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FINANCING FOR A FAIRER, MORE PROSPEROUS KENYA
A REVIEW OF THE PUBLIC SPENDING CHALLENGES AND OPTIONS FOR SELECTED ARID AND SEMI-ARID COUNTIES

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

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EXECUTIVE SUMMARY

The constitution adopted by Kenya in 2010 is a remarkable document. It shifts the locus of political authority towards devolved governments, establishes a range of social and economic rights and includes a bill of rights. The constitution also sets out some principles on public spending. Future governments will be required to ensure that revenue and budget allocations meet constitutional requirements for 'equitable sharing'. These requirements include affirmative action aimed at reducing disparities between regions, combating marginalization, and raising the quality and coverage of basic service provision in areas that are lagging behind.

These are bold aims. Kenyan society is fractured by deeply entrenched vertical and horizontal inequalities, which have been perpetuated and reinforced over time by public spending patterns that systematically disadvantaged some groups and areas. The arid and semi-arid regions stand out as areas of acute marginalization. Human development indicators for these regions fall far below the national average, with populations facing high levels of poverty, food insecurity and deprivation in access to basic services. It follows that the treatment of these counties under the

'equitable sharing' rules governing public spending will provide a litmus test of whether the principles of the new constitution are being translated into public policy.

This paper looks at the implications of the constitution's public spending provisions for 12 Arid and Semi-Arid Land (ASAL) counties.[1] Identified by the Ministry of State for Development of Northern Kenya and Other Arid Lands as areas of specific concern on the basis of their deeply entrenched patterns of disadvantage, these counties have some of the worst social indicators in Kenya. Poverty incidence in several counties reaches levels in excess of 80 percent. Poverty in the ASAL counties is also more intense. While the national poverty gap for Kenya is 16 percent, there are seven ASAL counties in which it is over 30 percent. Food security problems are endemic. Access to basic services is limited, with coverage levels far below those in other counties. Drawing on a range of sources, we map deprivation in some key dimensions of human development and rank the counties on a national performance scale covering all 47 of the new counties.

Education is highlighted as an area of special concern. As in other areas, Kenyan society is marked by deep

disparities in opportunities for education. These disparities are closely associated with wider inequalities linked to poverty, gender and location. Here, too, the 12 ASAL counties covered in this paper are sites of acute disadvantage, as illustrated by the following facts:

- With 18 percent of Kenya's primary school-age children, the ASAL counties account for 46 percent of the out-of-school population.

- Fewer than 10 percent of the children in most of the ASAL counties that we cover negotiate the journey from school entry through the last grade of primary school.

- When Kenya's 47 counties are ranked by the ratio of girls-to-boys in primary school, the ASAL counties account for 11 of the 13 counties with the greatest gender gaps.

- The ASAL counties account for just 8 percent of candidates sitting the Kenya Certificate of Primary Education and just 4 percent of those sitting for the Kenya Certificate of Secondary Education.

- Girls in the 12 ASAL counties are less likely to sit the secondary school leaving exam and far less likely than boys to secure a higher grade. Female students are 40 percent less likely to secure a B+ grade or higher.

The state of education in the 12 ASAL counties has a wider significance. If Kenya is to accelerate progress towards the 2015 Millennium Development Goal (MDG) target of universal primary education and raise average learning achievement, government will need to pay far more attention to the most marginalized counties. Failure to tackle education inequalities in general and the marginalization of children in the ASAL counties in particular is acting as a powerful brake on progress towards national goals.

Moves towards greater equity in public spending could help to redress the marginalization of the 12 ASAL counties and wider inequalities. However, translating constitutional principle into public spending strategies is not straightforward. The Kenyan government needs to consider how much weight to attach to specific disadvantages, the availability of data, and the balance sheet of potential winners and losers. Looking beyond the considerable technical difficulties in all of these areas, any reform of public spending will be shaped by institutional processes that reflect the relative strength—and weaknesses—of different political constituencies in shaping decisions.

The debate over the constitutional provisions on equitable sharing raises a question that goes to the heart of national governance in Kenya—namely, who gets what from the national budget? Answers to that question will be determined by the formulae that govern budget allocations. Focusing on horizontal disparities between counties, we consider a range of options that could help to translate constitutional principle into budget practices. Among the central recommendations:

- **The constitution's 'equitable sharing' provision should apply to *all* public spending, and not just the devolved budgets.** The distinction is important. Devolved financing will cover up to 15 percent of national revenue, with a further 0.5 percent of revenue allocated through an Equalization Fund. Much of the debate in Kenya has tended to focus on these areas. However, the constitution requires that "all aspects of public finance…promote an equitable society" (Government of Kenya 2011a). Both the letter and the spirit of its public spending provisions require that government extends the 'equitable sharing' principle to the 85 percent of the budget falling outside of the more narrowly-defined devolved funds.

- **The government of Kenya should adopt a redistributive approach to public spending aimed at equalizing opportunity.** There are clearly limits to the implicit marginal rate of tax that can be applied to finance transfers from richer to poorer counties.

However, current inequalities in access to basic services, opportunities for education and economic infrastructure are a barrier to economic growth and efficiency, as well as a source of inequality—and there is no inherent trade-off between equity on the one side and economic growth on the other. Linked to the right policy framework, more progressive public spending has the potential to create a win-win scenario for equity and economic growth. Experience from other countries—including more financially devolved states like India and Brazil— demonstrate intragovernment fiscal transfer has helped to mitigate horizontal inequalities without compromising economic growth.

- **Public spending formulae should reflect a needs-based approach to equitable sharing, striking a balance between equal per capita transfers and weighting for disadvantage.** Some policymakers in Kenya see equitable financing as synonymous with equal per capita transfers. The Commission for Revenue Allocation (CRA) has proposed that 60 percent of the devolved budget should be allocated on the basis of equal per capita transfers. This is an extremely narrow and partial interpretation of the term 'equity'—and one that rests uneasily with the provisions of the new constitution. If the aim is to narrow inequalities in access to basic services and support affirmative action for marginalized counties, as requested by the constitution, then public spending allocations have to be positively associated with need —that is, the greater the degree of disadvantage, the higher the level of support provided.

- **The poverty gap, as distinct from the poverty headcount and incidence, should be a primary indicator of disadvantage.** Reflecting the broader preference for an 'equal transfer' model, initial proposal from the CRA in February 2012 recommended an equal cash transfer for every person below the national poverty line. This is a flawed starting point because it ignores the depth of their poverty. The 'poverty gap' is a more sensitive indicator of poverty-related disadvantage since it captures the distance of the average poor person from the poverty line. We

recommend that consideration be given to a devolved budget formula that attaches a weight of 30 to 50 percent to the poverty gap, as indicated by the share of each county in the total gap.

- **More weight should be attached to the number of out-of -school children of primary school age and to wider indicators of disadvantage in determining basic education budget allocations.** Current education financing norms allocate resources almost entirely to reflect numbers of children in school. This has a perverse unintended effect: counties with lower levels of school participation are penalized. Most of the 12 ASAL counties that we cover lose out. For example, Turkana receives less than one-half of the public financing for education that it would receive if resources were allocated on a per child basis. Current norms for budget transfers attach at best a marginal weight for other indicators that influence opportunities for education, including poverty, parental literacy, gender, livelihood patterns and wider social factors. We advocate a formula-based approach that attaches more weight to (i) the total number of school-age children in a county (ii) the poverty gap and (iii) broader indicators of deprivation, including gender disparities. The paper recommends that consideration be given to an approach that weights in the following ranges: 50 percent for children in school, 20 percent for children not in school, 20 percent for household poverty, 5 percent for gender disparity and 5 percent allocated to a special fund for arid and pastoralist counties.

- **Secondary education funding formulae should be revised to reflect the acute disadvantages facing the 12 ASAL counties.** Kenya's secondary education budget is increasing both in real terms and as a share of the overall education budget. With few children—especially girls—in the ASAL counties progressing beyond secondary school, there is a danger that budget allocations will increasingly mirror horizontal inequalities in opportunity. We recommend a formula-based approach that attaches more weight to out-of-school secondary school-age children, with an additional 10 percent of budget allocations weighted to reflect gender disparities.

- **More equitable financing formulae in education should be linked to more effective policies for expanding access and improving learning achievement.** The ASAL counties covered in this report have some of the lowest levels of participation in education and some of the worst learning achievement levels in Kenya. More equitable public spending *could* help to change this picture, but additional finance has to be linked to policies that deliver results. Cash transfers to protect vulnerable households from economic shocks and promote demand for education, bursaries for girls, increased funding for teacher recruitment and retention, and early childhood programs all have a role to play. The pastoralist and nomadic livelihood patterns of many people in the ASAL counties also require innovative approaches to education delivery, including investment in distance learning and mobile schools. Like counties across Kenya, the 12 ASAL counties would benefit enormously from a functioning learning assessment system, improved teacher training and strengthened in-service support.

- **Looking to the future, policymakers in Kenya should consider the development of a public financing model geared towards the provision of a 'social minimum' of basic services.** Through its national commitments to the Millennium Development Goals and the social and economic rights enshrined in the constitution, Kenya has committed to provide a basic standard of provision for all citizens. As the devolved system develops over time, county-level and national authorities should estimate the financing gap facing each county with respect to the provision of key basic services. That gap should figure as a 'needs assessment' component in national and devolved financing formulae.

- **The government of Kenya and aid donors should invest in building the national statistical capacity required to underpin a devolved financing system and to inform approaches to equitable sharing.** Kenya has a relatively strong and professionalized set of institutions generating data on a wide range of social indicators, including the Kenya National Bureau of Statistics and relevant line ministries. There are problems however. Surveys on key human development indicators are intermittent. In some areas the available data is either dated or not available on a comparable cross county basis. In others, the data is not available. The bottom line is that policymakers currently lack access to the type of reliable, real-time data required to inform approaches to equity. If one of the criteria for 'equitable sharing' is an allocation of resources that reflects need, it is important to develop statistical systems that capture relative deprivation in a timely and systematic fashion geared towards annual budgeting cycles.

The debate over equitable sharing in public finance is of critical importance for Kenya. The debate, like the new constitution itself, reflects a growing awareness that the country's extreme disparities in wealth and opportunity represent not just a source of social injustice, but a barrier to economic efficiency, shared growth and political stability. The Kenyan government's broad strategy for the future of the country, set out in *Kenya Vision 2030,* aims at the development of a socially inclusive society and a more competitive economy. Neither of these aims is compatible with the extreme inequalities that now characterize the country.

For many Kenyans, devolution and the provisions of the new constitution hold out the promise of a more equitable pattern of development. Public spending has a critical role to play in realizing that promise. Spreading opportunity and investments more equally across the country could unlock the door to accelerated human development, reduced inequality and accelerated growth. Making the transition to equitable sharing will not be easy—but a business-as-usual alternative is likely to prove politically and economically unsustainable.

INTRODUCTION

In August, 2010 the government of Kenya adopted a new constitution. This followed a referendum in which an overwhelming majority of Kenyans voted for change. The decisive impetus for reform came from the widespread violence and political crisis that followed the 2007 election. While claims of electoral fraud provided the immediate catalyst for violence, the deeper causes were to be found in the interaction of a highly centralized 'winner-take-all' political system with deep social disparities based in part on group identity (Hanson 2008).

Provisions for equity figure prominently in the new constitution. Backed by a bill of rights that opens the door to legal enforcement, citizenship rights have been strengthened in many areas, including access to basic services. 'Equitable sharing' has been introduced as a guiding principle for public spending. National and devolved governments are now constitutionally required to redress social disparities, target disadvantaged areas and provide affirmative action for marginalized groups.

Translating these provisions into tangible outcomes will not be straightforward. Equity is a principle that would be readily endorsed by most policymakers in Kenya and Kenya's citizens have provided their own endorsement through the referendum. However, there is an ongoing debate over what the commitment to equity means in practice, as well as over the pace and direction of reform. Much of that debate has centered on the constitutional injunction requiring 'equitable sharing' in public spending.

There are compelling grounds for a strengthened focus on equity in Kenya. In recent years, the country has maintained a respectable, if less than spectacular, record on economic growth. Social indicators are also on an upward trend. On most measures of human development, Kenya registers average outcomes considerably above those for sub-Saharan Africa as a region. Yet the national average masks extreme disparities—and the benefits of increased prosperity have been unequally shared. Some regions and social groups face levels of deprivation that rank alongside the worst in Africa. Moreover, the deep fault lines running through society are widely perceived as a source of injustice and potential political instability.

High levels of inequality in Kenya raise wider concerns. There has been a tendency in domestic debates to see 'equitable sharing' as a guiding principle for social justice, rather than as a condition for accelerated growth and enhanced economic efficiency. Yet international evidence strongly suggests that extreme inequality—especially in opportunities for education—is profoundly damaging for economic growth. It follows that redistributive public spending has the potential to support growth.

The current paper focuses on a group of 12 counties located in Kenya's Arid and Semi-Arid Lands (ASALs). They are among the most disadvantaged in the country. Most are characterized by high levels of income poverty, chronic food insecurity and acute deprivation across a wide range of social indicators.

Nowhere is the deprivation starker than in education. The ASAL counties account for a disproportionately large share of Kenya's out-of-school children, pointing to problems in access and school retention. Gender disparities in education are among the widest in the country. Learning outcomes for the small number of children who get through primary school are for the most part abysmal, even by the generally low national average standards.

Unequal public spending patterns have played no small part in creating the disparities that separate the ASAL counties from the rest of Kenya—and 'equitable sharing' could play a role in closing the gap. But what would a more equitable approach to public spending look like in practice?

This paper addresses that question. It looks in some detail at education for two reasons. First, good quality education is itself a powerful motor of enhanced equity. It has the potential to equip children and youth with the skills and competencies that they need to break out of cycles of poverty and to participate more fully in national prosperity. If Kenya is to embark on a more equitable pattern of development, there are strong grounds for prioritizing the creation of more equal opportunities in education. Second, the education sector illustrates many of the wider challenges and debates that Kenya's policymakers will have to address as they seek to translate constitutional provisions into public spending strategies. In particular, it highlights the importance of weighting for indicators that reflect need in designing formulae for budget allocations.

The paper is organized as follows. Part 1 provides an overview of the approach to equity enshrined in the constitution. While the spirit of the constitution is unequivocal, the letter is open to a vast array of interpretations. We briefly explore the implications of a range of approaches. Our broad conclusion is that, while Kenya clearly needs to avoid public spending reforms that jeopardize service delivery in wealthier counties, redistributive measures are justified on the grounds of efficiency and equity. Although this paper focuses principally on basic services, we caution against approaches that treat equity as a matter of social sector financing to the exclusion of growth-oriented productive investment.

Part 2 provides an analysis of some key indicators on poverty, health and nutrition. Drawing on household expenditure data, the report locates the 12 ASAL counties in the national league table for the incidence and depth of poverty. Data on health outcomes and access to basic services provide another indicator of the state of human development. While there are some marked variations across counties and indicators, most of the 12 counties register levels of deprivation in poverty and basic health far in excess of those found in other areas.

Part 3 shifts the focus to education. Over the past decade, Kenya has made considerable progress in improving access to basic education. Enrollment rates in primary education have increased sharply since the elimination of school fees in 2003. Transition rates to secondary school are also rising. The record on learning achievement is less impressive. While Kenya lacks a comprehensive national learning assessment, survey evidence points to systemic problems in education quality. In both access and learning, children in the ASAL counties—especially female children—are at a considerable disadvantage. After setting out the national picture, the paper explores the distinctive problems facing these counties.

In Part 4 we look beyond Kenya to wider international experience. Many countries have grappled with the challenge of reducing disparities between less-favored and more-favored regions. There are no blueprints on offer. However, there are some useful lessons and guidelines that may be of some relevance to the policy debate in Kenya. The experience of South Africa may be particularly instructive given the weight attached to equity in the post-apartheid constitution.

Part 5 of the paper explores a range of approaches to financial allocations. Converting constitutional

principle into operational practice will require the development of formulae-based approaches. From an equitable financing perspective there is no perfect model. Any formula that is adopted will involve trade-offs between different goals. Policymakers have to determine what weight to attach to different dimensions of equity (for example, gender, income, education and health), the time frame for achieving stated policy goals, and whether to frame targets in terms of outcomes or inputs. These questions go beyond devolved financing. The Kenyan constitution is unequivocal in stipulating that the 'equitable sharing' provision applies to all public spending. We therefore undertake a series of formula-based exercises illustrating the allocation patterns that would emerge under different formulae, with specific reference to the 12 ASAL focus counties and to education.

THE 2010 CONSTITUTION: PUTTING EQUITY ON THE AGENDA

The 2010 constitution marks the most momentous governance reform in Kenya's post-independence history (Akech 2010; Kramon and Posner 2011). Devolution is at the heart of the reform process. While many of the details on implementation remain unclear, the new constitution signals a shift in the locus of power away from a highly centralized system and towards decentralized government at the county level. It also establishes social justice as a guiding principle for policy design. Drawing on the experience of South Africa, the constitution includes far reaching provisions aimed at making Kenya a fairer and more equal country.

Devolution will transform the structure of government. An explicit objective is to bring decision making closer to the affected population and to make government more accountable. Under the old constitutional regime, political power was highly concentrated in central government with administration structured around eight provinces and 158 districts. The new devolved system will operate through 47 counties. The new counties, which will become operational during 2013 after the next election, will have responsibility for delivering a wide array of 'proximate, easily accessible services', promoting 'the interests and rights of marginalized communities' and overseeing the 'equitable sharing' of resources in their areas of assigned responsibility.

Equity is the political cornerstone of the new constitution. The longest chapter is a Bill of Rights, the provisions of which can be limited only under exceptional circumstances, creating a constitutional framework for legal challenges to government policies (Domingo and Wild 2012). The constitution creates quasi-legal entitlements to basic services as a right of citizenship, along with a broad array of social and economic, civil and political rights. While there are potentially formidable social, economic and legal barriers facing any citizen seeking redress through litigation, the newly established Kenya National Human Rights and Equality Commission is charged with promoting and protecting the rights set out in the constitution, including social and economic rights (Kenya National Commission on Human Rights 2011).

Public Spending and 'Equitable Sharing'

Public finance figures prominently in the social provisions of the new constitution. Chapter 12 sets out guidelines establishing equity as an organizing principle for the allocation of public spending. These guidelines include an injunction to ensure that 'expenditure shall promote the equitable development of the country, including by making special provision for marginalized groups and areas' (Government of Kenya 2011a)

That injunction extends beyond the devolved budgets. Article 202 stipulates that 'revenue raised nationally shall be shared equitably among national and county governments.' Criteria to be used in allocating funding include 'economic disparities within and among counties and the need to remedy them,' as well as 'the need for affirmative action in respect of disadvantaged areas and groups.' This is not the first time that equity has been made a budget priority. Indeed, in a review of past public spending practices one commentator has observed that 'at the planning stage, inequality is a priority but there is no link between plans and budgets' (Kiringai 2006). Where the new constitution is distinctive is in the scope and, potentially, enforceability of its provisions.

While the constitutional commitment to equity is unequivocal wider principles also apply. Article 203 establishes 11 separate criteria for determining equita-

ble shares, including national interest, fiscal capacity, efficiency, development needs, the 'economic optimization of each county,' and developmental needs. While uncontroversial in themselves, these provisions underline the potential for divergent interpretation. It is not difficult to envisage a scenario in which advocates for 'economic optimization' seek to assert precedence over those calling for more weight to be attached to 'economic disparities … and the need to remedy them.' Similarly, claims from county governments prioritizing affirmative action may be met by counterclaims from those highlighting fiscal capacity. Constitutional documents do not, by their nature, prescribe detailed resolutions for potential conflicts over interpretation and the new Kenyan constitution is not an exception to this rule.

Devolved Financing and Beyond

Since the adoption of the constitution, much of the debate on equitable financing has focused on devolved budgets. This may be misplaced on two counts. First, the bulk of public spending—over 80 percent of the total—will continue to come from central government budgets. It follows that overall equity in public spending will be shaped by policies influencing the nondevolved budgets. Second, the new constitution explicitly requires that the principles of 'equitable development' and 'special provision for marginalized groups and areas' applies to *all* public spending (Article 201) (Government of Kenya 2011a). This is particularly important in light of the fact that some key basic services—including education—will not initially be devolved to county-level governments.

The constitution sets some clear budget parameters. Under the 'equitable share' provision counties are guaranteed to receive not less than 15 percent of national revenue (Article 203) (Government of Kenya 2011a). Another 0.5 percent of revenue will be channeled through the Equalization Fund, which the constitution requires be used 'to provide basic services … to marginalized areas to the extent necessary to bring the quality of those services … to the level generally enjoyed by the rest of the nation, so far as possible.' This language is important because it establishes an explicit requirement that spending is geared not just towards expanded provision of basic services, but also towards a reduction of inequalities in the level and quality of provision. The fund can also be used by the central government to provide conditional grants or other direct financing to counties with marginalized populations.

Transition arrangements for the two major devolved funds now in operation have yet to be finalized. Currently, the main source of decentralized financing in Kenya is the Local Authorities Transfer Fund (LATF), a block grant provided by central government and used at the local authority's discretion. Equity considerations of the type set out in the new constitution play a limited role in determining allocations under the LATF because of the weighting attached to population and lump sum transfers.[2] The other major devolved financing vehicle is the Constituency Development Fund (CDF). Established in 2004, the legislation governing the CDF requires that it receive 2.5 percent of government revenue for allocation to development programs at a constituency level. While equity weighs more heavily than under the LATF, the bulk of CDF financing is allocated on an 'equal shares' formula with just 25 percent of the transfer linked to poverty (Government of Kenya 2010; Romero 2009).

Why Equity Matters

Equity has emerged as an increasingly prominent theme in national policy debates in Kenya. It figures

with some prominence in the government's *Kenya Vision 2030* strategy, which seeks to identify a pathway to middle-income status and the development of a fairer, more inclusive society (Government of Kenya 2007). The emphasis on fairness and inclusive growth in *Kenya Vision 2030* reflects wider currents of thinking in international development. In recent years reports from the World Bank and the Africa Progress Panel have drawn attention to the damaging consequences of extreme inequality not just for social justice, but also for political stability, economic growth and poverty reduction (World Bank 2006; Africa Progress Panel 2012).

Efforts to promote equity are in some senses swimming against the tide of post-independence history. Enduring inequalities in Kenya reflect the legacy of an uneven pattern of economic growth, unequal provision of basic services, and a political system that has perpetuated group-based disparities in political power (Muhula 2009; World Bank 2009). Income distribution is highly unequal, with the Gini coefficient estimated at 0.44—well above the level in neighboring countries such as Ethiopia, Tanzania and Uganda. Economic growth has been skewed towards urban centers, a narrow corridor between the port of Mombasa and Kisumu, and a small number of commercial farming areas. According to the Word Bank, 80 percent of economic activity is generated by just half of Kenya's new counties (World Bank 2011b).

Wealth disparities intersect with wider inequalities. While the average Kenyan aged 17-22 years has spent just over seven years in school that figure rises to over 10 years for the wealthiest 20 percent. Similarly, around 12 percent of 17-22 year olds have accumulated less than four years in school, rising to 27 percent for girls from poor rural households and 92 percent for girls from the ethnic Somali community (UNESCO 2010). Health disparities are equally marked. Child

mortality rates among children from the poorest 20 percent of homes are twice as high as they are among the wealthiest households (Kenya National Bureau of Statistics 2010). The most recent service delivery survey found that only 56 percent of clinics in North Eastern Province offered antenatal care, compared to 94 percent in Western Province.

These disparities in wealth and opportunity are in direct conflict with many of the goals set out in national policy documents, including *Kenya Vision 2030*:

- *Poverty reduction*. High levels of inequality weaken the rate at which economic growth is converted into poverty reduction—the poverty elasticity of growth. Other things being equal, increasing the share of increments to growth captured by people living in poverty will accelerate the pace of poverty reduction (Ravallion 2005; Ravallion 2009; Ferreira and Ravallion 2009). The effect is cumulative because poverty reduction is itself a potential spur to increased investment, productivity and economic growth. Kenya's variable record in converting growth into poverty reduction illustrates the importance of patterns of distribution (Kabubo-Mariara, Mwabu and Ndeng'e 2012).

- *Economic growth*. It has sometimes been argued that pro-poor redistribution is counterproductive for poverty reduction because it has the potential to damage economic growth. In practice, outcomes will depend on the design, pace and sequencing of reforms. However, there is now a large and growing body of evidence to suggest that the implied trade-off between growth and equity is more imagined than real (Bourguignon, Ferreira, and Walton 2007; World Bank 2006). Recent analysis from the International Monetary Fund and others indicates that high levels of inequality are bad for long-term economic growth and poverty reduction (Berg and Ostry 2011). In the case of Kenya, income inequality and inequalities in opportunities for health, education and nutrition compromise the economic growth goals set out in *Kenya Vision 2030*.

- **Social cohesion**. High levels of inequality in income and opportunity can weaken political institutions and exacerbate tensions between groups (Alesina and Rodrik 1994; World Bank 2006; Fukuyama 2012). This is one of the reasons that the new constitution prioritizes enhanced equity. As the *Kenya Vision 2030* document recognizes, perceived injustices and disparities in access to basic services have been "a major cause of social tensions in the country as was evident during the 2007 post-election crisis" (Government of Kenya 2007).

- **Lost human potential**. Extreme inequalities in opportunity come with high costs for individuals and society. For example, education is a strong predictor of individual earnings and is also strongly correlated with health status, which in turn influences earnings. Cross country evidence from rich and poor countries suggests that gains in education quality can raise the long-run average annual growth rate by 2 percent per capita, with attendant benefits for poverty reduction (Hanushek 2009; Brown 2011). Thus greater equality of opportunity for education can help to promote not just human development but more efficient and more dynamic economies (World Bank 2006).

Greater equity would enhance Kenya's prospects for accelerated progress towards the Millennium Development Goals. While trend data is lacking, World Bank estimates suggest that 45 percent of Kenyans were living on less than $1.25 a day in 2005, above the estimated levels for 1990 (the MDG base year). According to the 2010 Public Expenditure Review, progress in reducing poverty may have slowed since 2008. Scenarios for under-five mortality, maternal mortality and access to water have also deteriorated with the 2010 Public Expenditure Review estimating that the amount of finance required to achieve the MDGs had increased from $49 per capita (in 2005) to $68 per capita (Government of Kenya 2010).

Fiscal pressure provides another rationale for strengthening the commitment to equity. While government spending has increased strongly in real terms since 2003, the slowdown in economic growth and the stimulus package adopted in the 2009/2010 budget has led to a deteriorating budget position. With the fiscal deficit nearing 6 percent of GDP and interest payments taking a rising share of the recurrent budget, public spending is likely to increase only slightly over the next few years. Reducing poverty and enhancing equity while adhering to the priorities set out in the medium-term expenditure framework will require greater attention to equity in public spending.

The 2010 constitution itself provides little guidance on what this might mean in practice. At one end of the spectrum, equity might be interpreted as a requirement that all Kenyans receive an equivalent level of financing. Other approaches might place more emphasis on the equalization of opportunity. Recognizing that some populations may require more funding to secure equivalent opportunities as a result of, say, poverty or illness, more equitable public spending could be seen as a matter of matching resources with needs, to achieve equivalent capabilities—an aspect of equity to which Amartya Sen drew attention (Sen 1992). Applied in the context of an intragovernmental revenue transfer system, a greater emphasis on the equalization of opportunity would require financing formulae geared towards the correction of horizontal and vertical disparities in opportunity linked to wider disadvantages. To provide a practical example, more equitable financing for basic education would require not just spending on education infrastructure and teachers in underperforming areas, but additional per capita transfers to counteract the effects of disadvantages transmitted through poverty, malnutrition and parental illiteracy.

In practice, all public spending systems have to strike a balance between 'population-based' and 'needs-based' transfers. Depending on the perspective adopted, there are a range of approaches to public spending and service provision that could claim some degree of consistency with constitutional principles in favor of 'equitable sharing'. Most national revenue-sharing models would include some or all of the following elements (Bahl and Linn 1994; Bahl 2008):

- **Equal per capita transfers** based on population, irrespective of differences in wealth, location or relative need.

- **Equal share transfers** under which each county receives a fixed share of a specified budget.

- **Deprivation-weighted transfers** under which disadvantaged groups identified by, say, poverty, health indicators and other sources of disadvantage receive a budget increment.

- **Outcome-based transfers** under which budgets are allocated to reflect commitment to a specific result, such as reduced disparities in access to and utilization of education, health care and other basic services, or a specific goal such as universal primary education and improved child survival.

- **Cost-related transfers** that reflect the financing required to deliver basic services in areas characterized by different population densities, accessibility and other factors affecting cost.

