

Exploring Kenya's Inequality

Pulling Apart or Pooling Together?

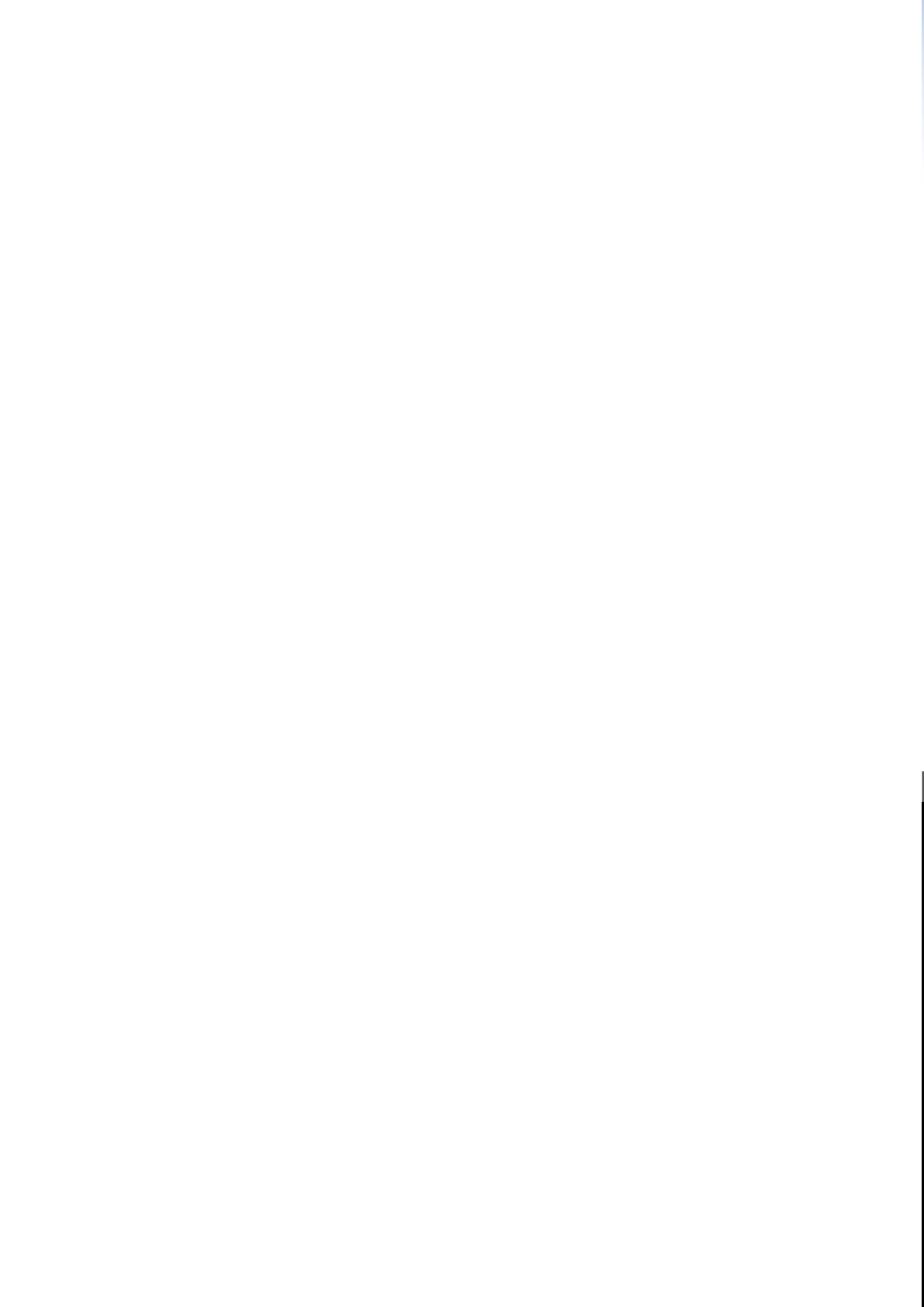
Abridged Report



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Exploring Kenya's Inequality

Pulling Apart or Pooling Together?

This is the abridged version of 'Exploring Kenya's inequality: Pulling apart or pooling together?' county and national reports



Published by



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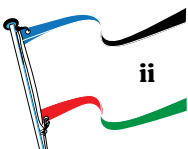
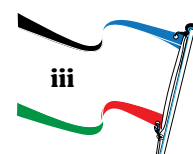


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Foreword

Kenya, like all African countries, focused on poverty alleviation at independence, perhaps due to the level of vulnerability of its populations but also as a result of the 'trickle down' economic discourses of the time, which assumed that poverty rather than distribution mattered – in other words, that it was only necessary to concentrate on economic growth because, as the country grew richer, this wealth would trickle down to benefit the poorest sections of society. Inequality therefore had a very low profile in political, policy and scholarly discourses. In recent years though, social dimensions such as levels of access to education, clean water and sanitation are important in assessing people's quality of life. Being deprived of these essential services deepens poverty and reduces people's well-being. Stark differences in accessing these essential services among different groups make it difficult to reduce poverty even when economies are growing. According to the Economist (June 1, 2013), a 1% increase in incomes in the most unequal countries produces a mere 0.6 percent reduction in poverty. In the most equal countries, the same 1% growth yields a 4.3% reduction in poverty. Poverty and inequality are thus part of the same problem, and there is a strong case to be made for both economic growth and redistributive policies. From this perspective, Kenya's quest in vision 2030 to grow by 10% per annum must also ensure that inequality is reduced along the way and all people benefit equitably from development initiatives and resources allocated.

Since 2004, the Society for International Development (SID) and Kenya National Bureau of Statistics (KNBS) have collaborated to spearhead inequality research in Kenya. Through their initial publications such as 'Pulling Apart: Facts and Figures on Inequality in Kenya,' which sought to present simple facts about various manifestations of inequality in Kenya, the understanding of Kenyans of the subject was deepened and a national debate on the dynamics, causes and possible responses started. The report 'Geographic Dimensions of Well-Being in Kenya: Who and Where are the Poor?' elevated the poverty and inequality discourse further while the publication 'Readings on Inequality in Kenya: Sectoral Dynamics and Perspectives' presented the causality, dynamics and other technical aspects of inequality.

KNBS and SID in this publication go further to present monetary measures of inequality such as expenditure patterns of groups and non-money metric measures of inequality in important livelihood parameters like employment, education, energy, housing, water and sanitation to show the levels of vulnerability and patterns of unequal access to essential social services at the national, county, constituency and ward levels.

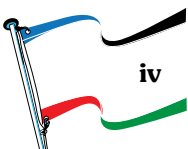
We envisage that this work will be particularly helpful to county leaders who are tasked with the responsibility of ensuring equitable social and economic development while addressing the needs of marginalized groups and regions. We also hope that it will help in informing public engagement with the devolution process and be instrumental in formulating strategies and actions to overcome exclusion of groups or individuals from the benefits of growth and development in Kenya.

It is therefore our great pleasure to present 'Exploring Kenya's inequality: Pulling apart or pooling together?'

Ali Hersi

Society for International Development (SID)

Regional Director

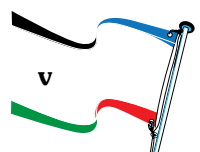


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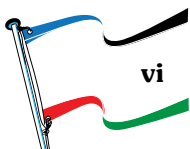
Stefano Prato
Managing Director,
SID



Striking features of inequality in Kenya

The findings in this book, the county and the national reports all point to various critical issues about inequalities in Kenya.

1. Inequalities in all the variables are extreme. For example, in Wajir County out of a population of 522,830 people, only 2,242 people can afford to spend Ksh7,200 or above.
2. Kenyans living in different regions have completely different lifestyles and access to services. For example:
 - The share of people spending Ksh7,200 or above in urban areas is almost 10 times more than those spending the same amount of money in rural areas.
 - Individuals in Nairobi County have 15.4 times more access to secondary education than those living in Turkana County. They also have 2.2 times more access to secondary education than an average Kenyan while those living in Turkana County are seven times less likely to have access to secondary education than an average Kenyan.
 - Loima Constituency in Turkana County has the lowest proportion of individuals with secondary education in Kenya at 0.8 percent. This is 79 times less than the proportion in Embakasi West Constituency in Nairobi County which is at 63 percent. If an individual comes from a female headed household in Loima Constituency, the share increases to 120 times less than an individual in Embakasi West Constituency or 28.5 times less than an average Kenyan.
3. Kenyans living within the same region have completely different lifestyles and access to services. For example:
 - In urban areas, the share of those who spend Ksh7,200 or above in the fifth quintile is 121 times more than the share of those who spend Ksh1,440 or less.
 - Magarini Constituency in Kilifi County has 84.5 percent of its population living in poverty compared with Rabai Constituency in the same county where only 39 percent of the population lives in poverty.
 - Within Malindi Constituency in Kilifi County, Kakuyuni ward has poverty levels of 85.7 percent while Malindi town ward has poverty levels of 30.4 percent, a difference of 55.3 percentage points.
4. In spite of past development policies and funds such as Free Primary Education (FPE), Secondary Schools Bursary Fund (SEBF), Constituency Development Fund (CDF), Local Authority Transfer Fund (LATF) or Rural Electrification Fund (REF), levels of deprivation remain extremely high in some areas compared to others. A good example is:
 - One quarter of Kenya's population has no education. Slightly over half of the population has primary education only and 23 percent of the population has secondary education and above.
 - In Loima Constituency in Turkana County, 93.0 percent of the population has no education, compared with Makadara Constituency in Nairobi County where only 8.2 percent of the population has no education, a difference of 84.8 percentage points. This implies that a person in Loima is 11 times more likely to have no education than a person in Makadara
 - Only 23 percent of households in Kenya use electricity for lighting. A household in Nairobi is 36 times more likely to have electricity for lighting compared with those in Tana River (2.4 percent coverage) and Turkana (2.2 percent coverage).
5. Geographical location is a major determinant of vulnerability and deprivation levels. For example:
 - Individuals in urban areas have one and half times more access to improved water sources than their rural



counterparts. They also have two times more access to improved sanitation than their rural counterparts.

- Urban areas have 10 times more electricity coverage (51 percent) than rural areas (5 percent)
 - For individuals with secondary education, employment for pay in urban areas (43.2 percent) is twice the employment for pay in rural areas (21.3 percent) for individuals with the same level of education.
 - Conversely, individuals living in urban areas who have no education are twice as likely to be without work compared with their rural counterparts.
6. Some counties are deprived of some things and are well endowed in others. For example:
- Narok County has the highest proportion of individuals (i.e 80 percent of the population) lacking access to improved sources of water yet it is among the counties with the lowest poverty gap and the second most equal (in income as per the gini coefficient) county after Turkana.
7. Inequalities become more severe as the information is further disaggregated. For example:
- At county level, the difference between the highest and the lowest access to improved modes of waste disposal is 15 times. At constituency level, it is 52 times while at ward level it is 554 times.
 - The difference in share of poor people (the percentage of the population that is poor) between the poorest and the richest counties is 4 times. The difference in the share of poor people at constituency level is 9 times while at the ward level it is 30 times.
8. The data confirms that lack of access to essential services like education leads to continued poverty and vulnerability. For example
- Employment for pay is highest among people with secondary education or above in both rural and urban areas
 - People with no education in Kenya are almost twice as likely (1.7 times) to have no work than people with secondary education and above.
9. The data challenges common perceptions like:
- Kibra Constituency (32 percent poverty share) is the poorest slum in Nairobi while it is actually third after Mathare Constituency (36.5 percent) and Ruaraka Constituency (33 percent).
 - There is a severe shortage of clean drinking water in the arid parts of the country. However, constituencies with the second and third highest access to improved water sources are Garissa Township Constituency (92.7 percent) and Dadaab Constituency (91.5 percent), both in Garissa County
10. The data also confirms previous findings like:
- Women are disadvantaged or marginalised in some aspects. The proportion of individuals with secondary education in male headed households is higher than in female headed households across all counties.
 - Overall, 26.8 percent of the population in FHH have no education compared to 23.5 percent in MHH. This in absolute numbers translates into 4.6 million kenyans in FHH compared to 3.9 million kenyans in MHH.
11. Proportions mask huge differentials in absolute numbers. For example
- In Kenya, 47.6 percent of MHH and 47.6 percent of FHH use pit latrines. However, in absolute terms, 12.7 million in MHH compared to 5.3 million in FHH use pit latrines.

The data in this book suggests stark inequalities at the outset of devolution. The question is whether policymakers at national and county level will perceive this data as a call to action to ensure that inequality becomes a central agenda as devolution unfolds, and that ultimately leads to improved welfare for all Kenyans.

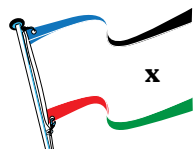
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Abbreviations

AMADPOC	African Migration and Development Policy Centre
CDF	Constituency Development Fund
CRA	Commission on Revenue Allocation
DANIDA	Danish International Development Agency
DAP	Drivers of Accountability Programme
FPE	Free Primary Education
HDI	Human Development Index
IBP	International Budget Partnership
IEA	Institute of Economic Affairs
IPAR	Institute of Policy Analysis and Research
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
LATF	Local Authority Transfer Fund
LPG	Liquefied Petroleum Gas
NCIC	National Cohesion and Integration Commission
NTA	National Taxpayers Association
REF	Rural Electrification Fund
SEBF	Secondary Schools Bursary Fund
SID	Society for International Development
TISA	The Institute for Social Accountability
VIP latrine	Ventilated-Improved Pit latrine
VOCs	Volatile Organic Carbons
WDR	World Development Report



1. Why should we care about inequality?

1.1 A theoretical basis

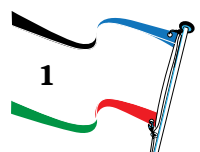
Inequality matters for both ethical and instrumental reasons. On the ethical front, the way social, economic and political benefits are shared in a society is a reflection of how fair a society's institutions are to those living in it. If the society is structured in a way that seems to systematically favour those belonging to a particular region, class, ethnic or other groups rather than those who work hard, are most productive or need the most help, then there is cause for concern. Worse, if vulnerabilities are transmitted across generations because a society does not sufficiently allow poor or marginalised groups access to resources or opportunities that enable them to thrive, then fairness becomes truly elusive. As much as inequalities will always exist because not everyone is equally able to take advantage of available opportunities, there should be a reasonable chance that a person born without advantages can, through their efforts, excel.

On the instrumental front, there is a growing body of literature that suggests inequality has a negative impact on poverty reduction, economic growth and the stability of a country. First, in more unequal societies, economic growth tends not to reduce poverty as quickly as in more equal societies. According to the World Bank (WDR, 2006), countries that are more unequal experience less poverty reduction for a similar level of economic growth. Ravallion and Chen (2007) found that in provinces where there was high inequality in China, there was lower poverty reduction because the level of inequality slowed the pace of economic growth. In a simulation carried out by Ravallion and Ferreira (2008), with a 2 percent growth rate and poverty rate of 40 percent, a low-inequality country (with a Gini index of about 0.30) would halve its headcount poverty index in 11 years. Under similar circumstances, a high inequality country (with a Gini index of about 0.60) would take about 35 years to halve the initial poverty rate. The reason for this is largely to do with the fact that for the same poverty rate, if the people below the poverty line are very far below it (condition of greater inequality), it is harder to push them above it compared with a case where they are very close to the line (condition of less inequality).

A second type of relationship between poverty reduction, inequality and economic growth has to do with the type of growth and how it is distributed. Different types of economic growth (meaning growth driven by different sectors, such as agriculture or services, or by different regions of a country) may have a different impact on poverty reduction because of the nature of inequality in the country and the degree to which growth changes or reinforces that distribution. For example, Ravallion and Chen (2007) found that poverty reduction in China was mostly driven by growth in the agrarian sector, which in turn reduced inequality more than growth in other sectors.

Inequality can dampen growth for a number of reasons. In a world where the poor are not able to access credit, inequality reduces the capacity of a society to make productive investments by marginalising a large part of the population from the economy. In particular, it marginalises those who would increase their productivity the most for a given amount of capital. Less inequality would make it easier for the poor to invest part of their earnings and increase aggregate growth. Another argument is that inequality leads to increased macroeconomic volatility, and therefore reduces growth over time. There are both political and economic reasons why this can happen (Aghion, et al, June 1999). Essentially, inequality reduces the potential for and stability of investment, thus reducing economic growth.

Various studies comparing local units within a single country have found that greater inequality leads to greater violence. The argument is that persistent inequality between different groups (ethnic, religious, geographical, etc.) can create bonds among those who are disadvantaged and allow them to unite in violent activity. A reduction in inequality within the country therefore reduces the grievances of these marginalized groups and their ability to unite. A case study of the Maoist insurgency in Nepal found that, across several thousand villages, inequality was an important predictor of violence (Nepal et al, 2011). A study in Indonesia found that when population growth was high, inequality between religious groups was more likely to lead to violence (Østby et al, 2011). Taken together, the impact of resource pressures from population growth and grievances related to perceived inequality may fuel violent conflict.



Striking facts about inequality

1. When there is high inequality and national incomes rise, those at the top benefit the most.
2. High inequality also means that when economic downturn or disaster strikes, those at the bottom of the income scale, the most vulnerable, are disproportionately hurt.
3. In high inequality situations, focusing exclusively on economic growth and income generation as a development strategy may be ineffective as it leads to the accumulation of wealth by a few and worsens poverty of many.
4. In more equal countries, each percentage point of economic growth brings about a 4 percent decline in the number of people living on less than \$1 a day. That reduction is almost nonexistent in countries with high levels of income inequality.
5. Economic growth is necessary for poverty reduction but may increase inequality. China grew at exceptionally high rates that managed to reduce poverty rapidly even as inequality increased further.
6. Economic growth is necessary for poverty reduction but it may be optimal to divert some resources to reducing inequality.

Source: Various

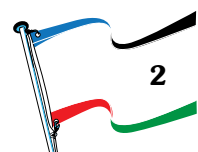
1.2 Why undertake an inequality study in Kenya?

First, the Constitution clearly specifies that equity is an expected outcome. Specifically, clause 201 states that the public finance system is to promote an equitable society in that revenue raised nationally shall be shared equally between national and county governments and in the promotion of equitable development, and expenditures will be oriented towards addressing the needs of marginalised groups and regions. In terms of resources to be allocated to the county level, under clause 203, specific reference is made to the allocation of resources guided by the developmental and other needs of counties according to economic disparities within and among counties; the need for affirmative action; and the need for economic optimisation of each county. The Equalisation Fund (created under clause 204) will see 0.5 percent of all nationally collected revenues directed towards the provision of water, roads, health and electricity to marginalised areas to the extent necessary to bring the quality of those services in those areas to the level generally enjoyed by the rest of the nation.

Second, inequality across regions is frequently discussed and is an emotive issue in Kenya. These differences in development outcome are partly attributed to structural disparities in accessing opportunities. Thus some regions like Nairobi have a Human Development Index (HDI)¹ of 0.773 and are comparable to high HDI countries like Seychelles (0.773) and Mexico (0.770). The Central region (0.637) can be compared to medium HDI countries like Egypt (0.644) and Botswana (0.633) while parts of the Northern region (0.417) can be compared to low HDI countries like Malawi and Afghanistan. The regions considered to be doing well on average also have huge disparities within them. The Rift Valley region, for example, has an average HDI of 0.574 but Turkana registers an HDI of 0.33 while Uasin Gishu registers an HDI of 0.63 which is twice that of Turkana. These extreme differences make it imperative to revisit the issue of regional inequality, especially now that the country is undertaking an ambitious devolution programme.

Third, in the past decade when Kenya's macroeconomic policies stabilised and the economy grew more rapidly, most Kenyans did not see sufficient or broad sharing of the resources generated under the centralised system. Kenyans therefore have high hopes that devolution will lead to fairer sharing of resources and more widespread development that will improve their lives.

¹HDI attempts to describe achievement of development goals related to quality of life using data that can be compared across countries and time. It aggregates life expectancy, adult literacy, the gross school enrolment index and the GDP per capita



1.3 Important uses of the data generated

A study like this one is crucial in facilitating:

The need to know: This study forms a core part of our precise understanding as a country, of the situation within counties and among counties. It establishes a baseline for understanding regional inequalities at the onset of devolution.

Planning: The new Constitution, the County Governments Act 2012 and the Public Finance Management Act 2012 have created new, more open processes of policymaking, planning and budgeting. Counties are now required to produce and implement a number of short, medium and longer term plans as part of the budget: an integrated development plan; a spatial plan; sectoral plans; and annual development plans. This array of new planning requirements demands a constant supply of regionally disaggregated information like that in the ‘Inequality in Kenya: pulling apart or pooling together’? county and national reports. County officials are also able to understand and take action to ameliorate the said inequalities and improve the Human Development in their jurisdictions.

The ability to benchmark progress: If devolution is to lead to greater equality, there is a need to know against what criteria to assess the changes. Five years from now, every county should be able to look back and see whether the situation has improved.

Participation and social accountability: Citizens have a basis on which to demand services and question the rationale of projects and expenditures by county leaders. Using this data, citizens also have an opportunity to periodically assess whether the resources allocated and development opportunities provided are broadly shared and whether they have resulted in improved livelihoods.

Revenue allocation: The Commission on Revenue Allocation put forward a first formula for distributing resources among counties that must be revised within three years. CRA itself recognized that it lacked data to recommend a more complex formula. This publication can provide a basis for preparing a second-generation formula.

CRA also opted to allocate the Equalisation Fund at the county level. However, as indicated in the national and county report as well as in this abridged report, intra-county inequalities are severe and a mechanism to remedy this situation should be sought. The data in this book can be a starting point in this regard.

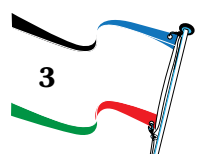
The national government retains the right to use conditional transfers to address issues of intra-county inequality and marginalization in counties not catered for by the Equalisation Fund. Proper targeting of these transfers requires good data at constituency and ward level, and this volume begins to provide that.

1.4 The focus of this study

The focus of this study is geographical or regional inequalities, meaning inequalities between and among counties, constituencies and wards. In some variables inequalities between Male and Female Headed Households are also highlighted.

