptionally high degree of progressivity, with a Kakwani Index of 123.6. This value exceeds 100, which occurs when benefits are strongly concentrated among the poorest households. While such a high index signals effective pro-poor targeting, it does not necessarily imply a large redistributive impact, as the measure reflects relative progressivity rather than program size or coverage. Small, narrowly targeted transfers like NICHE can achieve very high Kakwani scores yet have limited effect on overall inequality, underscoring the need to consider program scale alongside progressivity when assessing equity outcomes.

Figure 4.23: Kakwani index for transfers

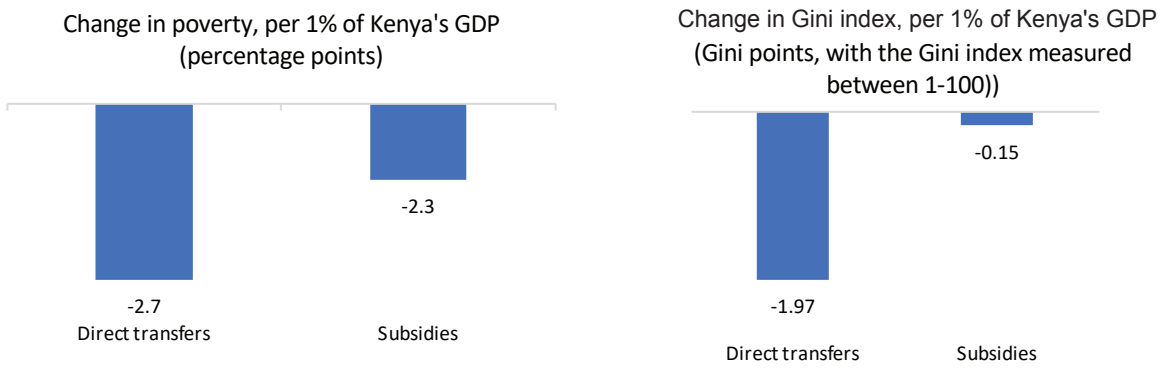


Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

4.6 Cost-effectiveness analysis

An analysis of cost-effectiveness reveals that direct transfers are significantly more efficient than subsidies in reducing poverty and inequality. With fiscal space increasingly constrained by substantial spending on subsidies, many of which tend to disproportionately benefit better-off households, the government's ability to invest in critical pro-poor sectors like social protection, health, and education is limited. For example, in the 2022/23 fiscal year, Kenya allocated about 1.4 per cent of GDP to subsidies such as fertiliser support, while direct transfers received only 0.2 per cent of GDP. Yet, direct transfers delivered a greater impact: each 1 per cent of GDP spent on them reduced poverty by 2.7 percentage points and inequality by 1.97 Gini points, compared to a 2.3-percentage point poverty reduction and just 0.15 Gini point decline from subsidies (Figure 4.24). These findings underscore that direct cash and near-cash transfers are a more cost-effective tool for tackling poverty and inequality in Kenya.

Figure 4.24: Direct transfers are more cost effective at reducing both poverty and inequality than subsidies



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Note: Cost-effectiveness is points of poverty or Gini Index reduction per one per cent GDP spent. Direct transfers include all cash benefits.

4.7 Illustrative policy simulations

What could happen to poverty and inequality when a policy variable changes? In this section, the CEQ methodology is employed to simulate policy changes and discuss their potential impacts on poverty, inequality, and the government budget.[10] For illustrative purposes, several areas of policy reforms were considered, but only a few—specifically those related to VAT, education, social protection, and fertiliser subsidy—are implemented in this report due to data and other limitations. The scenarios simulated under each policy area are presented and discussed in this section.

4.7.1 Value Added Tax

Simulations on VAT includes the following four scenarios:

- Scenario 0 is where the standard 16 per cent on VAT is reduced to zero (meant for comparison).
- Scenario 1 is where the standard 16 per cent VAT is reduced to 14 per cent.
- Scenario 2 is where the standard 16 per cent on VAT is increased to 18 per cent.
- Scenario 3 is where the standard 16 per cent on VAT is applied on petroleum instead of 8 per cent.

VAT changes can reduce poverty slightly but have minimal effects on inequality, with significant revenue implications depending on the scenario. Table 4.1 presents the results of four simulations on VAT. Scenario 0 shows a reduction in poverty by approximately 2.0 percentage points across all regions. However, this scenario also leads to a slight increase in inequality, ranging from about 0.15 to 0.2 Gini points across the regions. Despite its positive impact on poverty, Scenario 0 has significant implications for government revenue, reducing revenue from indirect taxes by about 70 per cent, making it an unfeasible option. The proposed changes in VAT in scenarios 2, 3, and 4 are relatively small, and this is reflected in their effects on poverty, which are also minimal. Increasing or reducing the standard VAT by 2 percentage points results in a change of less than 0.5 percentage points in poverty, while increasing VAT on petroleum results in a change of 0.1 percentage points. The impact on inequality is similarly small, with changes of about 0.02 Gini points across all regions. It is important to note that the model does not incorporate economic agents' price expectations following a rise in VAT on petroleum. Implementing these policies would also affect government revenue. Scenario 1 results in a loss of 8.9 per cent from indirect taxes, while Scenario 2 results in a gain of 8.9 per cent. Scenario 3 leads to a 1.7 per cent revenue gain.

[10] The key variables of interest and scenarios were gathered from various stakeholders, including the Ministry of Education, Ministry of Health, Ministry of Agriculture, Ministry of Energy, Kenya National Bureau of Statistics (KNBS), Kenya Revenue Authority (KRA), The National Treasury, UNICEF, The Kenya Institute for Public Policy Research and Analysis (KIPPRA), and the Council of Governors (COG), among others.

Table 4.1: Impact of VAT rate changes on poverty and inequality

	Scenario 0: Zero VAT	Scenario 1: 14% VAT	Scenario 2: 18% VAT	Scenario 3: 16% VAT, on petroleum
Poverty (percentage points)				
Rural	-1.95	-0.25	0.20	0
Urban	-2.05	-0.30	0.15	0
Non-ASAL	-2.00	-0.25	0.20	0
Semi-arid counties	-2.30	-0.35	0.25	0.05
Arid counties	-1.60	-0.15	0.10	0
Inequality (Gini points)				
Rural	0.15	0.02	-0.02	-0.02
Urban	0.17	0.02	-0.02	-0.02
Non-ASAL	0.20	0.03	-0.02	-0.02
Semi-arid counties	0.17	0.02	-0.02	-0.02
Arid counties	0.15	0.02	-0.02	-0.02

Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

4.7.2 Social protection

Simulation on social protection includes the following three scenarios:

- Scenario 1 is where HSNP is scaled up to include all monetary poor households in the entire country.
- Scenario 2 is where all existing cash transfer benefit amount is increased by 20 per cent.
- Scenario 3 is where all cash transfer benefit amount is reduced by 20 per cent[11].

Scaling up HSNP to include all monetary poor households significantly reduces poverty and inequality, particularly in rural areas and among pensioners, but requires a large budget increase. Table 4.2 shows the results of the three scenarios on social protection. Scenario 1 demonstrates a significant reduction in poverty, with the most substantial decrease observed in rural areas (11 percentage points) and the smallest decrease in arid counties (5.7 percentage points). As illustrated in Figure 4.25, this scenario has the most pronounced impact on pensioners, resulting in a poverty reduction of 29.4 percentage points. Conversely, the smallest impact is seen in households with more than three children, with a reduction of 5.4 percentage points. Generally, these are huge reductions in poverty to be achieved in a short period, but it illustrates how increasing the coverage of cash transfers can help achieve huge reduction in poverty. Additionally, Scenario 1 has a notable effect on reducing inequality, with the Gini index decreasing by 1.5 to 2.9 points across various locations.

The second and third scenarios have a smaller effect on poverty, reducing it by less than 1 percentage point. These scenarios show a stronger impact in rural areas and a relatively weaker effect in arid counties. In addition, their effects across household types are relatively modest, with reductions of

[11] This is only for illustration as in reality it is not a practical option from a technical and policy perspective given that cash transfers have not been increased since 2014 thereby loosing purchasing power due to inflation making reducing the transfer amount not to be feasible

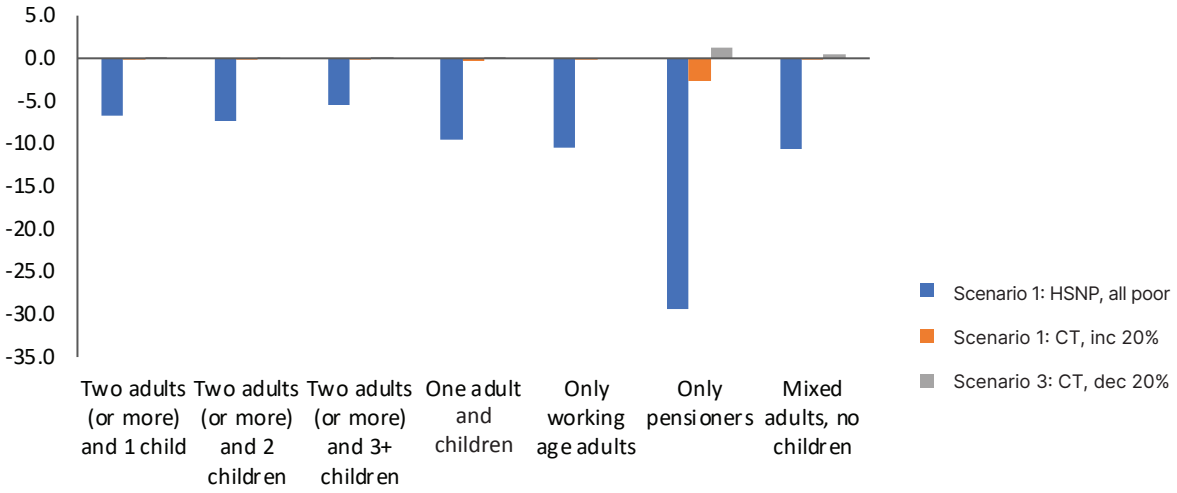
less than 3 percentage points. Similarly, both scenarios have a relatively weaker impact on inequality, decreasing the Gini index by less than 1 point. In terms of budget implications, the first scenario requires a substantial increase in the social protection budget, approximately 500 per cent, to implement it. The second scenario necessitates a 20 per cent increase in the social protection budget, while the third scenario requires a 20 per cent decrease.

Table 4.2: impact of social protection interventions on poverty and inequality

Location	Scenario 1: HSNP, all poor	Scenario 2: CT, increase by 20%	Scenario 3: CT, decrease by 20%
Poverty (percentage points)			
Rural	-11	-1	0.25
Urban	-7	-0.75	0.1
Non-ASAL	-7.5	-0.5	0
Semi-arid counties	-8.25	-0.75	0.15
Arid counties	-5.75	-0.25	0
Inequality (Gini points)			
Rural	-2.6	-0.1	0.05
Urban	-1.5	-0.05	0.05
Non-ASAL	-1.75	-0.05	0
Semi-arid counties	-2.3	-0.05	0.05
Arid counties	-2.9	-0.05	0.05

Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Figure 4.25: Change in poverty rate relative to baseline by household type (percentage points)



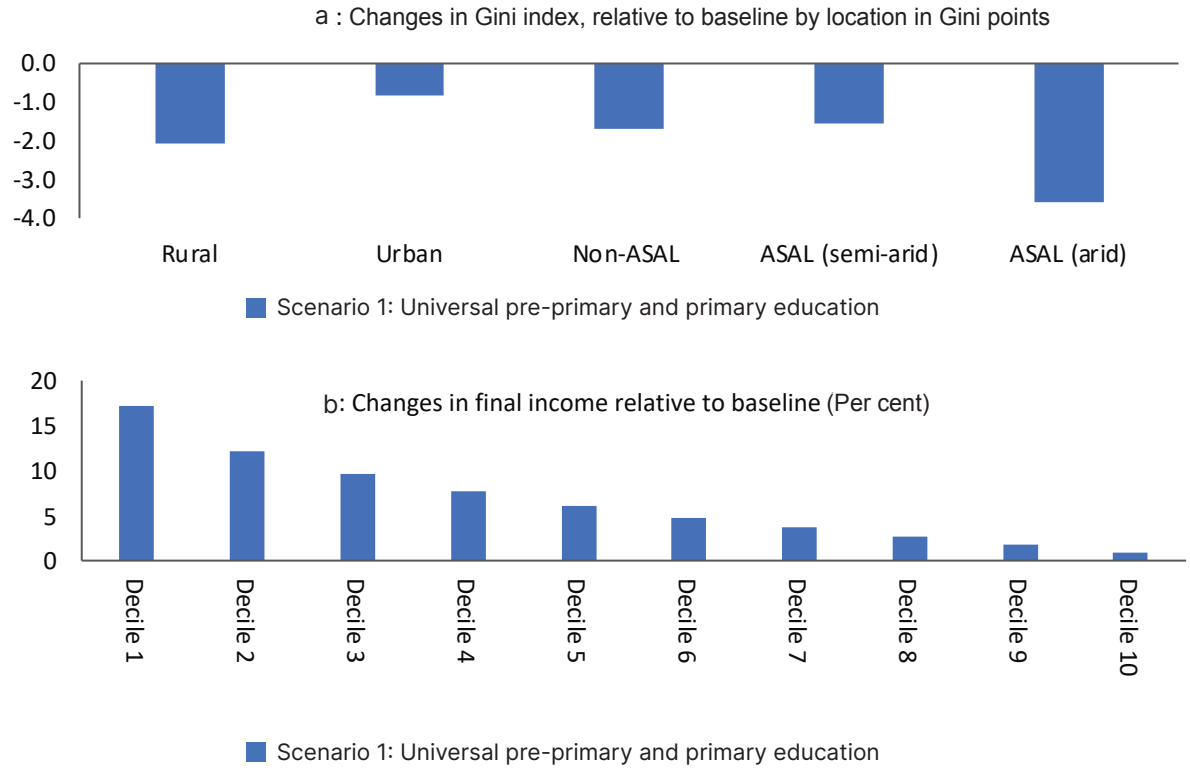
Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

4.7.3 Education

Simulation of the scenario on education: Scenario 1, where the country achieves universal pre-primary & primary education

Achieving universal pre-primary and primary education decreases inequality. As expected, most of the children not attending school are more likely to be from poor households. Therefore, bringing out-of-school children into the education system reduces inequality, given the disproportionately large number of out-of-school children from poor households. The reduction in inequality is more pronounced in arid counties (3.6 Gini points) and rural areas (2.1 Gini points), as shown in Figure 4.26a. Figure 4.26b illustrates that the increase in education benefits due to achieving universal education in pre-primary and primary levels, and consequently the final income, is concentrated among poor households. This leads to an increase in final income by 17 per cent for the poorest decile and 1 per cent for the richest decile. Achieving universal education also means enrolling an additional 2.2 million out-of-school children, which would increase the education budget by more than 40 per cent. It is important to note that increasing access to education does not necessarily translate to increased enrollment. Ensuring that all children attend school requires addressing various barriers that prevent school attendance, such as financial constraints, cultural factors, and the quality of education provided.

Figure 4.26: Change in inequality due to achieving universal pre-primary and primary education



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.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4.7.4 Agriculture

Simulation of the scenario on agriculture: Scenario 1, where fertiliser subsidies are provided to all poor farmers while removing the subsidy from all non-poor farmers.

Providing fertiliser subsidies to all poor farmers while removing the subsidy from non-poor farmers reduces both poverty and inequality (Table 4.3). Expanding the fertiliser subsidy to all poor farmers reduces poverty by 1 to 6 percentage points across the region. The poverty reduction channel can be through reduced cost of production at the farm level, increased productivity (yields) that support household incomes (Nguyen et al, 2023) although this will happen with time lag from the harvest period. The highest reduction in poverty is observed in semi-arid counties (6 percentage points), followed by non-ASAL areas and rural areas (both at 4.7 percentage points), while the lowest reduction is seen in arid counties (1 percentage point). The low impact of fertiliser subsidy in arid regions is because returns to subsidies are generally lower under rainfed agriculture, particularly in arid areas that are prone to frequent droughts (Jayne et al., 2019). In Kenya's arid regions, where pastoralism is the dominant livelihood and crop production is minimal, the use of fertilisers is limited, reducing the overall effectiveness of fertiliser subsidies in addressing poverty in these regions. The poverty impact in rural areas is lower than those of urban areas due to access constraints in rural areas owing to availability of the distribution centres. There is a cost of access to the subsidized fertiliser. Expanding the fertiliser subsidy to all poor farmers also decreases inequality, with the largest decrease in rural areas (1.6 Gini points) and semi-arid counties (1.5 Gini points). However, this expansion is resource-intensive, leading to an increase in the government budget for subsidies by more than 2,000 per cent.

Nonetheless, empirical evidence suggests that fertiliser subsidies are not a reliably effective tool for poverty reduction. Studies, including systematic reviews, indicate that such subsidies often fail to reach the poorest households effectively due to issues like leakage and misallocation. Even when targeted, the poorest may not benefit as intended, sometimes selling the inputs to meet more immediate needs such as food or healthcare (Hemming et al., 2018).

It is important to also note that one limitation of this scenario is that only a small fraction of farmers who use fertilisers were captured in the 2022 KCHS data due to the timing of the introduction of the fertiliser subsidy and data collection. Therefore, caution is needed when interpreting these results, as they reflect the initial stages of the fertiliser subsidy programme.