There are no blueprints for guiding the design of approaches to equitable public spending. The World Bank has drawn attention to the potential for damaging trade-offs between economic growth on the one side and redistributive public finance on the other (Box 1). While the report makes a number of important observations, the central policy prescription to emerge rests uneasily with evidence from countries that have sought to combine more equitable public spending aimed at narrowing horizontal and vertical inequalities, with strategies for inclusive economic growth. China is a case in point. During the 1990s concern over regional inequalities prompted the Chinese government to introduce a program—the '8-7 Program'—targeting the poorest counties in the country for increased investment in productive infrastructure and enterprises. The result was a significant increase in growth and employment (Higgins, Bird and Harris 2010). Since 2000, there has been a renewed emphasis on investment in poorer regions. In Vietnam, another high growth economy, 'Program 135' targeted 2,374 poor communes in ethnic and minority areas not just for social service provision, but also with productive investment in roads, irrigation and the development of markets. The program is credited with supporting economic growth and poverty reduction (Thuat and Quan 2008). Social protection is another example of a redistributive public spending policy with the potential to raise the income and productivity of the poor. In Brazil, the *Bolsa Familia* cash transfer scheme has transferred around 0.4 percent of national GDP to the poorest households in the country. The program is overtly redistributive. There is no evidence that it has weakened economic growth. What it has done is to contribute to a decade of rapid poverty reduction and falling inequality, with the average income of the poorest households rising at three times the level of the wealthiest households (Ravallion 2009). The Brazilian case is one element in a wider regional story. Over the past decade, redistributive social protection programs in Latin America have contributed to a region-wide decline in inequality *and* stronger economic growth (Cornia 2012; ECLAC 2011). Here, too, the evidence is that redistributive equity and growth-oriented policies can be mutually reinforcing.

None of this is to discount potential tensions between efficiency and equity to considerable scrutiny.

Box 1: 'People Not places': The World Bank Perspective

Building on an analytical framework developed in the 2009 World Development Report, the World Bank has recommended that devolution in Kenya should be guided by the principle that equalization should target 'people not places.' What does this mean in practice?

The World Bank's starting point is that equity should focus not on the progressive equalization of household or regional incomes, but on investments aimed at expanding access to education, health and other basic services. The reason: increasing income disparity during initial growth surges is seen as an inevitable consequence of the advantages enjoyed by economic growth poles. Using the public finance system to narrow wealth gaps has the potential to weaken the very incentives that drive growth, while at the same time disrupting service provision in high growth areas. The preferred option in this perspective is to use the revenues generated by growth to progressively strengthen basic service provision. As the World Bank puts it:

"Large-scale distribution across counties may not be possible or desirable immediately, given budget constraints and efficiency considerations...these 'wealthy' counties are also among Kenya's most dynamic regions, which are driving economic growth and generating the bulk of national income out of which redistribution will eventually be financed....Any drastic move to redistribute resources away from affluent towards destitute counties could result at best in severe fiscal stress, and at worse in the collapse of essential service delivery."

Stated as a matter of abstract principle, this view is superficially attractive. Expanding service provision in one area through financing arrangements that lead to the collapse of services in another is clearly a suboptimal approach. In economic terms, an excessive marginal rate of taxation on income and wealth creation is potentially damaging.

Yet it is not immediately clear where equity fits in to the logic of the World Bank's perspective. In the case of Kenya, the hope for disadvantaged counties appears to be that redistributive transfers will 'eventually' take place once some specified wealth threshold has been passed. The underlying message is that little can be done through more equitable sharing of revenues to mitigate Kenya's deep disparities in access to basic services, and that spending patterns underpinning those disparities will remain intact for the foreseeable future.

Second, the World Bank's perspective takes it as axiomatic that Kenya's poorer counties have grown more slowly because they lack the advantages of high growth areas, and that migration offers the best near-term prospect of more inclusive growth. This may be confusing cause and effect. It could equally be argued that high growth commercial farming areas have emerged as growth poles in part because of the infrastructure support that they have received, while arid and semi-arid areas have grown less rapidly because of weak infrastructure.

There are certainly grounds for concern that successive governments in Kenya and the donor community have underestimated the growth potential of arid and semi-arid lands. Comparisons with Ethiopia, where arid and semi-arid areas have emerged as a growth pole, are instructive. These areas are at the center of a livestock and meat sector that is now the second largest exporter after coffee, accounting for 12-15 percent of foreign exchange earnings. Linkages with higher value-added, labor-intensive manufacturing such as footwear and leather are strengthening over time. By contrast, Kenya has been slow to exploit the potential of livestock sectors in arid and semi-arid regions, in part because of a restricted assessment of growth prospects. Recent research put the contribution of livestock to the national economy at $4.2 billion in 2009, or 13 percent of the total. That is more than double previous assessments and not far off the $5.25 billion estimated value of crops and horticulture. There are other areas of potential growth in the arid and semi-arid counties, including renewable energy, minerals, and linkages to neighboring economies.

The third element of the World Bank's approach meriting critical scrutiny is the starting point. While it is right to caution against an excessively redistributive approach at high implied rates of marginal taxation, the real debate is over the balance to be struck between the pursuit of equity and realism in public finance. Some degree of redistribution is both affordable and desirable. Many would argue that redistributive public finance is also a political imperative and a constitutional obligation. Ultimately, policymakers in Kenya have to design equitable sharing financing policies that reflect a concern to simultaneously narrow gaps in opportunity, mitigate horizontal and vertical inequalities, and support economic growth.

Sources: World Bank 2011a; World Bank 2011b; Higgins, Bird and Harris 2010.

Transfers to poor regions financed by excessive marginal tax rates on wealthier regions and higher income groups could have the perverse effect of improving equity access in the short run, while undermining the potential for economic growth, employment creation and financing for basic services over the medium term. Yet the sides of perverse incentives operating in the other direction also have to be recognized. Extreme horizontal disparities can also weaken prospects for growth. Ultimately, policymakers need to consider the scale of transfers, the time horizon for achieving equity goals and the full range of intended and unintended outcomes. There are self-evidently limits to the extent of feasible redistribution, but ruling out the scope for redistributive income transfers in advance is not necessarily a good guide to policy formulation.

POVERTY AND HEALTH IN THE 12 COUNTIES

In this section we chart some of the key human development deficits affecting the 12 ASAL counties. After identifying the distinctive features of the counties, we focus on income poverty, wealth distribution and a range of health indicators. Disadvantages in each of these areas are important in themselves while at the same time symptomatic of wider inequalities in opportunity. Where possible, we locate the 12 ASAL counties on a national scale of disadvantage relative to other counties. The horizontal disparities captured in these rankings are one part of a wider picture of inequality (Sundet and Moen 2010; World Bank 2009). They intersect with the fault lines running through Kenyan society linked to wealth, gender, ethnicity, rural-urban differences and other determinants. Yet the ASALs are centers of highly concentrated disadvantage. With a small number of exceptions, they have the highest incidence of poverty and they account for a disproportionate share of the national poverty gap. Kenyans living in the ASAL counties also face acute disadvantages in access to health and education. While we trace different aspects of deprivation separately, it is important to recognize that the disadvantages they entail operate in a cumulative and mutually reinforcing fashion to diminish life-chances.

The 12 ASAL Counties

The counties covered in this report represent a subset of the ASAL counties. Of the 47 new counties created through devolution, 23 are categorized as ASAL areas. The Ministry of Northern Kenya has responsibilities spanning all 23 counties. However, it has identified the 12 counties that we cover as areas meriting special concern in the context of political devolution. Those concerns relate to human capital weaknesses, the size of geographic areas covered and associated low population density, the strong influence of clan-based governance systems, and the distinctive livelihood challenges facing pastoralists.

While the 12 focus counties included in this report face many development problems in common there are also important differences. Eight of them—Garissa, Mandera, Marsabit, Samburu, Tana River, Turkana, Isiolo and Wajir—are arid and spread over very large areas. Another two counties—Lamu and West Pokot—are less arid and cover smaller geographic areas. Both Kajiado and Narok are categorized as semi-arid. Human development indicators also vary widely. As the data presented in this section demonstrates, Kajiado and Narok are outliers. Bordering commercial agricultural areas and in the case of Kajiado, Nairobi, they figure near the top of the national for some—although not all—of the indicators that we examine. At the other end of the spectrum, counties such as Turkana and Wajir are consistently at or around the bottom of the national league table.

The limitations of a county-based analytical lens have to be recognized. To the extent that the new counties represent the locus of political devolution, cross county disparities in human development will have to figure prominently in any needs-based financing formula aimed at equitable sharing. However, just as national average data can mask disparities across counties, so county-level data can obscure inequalities *within* the 12 counties. For example, while Kajiado and Narok have low levels of income poverty, there are large variations around the average. The poverty incidence figure for Narok County is 34 percent, with a reported incidence for the two old districts of Transmara and Narok (which were combined to form the new county) were 50 percent and 26 percent respectively. Similarly, in a county like Garissa there are very large disparities between urban and rural areas

Map 1: Kenya's New County Map with Selected ASAL Counties

Turkana
Marsabit
Mandera
West Pokot
Samburu
Wajir
Trans Nzoia
Elgeyo Marakwet
Bungoma
Baringo
Isiolo
Busia
Uasin Gishu
Kakamega
Laikipia
Siaya
Nandi
Meru
Vihiga
Kisumu
Tharaka Nithi
Kericho
Nyandarua
Garissa
Homa Bay
Nyamira
Nakuru
Nyeri
Kirinyaga
Kisii
Bomet
Embu
Migori
Muranga
Narok
Kiambu
Nairobi
Machakos
Kitui
Kajiado
Makueni
Tana River
Lamu
Kilifi
Talta Taveta
Mombasa
Kwale

Kilometers
0   50   100   200   300   400

N
NW   NE
W   E
SW   SE
S

Source: created by The World Bank: Nairobi 2012.

across all indicators. It follows that any approach to more equitable sharing in public finance will have to look beyond county-level indicators to subcounty data and inequalities within the counties.

As is evident from Map 1, the 12 selected ASAL counties dominate the physical geography of Kenya. Just five of these counties account for almost half of total land area: in descending order, Marsarbit, Turkana, Wajir, Garissa and Tana River. Collectively, these 12 counties have a population of around 6.2 million people, or 16 percent of the national total (Table 1). Low population density is one of the characteristics of almost all of the 12 counties. Average population density in Kenya is 66 people per km^2, rising to over 4,000 people per km^2 for Nairobi. The comparable figures for the 12 ASAL counties range from 4-6 people per km^2 for Marsarbit and Tana River, to 12-13 people per km^2 for Wajir and Turkana, and over 30 people per km^2 for Kajiado and Narok. The 12 focus counties are also home to a large and growing share of Kenya's young people, with half of the population in the 12 counties aged 15 years or less.

Whatever definition of equity is adopted, the development of equitable financing formulae depends critically on the availability of credible, recent and relevant data. Our cross county ranking revealed a number of problems in this area. At one level, Kenya is a 'data rich' country. Many government line ministries have statistics units. The Kenya National Bureau of Statistics publishes a wide range of data. Household surveys are widely used by government, nongovernment organizations, the World Bank and the U.N. to generate data on different parts of the country. Additionally, moves towards greater transparency through the Kenya Open Data Initiative have increased both the quantity and the quality of publicly available data. Yet there are significant gaps, time lags

Table 1: Population Size and Share: 12 ASAL Counties

County	Population Size	Population Share (percent)
Garissa	623,060	1.6
Isiolo	143,294	0.4
Kajiado	687,312	1.8
Lamu	101,539	0.3
Mandera	1,025,756	2.7
Marsabit	291,166	0.8
Narok	850,920	2.2
Samburu	223,947	0.6
Tana River	240,075	0.6
Turkana	855,399	2.2
Wajir	661,941	1.7
West Pokot	512,690	1.3
Total	**6,217,099**	**16.1**

Source: Census 2009.

and comparability problems. For instance, the most recent data available on poverty and inequality is from the 2005 Kenya Household Budget Survey; and at the time this report was being prepared (late 2011) the 2010 county-level school enrollment data were still not accessible. If the aim is to ensure that public spending formulae reflect need, then more has to be done to generate real-time data aligned with the budget cycle. Once the key indicators for assessing equity and allocating resources are determined, it is critically important that government develops the capacity to collect and disseminate data on a timely basis. This capacity is needed at both national and county levels.

Comprehensive county-level data was not available at the time that research for this report was undertaken. The World Bank has re-estimated data in the 2005 Kenya Integrated Household Budget Survey (KIHBS),

which we draw on for the statistics on income poverty and inequality. The 2005 survey also makes it possible to measure at a county level the depth of poverty, as indicated by the income-gap ratio.[3] Health and education data are drawn from administrative reporting systems, reconfigured to follow the administrative contours of county boundaries. Drawing on these sources the following section provides a snapshot of where the 12 focus counties stand in a national ranking for selected indicators covering poverty, inequality and public health

Income Poverty and Inequality

Household expenditure is an important indicator of welfare. While monetary wealth is a means to broader ends rather than a direct measure of human capability, income poverty in Kenya is closely associated with wide-ranging disadvantages in health, nutrition and education. For all of these reasons, the distribution of household consumption poverty is an important dimension of horizontal and vertical inequality in Kenya.

As in many other countries in sub-Saharan Africa, the poverty data in Kenya suffer from the irregularity of measurement and inconsistencies between household surveys and national income accounts. The most recent national data for Kenya comes from the 2005-2006 Kenya Integrated Household Budget Survey, which provides a snapshot of poverty some eight years ago. Inevitably, the national poverty profile will have changed over the intervening years. The resulting data gap highlights the need for the development of more timely data collection, perhaps using smaller-scale but more frequent surveys to update the picture provided by large-scale survey exercises.

The KIHBS estimated poverty by reference to a range of thresholds. It reported that 46 percent of Kenyans

—16.6 million people in 2005—had levels of consumption insufficient to meet basic food needs, with marked differences between urban and rural areas (a reported incidence of 33 percent and 49 percent respectively). These figures represented a modest decline over the levels reported in 1997.[4] For point of reference, the estimated poverty incidence in 2005 for the international $1.25 purchasing power parity threshold was 43 percent. The KIHBS survey also provides an estimate of the poverty gap. Whereas the incidence of poverty measures the share of the population below the poverty line, the poverty gap provides information regarding how far households fall from the poverty line.[5] It captures the mean aggregate income (or consumption) shortfall relative to the poverty line across the whole population. The national poverty gap for Kenya at the time of the survey was 16.3 percent. Another threshold used in the KIHBS is 'hardcore poverty,' a cut-off line at which individuals would be unable to meet basic food needs even if they were to forego all nonfood consumption. Around one in five individuals in that year had consumption levels falling below this line. While hardcore poverty fell significantly in rural areas over the decade prior to 2007 it slightly rose in urban areas.

Poverty in the ASAL Counties

Any approach to equitable sharing in public finance has to consider whether and how to weight for poverty. This is not a straightforward exercise. Poverty can be measured by reference to incidence, headcount numbers or the poverty gap, all of which provide different perspectives. In any system of intergovernmental transfer formulae that attach more weight to the incidence of poverty than the headcount will implicitly favor those regions with high poverty rates over those with lower rates but larger numbers of poor people. One of the limitations of both the incidence and the

headcount measures is that neither captures the depth of poverty. The poverty gap is in many ways the most useful sensitive indicator of poverty-related disadvantage, since it combines the headcount number with the distance from the poverty line.

Both the incidence and the depth of poverty are far higher in most of the 12 ASAL counties than in the rest of Kenya. Weighted poverty incidence for the counties averaged 61 percent, with some 2.5 million people affected. Averages inevitably obscure the differences across the 12 counties. Poverty incidence in Mandera, Marsabit, Turkana and Wajir is over twice the national average, reaching 94 percent in Turkana. On the national ranking, these four counties, along with Samburu, Tana River and West Pokot, account for seven of the 10 counties with the highest incidence of poverty in the country (Figure 1). Poverty is also deeper in the ASAL counties (Figure 1). The reported poverty gap for Mandera was 44 percent, rising to 69 percent for Turkana. This implies that the average income of a poor person in Turkana is less than

Figure 1: Poverty Incidence and Poverty Gap Ranking: 12 ASAL Counties
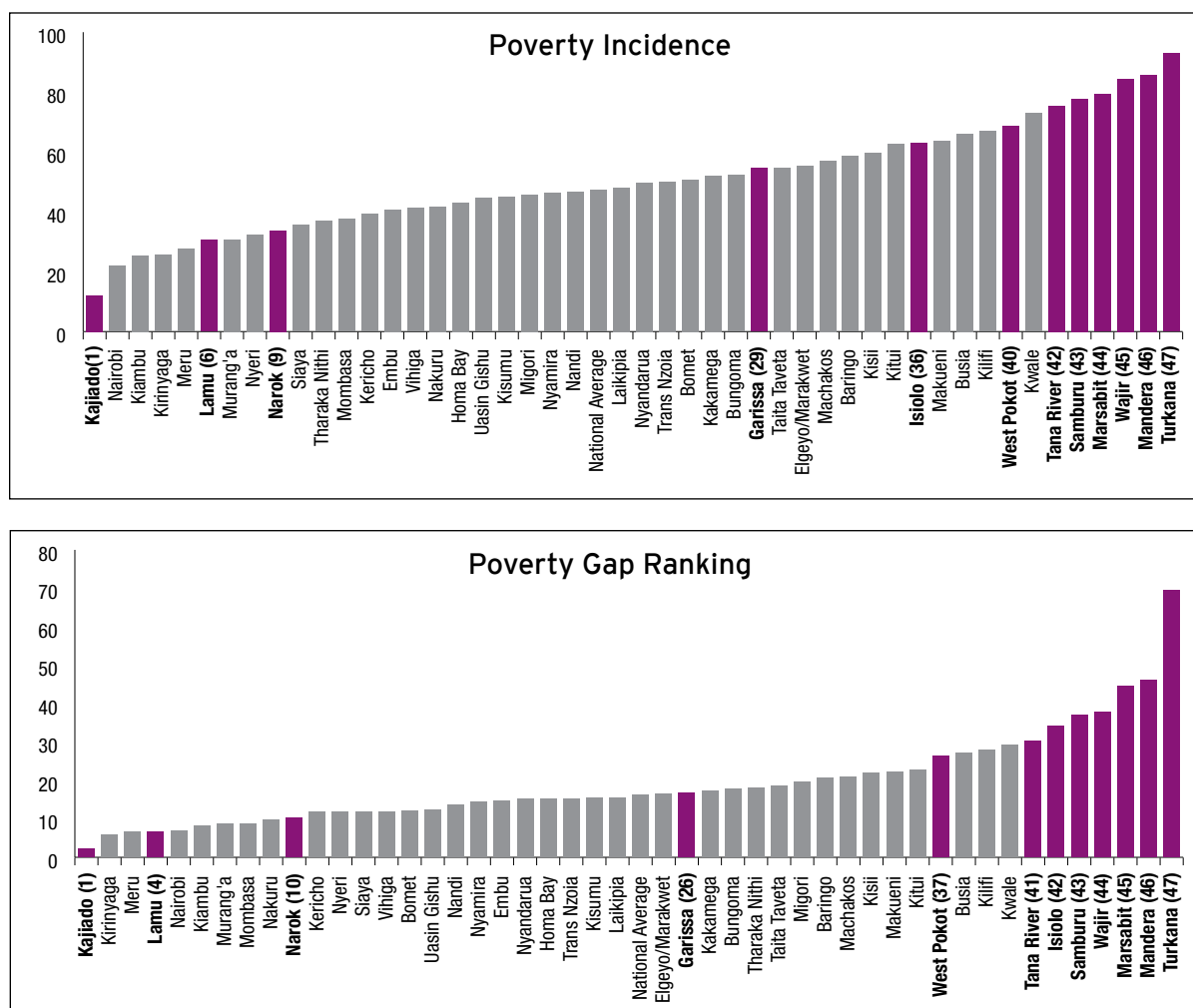
Source: KIHBS 2005.

one-third of the poverty threshold. At the other end of the scale, Kajiado has the lowest level of household income poverty in the country; with Narok and Lamu also well below the national average.

Integrating the poverty gap into the formula for inter-governmental transfers requires a disaggregation of the national gap into county shares. Taken individually and collectively, the 12 ASAL counties account for a larger share of the national poverty gap than their population share (Figure 2). The outlier is Turkana, which has a poverty gap some four times larger than its population share. Other counties such as Marsabit, West Pokot, Isiolo and Wajir also account for a share of the national poverty gap far exceeding their population shares, while the inverse holds for Narok and Kajiado. It should be noted that the ASAL counties are not alone in having an oversized share of the national poverty gap, as witnessed by the data for counties such as Baringo, Kakamega and Machakos (see Figure 2).

Household Consumption: High Levels of Inequality

Kenya's county-level poverty profile mirrors some deep horizontal disparities in the distribution of income. People living in the ASAL counties are concentrated in the lower reaches of Kenya's income distribution.

The data are striking. Over 50 percent of households in Samburu and Mandera are in the poorest quintile of Kenyan society, rising to 86 percent for Turkana. To view the data from the other end of the wealth telescope, a child born in Turkana or Wajir has a 1-2 percent chance of being born into the wealthiest quintile. The equivalent figure for Machakos is 21 percent, rising to 75 percent in Nairobi (Figure 3). These county-level wealth disparities are of enormous sig-

nificance in Kenya, not least because of the strong correlation between household wealth and indicators such as school attendance (see below), child survival and nutrition.

Among the many caveats that have to be attached to income poverty and wealth distribution data for the 12 counties, two related concerns merit specific mention. First, the 2005 KIHBS provided a static (and by now dated) snapshot of household consumption at one point in time. The state of poverty itself is dynamic, with populations moving above and below the poverty threshold over different periods.

Second, the arid and semi-arid areas of Kenya are characterized by low and erratic rainfall and highly vulnerable livelihoods. In this context, income-based indicators can provide at best a very partial indicator of the risks and vulnerabilities that come with drought, loss of livestock and food insecurity. Pastoralists have developed sophisticated coping mechanisms to manage risk. These include moving herds and social insurance arrangements, such as the transfer of breeding animals. Even in a normal year these arrangements come under pressure (Fitzgibbon 2012). During periods of severe drought these arrangements break down in the face of rising food costs and falling prices for livestock, and the depletion of herds. The devastating drought of 2010 and 2011 left some 3.7 million people facing chronic food insecurity in seven counties (Turkana, Mandera, Marsabit, Garisaa, Wajir, Isiolo and Tana River) with among the highest incidence of poverty in Kenya. The combination of rising food prices—food price inflation stood at 11 percent in 2011 —and declining prices for livestock will have pulled a significant number of people below the poverty line, pushed many of those already in poverty further below the poverty threshold, and contributed to acute nutritional problems (World Bank 2011a).

Figure 2: Poverty and Population: County Shares of National Poverty Gap and Population
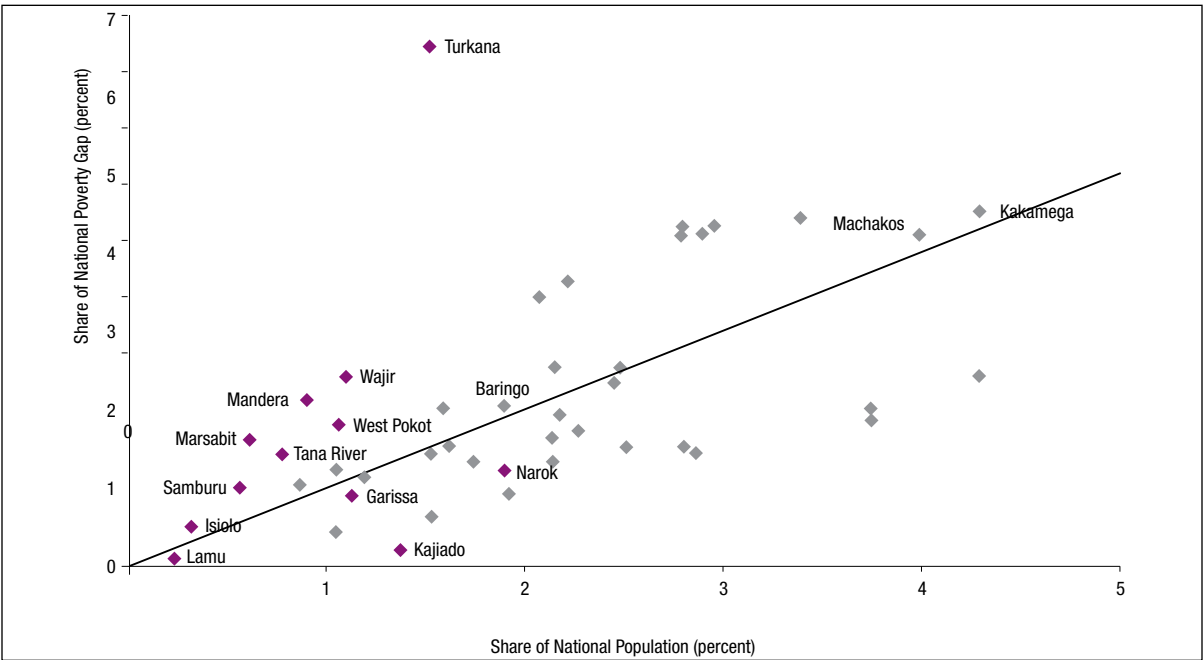
Source: Census 2009 & KIHBS 2005.
* Nairobi is not included in the data. The county accounts for 7.9 percent of the population and 3.8 percent of the poverty gap.

Health and Nutrition

Using the Millennium Development Goals targets as a benchmark for measuring progress, Kenya has a mixed record on health and nutrition indicators. There have been remarkable gains on some indicators – and little progress on others. As in other countries, health status in Kenya is the result of many important factors including the provision of basic services and health inequalities linked to gender, geography and socio-economic status. Data constraints make it impossible to document trends in the ASAL counties relative to the rest of Kenya, although the data that is available highlights some distinctive challenges. The 2008-2009 Demographic and Health Survey (DHS) provides the most recent overview of the health status of Kenya's people, however the survey data is organized on the basis of the old provinces rather than the new

counties. In this section we draw on the DHS and wider health survey data disaggregated to follow the contours of the new counties.

The National Picture

The 2008-2009 DHS records a number of major advances in public health. One of the most positive findings to emerge was a sharp decline in child mortality. Between 2003 and 2008, the under-five death rate declined from 115 to 74 deaths for every 1000 live births—a 36 percent drop. The record on the nutritional status of children has been less encouraging. There was a modest decline in stunting between 2000 and 2008—from 35 percent to 30 percent—with reported stunting increasing in North Eastern Province.[6] The proportion of children who are wasted and underweight changed little in the decade after 2000, raising

Figure 3: For Richer, for Poorer: Share of Population in Top and Bottom Quintile of the Wealth Distribution (47 counties)
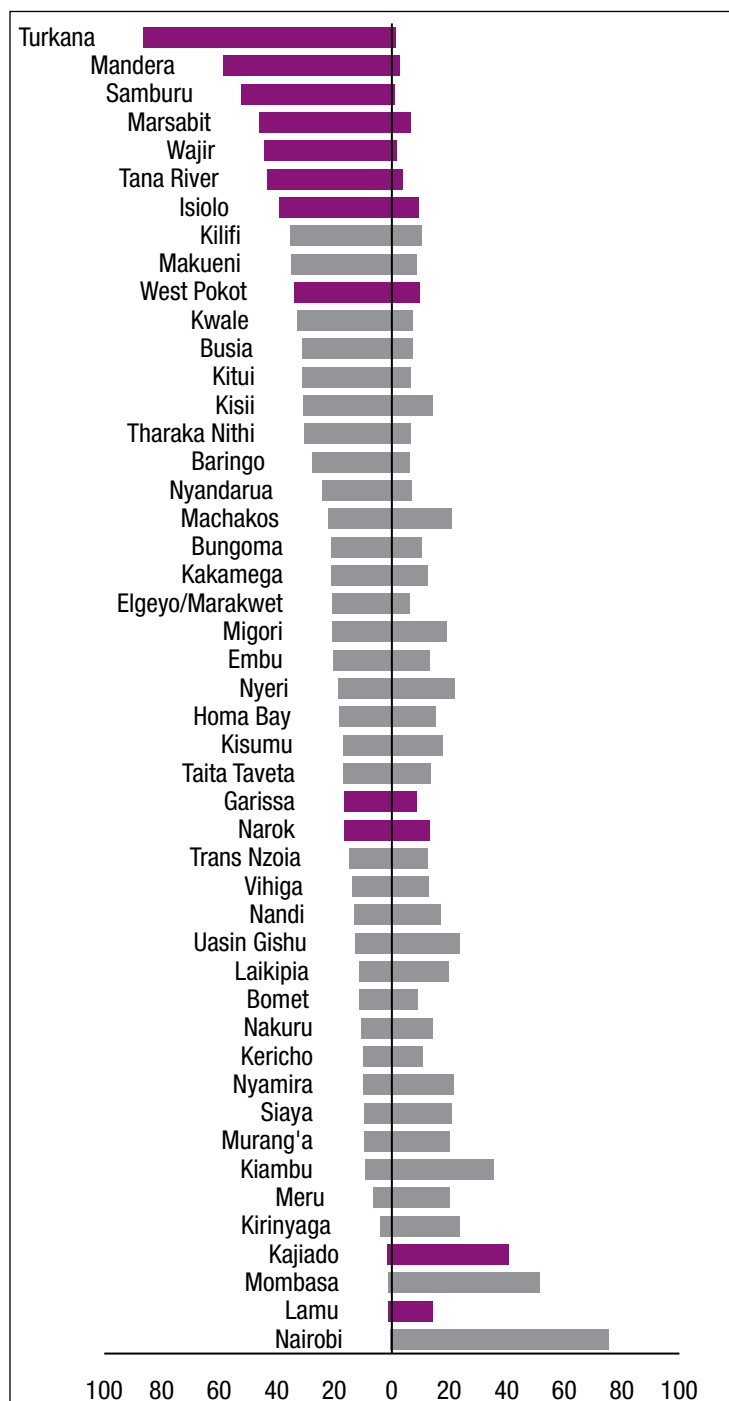
Source: KIHBS 2005.

concerns over the degree to which increased income has translated into reduced poverty.

