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Fiscal Space, Poverty and Inequality in Africa

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Abstract: The benefit of growth experienced since 2000 in Africa has not been broadly shared. Poverty fell by only 8.0 percentage points between 1990 and 2010 compared to the targeted 28.3 percentage points by 2015. Although income inequality fell by 4.3 percent between 1990 and 2009, Africa remains the second most unequal region globally after Latin America and the Caribbean region. Fiscal policies play important roles in reducing poverty and inequality through such instruments as taxes, transfers and government spending. Countries with high fiscal space tend to have lower poverty rates than those with lower tax revenue to GDP ratios. Indeed, fiscal space alone tends to account for 16.5 percent of changes in poverty reduction. Institutions play an important role in increasing fiscal space in Africa. Countries with increasing participatory, transparent and accountable budgetary process tend to have stronger impact of fiscal space on poverty and inequality reduction. Although 29 countries recorded declines in the distributional effectiveness of their fiscal policies over time, the distributional impact rose by 35 percent or more in countries such as Angola, Mozambique, South Africa and Togo. This paper calls for enhancing the non-extractive revenues by diversifying revenues sources from the extractive sectors and improving progressive taxation in countries with high fiscal space and high income inequality. Heavy investment in quality and accessible education and health services, and social programs are also vital to reduce poverty and inequality in Africa.

1. Introduction

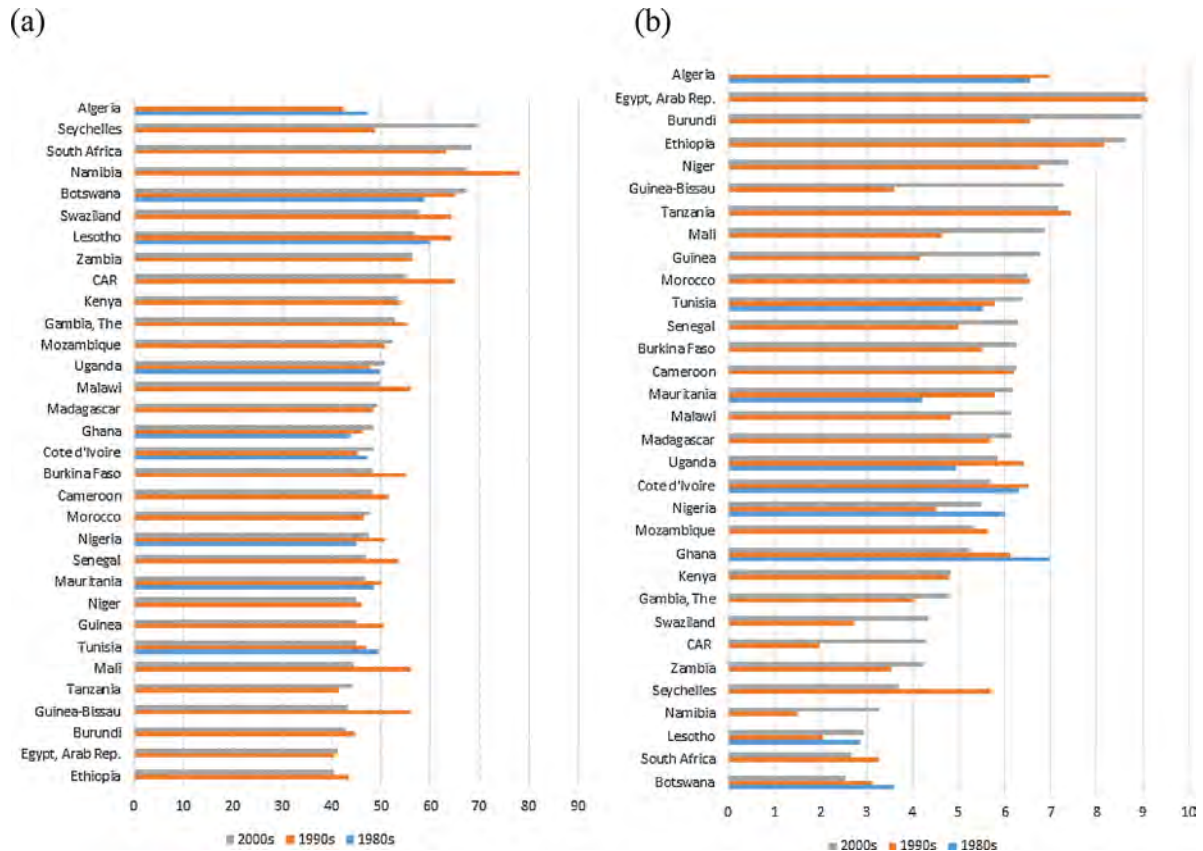
Sub-Saharan Africa experienced a stellar economic growth over the past decade (2004–2013) at an annual average of 5.66 percent; an average annual rate of 6.43 percent during 2005–2010 and 4.56 percent during 2010–2013 (World Bank IBRD-IDA, n.d.). The continent also had six out of the ten fastest growing economies in the world during the first of decade of the 2000s and seven of the ten projected fastest growing economies between 2011 and 2015. The resounding economic growth performance made it the second fastest growing region in the world, despite the slowdown in the world economy since 2008. GDP per capita also grew at an annual rate of 2.0 percent during 1990 and 2011. Several factors accounted for this performance, including among others: the primary commodity boom; improved macroeconomic management (such as inflation, exchange rates and debts); improved trade orientation towards fast-growing emerging markets; and increased external flows (foreign direct investment and remittances).