1.5 Limitations of the study

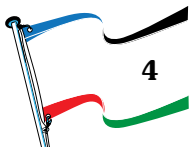
The study is limited to a certain set of variables, namely money metric measures of inequality such as mean expenditure and measures of inequality in important livelihood parameters like, employment, education, energy, housing, water and sanitation. These variables were selected from the census data and analyzed in detail and form the core of the inequality reports. Other variables such as migration or health indicators like mortality, fertility etc. are analyzed and presented in several monographs by Kenya National Bureau of Statistics and were therefore left out of this report.



Conclusion

This is the first attempt to document disaggregated data to the ward level after the formation of new administrative boundaries under the Constitution of Kenya 2010. The report should therefore be seen as providing comprehensive baseline data on inequality. It is important to note that this publication builds on previous reports generated by the government and other development agencies. The work therefore seeks to complement rather than compete with previous reports.

In acknowledging that the report will be of interest to a wide audience, it would be impossible to capture all the analyses that can be generated from the wealth of data provided. Stakeholders are therefore encouraged to use this information to generate more conclusions for themselves and others



2. Manifestations of inequality in Kenya

2.1 Demographics

According to Bloom (2003), the way in which a population is distributed across different age groups at any given point in time is deemed important because people's social and economic behaviour and needs vary at different stages of life. A country's age structure therefore has a significant impact on its socio-economic development. A large population of children (0-14) signifies high child dependency and the need to invest in child and maternal health as well as education opportunities. A large working age population (15-64) signifies an urgent need for investment in gainful employment opportunities while a large ageing population (65+) signifies high aged dependency and the need to invest in health care and retirement income.

- **Proportion of the population by age**

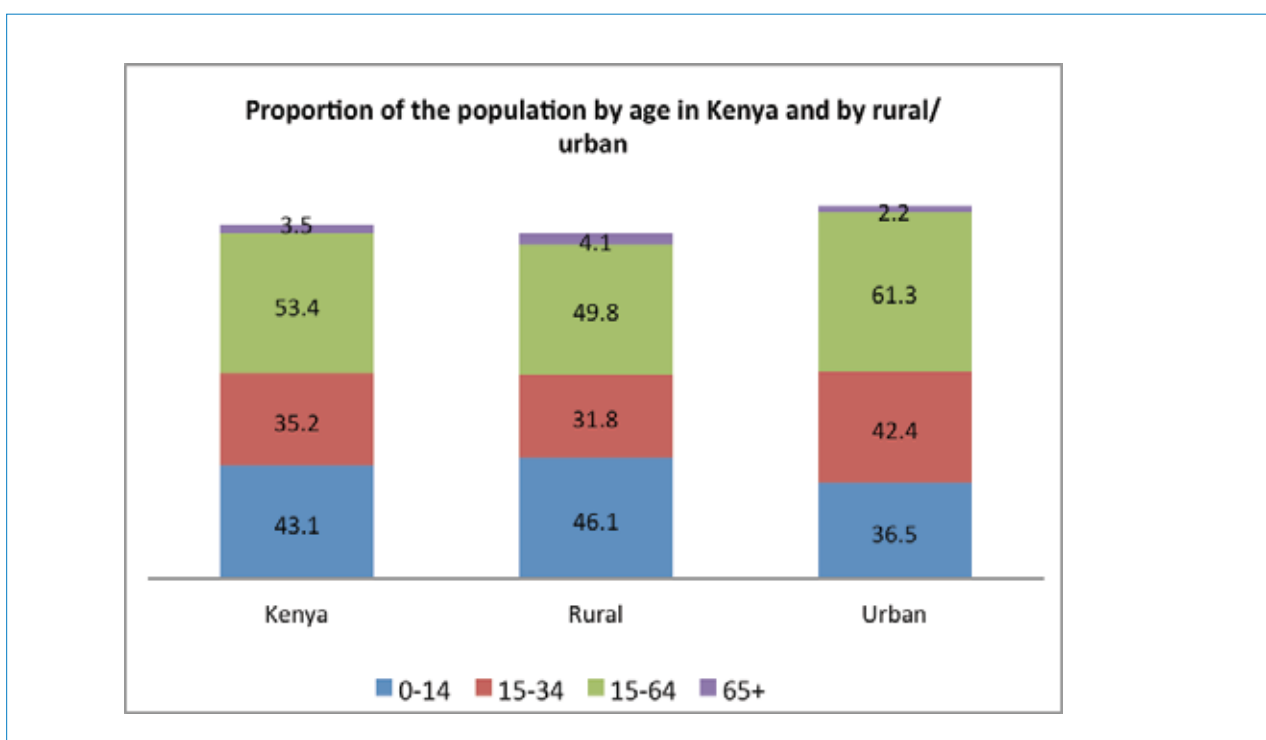
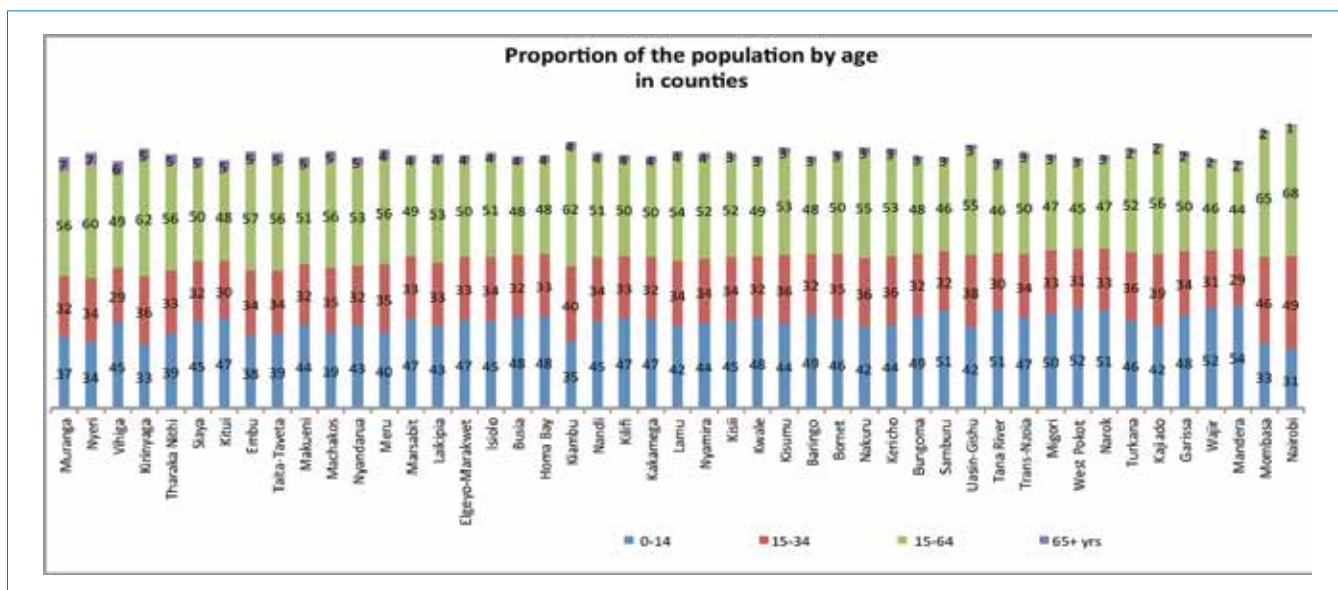


Figure 2.1: Proportion of the population by age in Kenya and by rural/urban

As illustrated in figure 2.1, Kenya's child population is at 43 percent while the youth population is 35 percent. The working age population is 53.4 percent while the aged population is 3.5 percent. There are slight differences between rural and urban areas. The child population is 9.6 percentage points more in rural areas than in urban areas. The youth and the working age population is more in urban than in rural areas by 10.6 and 11.5 percentage points respectively. As expected, rural areas have twice the number of old people than urban areas.

Figure 2.2: Proportion of the population by age in counties



As illustrated in figure 2.2, over half of the population in Mandera, West Pokot, Wajir, Tana River, Samburu, Narok and Migori Counties are below 14 years of age. These counties also have the highest total dependency ratios and, with the exception of Migori and Narok Counties, are among the poorest in Kenya. Nairobi, Mombasa and Kiambu Counties on the other hand have the highest proportions of youth i.e 49 percent, 46 percent and 40 percent respectively. Nairobi, Mombasa, Kiambu, Kirinyaga and Nyeri Counties have more than 60 percent of their population in the working age group. These counties have the least dependency ratios and are among the least poor in Kenya. Muranga, Nyeri and Vihiga Counties have the highest number of old people.

• **Proportion of household members**

Households with many members tend to be poorer than those with few members. As illustrated in figure 2.3, most Kenyan households have four to seven or more members i.e. (58.5 percent). A sizeable proportion (41.5 percent) has three or fewer household members. Rural areas are two times more likely to have seven or more household members than their urban counterparts. More than half of urban households have three or fewer household members.

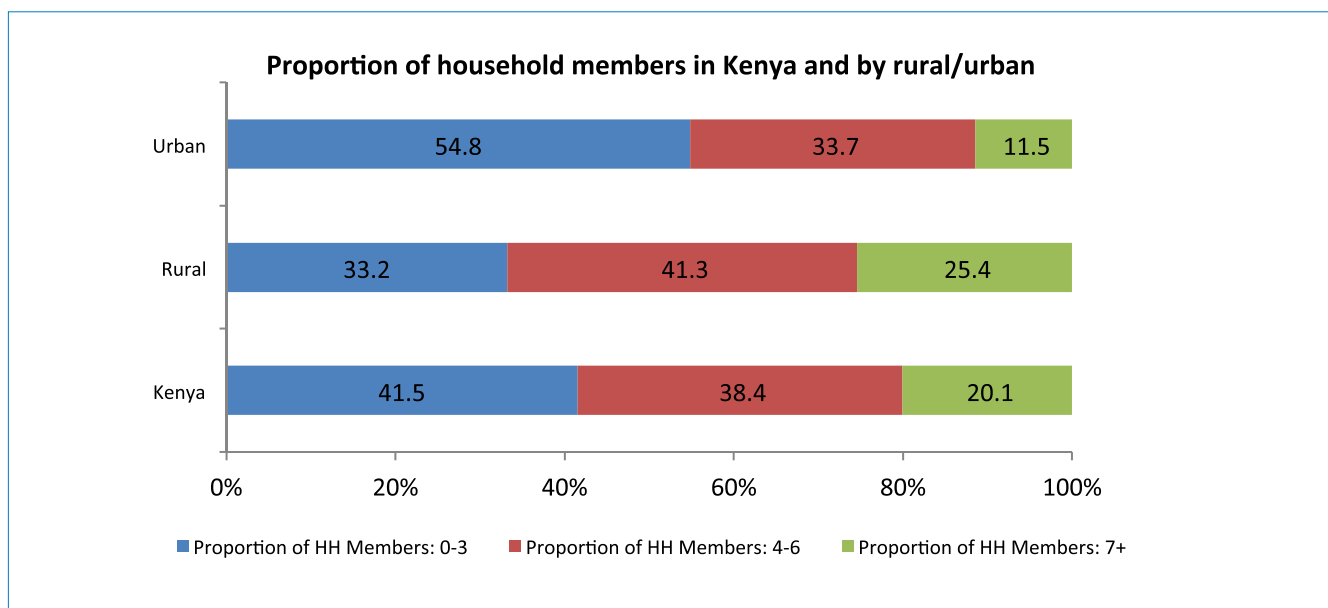


Figure 2.3: Proportion of household members in Kenya and by rural/urban

As illustrated in figure 2.4, more than half of the households in Mandera, Wajir, Turkana and Garissa have seven or more members. These counties also have more than half of their populations living below the poverty line. Conversely, more than half of the households in Nairobi, Mombasa, Nyeri, Kirinyaga, Kiambu and Murang'a have three or fewer household members. These counties are also among the least poor in the country.

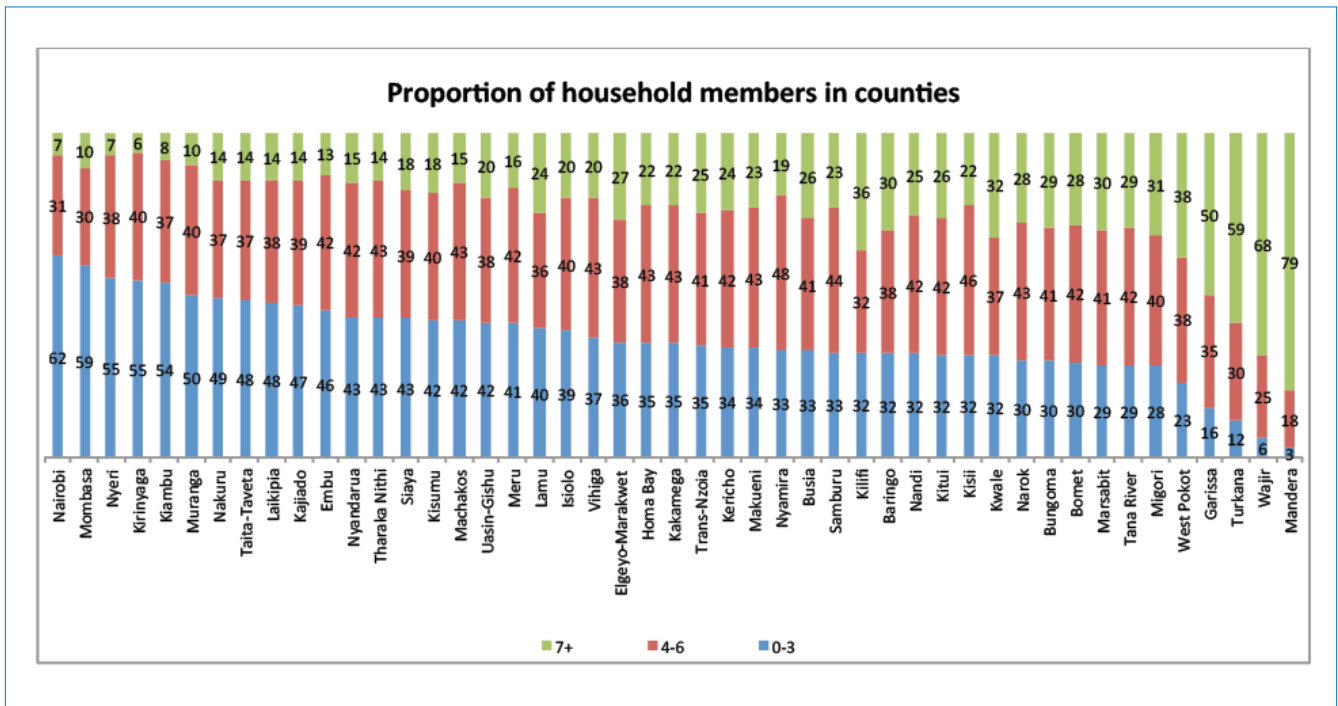


Figure 2.4: Proportion of household members in counties

- **Total Dependency Ratio**

Dependency ratios give an indication of the burden that tends to fall on the working population and the government to support those members of society who are not working, usually because they are too young or too old. Inequalities in dependency ratios suggest that some counties will bear a higher burden than others of supporting their non-working populations, implying potentially higher public and private costs, and lower revenues from taxation. Because the dependency ratio is driven more by a large number of children than a large number of the elderly (see figure 2.5), the implication is that the burden of spending will be on education rather than pensions or disability allowances. It is also important to note that dependency may not be as problematic if patterns of migration and remittances support dependants in one county through resources generated elsewhere. Migrants from the country to urban areas such as Nairobi may well remit funds that support dependants in their areas of origin.

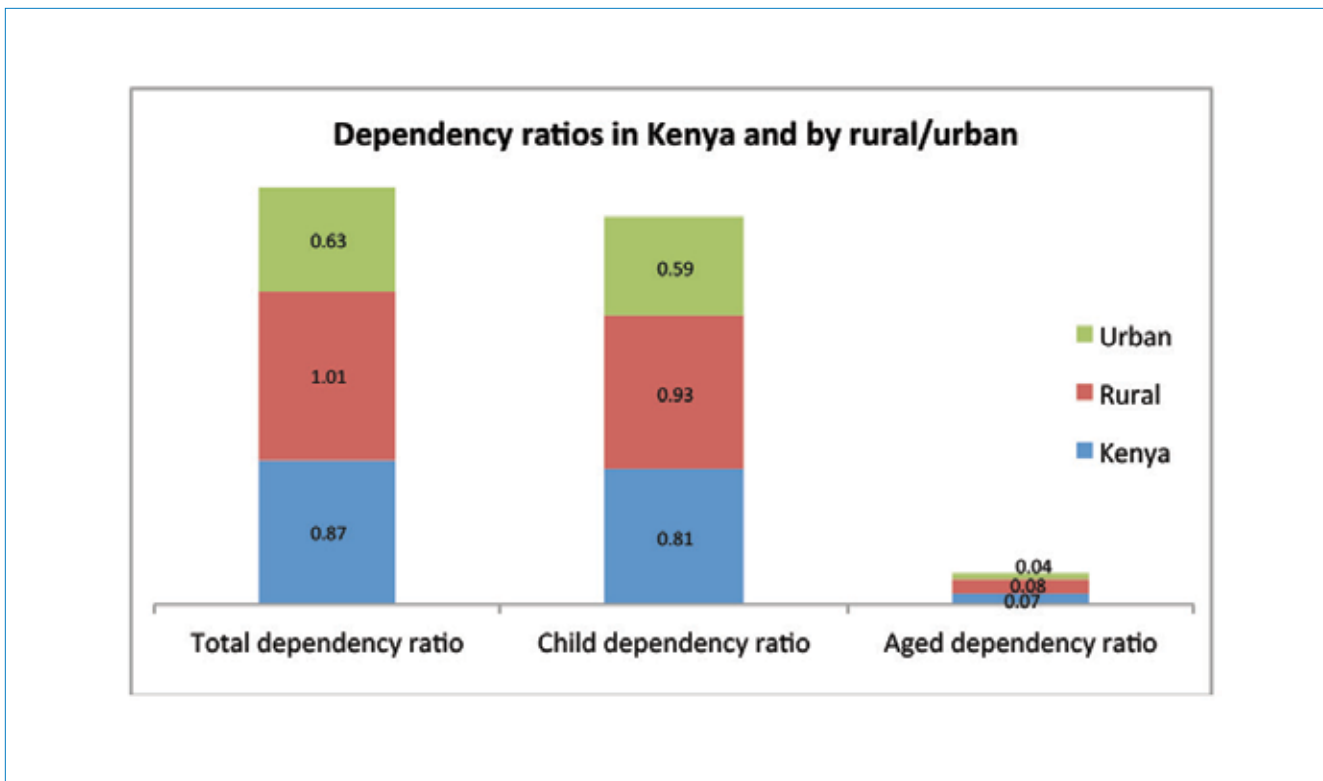
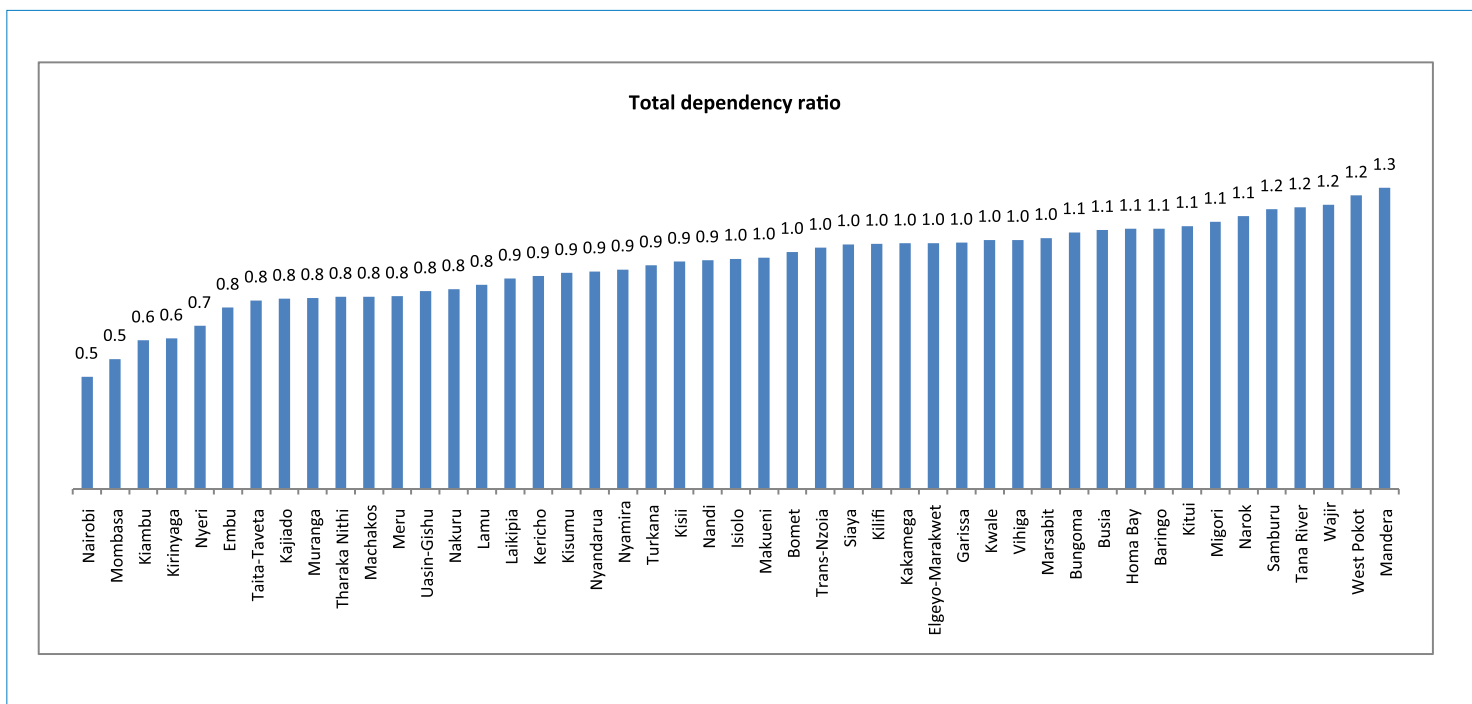


Figure 2.5: Dependency ratios in Kenya and by rural/urban

As illustrated in figure 2.5, the total dependency ratio (which is the number of people below 15 and above 64 divided by the number of people between 15 and 64) in Kenya is 0.87. It is 1.6 times higher in rural areas than in urban areas and is as a result of high numbers of children rather than of the elderly.

Figure 2.6: Total dependency ratio in counties



The highest dependency ratio is in Mandera (1.3) which is about 2.7 times the dependency ratio in Nairobi (0.465).