The nutritional status of children should weigh heavily in any consideration of equity in public spending. Apart from the immediate concerns over humanitarian suffering, malnutrition in the early years sets children on course for a life of disadvantage, vulnerability and underachievement. Those affected are less likely to enter school at an appropriate age and less likely to make the transition to secondary school. Moreover, there is compelling evidence that early childhood malnutrition inflicts damage on cognitive development. As a recent series in *The Lancet* powerfully documents, the combined effects of household poverty and poor nutrition affect brain development from the prenatal period or earlier (The Lancet 2007; The Lancet 2008). That damage, which is often irreversible, is reflected in lower levels of education attainment and lower levels of income (The Lancet 2011).

Progress on maternal mortality, the fifth of the MDGs, is uncertain. The 2008-2009 DHS reported a small increase in the maternal mortality rate, while updated estimates prepared on the basis of a more recent tracking survey points to a sharp decline (Hogan et al 2010). Divergent estimates point to the large margins of error in sampling. To the extent that any definitive conclusion can

be drawn, maternal mortality remains high in Kenya. The maternal mortality ratio is 488 deaths for every 100,000 live births. Risks are associated with differential levels of wealth, education, birth-spacing, access to health facilities and other factors. The 2008-2009 DHS reported North Eastern Province as having the lowest proportion of births delivered in a health facility—just 17 percent compared to 89 percent in Nairobi (Kenya National Bureau of Statistics 2010). When questioned as to reasons for not delivering in a health facility, 17 percent of mothers in the North Eastern Province identified the poor quality of service available as the major concern (four times higher than in any other district) and 9 percent cited the fact that there was no female provider (no other province registered this as a concern for more than 1 percent of women). The proportion of women in the North Eastern Province citing distance as a barrier to delivery in a health facility was also the highest in Kenya.

The 12 Counties

Data availability does not allow for cross county comparisons of some key indicators, including child and maternal mortality. Drawing on the 2005 household consumption survey it is possible to derive a picture – albeit somewhat dated and partial – of nutritional indicators, and of access to basic health care. Data from the Health Management Information System provides another data source allowing for disaggregation to the county level in some areas of service delivery.

Nutritional Indicators

The national picture on child malnutrition is disturbing across Kenya. Many counties with relatively high average income levels and a low incidence of income poverty have a high incidence of stunting and underweight children. The relationship between income and nutritional status is decidedly nonlinear in Kenya, as

is the relationship between stunting and underweight prevalence. However, several of the 12 ASAL counties register particularly worrisome levels of deprivation. They account for six of the 10 counties with the highest prevalence of underweight children. In five of these – Turkana, Tana River, Mandera, Isiolo and Samburu –more than one child in every three is underweight for their age (Figure 4). Extreme stunting levels (three standard deviations or more from the predicted height-for-age) provide an indicator of sustained and chronic nutritional deprivation. Four of the ASAL counties register particularly high levels of extreme stunting with over 25 percent in Garissa and 40 percent in Wajir affected.

As in the case of income poverty, there are dangers in reliance on static snapshots of malnutrition. This is especially true for the ASAL counties, where nutritional status—particularly proportions of underweight children—varies significantly within and between seasons, and over time. Additionally, drought can have dramatic effects on nutrition that may not be captured by occasional surveys. Research carried out by Save the Children during the 2011 drought in Wajir and Mandera found global acute malnutrition rates of 23 percent and 32 percent respectively (the World Health Organization's emergency threshold is 15 percent). In both cases, the levels registered were some four to five times the rates documented in 2009. Findings such as these illustrate the degree to which pastoralist households with limited savings and high levels of poverty are ill-equipped to cope with the combined effects of rising food prices and declining livestock prices.

Access to Basic Services: Immunization and Birth Attendance

Access to health facilities and the availability of skilled staff are two of the most critical factors influencing

Figure 4: The Nutritional Status of Kenya's Children: Extreme Stunting and Underweight-for-Age (47 counties)
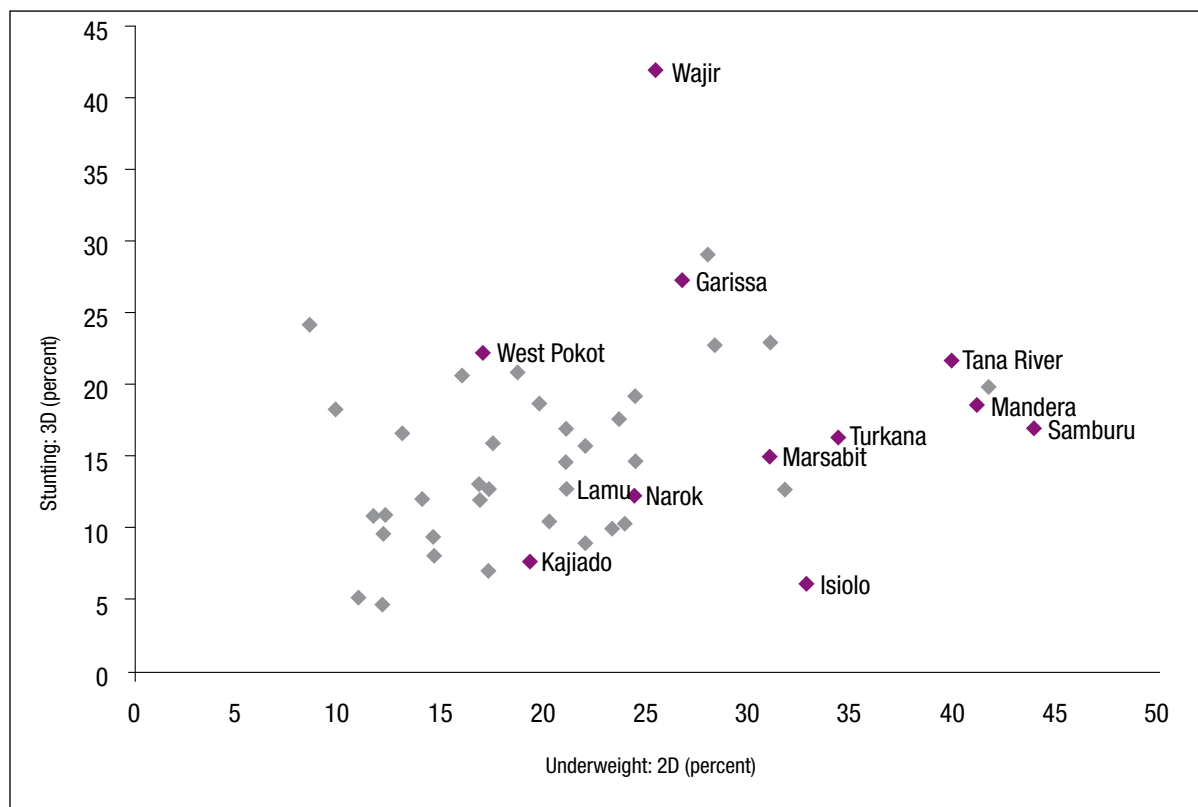
opportunities for health. To varying degrees, the ASAL counties covered in this survey lose out on both fronts.

Data provided by the Commission on Revenue Allocation in 2012 highlights the extent of national inequalities (Table 2). On average across Kenya's 47 counties there is one doctor for every 25,000 people, and one nurse for every 2,054 people. Almost all of the 12 counties have ratios above both levels. In Turkana, the ratio of people-to-doctors is more than 10 times the national average and the ratio of people-to-nurses is seven times the national average.

The consequences of these disparities in access to qualified medical care are apparent in a range of health indicators. While immunization rates have generally improved in recent years, all but three of the 12 counties are in the bottom half of the league table for full vaccination coverage. The limited presence of health providers is reflected in the high proportion of births not attended by skilled medical staff. Five of the seven counties with the lowest rates of coverage are in the bottom seven of the national league table on this indicator. In both Turkana and Wajir, only 5-6 percent of births are attended by skilled providers, which is less than one-third of the national average.

Inequalities such as these can only be addressed through public spending measures that allocate resources against need.

As in other areas, the health service delivery picture is not straightforward. Some of the 12 focus counties are near the bottom of the national ranking for both immunization and skilled birth attendance—Wajir, Mandera and Turkana are examples. Others appear close to the top of the national ranking on one indicator, but closer to the bottom on another—West Pokot and Isiolo do far better on immunization than birth attendance, and vice versa for Lamu. These outcomes illustrate the differential effects of government programs and priorities. They may also reflect public perceptions of the quality of staff and service provision for birth attendance.

Significant barriers to access persist. Cost and distance have a marked bearing on access to health services across Kenya—and the 12 ASAL counties are no exception. Over one-third of total health spending in Kenya takes the form of out-of-pocket payments. While this share has been shrinking with the rise in public spending, cost remains a substantial obstacle for poor Kenyans—and the high levels of poverty in the ASAL counties raises the height of that barrier. Distance is another barrier. In some of the larger ASAL counties it is not uncommon for communities to be located more than 30 kilometers from the nearest health facility.

Table 2: Immunization and Qualified Medical Assistance at Birth: Ranking of 12 Counties and National Average

County	Medical assistance during birth (percent)	Rank [out of 47 counties]	Fully Vaccinated [children under five] (percent)	Rank [out of 47 counties]	Population Per Doctor (in 000's)	Rank [out of 45 counties]
Garissa	23.9	34	74.6	25	52	29
Isiolo	27.9	29	72.2	30	143	39
Kajiado	39.8	18	70.7	31	76	34
Lamu	27.2	30	80.5	19	No data	n/a
Mandera	11.3	45	47.0	46	256	41
Marsabit	17.4	41	80.1	20	32	18
Narok	18.9	40	62.2	42	41	22
Samburu	19.0	39	85.6	13	No data	n/a
Tana River	20.4	38	85.7	12	48	28
Turkana	6.9	46	66.7	35	285	44
Wajir	5.4	47	72.7	28	132	38
West Pokot	16.9	42	56.2	43	73	33
National Average	**37.6**	-	**75.0**	-	**25**	-

Source: Commission on Revenue Allocation 2011.

Even when able to reach a facility, there is no guarantee that patients will receive effective treatment. Further, national surveys have pointed to acute shortages in both staff and medicines in health facilities across ASAL districts (Government of Kenya 2010).

The new constitution identifies public spending as a means to enhance the provision of health facilities in marginalized areas in order to meet the level of quality achieved in the rest of the nation. Against this backdrop, there would appear to be strong grounds for ensuring that devolved financing in health includes special provisions for those ASAL counties facing acute shortages of facilities, trained health workers and medicines.

EDUCATION: ACCESS AND LEARNING

Education has been a partial success story in Kenya over the past decade. Enrollment rates have increased at all levels. More children are entering primary school, completing the primary cycle, and making the transition to secondary school. On a less positive note, the Kenyan education system is characterized by continued problems in access, high levels of inequality and low levels of learning achievement.

Tackling the twin challenge of unequal access and poor quality provision is central to the realization of the ambition of transforming Kenya into a dynamic, inclusive, middle-income country, as articulated in the *Vision 2030* strategy. Addressing these two key challenges is also essential to sustained progress across a wider range of human development indicators. Higher levels of education, especially maternal education, are inversely correlated with child death rates and malnutrition, and positively correlated with the use of basic services (Table 3)**.**

Greater equity is critical if Kenya is to unlock the potential of education as a force for change. The country is marked by extreme vertical and horizontal inequalities in opportunities for education. This applies both to school participation and learning achievement. The ASAL counties represent areas of acute deprivation, with restricted opportunities for education reinforcing and interacting with wider social disadvantages. More equitable patterns of public spending harnessed to more effective policies for delivering quality education in marginalized areas could play a decisive role in unlocking the potential of education as a catalyst for accelerated growth, poverty reduction and human development.

The National Picture: School Participation and the Quality of Education

The Kenyan government has placed considerable emphasis on increasing access to education. In 2003 a policy of Free Primary Education (FPE) was adopted, leading to the withdrawal of formal fees for primary school. More recently in 2008, a policy of 'free secondary education' was introduced in an effort to ensure that children from poor households acquire a quality education that enables them to access opportunities for self-advancement.

Table 3: Maternal Education and Wider Development Indicators

| Mothers Education	Development Indicator			
	Under-five mortality (per 1000)	Skilled antenatal care (percentage)	Delivered by skilled provider (percentage)	Extreme Child Stunting (percentage)
None	86	72	19	17
Primary	68	95	49	14
Secondary or Higher	59	96	73	9

Source: DHS 2008.

School Participation: A Rising Tide of Enrollment

Measured by headcount numbers the effort to accelerate progress towards universal primary education has delivered results. Between 2002 and 2009, the number of children enrolled in primary school increased from 6 million to 9.5 million. The net enrollment rate increased from 79.9 percent to 92 percent over the same period (Figure 5). Part of the surge in enrollment has been absorbed by private schools, although public provision still overwhelmingly dominates the education delivery landscape, accounting for 88 percent of enrollment at the primary level in 2008 (Government of Kenya 2011b). An additional 1 million children entered the secondary system between 2002 and 2009, with gross enrollment rates rising from 29 percent to 42 percent. The overall gains have seen the median number of years of schooling completed (for those aged over 6 years) rise from 4.3 in 2003 to 5.2 in 2008 for females and from 5 to 6 years for males in the same time period (Kenya National Bureau of Statistics 2010).

The surge in enrollment since 2000 has brought large numbers of over-age children into the education system. Many of these children would previously have been excluded from school by the cost of education. Others would have been re-entering the system having previously dropped out. Over 70 percent of the children in Kenya's primary school classrooms are older than the prescribed age for their grade. The national age-for-grade profile is captured in Figure 6, which documents the presence of almost a half million 8-10-year-olds in Standard 1, and 150,000 children aged 13-year-olds in Standard 5 (two years over the prescribed age-for-grade). This profile has some important implications for the quality of education and the additional challenges associated with teaching over-age children.

Figure 5: Progress in Education: Male and Female Enrollment Rate (2000-2009)
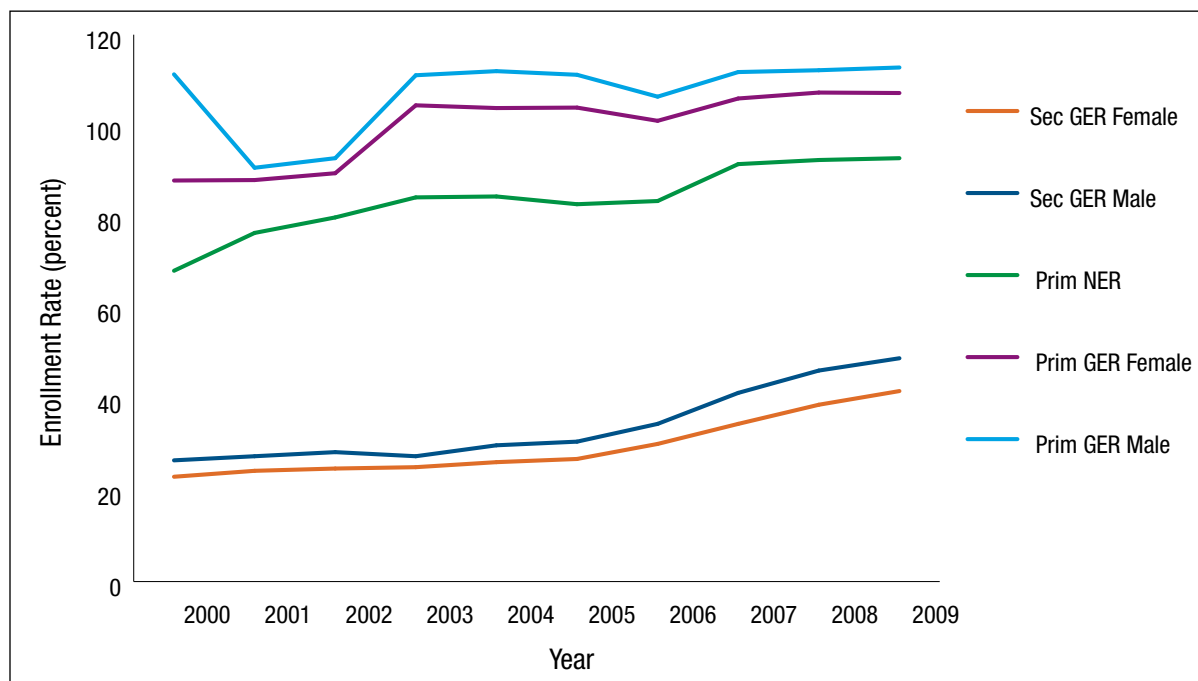
Source: EMIS 2000-2009.

Figure 6: The Age Profile in Kenya's Classrooms: Age-By-Grade Enrollment (2010)
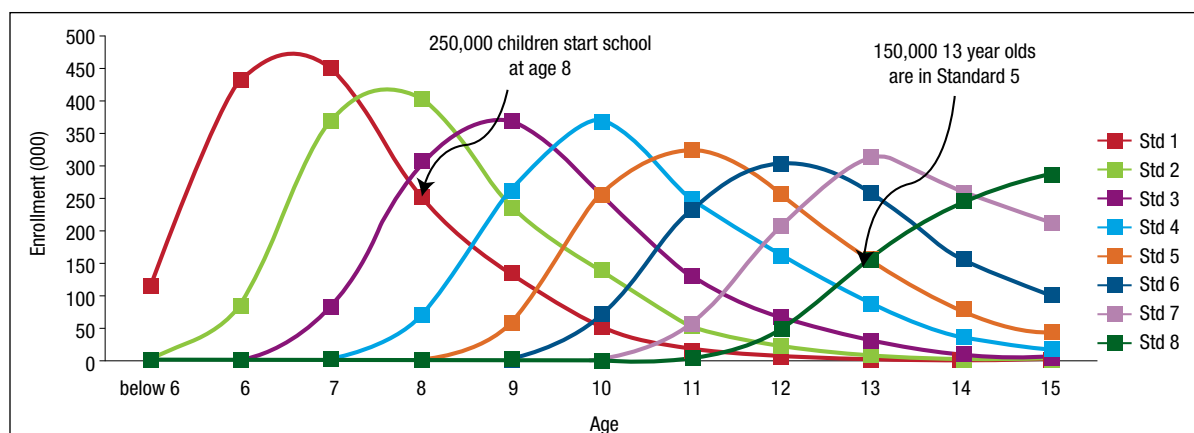
Source: EMIS 2010.

Gender disparities have proven resilient to change in both primary and secondary education, where they have increased since 2006 (Figure 5). By Standard 8, there are just nine girls in school for every 10 boys. While girls have a slightly higher transition rate from primary to secondary school, the gross secondary enrollment rate for girls is 42 percent and 49 percent for boys—a discrepancy that is equivalent to around 108,000 'missing girls.'[7] Age-specific school attendance rates point to higher levels of attendance by males at ages 5-6, reflecting the delayed entry of girls into basic education. Gender disparities in attendance equalize around age 13-14, before widening in favor of males from age 14 onwards (Kenya National Bureau of Statistics 2010). Significant gaps in wealth cut across the gender disparities, especially at the secondary school level (Figure 7).

Out-of-School Numbers

Headline figures on national enrollment have to be interpreted with some caution. While Kenya is getting more children into the school system, there are significant gaps and problems with retention. If the measure of universal basic education is the proportion of children progressing through the full national cycle of eight years, Kenya still has some distance to travel.

That distance is reflected in out-of-school numbers. As illustrated by the data in Table 4, any estimate of out-of-school numbers in Kenya is subject to large margins of error related to divergent estimates for the denominator (the number of children) and the use of different indicators for the nominator (the number of children enrolled or attending school). Estimates by the UNESCO Institute for Statistics (UIS), the primary international reporting agency, put the out-of-school number at around 1 million for 2009. This is above the government of Kenya's own estimate (around 600,000) based on enrollment data in the Education Management Information System (EMIS), which reports a higher enrollment rate than that used by the UIS. However, neither of these sources uses the 2009 population census, which revised upwards estimates for the size of the school population.[8] Applying the net enrollment rate reported in the EMIS to census population for primary school-age children would put the number of the out-of-school children to around 2 million. Survey data on school attendance, as distinct from administrative data on enrollment, tells a different story again. The 2009 census and the 2008-2009 DHS report school attendance rates of 77 percent and 79 percent respectively, implying an out-of-school population of around 1.9 million in the case of the census.

Figure 7: Kenya's Wealth Gaps in School Attendance (2008)
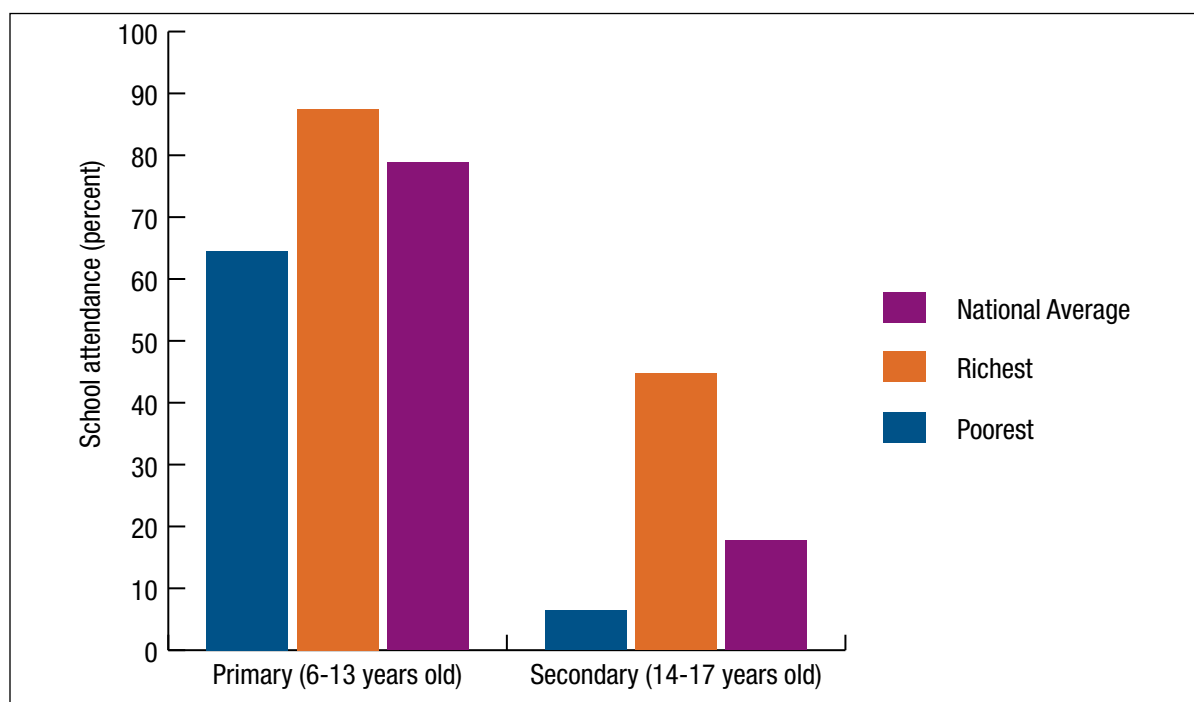
Source: DHS Report 2008-2009.

Table 4: Reported School Attendance and Enrollment

Source	Attendance/ Enrollment (percentage)	Out-of-school estimate (millions)
Census 2009*	77	1.9
DHS 2008*	79	1.8
Uwezo 2011*	87	1.2
National Administrative Data**	90	1.1

Out-of-school population calculated using the Census 2009 Primary School Population (ages 6-13).

** As reported on the Global Monitoring Report 2011 (ages 6-11).*

National data on out-of-school numbers raise three related sets of concerns. First, the discrepancies in the data have far reaching implications for any approach to public spending. If education in Kenya is a basic constitutional right, then the government needs credible and robust indicators to assess the number of children denied that right – and to estimate the financing requirements for delivering education for all. Second, if educational disadvantage is to be included as an element in national financing formulae, then an accurate county-level profile of school participation is a required guide for resource allocation. Third, there are worrying signs that, whichever baseline is used, Kenya is struggling to maintain the momentum towards universal net enrollment. One reason for this is that, like other countries, Kenya now faces the challenge of extending opportunities to children who are the hardest to reach – the last 10-15 percent of the primary school-age group in this case. Many of these children live in the ASAL counties.

School Progression

As the out-of-school numbers indicate, progression through Kenya's education system remains difficult for many children. There are high levels of attrition at various points in the school cycle, including in the early grades into the last grade of the basic education cycle, and in transition to secondary school.

Pure cohort tracking is not possible in Kenya because the absence of longitudinal data makes it impossible to track identifiable children. Some indication of progression patterns can be created through proxy tracking exercises, which trace classroom numbers across grades. Figure 8 summarizes such an exercise for the 1.3 million children who entered Standard 1 in 2003. With smooth progression, these children would have been expected to complete an eight year cycle

in 2010. However, there were just 740,000 students in Standard 8 in that year, and fewer than 400,000—or one-third of the 2003 intake number—took the Kenyan Certificate of Primary Education (KCPE) at the end of the primary cycle.

These figures suggest that repetition and drop out take a heavy toll. Many children do not make it through the basic education system in the anticipated number of years and many do not make it through the system at all. There is further attrition at the secondary school level. In 2010, a reported 354,000 students sat for the Kenyan Certificate of Secondary Education (KCSE), implying that 10 percent of entrants to secondary school in 2007 had either dropped out or not yet completed Standard 4.

Figure 8: Charting Grade Progression: Reported Enrollment for Standard 1 Through the KCSE (2003)
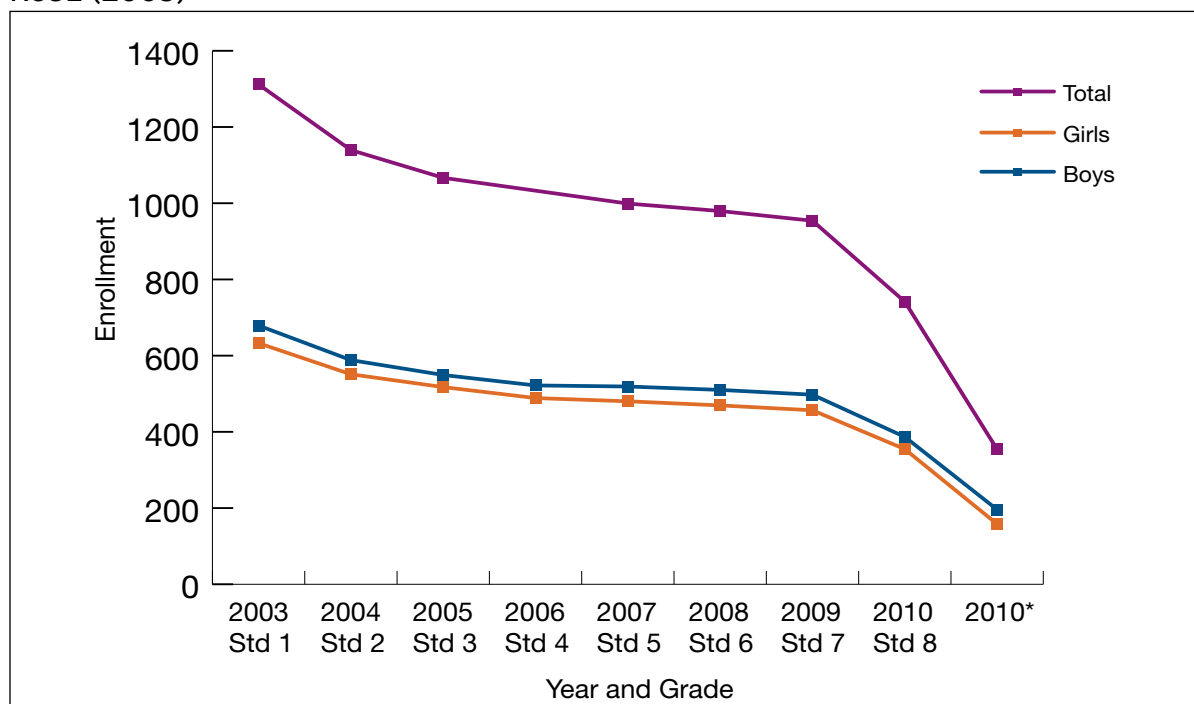
Source: EMIS 2010.

*Number of students sitting for KSCE.