In spite of this giant stride in economic growth, the benefit of the growth has not been broadly shared. Poverty only declined marginally, from 56.5 percent in 1990 to only 48.5 percent in 2010 — far below the 28.2 percent target by 2015. The growth elasticity of poverty has been quite low in Africa due to a high level of inequality.

Income inequality (measured by the Gini coefficient) is very high in Africa — 0.411 in 2000–2009 compared to 0.521¹ (Latin America and the Caribbean) and 0.367 (Asia). Yet, the continent had the fastest reduction in inequality among developing regions. During these two periods (1990–1999 and 2000–2009), Africa experienced the highest decline in income inequality (4.3 percent) followed by Asia (3.1 percent) (AUC *et al.*, 2014; UNDP, 2013). Inequality worsened in Latin America and the Caribbean, and Europe. However, the continental average tends to mask regional differences in the Gini coefficient: Southern Africa (0.485), Central (0.450), East Africa (0.410) and North Africa (0.374).

The top 20 percent of the population still earns more than 50 percent of the national wealth in many countries, especially in the following Southern African countries, Botswana, South Africa, Lesotho, Swaziland, Zambia and Mozambique (see Figure 1a).²

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Figure 1: Share in national income, 1980s–2000s: (a) top 20%; (b) lowest 20%

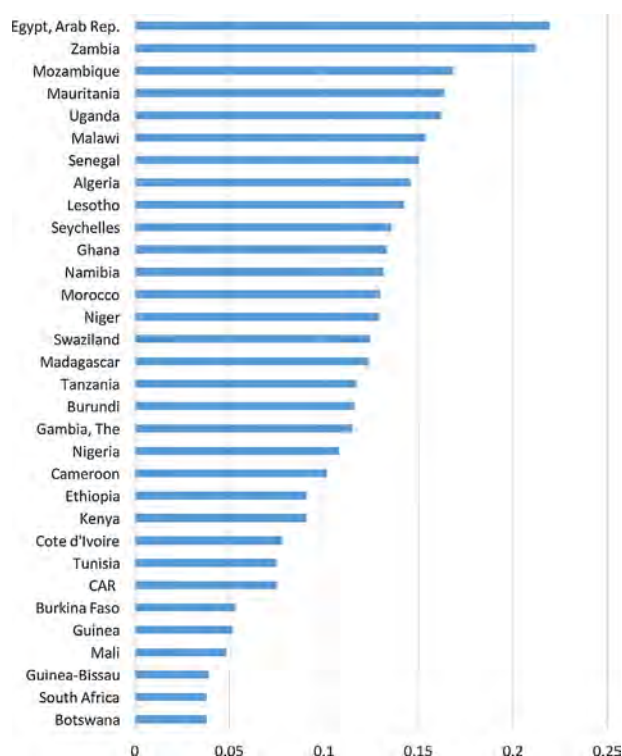
Source: Computed by the author from the World Development Indicators (World Bank IBRD-IDA, n.d.).

However, the income share of the lowest 20 percent is below 4 percent in countries such as Botswana, Lesotho, Namibia and South Africa (see Figure 1b).