2.2 Poverty

- Poverty Line

Poverty in this report is measured using estimated consumption expenditures. The poverty line is a threshold below which people are deemed poor. In 2005/06, the poverty line was estimated at Ksh1,562 and Ksh2,913 per adult equivalent per month for rural and urban households respectively. Nationally, 45.2 percent of the population lives below the poverty line (2009 estimates), down from 46 percent in 2005/06.

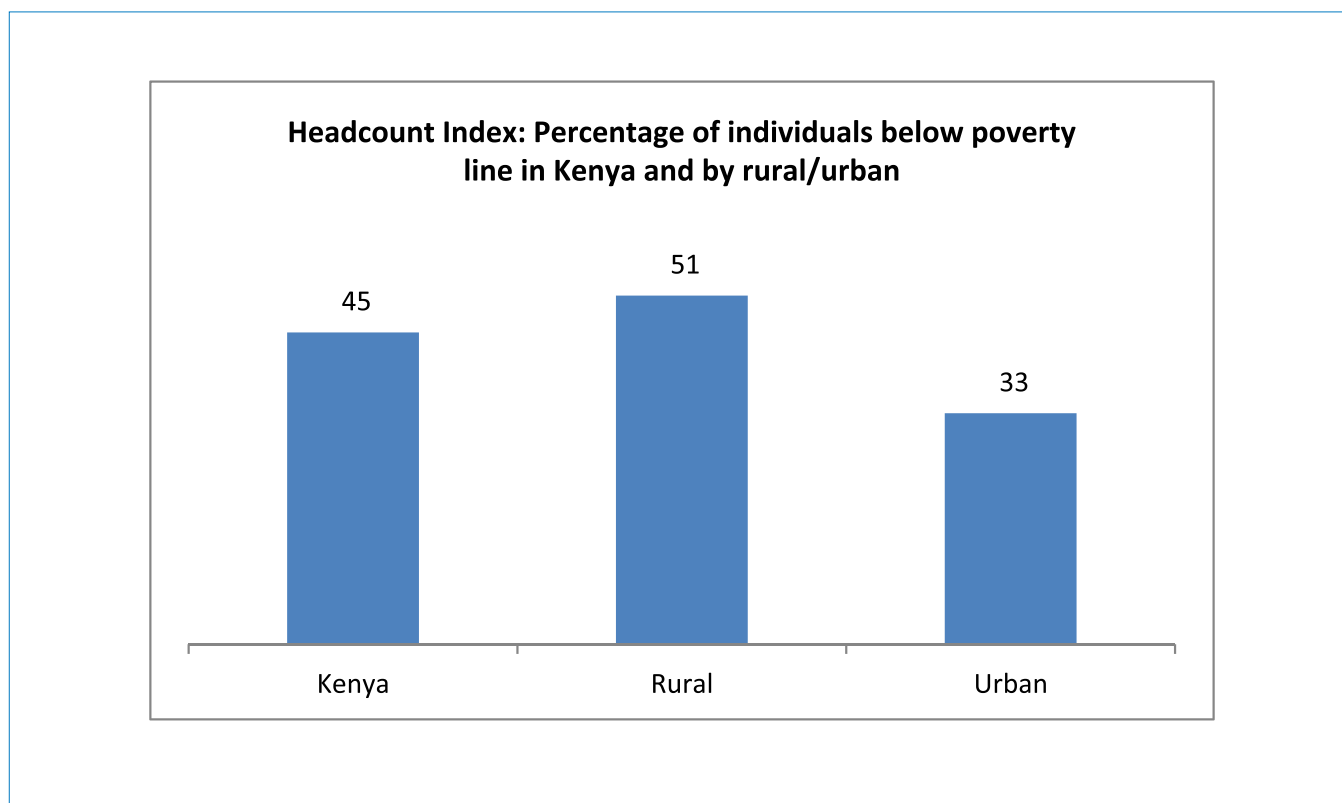


Figure 2.7: Percent of individuals below poverty line in Kenya and by rural/urban

Half of the people in rural areas and one third in urban areas live below the poverty line, a difference of 18 percentage points between rural and urban areas as indicated in figure 2.7.

As illustrated in figure 2.8, roughly 8 out of every 10 people in Turkana, Mandera and Wajir Counties are poor. The proportion of individuals below the poverty line in Turkana (87.5 percent) is four times that in Nairobi, which has the lowest poverty at 21.8 percent.

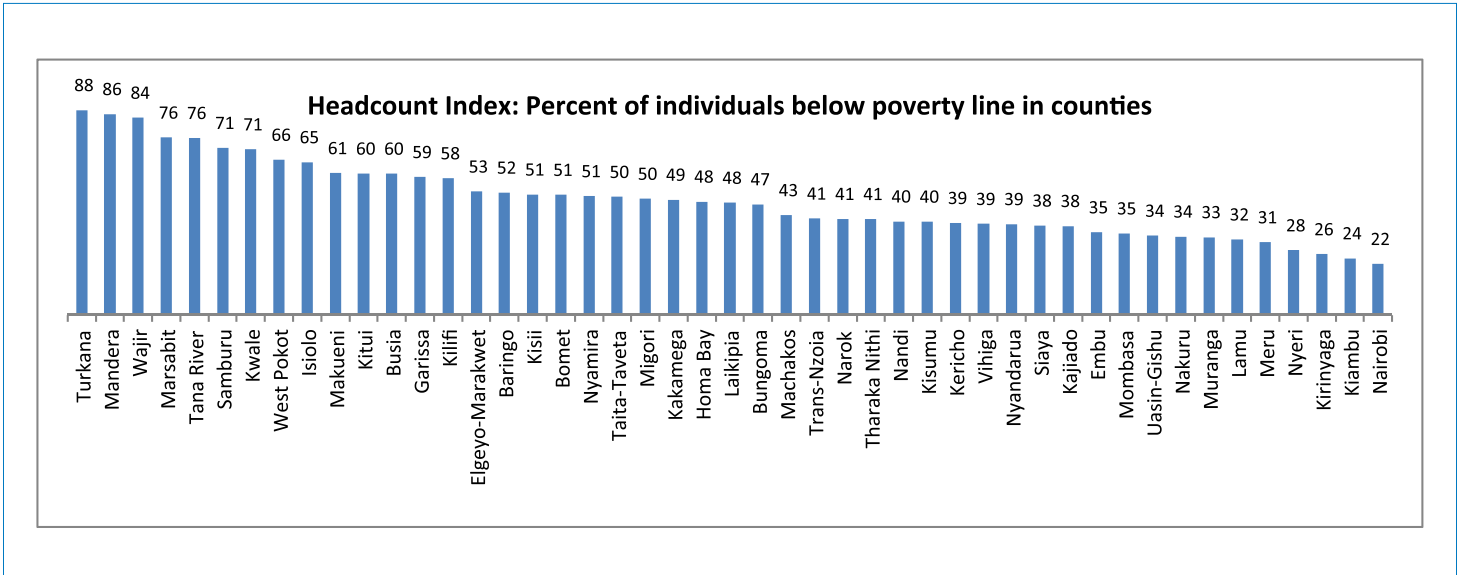


Figure 2.8: Headcount Index: Percentage of individuals below poverty line in counties

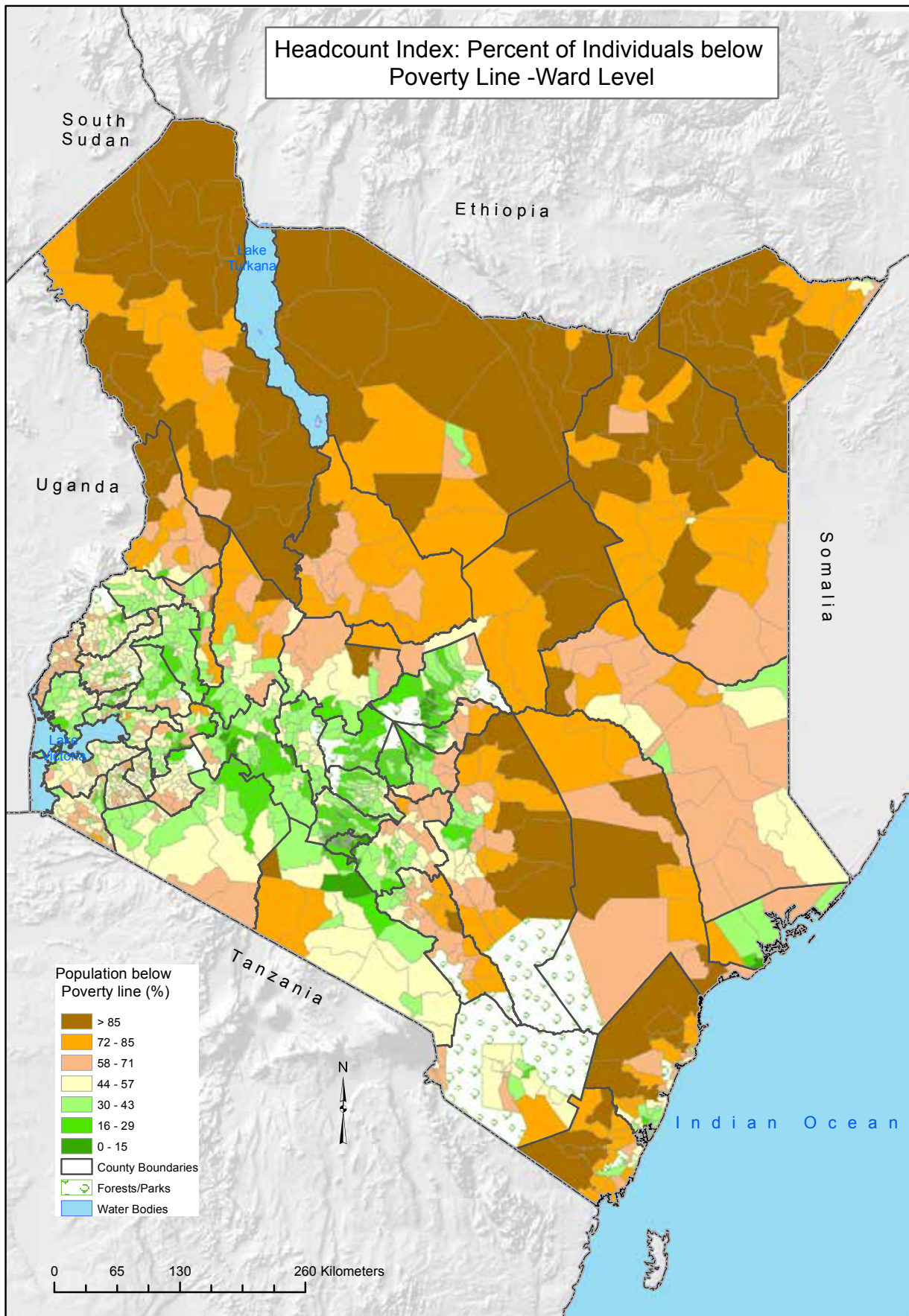


Figure 2.9: Proportion of population below poverty line (headcount index) nationally

The national inequalities in poverty across counties are depicted in figure 2.9, which shows the incidence of poverty is higher in the Northern and Coastal regions of the country and significantly lower in others especially in Nairobi and the central region of the country.

- **Poverty gap**

The poverty gap provides an indicator of the resources required to eliminate poverty in a given area. In other words, it is an estimate of how much on average would be needed to bring each household from their current income to the poverty line. It is therefore an important indicator of fiscal decentralisation because each county will want to understand the resources it will need in order to bring its population above the poverty line. The higher the gap as a percentage of the poverty line, the farther most households are below the line. As illustrated in figure 2.10, the poverty gap as a percentage of the poverty line in Kenya is at 12 percent. The poverty gap in rural areas is 1.75 times that in urban areas.

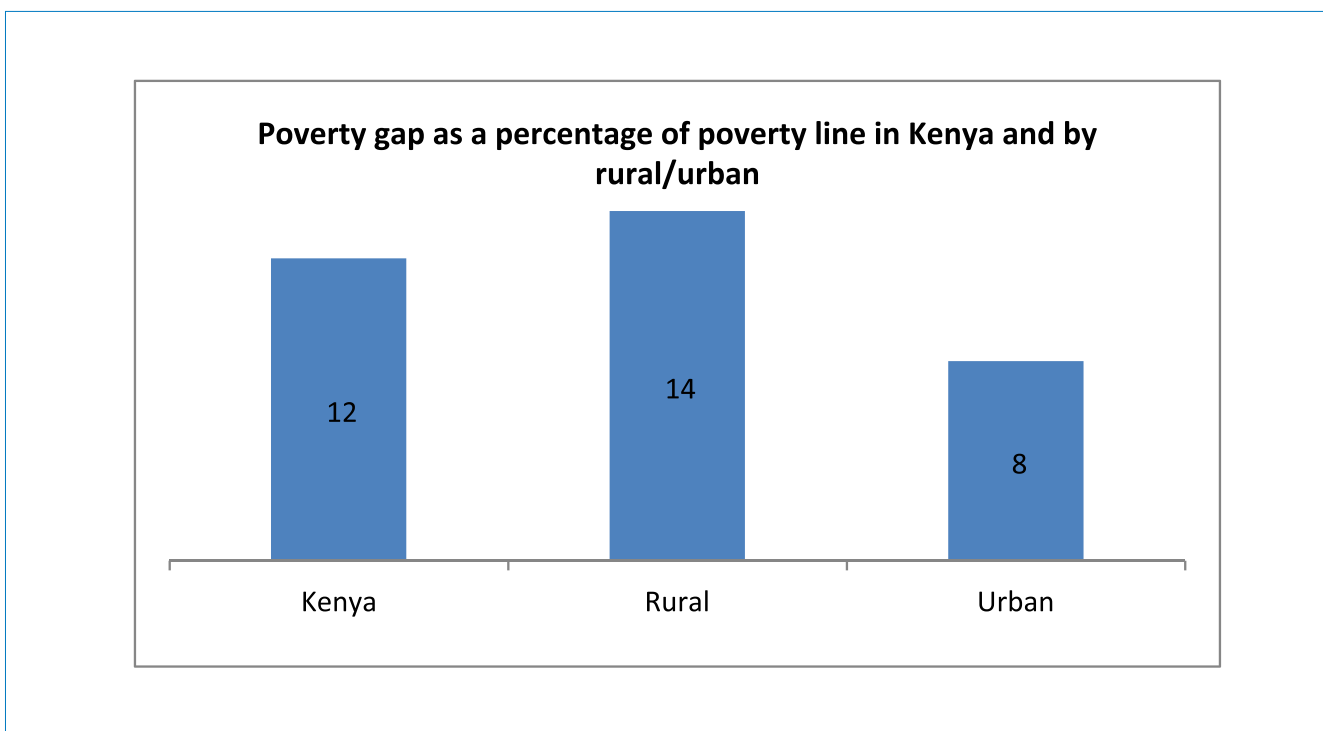
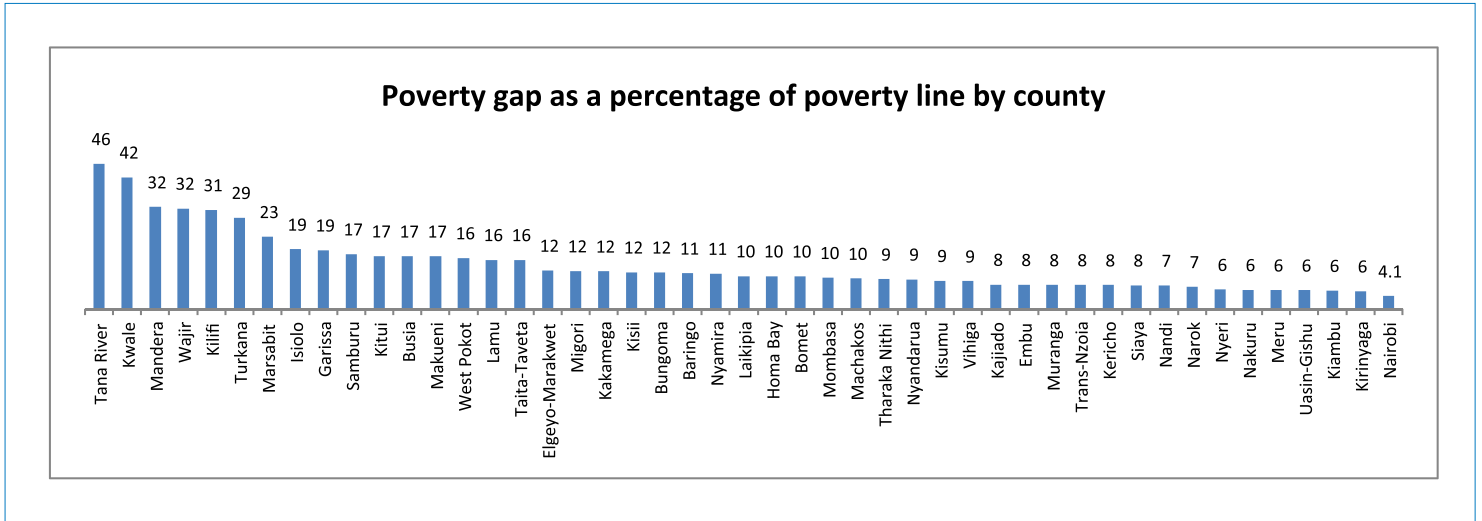


Figure 2.10: Poverty gap as a percentage of poverty line in Kenya and by rural/urban

As seen in figure 2.11 and 2.12, the poverty gap is highest in Tana River (46 percent), Kwale (42 percent), Mandera (32 percent), Wajir (32 percent) and Kilifi (31 percent) Counties. These huge disparities in the poverty gap illustrate the variation in the extent of county requirements to pull the population out of poverty.

Figure 2.11: Poverty gap as a percentage of poverty line by county



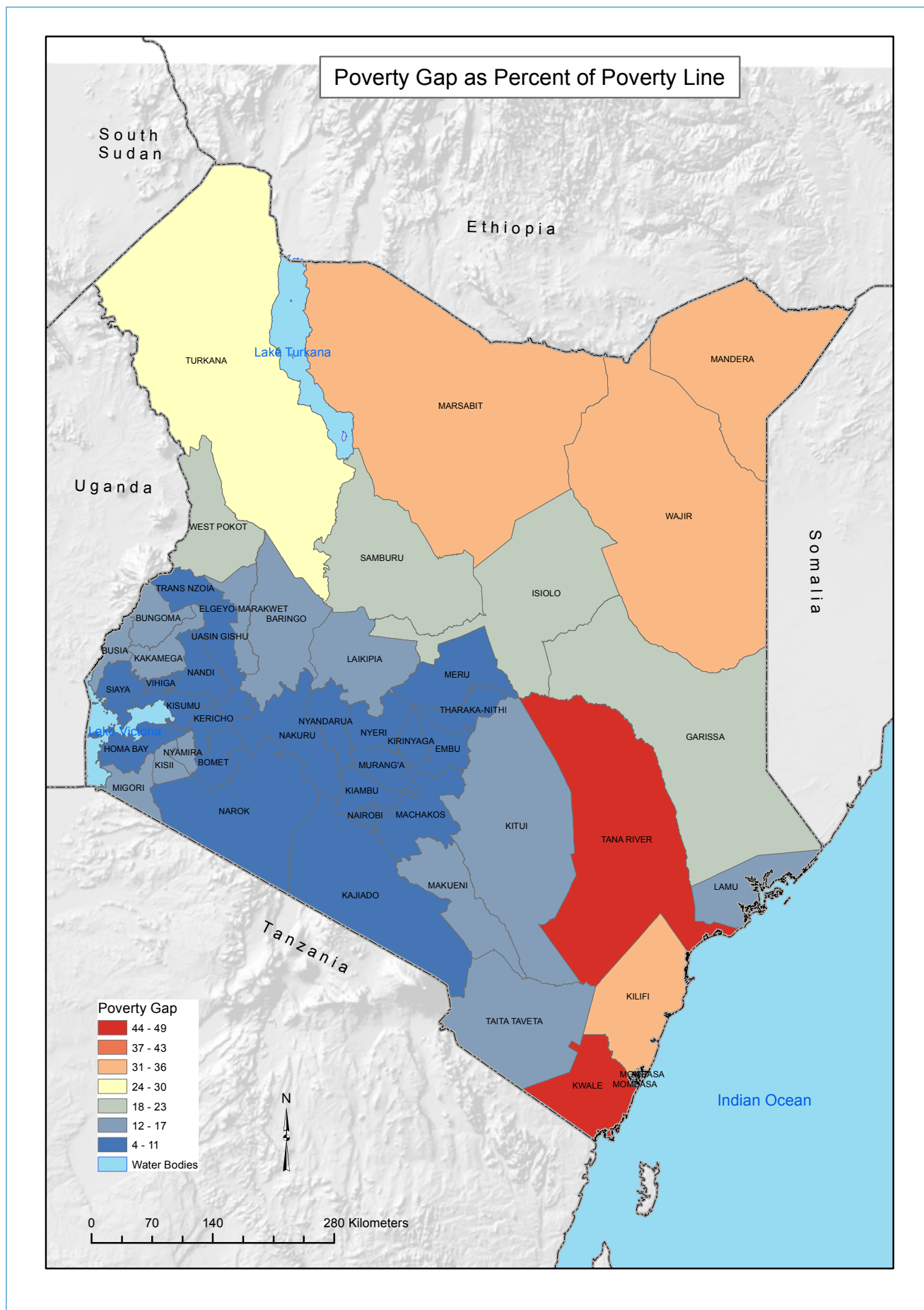


Figure 2.12: Poverty gap as a percentage of poverty line nationally

- **Severity of poverty**

The poverty severity measure assesses how poor the poor really are. It is sensitive to the distribution of living standards among the poor. Even if it has no intuitive interpretation, it takes into account the variations in distribution of welfare amongst the poor to give the intensity of poverty.