Factors Keeping Children Out of School and Fueling Attrition

There has been extensive research into the barriers that keep children out of school and the factors behind school attrition. While there are many localized variations, five major and overlapping themes emerge:

- *Parental education*: As in other countries, in Kenya participation in education is strongly associated with parental education. Having literate parents confers significant advantages that may be associated with the value attached to education, support with homework, parental confidence in engaging with schools and teachers, and household wealth effects. Disaggregated county-level data on parental education is not yet available. However, the 2008-2009 Demographic and Health Survey found that over two-thirds of women (and one-half of men) in the old North Eastern Province reported no education, compared to just 6 percent in Nairobi and 10 percent in Central Province.

- *Household wealth*: Cost remains a major barrier to education for the poorest households in Kenya. Despite the policy of Free Primary Education, parents still face indirect costs including uniforms, learning materials and a range of informal charges (even though FPE funds include support for learning materials). Under the 2008 policy, the government of Kenya has committed to providing a per pupil subsidy for all children in public day secondary schools, but schools still charge to cover the costs of development projects and food. As such, it would be more accurate to describe the policy as one of reducing charges.[9] One study estimates that these costs amount to as much as $186 a year for day school pupils and $368 a year (at 2007 exchange rates) for public boarding school pupils (Obha 2009). Household expenditure for secondary school averages eight times the level for primary education (Glennerster et al 2011). For the reported 45 percent of Kenyans living below the poverty line, these are significant cost barriers. In a setting where the education of girls is perceived as being of less value than the education of boys, economic pressures are likely to fuel gender disparities.

- *Education quality*: Parents in poor households have to make considerable investments to put their children through school. To the extent that these investments are perceived to generate returns in terms of improved prospects for employment and wider opportunities, parents will have an incentive to keep their children enrolled in school. However, those incentives will be weakened if the education system is seen as delivering limited results—and some of the learning achievement results are discouraging (see below). In some areas, including the ASAL counties, parental concerns over quality extend to the school curriculum itself, which may not be seen as sufficiently sensitive to local language, beliefs and customs, or as sufficiently relevant to livelihoods.

- *Health effects:* The poverty and childhood health and nutrition indicators discussed earlier in this report have far reaching consequences for education. Cross country research has demonstrated that both stunting and poverty are associated with reduced years of schooling and lower test scores. One of the most detailed studies finds that being stunted and living in poverty results in a loss of two years of schooling and another two years of lower grade attainment (Martorell et al 2010). The cumulative effects of illness and micronutrient deficiency in terms of lost school attendance, diminished cognitive development and lower learning outcomes has not been estimated for Kenya—but the costs are likely to be very high.

- *Distance and gender:* Low population density and fewer schools in some of the 12 counties result in longer distances and journey times to school, which are in turn associated with lower attendance rates for children who are not in boarding school. Problems are compounded at the secondary level because there are fewer schools. In counties where adolescent children are actively engaged in herding and in water and firewood collection, distance

to school is associated with high opportunity costs. Gender factors also come into play, with parental security fears militating against allowing girls to walk long distances or to join boarding schools (UNESCO 2010).

The National Learning Achievement Deficit

The primary focus for basic education policy in Kenya over the past decade has been getting children into school. Less attention has been directed to what children learn in school. As in many other countries, the emerging evidence strongly suggests that a more integrated approach is needed. The next generation of reform needs to combine an equal commitment to enhanced access and learning.

Uwezo Surveys: 'Our Children Are Not Learning'

Surveys carried out by Uwezo, a Kenyan nongovernmental organization, have highlighted the poor state of learning in many of Kenya's schools. These surveys test children in higher grades on exercises designed for lower classes. Apart from documenting the absolute level of learning, they capture the value added by a year of education as children progress across grades (Uwezo Kenya 2011).

The results tell their own story. The 2011 Uwezo survey revealed that some 70 percent of children in Standard 3 were unable to successfully complete tests designed for Standard 2 children. More alarmingly, one in five children in Standard 4 could not read a text designed for Standard 2 children; and 9 percent of children in Standard 8, the final grade of primary school, could not do a Standard 2 division sum. As the survey concluded, "Our children are going to school, but they are not learning."

While the Uwezo surveys attract considerable media interest in Kenya, the implications of the results are not sufficiently recognized. Consider the test results for final grade students on the Standard 2 division sum. Fully 10 percent of these students have gone through seven years of schooling with no value added in terms of their ability to perform foundational skill tasks from Grade 2. Other sources broadly corroborate the Uwezo survey results. In 2010, results from a survey carried out by the Kenya National Assessment Center found that half of pupils in Standard 6 were unable to achieve basic competency levels for literacy and numeracy (Wasanga, Ogle and Wambua 2010).

These learning shortfalls inevitably contribute to the high rates of attrition recorded in the previous section. Children who aren't learning are less likely to progress across grades, in part because their parents may be unwilling to meet the direct financial costs and wider opportunity costs of keeping them in school. It can reasonably be assumed that a large proportion of the dropout that occurs between Standard 7 and Standard 8 is a direct result of parental recognition that their children are unlikely to pass the school-leaving test.

National Examination Results: Primary School

Examination results provide another window into Kenya's learning achievement problems. Many of Kenya's children fall far short of the learning achievement levels required to progress to secondary school. This is true even for those who progress through primary school to sit for the Kenya Certificate of Primary Education, the results of which are used to select children for entry to one of the three secondary school tiers—district, provincial and the elite national schools.

Some caution has to be exercised in using test scores to assess learning achievement levels over time. The scores are normalized with the distribution pattern geared in part towards the availability of secondary school places. Even so, a large proportion of students score at a level so low as to raise questions about the value added by eight years of schooling.

Figure 9 documents the test score distribution for 2010. It identifies a number of performance bands for the five core competencies covered by the KCPE (Kiswahili, English, math, science and social studies). While there is no 'pass' or 'fail' cut-off point in the test score distribution, scores below 200 are considered very poor and well below the level required to make a successful transition to secondary education. Students scoring at this level are registering learning achievement standards several grades below those expected. The range between 200 and 250 is also considered to be below the required level for secondary schooling, with students scoring in this range requiring remedial teaching to make up lost ground. As indicated by the test score distribution, fully one-quarter of KCPE students, 171,000 in total, score below 200. On the other side of the low performance threshold, 28 percent of students score between 200 and 250.

Figure 9: Kenya's Primary School Learning Outcome Results: National Frequency Distribution for Test Scores (2010)
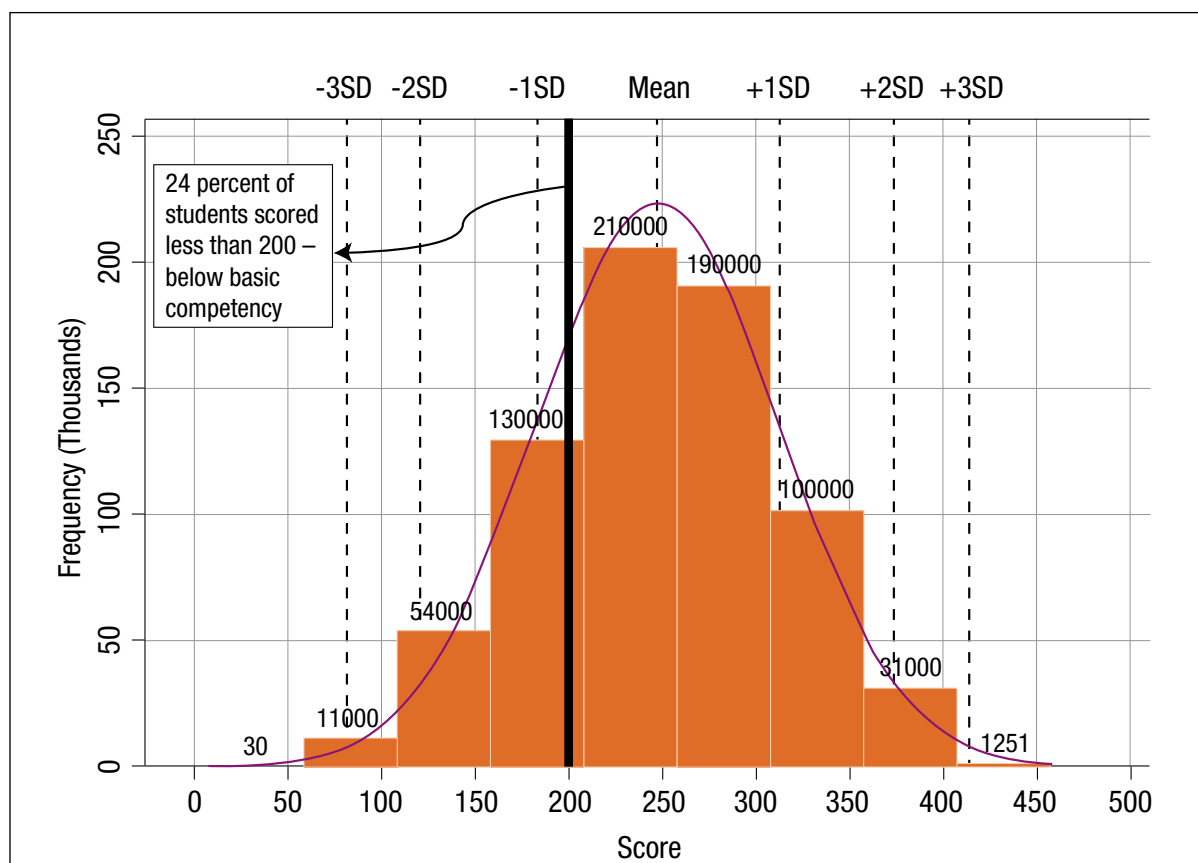
Source: KNEC: KCPE 2010.

In summary, just over half of the students making it through to the KCPE exam stage are scoring at levels below those required to prepare for a successful secondary education. For the 15 percent of students scoring below 185, the performance level is so low as to raise questions about the value added by their schooling over a period of several years.

Looking beyond primary school the number of students sitting the Kenya Certificate of Secondary Education has been rising steadily. In 2010, a record 354,062 pupils sat the exam. Just over one-half of these pupils scored a C+ or higher. Reflecting the gender gap in secondary school enrollment, boys accounted for 55 percent of candidates. Gaps in test score appear to rise with the grade. Thus while an approximately equivalent share of male and female candidates gain a C+ or higher, boys are more likely to gain a B+ or higher. Nationally, 6 percent of Standard 4 leavers were admitted to university in 2009, with a further 14 percent admitted to technical and vocational courses or college.

There are marked disparities in performance across schools. Data for national schools in 2008 indicate that 90 percent of students scored a C+ or higher, with an average score of 9.6 out of 12. Gender gaps in score were insignificant. In provincial schools the share of students scoring C+ dropped to 43 percent, with significant gender gaps emerging. In district schools just 11 percent of students scored C+ and the proportion of boys performing at this level was almost double that for girls (Glennerster et al 2011). While the government of Kenya has recently moved to implement quotas for public school entrants to national and provincial schools, these test disparities serve to underline the advantages that come with attendance at the high-performing private schools at the primary level (Muindi 2012a; Muindi 2012b).

Private School Attendance: A Significant Advantage

Attendance at a private primary school confers significant advantages for KCPE candidates. Private school students score higher grades and are more likely to be eligible for entry to the elite tier of national schools. Paradoxically, a private primary education is the most secure route into a high quality, publicly financed secondary education.

The learning achievement advantages registered by private school students are apparent long before they sit the KCPE. The 2010 National Assessment Center survey found that pupils in private schools were outperforming their counterparts in public school by around two-thirds of a standard deviation on numeracy and one standard deviation on literacy by Grade 5. By the time children sit the KCPE the performance gap is extremely large. In 2011, there were just two government schools in the top 30 of the national KCPE ranking; and just 10 in the top 130. While representing only around 10-15 percent of KCPE candidates, private primary school graduates typically account for around 50 percent of the KCSE candidates in national schools (Glennerster et al 2011).

Some commentators point to test score differences as evidence of the inherent advantages of private over public schools. That evidence is in turn cited to make the case for expanding the provision of public finance for low-fee private schools, notably through vouchers for children from low-income households. Does the undoubted public-private school performance gap justify the policy prescriptions in favor of publicly financed private education?

Not on the basis of the evidence presented to date (Box 2). While several studies have sought to demonstrate that private schools outperform public

schools, most have failed to adequately control for the socio-economic status of pupils. They have also failed to sort children by the type of private schools they attend. The private school sector in Kenya is very diverse, spanning 10,000 registered schools and an unknown number of unregistered schools. Some of these schools, especially the best performing among them, are drawing pupils from high-income households. At the other end of the spectrum are low-fee private schools operating in informal urban settlements and some rural areas. There are no robust studies comparing the low-fee schools serving poor communities with public schools serving comparable communities.

None of this is to understate the scale of the learning achievement crisis in Kenya's public schools. State failure to deliver quality education has fuelled a large-scale exit from the public school system. There are now over one million children in private primary schools—some 10 times the number before the introduction of free primary education in 2003 (Government of Kenya 2008). Many of these children come from exceptionally poor households, and those in low-fee private schools are often paying for an education of exceptionally poor quality. Indeed concerns over the standards of low-fee providers have increased with their expansion. During 2011 the District Education Board in Kisii ordered the closure of 30 low-fee private academies, 20 of which were among the worst performers in the national KCPE ranking (Nyagesiba 2012). The district commissioner's report highlighted the failure of the schools to comply with the basic standards for environmental safety and learning set by the Ministry of Education. "The owners of the schools," he commented, "are interested only in making money at the expense of young learners." (Nyagesiba 2012)

That observation almost certainly has a far wider application. It draws attention to problems of the regulatory failure of nonstate providers in a context of widespread state failure to deliver good quality education. Even established private school associations have expressed concern that the rapid growth of the sector has seen an increase in malpractice—ranging from the corrupt purchase of exam papers, the registration of weak students under the names of other schools, and the practice of poaching top students from public schools—to drive up results. The Kenya Private Schools Association has called on the government to introduce legislation requiring more stringent regulation.

Factors Behind Low Levels of Learning Achievement

As in the case of school access and retention, many of the barriers to improved learning achievement are well understood even though more research is needed to identify strategies for raising standards.

Some of the factors holding down learning standards are exogenous to the education system. Poverty, malnutrition and parental illiteracy clearly disadvantage many children. Early childhood provision has the potential to mitigate that disadvantage. However, only one-quarter of children in the relevant age group are enrolled in pre-primary education and there are marked disparities across income groups and regions.

School-based and wider institutional failings in the education system hamper learning prospects. Shortages of textbooks and teaching materials are a problem, especially for children from households unable to afford them. The 2011 Uwezo survey found just one textbook to every three children in Class 2. This is broadly consistent

Box 2: Low-fee Private Schools in Kenya: Symptom of State Failure, or Cure for the National Learning Crisis?

Since the nationwide elimination of school fees in 2003, in Kenya the private school sector as a whole has grown rapidly. Within this sector, many of Kenya's poorest households, especially those living in informal urban settlements, send their children to low-fee private schools. Several commentators have argued that these schools represent a viable, affordable and cost-effective alternative to poor quality public provision—and that both the Kenyan government and donors should be using school vouchers and other arrangements to increase budget financing for private education.

Are these claims and policy conclusions supported by rigorous evidence? The underlying arguments rest on the contention that low-fee private schools are delivering higher levels of learning achievement at lower cost than public schools—and that provision could be scaled up without compromising the quality and cost advantage. Current research evidence does not support these conclusions. Moreover, while many poor households have exited public schools because of quality concerns, advocates for low-fee private schools have tended to neglect the absence of state provision as a 'push factor'.

One recent study illustrates some of the weaknesses underpinning the case for an increase in public finance for private education (Bold et al 2011a). In a review of KCPE data up to 2005, the authors find that private schools achieved an average test score premium of around 20 percent—equivalent to one full standard deviation. With reported average per pupil cost in two-thirds of private schools (as measured by reported school fees paid by parents) being less than half public spending per pupil in public schools, the authors contend that increased public spending on private schools could raise education quality at a net savings to the national budget.

The disarmingly simple policy conclusion obscures some serious methodological flaws. Among the problems with the research and the subsequent policy conclusions it draws, others include:

- Failure to control for the socio-economic status of pupils. The superior performance of private schools in the KCPE exams is well documented (see main text). However, matching pupils to compare like-with-like is difficult in Kenya—and the study fails to address the problem.

Between 2003 and 2008 both the public and private school sector registered enrollment increases in excess of 700,000 pupils, with private schools enrollment increasing from 2.6 percent to 10 percent. The headline figures do not capture underlying patterns of school and pupil segmentation. Given that the rise in enrollment was associated with the lowering of cost barriers, it is probable that most of the 1.4 million pupils entering the education system for the first time were from the poorest, least literate households in Kenya. Many would have been first generation learners. Meanwhile, most pupils exiting public schools and entering the private system were, by definition, able to afford the transition. In other words, the marginal student entering the public system was carrying a higher level of educational disadvantage than the marginal student entering private schools. The 90 percent of pupils attending Kenya's public schools include the most deprived in the country, while private schools include the most advantaged (including post-2003 recruits from public schools).

- Failure to sort by pupil and school identification. In 2005 (the last data point for the survey) most low-fee private schools were unregistered. Their pupils took their KCPE exams in public schools—and their results were recorded as public school results. The practice remains widespread even today, yet the survey does not control for the consequences of this important administrative practice. The sorting problems do not end here. Most low-fee private schools operating in informal settlements provide classes only up to Form 6 or below, while the KCPE exam is taken by Form 8 students. It therefore appears likely that many low-fee private school pupils either drop out or transfer to public schools, making it difficult to attribute achievement gains by school type.

- Failure to control for dispersion of private school funding and household finance. As in other countries, the private school sector in Kenya is very diverse. The authors of the study under review estimated the 2006, median and mean private school fees per pupil respectively at $40 and $110 per year. They contrast this with an estimated average per pupil cost of $88 per year in state schools. However, the data comparison does not include non-fee expenditures undertaken by households of children in private schools—a major omission in any comparison of cost effectiveness. Moreover, it is not clear that the survey covers the bulk of students attending the low-fee private school sector. The 2005 Kenya Integrated Household

Budget survey reported that 47 percent of the country had a income of $38 per month or less. The implication is that the cost of sending two children to the median low-fee private school would have been equivalent to around one-fifth of total per capita adult income, before factoring in costs of uniforms, textbooks and informal fees. Given the large share of household budgets for the poor absorbed by food costs, it appears unlikely that the intake for median fee private schools was drawn from the poorest half of Kenyan society, again calling into question the merits of simple 'public-versus-private' comparisons.

- Failure to examine underlying sources of cost-differences and implications for learning. The research exercise treats cost-differences as a simple indicator of cost efficiency. Detailed school survey evidence points to the need for greater nuance. Government owned schools register higher costs in part because they tend to have more textbooks per pupil, better buildings, high standards of water and sanitation, and more qualified teachers than low-fee private providers. Driving down standards in these areas would hardly appear to be a desirable reform option in the context strategies aimed at raising learning achievement levels. The same is true for the primary source of the public-private school cost differential: namely teacher salaries. While there are many problems with the training, support and deployment of Kenya's teachers, as well as with teacher absenteeism, driving down pay and conditions while seeking to increase and improve the quality of new career entrants in the name of efficiency is likely to prove counterproductive.

- The emergence of the low-fee private school in Kenya is a response to various underlying currents. Concern over the quality of public provision is certainly one of those currents, but other factors are also at play. The introduction of free primary education in 2003 has not brought public schooling to many informal settlements, leaving some of the poorest households in the country with no alternative but to turn to low-fee—and low-quality—private providers. Household surveys in informal settlements reveal a large unmet demand for public provision, with many poor households turning to public providers when they are available.

- Low-fee private schools are likely to remain an important part of the education landscape in Kenya. The growth of these schools is in large measure a symptom of the failure of public schools to provide the option of decent quality education. However, it is not in itself evidence that the low-fee private sector is equipped to expand provision of quality education on a more cost-effective basis than the public education system. This is especially true of the ASAL areas, where the market in private school provision remains limited (see main text). For the vast majority of Kenya's children, especially the very poorest among them, prospects for a decent quality education will continue to hinge on reforms that strengthen the equity and efficiency of what is on any measure an under-performing public school system.

Sources: Bold et al 2011a; Bold et al 2011b; Glennerster et al 2011; Oketch and Ngware 2010; Ngware, Oketch and Ezeh 2011; Oketch et al 2010.

with another national survey which found that half of Kenya's teachers reported book-to-pupil ratios in excess of 1-to-3 for English and math (Wasanga, Ogle and Wambua 2010). School infrastructure is another concern that may impede quality of learning: Uwezo found that four in 10 schools had no clean drinking water and one in 10 no usable toilet.

Classroom overcrowding is another major concern. An econometric regression carried out in the 2010 National Assessment Center survey on learner achievement found that pupils in smaller classes tended to perform better on numeracy (less so on literacy). National average pupil-teacher ratios are marginally above the guideline level of 40-1, but overcrowding is a major problem in some areas. Moreover, the real ratios may be far higher than reported because of teacher absenteeism. In 2011 the Uwezo survey found that 13 percent of teachers were absent from school at a time when they should have been present.

Having teachers in the classroom is not an automatic guarantee of effective learning. The quality of classroom instruction experienced by many of Kenya's

children leaves a great deal to be desired. Both the National Assessment Center survey and the findings of the Uwezo study point to weakness in teaching for basic literacy and numeracy as a national problem. This raises questions about the quality and relevance of teacher training. Teachers are poorly equipped to provide effective remedial teaching, even though it occupies a significant share of their classroom time. In-service support does little to counteract the problem. Around one-third of teachers reported no in-service training between 2003 and 2009.

Education Disadvantage in the 12 ASAL Focus Counties

The access and learning problems discussed in the previous section are evident across Kenya. Most of the new counties have significant out-of-school populations and all have large numbers of schools and pupils registering low levels of learning achievement. However, the ASAL counties account for a disproportionately large share of Kenya's national education deficit. Children from these counties carry disadvantages associated with their home environment, including high levels of poverty, parental illiteracy and acute health problems. These disadvantages, especially female children, start before school and affect them throughout the education system, reinforcing wider cross county disparities.

Parental illiteracy has a marked bearing on prospects for school enrollment and learning. Children with more educated mothers in particular are more likely to be in school and less likely to drop out. Having a literate home environment confers additional advantages in terms of school preparedness and support with homework. Most children in the 12 ASAL counties do not come from such an environment. These

Figure 10: Female Literacy and Gender Disparity (47 counties)
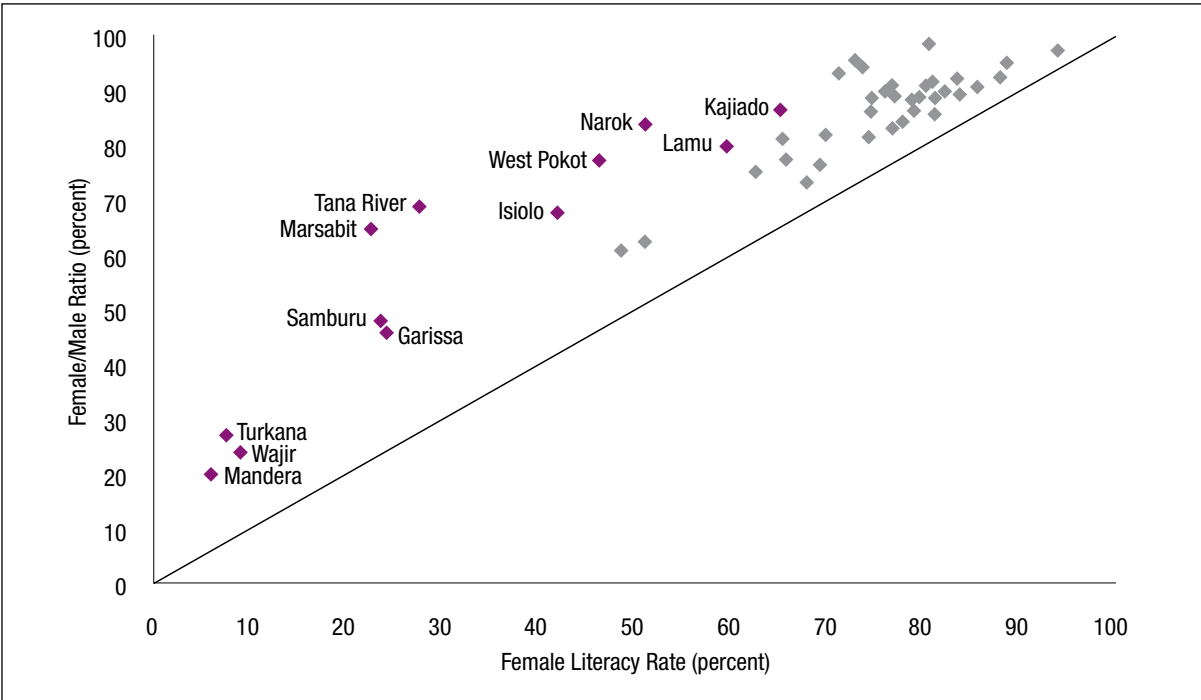
Source: KIHBS 2005.

*Female literacy as a share of male literacy (Age 15+).

counties occupy eight of the 10 bottom places in the national ranking for literacy levels across Kenya's 47 counties. The gender disadvantage in adult literacy is particularly marked. In Samburu and Garissa fewer than half of females are literate, falling to less than one-third in Turkana, Wajir and Marsabit (Figure 10).

The School Enrollment Deficit

County-level data on enrollment highlights the gulf separating children in most of the 12 countries from their peers across Kenya. The ASAL counties account for nine of the 10 lowest enrollment rates in the country – and all 12 are in the bottom 15 (Figure 11). Turkana has the lowest net enrollment rate of any county, with just one-quarter of primary school-age children enrolled. That figure rises to just over one-third for Garissa and Wajir. Household poverty is likely to be a significant contributory factor in explaining the low net enrollment rates in most ASAL counties. However, the relationship between poverty incidence and school participation is nonlinear. Narok and Kajiado combine among the lowest poverty rates in Kenya with the lowest net enrollment rates.

Part of the explanation for low overall enrollment can be traced to gender inequalities. The 12 ASAL counties have some of Kenya's deepest disparities in enrollment between girls and boys. Using the boy-girl ratio to rank in primary school, the 12 ASAL counties are included in the 13 counties with the largest gender gap (Figure 11). Only West Pokot has a lower level of gender disparity below the national average

Enrollment rates for secondary education in the 12 ASAL counties mirror those for primary school, with a magnified gender gap (Figure 12). Nine of the bottom 10 counties in the national ranking are in the group of 12 ASAL counties for secondary school enrollment. These figures illustrate the difficulties faced by parents and children in these counties in negotiating progression through the education system.
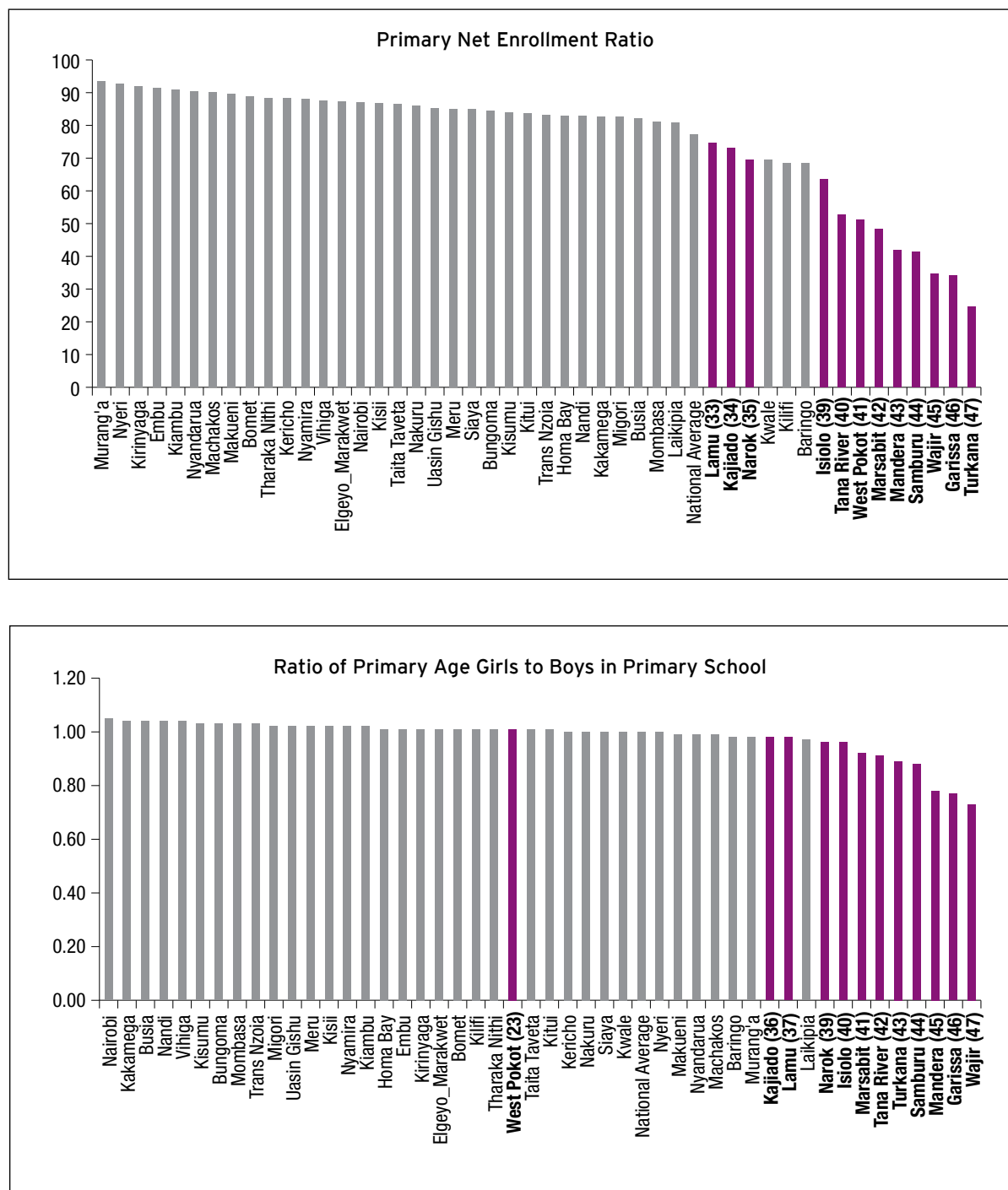
Out-of-school Children

As indicated by the enrollment data, the 12 ASAL counties account for a disproportionate share of extreme disadvantage in access to education. These counties are home to 20 percent of the national primary school-age population, but around 46 percent of the out-of-school population. Put differently, being born in one of the ASAL counties roughly doubles the risk of being out of school.