The share of each group in national income grew between 1990s and 2000s, but the rate of growth in income share varies across countries. The growth in income share of the lowest 20 percentile was faster than the top 20 percentile in such countries as Guinea Bissau, Mali, Namibia, Central African Republic and Swaziland. For instance, in Guinea Bissau, during the period from the 1990s to the 2000s, the growth rate of their share of national income was 124.9 percent and 490.4 percent for the top and lowest quintiles, respectively. The opposite is the case, however, in Ghana where the top quintile share grew by 266.9 percent and the lowest quintile by 198.6 percent. This notwithstanding, while inequality rose between 1990s and 2000s in some countries, such as Botswana, Ghana, Tunisia, Morocco and Madagascar, it fell in others, such as Tunisia, Swaziland, Namibia, Mali, Malawi and Guinea Bissau.

To avoid the variability associated with measuring inequality either by the extreme percentiles or quintiles, a severity index of the relative share of the lowest quintile to the top quintile was used to measure the severity of inequality across African countries. The share of the lowest quintile in the top quintile income is 15 percent and above in Egypt, Zambia, Mozambique, Uganda, Malawi and Senegal. The distribution of incomes is better among these countries relative to others. In Botswana, South Africa, Guinea Bissau and Mali, the share is less than 5.0 percent — an indication of high income inequality across groups (Figure 2).

The central role of fiscal policy in addressing poverty and inequality has long been acknowledged in the literature, yet empirical work on it, particularly in Africa, is limited. Fiscal policies affect poverty and inequality through the progressivity of taxation, well-targeted transfers and quality of public expenditure. The relationship is, however, not linear. Fiscal policy can also be used to influence other structural factors affecting poverty and inequality, especially human capital accumulation, factor

Figure 2: Income Inequality Severity Index among African countries

Source: Computed by the author from the World Development Indicators (World Bank IBRD-IDA, n.d.).

endowment and labor market development. This paper, therefore, examines the role of fiscal policies in reducing poverty and inequality in Africa.

2. Establishing the Linkage between Fiscal Space and Poverty or Inequality

Fiscal space can be defined as the level of freedom governments have to control both their revenues and their expenditures without any prejudice to the sustainability of their financial positions (Heller, 2005; and Roy and Heuty, 2009). Governments' capacity to undertake spending choices depends on the level of tax revenues mobilized. To this end, this paper focuses its analysis mostly on the ratio of tax revenues to GDP as a measure of fiscal space.

The seminal work of Simon Kuznets in 1955 brings to prominence the linkage between economic growth and inequality by hypothesizing that economic growth at the initial stage raises and later reduces income inequality — the trickle-down effect.³ Since then, several studies have tried to unearth key drivers of inequality — factors contributing to lopsided wealth and income distributions — for instance, the level of GDP that is critical in determining inequality (e.g. Barro, 2000); while studies such as Ramos and Roca-Sagalés (2008) and Marreo and Rodríguez (2013) show that economic growth is not a cause, but rather an instrument to tackle inequality. Other important determinants of inequality include: human capital accumulation (Tanzi, 2000); labour and capital endowments and their returns (e.g. Benhabib *et al.*, 2011); trade openness (Barro, 2008; Feld and Schnellenbach, 2014) using wages and employment as the transmission mechanisms; and economic integration leading to the adoption of common currency in Europe, which limits national governments to pursue their own income redistribution objectives (Bertola, 2010; Bouvet, 2010).⁴ The key question, therefore, is how can we use fiscal policies to influence these factors that shape poverty and inequality?

Improved fiscal space enhances economic efficiency and better distributional coverage. Fiscal policies affect poverty and inequality through taxes, transfers and public expenditure. The relationship is not automatic or linear. The progressivity of direct taxes (such as those levied on income, wealth and inheritance) and indirect taxes (such as on consumption) is an important

channel.⁵ Efficient and well-targeted public spending on education, vocational and entrepreneurial training, and basic health services are vehicles to reduce poverty and income inequality. For instance, public spending that proactively supports girls' and women's education could help address intergenerational poverty while those directed at vocational skills of unskilled labor could accelerate reduction in income inequality. Heavy, quality investment in human capital accumulation and development could drive poverty and inequality reduction.

The ability of fiscal policies to substantially influence social change and labor market mobility, for instance, is determined by whether the impact on poverty and inequality is short- or long-term in orientation (OECD, 2008). For instance, transition from vulnerable groups to a middle-class status is a social movement. Enhancing the knowledge and cognitive skills of girls and women provides an opportunity to transit from the excluded and marginalized groups to empowered groups that hold the key to propel fortunes of households.