Table 4.3: Expanding fertiliser subsidy to all poor farmers

Location	Change in poverty (percentage points)	Change in Inequality (Gini points)
Rural	-3.5	-1.6
Urban	-4.8	-0.2
Non-ASAL	-4.8	-1.1
Semi-Arid counties	-6.0	-1.5
Arid counties	-1.0	-0.3

Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

05

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Extension to Gender

Kenya's pursuit of inclusive economic growth necessitates the equitable distribution of resources and opportunities. Gender equality is pivotal in achieving this inclusive growth. Kenya's commitment to gender equality is enshrined in its constitution and reinforced by specific legislative measures. Article 27 of the Constitution of Kenya (2010), explicitly guarantees equality and freedom from discrimination, stating that every person is equal before the law and has the right to equal protection and benefit of the law. It further mandates that women and men have the right to equal treatment, including equal opportunities in political, economic, cultural, and social spheres. Following the promulgation of the Constitution of Kenya in 2010, the National Gender and Equality Commission Act (2011) was enacted, establishing the National Gender and Equality Commission (NGEC), tasked with promoting gender equality and freedom from discrimination. While Kenya has made strides in establishing legislative frameworks to promote gender equality, significant disparities persist.

Various studies and reports document gender differences in Kenya. For instance, KNBS (2024) indicates a higher poverty level in female-headed households (35.6 per cent) compared to male-headed households (32.6 per cent). This disparity is more pronounced in rural areas, where 40.2 per cent of female-headed households are poor compared to 37.2 per cent of male-headed households. Similarly, KNBS (2020) reveals that inequality in 2015/16 was higher among female-headed households, with a Gini index of 41.4, compared to male-headed households, with a Gini index of 39.9. Furthermore, despite significant progress in primary school enrollment, disparities persist at secondary and tertiary education levels, with female student enrollment being lower than that of male students. In the labour market, the female unemployment rate (4.8 per cent) is higher than the male unemployment rate (2.2 per cent). Male earnings are, on average, higher than female earnings, and access to formal wage employment is higher for men than for women (KNBS, 2020; UN Women, 2023). According to UN Women (2023), the employment rate for women (60.3 per cent) is lower than that for men (70.4 per cent), while the gender pay gap was 31.3 per cent based on monthly pay.

Gender differences in earnings can be attributed to factors such as occupational segregation, discrimination, and the undervaluation of women's labour (Altonji & Blank, 1999). Weak enforcement of laws related to equal pay and protection against discrimination remains a challenge and contributes to the persistence of gender disparities (ILO, 2017). In addition, gender norms significantly influence economic activity, creating distinct patterns in labour force participation, sector of employment, asset ownership, and consumption (Elson, 2017; World Bank, 2019). Women in rural areas and informal settlements often bear a disproportionately higher burden of unpaid care work, limiting their capacity to engage in paid employment and economic advancement (Kinyanjui, 2018). This "care penalty" intersects with limited access to financial resources, land ownership, and digital technologies, creating a complex web of gendered vulnerabilities (UN Women, 2020). These factors collectively contribute to disparities in inequality and welfare between men and women.

Government intervention through taxation and public spending can directly influence gender-based differences in inequality and poverty. As discussed by Stotsky (1997), gender inequities in the fiscal system can arise due to explicit provisions in the tax and transfer system or implicitly. Public revenue and expenditure policies significantly impact inequality and poverty by shaping access to essential services, labour market participation, and the overall well-being of individuals and households. Fiscal

incidence analysis is crucial for understanding how Kenya's tax and expenditure policies affect different population segments. However, basic FIA often overlooks the complex interplay of gender and fiscal policy, failing to capture the significance of intra-household resource allocation and the economic value of unpaid care work (Budlender, 2019). Given that household-level data can mask significant gender disparities, a more detailed gendered FIA is necessary to reveal how fiscal policies impact the welfare of men and women.

This study conducted a gendered fiscal incidence analysis for Kenya, drawing upon the Commitment to Equity (CEQ) framework. It addresses the following questions: What is the impact of taxes and government transfers on gender differences in inequality and poverty? Are the burdens of taxation and the benefits of transfers different by gender? The study uses the 2022 KCHS data and administrative data to analyse the impact of fiscal policy actions on poverty and inequality by gender. Box 5.1 summarizes how the extension of the CEQ analysis to gender (eCEQ) can be done.

Analysing the gender dimension of fiscal incidence can shed light on how the fiscal system may exacerbate gender inequity or fail to adequately address it. The results of eCEQ can inform policymakers about fiscal policy reforms that can help reduce gender inequities. Therefore, this study contributes to the ongoing discourse on gender-responsive budgeting and fiscal policy in Kenya, providing recommendations for policy reforms that promote gender equality and inclusive economic growth.

Box 5.1: Extending the CEQ framework to gender

The CEQ assessment can be extended to conduct fiscal incidence analysis through a gender lens. The engendered CEQ (eCEQ) approach mirrors the basic CEQ methodology as described in section 3, except that the analysis is disaggregated by gender. To implement this framework, a clear criterion for defining "gender." is required. This can be achieved by classifying households based on gender or by classifying individuals by gender (Greenspun and Lustig, (2013). However, individual level classification poses challenges for certain indicators such as the incidence of consumption taxes, which require consideration of the intra-household distributional dynamics, for which data is difficult to generate (Greenspun and Lustig (2013). Identifying the diverse experiences and interactions of men and women with the fiscal system is often constrained by data limitations. This is because household members tend to pool incomes, expenditures, and assets together, whether they are contributed by one individual or several households. Moreover, microdata typically operates at the household level. Consequently, integrating a gender dimension into fiscal incidence analysis is challenging initially since it involves addressing conceptual and data limitations related to intra-household dynamics.

The literature on eCEQ, proposes analyzing several "access points" that define the interactions of households and the fiscal system to provide evidence of fiscal incidence on gender equity. Households interact with the fiscal systems through consumption i.e when they consume goods and services; reproductive decisions; labour market participation; production for market sales or own consumption; allocation of time between labour, study, and other activities; investment in human capital and assets, among others. These decisions are influenced by taxes and transfers of the fiscal system, as well as implicit and explicit gender biases and incentives (Tarlovsky and Icaza, 2023). Previous studies suggest classifying households into typologies that highlight gender dimensions and potential gender disparities (Tarlovsky and Icaza, 2023) as shown in Table 5.1.

Table 5.1: Classification of households into categories based on gender relations

	Headship	Demographic composition	Income contributions	Mixed typology
Description and identification	Most common classification. Generally, self-reported or enumerator assigned in the survey.	Exploits variation in consumption patterns and gender-specific needs.	Exploits variation in intra-household bargaining power. Exploits variation in gender-specific market opportunities.	Combining more than one typology to further disaggregate household characteristics.
Pros	Available in most surveys.	Easily available from the household roster. Accounts for eligibility to certain fiscal policies.	May disclose power dynamics within the household that affect decisions.	A more detailed analysis accounting for interactions in gender and household vulnerabilities.
Cons	Definitional issues. Does not account for intra-household dynamics and allocations.	It may still be insufficient to capture intra-household dynamics and allocations.	The definition of income thresholds may not be straightforward.	Cells may be empty or the sample size insufficient for statistical inference.

Source: Adopted from Tarlovsky and Icaza (2023).

The study analyses the impact of taxes and cash transfers on males and females by categorizing gender based on household headship, income contribution, and a mixed typology that combines income contribution (representing bargaining power) and domestic responsibilities. Specifically, households are differentiated based on whether they are headed by a woman or a man (the most common gender typology used), whether women or men contribute most of the income in the household (contributing more than 60 per cent of the earnings from the labour market), and the mixed typology. Using the second category helps to capture intra-household roles and bargaining power, while the mixed typology captures both bargaining power and care needs (domestic responsibilities). The gender categories used in this analysis are shown in Table 5.2. By employing these categories, the analysis goes beyond the traditional approach of grouping households by the sex of the head of household and considers other characteristics, providing a richer typology for fiscal incidence analysis (Grown and Valodia, 2010).

Table 5.2: Gender categorizations used in the analysis

Criteria	Household type	Definition
Traditional definition		
Household headship	Female headed households	• Identification of household head as (self-reported) in household interview roster
	Male headed households	
Income (proxy for intra-household roles and bargaining power)		
Income contribution	Females contribute a larger share (>60%) of household income	• Calculated over total labour earnings reported by gender of household members. • Labour earnings include salaries and self-employed earnings; excluding incomes from agricultural sales and own consumption
	Males contribute a larger share (>60%) of household income	
	No majority male or female contribution to a household income	
	Households with no labour earnings	

Table 5.2: Gender categorizations used in the analysis *Continued*

Criteria	Household type	Definition
Income (proxy for intra-household roles & bargaining power) + Presence of dependent children & elderly (proxy for care needs and domestic responsibilities)		
Gender sustaining household earnings + presence of children & elderly	Gender sustaining household labour earnings combined with the presence of dependent children and the elderly: ✓ Children < 6 years old ✓ Elderly 80 plus years	• Calculated from gender and age of all household members (self-reported) in household interview roster and labour earnings reported by gender of household members.
	Large share (>60%) of female household labour earnings plus dependent children and elderly	
	Large share (>60%) of female household labour earnings plus dependent children only	
	Large share (>60%) of female household labour earnings plus dependent elderly only	
	Large share (>60%) of female household labour earnings with no dependent children and elderly	
	Large share (>60%) of male household labour earnings plus dependent children and elderly	
	Large share (>60%) of male household labour earnings plus dependent children only	
	Large share (>60%) of male household labour earnings plus dependent elderly only	
	Large share (>60%) of male household labour earnings with no dependent children and elderly	

5.1 Population share of the various household typologies

Male-headed households are the majority, men generally contribute more to household income, and most households have dependent children but no elderly members. Male-headed households account for 71 per cent of all households compared to 29 per cent that are female-headed (Table 5.3). Men generally contribute more to household income: in 36.1 per cent of households, men contribute over 60 per cent of income, while women do so in 18.4 per cent. A small share (6.1 per cent) has no majority contributor, and 39.4 per cent have no labor income. In terms of household composition, nearly half (49.8 per cent) have children less than six and no elderly aged 80 and above, with female-type households (where women contribute at least 60 per cent of income) making up 8.2 per cent and male-type (where men contribute at least 60 per cent of income) 19.3 per cent. Households with elderly and no children account for 9.7 per cent of all households, while those with both children and elderly are just 4.5 per cent. 36 per cent of households have neither children nor elderly, split between 7.8 per cent among female-type households and 13.1 per cent among male-type households.

Table 5.3: Population share by household type

Household type	Population share (%)
Female household head	29.0
Male household head	71.0
By share of contribution to household income	
Female (>60% of income)	18.4
Male (>60 of income)	36.1
No majority income share	6.1
No labour income	39.4
By share of contribution to household income and care/domestic responsibilities	
Households with both children and elderly	**4.5**
Female (>60% of income)	0.8
Male (>60% of income)	1.3
No majority income share	0.2
No labour income	2.2
Households with children but no elderly	**49.8**
Female (>60% of income)	8.2
Male (>60% of income)	19.3
No majority income share	3.5
No labour income	18.8
Households with elderly but no children	**9.7**
Female (>60% of income)	1.5
Male (>60% of income)	2.5
No majority income share	0.4
No labour income	5.3
Households with neither children nor elderly	**36.0**
Female (>60% of income)	7.8
Male (>60% of income)	13.1
No majority income share	2.1
No labour income	13.0

Source: Authors' calculations based on KCHS 2022.

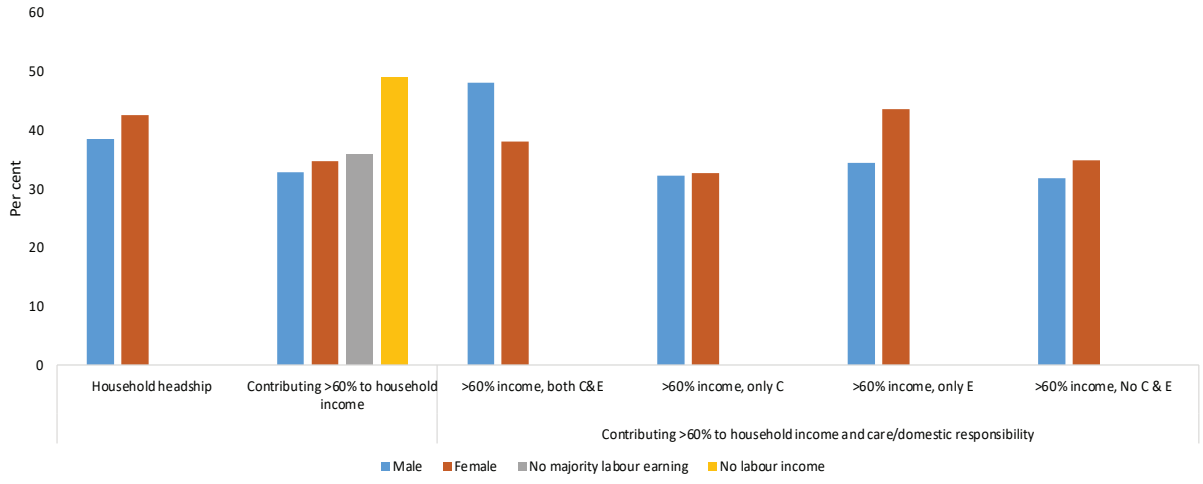
Note: C=dependent children (below 6 years); E=elderly household members (80 plus years).

5.2 Poverty and inequality by gender

Poverty is consistently higher in female-headed households and those where women contribute more to income, but the most severe poverty occurs in households with no labor earnings, followed by male-type households with both dependent children and elderly members. Overall, female-headed households and those where women contribute a larger share of income experience higher poverty rates than their male counterparts (Figure 5.1). Female-headed households have a poverty rate of 42.6 per cent, compared to 38.5 per cent in male-headed households. Similarly, in terms of household composition, poverty is greater in female-type households than in male-type households across most typologies, except where men contribute more and the household includes both children and elderly where poverty peaks at 48 per cent versus 38.1 per cent in similar female-type households.

The results highlight structural inequalities in labor markets and income-generating opportunities between men and women. The largest poverty gap (9.9 percentage points) occurs between male-type and female-type households where men or women contribute most of the income. Female-type households, where women provide at least 60 per cent of income, tend to face higher poverty because women often earn less, have less access to stable employment, and are concentrated in lower-paying sectors. In contrast, male-type households benefit from men's generally higher wages and greater employment security, reducing their poverty risk. This disparity underscores how reliance on a single gender for income amplifies vulnerability, particularly when that gender faces systemic economic disadvantages.

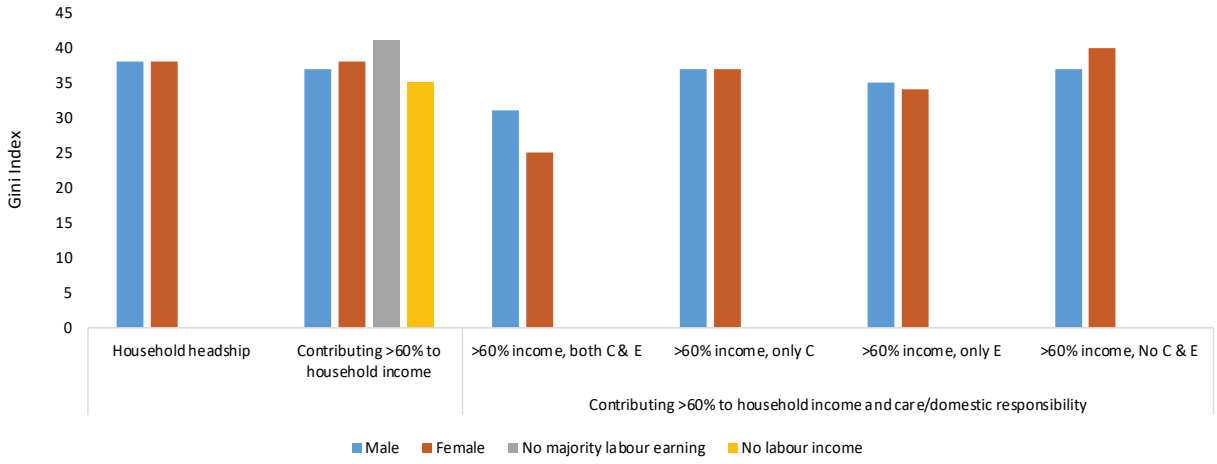
Figure 5.1: Gender differences in poverty headcount by household typology



Source: Authors' calculations based on 2022 KCHS.
Note: C=dependent children (below 6 years); E=elderly household members (80 plus years).

Inequality levels are broadly similar between male- and female-headed households, both with a Gini index of 38, indicating that headship alone does not drive inequality. However, when households are classified by income contribution, female-type households—where women provide most of the income—show slightly higher inequality (Gini index of 38) compared to male-type households (Gini index of 37) (Figure 5.2). This reflects structural gender disparities in labor markets: women often earn less, have less stable employment, and are concentrated in lower-paying sectors, making income distribution more uneven when they are the primary earners. Inequality is lowest in households without labor income, likely due to reliance on transfers that are more evenly distributed. Within mixed typologies, inequality peaks in female-type households with no dependent children or elderly (Gini index of 40 versus 37 for male-type). Conversely, households with both children and elderly have the lowest inequality. Overall, female-type households tend to face slightly greater inequality, underscoring how gendered economic roles shape household income distribution.