Stark as it is, even this figure understates the elevated risks facing some counties. Figure 13 compares the share of each of Kenya's 47 counties in the national primary school-age population with the county share of out-of-school children. In the case of counties such as Turkana, Wajir, Garissa and West Pokot the county share in the out-of-school population is more than three times the population share.
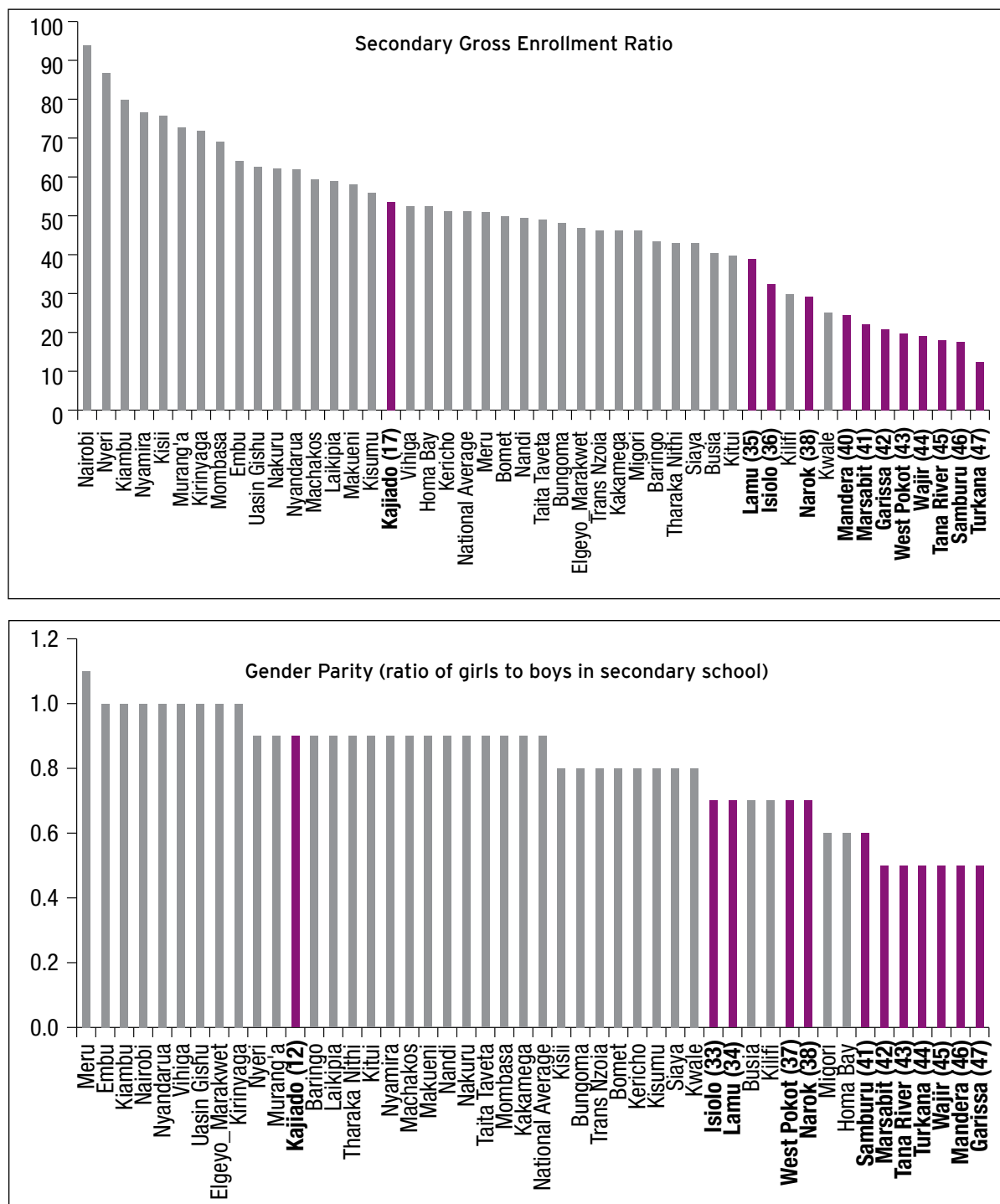
The data on out-of-school children draw attention to a wider set of challenges. Along with other countries, Kenya has adopted the Millennium Development Goals target of universal primary education by 2015. The eliminating education charges in 2003 accelerated progress towards that target. However, the national enrollment picture points to a marked slowdown since 2007. With almost half of Kenya's out-of-school children now concentrated in the 12 ASAL counties, changing this picture and getting on track for the 2015 target will require focused policy interventions targeting these counties. This is an area in which the constitutional commitment to affirmative action for the most marginalized counties and associated public spending commitments could make a significant difference—an issue that we return to in Section 4 of this paper.

Figure 11: Primary School Ranking: Primary School Net Enrollment Rates and Gender Parity Ratios (47 counties, 2009)
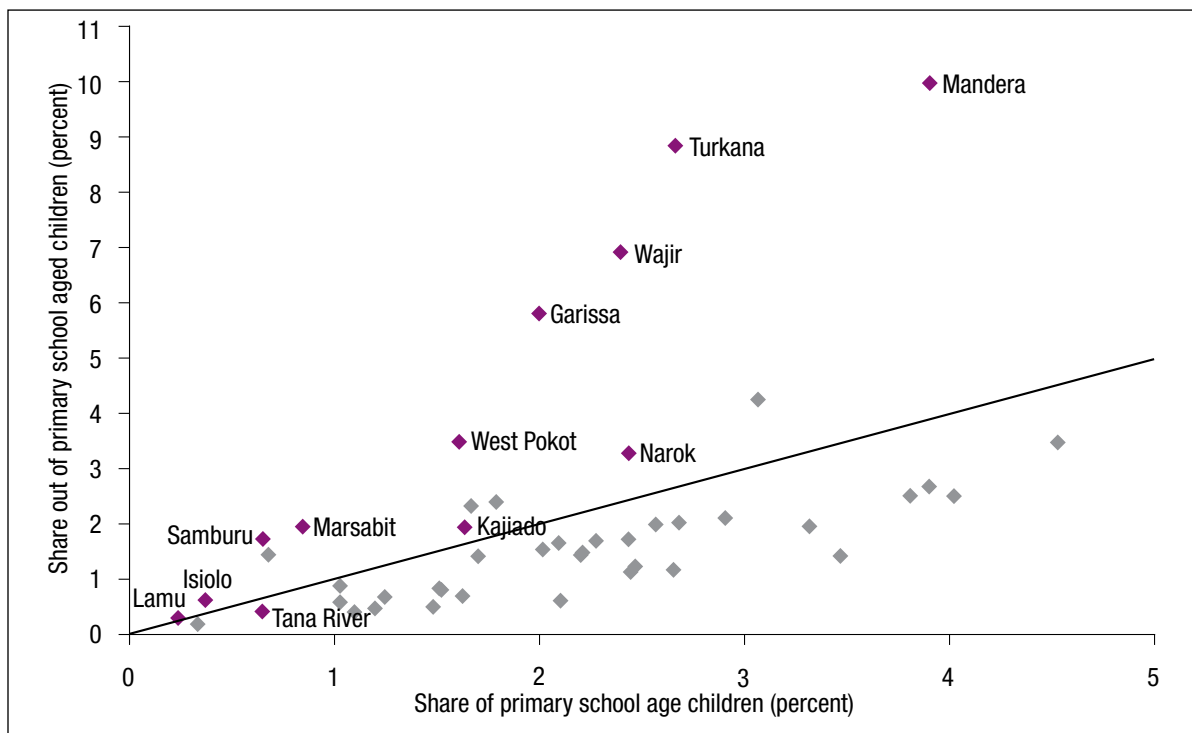

Source: EMIS/Census 2009.

Figure 12: Secondary School Ranking: Secondary School Gross Enrollment and Gender Parity (47 counties 2009)

Figure 13: Kenya's Unequal Distribution of Out-of-School Children (47 counties)

Source: EMIS/Census 2009.

Patterns of School Attrition

Out-of-school numbers reflect the very high attrition rates evident across the 12 counties. The odds are firmly stacked against children making it through basic education, with those who succeed facing another set of barriers at the point of transition to secondary education.

As is the case at the national level, data constraints make it impossible to construct longitudinal cohort-tracking exercises for the 12 counties. Using 2010 data made available by the Ministry of Education, we construct a proxy tracking exercise by mapping numbers enrolled by grade for four of the ASAL counties, starting with the cohort that entered Standard 1 in 2003 (Figure 14).

The exercise reveals some contrasting patterns of school progression. Each of the four counties has a high level of dropout in the earlier grades, with continued attrition across later grades. In each case, the number of children sitting in Grade 8 classrooms is less than one-half of the number in Grade 1: in Turkana and Wajir it is around one-quarter. Prospects for progression through the point at which children sit the KCSE are highly unfavorable. While children across the four counties share a limited likelihood of reaching secondary school, dropout patterns vary. In Turkana, the number of students in Standard 3 is less than half the number entering Standard 1, whereas West Pokot registers a less steep decline. Progression profiles also vary by gender. The disparities are limited in West Pokot and Turkana, but far wider in Wajir and Garissa.

Both the high overall level of early grade attrition and the differences between counties have implications for education financing. If closing county-level gaps in progression towards universal primary education is a core policy goal, the fi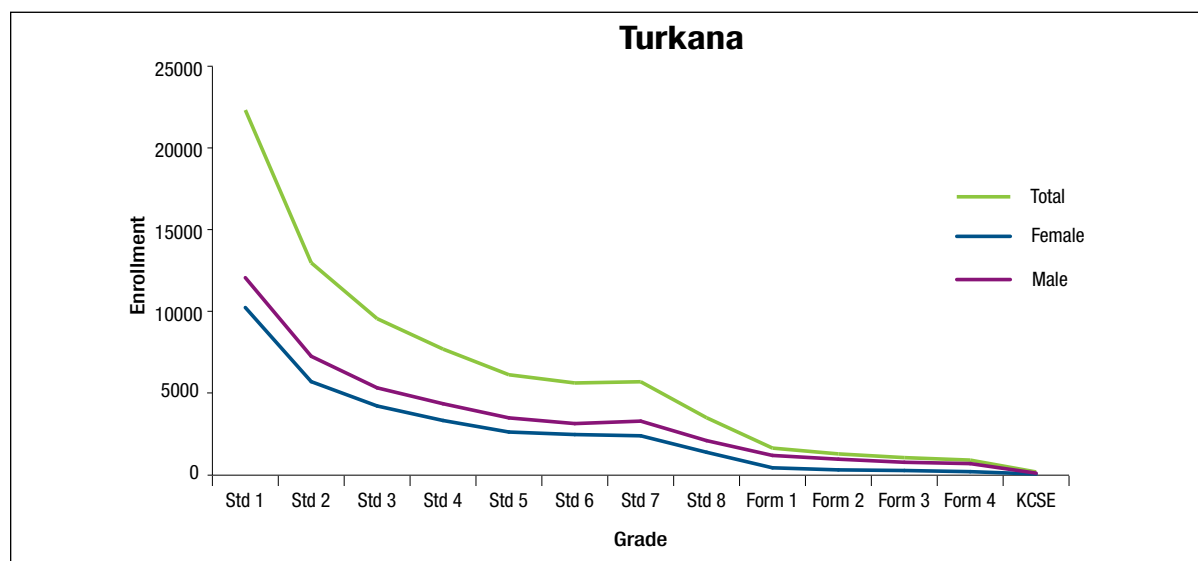nancial support has to be directed towards countering the pressures leading to elevated risk of dropout during the primary cycle.

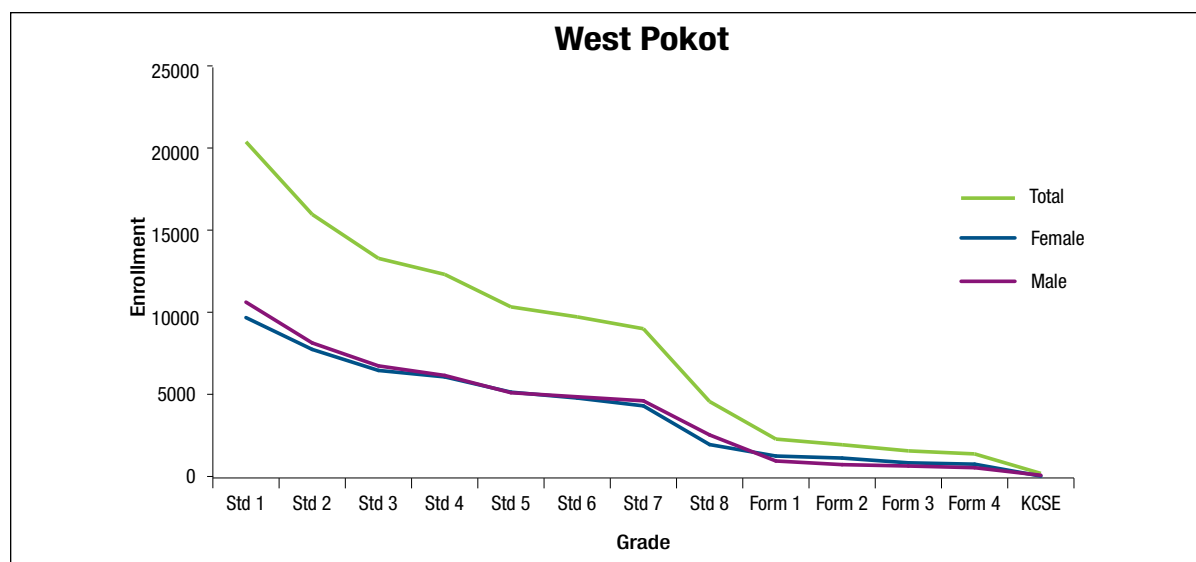The cumulative effect of attrition in primary and secondary school can be best seen at the point that

Figure 14: School Progression Profiles: Enrollment Levels by Grade for Wajir, Turkana, West Pokot and Garissa (2009)
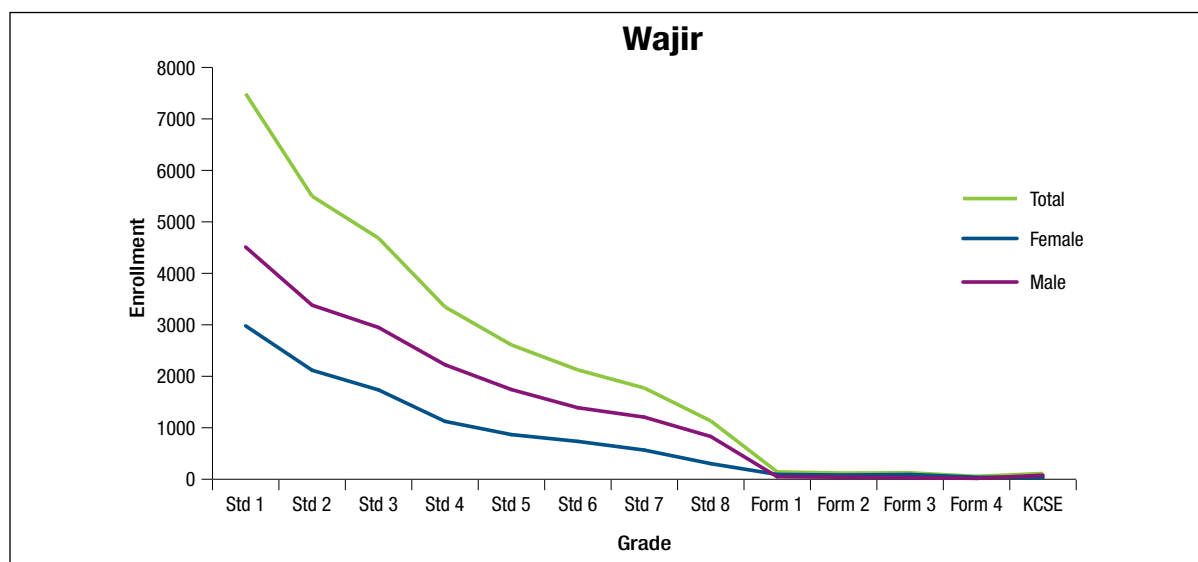
Source: EMIS 2010.

Source: EMIS 2010.

West Pokot

Source: EMIS 2010.

Garissa
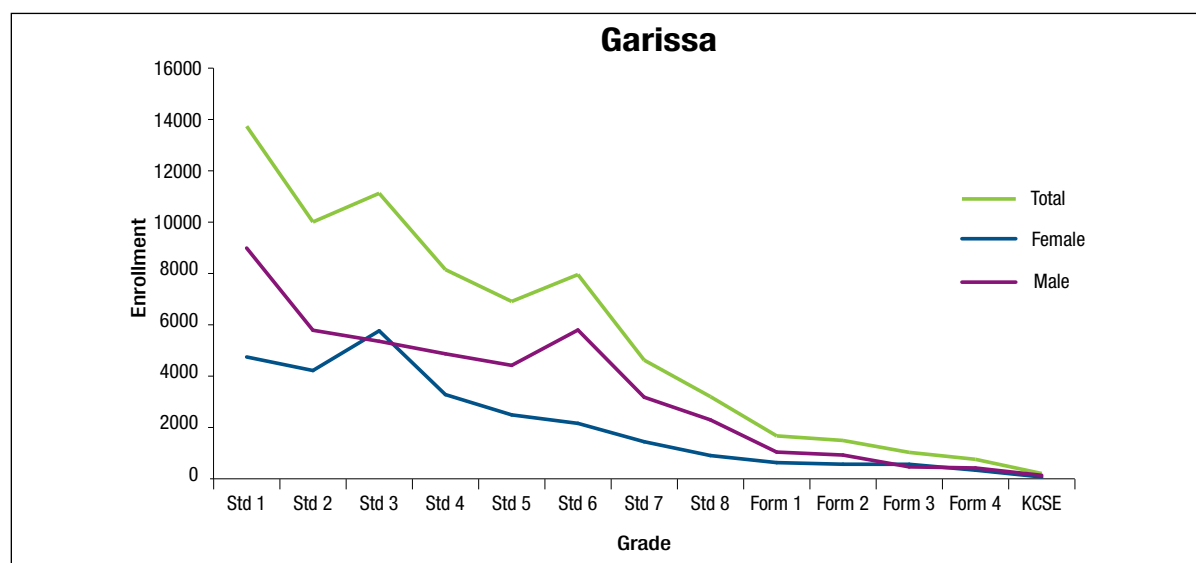
Source: EMIS 2010.

Kenya's children sit for the KSCE. Figure 15 provides a simple comparison of the share of each of the new counties in the secondary school-age population and their share of pupils sitting the KCSE. This is a very rough measure of equity, but it is nonetheless telling. In a situation of equal opportunity, the distribution of students sitting the KCSE would mirror the distribution of the eligible population (adjusted for chance and effort). In other words, the two sides in Figure 15 would be of equivalent length. With 18.5 percent of the secondary school-age population, the 12 ASAL counties would account for a similar proportion of KCSE exam candidates. They account for 5 percent of KCSE candidates. Gender disparities are very large across the 12 ASAL counties, with girls representing around 4.2 percent of female candidates that sat for the 2010 exam.

Figure 15: Unequal Opportunity: Share of County Secondary School-Age Population and Share of Cohort Sitting the KCSE (2010)

Mandera accounts for 4 percent of the secondary school age children, but just 0.4 percent of the KSCE candidates. (Girls account for 0.1 percent of the KSCE candidates)

Machakos accounts for 3 percent of the secondary school age children, but just 4 percent of the KSCE candidates. (Girls account for 2 percent of the KSCE candidates)

■ Share of male students sitting for KCSE

■ Share of female students sitting for KCSE

■ Share of the national secondary school age children

KCSE Students — Secondary school age population

Source: KNEC: KCPE 2010.

Learning Achievement

Getting through to the exam stage of the education cycle is an indicator of school progression, not of learning achievement. How do pupils from the ASAL counties perform in the KCPE and KCSE exams relative to their peers from other counties?

That question has to be addressed with some caution. Given that the vast majority of children entering school drop out long before reaching the relevant KCPE let alone the KCSE grades, the exams provides a reference point for a very small sample of children. The vast majority have dropped out before taking the exams, presumably at far lower levels of learning achievement. As a group, the 12 ASAL counties covered in this report accounted for just 8 percent of KCPE candidates in 2010, which is under half of their collective share in the primary school-age population.

Bearing in mind the sample size caveat, the 12 ASAL counties have a mixed record on exam performance. On a simple ranking of mean scores for the KCPE, eight of the 12 ASAL counties are in the bottom 20, with Mandera, Tana River and Garissa in the bottom five (Table 5). Mandera registers the lowest test score of any county. At the other end of the spectrum, two counties – Kajiado and West Pokot – are in the top quartile of counties, with Turkana and Samburu in the top half of the distribution.

Figure 16 looks beyond the county average performance to the test score distribution for four counties.

Table 5: Kenya Certificate Primary Examination Average Scores: 12 ASAL Counties and National Average (2010)

County	Mean	Rank (out of 47 counties)	Male	Female	Gender disparity
Mandera	218	47	223	207	0.96
Garissa	220	44	222	214	0.93
Tana River	220	46	227	208	0.98
Lamu	226	42	229	222	0.97
Wajir	232	38	233	228	0.93
Marsabit	240	34	250	224	0.90
Narok	242	32	249	232	0.93
Isiolo	242	31	250	232	0.90
Samburu	253	17	262	237	0.92
Turkana	254	15	259	245	0.95
Kajiado	258	11	261	254	0.98
West Pokot	267	6	272	261	0.96
ASAL Average (12 counties)	**239**	**-**	**245**	**230**	**0.94**
National	**247**	**-**	**252**	**240**	**0.95**

Figure 16: Distribution of KCPE Test Scores: Turkana, West Pokot, Tana River and Mandera (2010)
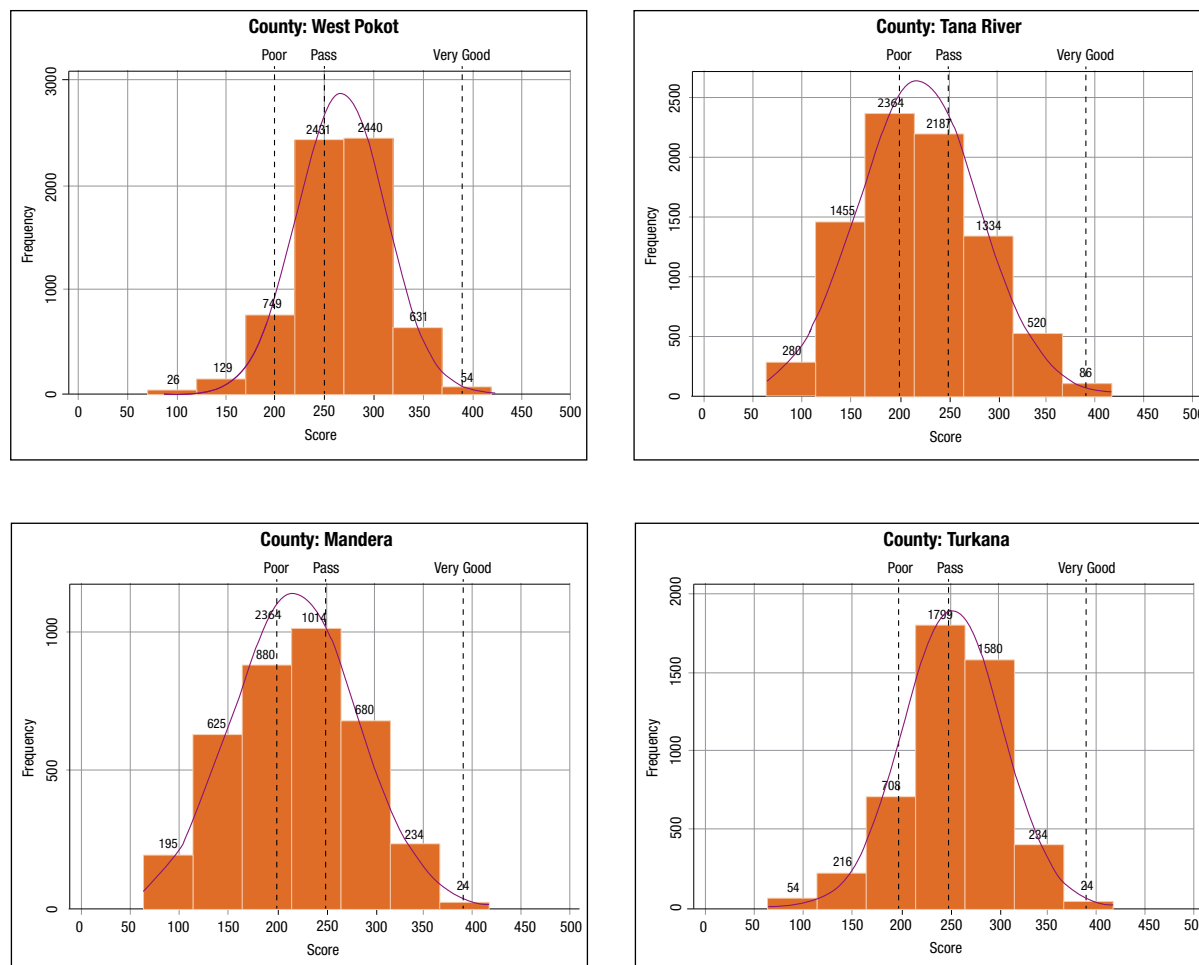
Source: KNEC: KCPE 2010.

It illustrates the diversity of performance. While very few children in West Pokot and Turkana take the KCPE, those that do perform relatively strongly with just 7 percent and 15 percent respectively scoring below 200 (well below the national average of 24 percent). This is in marked contrast with the situation in Tana River and Mandera, where the proportions scoring below 200 are respectively 41 percent and 39 percent.

These figures draw attention to the twin challenge in access and learning facing the ASAL counties.

Counties such as Turkana perform well on test scores, in part because such as small proportion of students make it through to the KCPE. For counties in this category the priority is to maintain learning achievement levels while increasing the number of children progressing to Grade 8. In the case of counties like Mandera, the desperately low levels of learning achievement among KCPE points to fundamental failures in the education system, allied to wider pressures that lead children to drop out.

There is a consistent pattern of boys outperforming girls in KCPE scores across the 12 ASAL counties, although the gender gap varies across counties. For instance, Wajir has very high levels of gender disparity in school participation, but a lower level of disparity in test score; Samburu and Isiolo have levels of disparity in test scores well above the national average. The persistence of the gender disparities in exam scores even for girls who make it through to the KCPE points to serious concerns that reflect the learning environment they face at home and at school.

Results at the KCSE level are more discouraging for the ASAL counties (Table 6). Students seeking to secure funding for progression into higher education in Kenya are required to achieve a B+ score. In 2010, 7 percent of boys and 4 percent of girls across the country achieved that grade. The comparable figures for boys and girls in the 12 ASAL counties are just under 3 percent and 1 percent. Only boys in West Pokot perform above the national average. Similarly, the chances of children from the ASAL counties scoring above a C grade are well below the national average.

Gender disparities in KCSE scores are far wider across the 12 ASAL counties than the rest of Kenya. Girls are less than half as likely as boys to score a B+. While the gender gap is narrower for C+ performance it is still wide: the gender parity ratio is 0.68. Here, too, there are some marked variations. Girls in Turkana and Isiolo have far less chance than boys of making it through to the KCSE, but those that do perform almost on par with boys in achieving a score of B +. By contrast, girls in Garissa are half as likely to score at B+, falling to less than one-fifth as likely in West Pokot.