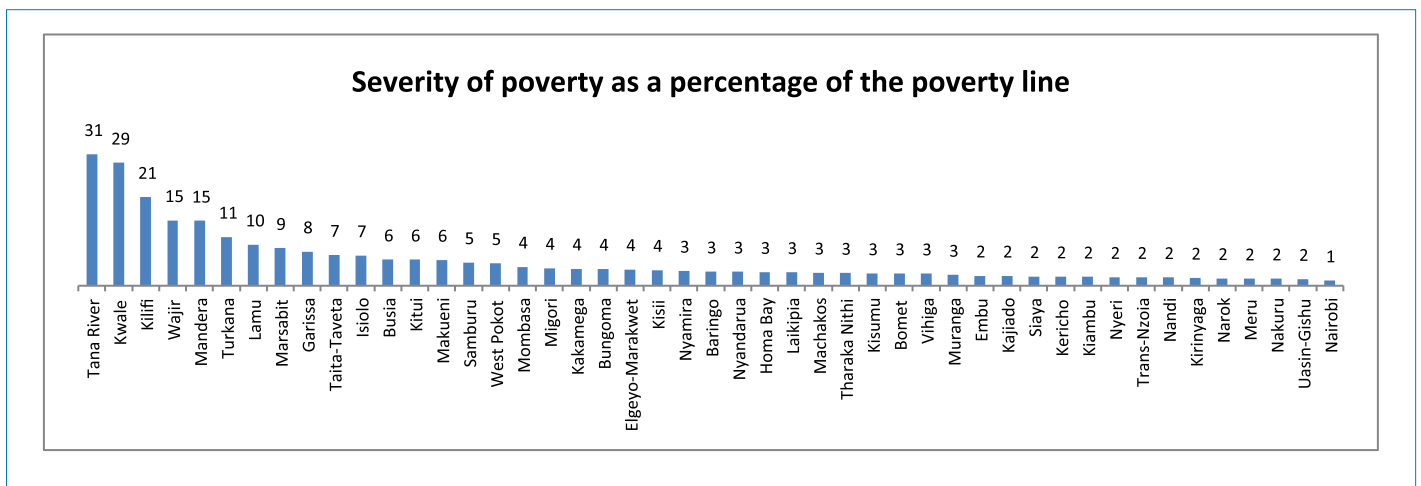


Figure 2.13: Severity of poverty as percent of the poverty line

As illustrated in figure 2.13, poverty is most severe in Tana river, Kwale and Kilifi. As demonstrated in section 2.2, poverty is highest in the northern region but most severe in the coastal region

2.3 Consumption expenditure

Household welfare is highly correlated with income. Household incomes are however not easy to measure, because they are not always a true reflection of actual incomes, but household consumption expenditure is usually a reliable indicator. Individual expenditures have historically been shown to be correlated with income levels. Household surveys have therefore traditionally captured data on expenditures as a proxy for estimating incomes.

Household expenditure in Kenya averages Ksh3,440 per adult equivalent² per month nationally. However, there are differences between urban and rural areas, counties and constituencies. Household expenditures per adult equivalent per month are Ksh2,270 in rural areas compared with Ksh6,010 in urban areas.

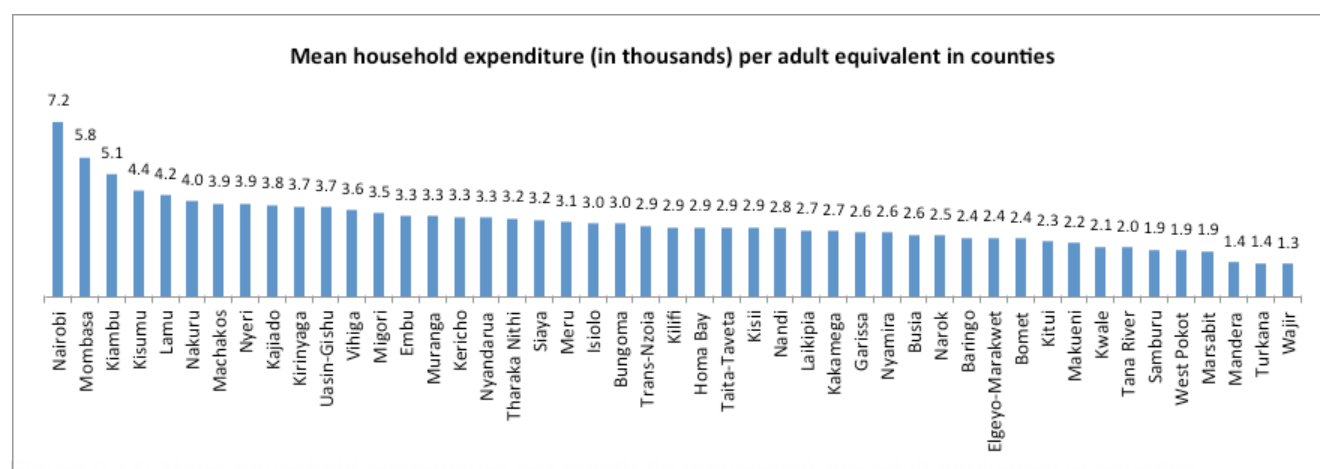


Figure 2.14. Mean household expenditure per month (in thousands) per adult equivalent in counties

On average, households in Nairobi County spend Ksh 7,200 per adult equivalent compared to Wajir county where on average, households spend Kshs1,300 as illustrated in figure 2.14. The counties that have mean household expenditures of Kshs 2,200 and below per month per adult equivalent are also among the poorest in Kenya.

For purposes of analysing inequality, we divide the population into quintiles of 20 percent each representing the lowest to the highest spending households in Kenya.

²This is basically the idea that every person needs different levels of consumption because of their age, gender, height, weight, etc. and therefore we take this into account to create an adult equivalent based on the average needs of the different populations.

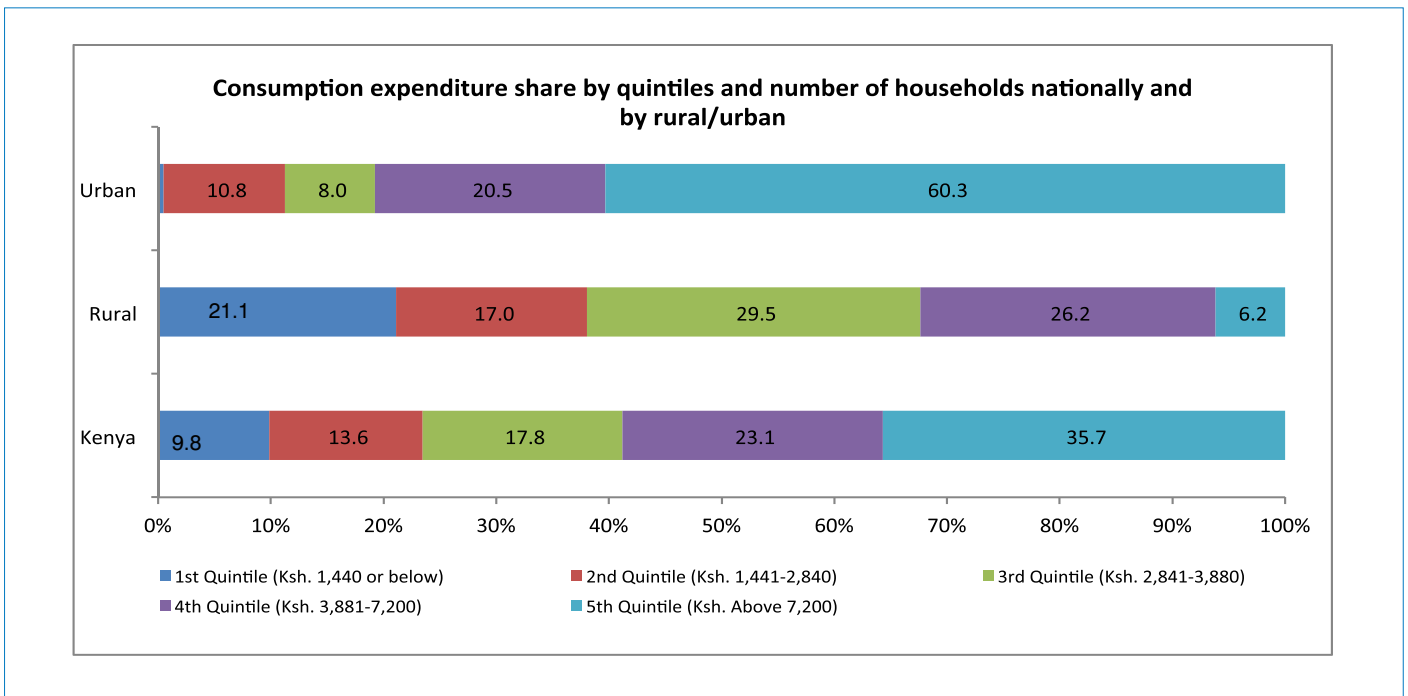


Figure 2.15: Consumption expenditure share by quintiles and number of households nationally and by rural/urban

As indicated in figure 2.15, the monthly household consumption share in Kenya of the fifth quintile (with expenditures of Ksh7,200 or more) is 3.6 times that of the first quintile. The disparities in expenditure are more pronounced in urban areas than in rural areas. The consumption expenditure share of the fifth quintile in urban areas is 10 times more than the consumption expenditure share of the same quintile in rural areas. The expenditure share in the fifth quintile in urban areas is 121 times more than the expenditure share of the first quintile (that spends Ksh1,440 or less) in urban areas. Consumption share in rural areas is more even.

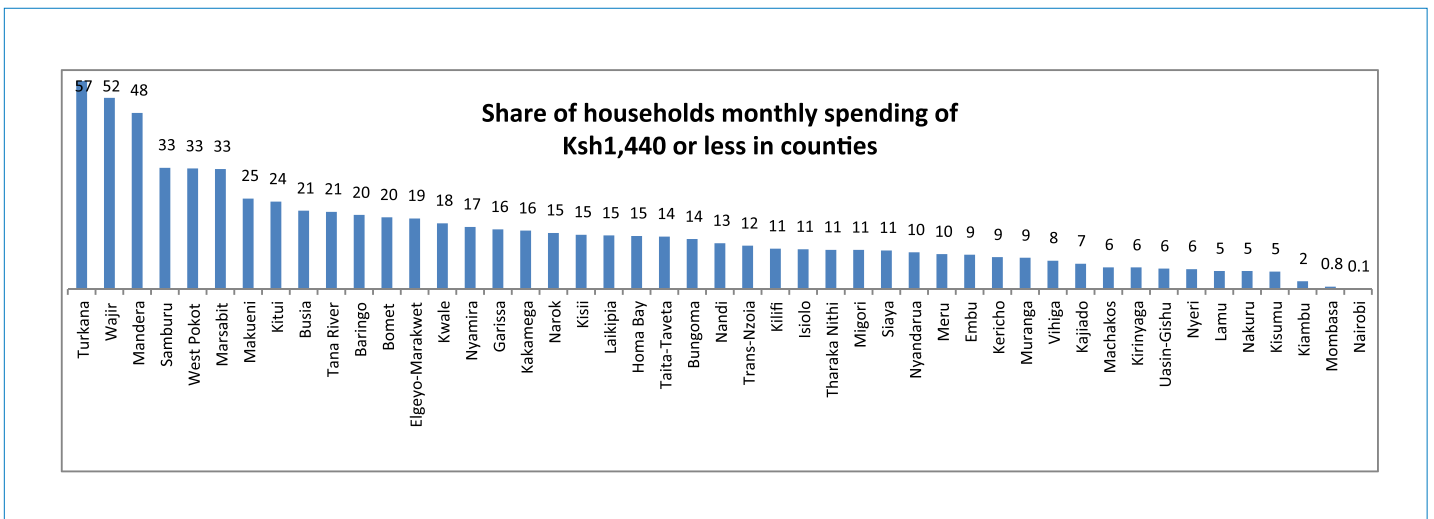


Figure 2.16: Share of households monthly spending of Ksh1,440 or less in counties

More than 50 percent of households spend Ksh 1,440 or below in Turkana and Wajir and yet most of them (59 percent and 68 percent respectively) have seven or more household members.

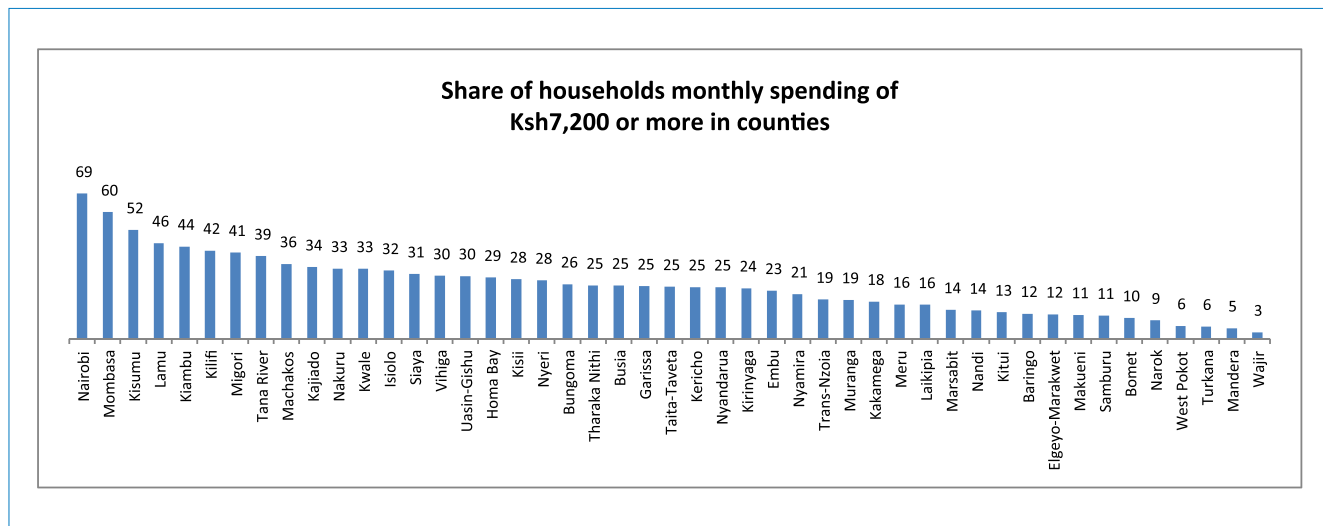


Figure 2.17: Share of households monthly spending of Ksh7,200 or more in counties

The counties that display significant differences within themselves in the share of households whose expenditure share is Ksh7,200 or above versus the share of households whose expenditure is Ksh1,440 or less as shown in figure 2.16 and 2.17 are Nairobi (690 times), Mombasa (75 times) and Kiambu (22 times).

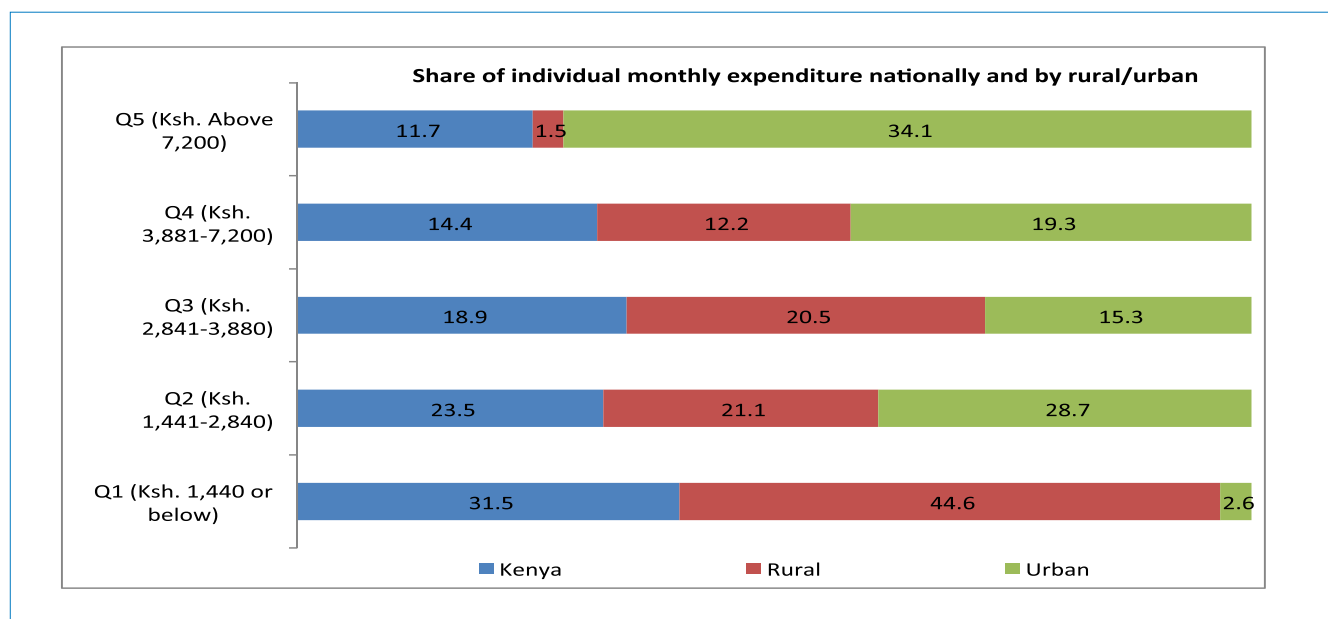


Figure 2.18: Share of individual monthly expenditure nationally and by rural/urban

When we look at the population in each quintile, there are also big disparities between rural and urban areas. Overall 44.6 percent of the rural population spends Ksh1,440 or less compared with only 2.6 percent of the urban population. By comparison, 34.1 percent of the urban population spends Ksh7,200 or above compared with only 1.5 percent in rural areas, indicating large income differentials between urban and rural areas. One third of Kenyans spend Ksh1.440 or less per month while only 12 percent spend Ksh7,200 and above (see figure 2.18).

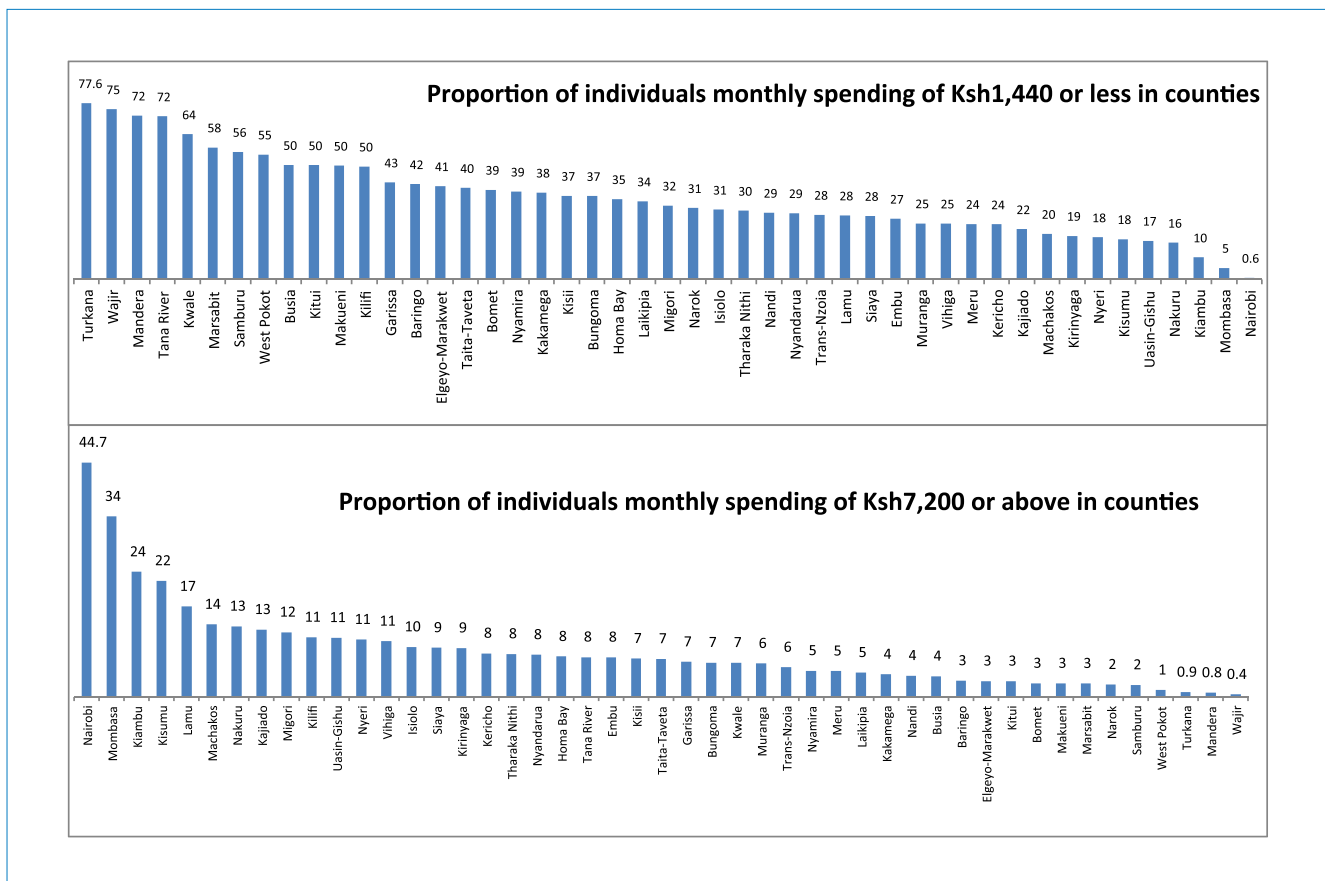


Figure 2.19: Proportion of individuals monthly spending of Ksh1,440 or less and proportion of individuals monthly spending of Ksh7,200 or above in counties

Inequalities in consumption expenditure are pronounced across counties (see figure 2.19). There are 12 counties where 50 percent of the population spends Ksh1,440 or less per month. These counties are also among Kenya’s poorest. The proportion of those spending Ksh1,440 or less in Turkana County is 129 times the proportion of those spending the same amount in Nairobi.

The four counties with the largest proportion of their populations spending Ksh7,200 and above are major towns i.e. Nairobi, Mombasa, Kiambu and Kisumu. The proportion of those spending Ksh7,200 and above in Nairobi County is 112 times the proportion of those spending the same amount in Wajir County, where out of a population of 522,830 people, only 2,242 people can afford to spend Ksh7200 and above.

2.4 Gini coefficient

The Gini coefficient is a commonly used measure that varies between '0' reflecting complete equality and '1' indicating complete inequality. The Gini coefficient is based on the Lorenz curve, which compares the distribution of incomes across the entire population of an area. It is a useful measure because it incorporates all of the information available from a particular area.