Figure 5.2: Gender differences in Gini index by household typology



Source: Authors' calculations based on KCHS 2022.

Note: C=dependent children (below 6 years); E=elderly household members (80 plus years).

5.3 Overall impact of fiscal policy actions

5.3.1 Overall impact on the gender income gap

Fiscal policy reduces gender income gaps in most household typologies, but its impact varies across household types—narrowing gaps in most cases yet increasing in households with no dependent children and elderly. Table 5.4 presents the calculation of gender gaps in average income across income concepts defined by the CEQ and for various household typologies. In all cases, the gender gap is measured by comparing the incomes of households characterized predominantly by "female traits" with those identified by "male traits." As shown in the table, fiscal policy reduces the gender income gap between female-headed and male-headed households. It also narrows the gap between households in which women or men contribute a larger share of household income. The gender income analysis is further disaggregated by mixed household typologies. Fiscal policy measures reduce the gender income gap in households with dependent children and elderly members, those with dependent children but no elderly members, and those with elderly members but without dependent children. However, the gender income gap increases in households without dependent children and elderly members.

Table 5.4: Gender income gaps across income concepts

Household type	Population share (%)	Market income + pensions	Disposable income	Consumable income
By household headship (%)		**9.4**	**7.1**	**6.7**
Female-headed	29	94,799	92,853	89,860
Male-headed	71	103,716	99,461	95,905
By share of contribution to household income (%)		**3.0**	**2.2**	**1.9**
Female (>60% of income)	18.4	115,022	109,013	105,292
Male (>60% of income)	36.1	118,438	111,459	107,255
No majority income share	6.1	117,550	112,303	108,481
No labour income	39.4	76,217	77,134	74,706
By share of contribution to household income and care/domestic responsibilities				
Households with both children and elderly (%)		**7.8**	**7.7**	**7.7**
Female (>60% of income)	0.8	69,786	69,689	67,703
Male (>60% of income)	1.3	75,216	75,085	72,947
No majority income share	0.2	66,487	66,334	64,398
No labour income	2.2	58,438	60,139	58,718
Households with children but no elderly (%)		**3.7**	**2.9**	**2.7**
Female (>60% of income)	8.2	119,662	112,303	108,963
Male (>60% of income)	19.3	124,109	115,604	111,861
No majority income share	3.5	125,917	119,720	115,959
No labour income	18.8	74,289	74,738	77,788
Households with elderly but no children (%)		**13.1**	**12.2**	**11.5**
Female (>60% of income)	1.5	81,799	82,736	80,006
Male (>60% of income)	2.5	92,545	92,828	89,184
No majority income share	0.4	88,847	90,451	87,349
No labour income	5.3	62,569	66,333	64,074
Households with neither children nor elderly (%)		**-1.5**	**-1.8**	**-2.5**
Female (>60% of income)	7.8	121,037	114,532	110,048
Male (>60% of income)	13.1	119,222	112,450	107,253
No majority income share	2.1	114,118	108,701	104,443
No labour income	13.0	87,649	87,944	84,583

Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

5.3.2 Overall impact on inequality

Fiscal policy significantly reduces inequality across all household types, with female-type households benefiting the most partly due to their greater initial disadvantage. Moving from pre-fiscal to final income lowers inequality for male-headed households by 3.6 Gini points and for female-headed households by 4.6 points (Table 5.5). When classified by income contribution, female-type households experience a larger decline (6.1 points) compared to male-type households (4.9 points), reflecting structural gender disparities—women often earn less and have less stable employment, so fiscal transfers have a stronger equalizing effect. Within mixed typologies, reductions occur across all groups, with the greatest drop—6.6 points—in female-type households with no dependents, followed by 5.8 points in female-type households with children only. For male-type households, the largest decline is 5.5 points in households without dependents. Overall, fiscal policy narrows inequality gaps most where vulnerability is highest, underscoring its role in mitigating gender-based and structural income disparities.

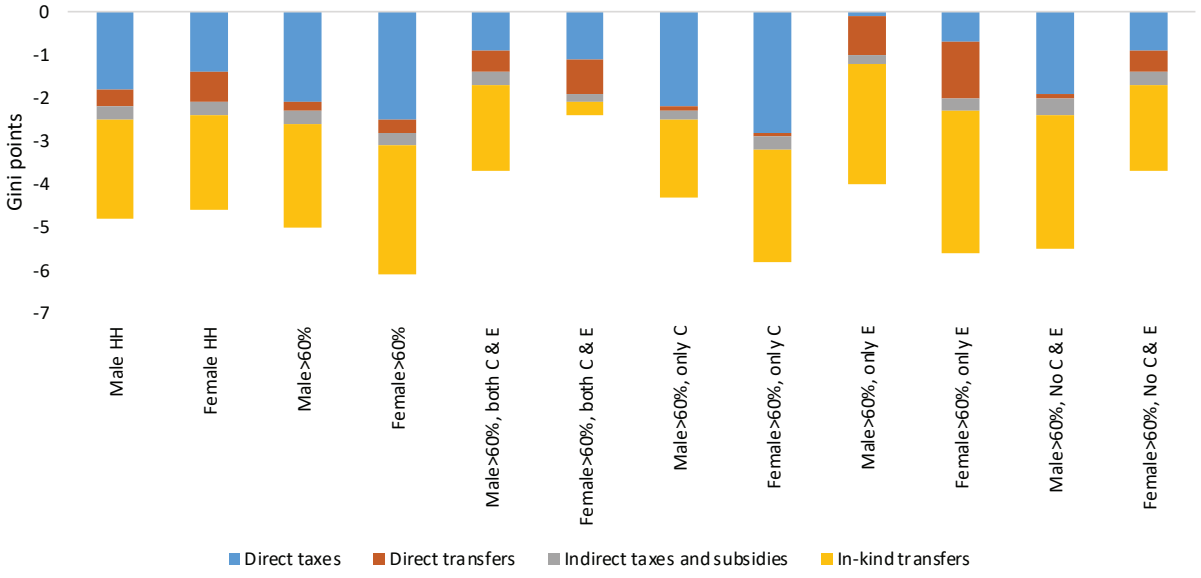
Table 5.5: Gini index by gender and income concepts

Household type	Market income plus pensions	Net market income	Disposable income	Consumable income	Final income
Female-headed	40.5	39.0	**38.4**	38.1	35.9
Male-headed	32.1	31.2	**30.8**	30.5	28.5
Female (>60% of income)	40.8	38.3	**38.1**	37.7	34.7
Male (>60% of income)	39.4	37.1	**36.9**	36.6	34.2
Female (>60% of income), both C & E	26.6	.25.5	**24.7**	24.5	24.2
Male (>60% of income), both C & E	32.1	31.2	**30.8**	30.5	28.5
Female (>60% of income), only C	39.4	36.6	**36.5**	36.2	33.6
Male (>60% of income), only C	39.4	37.2	**37.0**	36.8	35.0
Female (>60% of income), only E	35.7	35.1	**33.8**	33.5	30.2
Male (>60% of income), only E	36.6	35.9	**35.0**	34.8	32.0
Female (>60% of income), No C & E	42.6	40.1	**40.0**	39.6	36.0
Male (>60% of income), No C & E	38.7	36.8	**36.7**	36.4	33.2

Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Note: C = dependent children (below 6 years); E = elderly members (80 plus years).

Taxes and transfers considered in the analysis reduce inequality, but in-kind transfers have the greatest impact across most household types. Figure 5.3 shows that in-kind transfers consistently deliver the largest reduction in inequality, particularly in households with elderly members. Direct taxes rank second due to their progressive nature, narrowing income gaps more in households with dependent children where pre-fiscal disparities are higher. Cash transfers also reduce inequality, especially in households with elderly members, though their effect is smaller than in-kind transfers. Indirect taxes and subsidies have minimal impact since they are broadly applied and less targeted. While this overall pattern holds, slight variations exist reflecting differences in household needs and income structures.

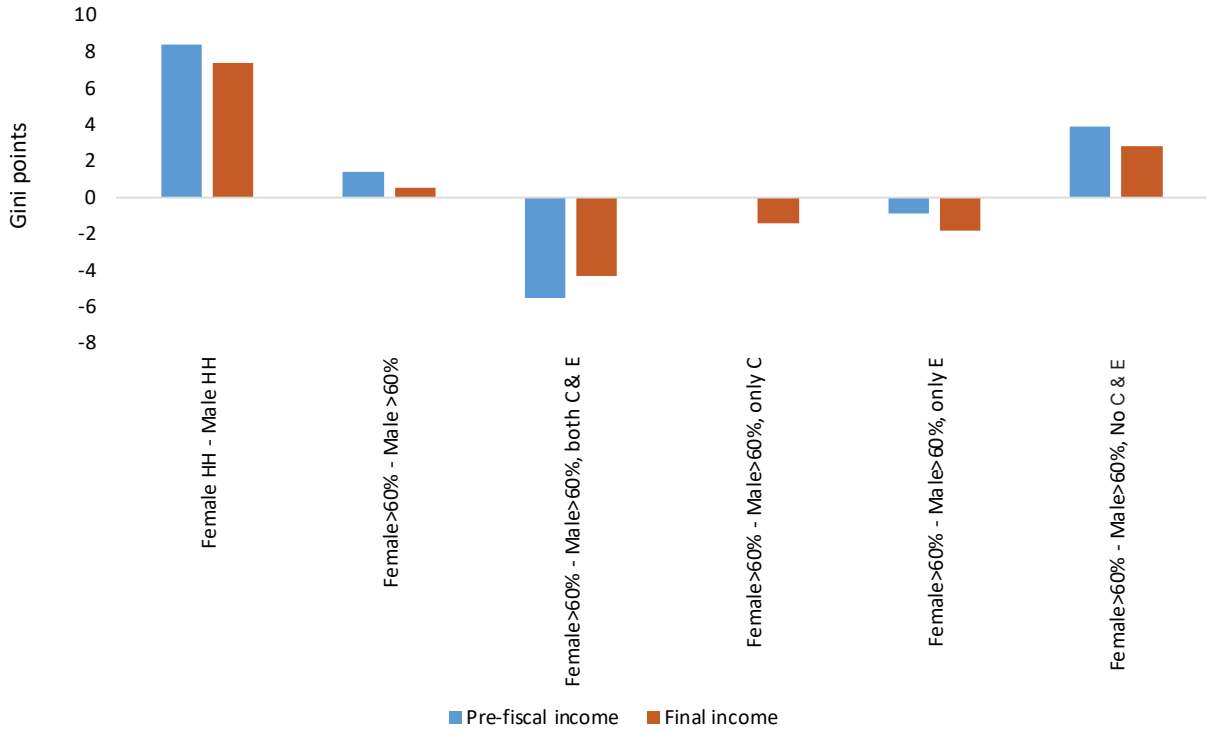
Figure 5.3: Change in Gini index due to direct tax, direct transfer and indirect tax and subsidy



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Note: HH=household head; C=dependent children (below 6 years); E=elderly household members (80 plus years).

Fiscal policy reduces gender differences in inequality for most household types, but its impact is uneven because of how taxes and transfers interact with household needs and gender roles. Figure 5.4 shows that in male- vs. female-headed households and in households where men or women contribute most of the income, gender gaps in inequality decline after fiscal policy, from 8.4 to 7.4 Gini points and from 1.4 to 0.5 points, respectively. These reductions occur because redistribution measures, such as in-kind benefits and progressive taxes, offset income disparities, particularly for female-type households that start more disadvantaged. Similar declines are seen in mixed households with both children and elderly members and in those without dependents. However, gender differences increase in households with only dependent children or only elderly members. Overall, while fiscal policy helps narrow gender inequality where support is well-aligned, it can inadvertently widen gaps in certain household types, underscoring the importance of tailored interventions.

Figure 5.4: Gender gap in inequality at pre-fiscal income and final income



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Note: HH=household head; C=dependent children (below 6 years); E=elderly household members (80 plus years).

5.3.3 Overall impact on poverty

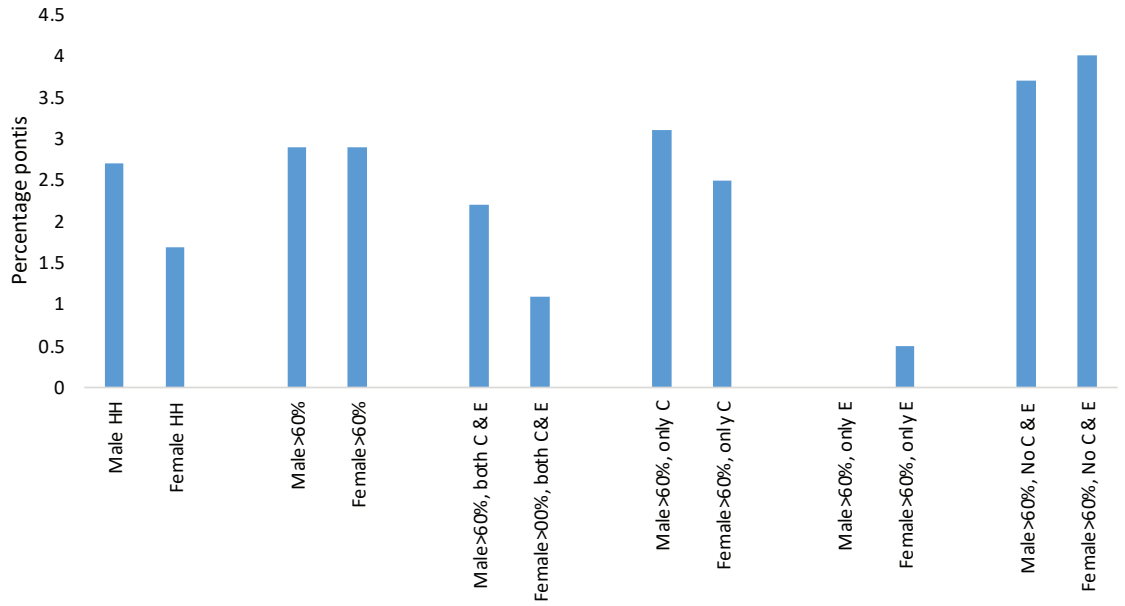
Moving from pre-fiscal to consumable income increases poverty across all household types in part because indirect taxes on goods and services are less progressive, reducing disposable income more for poorer households. The largest rise occurs in households without dependents, which lack compensating benefits: poverty increases by 4.0 percentage points for female-type households and 3.7 points for male-type households (Table 6.6 and Figure 5.5). Male-headed households see a 2.7-percentage point increase compared to 1.7 percentage points for female-headed households, and households where men or women contribute most of the income experience a 2.9-percentage point rise. The smallest increase is in households with elderly only, likely due to targeted support such as pensions.

Table 5.6: Poverty headcount estimates by gender and household typology (%)

Category	Market income plus pension	Net market income	Disposable income	Consumable income
Female-headed	43.3	43.7	***42.6***	45.5
Male-headed	38.2	39.0	***38.5***	41.0
Female (>60%)	34.8	35.5	***34.7***	37.7
Male (>60%)	31.9	33.3	***32.8***	34.8
Female (>60%), both C & E	43.1	44.6	***38.1***	44.1
Male (>60%), both C & E	54.3	54.3	***48.0***	52.1
Female (>60%), only C	32.0	32.8	***32.7***	34.5
Male (>60%), only C	30.7	32.3	***32.3***	33.8
Female (>60%), only E	44.6	45.8	***43.5***	45.1
Male (>60%), only E	36.9	37.2	***34.4***	36.8
Female (>60%), No C & E	34.9	35.6	***34.9***	38.9
Male (>60%), No C & E	30.6	31.9	***31.8***	34.3

Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Notes: C=dependent children (below 6 years); E=elderly household members (80 plus years).

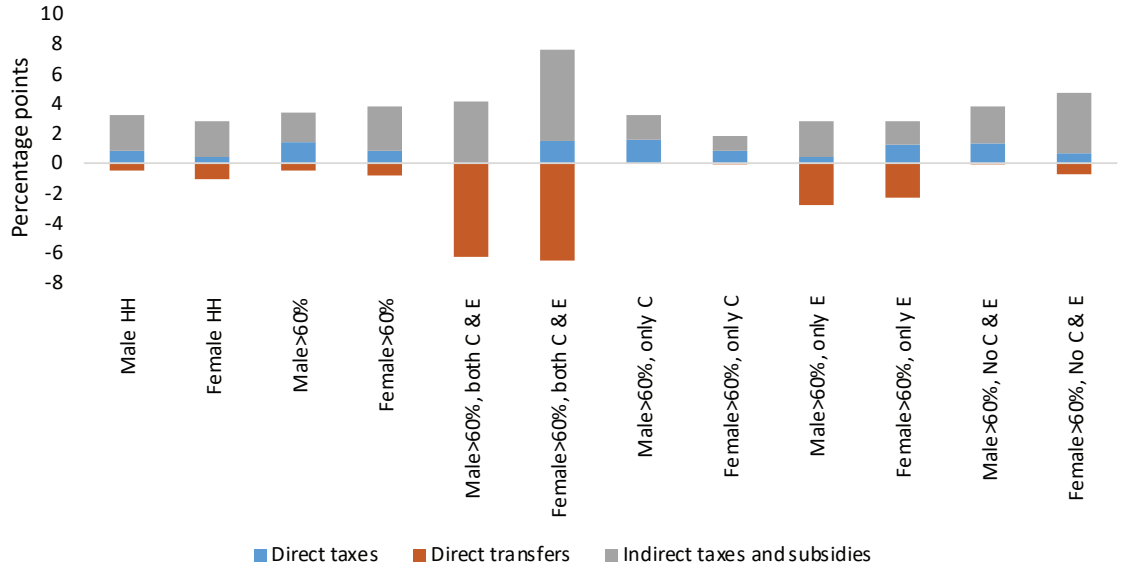
Figure 5.5: Change in poverty headcount from pre-fiscal income to consumable income



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Note: HH=household head; C=dependent children (below 6 years); E=elderly household members (80 plus years).