Table 6: KCSE Results: Selected ASAL Counties and National Average (2010)

| KCSE 2010								
	Male (%)		Female (%)		Gender Disparity		County Share (%)	
County	B+ Above	C+ Above	B+ Above	C+ Above	B+ Above	C+ Above	School-Age Population	Candidates
Garissa	1.0	19.1	0.5	8.6	0.47	0.45	1.8	0.5
Isiolo	1.1	15.6	1.1	13.0	0.96	0.83	0.3	0.2
Kajiado	4.7	25.9	3.5	27.8	0.74	1.07	1.5	1.2
Lamu	2.5	17.0	0.3	16.4	0.12	0.96	0.2	0.2
Mandera	1.9	16.0	0.0	3.6	0.00	0.22	3.6	0.4
Marsabit	1.9	23.0	1.5	11.2	0.79	0.49	0.8	0.2
Narok	1.4	19.3	0.9	15.6	0.61	0.81	2.0	0.9
Samburu	3.0	34.8	1.5	23.2	0.50	0.67	0.6	0.2
Tana River	0.5	5.9	0.0	2.9	0.00	0.49	0.5	0.2
Turkana	3.2	28.5	3.1	26.6	0.94	0.93	2.9	0.4
Wajir	0.2	19.4	0.0	2.8	0.00	0.14	2.2	0.3
West Pokot	9.9	46.0	1.9	33.8	0.19	0.73	1.4	0.6
ASAL Average (12 counties)	**2.6**	**22.6**	**1.1**	**15.46**	**0.45**	**0.68**	**1.54**	**0.44**
National	**7.1**	**33.1**	**4.4**	**26.9**	**0.62**	**0.81**	**-**	**-**

Source: KNEC: KSCE 2010.

Uwezo Survey Evidence

Looking beyond exam results the absolute level of learning in the ASAL counties is very low. The Uwezo survey results for the counties suggest that large numbers of children progress through the primary school system without acquiring basic competencies —a state of affairs that inevitably contributes to high levels of dropout.

Taken as a group, the ASAL counties perform far below the national average performance levels on basic competencies (Figure 17). The gap is evident as early as Grade 3. The Uwezo national ranking covers 124 districts by the proportion of Grade 3 children able to achieve Grade 2 standards for literacy and numeracy. The 12 ASAL counties account for 20 of the bottom 24 districts. In Turkana county just 8 percent of children in Standard 3 could perform a Standard 2 division. Only one in 10 children in Standard 3 in Wajir could perform at Standard 2 levels.

Figure 17: Unequal Achievement: Learning Levels for Arid Districts and Average for All Districts (2011)
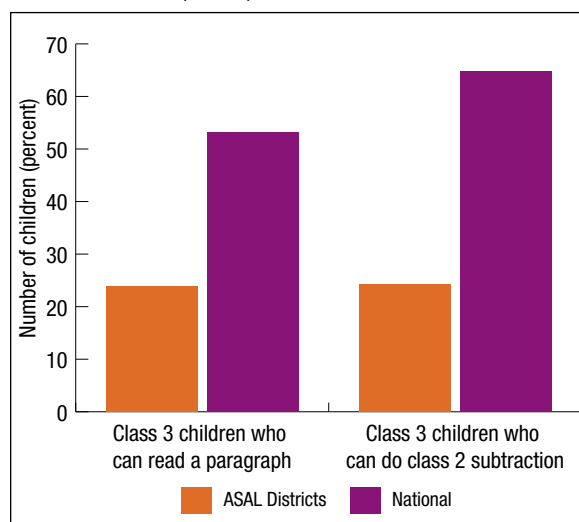
Source: Uwezo 2011.

Disparities within the 12 counties are significant in some cases. Within Kajiado county, the proportion of children in Standard 3 able to read a Standard 2 Kiswahili text ranges from 14 percent in Loitokitok to 73 percent in Kajiado North (the area close to Nairobi). At the other end of the average performance scale, in Turkana county the share of children in Standard 3 able to do a Standard 2 division ranges from 12 percent in Turkana Central to 4 percent in Turkana South. Once again, these disparities underline the importance of subcounty-level data in identifying areas of acute deprivation.

Private Schools: A Limited Presence

Private schools have a limited presence in most of the 12 ASAL counties. In most cases underlying conditions are not favorable to the development of a market for private providers. Low average-incomes, high levels of poverty and low population density all limit demand, while the small number of students reaching the early grades of secondary school limits the supply of potential teachers.

The Uwezo survey provides a useful point of comparison. Nationally, it reports that around 12 percent of children were covered by private providers in 2011, with urban areas registering the highest concentration. By contrast, just 1-2 percent of children in Samburu, Turkana, Wajir and Tana River were reported as attending private schools, rising to 3-5 percent in Mandera and Isiolo. Only Kajiado exceeded the national average, with 20 percent of children enrolled in private schools.

Children in the 12 counties were also far less likely to be receiving private tuition. While 67 percent of parents of children covered by the Uwezo study in Nairobi reported receiving private tuition, the comparable

shares for Turkana, Samburu and Wajir ranged from 6-12 percent.

Several policy conclusions can be drawn from the pattern of private provision and household expenditure on tuition. The limited presence of private schools implies that public schools will have to play the central role in addressing problems of access and quality. Leaving aside the wider debate over the quality and cost effectiveness of private schools, it would appear unlikely that most of the ASAL counties will develop a private school market of any scale in the near-term future. Given the limited household expenditure on private tuition, which is in part a corollary of high levels of poverty, there are also strong grounds for providing public spending increments to schools in ASAL targeted at raising learning standards.

Barriers to Enhanced Access and Quality

All of the barriers to access, retention and learning identified for Kenya appear in concentrated form in the 12 ASAL counties. The effects of household poverty, food insecurity and parental illiteracy weigh heavily on children's education prospects long before they enter school.

Pupil absenteeism rates provide a barometer of wider disadvantages affecting education. At the time of the 2010 Uwezo survey over 40 percent of enrolled children were reported out of school in Narok, Samburu, Tana River, Turkana and Wajir (Uwezo Kenya 2011). Ill-health is a major contributory factor, with malaria and nutrition-related conditions the most prevalent problems. Livelihood factors also weigh heavily. Young boys from pastoralist homes take on early responsibilities for herding, while young girls are intensively engaged in the collection of water and firewood. These

activities can compete with schooling. While hard data is lacking, it is likely that drought has damaging effects on education in the ASAL counties. It drives up the price of food, contributing to child malnutrition and ill-health, leads to women and girls spending more time collecting water, and results in young boys herding over longer distances.

Even without drought distance is a major concern. In counties with low population densities boarding schools may offer the only prospect of a secondary education, or even the upper years of basic education. However, the costs of attending boarding schools are prohibitive for the vast majority of people living in the 12 counties. Pastoralist livelihoods can also present a challenge. While education planners tend to think of schools as a fixed structure, pastoralist herders travel over long-distances. Given that pastoralist children start herding in many cases before their adolescent years, the implication is that either school terms have to adjust, or schools themselves have to become mobile (Krätli and Dyer 2009; Government of Kenya 2010).

Learning prospects are further impaired by school-based factors. In counties such as Wajir, Garissa and Mandera, over 40 percent of children attend schools lacking desks and chairs, with children sitting on the floor (Uwezo Kenya 2011). Pupil-teacher ratios are very high in some areas. Both Turkana and Mandera have ratios above 50-1. In another five counties—Wajir, Tana River, Marsarbit, Narok and West Pokot—the ratio is between 40 and 50-to-1. Given that many of the children entering schools in the ASAL counties are first generation learners from non-literate home environments requiring special support, these are very high ratios. Factoring in teacher absenteeism would inflate the ratio in many counties. In Turkana, one in five teachers was absent on the day of the Uwezo survey team visit in 2010 (Uwezo Kenya 2011).

The ASAL counties also face wider difficulties. As in other counties, the quality of the teacher workforce is compromised by a training system geared towards rote learning and by inadequate in-service support. Beyond these general problems, concerns have been raised over the relevance of the national curriculum for children in the ASAL counties, especially those from pastoralist households (Commonwealth Secretariat 2007). There is also evidence that schools in counties characterized by low population density struggle to recruit and retain experienced teachers. This has been recognized in a number of national education strategy documents. In 2008 the government of Kenya made a commitment to establish a National Council for Nomadic Education, prompted in part by a recognition that "the hardships associated with the ASALs and the few teachers with a nomadic background make recruitment, deployment and retention of teachers difficult" (Government of Kenya 2010). While the Council has to yet be established it is provided for in the Education Bill currently before the Kenyan Parliament.

Current policy approaches appear insufficient to address these problems, some of which are self-reinforcing. To take one example, the limited flow of pastoralist girls into secondary education limits the supply of potential teachers. The policy implication is that the difficulties associated with teacher recruitment and retention has to be addressed partly in the education system through a strengthened focus on the retention of female students, and partly through the teacher management system.

SOME LESSONS FROM INTERNATIONAL EXPERIENCE

The marked inequalities across Kenya's counties outlined in previous sections are the results of many factors. Historical legacy, patterns of economic growth and political marginalization have all contributed. Public spending patterns have also played a role, with more commercial farming areas and urban centers capturing the lion's share of budget allocations. One of the aims of the public spending provisions in the new constitution is to counteract the horizontal inequalities between counties and the vertical imbalances between groups that characterize Kenyan society.

Kenya is not the only country addressing this issue. Governments across the world use intergovernmental transfers, targeted support measures and national programs aimed at mitigating national inequalities, and at establishing a minimum level of basic service provision. Some of these programs transfer revenues from central to devolved governments. Others target specific forms of deprivation by targeting identifiable groups, regions or individuals. The design of programs and broad national approaches reflect the different institutional arrangements, political processes and history of different countries. There are no blueprints for Kenya to draw on. By the same token, international experience offers some useful guidelines and lessons that may have relevance for the debate over equitable sharing of public finance in Kenya.

Intergovernmental Transfers

Fiscal and political decentralization is fundamentally an exercise in transferring budget authority and devolving decision-making to subnational levels of government. Broadly, the process revolves around three practices: expenditure assignment, revenue assignment and intergovernmental transfers. Countries vary enormously in the degree to which they devolve responsibilities for expenditure and revenue mobilization, though almost every country in the world makes some attempt to mitigate horizontal disparities between different parts of the country through intergovernmental transfers (Bahl 2010).

Horizontal disparities can arise for many reasons. In countries that have highly devolved revenue systems, fiscal imbalances can arise because of differences in average income (and hence the tax base) of richer and poorer areas (Bird and Bahl 2008). On the expenditure side of the equation, the costs of delivering basic services can also vary as a result of differences in terrain, population density or distance from highways. When subnational entities are responsible for delivering basic services, the financing requirements for achieving a national minimum standard of provision will also reflect inequalities in access. Regions that are furthest from the required level of coverage will face higher financing requirements. Formulae for determining intergovernmental transfers will typically include (i) norms for the provision of basic services (ii) an assessment of the fiscal capacity of the government entity charged with providing the service (iii) criteria for establishing current shortfalls in provision and (iv) the estimated costs of achieving specified goals (Bahl 2008; Bahl and Wallace 2004).

Approaches to the correction of horizontal and vertical imbalances in Kenya will be shaped in part by the country's distinctive model of devolution. That model is marked by elements of continuity as well as change. One such element is the degree of centralization in the fiscal system with respect to revenue mobilization. Some 24 percent of Kenya's GDP is mobilized as central government revenue, with local government sources—mainly property taxes—accounting for 1-2

percent of GDP (World Bank 2011b). Nairobi City alone accounts for just over 40 percent of own-source revenue for municipalities—giving the city a per capita revenue base some 20 times higher than those reported in poorer rural municipalities, such as those in the ASAL counties (Government of Kenya 2010).

Devolved financing will increase the level of intergovernmental transfers. The constitution mandates that a minimum of 15 percent of national revenue is to be transferred on an unconditional basis to the counties to cover their responsibilities assigned to them. This is an increase over the financing provided through the currently devolved funds, the Constituency Development Fund and the Local Authorities Transfer Fund, which accounted for around 3 percent of the annual budget in 2009 (World Bank 2011b). Importantly, the constitutional provisions governing devolved financing extend not only to devolved financing but to the overall public spending envelope. This implies that future governments could be required to demonstrate an intention to correct horizontal and vertical imbalances through the 85 percent of the budget falling outside of the devolved funds.

International Experience

Any assessment of international experience and its relevance for Kenya has to take into account the specific characteristics of the country's path to devolution. Unlike countries such as India or Brazil, Kenya will not have subnational entities with strong revenue raising powers and high levels of fiscal autonomy. Moreover, given the highly centralized nature of both the fiscal system and the political system, Kenya does not have well-defined norms, rules and institutions for the governance of subnational entities. The creation of 47 new counties out of the old system of 158 districts assembled in eight provinces will create political and administrative strains. In the midst of these uncertainties, the Commission for Revenue Allocation (CRA) has been charged with developing formulae for intergovernmental transfers and wider budget allocations that will enact the principles of the new constitution.

The South African experience has a special relevance for Kenya. Parts of the 2010 constitution draw heavily on South Africa's constitutional arrangements. Moreover, South Africa has one of sub-Saharan Africa's most highly developed systems of intergovernmental transfers aimed at reducing horizontal inequalities. Decentralized financing has been one element in a wider set of fiscal measures aimed at combating the legacy of apartheid.

Central government allocations to devolved authorities in South Africa are determined by a 'Provincial Equitable Share' formula that attaches varying weights to population and equity goals. For example, the transfers for health are determined by population size and by the size of the population without access to medical aid. In education, the size of the school-age population is adjusted in the funding formula by the size of the out-of-school population. As we suggest in the next section of this paper, this is an approach that would help to develop more equitable financing in education for Kenya. The same is true of the provisions made in South Africa's intergovernmental transfer system for the weighting of poverty (Box 3).

More devolved fiscal systems also hold out lessons. The case of India is instructive because of the country's long experience in the design, development and implementation of intergovernmental transfer systems. Here too, equity has been a central theme in determining transfers to states. One of the features of Indian federalism is the use of a formula to determine the fiscal capacity of states, taking into account their

highly unequal average income levels (Box 4). An explicit goal is to narrow the gap in fiscal capacity, and hence capacity to deliver basic services, between the poorest and richest states. An underlying principle of the Indian intergovernmental transfer system is that all states should be in a position to provide comparable levels of public services despite differences in their revenue raising capabilities (Chakraborty 2010a; Chakraborty 2010b). While Kenya's counties will have limited revenue raising powers, this is a principle that has direct relevance for the country – not least in the light of the very unequal levels of service provision now in evidence.

Not all equalization measures operate through the general system of intergovernmental transfers. Provisions for specific sectors can also seek to redress horizontal imbalances, with specific programs that

Box 4: Intergovernmental Transfers in India

India seems an unlikely point of reference for comparison with Kenya on the issue of financial devolution. With the world's largest population, a highly devolved political system and decentralized financing arrangements that have evolved over more than six decades, the country has a long track record in developing arrangements for intergovernmental transfers. Even so, an awareness of India's arrangements could help to inform public debate in Kenya.

One of the unique features of devolved financing in India is the role of the Union Finance Commission (UFC). This is a constitutional body charged with correcting vertical and horizontal imbalances in financing. Recommendations of the UFC have a near-binding status with respect to the system of intergovernmental transfers. These transfers are significant. They represent around 5 percent of GDP, or just under half of central government revenue. India's states raise around 8 percent of GDP through their own revenue mobilization efforts.

Rapid economic growth in India has been associated with persistent and widening inequalities, including interstate disparities. The horizontal distribution formula for 2010-2015 was intended to redress inequalities in fiscal capacity between middle-income and high-income states (such as Maharashtra, Haryana and Gujarat) and poorer states (such as Bihar, Chattisgarh and Uttar Pradesh). The formula incorporates four indicators, each with a different weight attached to it: fiscal capacity (47.5 percent), population (25 percent), fiscal discipline (17.5 percent) and area (10 percent).

The fiscal capacity provision is aimed at increasing the resources available to low-income states with a limited tax base relative to higher-income states. It does so through a formula that uses the average tax-GDP ratio by state as a norm for determining the 'potential tax revenue' of each state based on its income level. This is used to calculate the 'fiscal distance' between this potential and the revenues that would be generated in the highest-income state applying the same tax rate. The gap, or the 'fiscal capacity distance' as it is known, determines just under half of the tax transfer from central government.

As illustrated in the figure below, the 'fiscal capacity distance' formula has a markedly equalizing effect on revenue allocations. There is an inverse correlation between average state-level income and per capita transfers from the national tax revenue pool to state governments. For example, the poorest state (Bihar) receives almost three times as much on a per capita basis as the richest (Haryana). While the transfer does not equalize revenues, it mitigates the revenue gaps and the resulting differences in financing capacity across India's states. Notwithstanding the marked differences in national contexts, this is an arrangement that merits some consideration in Kenya. Wider aspects of the debate surrounding the intergovernmental transfer system in India may also be relevant for Kenya. Critics point out that area and population are neutral indicators of need, and that the fiscal discipline provisions can have the effect of limiting expenditures without reference to need. While the horizontal transfer formula mitigates fiscal disparities between states, it does not eliminate the very large inequalities in expenditures on basic services and economic infrastructure associated with wealth disparities.

The system of intergovernmental transfers is just one component in a wider set of transfers. Central government also finances a wide range of sector and state-specific programs. These include grants for the flagship national education program – the Sarva Shiksha Abhiyan (SSA) – that provides states with the capacity to meet their obligations under the 2009 Right to Education Act, transfers for the Mahatma Gandhi Rural Employment Guarantee Program and national programs on child nutrition. One of the criticisms leveled against the wider public financing architecture is that there is no integrated structure capturing the degree to which overall resources are allocated against needs.

There are at least two features of the Indian model that have some resonance with debates in Kenya. The first concerns weighting. Under the current horizontal financing formula, India attaches a modest weight (25 percent) to population – and far less than in Kenya. Conversely, the weight attached to fiscal capacity equalization reflects the concern in establishing comparable levels of public service for comparable levels of taxation. This affirmative financing arrangement that favors poorer states reflects the spirit of Kenya's 2010 constitution.

Second, intergovernmental transfers are one part of a wider set of financing instruments used in India. The rapid

progress that India has registered in basic education reflects the combined effects of programs such as the SSA, rural employment guarantees and other measures that target highly marginalized populations. Such programs could play a critical role in breaking the cycle of poverty and disadvantage holding back the arid and semi-arid counties in Kenya.

Per Capita Tax Devolution of General Category States: 2009-2010
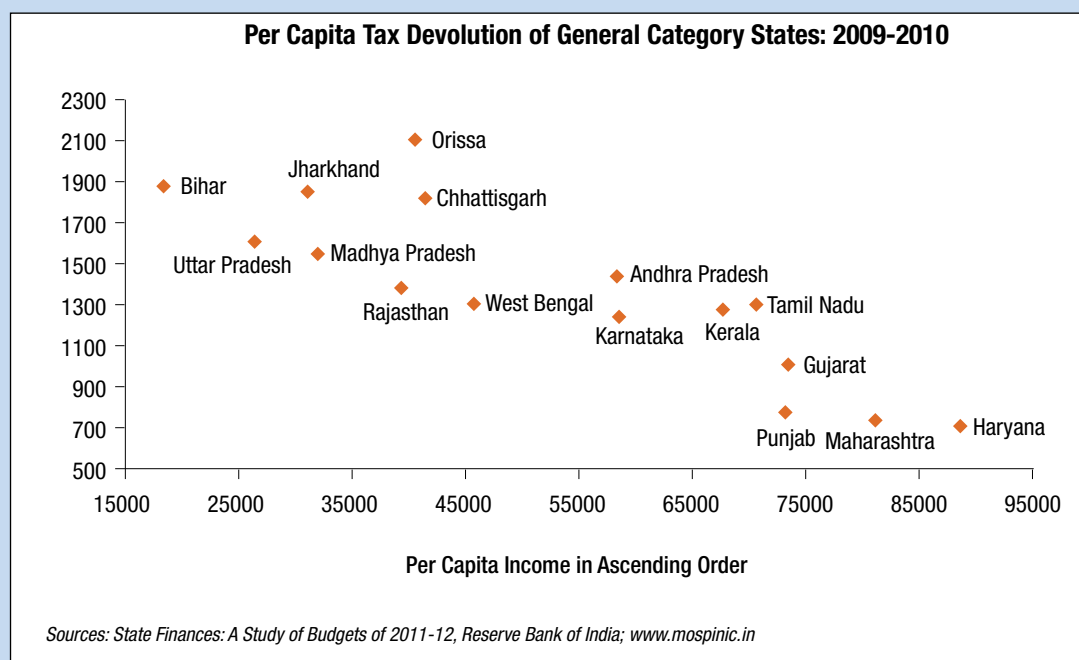
target vertical income imbalances playing a supplementary role.

One example comes from the education sector in Brazil. Financing for the sector is highly devolved, with local taxes the dominant source of revenue. However, states in the poorer northeast have less revenue-mobilization capacity than those in the wealthier south. The resulting disparities in per pupil financing capacity are partially mitigated by central government transfers from the federal education budget, with the Bolsa Familia social protection program providing cash transfers to poor households on the condition that they keep children in school. One of the lessons from Brazil is that narrowing horizontal disparities in education financing through intergovernmental transfers while increasing demand for education through cash transfers can greatly enhance access and learning achievement levels (Box 5). This is a lesson that has some resonance for Kenya given that horizontal and vertical inequalities in education have stalled progress towards the 2015 MDG targets.

Most developed countries also make provisions for redressing education disparities through national financing. One illustration comes from the United States, where the federal governments Title 1 program for primary and secondary schools allocates resources for measures that target poor performing schools characterized by high levels of poverty. Schools that

enroll at least 40 percent of children from low-income households are eligible, along with schools operating programs aimed at identifying and supporting 'failing children' (Lefkowits 2004). Another example is the United Kingdom's 'relative needs' formula, which is used to determine the central government grant to local government. The formula includes a 'pupil premium.' Tied to the number of children eligible for free school meals, a proxy for household deprivation, this raises funding per pupil by 50 percent (Government of the United Kingdom 2011).

While the circumstances are clearly very different to those prevailing in Kenya, these two cases illustrate a broader principle. In both cases the objective is to provide higher levels of per capita financing for pupils facing identifiable disadvantages. Put differently, the recognition that equal spending for children in unequal circumstances is not compatible with a commitment to equity.

Several countries have adopted local government financing formulae with an explicitly redistributive bias in favor of disadvantaged regions. Many of these

formulae also introduce a proxy weighting for the cost of service provision. Examples include the following:

- *Tanzania* has a nonsectoral capital development grants program with allocations weighted by population (70 percent), territory size (10 percent), poverty count (20 percent) and local government performance (20 percent).

- In 2006 *Rwanda* adopted an allocation formula for block grants to local government based on population (20 percent), a proxy for poverty (20 percent, using revenue collection), size of area (10 percent) and an estimated financing gap between revenue collection and costs of administration (40 percent).

- *Zambia* provides recurrent financing grants through a formula that includes population weighted by a deprivation index giving equal weight to the following: number of poor people, the percentage of the population lacking access to water, sanitation, markets and public transport.

- *Nepal* operates a system of government-financed development grants allocated on the following criteria: population (50 percent), the Human Development Index (10 percent), size of territory (10 percent) and a weighted cost-of-service index (25 percent).

The experience of Ethiopia is of considerable interest in the Kenyan context, not least because of the country's relatively recent transition to devolved financing. The intergovernmental transfer operates through a grant allocation formula developed by a technical committee and approved by parliament (Box 6). As in India, the formula includes a methodology for estimating the potential tax base of each region. Unlike the Indian system, however, the Ethiopian arrangement measures the estimated tax base against an assessment of the expenditure needs required for regional governments to meet basic service provision targets in assigned areas, including education, public health, agriculture and rural development, and roads (Gebregziabher, Woldehanna and Ayenew 2012).

One of the distinctive features of the Ethiopian arrangement is that it establishes what is effectively a basic service minimum entitlement for all citizens, with the intergovernmental transfer system geared towards delivering that entitlement. Given that one of the aims of Kenya's Equalization Fund is to raise basic services in marginalized areas to the standards enjoyed by the rest of the country, a starting point might be to adapt the Ethiopian approach by defining a minimum standard and estimating the costs of meeting that standard on a county-by-county basis.

Several countries have used regional development policies to target support towards regions—or subregions—and groups characterized by high levels of disadvantage. The large-scale regional development strategies adopted by China (in western regions) and Brazil (for the northeast), programs in India targeting scheduled castes and tribes, and an Indonesia program for less-developed villages are all examples. One model that may have some relevance for Kenya is Vietnam's 'Program 135,' which has identified communes in the most disadvantaged provinces for support in areas such as health, nutrition and education (Box 7).

Cautionary Tales

While almost all countries have embraced the principle of horizontal equalization in their approach to intergovernmental transfers, many have struggled to translate principle in practice. Uganda is a case in point. Recognizing the degree to which some districts were lagging behind in service provision, the government of Uganda first adopted an Equalization Grant in 1999. However, the formula adopted is at best weakly redistributive – overall population size accounts for over 90 percent of the weighting used in the formula governing allocations (Government of Uganda 2010).

Box 6: Federal Allocations to Regional States in Ethiopia

Like Kenya, Ethiopia is marked by extreme regional disparities in income and wider human development indicators. Narrowing these disparities through intergovernmental transfers is a major priority. The grant formula developed to determine allocations considers both the fiscal capacity of regions and the estimated cost of achieving specified goals – a framework that may have some relevance for Kenya.

Regional disparities in Ethiopia intersect with wider inequalities linked to wealth, the rural-urban divide and gender inequalities. While over 90 percent of the population in Addis Ababa is in the country's wealthiest quintile, that share falls to just 12 percent for Benishangul-Gumuz. School attendance ratios range from 84 percent in Addis Ababa to 57 percent in the Somali region. Similarly, vaccination coverage ranges from 78 percent in Addis Ababa, to 15 percent in Gambella and 8 percent in Afar. These figures illustrate part of the rationale for intergovernmental transfers: regions with a large proportion of low-income households (and hence a smaller tax base) face large deficits in the provision of basic services.

The principle public spending mechanism for mitigating regional inequalities in Ethiopia is the Federal Budget Subsidy Allocation (FBSA). Governed by a spending allocation formula that is subject to approval by parliament, the FBSA has to comply with constitutional provisions. These range from an obligation to ensure that "all Ethiopians get equal opportunity to improve their economic conditions", the promotion of an "equitable distribution of wealth" and equitable access to basic services, and the provision of "special assistance" to the least advantaged counties.

Regional allocations are determined through a grant formula covering two key areas. The first is an estimate of potential revenue, taking into account a wide range of taxes levied by regional governments. The second mechanism is an Expenditure Needs Assessment, covering areas in which regional governments have assigned responsibilities. Education is the single largest regional budget item, accounting for around one-third of the total, followed by (in descending order) administration, agriculture and rural development, health and water. The fiscal gap between each region's revenue raising capacity and expenditure need provides the basis for determining the level of transfers.

There are a number of equitable financing provisions built into the FBSA formula. The allocation for administrative costs includes an equal share provision, with a 10 percent supplement for hilly terrain and a higher per capita transfer for pastoralist populations. Hardship allowances averaging 30 percent are built into salary cost estimates for staff working in remote areas. In education, financing requirements are estimated on the basis of the per capita funding required to achieve the national education sector strategy target of full universal primary schooling. Because the formula takes into account the gap between current enrollment levels and target levels, it includes an implicit premium in favor of regions with large out-of-school populations. Similar approaches are applied to water and roads. In the case of health, financing costs weight for the number of people in each region living below the poverty line.

Looking beyond the allocation formula, Ethiopia has developed a distinctive political process for determining allocations. The House of Federation in the Ethiopian parliament effectively outsources technical work on the development of the formula to high-level external consultants who work closely with staff from ministries, government agencies, regional bodies, and revenue departments. Considerable emphasis is placed on participation and the development of a consensus across stakeholders before proposals are submitted to parliament.

Sources: Kenya National Bureau of Statistics 2010; Gebregziabher, Woldehanna and Ayenew 2012.

Another problem is the size of the grant. As the government of Uganda has acknowledged: "The grant is too small to cover the vertical fiscal gaps and the differences in expenditure needs across local government" (Government of Uganda 2003). Given the very small scale of Kenya's own Equalization Fund—0.5 percent of national revenue—Uganda's experience reinforces the case for an approach to equitable sharing that extends across all budget lines.