The Gini coefficient of inequality, which is calculated using consumption expenditures per capita, is presented in figure 2.20

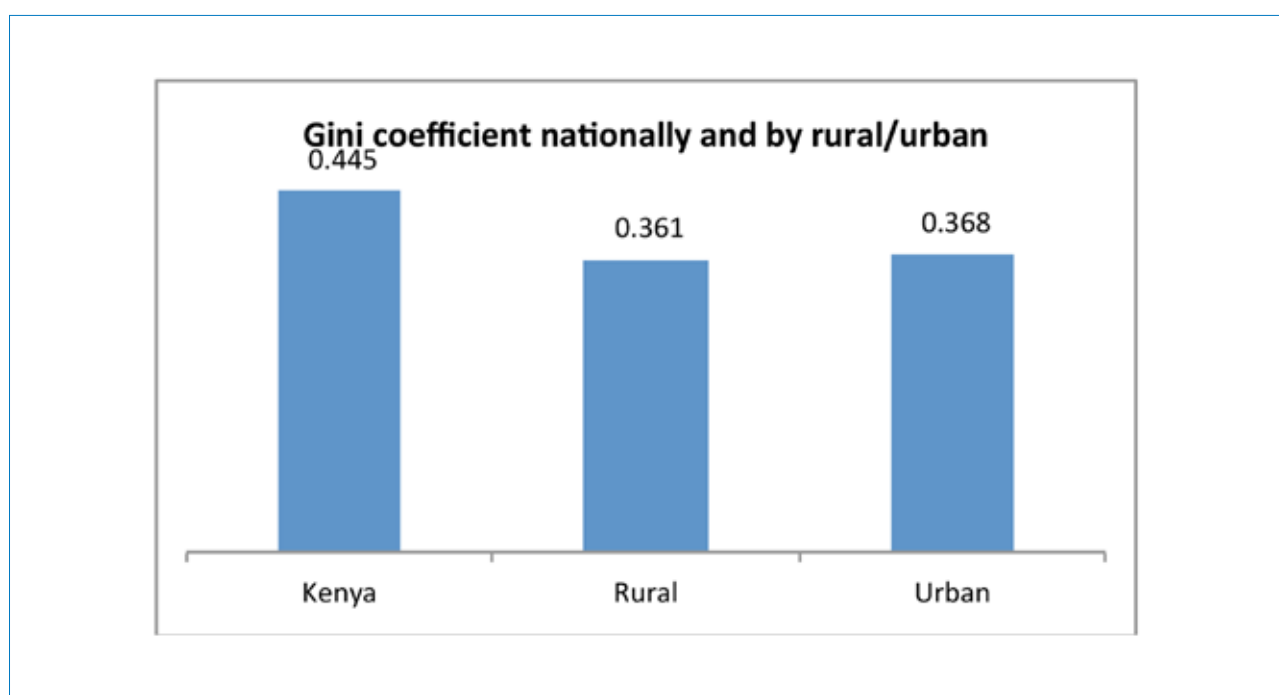


Figure 2.20: Gini coefficient nationally and by rural/urban

The national Gini coefficient is estimated at 0.445. This reflects a high level of inequality. The Gini coefficient in rural areas is 0.361 while in urban areas it is 0.368. Thus while inequality in urban areas appears similar to that in rural areas, rural areas have a disproportionately higher population at 68.8 percent compared with 31.2 percent in urban areas and control 45.4 percent of the consumption expenditure. Urban areas control 54.6 percent of consumption expenditure as indicated in figure 2.21. Once we bring them together, however, the inequality levels jump. The leap in national Gini coefficient is due to income gaps between rural and urban areas. A decrease in the income gap between urban and rural areas is therefore a necessary condition for reducing the national Gini coefficient. This is highlighted in the consumption expenditure patterns of rural and urban areas that reflect the prevailing income gaps between the populations in the two areas.

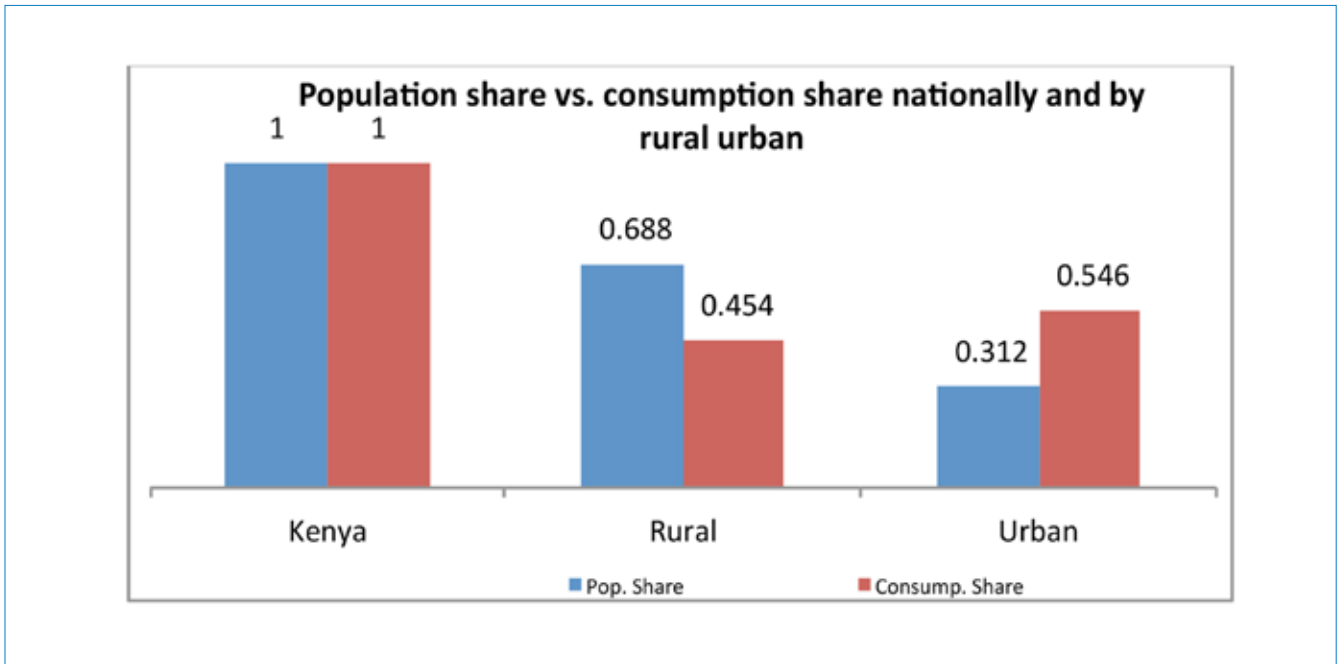


Figure 2.21: Population share vs. consumption share nationally and by rural urban

Population share vs. consumption share by county

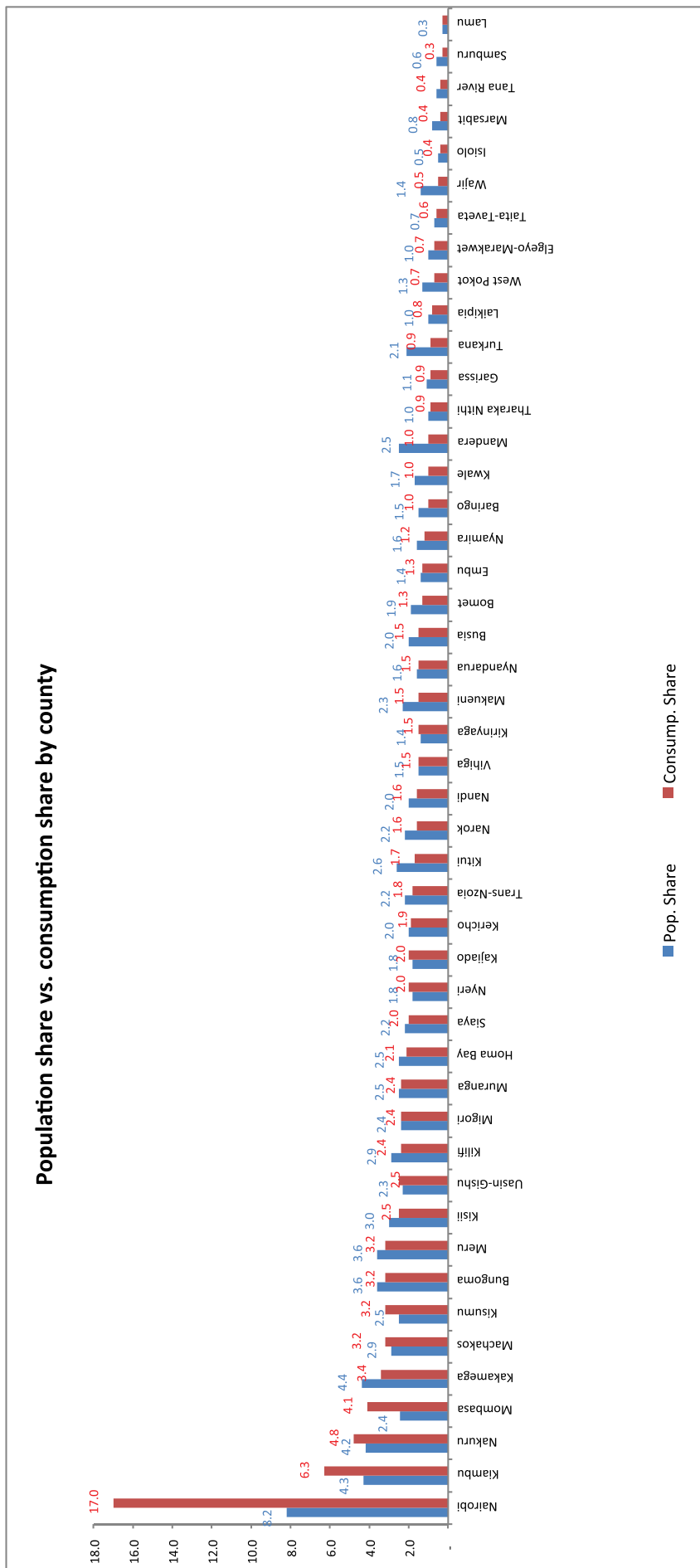


Figure 2.22: Population share vs. consumption share nationally and by rural urban

People living in cities and big towns such as Nairobi, Kiambu, Nakuru, Mombasa and Kisumu consume much more than their population share. Nairobi, for example, consumes twice its population share (see figure 2.22).

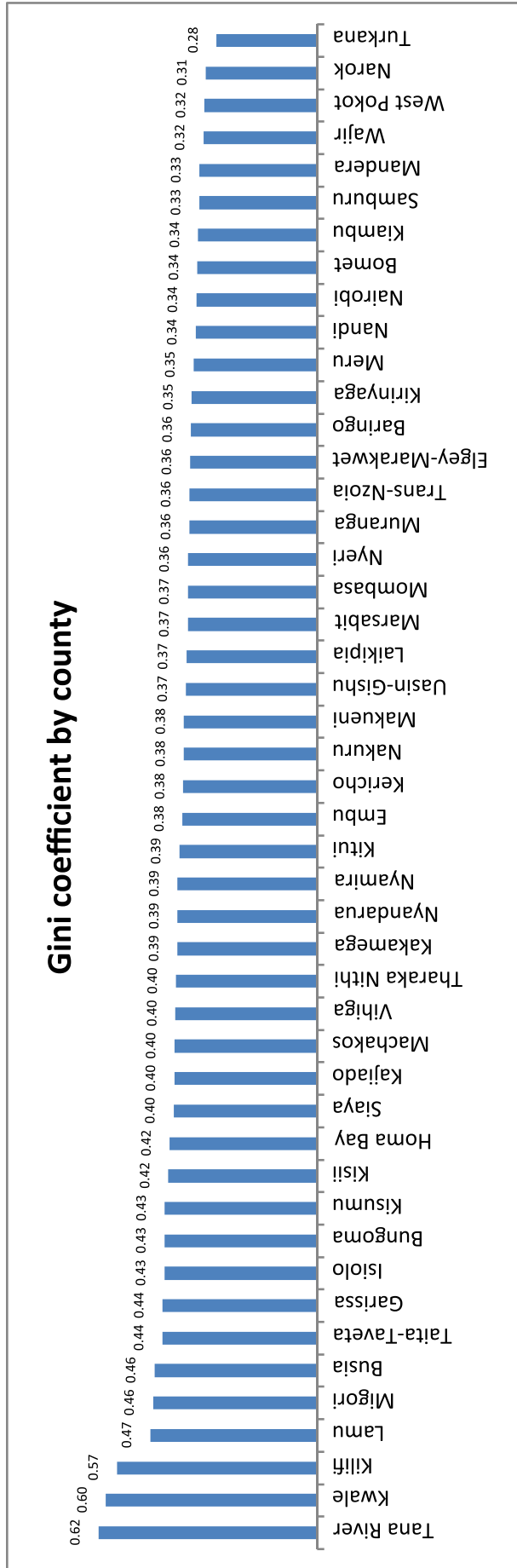


Figure 2.23: Gini coefficient by county

Counties with the greatest inequalities are Tana River, Kwale and Kilifi with Gini coefficients of 0.62, 0.60 and 0.57 respectively (see figure 2.23). These are situated in the Coastal region of the country as seen in figure 2.24. The most equal counties are Turkana, Narok, and West Pokot with Gini coefficients of 0.28, 0.31, and 0.32, respectively. Turkana County emerges as the poorest and the most equal county.

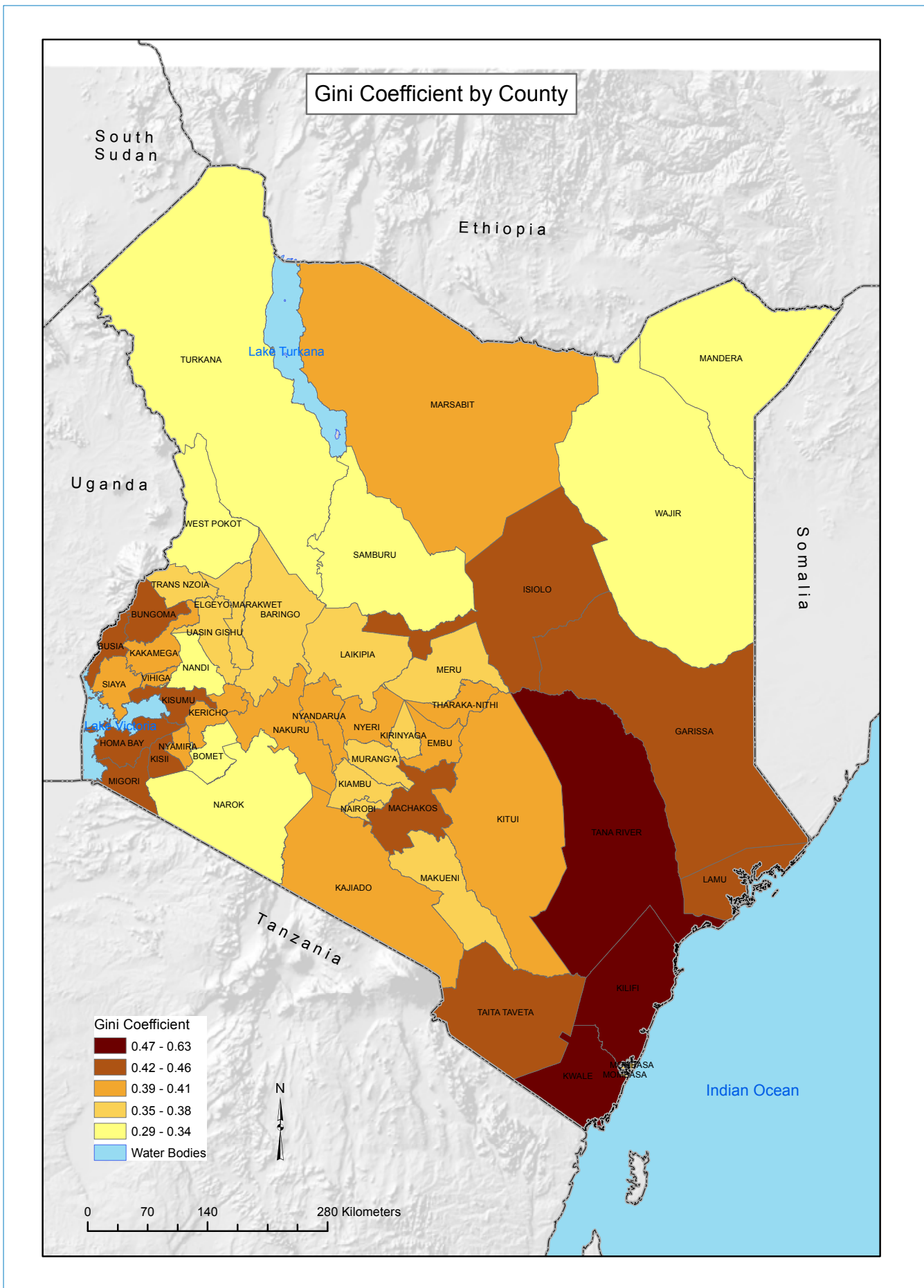


Figure 2.24: Gini coefficient nationally

2.5 Education

Education is recognised as a key determinant in human development through more opportunities and enhanced earnings. Unequal opportunities in access to education have long-term consequences that include intergenerational persistence of poverty. The level of education of the household head is a key determinant of future earnings, child health, and other social and economic outcomes (Bourguignon et al. 2007, Kovacevic, 2010). Higher educational attainment and more equal access across all segments of the population should enhance participation in the labour market, increase economic growth and contribute to more equitable distribution of incomes in the long term.

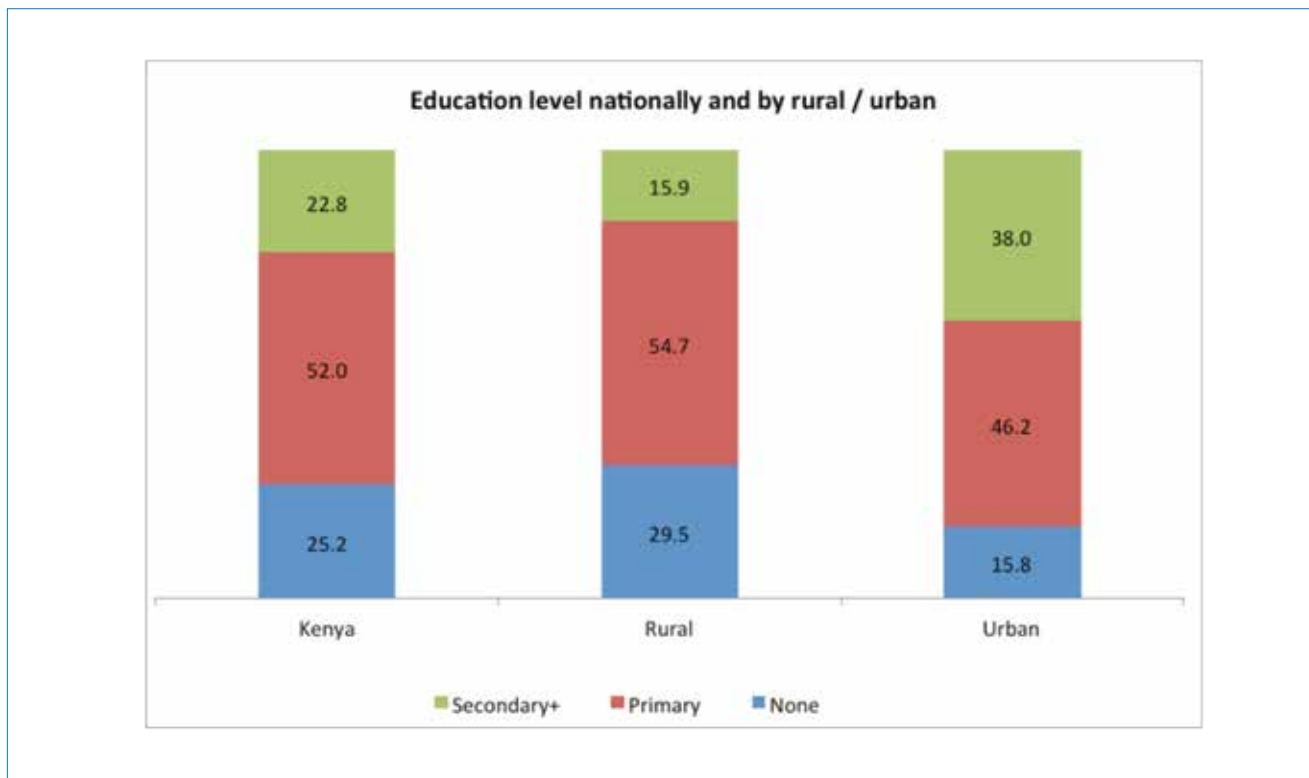


Figure 2.25: Education level nationally and by rural /urban

One quarter of Kenya's population has no education. Slightly over half of the population has primary education only and only 23 percent of the population has secondary education and above. In rural areas, one-third of the population has no education and slightly over half have primary education only. Only four out of every 25 people in rural areas have secondary education. Most (38 percent) of those with secondary education and above live in urban areas.