Taxes, especially indirect ones, shrink real income and push households deeper into poverty, while transfers provide only limited relief. As a result, most households experience a net increase in poverty after accounting for both taxes and transfers. Figure 5.6 illustrates these effects for direct taxes, direct transfers, and indirect taxes and subsidies. Direct taxes reduce disposable income and therefore increase poverty, with the impact varying by household type. Male-headed households and those where men contribute a larger share of income are hit harder because they pay more in direct taxes. In contrast, direct transfers provide relief by increasing household income, particularly for households with children or elderly dependents and where either men or women contribute a large share of income. However, the size of these transfers is too small to fully compensate for the tax burden. Indirect taxes and subsidies have the strongest negative effect because they raise the cost of goods and services. This disproportionately affects poorer households that spend most of their income on consumption. Female-type households often bear a heavier burden since they allocate more resources to dependents.

Figure 5.6: Change in poverty due to direct tax, direct transfer and indirect tax and subsidy

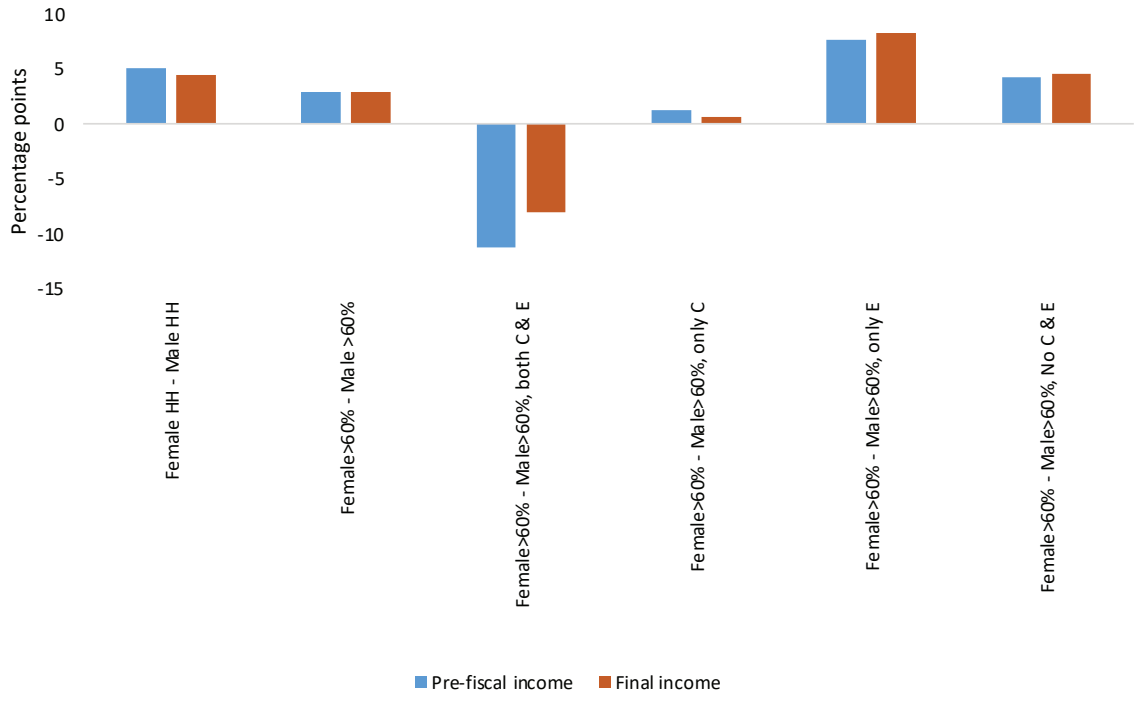


Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
C=dependent children (below 6 years); E=elderly household members (80 plus years).

The tax-benefit system tends to narrow the differences in poverty between male- and female-type households, but this is driven more by higher poverty increases among male-type households than by significant gains for female-type households. The government's tax and benefit system generally reduces poverty differences between male-type and female-type households when moving from pre-fiscal to consumable income, but the extent of this reduction depends on household composition. Figure 5.7 illustrates these changes. For most household types, the gender gap in poverty narrows after taxes and transfers. For example, among male- and female-headed households, the gap declines from 5.1 percentage points at pre-fiscal income to 4.5 percentage points at consumable income. In households where men or women contribute more than 60 per cent of income, the gap remains unchanged at 2.9 percentage points. In mixed household typologies, the gap decreases in households with dependent

children and elderly members but widens in those without dependents or with only elderly members. *Why does this happen?* Taxes and transfers affect households differently. Male-type households often pay more in direct taxes because they contribute more income, which raises their poverty levels and narrows the gap with female-type households. Where gaps widen, it is because female-type households experience a sharper poverty increase, often due to indirect taxes that disproportionately affect households spending more on basic goods for dependents.

Figure 5.7: Difference in gender poverty at pre-fiscal income and final income



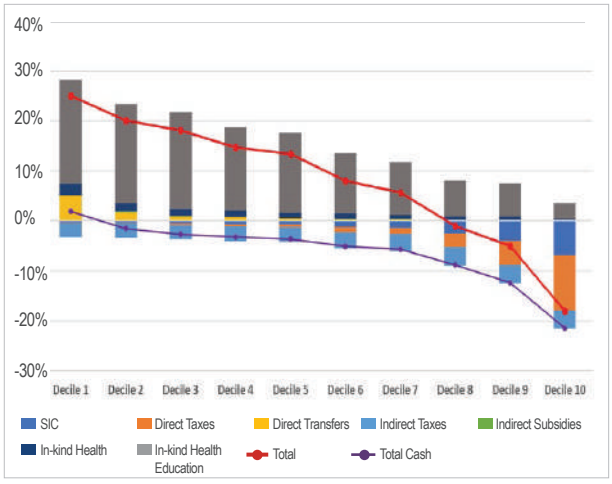
Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Note: HH=household head; C=dependent children (below 6 years); E=elderly household members (80 plus years).

5.4 Net benefit position by decile and gender

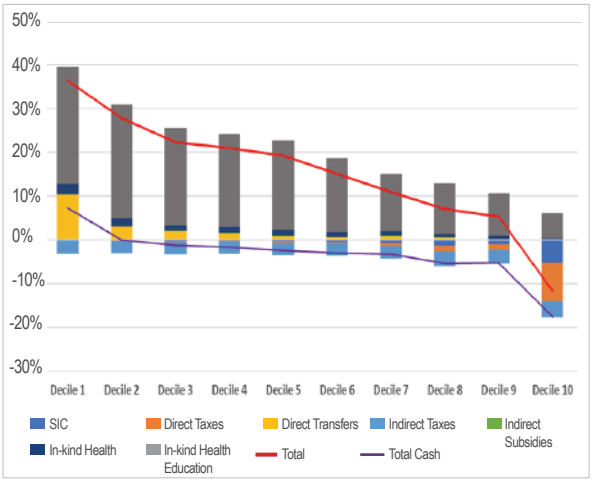
Female-headed households benefit more from the fiscal system than male-headed households, primarily due to in-kind transfers, especially education benefits. Figure 5.8 illustrates the net benefit position of the tax and spending system for both household types. For male-headed households (Figure 5.8a), individuals in the first seven deciles are net beneficiaries of the fiscal system, while those in the top three deciles are net contributors. However, when in-kind transfers are excluded, only individuals in the first decile remain net beneficiaries, highlighting the critical role of education-related in-kind transfers. For female-headed households (Figure 5.8b), the pattern is even more progressive: individuals in the first nine deciles are net beneficiaries, with only the top decile being net contributors. Similarly, without in-kind transfers, only the first decile benefits, reinforcing that education transfers dominate the benefit structure. Other components, such as direct cash transfers and in-kind health benefits, provide additional support but are relatively less significant.

Figure 5.8: Net benefit position by gender of household head

a. Male-headed households



b. Female-headed households

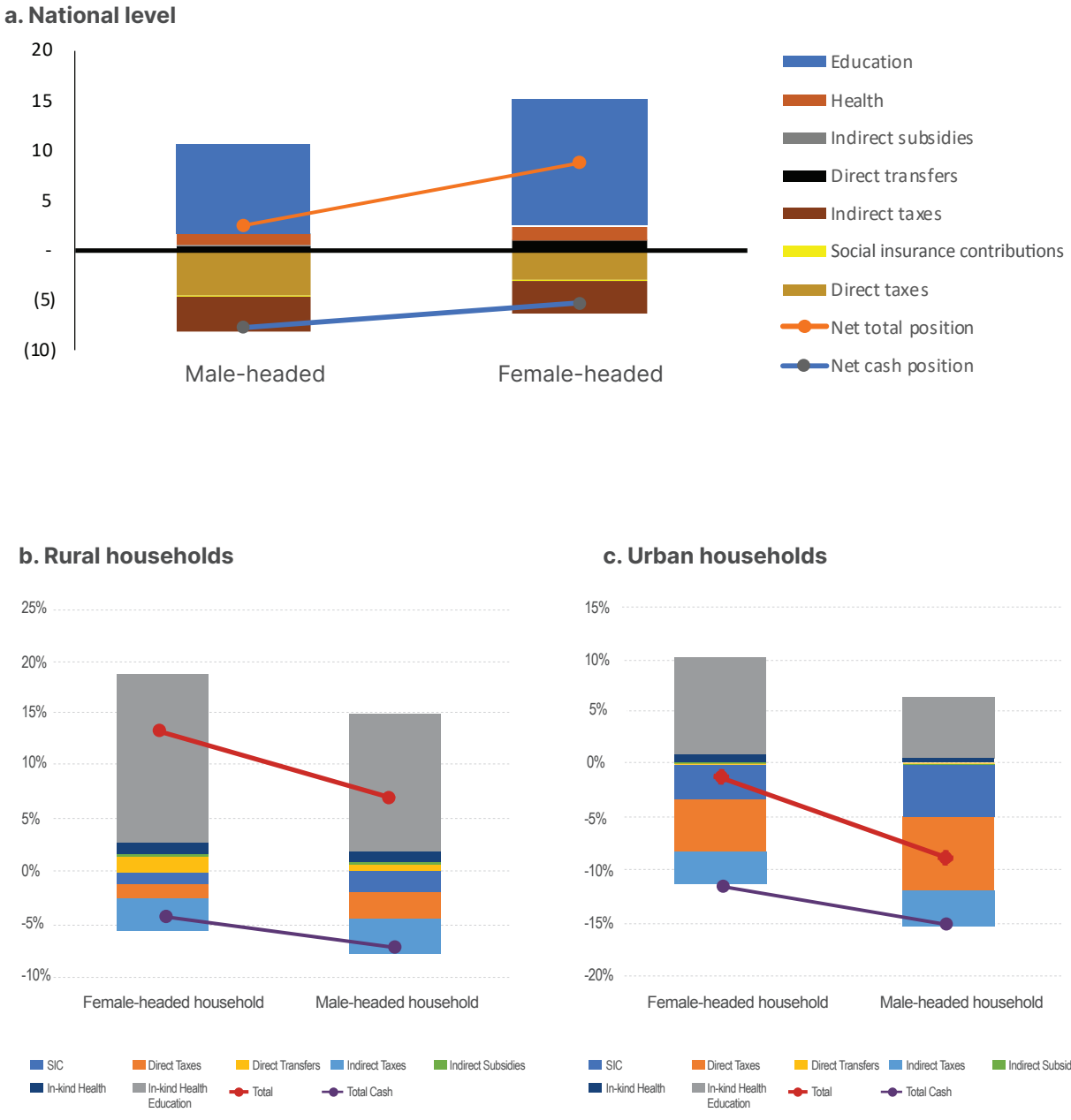


Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Note: SIC=social insurance contributions.

The fiscal system favours female-headed and rural households through education and cash transfers, while male-headed and urban households contribute more through taxes. Female-headed households are net beneficiaries of the fiscal system, mainly due to in-kind education transfers and cash transfers, while male-headed households are net contributors through direct taxes. Figure 5.9 illustrates these patterns at both national and rural-urban levels. At the national level, female-headed households receive more benefits because they tend to have lower incomes and greater need for education and social support, making them more reliant on in-kind education transfers and cash transfers. Male-headed households, on the other hand, contribute more through direct taxes, reflecting their higher income levels.

The rural-urban divide reinforces these differences. In rural areas, both male- and female-headed households are net receivers of fiscal benefits, but female-headed households gain more from education transfers and also receive more cash transfers than their male counterparts. This is intuitive because rural female-headed households often face higher vulnerability and have more dependents, increasing their reliance on social programs. In contrast, in urban areas, both male- and female-headed households are net payers, as higher incomes lead to greater tax contributions. Even so, female-headed households in urban areas still benefit more from education transfers than male-headed households.

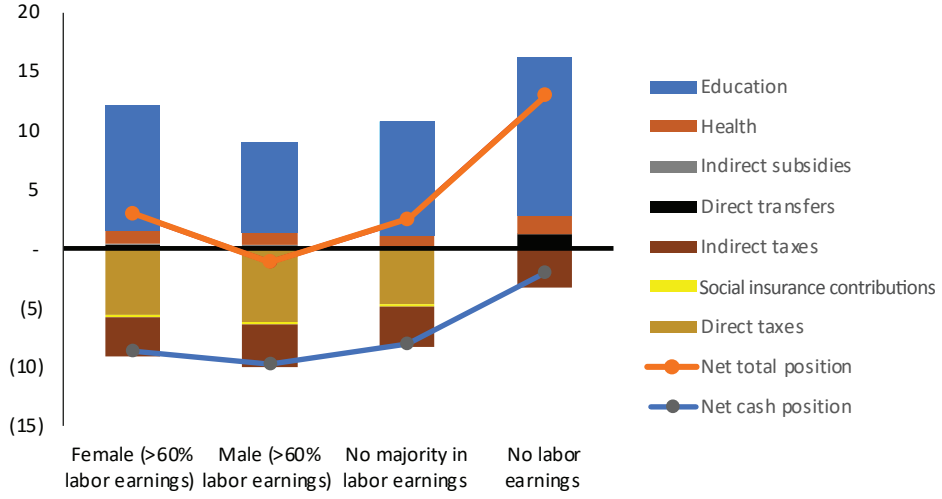
Figure 5.9: Net benefits position as a percentage of pre-fiscal income at national, rural and urban areas and by gender



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Note: SIC = social insurance contributions.

Bargaining power and income contribution shape fiscal outcomes. Households where men contribute a larger share of income are net payers in the fiscal system, while those where women contribute more, where contributions are balanced, or where there are no labor earnings are net receivers. This pattern reflects differences in income levels and reliance on public services: male-majority households typically have higher earnings and therefore pay more in taxes, whereas female-majority and non-earning households depend more on government support. Among net receivers, households with no labor earnings benefit the most from in-kind education transfers compared to those with labor income (Figure 5.10).

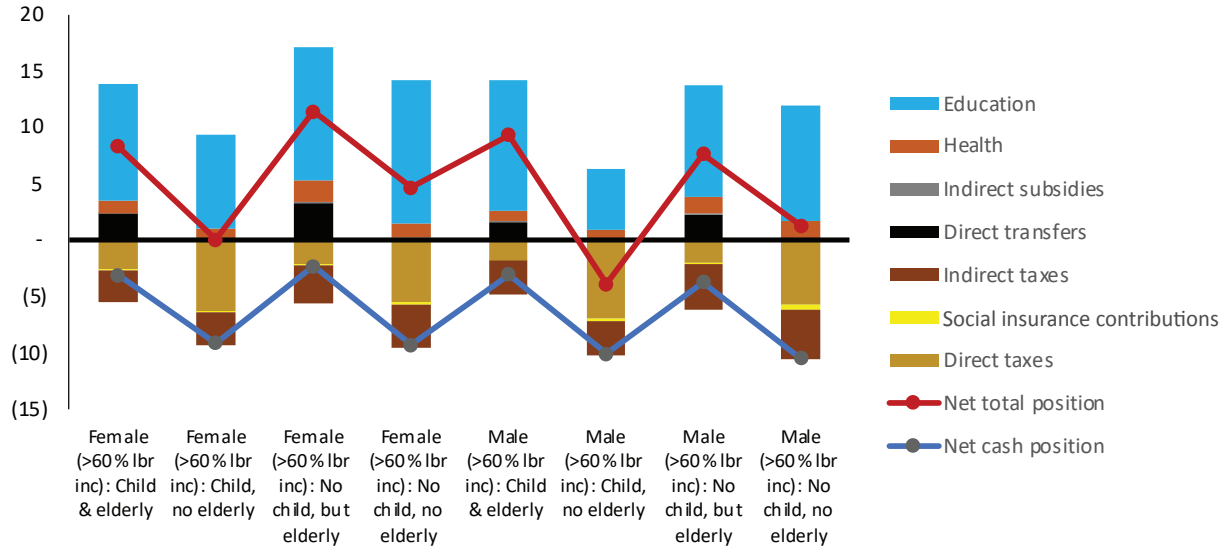
Figure 5.10: Net benefits position as a percentage of pre-fiscal income by gender bargaining power



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

For mixed household types, the pattern depends on dependents and elderly members. Households where either men or women contribute most to labor income are net receivers in categories with dependent children and elderly, elderly only, and those with no dependents. However, in households with dependent children only, male-type households are net receivers while female-type households are neither net receivers nor net payers. Figure 5.11 shows that in female-majority income households, all categories—whether they include dependents or elderly—are net receivers. Similarly, male-majority income households are net receivers in most categories except those with dependent children only, which are net payers. Although it may seem counterintuitive that households classified as having no child dependents receive education benefits, this is plausible because the definition does not exclude older school-going children. Such households may include children aged six and above or tertiary students, explaining their share of education spending. In contrast, households with children but no elderly often receive few transfers due to program design: most Inua Jamii programs prioritize older persons, while child-focused transfers like NICHE and CT-OVC have limited coverage. Consequently, households without OVC, persons with severe disabilities, or HSNP coverage may receive no transfers despite having school-age children.