The Ugandan evidence raises another question of relevance to the debate over equitable sharing of public spending in Kenya. That question is whether the emphasis should be on equal spending across all people, or on adjusting budget allocations to counteract specific disadvantages. In the case of Uganda, the most disadvantaged regions are located in the north of the country—a legacy of several decades of armed conflict. Measured in per capita terms, overall central government transfers to these regions are comparable to the national average. Yet the northern counties have deeper poverty, far lower levels of basic service provision and face higher costs of service delivery, raising the question as to whether equitable financing requires that they should be receiving higher per capita transfers (Uganda Multi-Donor Group 2007). In the case of Kenya, as we show in the next section, the Commission for Revenue Allocation has tended towards an 'equal spending' interpretation of equitable sharing, rather than a needs-based interpretation. Such an approach will weaken the role of public spending in achieving the social goals set out in the 2010 constitution, including the reduction of economic disparities between counties, support for marginalized areas, and moves towards the equalization of basic services.

One of the clear lessons to emerge from a number of countries is that complexity is best avoided. There are strong political and financial grounds for adopting formulae that are transparent, easily understood and amenable to communication. Local government financing in Ghana has suffered from the absence of these simple virtues. The constitution provides for a 'District Assemblies Common Fund' representing at least 5 percent of national revenue to be distributed through a formula agreed by parliament. The formula is supposed to reflect four underlying principles: namely, 'need', 'responsiveness', 'service pressures'

and 'equality'. The 'equality' provision relates solely to population size and accounted for a 60 percent weighting of disbursements in 2005. 'Need' accounted for another 35 percent of the weighting, with the formula combining six indicators for basic services. However, the needs formulae have been changed on a regular basis, and the data needed to translate the formulae into allocations is often lacking. The result: allocations have been heavily influenced by political affiliations and electoral cycles rather than needs-based financing (Banful 2009).

Social Protection and Safety Nets

Intergovernmental transfers are just one weapon in the armory for correcting horizontal inequalities. In countries where income poverty is highly concentrated in specific regions, targeted anti-poverty programs will direct resources towards those regions. The same is true for programs targeting other forms of deprivation. In many cases programs targeting vertical inequalities between people will have strong mutually-reinforcing effects and benefits for equity.

The *Bolsa Familia* program in Brazil is an example. This transfers around 0.5 percent of GDP to around 12 million households eligible by virtue of low income. On one estimate, the program has accounted for around one-sixth of the poverty reduction achieved in Brazil since 2003. Independent evaluations have found positive results in terms of health and nutrition effects, cognitive development, school enrollment, learning achievement and reductions in child labor. For example, Bolsa Familia led to a 4.4 percent increase in school attendance, with the largest gains occurring in the disadvantaged northeast, where enrollments increased by 12 percent. Children covered by the Bolsa Familia were also far more likely to progress from one grade to the next. This was especially true of girls

aged between 15 and 17—who are at greatest risk of dropping out. Bolsa Familia increased the likelihood that a 15-year-old girl will remain in school by 19 percentage points (de Brauw et al 2012).

An analogous program in Mexico—*Opportunidadas*—uses geographical targeting and proxy-means testing to make payments to over 4 million eligible households, with transfers given to the female family head. Here, too, evaluations have found gains extending beyond the reduction of income poverty to improvements in child nutrition, cognitive development and progression through school (Behrman, Parker and Todd 2008; Behrman and Hoddinott 2005).

Other social protection programs target vulnerable populations without recourse to conditional transfers. In India the Mahatma Gandhi Rural Employment Guarantee Program has provided a safety net for some 50 million households, offering guaranteed employment for 100 days a year and payment in cash or food during periods of stress. One of the world's larg-

est safety net programs—budget allocations in 2009 reached $8.9bn—the scheme has generated rural employment, improved nutrition, and supported efforts to raise school enrollment (International Food Policy Research Institute 2011). Ethiopia's Productive Safety Net Program (PNSP), sub-Saharan Africa's largest social protection scheme outside of South Africa, is modeled on the Indian program. In 2008 it reached 7 million people and had an operating budget of $500 million. While the PNSP is not an education sector intervention, it has generated benefits in education, including the reduced risk of children dropping out of school during drought episodes (Gilligan, Hoddinott, and Taffesse 2008).

Social protection and safety-net programs have the potential to simultaneously reduce horizontal disparities and enhance the self-reliance of vulnerable populations. They have a proven track record across many countries, although there are ongoing debates over eligibility criteria, targeting mechanisms and the use of conditional versus unconditional transfers (Fiszbein

Box 7: Vietnam's Targeted Programs

Confronted with evidence of widening inequalities in health and slow progress among hard-to-reach groups in education, Vietnam has adopted a number of ambitious programs. While the context is very different, the principles underpinning the programs have a strong resonance with the equity framework enshrined in Kenya's constitution.

Health disparities have been an area of concern in Vietnam. In 2002 the government introduced the Health Care Fund for the Poor to finance free health care services, using a mixture of group and geographic targeting. The fund now covers around 18 million people. Beneficiaries include households classified as poor according to the international poverty line, ethnic minority residents in six northern provinces and five highland provinces, and all residents of 135 communes classified as socially disadvantaged. These communes are also targeted through 'Program 135' for social investments.

In parallel, Vietnam has a national program for Hunger Eradication and Poverty Reduction that targets households, rather than communes. In the education sector, the government incorporated in its national strategy a Primary Education for Disadvantaged Children project aimed at improving access to schools and raising learning standards in over 400 districts characterized by low enrollment, high dropout rates and low levels of learning achievement. Expenditure was geared towards a range of inputs aimed at raising the 'fundamental school quality level' in districts characterized by high levels of rural poverty and concentrations of ethnic minority groups. Both the health and education programs achieved significant results – and both demonstrate the impact of redistributive public spending in terms of expanding opportunity, narrowing gaps in basic service provision, and cutting social disparities.

Sources: Phuong 2009; Quan 2009.

and Schady 2009). For the ASALs of Kenya, increased public spending on well-targeted social safety nets could help to weaken the transmission effects of drought on poverty, child malnutrition and nonattendance at school.

While Kenya has a highly fragmented patchwork of safety nets offering limited coverage, recent years have seen some progress towards the development of more comprehensive systems. The Hunger Safety Net Program (HSNP), an unconditional cash transfer program targeted at the chronically food insecure, has the goal of delivering long-term, guaranteed cash transfers to the poorest and most vulnerable 10 percent of Kenyan households. The project uses innovative technology-based systems for disbursing cash, including mobile transfers. Implementation is in two phases. The principal objective of Phase 1 is to implement a cash transfer program in the arid and semi-arid lands districts of northern Kenya, making regular cash transfers to 69,000 households every two months for three years. Phase 2, beginning in 2013, aims to roll out the HSNP under a national social protection system addressing the needs of 1.5 million Kenyans (some 400,000 households), with government of Kenya and donor funding. While these safety nets are not directly associated with local government financing, they have consequences for equity in public spending—and there are strong grounds for scaled-up financing in support of the equitable sharing principle.

EQUITABLE SHARING FOR KENYA: THE EDUCATION SECTOR AND BEYOND

As highlighted earlier in this paper, the Kenyan constitution establishes equitable sharing as a core value for public spending, but it does not provide guidelines on specific targets, the weight to be attached to different aspects of equity, or the time-horizon over which opportunities – or outcomes – should be equalized. These are issues that are the center of a national debate in Kenya. While the Commission on Revenue Allocation has produced some tentative ideas, that debate is likely to continue for some time as the new system evolves.

Designing a system geared towards more equitable sharing confronts policymakers with challenges at a number of levels. Given the extreme nature of cross county disparity in Kenya, it is evident that equitable sharing has to mean something more than providing equal amounts of finance for every citizen. Moreover, the constitution requires that public spending be used to narrow disparities in access to basic services for marginalized groups and regions. This is a clear injunction to adopt a redistributive approach, even though the degree of redistribution is open to debate and to political negotiations.

This starting point provides little guidance on the weighting to be attached either to different dimensions of inequality, or to current disparities in access to basic services. Even if there were agreement in principle in these areas, the availability of data poses another layer of difficulties. Kenya lacks real-time data on deprivation for a wide range of indicators, including poverty. Moreover, there are a range of unresolved data issues over the population size in different counties.

While much of the debate on equitable sharing in Kenya has tended to focus on decentralized financing, the new constitutional principles apply to *all* national budgeting. Under the new devolved regime, not less than 15 percent of all national revenue will be allocated to devolved governments. There will also be an Equalization Fund equivalent to 0.5 percent of national revenue geared towards bringing the provision of basic services in marginalized areas "to the level generally enjoyed by the rest of the nation." The future of existing decentralized funds remains uncertain. However, these arrangements will leave around 85 percent of revenue in the hands of central government and lines ministries – and these allocations will also have to be brought into line with constitutional principles.

This section looks at some of the issues that will have to be addressed in developing the formulae for allocating resources and enacting constitutional principles. It starts by establishing as a point of reference some initial proposals framed by the Commission on Revenue Allocation, before looking at experience under existing devolved funds. We then consider what an approach to equitable financing might look like in education. Having developed some rule-of-thumb estimates for the current distribution of public spending in education across counties, we look at a range of criteria that could be applied to allocate resources against need and we consider the cross county distributional implications. While education will not be subject to decentralization, the exercise serves to illustrate some wider equity issues.

An Initial Framework: The Commission on Revenue Allocation

Initial recommendations in February 2012 from the Commission on Revenue Allocation (CRA) have

identified a number of key parameters for more equitable financing. The selection of parameters is instructive, not least in highlighting some of the difficult issues that have to be addressed. Briefly summarized, the CRA has focused on five core indicators of equity, with a range of weights attached to reflect equity concerns. While these relate in the CRA's recommendations to devolved budgets, the issues at stake have a wider relevance to Kenya's constitutional requirements in favor of equitable spending. The indicators are as follows:

- Population size (60 percent) to reflect average per capita costs of service delivery and administration.

- Equal shares across county (20 percent) to reflect fixed county-level administration costs.

- Poverty (12 percent) under a formula that would treat every Kenyan below the poverty line equally, irrespective of their location.

- Land area (6 percent) to reflect the additional costs of service delivery in large counties.

- Fiscal responsibility (2 percent) to reflect fiscal discipline and create incentives for revenue mobilization.

Assessed as a mechanism for promoting equity, the CRA formula suffers from a number of shortcomings. Three problems stand out. The first is a *limited weighting for disadvantage*. Under the proposed framework, 80 percent of the budget will be allocated without reference to need on the basis of population and equal share provisions. It is geared towards an approach that implicitly views equitable sharing as a matter of providing equal transfers, irrespective of the balance of advantage and disadvantage across counties.

Second, a related concern is a weak weighting for poverty and associated *failure to consider the depth of poverty*. By definition, everyone below the poverty line shares something in common. But the funding formula

proposed by the CRA would provide the same level of per capita financing irrespective of how far people are from the poverty line. It is insensitive to the depth of poverty. From an equitable financing perspective this is problematic. If the aim is to align poverty-related financing with poverty-related disadvantage, a better starting point for revenue allocation formula is the *share* of each county in the national poverty gap. One advantage of a poverty gap approach is that it has a direct relevance for policy since it measures the minimum cost for eliminating poverty through transfers. An obvious limitation is that the poverty gap does not fully capture the degree of inequality among the poor. While there are other technical tools that address this shortcoming, including the squared poverty gap, Kenya may currently lack the data-base for their adoption. The third concern with the CRA formula relates to *areas of omission*. Household poverty is one important measure of deprivation—and it should figure prominently in any equitable financing formula. But other deprivation indicators are also important. These could include indicators for service availability (such as the ratio of doctors or nurses-to-population, immunization rates or average distance to facilities), health status (as measured by child mortality, nutrition levels or the maternal mortality rate) and education (for example, the number of children out of school, gender gaps, transition to secondary school or learning outcomes).

Over and above these substantive points, there are a number of technical difficulties with the proposed formula. Consider the provision for land area. This is an attempt to address a real concern: namely, the higher unit cost of service provision in larger counties. However, these costs may be more accurately reflected by population density than land area. In the case of the fiscal responsibility, it is not entirely clear which benchmarks will apply, what incentives will emerge, or which counties stand to benefit. An obvious

concern is that counties with limited revenue raising capacity may lose out. More generally, there would appear to be strong grounds for dispensing with the fiscal responsibility provision altogether and transferring the proposed allocation to the poverty component.

Currently Devolved Funds

Currently devolved funds operate on a limited scale in Kenya. Even so, they serve to highlight some of the issues raised by the proposed CRA framework and by the wider debate over equity.

Equitable financing has been a limited guide to budget allocations in devolved financing, which is especially true of the Local Authorities Transfer Fund – until now the primary source of local government financing. The financing formula for transfers has been determined by three factors: population size (60 percent), a lump-sum payment and the relative weight of the urban population. The criteria favor (wealthier) urban areas, with no weighting for poverty, wider human development disadvantages, inequalities in service provision, or the cost of service delivery.

The Constituency Development Fund, which is managed outside of the central government budget process, has some built-in weighting for equity. Allocations were initially made on the basis of an equal amount for each constituency (Bagaka 2008).

Figure 18: Actual CDF Allocations (2009-2010) vs. Inversion of the Current Formula (46 counties)
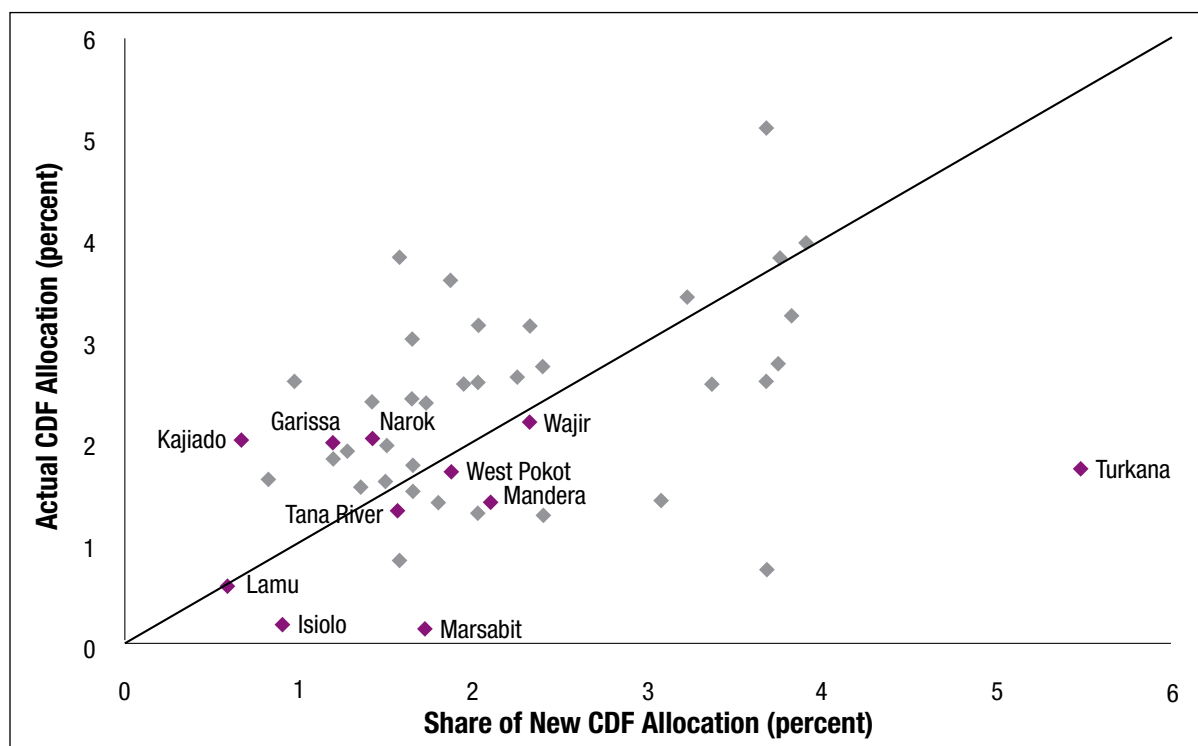
Source: CDF 2009/2010 Budget.
*New CDF Allocation: 75 percent share of national poverty gap and 25 percent equal share.
Note: Samburu is excluded because data for CDF allocation for 2009-2010 is missing.

Figure 19: CDF Budget Allocation Including Weighting for Population Density (46 counties)
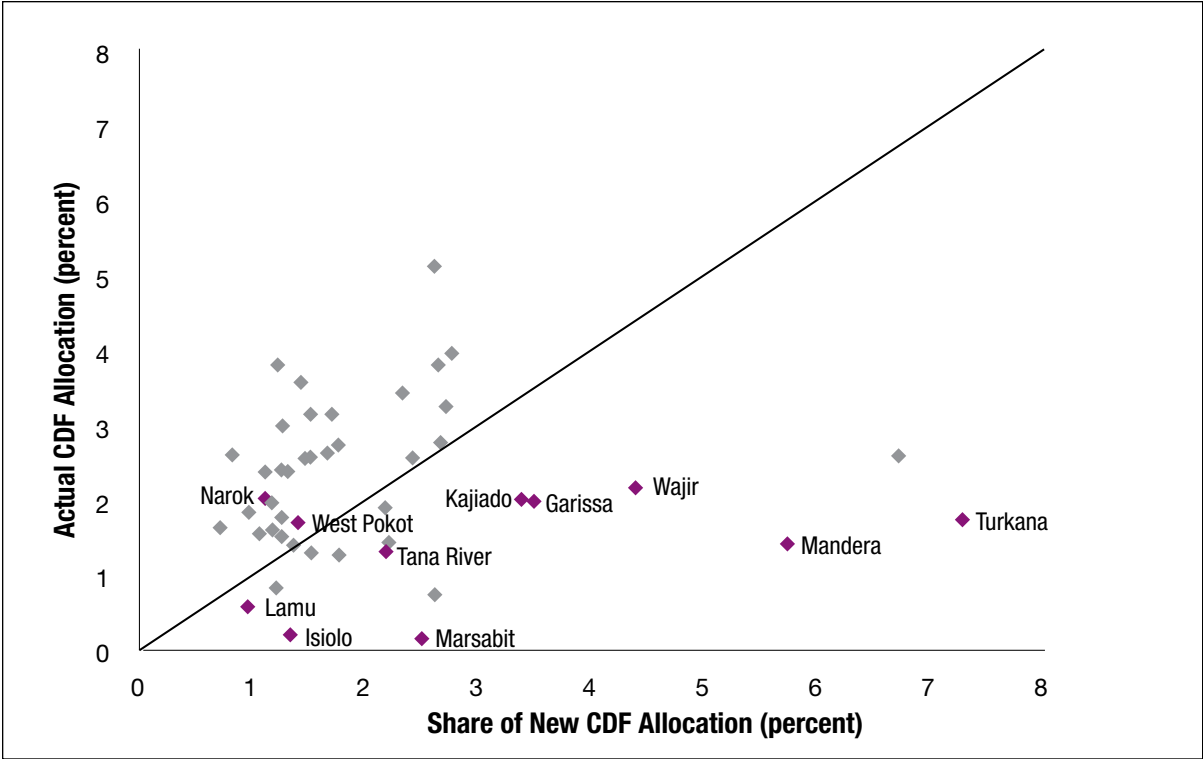
Source: CDF 2009/2010 Budget.
*New CDF Allocation: 50 percent share of national poverty gap, 25 percent equal, 25 percent counties with less than 40 people per km² population density – divided based on each counties share of the national population.
Note: Samburu is excluded because data for CDF allocation for 2009-2010 is missing.

This was subsequently amended so that 75 percent of the allocation is now determined on an equal share basis, with the remainder distributed according to a formula that weights the constituency's share in national poverty (Government of Kenya 2010). Apart from the poverty criteria, the CDF has an implicit weighting in favor of constituencies with smaller populations (since this raises the per capita transfer from equal share financing). There is also a small weighting in favor of rural areas. The largest proportion of the CDF budget—just over one-third in recent years—has been allocated to education.

For understandable reasons, the CDF is popular with Kenyan parliament members and allocations have in some cases made a significant contribution to local infrastructure. Viewed from an equity perspective, however, the CDF is at best modestly redistributive in terms of its cross county effects. Despite their high levels of deprivation, the 12 ASAL counties receive a limited CDF preference.

For illustrative purposes, we compared current CDF allocations to the ASAL counties with projected allocations under two different formulae that attach more

weight to identified disadvantages. Figure 18 contrasts the 2010 CDF allocation with the distribution that would have occurred had transfers been based on an inversion of the current formula: a 75 percent allocation on the basis of share in national poverty and 25 percent on the basis of equal resourcing. The outcome is mixed. Some of the 12 focus counties— Turkana, Marsarbit, Isiolo and Mandera—gain, while in others the effects are either neutral or slightly negative. Figure 19 includes a population-density weighting alongside the poverty and equal shares weighting. This produces a marked distributional shift in favor of most of the 12 ASAL counties covered in this report, although here too there are exceptions to the rule.

These scenarios for the CDF illustrate an issue of wider relevance for approaches to equitable sharing. Some caveats have to be attached to our exercise because it is not clear that current CDF allocations reflect a strict application of the formula. However, if the aim is to develop a formula for decentralized financing that narrows the gap in basic service provision between the ASAL counties and other areas, attaching more weight to poverty and population density may be a useful starting point.

Towards Equitable Financing in Education

Education will be the only major basic service sector that is not subject to devolution. The sector accounts for around one-fifth of total government spending, or around 7 percent of GDP (Government of Kenya 2010). It follows that the rules governing education budget allocations will have a major bearing on equity in public spending.

Existing budget arrangements have a mixed record on equity. The surge in enrollment that followed the introduction of free primary education in 2003 had a strongly progressive effect, especially at the primary school level. With more children from the poorest households entering the school system, the benefits of public spending in education have become more widely distributed. However, existing education budget norms do little to redress the horizontal inequalities discussed in Section 2 of this paper. These norms strongly link transfers to the number of children in school, as distinct from the number of school-age children – an approach that effectively penalizes counties with lower rates of enrollment, high levels of attrition in school progression, and lower levels of transition to secondary education.

The experience of the 12 ASAL counties illustrates some of the wider equity problems. Partly *because* they represent such a large share of Kenya's out-of-school population in primary education and such a small share of the secondary school-age population, children in the these counties receive less per capita than those in counties registering better education indicators. On a reasonable interpretation of equitable financing, these counties should be receiving more in order to counteract the effects of household poverty, parental illiteracy, gender disadvantage, and wider social and cultural barriers to equal opportunity. In this section we provide an approximate estimate of the cross county pattern of education budget allocation and consider a range of alternative allocation formulae that might enhance equity.

The Education Budget

Public spending on education has increased rapidly, rising by more than one-third in real terms over the past decade. Donors account for a relatively small share of the overall budget. According to the 2010 Public Expenditure Review, aid accounted for 4 percent of overall

expenditure on education (Government of Kenya 2010). Alongside public spending, households in Kenya make significant out-of-pocket payments for education. These include expenditure on uniforms and learning materials, payments for private education provision and a range of formal and informal payments to public providers.

The distribution of benefits from public spending in education is a function of budget allocations and the pattern of school participation. Broadly, the closer a country is to universal primary and secondary education the more equally distributed the benefits. Wealth-related benefit incidence analysis for Kenya carried out on the basis of 2005 data found that the poorest 40 percent of children accounted for around half of the benefits from government spending on primary education (children from wealthier households being more heavily represented in private schools). For secondary education the share dropped to 15 percent, reflecting a low rate of transition from primary schools (Demery and Gaddis 2009).

The increase in public spending in Kenya has gone hand-in-hand with changes in the profile of budget allocations. Primary education accounts for around one-half of overall public spending, but the share of secondary education has increased from 20 percent to 24 percent since 2003. Per pupil expenditure at the secondary level doubled in real terms between 2003-2004 and 2008-2009, and has continued to increase with the introduction of free secondary education in 2008. Around 60 percent of overall education spending is accounted for by teacher salaries. Transfers in the form of grants and subsidies account for another 30 percent. These transfers comprise payments associated with free primary and secondary education financing, grants to schools, bursaries and payments to local government for school supplies. The two larg-

est recurrent expenditure items after teacher salaries are the per capita pupil grants provided for both free primary education and free secondary education.

Evolving budget expenditure patterns have significant implications for the vertical and horizontal inequalities in Kenya's education system. With the share of secondary education in the overall budget envelope rising over time, overall benefit incidence will increasingly reflect the profile of the secondary school population. Socio-economic groups and counties with lower rates of school participation in the secondary sector stand to lose out. Similarly, the distribution of benefits from the per capita pupil grants for free primary and secondary education will mirror the distribution of children in school. Counties with the lowest levels of enrollment will lose out relative to those with higher levels of enrollment. The same holds true for the wider system of recurrent and capital funding. Current budget norms in Kenya allocate resources for teachers, teaching materials and school infrastructure almost entirely on the basis of numbers of children enrolled in classrooms.

In the following section we analyze budget allocation through the prism of horizontal disparities and the position of the 12 ASAL counties. It is worth emphasizing, however, that vertical disparities intersect with what might be thought of as subcounty horizontal inequalities. For example, the limited provision of public education in Kenya's informal urban settlements forces many children out of the public education systems and into low-fee private schools. Given that these children are from households at the lower end of Kenya's income distribution, this skews public spending for basic education in a less pro-poor direction (Oketch and Ngware 2010; Oketch et al 2010).

The 12 ASAL Counties

Constructing an accurate benefit incidence curve that captures horizontal inequality in benefits incidence for Kenya would require disaggregated data on transfers of education financing by county. Data constraints make it impossible to conduct this exercise. However, the close alignment of financial transfers with school participation in primary education makes it possible to generate an approximation of the more detailed picture. We derive an estimate of the primary school budget allocations for the 47 counties from the data provided in Section 2 of this paper. For secondary education we estimate the per capita free primary education grant by county, using this as a proxy for the overall budget allocation. Drawing on national census data, we then compare the county share in the education budget with the county share of school-age population.

The results for primary education are presented in Figure 20. This shows that all 12 of the ASAL coun-ties are receiving a share of the budget allocation smaller than their share in the school-age population. In the case of Turkana, the budget share is less than 40 percent of the county's share in the school-age population.

Secondary education allocations reflect the same pattern in magnified form. High dropout rates in primary education and low rates of transition to secondary school mean that the ASAL counties secure a small share of the expanding secondary education budget. Turkana is the national outlier with a budget share equivalent to less than one-third of the county's share in the secondary school-age population. Overall, the budget share of seven of the ASAL counties is less than half of the school population share (Figure 21). With the exception of Kajiado, the 12 ASAL counties fare badly in the current budget arrangements. They account for 11 of the 13 counties with the largest gap between secondary school population share and budget share. Several other counties also experience

Figure 20: Derived County-Level Share of Primary Education Spending as a Proportion of School-Age Population (47 counties, 2009)
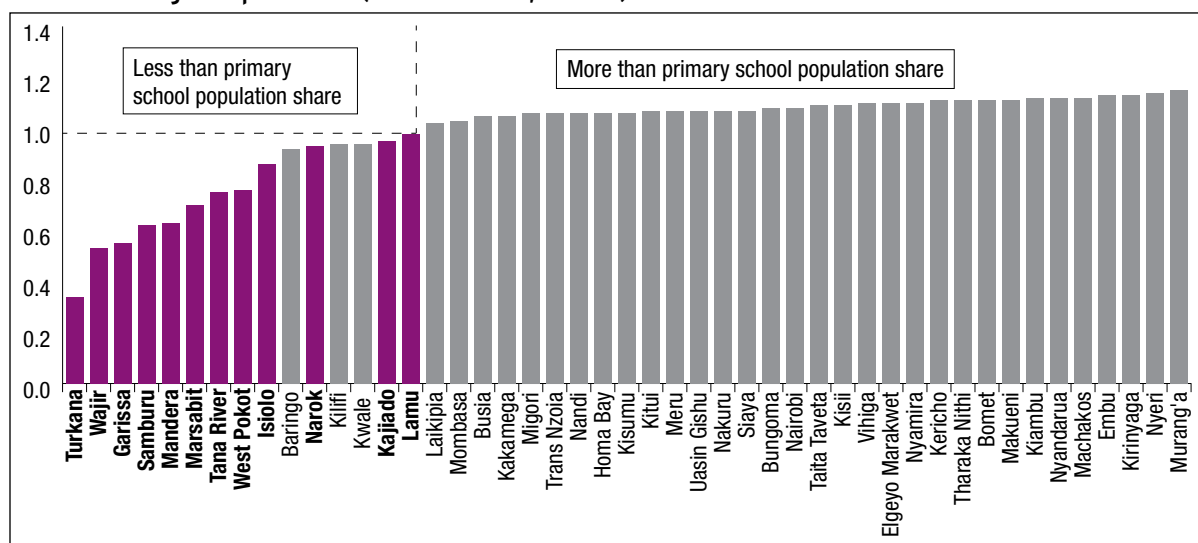
Source: Derived allocations based on school enrollment data and census data on school-age population.