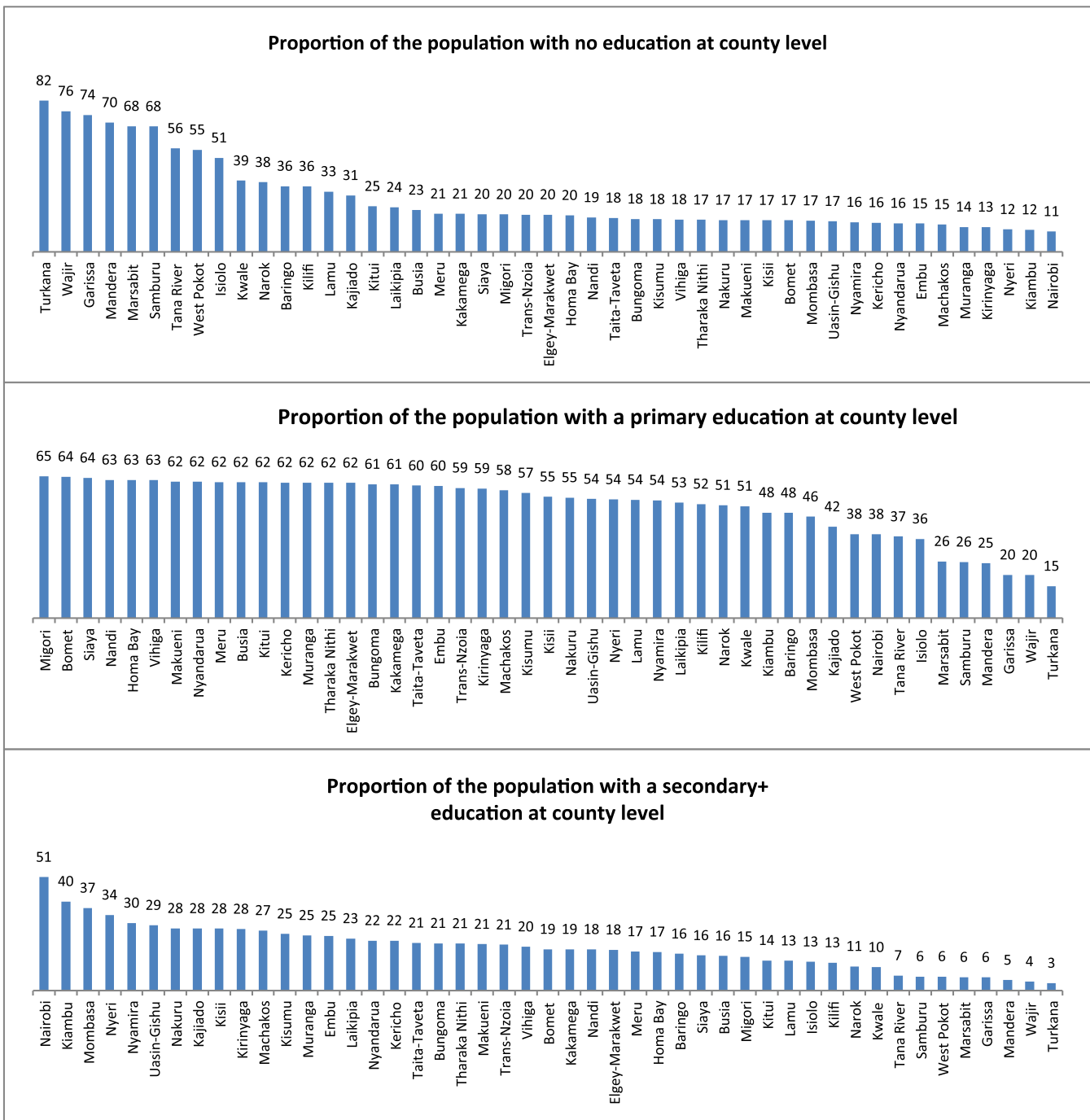
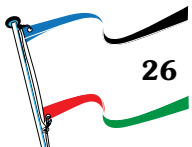


Figure 2.26: Proportion of the population with no education, primary education only and secondary+ education at county level

Figure 2.26: Proportion of the population with no education, primary education only and secondary+ education at county level

Individuals in Nairobi County have 15.4 times more access to secondary education or above than those living in Turkana County. They also have 2.2 times more access to secondary education than an average Kenyan. On



the other hand, individuals living in Turkana County are seven times less likely to have access to any secondary education than an average Kenyan. The proportion of individuals with secondary education in male headed households is higher than that in female headed households across all counties.

An individual in Embakasi West (the highest ranked constituency in access to secondary education) is 79 times more likely to have access to secondary education or higher than an individual in Loima (the constituency with lowest proportion of individuals with secondary education at 0.8 percent). If that individual comes from a female headed household in Loima Constituency, he or she has 120 times less access to secondary education than an individual in Embakasi West constituency or 28.5 times less access than an average Kenyan. An individual in a male headed household in Loima has 2.2 times more access to secondary education than an individual in a female headed household.

Turkana County, which has the highest proportion of the population with no education, is eight times that of the lowest ranked county, Nairobi. At constituency level, Loima has the highest proportion of individuals with no education at 93.0 percent compared with Makadara Constituency with the least at 8.2 percent, implying that a person in Loima is 11 times more likely to have no education than one in Makadara.

2.6 Employment

Kenya is characterised by a labour market that includes household based enterprises, subsistence agriculture and a small wage sector. The country's labour force is estimated at 20,249,800 persons, with an estimated 23.7 percent of the population engaged in wage employment. Figure 2.27 shows the national outlook of wage employment in Kenya.

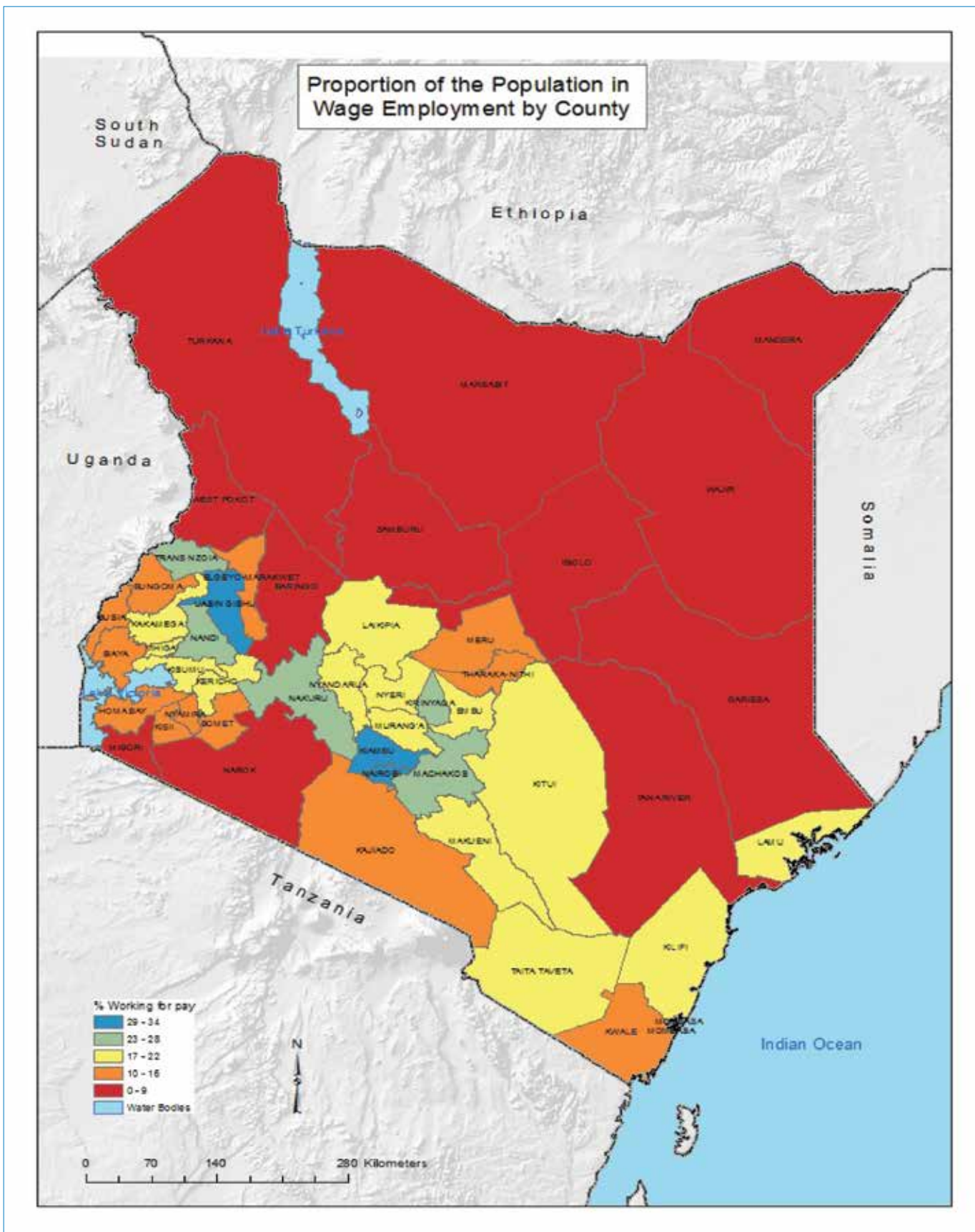


Figure 2.27: Proportion of the population in wage employment nationally

As indicated in figure 2.28, the majority of the country's population is engaged in agriculture (32.0 percent) on family owned land while 7.7 percent have no work. People working in urban areas are 2.4 times more likely to get paid than their rural counterparts. Most people in rural areas (44 percent) work on family agricultural holdings without pay. Urban areas also have more people without work than in rural areas.

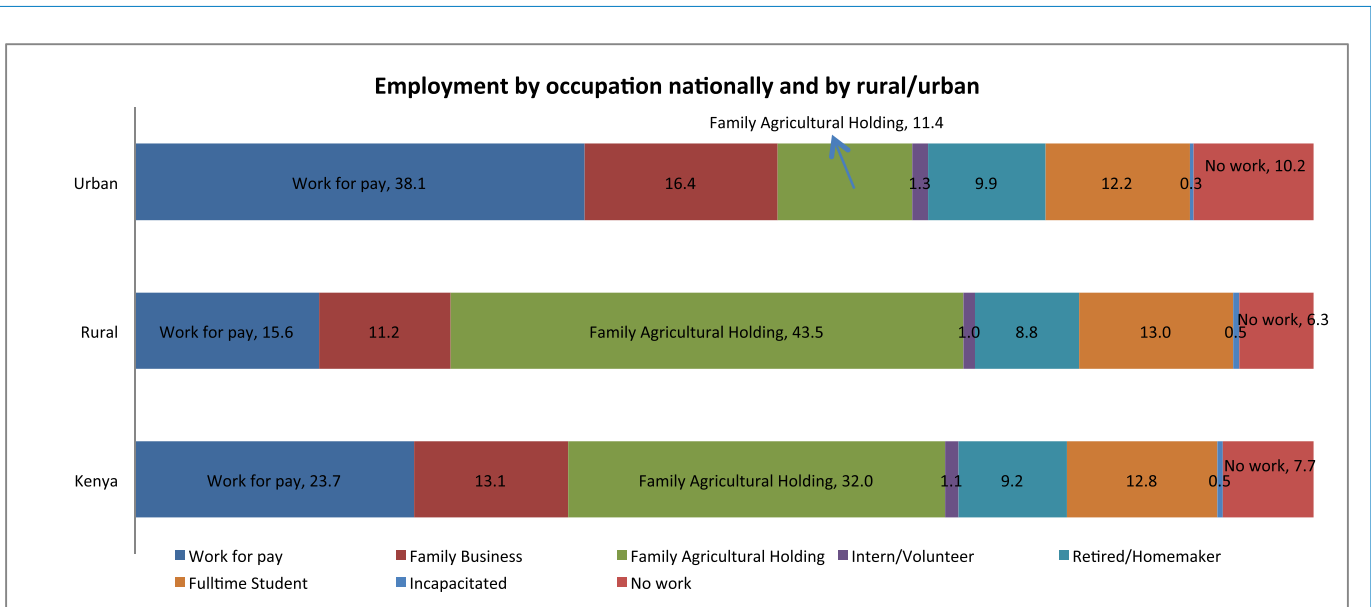


Figure 2.28: Employment by occupation nationally and by rural/urban

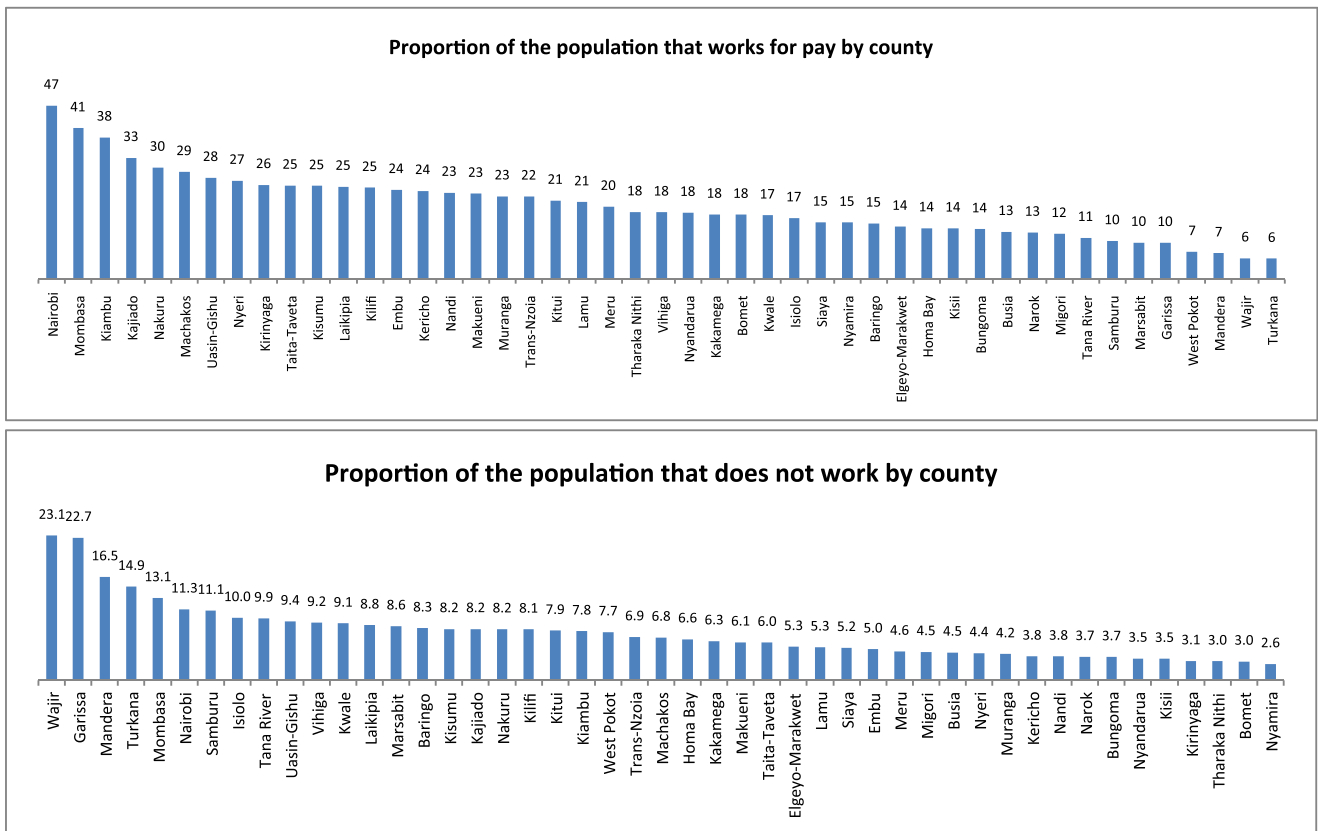


Figure 2.29: Proportion of the population that works for pay and those who do not work by county

The proportion of people working for pay in Nairobi County is 8 times more than the proportion of people working for pay in Wajir and Turkana Counties. Wajir and Turkana are also among the counties with the highest proportion of their populations without work as shown in figure 2.29. As expected they are among the poorest Kenya.

2.7 Employment and education

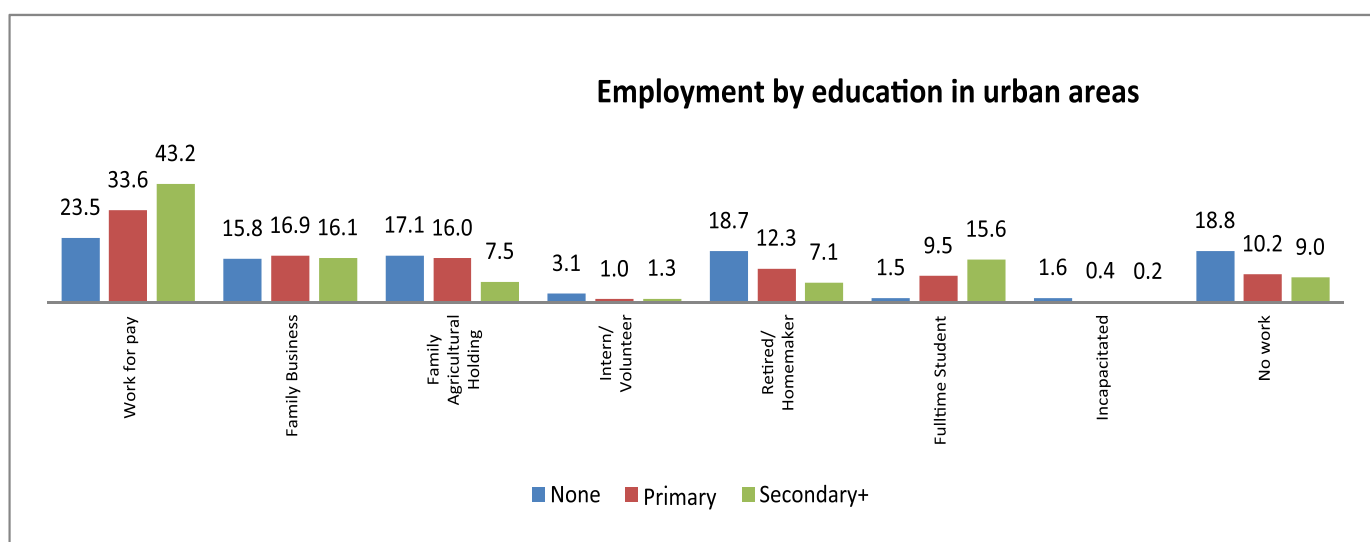
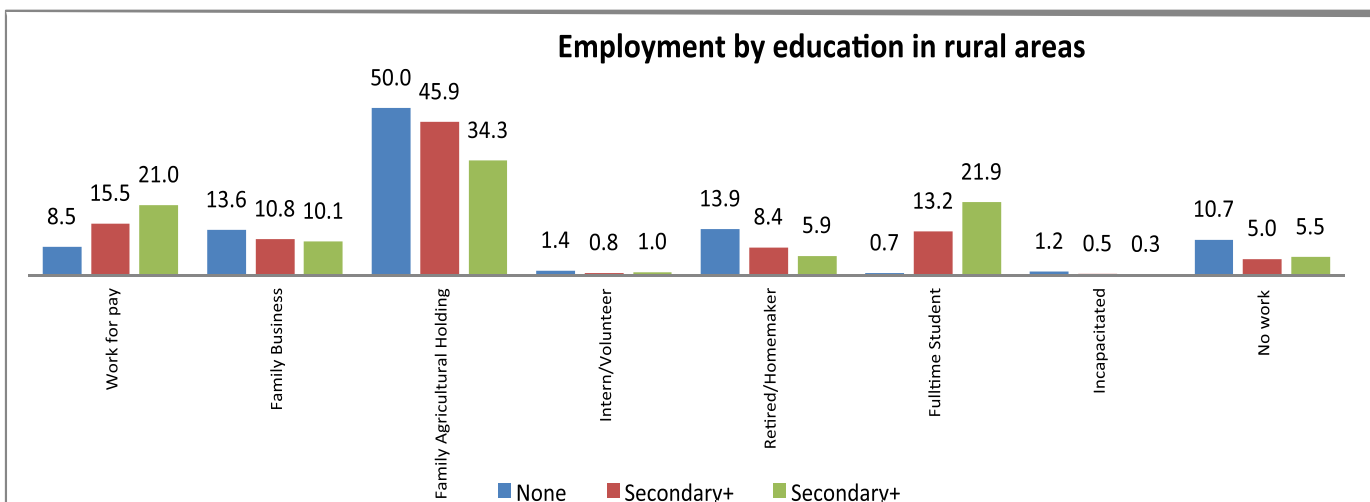
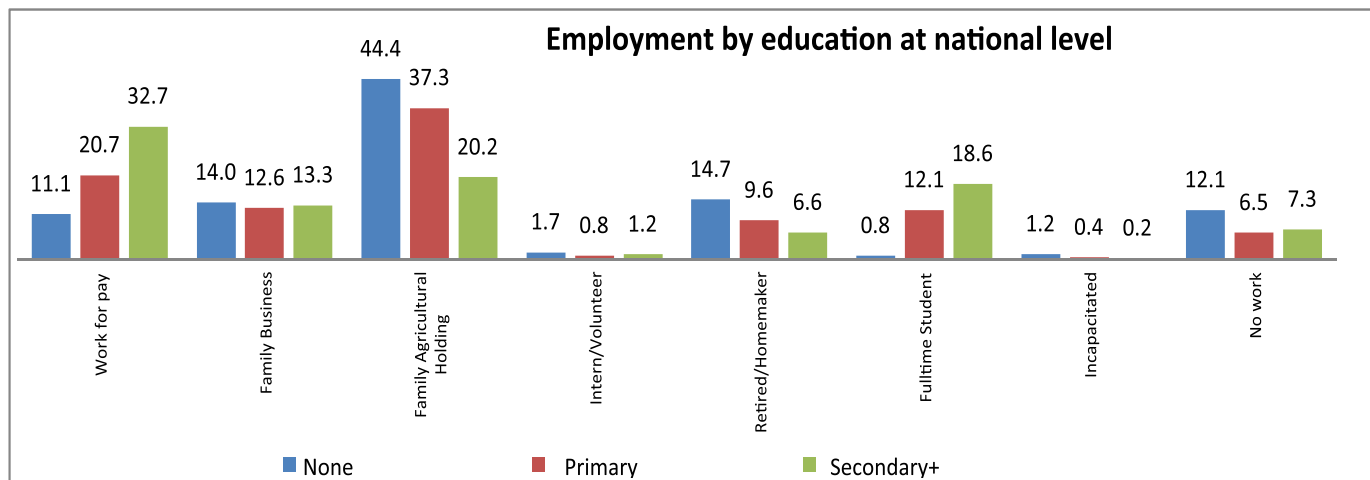


Figure 2.30: Employment by education nationally and by rural /urban

Educational attainment has implications for individuals' participation in the labour market. As evidenced in figure 2.30, people with no education in Kenya are 1.7 times more likely to have no work than people with secondary education or above. Employment for pay is higher for individuals with a secondary education in both rural (21.3 percent) and urban (43.2 percent) areas, even though employment for pay in urban areas is twice the employment for pay in rural areas. Overall, individuals living in urban areas who have no education are twice as likely to be without work than their rural counterparts. Higher educational attainment is associated with lower participation in agricultural activities.

2.8 Water

Among the most basic services and infrastructure are those related to water. Inequalities in access to improved sources of water are indicative of severe deprivation. The quality of water is related to the source - improved or unimproved. Improved water sources are less prone to contamination and hence are safer. Access to safe drinking water is critical for the health outcomes of individuals and households. Improved water sources include piped water, rain harvested water, borehole water and water from protected wells. Unimproved water sources include water from rivers or streams, dams, ponds, lakes, unprotected wells, unprotected springs, jabia, water vendors and other sources. Profiling households' access to water facilities will inform relevant authorities about the magnitude of the problem and highlight geographical areas for priority interventions.