Figure 5.11: Net benefits for households based on gender bargaining power and care/domestic responsibility



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.
Note: lbr=labour.

From the above analysis, **it is evident that a higher proportion of individuals in female-headed households benefit from the fiscal system compared to those in male-headed households.** Female-headed households gain more from in-kind transfers and direct transfers relative to male-headed households. Across both male and female-headed households, direct transfers and in-kind transfers are pro-poor, while the incidence of direct taxes and social security contributions falls on the rich. In terms of gender bargaining power, there is a difference between households where men or women contribute a larger share of household income, with male households being net payers while female households being net receivers. However, households with no male or female majority income share and those without labour income are net receivers. Based on gender bargaining power and domestic responsibilities, three out of four household categories in male-type and all female-type households are net receivers. This analysis highlights the importance of in-kind and direct transfers in supporting female-headed households and underscores the need for targeted fiscal policies to address gender disparities in poverty and inequality.

06

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Extension to Children

In Kenya, children make up 42 per cent of the population, totalling about 21.8 million, making their well-being critical to the nation's long-term development. Despite progress, child poverty remains high: monetary poverty dropped from 47.4 per cent in 2009 to 35.4 per cent in 2019 but rose to 46 per cent in 2020, settling at 42.4 per cent in 2022, while multidimensional poverty fell from 59.3 per cent to 47.7 per cent over the same period, implying that nearly half of children still lack of access to essential services like education, health, water, and sanitation (KNBS, 2020). Rural and ASAL regions face higher poverty rates, and although child mortality has declined significantly from 115 to 41 deaths per 1,000 live births between 2003 and 2022, 18 per cent of children are stunted, and 2.5 million remain out of school, underscoring the need for effective public spending and taxation policies to address these challenges.

The Commitment to Equity for Children (CEQ4C) framework extends traditional fiscal incidence analysis by focusing on children, integrating public finance, child poverty measurement, and fiscal incidence to assess how taxes and spending impact child welfare (Save the Children Fund, 2021). Unlike standard analyses, CEQ4C uses child-relevant budgets and household microdata specific to children, examining both monetary and multidimensional poverty. By incorporating a multidimensional child poverty index, it captures deprivations unique to children that monetary measures might miss, offering a more comprehensive understanding of fiscal policy's role in reducing child poverty and inequality.

This analysis evaluates the effectiveness of Kenya's fiscal interventions, such as free primary education, universal health coverage, and social protection programmes, in addressing child poverty and inequality. It provides insights into optimizing fiscal policies to better support vulnerable children, ensuring equitable distribution of benefits. As Kenya pursues these initiatives, understanding their distributional impacts is essential for shaping a development agenda that prioritizes the long-term well-being of its youngest citizens.

> **Nearly half of children still lack access to essential services like education, health, water, and sanitation.**

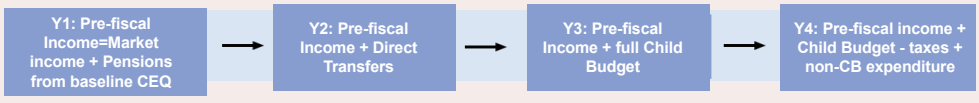
Box 6.1: CEQ4C methodology

The full CEQ4C methodology is explained in a research article by Cuesta, Jellema and Ferrone (2020), in a study done on Uganda. The methodology has been used previously in Kenya using the KIHBS 2015/16 (Save the Children Fund, 2021), and is applied in this study using the 2022 KCHS as the primary data source. For this study we also make use of the 2022 Kenya Demographic and Health Survey (DHS) to develop a multidimensional child poverty index. Focusing on children under 18, CEQ4C adapts the CEQ's fiscal allocation approach, establishing child-specific linkages at three levels: macro, by reevaluating income concepts to prioritize public budget components relevant to children's welfare; meso, through policy simulations targeting child-relevant expenditures and revenues; and micro, by integrating a multidimensional child poverty (MDCP) module into poverty and inequality measurements.

A child budget

No standard "best-practice" exists for creating a child-relevant budget. The authors evaluated budget lines to identify instruments directly or indirectly benefiting children, based on the number of transmission vectors needed (See Appendix III). For instance, food subsidies directly affect children's consumption in one step, while infrastructure subsidies require multiple steps—service changes, price shifts, and health or consumption impacts—diluting effects, as seen with security or climate spending (Manda et al., 2020). More steps increase the chance of obscured impacts.

Child-relevant spending includes pre-primary to secondary education but excludes tertiary education like TVET or universities, as children aren't direct beneficiaries. All public health spending is included, benefiting children directly and indirectly. Social insurance and assistance indirectly support children by reducing household risks and boosting consumption (Manda et al., 2020). Taxes, though not directly on children, affect household incomes, impacting children proportionately. New CEQ4C income concepts were developed to focus on the child budget.



This new perspective of income concepts allows us to measure precisely the poverty and inequality distributional impacts from interventions relevant to children. This framework also sets a standard for comparison both within countries (with multiple survey years and CEQ4C assessments) and internationally.

Policy simulations

This study makes use of a fiscal microsimulation tool to run various parameter-shifted scenarios upon the existing model. Much like the standard CEQ, the CEQ4C can produce full distributional impact results under different policy reform regimes, though its reform scenarios are targeted to children and its sample results are restricted to those under 18 years old. In addition, the CEQ4C microsimulation tool can produce various transfer scenario results using multidimensional poverty as its targeting mechanism, rather than the traditional monetary method. The specific policy reform scenarios produced are outlined in detail in section 6.6.

Box 6.1: CEQ4C methodology (Continued)

Multidimensional child poverty index

Monetary poverty levels for children are measured based on national definitions of poverty in Kenya while multidimensional poverty is measured based on the number of index dimensions in which a child is deprived. The measurement of multidimensional child poverty involves making difficult decisions about which dimensions should be included and how they should be weighted. In this analysis, the eight dimensions of multidimensional child poverty proposed by KNBS (2020) are used, which include, nutrition, health, education, information, water, sanitation and housing.

The MDCP index assesses child well-being by measuring deprivation in key dimensions aligned with children's rights and SDGs, using representative indicators with minimum thresholds. Most dimensions apply to all children, except specific indicators limited by age group, as detailed in Table 6.1 for Kenya. A child is deprived in a dimension if any indicator's threshold is not met. However, some indicators, like media exposure (which may reflect choice) or wasting (affected by seasonality), do not always indicate multidimensional poverty as traditionally understood.

Table 6.1: Multidimensional child poverty (MDCP) deprivation rubric

Dimension	Indicator	Definition of indicator	Reference age group
Nutrition	Stunting	At least 2 St. dev. from mean anthropometric WHO Child Growth Standards for age/height, indicating stunting	0–59 months
	Underweight/ wasting	At least 2 St. dev. from mean anthropometric WHO Child Growth Standards for weight/ height, indicating wasting	0–59 months
	Vitamin A supplement	No Vitamin A supplement in the past 6 months	5–17 years
Health	Birth attendance	Child delivered by unskilled attendant	0–11 months
	Vaccination against measles	Child has not received basic vaccination against measles, DPT, polio, BCG	9–59 months
Education	School attendance	Child who is not currently enrolled in school	4–17 years
	Grade for age	Child who is enrolled in school at an age-inappropriate level	4–17 years
	Illiteracy	Child in household which does not have a radio, television, computer, or internet connection	15–17 years
Information	Information devices	Child has no or limited access to a radio, television, mobile phone, computer, or internet	5–17 years
	Exposure to media	Child has no exposure to any source of media (radio, television, mobile phone, computer, or internet)	5–17 years

Box 6.1: CEQ4C methodology (Continued)

Table 6.1: Multidimensional child poverty (MDCP) deprivation rubric (continued)

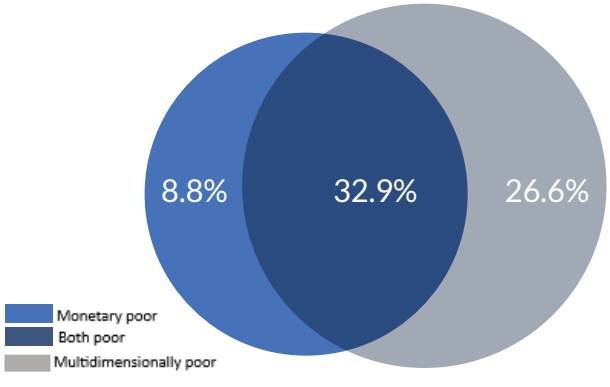
Water	Source of drinking water	Main source of drinking water is unimproved (e.g., unprotected well or tanker truck) or water source not treated appropriately for potability	0–17 years
	Distance to water source	Time to water source and back is greater than 30 minutes	0–17 years
	Water quantity	Household does not have sufficient water quantities in the last month	0–17 years
Sanitation	Toilet type	Household uses unimproved toilet facilities (e.g., pit latrine without slab, hanging latrine, or no facilities)	0–17 years
	Sharing toilet facilities	Household shares toilet facilities with at least one other household	0–17 years
	Handwashing	Household has no handwashing facility with water and soap available	0–17 years
Housing	Housing material	Household walls, floor, or roof are made of unimproved or impermanent materials (e.g., dirt, dung, cardboard, corrugated metal)	0–17 years
	Indoor air pollution	Child living in household where main energy used for cooking is solid fuels and there is only one room in the dwelling	0–17 years
	Access to electricity	Household has no access to electricity	0–17 years

The MDCP module, built from DHS data and merged with KCHS household survey microdata by matching wealth indices, maintains deprivation severity along the income distribution. Children are reranked by the number of deprivations they experience, rather than household income quantile, providing a multidimensional view of vulnerability that supports policy reform and distributional comparisons with other groups.

6.1 Child poverty in Kenya

One in three children face both monetary and multidimensional poverty. About 26.6 per cent of children, despite living in households with sufficient income, lack access to essential services. Conversely, 8.8 per cent are monetarily poor but not multidimensionally deprived, often living in low-income urban areas with better access to services (Figure 6.1). Nearly a third (32.9 per cent) of monetary poor children also face multiple deprivations, particularly in high-poverty counties like Turkana, Mandera, and Samburu, where access to sanitation, housing, and clean water is limited.

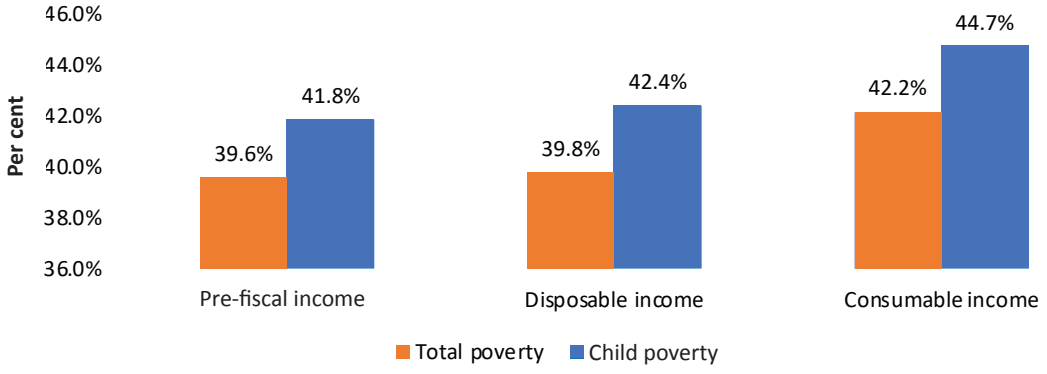
Figure 6.1: Overlap between monetary and multidimensional child poverty



Source: Authors' calculations based on KDHS 2022 and KCHS 2022

The country's fiscal system exacerbates child poverty, which is notably higher than overall population poverty. In 2022, 42.4 per cent of children were monetarily poor, exceeding the overall population poverty rate by 2.6 percentage points. Additionally, child monetary poverty was higher than the poverty headcount for the entire population by 2.2 and 2.5 percentage points at pre-fiscal income and consumable income levels, respectively (Figure 6.2). This indicates a higher risk of children living in monetarily poor households. However, monetary poverty provides only a partial perspective. Regardless of household income, children may lack access to nearby public schools and health clinics due to cultural and infrastructural barriers, failing to meet their basic educational and healthcare needs. Therefore, it is crucial to address multidimensional child poverty.

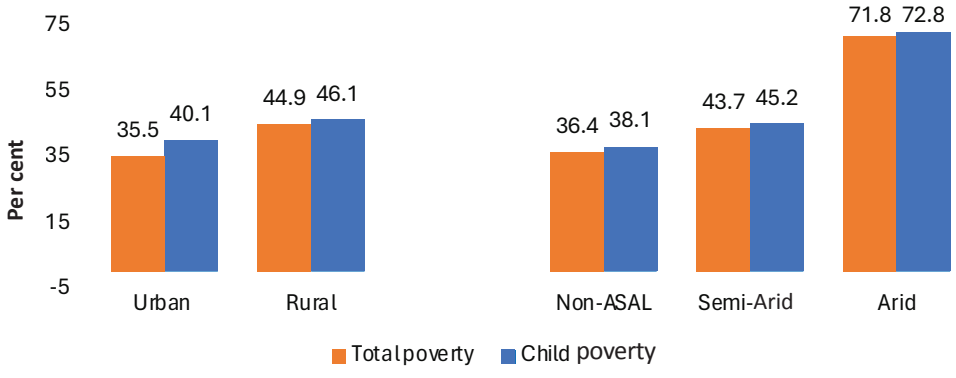
Figure 6.2: Baseline and child poverty headcount



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Child poverty exhibits pronounced regional disparity, with rural and ASAL regions bearing a disproportionately higher burden signalling the need for policy interventions. Rural areas recorded a child poverty rate of 46.1 per cent, higher than the urban rate of 40.1 per cent, reflecting significant urban-rural inequities in economic well-being (Figure 6.3). In ASAL regions, the socioeconomic challenge intensifies poverty: semi-arid areas recorded a child poverty rate of 45.2 per cent, while arid areas faced a staggering 72.8 per cent, starkly contrasting with the non-ASAL rate of 38.1 per cent, underscoring the imperative for targeted, evidence-based investments to mitigate these structural disparities and enhance equitable development outcomes for children.

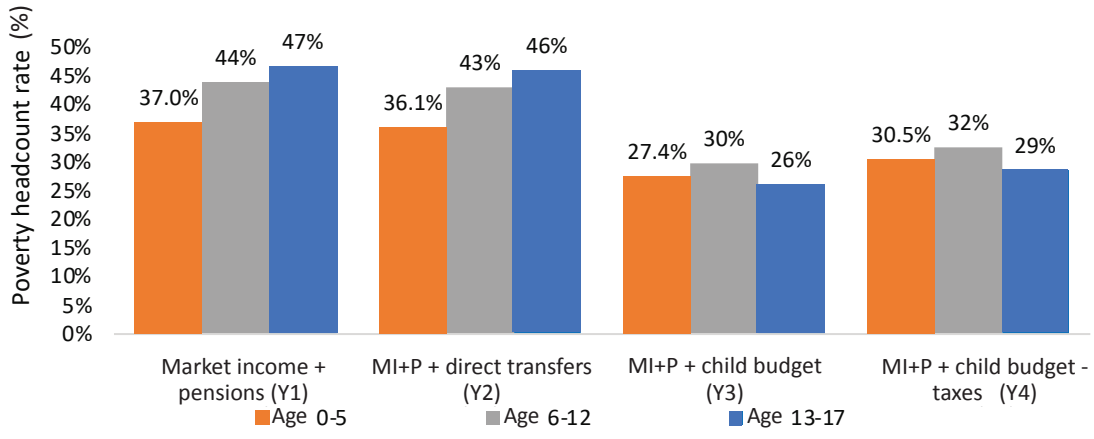
Figure 6.3: Monetary poverty by regions



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Fiscal interventions, particularly through health and education spending within the child budget, have a significant impact on children, while direct transfers show limited impact (Figure 6.4). However, it is critical to note that poverty reducing impacts of cash transfer programmes have been shown to occur not through a one-off immediate consumption effect of receiving the transfers, but rather over time as households are able to invest a small share of their transfers in assets and human capital and participate more profitably in the labour market. Such impacts cannot be captured through the static analysis in this paper. Adding direct transfers (Y2) to market income and pensions (Y1) marginally lowers poverty headcount rates across all age groups—from 37.0 per cent to 36.1 per cent for ages 0-5, 44 per cent to 43 per cent for ages 6-12, and 47 per cent to 46 per cent for ages 13-17. When the child budget is incorporated, (Y3), a more substantial decrease is observed, reducing rates to 27.4 per cent, 30.0 per cent, and 26.0 per cent respectively, highlighting the pivotal role of education and health investments. However, when taxes are factored in (Y4), poverty rates rise by approximately 3 percentage points across all cohorts, yet remain lowest for the 13-17 age group at 29.0 per cent compared to 30.5 per cent for ages 0-5 and 32.0 per cent for ages 6-12, indicating that fiscal policies are relatively more effective in mitigating poverty for older children mainly because they are school going and hence they get more benefits from public education spending.