Figure 21: Derived Share of FSE Spending as a Proportion of School-Age Population (47 counties, 2009)
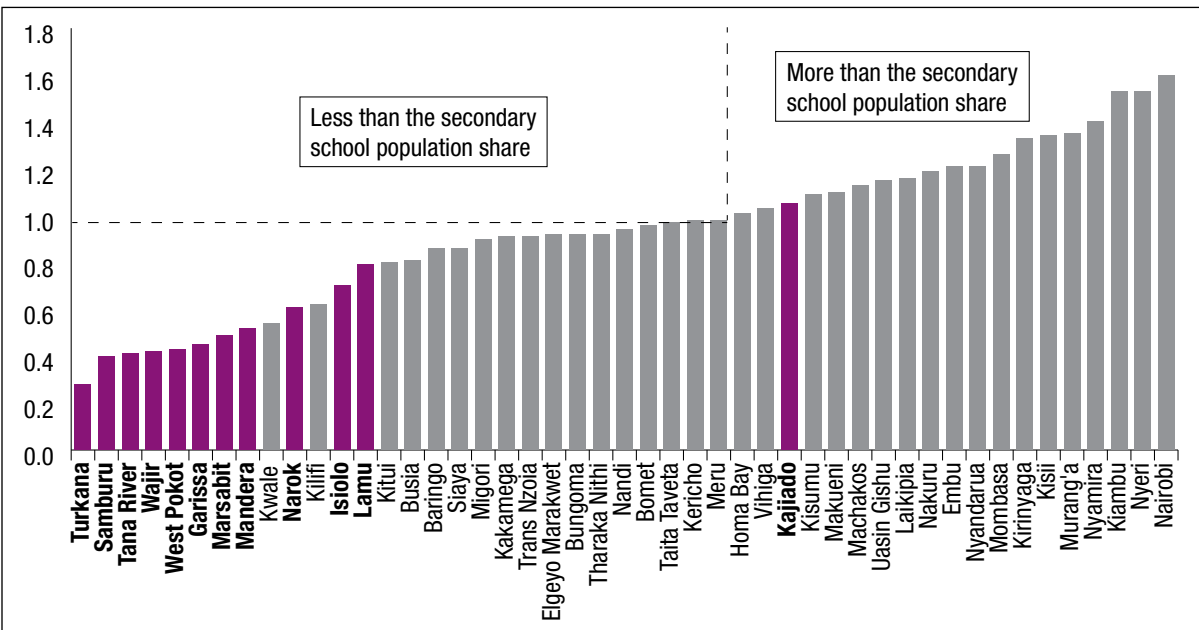
Source: Calculated on the basis of school enrollment data and census data on school-age population.

large gaps—depicted on the left-hand side of Figure 21. The converse of this deficit is the 'surplus' shown on the right-hand portion of the figure, with Nairobi securing a budget share some 50 percent higher than the county's population share.

Even allowing for data uncertainties, the cross county pattern of budget allocation raises some fundamental questions about equity. Facing some of the most highly concentrated education disadvantages in Kenya, children in the ASAL counties are receiving the smallest share of the budget. Put differently, there is an inverse correlation between education deprivation and budget allocation. While any linkage between budget transfers and school participation will automatically have distributional effects mirroring enrollment patterns, the strength of that linkage in Kenya means that public spending may be reinforcing, rather than mitigating, social disadvantage. This is the opposite

of what is required under the equitable sharing provisions on public spending enshrined in the 2010 constitution.

What might a more equitable set of budget norms look like? While there is no blueprint, two broad principles would appear to be important. The first is that the formula for budget transfers should be recalibrated to attach more weight to provisions for school-age children. Applying South Africa's Provincial Equitable Share formula for education illustrates one possible approach that may be of relevance for Kenya. This attaches equal weight in allocating finance to the overall number of school-age children and to the number of children in school. Figure 22 captures the distributional shift that would occur if this formula were to be applied to primary education in Kenya. With the exception of Kajiado, which is only marginally affected, each of the 12 ASAL counties gains a larger share of

Figure 22: Estimated Primary Education Budget Allocations by County: Equal Weighting Attached to School-Age Population and Children in School
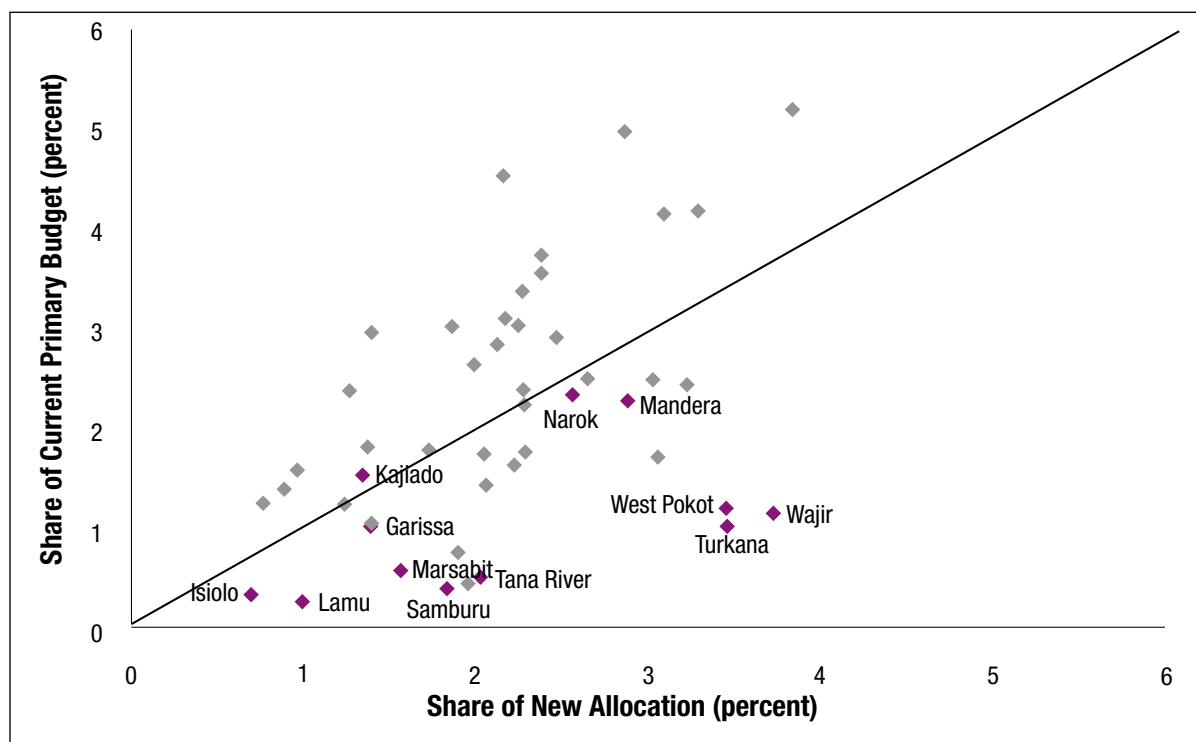
New PES Allocation: 50 percent primary school-age population and 50 percent equal share.
Note: Samburu and Tana River data points are overlapping on the figure.
Source: EMIS 2010; Census 2009.

the budget. In the case of Wajir and Turkana the share increases by a factor of three, reflecting their low rates of school participation.

The second broad principle for equitable sharing in education is a greater weighting for specific disadvantages. Adopting the South Africa PES approach to funding would help to equalize budget transfers per child. While such an outcome would meet a narrow interpretation of enhanced equity, it would fail on other tests. If the aim is to equalize education opportunity, providing children from very unequal backgrounds with equivalent resources is not a credible starting point. In the case of the 12 ASAL counties, more equal opportunities will require budget transfers that counteract the underlying sources of education deprivation, including household poverty, ill-health, parental illiteracy and gender disadvantage.

Designing budget formulae that weight for education disadvantage is not straightforward. In Kenya, as in other countries, the underlying sources of unequal opportunity in access to schooling and learning achievement are imperfectly understood. There are also large gaps in the availability of robust data. However, the disadvantages associated with poverty are well established—and the national poverty gap data are robust (if dated). The horizontal inequalities between counties in primary school enrollment, progression and transition to secondary education are also well established, with the Education Management Information System providing a national data source (see Section 2 of this paper).

Drawing on these sources it is possible to develop a range of scenarios that demonstrate the implications of changing the formulae guiding education budget allocations. For illustrative purposes, we provide two reinforced equity scenarios – one for primary education, and one for secondary education.

Figure 23 captures the distributional shift that would occur with the implementation of what can be thought of as a reinforced equity formula for education financing based on the following allocation criteria:

• Children in primary school: 50 percent (equal per capita funding).

• Primary school-age children not in school: 20 percent (share of the national out-of-school population).

• Gender disparity: 5 percent (allocated to counties with a ratio of girls-to-boys in school of less than 0.95 on the basis of their share in the total number of out-of-school girls).

• Household poverty: 20 percent (allocated on the basis of the county-level share in the national poverty gap).

• An ASAL special fund: 5 percent (allocated to arid and pastoral counties facing acute disadvantage in education in proportion to their share in the primary school-age population).

Figure 23: Estimated County-Level Primary Budget Allocations: Current Position vs. A Reinforced Equity Scenario*
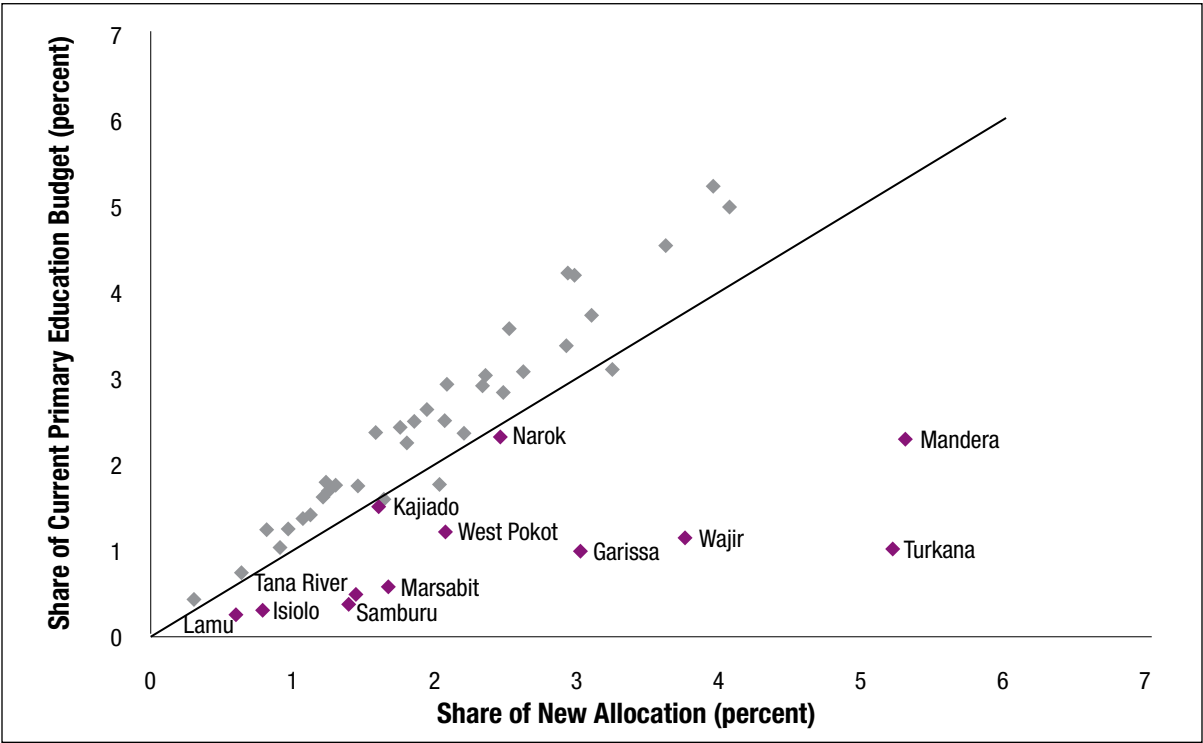
Source: EMIS 2010; Census 2009.
*New Allocation: 50 percent primary school-age children in school, 20 percent primary school-age children out of school, 20 percent national poverty rate, 5 percent counties less than 0.95 female-male ratio and 5 percent for ASAL counties.

Any change in the public spending formula for education will create winners and losers. The winners from the reinforced equity formula appear to the right of the 45 degree line in Figure 23, with the distance from the line capturing the size of the gain. Counties such as Garissa, Mandera, Marsabit, Turkana and Wajir all double their share of the primary school budget. Counties to the left of the line lose out in terms of budget shares, but the aggregate gain for the 12 ASAL counties is the product of relatively modest declines in most of the other counties.

Figure 24 shifts the focus to secondary schooling. It traces the distributional shift that would result from a formula based on the following elements:

• Children in school: 50 percent.

• Children not in school: 30 percent.

• Gender equity: 10 percent (allocated equally to counties with secondary Gross Enrollment Rates for girls of less than 40 percent).

• An ASAL special fund: 10 percent (allocated on the basis of population).

Figure 24: Secondary Education Allocations Under an Equity-Based Financing Formula: Comparison with Current Allocations (47 counties) **
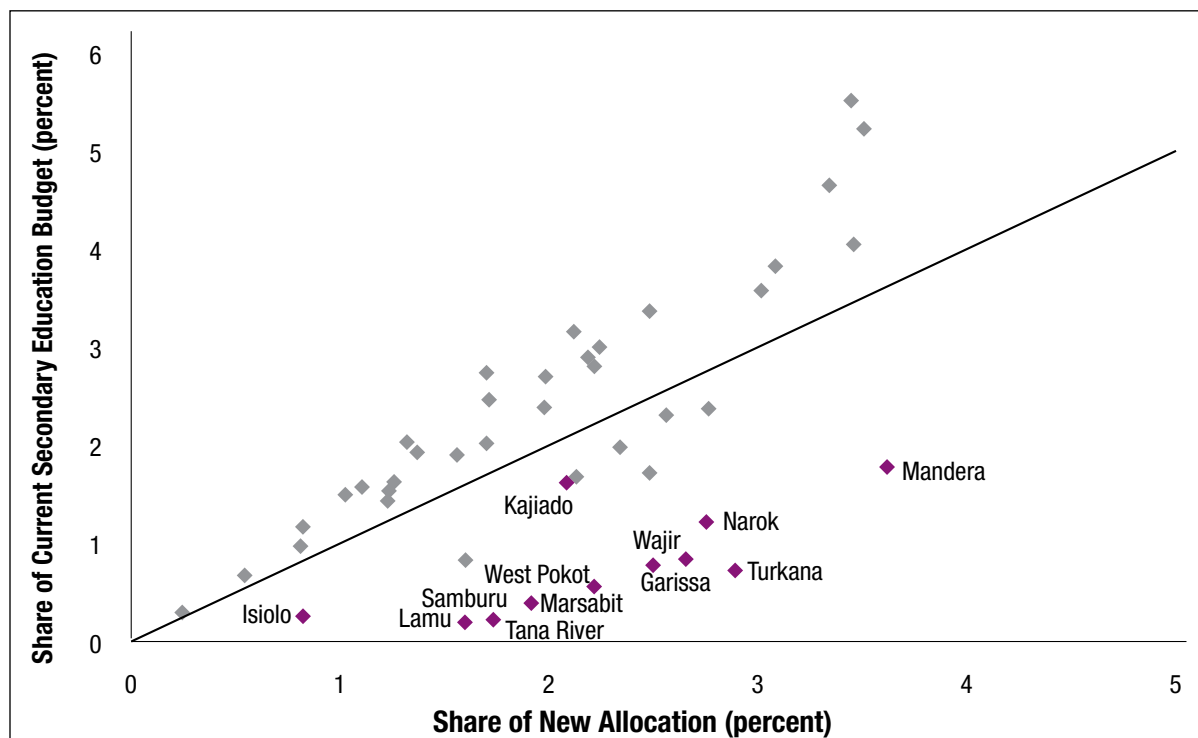
Source: EMIS 2010; Census 2009.
Note: Samburu and Tana River data points are overlapping on the figure.
**New Allocation: 50 percent secondary school children in school, 30 percent secondary school children out of school, 10 percent Gross Enrollment Rates for girls less than 40 percent and 10 percent for ASAL counties. Nairobi is not included in the data. The county accounts for about 10 percent of the current secondary education budget and 6 percent of the new allocation.

As in the case of primary education the reinforced equity provision creates a significant distributional shift in favor of the 12 ASAL counties. For example, the budget share of Marsabit increases from less than 0.5 percent of the current education budget to almost 2 percent. Turkana's share rises from less than 1 percent to 3 percent.

While both of our scenarios are illustrative they raise some practical questions. The counterpoint to any equitable sharing reform that provides a better deal for the most disadvantaged counties is the accompanying adjustment in other counties. Preventing severe disruption to education provision in counties that stand to lose out is obviously critical. The options are limited. Government can either increase the size of the budget envelope to maintain current levels of per capita spending, with the increment in allocations going to the most disadvantaged counties. Alternatively, it can adopt a gradualist approach, phasing in a formula for greater equity over time. In a growing economy with the level of budget revenue rising, this could prevent more equitable sharing from becoming a zero sum game: the resources available to 'losers' would still grow, but more slowly than those of 'winners'. Ultimately, the design of any reform scenario is about finding the right balance. In the case of Kenya, that balance will involve steering a middle course that moves the country away from the existing pattern of budget allocation in the direction of more equitable sharing.

Equitable Financing is Not a Substitute for Effective and Equitable Policies

More equitable public spending in education is not an end in itself. It is a means through which governments can create an enabling environment for the creation of fairer, more inclusive societies, expanded opportunity and accelerated economic growth. Greater equity in public spending can mobilize more finance for the most disadvantaged counties. Whether or not those resources produce more equitable outcomes in the 12 ASAL counties will depend on the effectiveness of the policies to which they are linked.

While this issue extends beyond the scope of the current paper, the pattern of disadvantage in the ASAL counties is strongly suggestive of some priority areas for additional financing. The high level of child malnutrition and parental illiteracy in the counties sets many children on a course for failure before they enter school. Expanded early childhood programs and preschool classes can make a difference. One recent randomized control evaluation of a program in Mozambique found that participation in a preschool program was associated with an increase of 24 percent in the likelihood of school enrollment, an additional 7 hours per work spent on school activities, and significant improvements in cognitive development and problem solving abilities (Martinez, Naudeau and Pereira 2012). These are results that underline the potentially high returns from preschool interventions – and they merit serious consideration in Kenya. At the same time, the ASAL counties would clearly benefit from a more integrated approach to child health and preschool provision.

Demand-side financing would appear to be another priority area. While the free primary and secondary education policies have lowered the cost of public school, education is only nominally free. Households still incur primary school costs for uniforms and textbooks. In remote rural areas parents have little choice but to send children to boarding schools for secondary education, and free provision does not extend to the full costs of boarding and ancillary expenditures

(Ohba 2009; Oketch and Somerset 2010). High levels of poverty in the ASAL counties mean that many parents are unable to afford indirect primary school costs and, even more so, secondary school fees. Moreover, social and cultural practices mean that when financial pressures force schooling choices, girls lose out relative to boys.

More equitable public spending in education could help to counter financial barriers to education. Cash transfers can be provided to the poorest households through social protection schemes. One approach might be to finance an education facility within the Hunger and Safety Net Program. This currently reaches an estimated 450,000 food insecure people in four of the poorest counties – Turkana, Marsabit, Mandera, Wajir – and will gradually scale up to reach 2.5 million. Currently, Kenya under-invests in this area: the country spends just 0.25 percent of GDP on social protection, with 80 percent of that amount directed towards emergency support (World Bank 2011b).

Some consideration could also be given to the development of conditional cash transfer programs, with eligibility linked to the attendance of children in school – and with a premium payment for girls. The effectiveness of such programs hinges on the targeting of support on the critical dropout years. While these vary across the 12 ASAL counties, the transition from primary to secondary school is a major source of school attrition. Stipend and bursary programs can create further incentives for keeping children in school. In Bangladesh, secondary school stipends for girls have been credited with the creation of incentives for households to ensure that their daughters complete primary education (Khandker, Pitt and Fuwa 2003). Similarly, a stipend program for girls in

Cambodia found strong effects on enrollment, especially among girls from the poorest 20 percent of households (Filmer and Schady 2008; Fiszbein and Schady 2009). Here, too, there are potential guides for policy design in northern Kenya.

Investments on the supply-side of education provision could also make a difference. Low population densities in many of the ASAL counties reduce the size of schools and increase distance from the home, while the remote nature of many districts makes it difficult to attract and retain teachers. Increased spending on innovative approaches to service delivery, including mobile schools, 'satellite schools' and distance-learning provision, could extend the reach of education systems. Teacher recruitment and retention poses wider challenges. Even so, part of the revenue generated through more equitable financing could be directed towards improved incentives and hardship allowances for teachers.

Not all of the problems faced by the 12 ASAL counties can be addressed in isolation from the wider challenges facing the education system in Kenya. The system is missing many of the ingredients found in countries that have successfully raised learning standards. Kenya lacks a functioning learning assessment to identify failing schools and pupils. Teacher training programs are not equipping teachers with the skills they need to deliver effective learning, especially in the early grades. There is no policy framework linking financial resource allocation to learning outcomes. To a greater or lesser degree every county in Kenya suffers from these wider weaknesses, though the ASAL counties covered in this report suffer disproportionately more than most.

CONCLUSION

The new constitutional framework for public finance in Kenya marks a bold departure from the norm. Translating the principles behind that framework into operational practice will require strong political leadership. Some of the poorest and most vulnerable sections of Kenyan society stand to emerge as winners – but this is not a constituency with a strong voice. The danger is that the process of political negotiation will see the potential gains for poor people and marginalized areas diluted. Guarding against that danger will require political figures of all persuasions to forge a new consensus in favor of a more equal society, backed by a shared commitment to support more equitable public spending.

This paper sets out some broad approaches that could translate the commitment to equitable sharing of public spending into practical policies. It highlights the critical role of the formulae that will be used to determine financial allocations. The following are among the core recommendations to emerge:

- **The constitution's 'equitable sharing' provision should apply to *all* public spending, and not just the devolved budgets.** The distinction is important. Devolved financing will cover up to 15 percent of national revenue, with a further 0.5 percent of revenue allocated through an Equalization Fund. However, the constitution requires that "all aspects of public finance…promote an equitable society" (Government of Kenya 2011a). Both the letter and the spirit of its public spending provision require that government extends the 'equitable sharing' principle to the 85 percent of the budget falling outside of the more narrowly-defined devolved funds.

- **Proposals from the Commission for Revenue Allocation should attach less weight to equal per capita transfers and more weight to indicators for disadvantage.** Equal spending per capita represents a minimalist interpretation of the constitution's equitable sharing provisions. The constitution itself identifies affirmative action to reduce inequality and overcome marginalization as core priorities, suggesting that public spending allocations should be positively associated with needs—that is, the greater the degree of disadvantage the higher the level of per capita support that should be provided.

- **The poverty gap, as distinct from the poverty headcount, should be a primary indicator of need in formulae governing allocations across counties, and in national budgeting for nondevolved sectors.** Initial proposals from the Commission for Revenue Allocation applied the 'equal share' principle to poverty-related transfers, with an equal cash transfer for every person in a county below the national poverty line. This is a flawed starting point because the proposed transfer would be unrelated to the depth of poverty. The 'poverty gap' is a more sensitive measure of disadvantage. Poverty-related transfers should be based on the share of each county in the national poverty gap.

- **The poverty gap should have a significant weighting in the devolved budget formula.** We recommend that consideration be given to a formula that attaches a weight of 30 to 50 percent to the share of each county in the national poverty gap, with additional weighting for low population density counties. While the poverty gap and population density are proxies for wider disadvantages, they are indicative of both the level and intensity of deprivation, and of the costs of moving towards more equal opportunities on the other.

- **The budget allocation framework for primary education should place greater emphasis on the equalization of opportunity, with weighting attached to the number of school-age children and other indicators of deprivation.** Current education financing norms allocate resources almost entirely to reflect numbers of children in school. This has an unintended perverse effect in that it implicitly penalizes counties with lower levels of school entry and higher dropout rates, including most of the 12 ASAL counties. Moreover, the current formulae for

budget allocation attach no weight to wider indicators of disadvantage—such as household poverty or parental illiteracy—which influence the distribution of opportunities in education. We therefore advocate a financing approach that attaches more weight to (i) the total number of school-age children in a county (ii) the poverty gap and (iii) broader indicators of deprivation and inequality, including gender disparities. One approach might be to consider weighting in the following ranges: 50 percent for children in school, 20 percent for children not in school, 20 percent for household poverty, 5 percent for gender disparity and 5 percent allocated to a special fund for arid and pastoralist counties. Variations on this approach could be considered.

- **Secondary education financing should be reviewed in the light of the acute disadvantages facing the ASAL counties.** The limited progression of children from the 12 ASAL through Form 4 of secondary school and the KCSE is indicative of deeply entrenched structures of disadvantage, especially for young girls. Learning achievement levels also lag behind the national average. In developing a financing formula that reflects the constitutional principle of equitable sharing, policymakers should consider linking half of the budget allocation to indicators for disadvantage. The scenario presented in this paper considers a 50 percent allocation geared to equal financing for children in school, with 30 percent based on the number of children out of school, 10 percent on gender disadvantage (as indicated by a GER of less than 40 percent), and with 10 percent of the allocation reserved for ASAL counties.

- **More equitable public spending in education should be linked to the development of policies and delivery mechanisms aimed at translating increased financing into more equitable opportunities for access and learning in the ASAL counties**. The 12 ASAL counties covered in this report have some of the lowest levels of participation in education and some of the worst learning achievement levels in Kenya. More equitable public spending *could* help to change this picture, provided that

the additional resources created for counties being left behind are used to finance policies that will promote greater equity in access to education and learning outcomes. These policies could range from conditional (or unconditional) cash transfers to targeted financing for bursaries, support for girls, investment in teaching materials, or increased in-service support for teachers in ASAL counties. In the case of the 12 ASAL counties, the financing premium generated through more equitable sharing could be geared towards the development of a more responsive and relevant system, including support for mobile learning facilities geared towards pastoralist livelihood patterns, distance learning, and adaptation of the curriculum and teaching materials.

- **Looking to the future, policymakers in Kenya should consider the development of a public financing model geared towards the provision of a 'social minimum' of basic services.** Through its national commitments to the Millennium Development Goals and the social and economic rights enshrined in the constitution, Kenya has committed to provide a basic standard of provision for all citizens. As the devolved system develops over time, county-level and national authorities should estimate the financing gap facing each county with respect to the provision of key basic services. That gap should figure as a 'needs assessment' component in national and devolved financing formulae.

- **The government of Kenya and aid donors should invest in building the national statistical capacity required to underpin a devolved financing system and to inform approaches to equitable sharing.** Kenya has a relatively strong and professionalized set of institutions generating data on social and economic indicators, including the Kenya National Bureau of Statistics and relevant line ministries. There are problems however. Surveys on key human development indicators are intermittent. In some areas the available data is either dated or not available on a comparable basis across counties. In others, the accuracy of the data available is contested. The bottom line is that policymakers currently lack access to the reliable, real-time data required to

inform approaches to equity. If one of the criteria for 'equitable sharing' is an allocation of resources that reflects need, it is important to develop statistical systems that capture relative deprivation in a timely and systematic fashion geared towards annual budgeting cycles.

There are limits to what can be achieved through public spending. As even a casual glance at the budgets of many developing and developed countries would confirm, high levels of spending on basic services do not automatically translate either into higher levels of human development, or into expanded coverage and improved quality. Outcomes in these areas are determined by the efficiency of public spending and the level of equity in budget allocations.

The provisions of the 2010 Kenyan constitution do not define a course towards a more equitable society. What the constitution does provide is an injunction to put inequality, marginalization and poverty at the centre of the agenda for public spending. By extension, this implies that the ASAL counties, which are home to some of the most marginalized communities in Kenya, should get a better deal in future public spending rounds. Whether that outcome materializes will ultimately depend on the degree to which political leaders are guided by the spirit and the letter of the new constitution.

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ENDNOTES

1. The Arid and Semi-Arid Land counties as a group represent 23 of the 47 counties created under the devolved government system. In this report, we cover a sub-set of 12 primarily arid and pastoralist counties.

2. The Local Authority Transfer Fund (LATF) is distributed on the basis of a formula that includes (i) a basic minimum lump sum (ii) a 60 percent weighting for population size and (iii) the relative size of the urban and rural population of each local authority (with a weighting in favor of urban populations). [see (Government of Kenya, 2010) for the formula].

3. The income gap ratio is the difference between the poverty line and the average income (or consumption) of the population living under the poverty threshold expressed as a fraction of the poverty line.

4. The 1997 survey reported a national poverty incidence of 52 percent.

5. The poverty gap is obtained by adding up all the shortfalls of the poor (considering the non-poor have a shortfall of zero) and dividing the total by the population. Put differently, it gives the total resources needed to bring all the poor to the level of the poverty line (divided by the number of individuals in the population).

6. The North Eastern province was one of 8 provinces. The 2010 Constitution replaces the previous provincial structure with a new county-based structure.

7. The reported primary school completion rate for 2008 was 85 percent for boys and 75 percent for girls.

8. The census reports a school-age population of 8.6 million

9. One survey in 2008 found that the average costs of sending a child to secondary school fell from around $185 to $79 (at prevailing exchange rates).