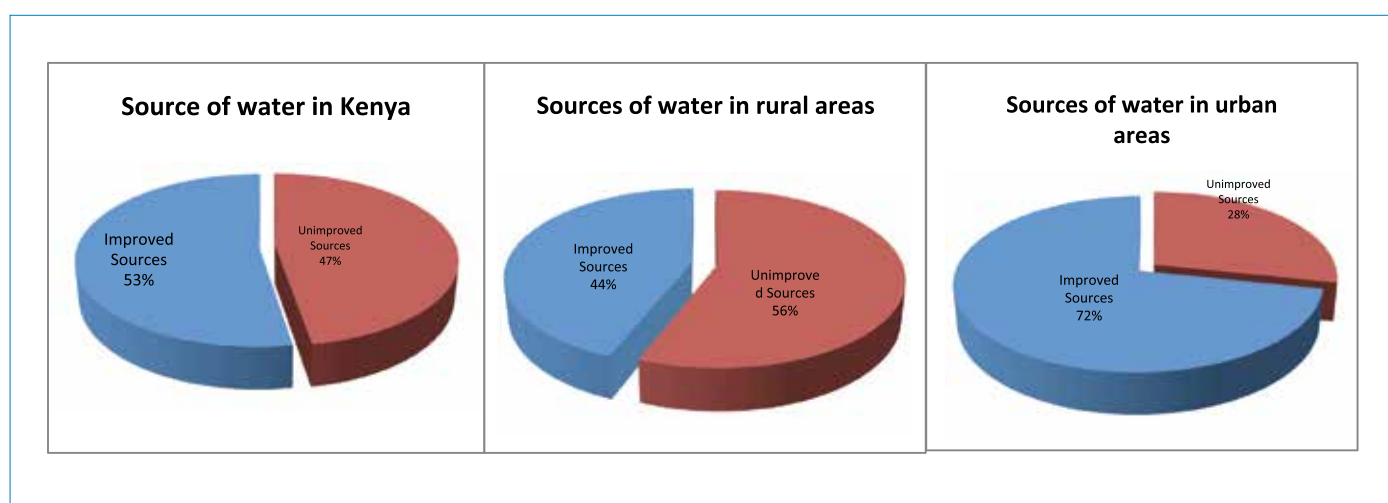


Figure 2.31: Source of water at the national level and by rural /urban

As illustrated in figure 2.31, just over 50 percent of Kenyans have improved sources of water. The highest access is in urban areas where 72 percent of the population has access to improved sources of water meaning that individuals in urban areas have one and half times more access to improved water sources than their rural counterparts. Twenty five percent of water in Kenya is piped (6 percent of which is in dwellings). Only 0.7 percent of the population in Kenya collect rain water.

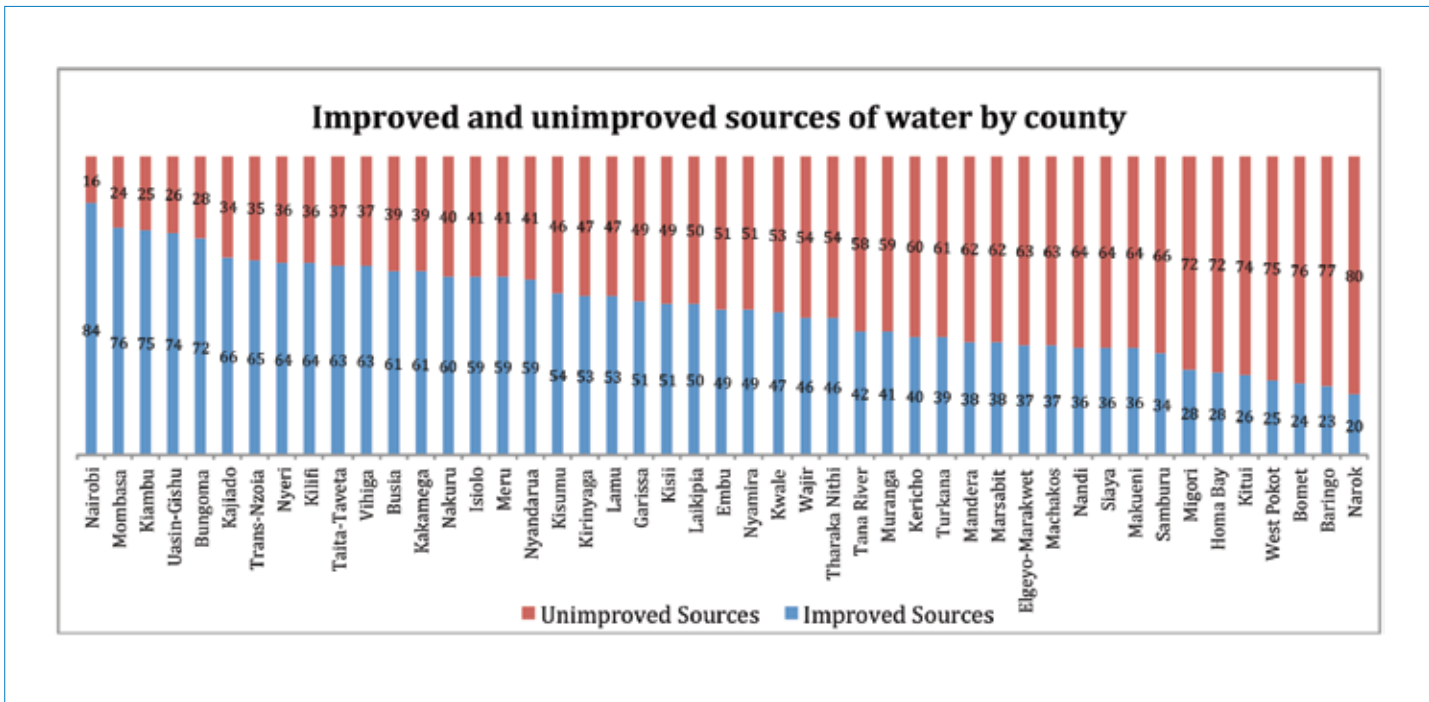


Figure 2.32: Improved and unimproved sources of water by county

As illustrated in figure 2.32, in Nairobi County, 8 out of every 10 people have access to improved water sources. This is 4 times more access to improved water sources than people living in Narok County, where only 2 out of every 10 people have access to improved sources of water. The constituency with the highest access to improved water sources is Embakasi North at 93.5 percent. Garissa Township Constituency (92.7 percent) and Dadaab Constituency (91.5 percent), both in Garissa County are in second and third place respectively in accessing improved water sources.

2.9 Sanitation

Access to safe human waste disposal methods is crucial for the health and wellbeing of people. Lack of access to safe human waste disposal facilities leads to higher costs to the community through pollution of rivers, ground water and higher incidence of air and water borne diseases. Other costs include reduced incomes as a result of disease and lower educational outcomes. Nationally, 61 percent of the population has access to improved methods of waste disposal as indicated in figure 2.33. Improved waste disposal modes include connection to main sewer, septic tank, cesspit, Ventilated-Improved Pit (VIP) latrine, and covered pit latrine. Unimproved methods include uncovered pit latrine, bucket latrine, bush and other sources.

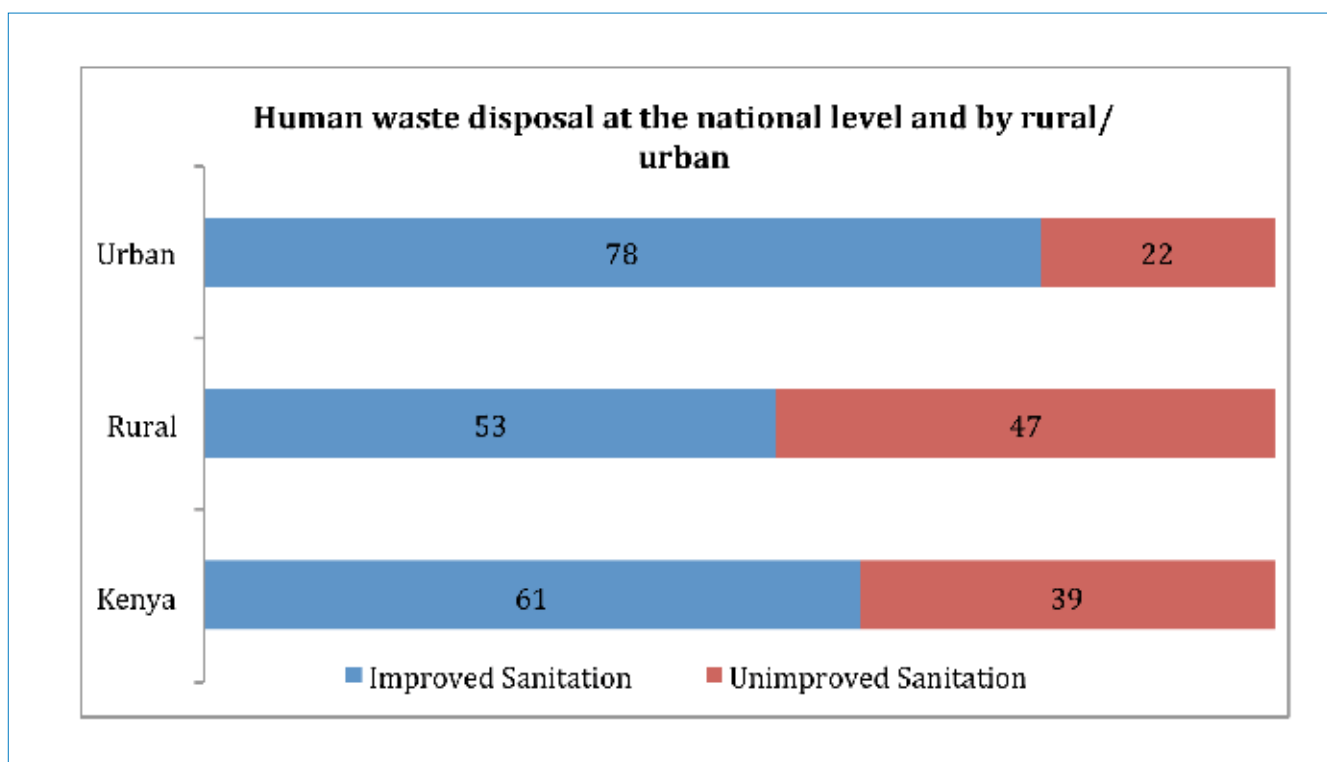


Figure 2.33: Human waste disposal at the national level and by rural/ urban

People living in rural areas have over two times more dependence on unimproved sanitation than their urban counterparts. Pit latrines in Kenya are the most common methods of waste disposal with 74 percent of Kenyans using them (VIP latrines are used by 5 percent; covered latrines are used by 48 percent; and uncovered latrines are used by 21 percent). A sizeable population (17.5 percent) still uses the bush to dispose human waste.

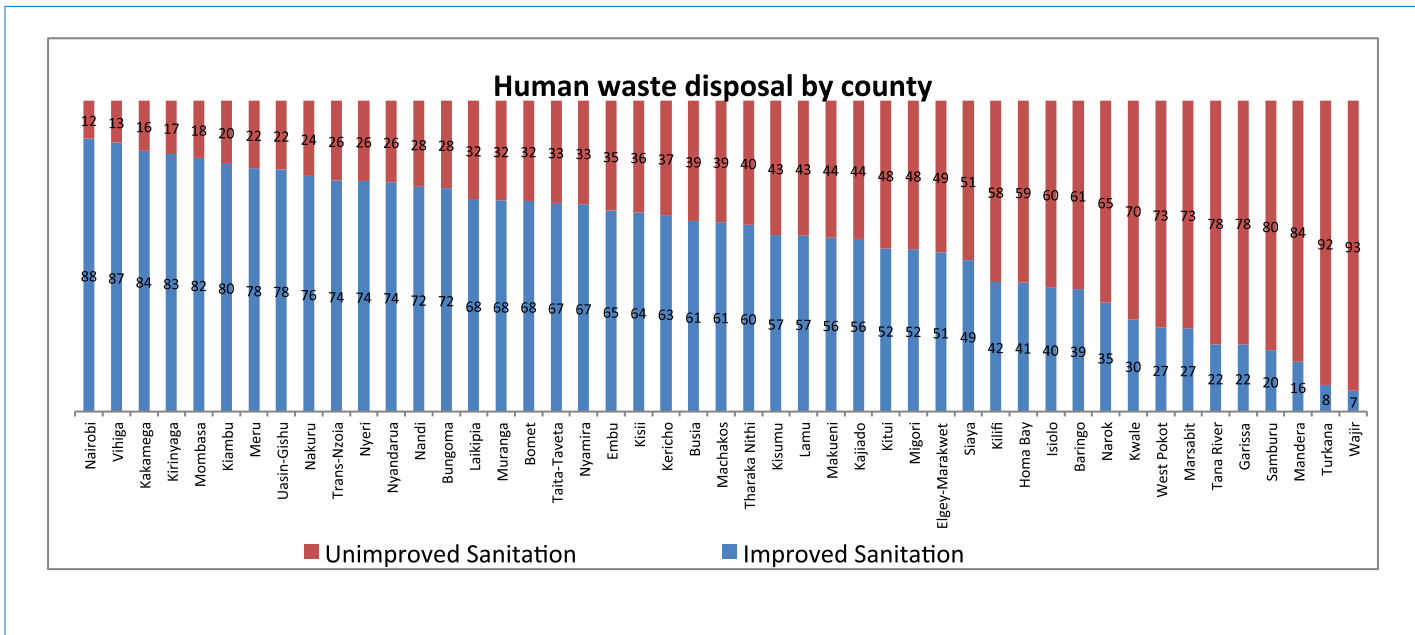


Figure 2.34: Human waste disposal by county

Access to improved modes of waste disposal in Nairobi County is 15 times more than in Wajir County as illustrated in figure 2.34.

2.10 Cooking fuel

Lack of access to clean sources of energy is a major impediment to development through health related complications such as increased respiratory infections and air pollution. The type of cooking fuel used by households is related to the socio-economic status of households. High level energy sources are cleaner but cost more and are used by households with higher levels of income compared with simpler sources of fuel, mainly firewood, which are used by households with a lower socio-economic profile (see figure 2.35).

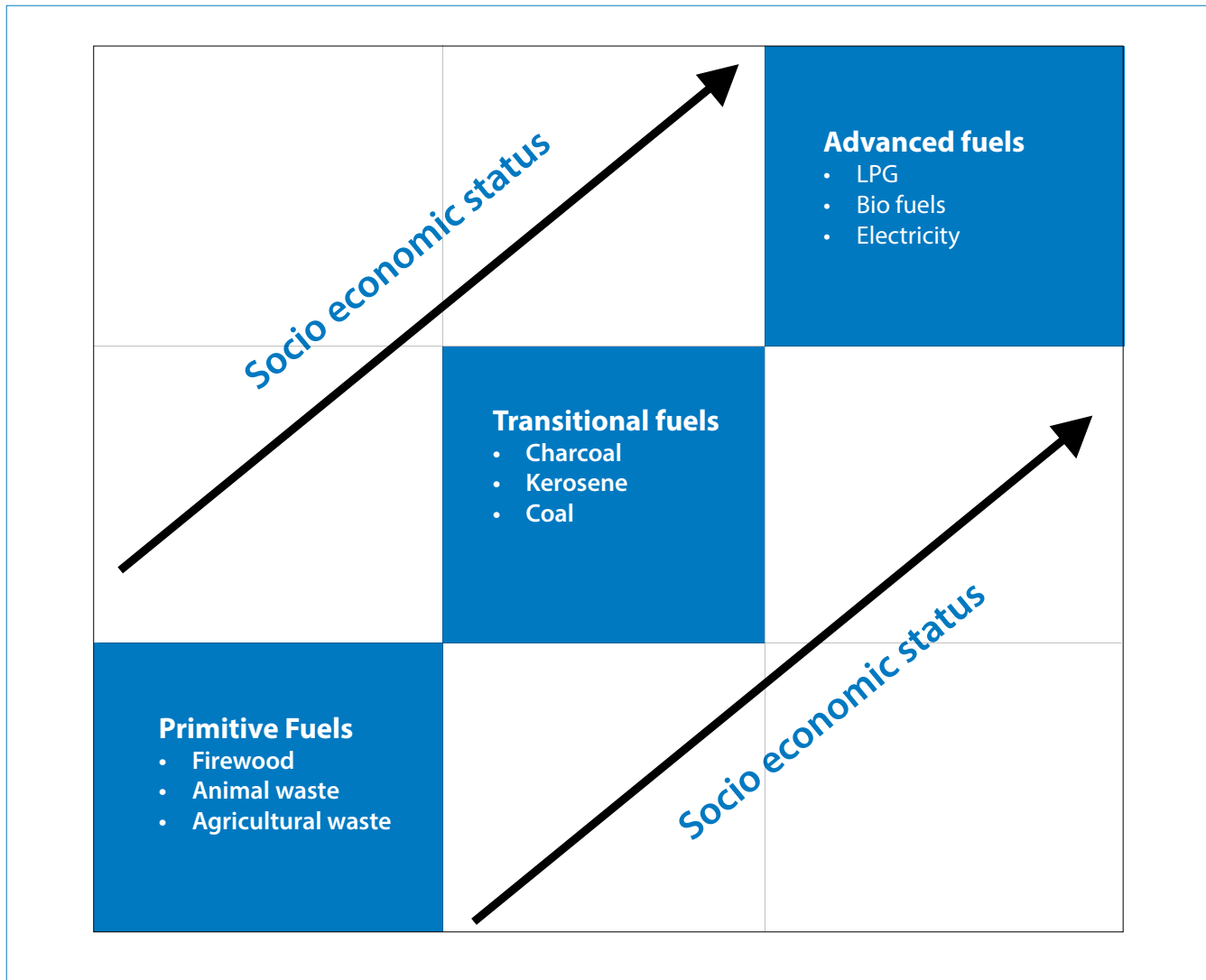


Figure 2.35: Energy sources and socioeconomic status

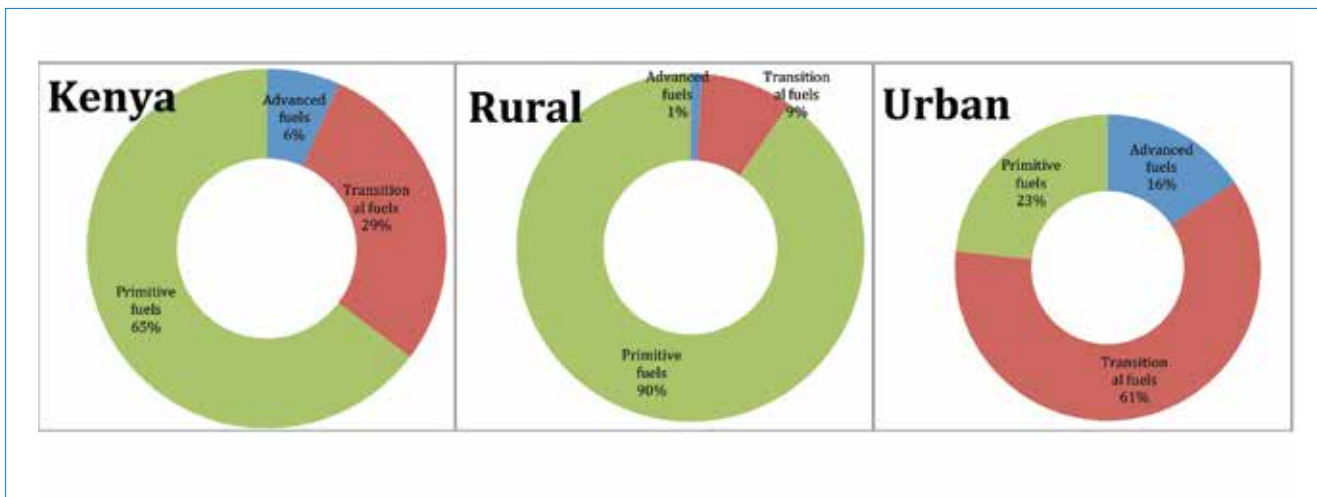


Figure 2.36: Main cooking fuel at the national level and by rural / urban

A total 65 percent of households in the country use primitive fuels, mostly firewood (64 percent), as the main source of cooking fuel, followed by transitional fuels, mostly charcoal (17.0 percent). Only 6 percent of households use advanced fuels, mostly LPG (5 percent). The use of advanced fuels is 16 times more while the use of transitional fuels is 7 times more in urban areas than in rural areas. The use of primitive fuels is 4 times more in rural areas than in urban areas (see figure 2.36).