Figure 6.4: Monetary poverty headcount for children by age (measured at absolute poverty line)



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Note: MI+P = Market income plus pensions.

6.2 Income inequality among children

Fiscal interventions, after adding all taxes and transfers, lower child inequality, but by slightly less than that for the total population. Figure 6.5 shows inequality for the entire population and for children in Kenya. As shown in the figure, inequality for children is lower than that for the entire population. The change in inequality between pre-fiscal and disposable income is similar for both children and the overall population; inequality drops by 3 Gini points. Inequality reduces further at final income for both children and overall population, suggesting that public spending on health and education is critical in narrowing the disparities.

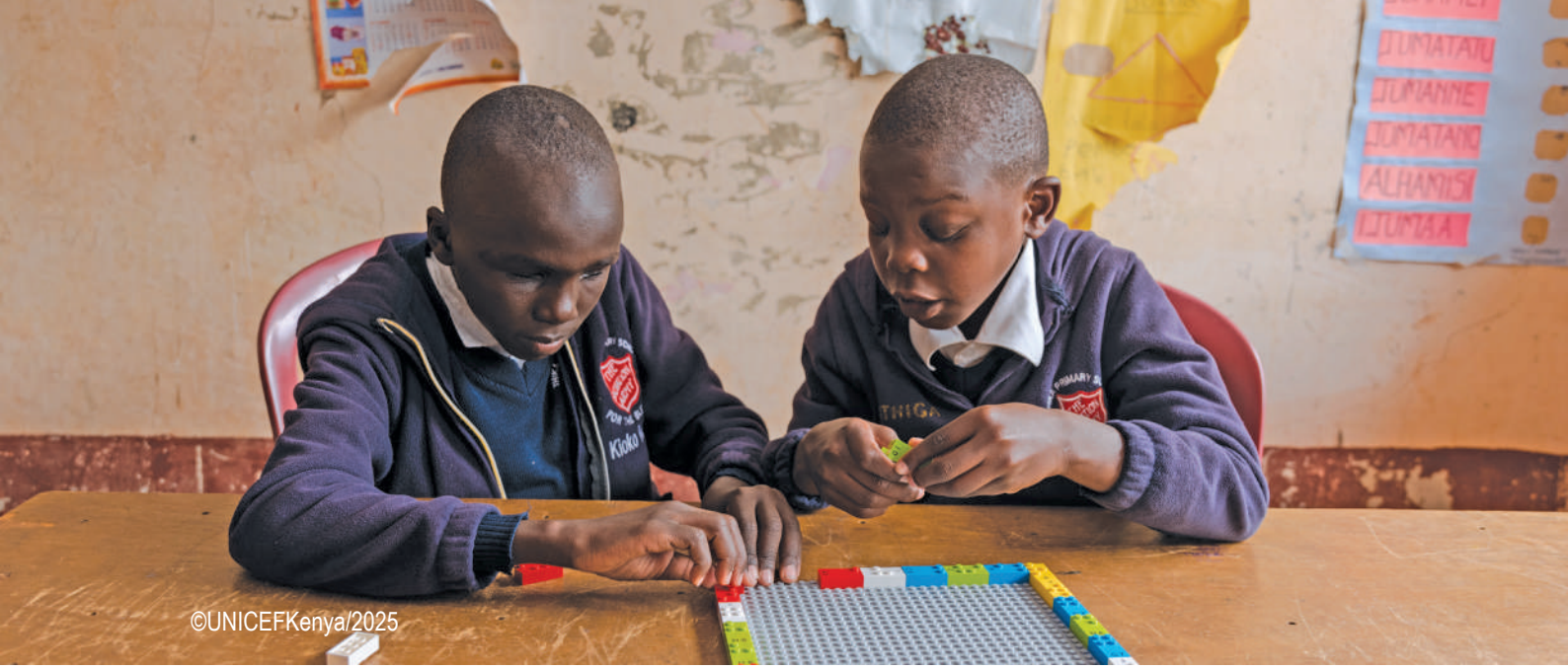
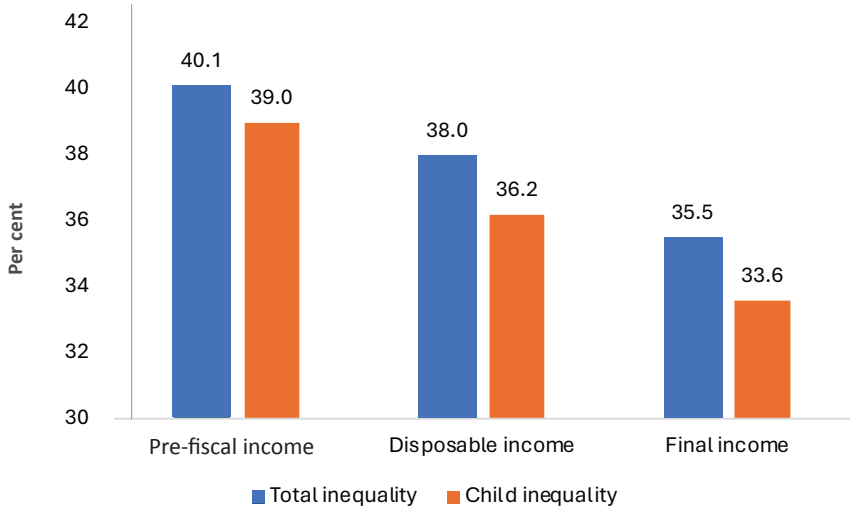


Figure 6.5: Gini index for children and the entire population



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

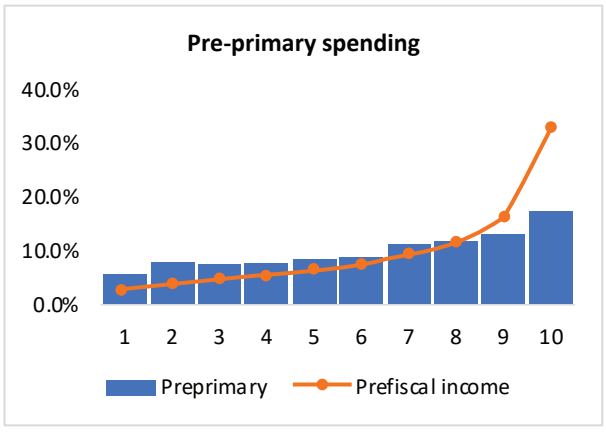
6.3 Equitable spending on education, health and social protection

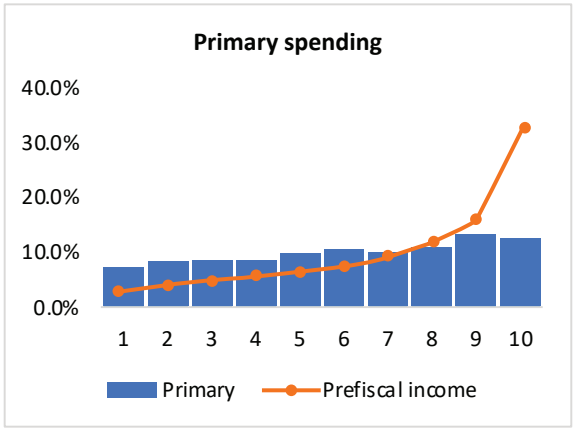
6.3.1 Public education spending

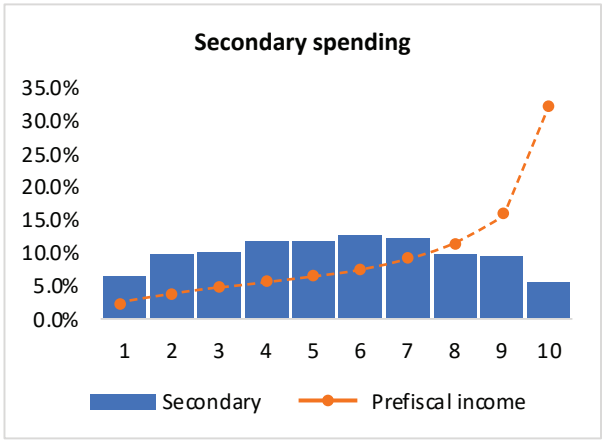
Public education expenditure in Kenya is broadly progressive but becomes more pro-poor at higher education levels, where benefits increasingly reach the most deprived children (Figure 6.6)**.** Overall, public spending on education is progressive relative to income, but from the lens of multidimensional poverty, it cannot be considered pro-poor[12] at pre-primary, as children from poor households do not receive the most benefits. At this level, multidimensionally non-poor children receive nearly half of the benefits, yet they constitute 40.5 per cent of the population, suggesting limited access by the most deprived. However, as the education level increases, spending becomes increasingly pro-poor, as 62.3 per cent of the secondary education benefits goes to the multidimensionally poor children, revealing increased access by the most vulnerable. Structural barriers such as birth certification, user fees, and infrastructural inequities that limit access to schools for poor children and undermine the pro-poor potential of these interventions.

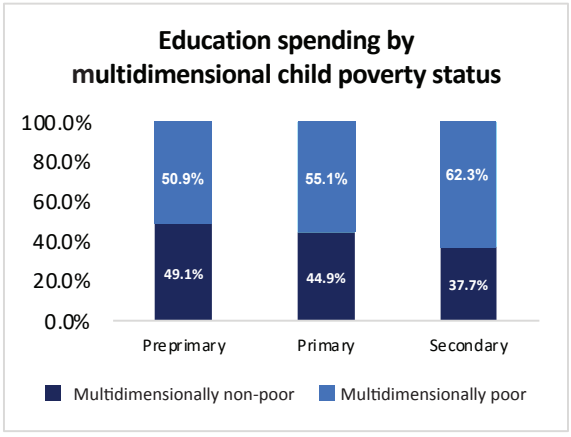
[12] The concept of pro-poor refers to policies or interventions that disproportionately benefit the poor, either by increasing their income or improving their access to essential services. In fiscal incidence analysis, a pro-poor policy is one where the share of benefits received by the poor exceeds their share of the population.

Figure 6.6: Concentration shares for in-kind education benefits by income decile and multidimensional poverty





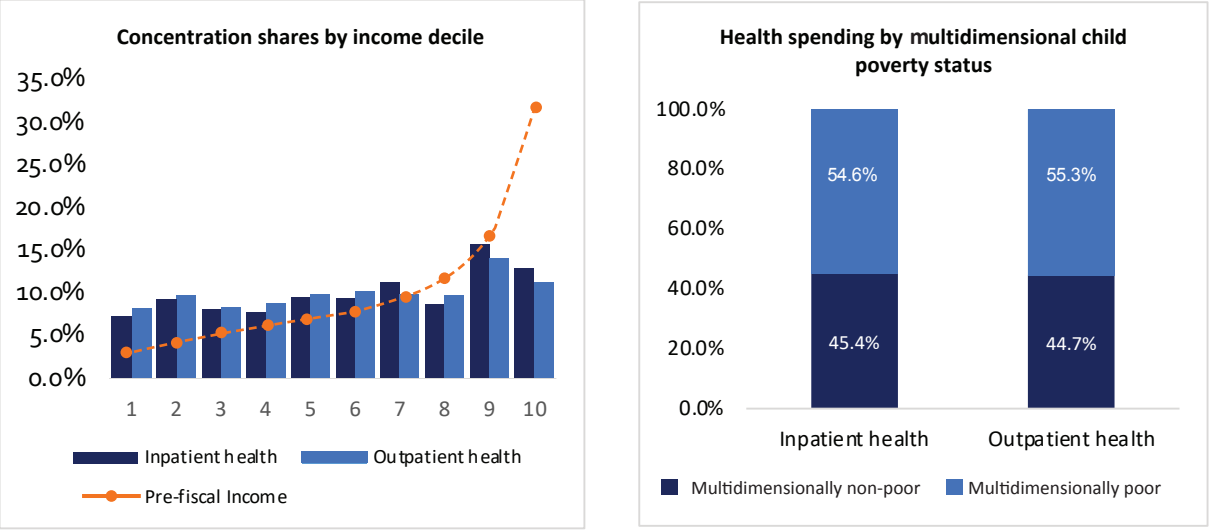




6.3.2 Public health spending

The overall spending in public health care is progressive and distribution of benefits is relatively flat across income deciles. Public healthcare spending, as depicted in Figure 6.7, reveals a distribution that, while progressive, doesn't favour deprived children relative to their better-off counterparts. Through the lens of multidimensional child poverty, multidimensionally non-poor children receive a relatively large share of health benefits, 45.4 per cent of inpatient and 44.7 per cent of outpatient services. This disparity underscores a critical gap in healthcare access, where the most vulnerable children, particularly in rural and ASAL regions as previously noted, are systematically underserved, highlighting the urgent need for targeted policy reforms to ensure health services reach the most vulnerable.

Figure 6.7: Concentration shares: In-kind transfers (health)



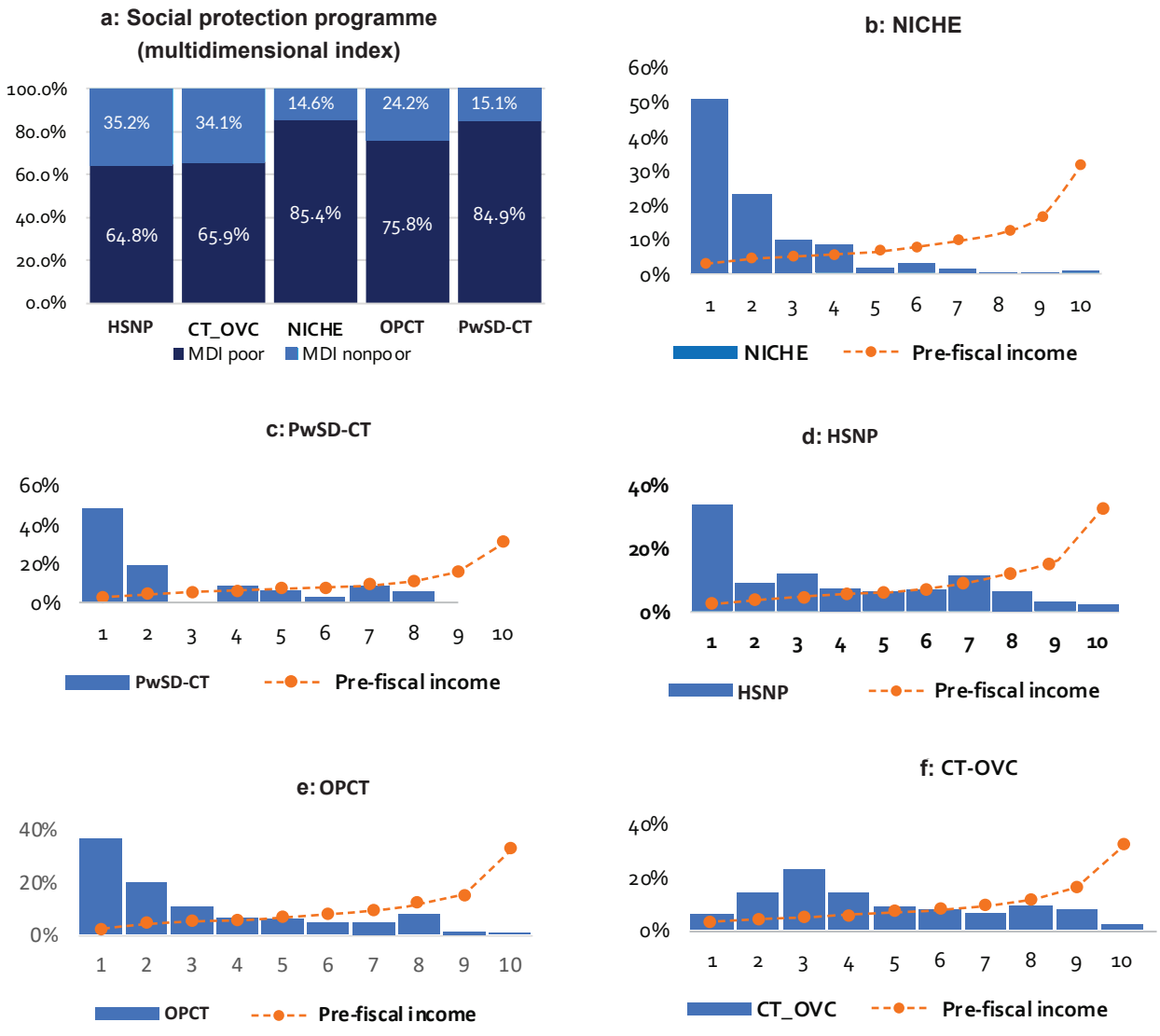
Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

6.3.3 Social protection spending

Direct cash transfers, while mostly well targeted, continue to lose purchasing power at current transfer levels, limiting their impact on poverty and inequality reduction. Additionally, some benefits accrue to non-poor households though it is unclear to what extent this is a result of the transfers themselves leading to improvements in the welfare of households or initial targeting (inclusion) errors. Whereas three in every four children benefiting from social assistance are multidimensionally poor, there is variation across programmes. NICHE and PwSD-CT effectively target multidimensionally poor children with nine in every ten children benefiting from the transfers being in multidimensional poverty (Figure 6.8a).

Kenya's cash transfer system is progressive with NICHE, PwSD-CT and HSNP being the most pro-poor programmes, ensuring that benefits reach majority of the poor children. CT-OVC and HSNP are less pro-poor compared to the other three cash transfer programmes. CT-OVC primarily targeted orphaned children who are not necessarily the poorest in the population. The eligibility criteria for CT-OVC have been focused on orphanhood, which data now show does not correlate with being in the poorest income category. Data shows orphans are not significantly more likely to live in poverty than non-orphans. The CT-OVC eligibility criteria have, however, been recently revised by the government to include other vulnerable groups of children beyond orphanhood and hence the targeting is likely to improve. Most of the benefits from Kenya's social protection programmes target individuals with lower levels of income, suggesting progressivity. Along the income dimension, on average, more than 60 per cent of the cash transfers benefits goes to the bottom 30 per cent in the income decile.

Figure 6.8: Spending on cash transfers

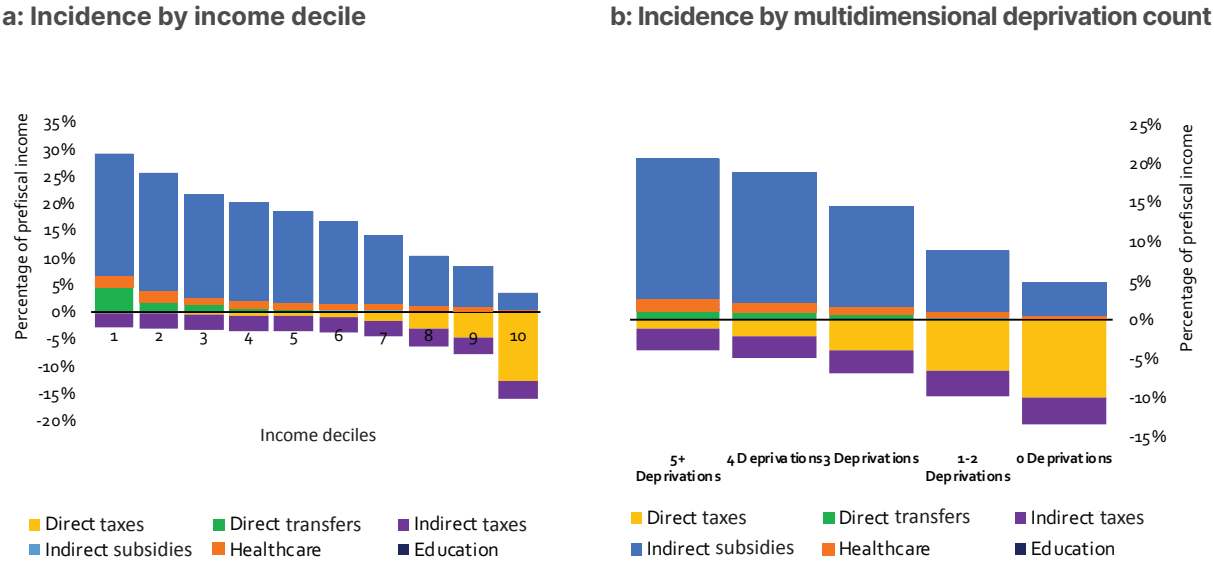


Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

6.4 Fiscal incidence

Public benefits impact low-income households more, while taxes are borne heavily by the high-income households (Figure 6.9(a)). Though direct transfers are highly concentrated in the lowest deciles, the impact of those transfers is small. The burden of direct taxes increases with income. Similarly, the most deprived children benefit more from government in-kind transfers, especially in the form of education and health spending. For example, cumulative benefits directed towards households with five or more deprivations are more than 20 per cent of their pre-fiscal income on average. On the contrary, the tax burden on these households is relatively low, less than 5 per cent of their pre-fiscal income on average. Households with zero or fewer deprivations bear relatively more tax burden and receive a smaller share of public benefits Figure 6.9 (b).

Figure 6.9: Fiscal incidence by income and deprivation



Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

6.5 Overall effect of fiscal policies on poverty and inequality

Fiscal policies increase child monetary poverty by 2.9 percentage points because the level of transfers does not full compensate for taxes paid, exacerbating vulnerability. Fiscal measures considered in this analysis increase child monetary poverty by 2.9 percentage points from 41.8 per cent at pre-fiscal income to 44.7 per cent at consumable income, as the burden of direct taxes (PIT) adds 1.1 points and indirect taxes contribute 3.0 points, far outweighing the small 0.5-point reduction from cash transfers, leaving children increasingly exposed to economic hardship. However, as noted earlier, the modest impact of cash transfers partly reflects the limitation of the static analysis employed in the CEQ framework. The approach does not capture the long-term, dynamic effects of regular cash transfers, such as investments in human and productive capital, which have been shown to reduce poverty sustainably over time.

Inequality decreases driven by direct taxes and in-kind transfers, though less impactful for children than the broader population. Child inequality falls by 5 Gini points, from 39 per cent to 34 per cent at final income, propelled by direct taxes (3-point drop) and in-kind transfers (2-point drop), yet this reduction lags slightly behind the broader population, indicating that fiscal policies are less effective in narrowing disparities for children compared to the overall population (Figure 6.5).

6.6 Policy simulations

In this section, the CEQ methodology is employed to run four policy scenarios relevant to social protection and estimate their potential impacts on child poverty and inequality. Specifically, we propose various adjustments to existing cash transfer programmes, either in the form of increasing the levels of benefits or expanding coverage and estimating the resulting shifts in child poverty and inequality (Table 6.2). However, it is crucial to note that because the methodology used only allows for static modelling (i.e. it does not allow for the dynamic effects of a policy intervention over time), the results here will necessarily be very conservative by not reflecting the medium to longer term impacts of such interventions, which the evidence on cash transfers suggests would result in considerably higher impacts over time.

Table 6.2: Policy simulations

	Policy scenario	Reduction in poverty (percentage points)	Reduction in inequality (Gini points)
1.	**Expand coverage of NICHE** to cover more beneficiaries, **all food poor,** at the same transfer value of KSh 500 per month.	0.55	0.25
2.	Expand **CT-OVC** to all households (with children) below **the extreme poverty** line at an updated transfer value of KSh 2,700	0.15	0.53
	Of which: Urban:	0.08	
	Rural	0.33	
3.	**Increase transfer value** of HSNP, CT-OVC, PwSD-CT and OPCT from KSh **2,000 to KSh 3,000**	0.40	0.12

Source: Authors' calculations based on KCHS 2022, fiscal administrative data, and the CEQ methodology.

Expanding NICHE coverage to all food poor households reduces poverty by 0.553 percentage points and inequality by 0.25 Gini points. This suggests that while NICHE effectively targets the poorest households, its relatively small transfer value limits its ability to substantially reduce poverty.

Expanding CT-OVC to all households with children below the extreme poverty line has a strong effect on inequality reduction (0.534 Gini points) and an effect on poverty (0.15 percentage points). This suggests that while the program narrows income gaps, the current transfer value of KSh 2,000 may be insufficient to lift many beneficiaries who are already extremely poor above the poverty line. Nevertheless, past impact evaluations of the CT-OVC have shown poverty reducing impacts over time as households invest a small portion of the monthly income in productive activities (which cannot be captured by this analysis). In addition, expanding the CT-OVC can help families with children access social services (e.g. school fees) and basic needs (e.g. nutritious food). The urban-rural breakdown shows that poverty reduction is higher in rural areas (0.33 percentage points) compared to urban areas (0.083 percentage points), likely due to higher poverty rates in rural areas. Further, majority of the poor households are in the rural areas and hence the expansion of the program to all households below the poverty line will benefit the majority of rural families hence reducing poverty rates.

Increasing cash transfer values for programmes like HSNP, CT-OVC, PwSD-CT, and OPCT from KSh 2,000 to KSh 3,000 per month leads to poverty reduction (0.40 percentage points) and a decline in inequality (0.12 Gini points). This suggests that while higher payments help lift beneficiaries out of poverty, they have a smaller impact in income distribution. This may be because the number of beneficiaries is very small (1.87 million) compared to the number of people living below the poverty line (20.2 million), beneficiaries accounting for less than 10 per cent of the poor population. However, it is critical to note that poverty reducing impacts of cash transfer programmes have been shown to occur

not through a one-off immediate consumption effect of receiving the transfers, but rather over time as households are able to invest a small share of their transfers in assets and human capital and participate more profitably in the labour market. Such impacts cannot be captured through the static analysis in this paper.

Policy implications

The simulations highlight that expanding coverage to extremely poor households effectively reduce inequality, while increasing transfer values moderately alleviate poverty. However, the limited scale of transfers and the depth of poverty constrain immediate impacts. Long-term benefits, such as improved human capital through reduced mortality, lower school dropout rates, and decreased malnutrition, underscore the value of sustained investment in social protection (Pérez-López & Bergeron, 2023).

Combining expanded coverage with higher transfer values could maximize poverty and inequality reduction. An example is expanding programmes like CT-OVC to cover all extremely poor households while increasing transfer values to at least KSh 3,000 per month. This dual approach would enhance immediate poverty alleviation and narrow income disparities.

Integrating complementary interventions and prioritizing rural targeting could enhance the poverty reducing impact of fiscal policy. Cash transfers should be paired with complementary interventions, such as addressing other non-income barriers to education, healthcare, and nutrition, to sustain poverty reduction. Additionally, given higher poverty reduction impacts in rural areas, programmes should prioritize rural households while ensuring urban coverage to address pockets of extreme poverty.

Poverty reducing impacts of cash transfer programmes have been shown to occur not through a one-off immediate consumption effect of receiving the transfers, but rather over time as households are able to invest a part of their transfers in assets and human capital and participate more profitably in the labour market.

07

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Conclusion and Policy Implications

This study uses the Commitment to Equity (CEQ) framework, extended to gender (eCEQ) and children (CEQ4C), to assess the impact of fiscal policy on poverty and inequality in Kenya. It also includes illustrative policy simulations to examine the potential effects of fiscal reforms on these outcomes. The analysis draws on 2022 Kenya Continuous Household Survey (KCHS) data complemented by administrative data for the same year.

7.1 Conclusion

Overall

Kenya's fiscal system reduces inequality, but its impact on poverty remains limited. In 2022, the fiscal system reduced income inequality by 4.6 Gini points, primarily through in-kind benefits in education and health. However, it increased poverty by 2.7 percentage points, as the burden of taxation outweighed the benefits from cash transfers. Regionally, fiscal policies reduce inequality more in areas with higher inequality (urban and non-ASAL regions) and increase poverty more in urban and ASAL regions. International comparisons show that, unlike Kenya, countries like South Africa reduce both inequality and poverty through fiscal actions. With reforms involving, for instance, increased coverage of cash transfers to vulnerable groups, Kenya could potentially achieve similar outcomes.

Lower-income households receive more in benefits than they pay in taxes, while higher-income households contribute more than they receive. Net benefits are concentrated among the first nine income deciles, with the top decile as net payers. In-kind education transfers drive this progressivity; however, when only cash transfers are considered, the effect weakens sharply: only the poorest decile remains net receivers. This highlights the limited scale of cash transfer programs and the need to expand them. On the tax side, nearly all households pay something, primarily through indirect taxes like VAT and excise duties, which disproportionately affect the poor and offset redistributive gains.

Residents of rural areas and ASALs are the primary beneficiaries of the tax-benefit system, mainly due to substantial in-kind education transfers.[13] Rural and ASAL residents are the main beneficiaries of the tax-benefit system due to substantial in-kind education transfers, while urban and non-ASAL areas are net payers. Without in-kind transfers, all regions would become net contributors, underscoring the critical role of public investment in education in reducing regional disparities and supporting disadvantaged populations.

Gendered impact

Fiscal policy narrows gender income gaps and reduces inequality across all household types, but its effect on poverty is mixed. Inequality declines in both male- and female-type households, with slightly greater reductions for female-type households. In-kind transfers have the strongest impact on reducing inequality. Both male- and female-type households experience higher poverty after taxes and transfers considered in the analysis, with male-type households, especially those with dependent children and

[13] Due to limited formal economic activity, residents in these areas are less likely to pay direct taxes.

elderly members, seeing the largest increases. This is largely driven by indirect taxes. Female-type households benefit more from the fiscal system overall, primarily through in-kind and direct transfers, and all female-type households are net beneficiaries of the fiscal system. Most male-type households are also net beneficiaries, except those with children and elderly members.

On children

Kenya's fiscal system reduces child inequality but fails to curb rising child monetary poverty, leaving children economically vulnerable. While fiscal measures lower child inequality by 5 Gini points, mainly through in-kind transfers in health and education, child monetary poverty increases by 2.9 percentage points, exceeding the overall population rate and exposing children to heightened economic vulnerability despite inequality gains.

Fiscal policy for children remains imbalanced: tax burdens erase transfer gains, social protection lacks scale, and education and health spending fail to prioritize the poorest. Indirect taxes undermine progress, offsetting the poverty-reducing effects of cash transfers. A 3.0-point poverty increase from indirect taxes overshadows the modest 0.5-point reduction from transfers, revealing a critical policy imbalance. Public spending, though progressive, is not sufficiently pro-poor. Social protection programmes target poor children but remain constrained by scale and inclusion errors. Programmes like NICHE and CT-PwSD effectively reach multidimensionally poor children (9 in 10 beneficiaries), yet limited coverage and leakage to non-poor households dilute their impact. CT-OVC is currently less pro-poor, but revised targeting criteria offer potential for improvement. Education and health spending disproportionately benefit non-poor households, suggesting structural barriers that limit poor households' ability to fully access and benefit from these services.

7.2 Policy implications

Overall, expanding the coverage and adequacy of cash transfers is central to making Kenya's fiscal policy a more effective tool for reducing poverty and inequality. Simulations show that scaling up the Hunger Safety Net Program (HSNP) to include all poor households would yield substantial gains, though at a significant fiscal cost. Increasing benefit levels is equally critical, as small adjustments to current low-value transfers have negligible impact. This is important because cost-effectiveness analysis consistently identifies direct cash and near-cash transfers as the most efficient instruments for tackling poverty and inequality. Universal pre-primary and primary education also stands out for reducing inequality, given that many poor children remain out of school. Targeted fertilizer subsidies could help, but only if directed exclusively to poor households, and even then, they require considerable resources.

Applying a gender lens is important. Female-headed households are more likely to be poor, and enhancing the distributional impact of fiscal policy requires addressing gender disparities. While fiscal policy tends to narrow income gaps between male- and female-headed households, both experience increased poverty when taxes and spending measures are combined. This underscores the need to strengthen coverage and targeting of cash transfers for female-headed households, moving beyond simple categorization by household headship to account for household composition, intra-household resource allocation, and dependency burdens.

Strengthening support for children is critical to amplify the poverty and inequality reducing impact of fiscal policy. This requires

- **Scaling up targeted cash transfers:** To help address stark regional disparities, expand programs such as CT-OVC, NICHE, and CT-PwSD to prioritize the most deprived children in high-poverty regions, particularly rural and ASAL areas where poverty rates reach 72.8 per cent. In addition, increasing the transfer amounts to align with inflation rates and current market prices will ensure that the support provided remains adequate and effective in meeting basic needs.

- **Removing structural barriers and improving service quality:** Removing structural barriers, such as user fees and birth certification requirements, that restrict poor and deprived children's access to education and health services, will help address systemic inequities. However, access alone is insufficient: quality must be enhanced to deliver meaningful outcomes. For instance, investments in teacher training, learning materials, and infrastructure will ensure education equips disadvantaged children with skills for tertiary education and long-term economic mobility. Similarly, improving healthcare quality will boost their chances of leading healthy, productive lives.

These measures demand substantial fiscal resources, yet Kenya's limited fiscal space makes strategic revenue mobilization essential. Options include reallocating funds from untargeted subsidies that disproportionately benefit wealthier households and implementing VAT reforms. Simulations show that a ±2 percentage point change in VAT rates has minimal impact on poverty and inequality but significantly affects revenue, suggesting that beyond rate adjustments, revisiting VAT exemptions could further strengthen fiscal space

In sum: Fiscal policy can be a powerful lever for reducing poverty and inequality, but fiscal policy alone is insufficient. Kenya's constrained fiscal space, driven by public deficits and rising debt, requires a dual strategy: effective redistribution through fiscal measures and robust, inclusive economic growth. Inclusive growth is critical for creating quality jobs and raising incomes among low-income households, directly narrowing disparities and reinforcing the sustainability and impact of fiscal interventions.

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Appendix I: Comparison of Survey Data and Administrative Data

Table A1.1 compares survey data estimates with administrative data. The survey estimate for personal income tax is less than the one reported in the administrative data. This can be attributed to some households misreporting their earnings, the survey data not capturing top income earners and the fact that we only capture tax on employees and self-employed leaving out other sources of PIT such as residential rental income tax, advance tax and digital service tax among others. Similarly, VAT estimates of from survey data are lower than those reported in administrative data partly due to difficulty of capturing VAT on imported goods and services.