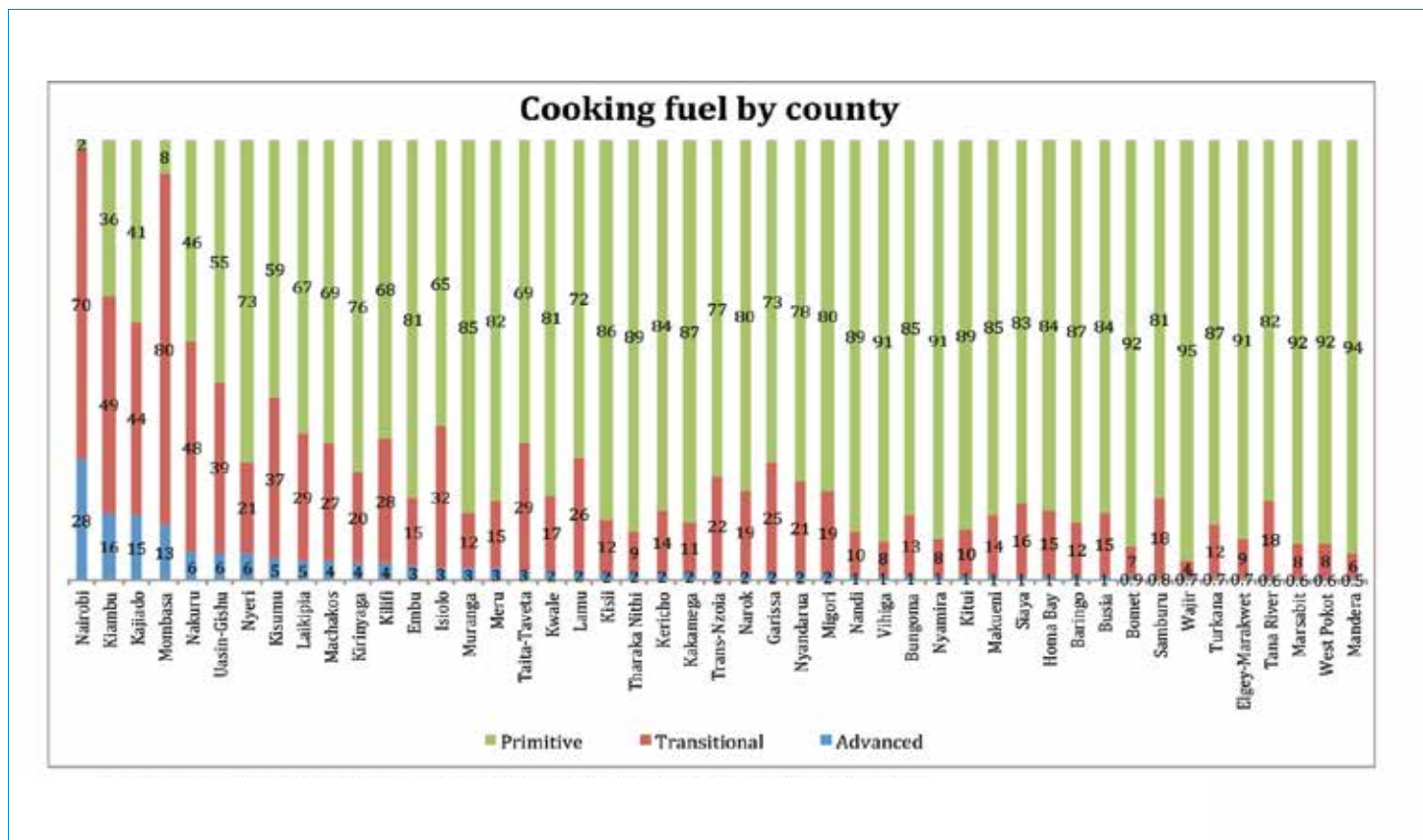


Figure 2.37: Cooking fuel by county

As illustrated in figure 2.37, the use of advanced fuels in Nairobi County is 56 times more than in Mandera County. The use of transitional fuels in Mombasa County is 40 times more than in Wajir County while the use of primitive fuels in Wajir County is 47.5 times more than in Nairobi County.

2.11 Lighting fuel

Nationally, the most commonly used form of lighting fuel in Kenya is tin lamps at 38 percent, followed by lanterns at 30 percent and electricity at 23 percent as illustrated in figure 2.38.

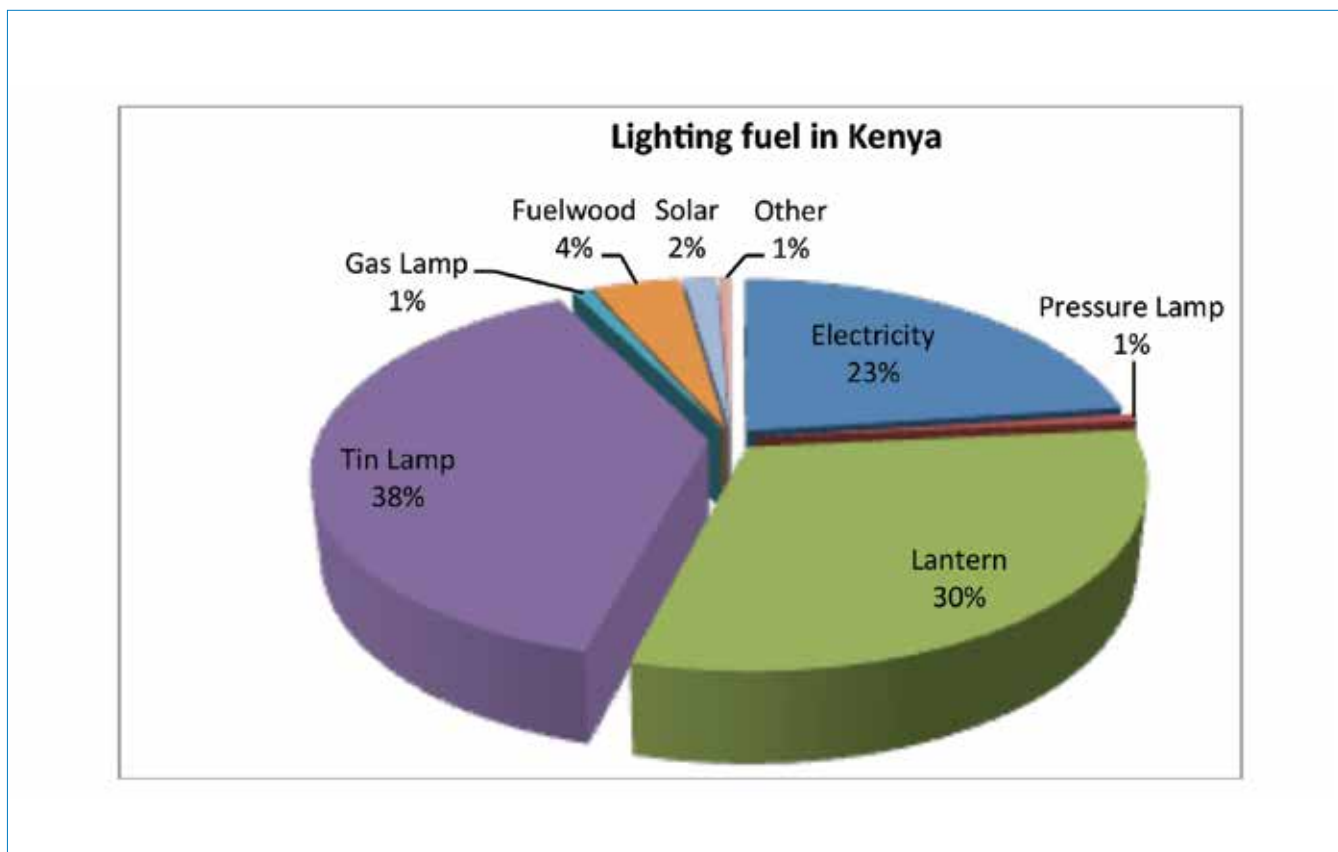


Figure 2.38: Lighting fuel in Kenya

The use of electricity is 10 times more in urban areas than it is in rural areas. 84 percent of households in rural areas use tin lamps and lanterns for lighting compared with 46 percent of households in urban areas, a difference of 39 percentage points. While the use of fuel wood for lighting in rural areas is significantly high at 7 percent, the use of solar for lighting is only 1.6 percent countrywide as illustrated in figure 2.39.

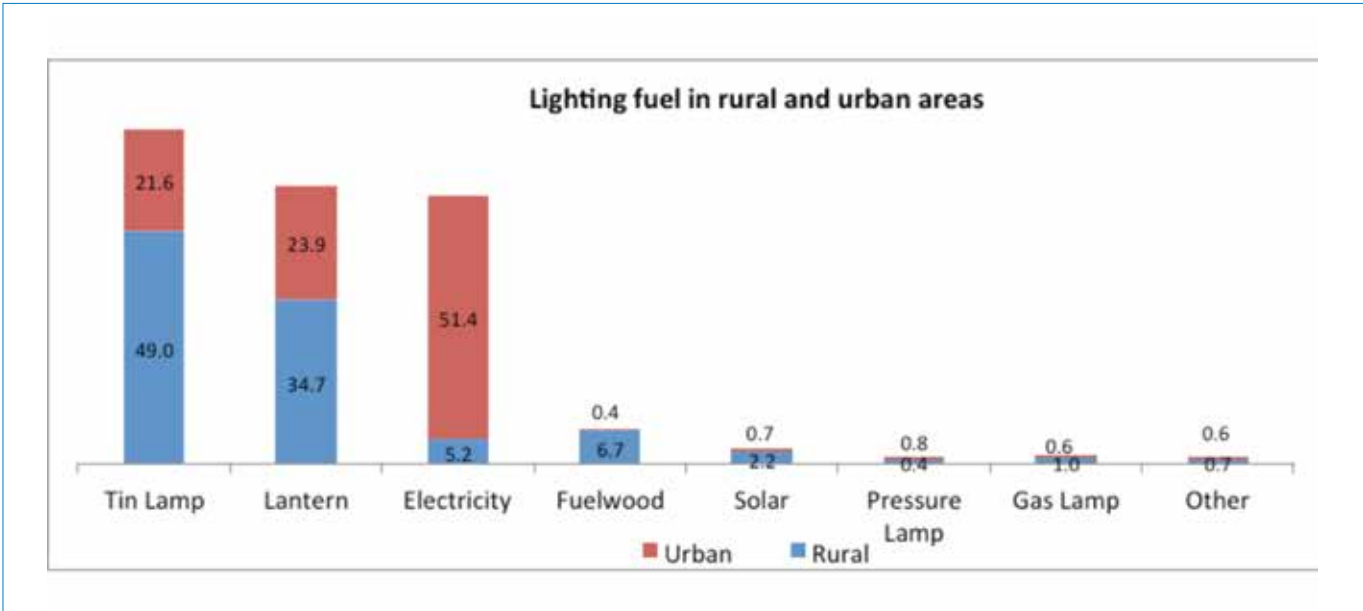


Figure 2.39: Lighting fuel in rural and urban areas

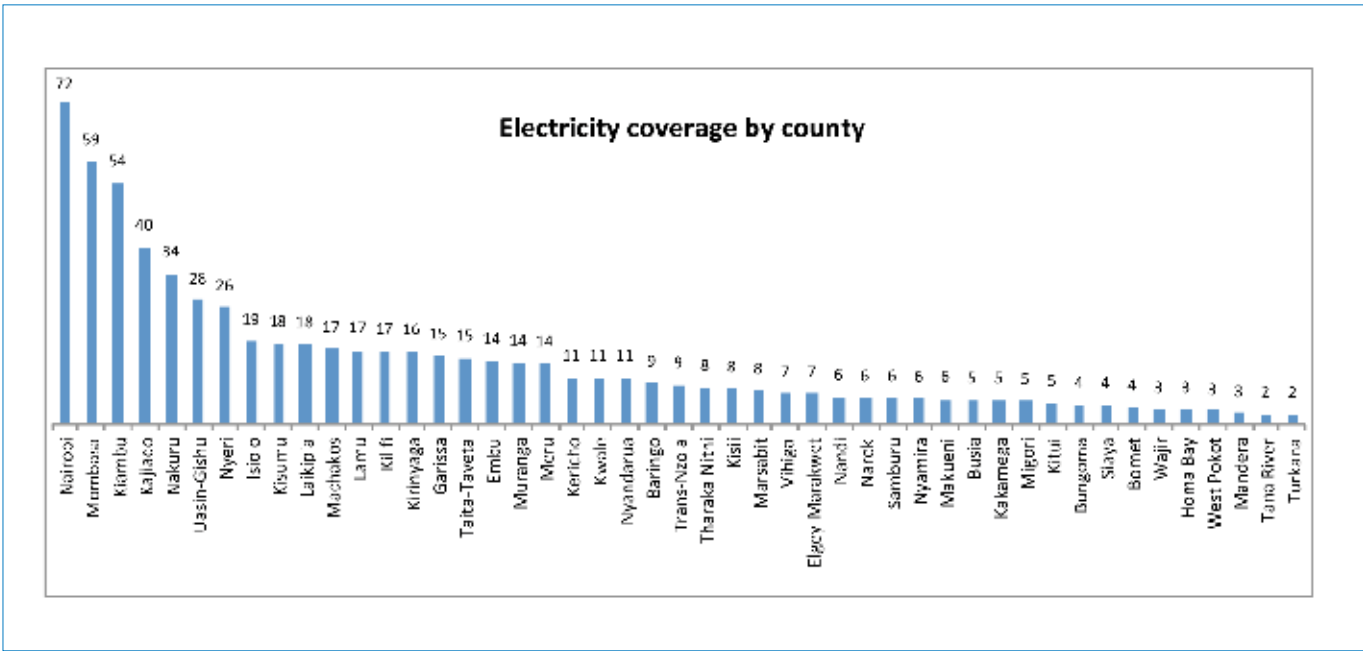


Figure 2.40: Electricity coverage by county

A household in Nairobi is 36 times more likely to have electricity for lighting than a household in Turkana and Tana River Counties as illustrated in figure 2.40.

2.12 Housing

Housing conditions are an indicator of the degree to which people live in humane and modern conditions. Materials used in the construction of the floor, roof and wall materials of a dwelling unit are also indicative of the extent to which they protect occupants from the elements and other environmental hazards. Housing conditions have implications for provision of other services such as connections to water supply, electricity, and waste disposal. Low provision of these essential services leads to higher incidence of diseases, fewer opportunities for business services, and lack of a conducive environment for learning. It is important to note that availability of materials, cost, weather and cultural conditions have a major influence on the type of materials used in different localities.

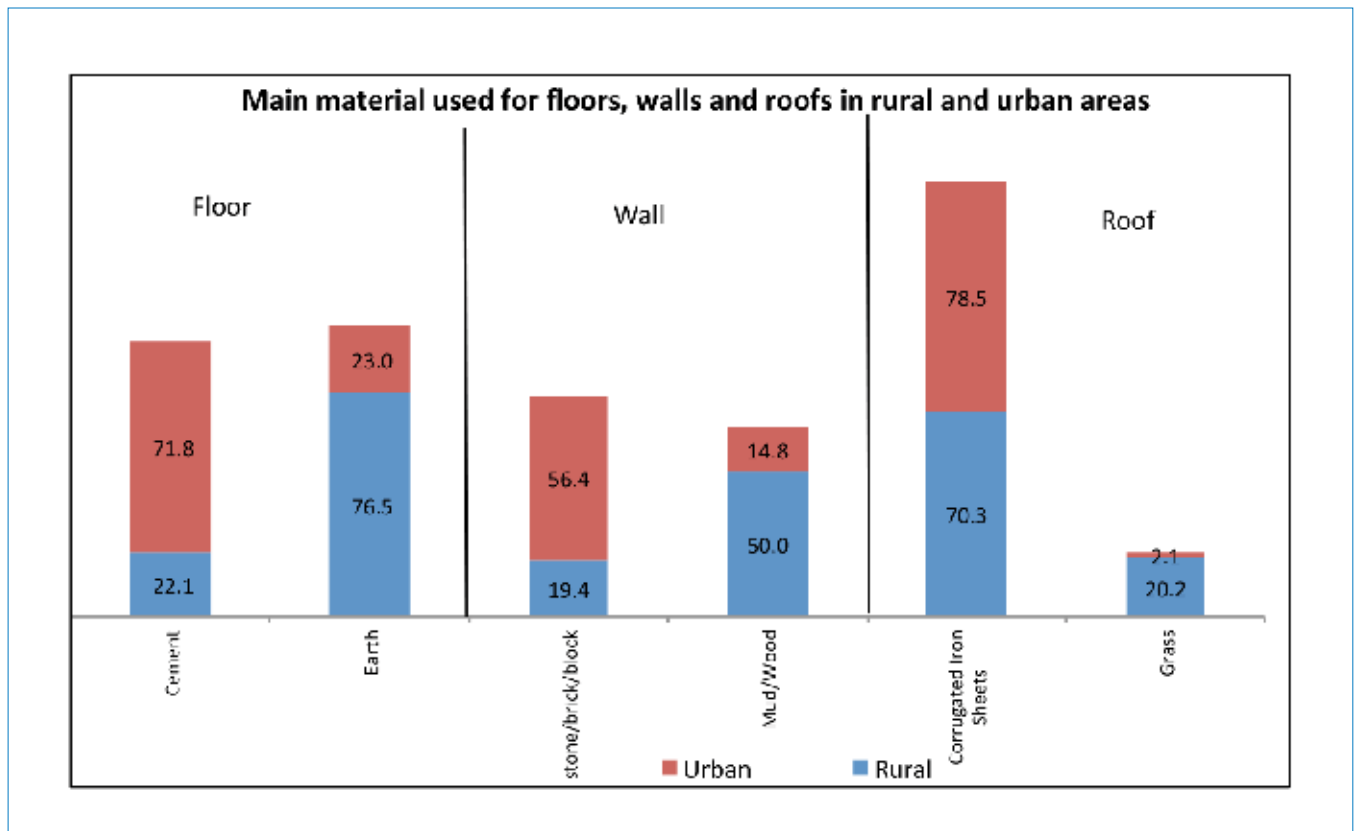


Figure 2.41: Main material used for floors, walls and roofs in rural and urban areas

- Floors

The use of cement floors is three times more common in urban than in rural households. Conversely, the use of earth floors is also three times more common in rural households than in urban ones.

- Walls

The use of stone/bricks/blocks walls is six times more common in urban areas than in rural areas just like the use of mud and wood is three times more common in rural than in urban areas.

• Roofs

Iron sheets are the most common roofing material in Kenya for both rural and urban areas.

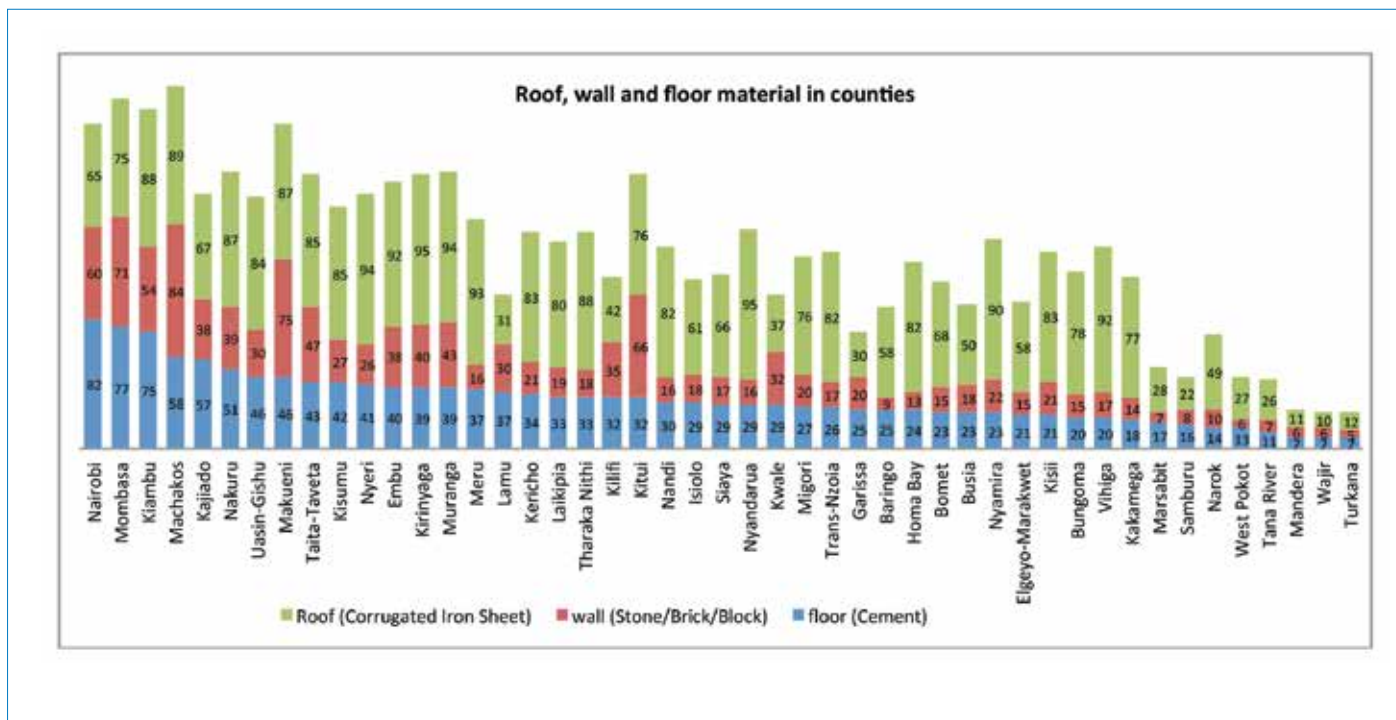


Figure 2.42: Roof, wall and floor material in counties

Turkana, Wajir and Mandera counties have the least proportions of their populations using corrugated iron sheets for roofing their houses, stone, brick or block for walling their houses as well as cement for flooring their houses. The variations in housing material reflect both access to resources and lifestyle differences stemming from pastoralist versus more sedentary living.

3. Conclusion

Using the census data, 'Exploring Kenya's inequality: Pulling apart or pooling together?' publications present monetary measures of inequality and socio-economic inequalities in important livelihood parameters to show the levels of vulnerability and patterns of unequal access to essential social services at the national, county, constituency and ward levels.

With the new administrative boundaries, KNBS and SID seek to provide comprehensive baseline data on the state of affairs with regard to inequality in Kenya. As illustrated in these publications, there are extreme inequalities. The counties with the most income inequalities as measured by the gini coefficient are Tana River, Kwale, Kilifi, Lamu, Migori and Busia. However, the counties that are consistently mentioned among the most deprived hence have the lowest access to essential services compared to others across the following nine variables i.e. poverty, mean household expenditure, education, work for pay, water, sanitation, cooking fuel, access to electricity and improved housing are Mandera (8 variables), Wajir (8 variables), Turkana (7 variables) and Marsabit (7 variables).

We envisage that this work will be particularly helpful to county leaders who are tasked with the responsibility of developing their jurisdictions and ensuring equitable opportunities for all while addressing the needs of marginalized groups and regions. We also hope that it will help in informing public engagement with the devolution process and be instrumental in formulating strategies and actions to overcome exclusion of groups or individuals from the benefits of growth and development in Kenya.

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The Kenya National Bureau of Statistics (KNBS) is a semi-autonomous organization established under Statistics Act 2006 as the principal agency for collecting, compiling, analyzing, publishing and disseminating statistical information needed for planning and policy formulation and is the custodian of official statistical information. More specifically the Bureau is charged with responsibility of: planning, authorizing, co-coordinating and supervising all official statistical programmes undertaken within the National Statistical System (NSS); establishing standards and promoting the use of best practices and methods in the production and dissemination of statistical information across the NSS; collecting, compiling, analyzing, abstracting and disseminating statistical information on matters specified in the First Schedule of the Statistics Act; conducting population and housing census every ten years, and such other censuses and surveys as the board may determine; and maintaining a comprehensive and reliable national socio-economic database.

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