The amounts on transfers, both direct and in-kind, are generally close to those reported in the administrative data except Technical and Vocational Education and Training (TVET) and VTC. Despite the low figure for TVET and VTC, the programmes involved are small and are unlikely to affect the results significantly. The inpatient and out-patient health spending capture 30 to 50 per cent of the administrative data, respectively. The lower figure for out-patient spending could reflect the fact that the 2022 KCHS did not have information on individuals using out-patient and in-patient services, necessitating simulation of this information from KIHBS 2015/16 survey data, which probably underestimates the number of persons utilizing the out-patient and inpatient services. Also, for health, budget data by type of service could not be collected because much of the budget is at the county rather than national level. The strategy was to use unit cost estimates calculated in 2011, before decentralization, by Flessa, et.al. (2011) and inflate them by the CPI to 2022/16.[13] The survey estimates for 2022 are likely to be low if this underestimates the unit cost for 2022. The subsidy values in the survey also underestimate

[13] This approach will thus miss any difference in incidence brought about by different spending in different counties subsequent to the decentralization.

Table A1.1: Comparison of survey data and administrative data

	2022 KCHS estimate, (million)	Admin value, 2022/23 (million)	Admin value as share of GDP	Included in analysis	Ratio, KCHS to Admin
Direct taxes *of which*		958,749			
PIT	206,348	540,691		Yes	0.38
Other Direct Taxes		418,057		No	
Social Insurance Contributions	8,422	68,017		Yes	0.12
Pensions					
Public servants					
Indirect Taxes					
VAT – (Direct)	119,367	548,541		Yes	0.23
VAT – (Indirect)	7,302				
Excise – (Direct)	40,234	129,987		Yes	0.34
Excise –(Indirect)	4,398				
Social Spending					
Social Protection					
Cash Transfers *of which*	28,018	30,079		Yes	0.91
Cash Transfer for Hunger Safety Net Program (CT-HSNP)	5,374	4,557		Yes	1.18
Cash Transfer for Orphans & Vulnerable Children (CT-OVC)	5,380	6,677		Yes	0.80
Older Persons Cash Transfer (OPCT)	16,409	17,944		Yes	0.91
Cash Transfer for Persons with Severe Disabilities (CT-PwSD)	832	901		Yes	0.92
Nutritional Improvements Through Cash and Health Education (NICHE)	23	23		Yes	1.00
Education *of which*					
Pre-school	14,405	22,874		Yes	0.63
Primary	118,187	189,856		Yes	0.62
Secondary	251,740	266,639		Yes	0.94
TVET & VTC	934	8,409		Yes	0.11
Tertiary	119,806	81,001		Yes	1.48
Health *of which*					
Out-patient:	49,479	154,058		Yes	0.32
In-patient	11,854	22,910		Yes	0.51
Subsidies *of which*					
Fuel (Direct)	503	146,095		Yes	0.01
Fuel (Indirect)	106				
Fertiliser (Direct)	1,606	17,147		Yes	0.12
Fertiliser (indirect)	366				

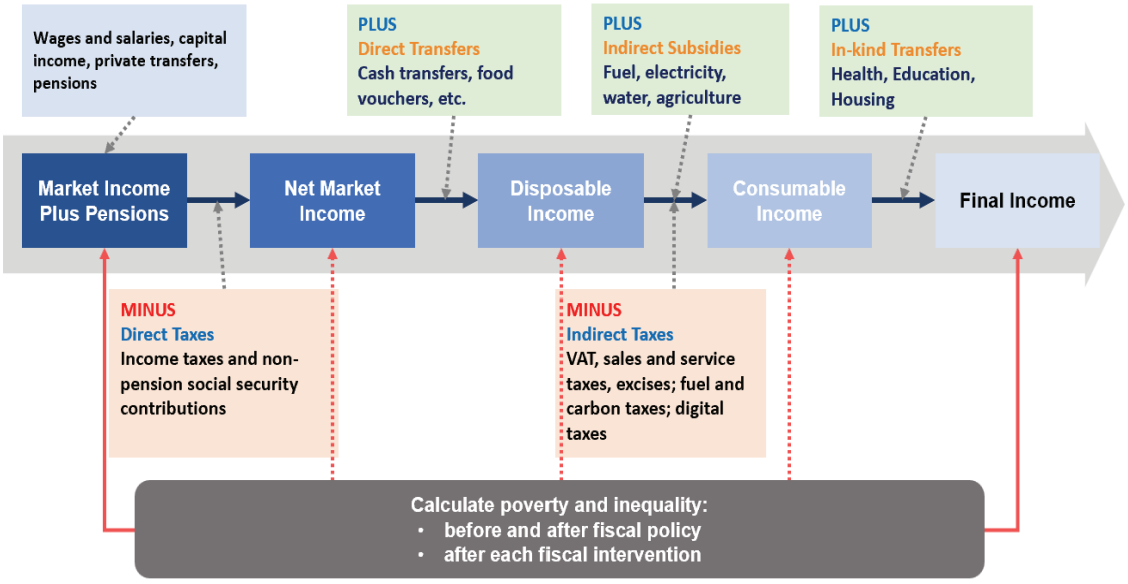
Appendix II: Details on the Construction of Income Concepts

A. The framework

The analysis follows the Commitment to Equity (CEQ) methodology to assess the distributional impact of the fiscal system in Kenya. Redistribution through the fiscal system refers to the process by which the state collects revenue from citizens and reallocates it back to citizens in the form of direct transfers, subsidies, and in-kind benefits. One of the advantages of the CEQ analysis is that it allows analyzing the joint impacts of taxes and expenditure on poverty and inequality. To do this, the methodology requires allocating taxes and benefits (both cash and in-kind) to individuals from a representative sample of the population in a household survey, such that one can compare incomes before taxes and transfers with incomes after taxes and transfers (Lustig, 2018). Because for each separate income concept it is possible to compute statistics such as the poverty rate, or inequality indices, comparisons across different income concepts thus allow for an assessment of marginal contributions of individual taxes and expenditure programmes to poverty and inequality alleviation. In addition, because each programme and tax are allocated to households in the survey sample, this also allows for insight into the incidence of various taxes and programmes across different population groups; in other words, one can construct a profile of contributors and beneficiaries of different programmes.

To analyse the distributional effects of fiscal policy, the CEQ framework constructs different income concepts in sequential stages, starting from pre-fiscal income (which only includes private income) to final income (that incorporates the full set of taxes and government benefits). The CEQ methodology relies on four main income concepts (Figure A2.1). The point of departure is market income, i.e. household income before any tax-benefit interventions have taken place. It comprises income from all forms of employment, capital income (rent and dividends) and private transfers. The next income concept can be defined by augmenting market income with pensions, i.e. market income plus pensions, which includes contributory pensions and excludes the respective pension contributions. Continuing from market income plus pensions, if we subtract direct taxes and social insurance contributions other than pension ones and add direct cash transfers (and other social benefits except pensions) we arrive at disposable income. Disposable income is typically the key income concept in standard analyses of poverty and inequality, and as such, the fiscal analysis typically stops here. However, we compute two further income concepts. By subtracting indirect taxes (VAT and excises) and adding subsidies we arrive at post-fiscal income, which reflects the actual amount of market goods and services consumed by households (sometimes this is also referred to as consumable income). Finally, we define final income as one that includes the cash equivalent of the cost of public health and education services consumed by households.

Figure A2.1: CEQ framework for fiscal incidence analysis



Source: Lustig (2018) - Commitment to Equity (CEQ) Institute at Tulane University.

In case of Kenya the analysis is done using the consumption-based approach. Given that official poverty in the country is consumption based, the fiscal incidence analysis follows the same approach. The disposable income is assumed to be equal to total consumption for all households. The market income is calculated as disposable income minus simulated personal income taxes and employee contributions to social security plus cash transfers. For the simulation of the alternative scenarios the constructed market income is assumed to be unchanged and all the income concepts starting from disposable income are affected by the simulations.

This assessment employs survey data from the 2022 KCHS and administrative data from various sources, including administrative data on taxes, cash transfers, education, and health in 2022. The analysis here covers all taxes and transfers allocated to households directly, making the analysis a useful baseline to further analyse the impacts of alternative fiscal policies such as changes in, for instance, VAT or cash transfer regimes.

The analysis here, just like other CEQ assessments, has important limitations. To mention some of them here again: first, it does not consider behavioural, life cycle, or general equilibrium effects. Since the analysis is a point in time analysis, without consideration of the long-term impacts of alternative polices, it cannot be used to evaluate the long-term impacts of alternative policy interventions, say, for instance, comparing the long-term impacts between higher spending on education versus social protection. Second, the analysis excludes essential categories of taxes and spending such as taxation of corporate income and expenditure on some public infrastructure. Third, household surveys typically fail to capture information on the richest households which could underestimate income and consumption taxes.

B. Components of the fiscal incidence analysis

The model allows us to simulate the distribution effects for different years. The baseline is the survey year (SY), i.e., 2022. The statutory parameters for direct and indirect taxes and cash transfers are used to calculate the gross income and net expenditures. At the next stage, the gross market income and net expenditures are nowcasted to the policy years (PY) of 2024. The results for the PY can be obtained by applying the actual/statuary or reform parameters for direct and indirect taxes, cash transfers, and in-kind benefits.

Personal income tax (PIT) and social insurance contributions

PIT is simulated using information in the Kenyan tax code and assuming that income reported in the 2022 KCHS data is net of taxes. We also assume payroll taxes are applicable to only formal workers and registered businesses. Formal workers are identified by contributions to either the National Social Security Fund (NSSF) or National Hospital Insurance Fund (NHIF). The economic incidence of direct taxes and social contributions is assumed to be fully on the workers.

Cash transfer programmes

Direct cash transfers in the model are mainly associated with five programmes: Hunger Safety Net Program (CT-HSNP), CT-PwSD, CT-OVC, OPCT, and NICHE. In the 2022 KCHS data, both the number of beneficiaries and the amount of transfers are underreported except for CT-HSNP. Thus, it was necessary to adjust the survey data for the other three cash transfer programmes. To make the necessary adjustments, we estimated a statistical model of transfer receipt which is then used to identify additional potential beneficiary households. Then, iterations were made such that the number of beneficiary households in each county within the analysis matched with those reported in administrative data in 2022 followed by allocating a statutory transfer amount to survey households.

It is worth mentioning that imputing beneficiary status assumes that the number of beneficiaries is underestimated but the survey information about the distribution of beneficiaries is accurate. In the imputation, we followed the procedure adopted by prior CEQ analysis: first, we run logit regression model to estimate the probability of transfer receipt where the dependent variable is household-level beneficiary status and the explanatory variables are a number of selected variables that capture household characteristics, including targeting criteria (e.g., the number or household members aged 65 and above, the presence of household members with disabilities, the presence of an orphan below the age of 18, etc.). Second, the predicted probabilities were used to rank households that did not identify as beneficiaries within each county. These were then allocated transfers starting with the highest-ranked household until the county quota suggested by the administrative data were filled. Third, statutory transfer amounts were allocated to beneficiary households.

Indirect taxes and subsidies

VAT and excise taxes are considered in our analysis where we assume that households report the value of purchases, which includes taxes. It is also assumed that the burden of VAT is shifted entirely to consumers. In Kenya, VAT is levied on goods and services that consumers spend on where the VAT is either standard rated (which is 16 per cent), zero-rated, or exempt. The VAT is allocated only to the formally purchased goods – goods purchased in the formal stores, supermarkets, etc. where place of purchase are simulated into 2022 KCHS data using the information on place of purchase in the 2026 KIHBS data.

Excise taxes are estimated based either on the value of consumption or quantities. A wide range of items are considered, including alcoholic beverages, non-alcoholic beverages, tobacco, kerosene, petrol, diesel, vehicles, cosmetics, jewelry, beauty services, mobile phone airtime, and financial services. Most of these items are taxed a fixed sum of money per quantity whereas 10 pe rcent excise tax was imposed on mobile phone airtime, financial services, cosmetics, and beauty services. The model also covers fertiliser subsidy of about 86 per cent. The assumed order of indirect taxes and transfers is that subsidies are applied first, then goes VAT and then excises go last.

In addition, to the direct effects the model includes indirect effects for indirect taxes and subsidies. Those are effects of higher prices for other goods (that are not directly affected by the simulated taxes or subsidies) that use the inputs that are taxes/subsidies. For the VAT the indirect effects happen through exemptions when the exempt items cannot claim the VAT for inputs and thus there is a cascading effect.

In-kind public education and health transfers

Using the 2022 KCHS data, we identify individuals who used public education to calculate the benefits of public education accrued to households. The unit cost of providing public (pre-primary, primary, and secondary) education was first computed using county-level administrative data on public expenditure and students enrolled in school at each level of education.

Admittedly, there are caveats in allocating per-student education expenditure to individual households. To mention one: this method assumes that the value of services is constant across users. This is violated if, for instance, students from poor families attend public schools that have fewer resources – which is typically the case.

For public health in-kind benefits, we considered both inpatient and outpatient care in the analysis where unit costs were obtained from prior literature in Kenya. Since the 2022 KCHS data do not gather information on public health facility utilization, we simulated inpatient and outpatient care in the 2022 KCHS data using detailed information on public health facility utilization in the 2015/16 KIHBS.

We adopted unit costs used in prior CEQ analysis for Kenya which originally came from the unit cost study by Flessa, et al. (2011). The estimated costs per outpatient visit in public health facilities in 2006/07 was KSh 174 in dispensaries, KSh 223 in health centers, and KSh 518 in district hospitals. On the other hand, the estimated unit cost per inpatient per admission per bed-day is public health facilities was KSh 3,500 in health centers, and KSh 2,186 in district hospitals. We adjust these unit costs to reflect changes in prices/inflation between 2006/07 (the year the unit-cost study was conducted) and 2022 (the survey year).

Appendix II: Child Budget

Table A3.1: Child budget

Administrative data	Total amount in KSh (million)	Included In CEQ?	Percentage included	Child-budget?
Total Revenue & Grants	2,508,804			
Revenue	2,485,721			
Tax Revenue	2,166,321			
Direct taxes of which	958,749			
Pay As You Earn (PAYE)	494,979	Yes	60%	Yes (indirect)
Corporate Income Tax (CIT)	263,819	No	0	No
Withholding Tax	154,238	No	0	No
Taxes on Property & others	45,713	No	0	No
Contributions to Social Insurance	68,017	Yes	220%	Yes (indirect)
Indirect Taxes of which	1,207,802			
Value Added Tax (VAT)	548,541	Yes	25%	Yes (indirect)
Customs Duties	129,987	No	N/A	No
Other taxes on goods and services	261,432	No	N/A	No
Excise Duties, of which:	267,965	Yes	21%	Yes (indirect)
Petrol	71,686	Yes	N/A	Yes (indirect)
Beer	31,454	Yes	N/A	Yes (indirect)
Wine	3,481	Yes	N/A	Yes (indirect)
Spirits	15,291	Yes	N/A	Yes (indirect)
Tobacco	11,896	Yes	N/A	Yes (indirect)
Airtime	41,407	Yes	N/A	Yes (indirect)
Financial Services	42,012	Yes	N/A	Yes (indirect)
Nontax Revenue	319,400	No	N/A	No
Grants	23,083	No	N/A	No
Total Expenditure				
Social Spending				
Social Protection				
Social Assistance of which	30,079			
Cash Transfers, of which	30,079			
Cash Transfer for Hunger Safety Net Program (CT-HSNP)	4,557	Yes	64%	Yes (direct)
Cash Transfer for Orphans & Vulnerable Children (CT-OVC)	6,677	Yes	96%	Yes (direct)
Older Persons Cash Transfer (OPCT)	17,944	Yes	96%	Yes (indirect)

Administrative data	Total amount in KSh (million)	Included In CEQ?	Percentage included	Child-budget?
Cash Transfer for Persons with Severe Disabilities (CT-PwSD)	901	Yes	58%	Yes (direct)
Other cash payments from govt (NICHE)	23	Yes	1757%	Yes (direct)
Noncontributory Pensions	N/A	No	N/A	No
Old age pension	N/A	No	N/A	No
Disability pension	N/A	No	N/A	No
Veteran's pension	N/A	No	N/A	No
Near Cash Transfers	N/A	No	N/A	No
School meals	N/A	No	N/A	No
Other food	N/A	No	N/A	No
Other	N/A	No	N/A	No
Education of which	583,313			
Pre-school	22,874	Yes	64%	Yes (direct)
Primary	205,391	Yes	59%	Yes (direct)
Secondary	266,639	Yes	96%	Yes (direct)
TVET & VTC	7,409	Yes	13%	No
Tertiary	81,001	Yes	151%	No
Health of which	49,233			
Out-patient, of which:	18,059	Yes	87%	Yes (direct)
at hospitals				
at County health facilities				
at mobile clinics				
In-patient	31,174	Yes	82%	Yes (direct)
at hospitals				
at County health facilities				
Housing & Urban of which	N/A	No		No
Subsidies of which	189,546			
Fuel (Fuel stablization)	146,095	Yes	1%	Yes (indirect)
Fertiliser	17,147	Yes	9%	Yes (indirect)
Electricity	26,304	No	N/A	No

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