The potential transmission mechanisms between fiscal decentralization, and poverty and inequality reduction, particularly through pro-poor sectoral outcomes such as basic education, basic healthcare and agricultural productivity, depend largely on the outcome of the trade-off between potential benefits derived from better matching of local preference due to local proximity, and the lack of technical capacity at the local level (Yao, 2007). Yao established some significant statistical, but non-linear relationships between fiscal decentralization and poverty, using the Generalized Method of Moment Instrumental Variable (GMM-IV) model on 97 countries over the period 1975–2000.

The studies from China show opposing results between taxes and government expenditures on inequality. Government spending exhibits a worsening impact whereas government taxes improve inequality (Cevik and Correa-Caro, 2015). It is also important to have fiscal policies that are able to counter other drivers of poverty and inequality such as access to health and education services. For instance, fiscal policies that are progressive and are able to strengthen accountability and transparency in the collection and use of public resources may produce stronger effects on poverty and inequality.

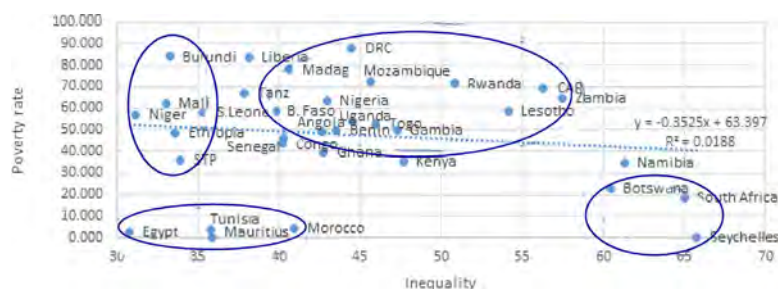
The findings from Salotti and Trecroci (2015) provide clarification on how inequality is sensitive to fiscal policy (the bottom and the top tail of income distribution). Using data for advanced countries, they found that public debts elasticity on inequality ranged between -0.05 and -0.18 , while that of government's final consumption expenditure ranged between -0.23 and -0.55 . When efficiency and quality of government spending is assured, public expenditure is potent for redistribution of wealth and opportunities to the lowest quintiles of the population. The equalizing impact of public spending on education, health and social spending is prominent.

Markets accelerate economic growth but the states distribute benefits of such growth. How? Effective fiscal policy, through progressive taxes and quality public expenditure, ensures better access to economic, social, and political resources. A fairer access to these resources does not only enhance wellbeing of the population but also promotes a better income distribution (IMF, 2014).

3. Analysis of Poverty and Inequality in Africa

Four distinct groups of countries emerge from an analysis of poverty and inequality in Africa. The first and the most desirable group is the set of countries with low poverty and low inequality levels: Egypt, Tunisia, Mauritius and Morocco (Figure 3). These are mostly North African countries where heavy investment in quality and accessible education and health services is a common

Figure 3: Poverty and inequality



Note: DRC = Democratic Republic of the Congo; CAR = Central African Republic; Tanz = Tanzania; B. Faso = Burkina Faso; STP = Sao Tomé and Príncipe.

Source: Computed by the author from the World Development Indicators database (World Bank IBRD-IDA, n.d.).

factor. The expected years of schooling in these countries range between 11 (Morocco) and 15.6 (Mauritius), while life expectancy also remains high (between 70.9 in Morocco and 75.9 in Tunisia).

Duclos and Verdier-Chouchane (2011) provide some clarification on what singles out Mauritius as a very good example of poverty and inequality reduction. Its poverty-inequality reduction strategy focuses more on expanding employment opportunities, modernizing its economy and maintaining an effective and elaborate social protection mechanism. Its social protection is anchored on deepening skills acquisition programs for unskilled and uneducated individuals and expanding access to nutritional and medical assistance to the marginalized — coupled with free education up to university level to all its citizens, transportation for school children and free health care services to all. The country has been allocating a significant proportion of public budget on education, health and social services. The result of this is manifest in 87 percent of Mauritians owning their homes (Stiglitz, 2015), and leading the continent on human development performance: a life expectancy at birth of 74.4, an expected year of schooling of 15.6 and a human development index of 0.777 compared to African averages of 61.2, 10.5 and 0.524 respectively (UNDP, 2016).

The second group succeeded in reducing poverty to some extent but inequality remains quite high. The countries in this group are essentially Southern Africa: Seychelles, South Africa and Botswana. The economic development strategy of these countries is outward oriented and they all exhibited some racial divide which tends to be distributed across sophisticated and peripheral economies. For instance, South Africa has the most expansive social protection in the continent. However, racial divisions and skills gaps among its youth remain a policy priority. As a result, youth (15–34 years) unemployment hovered between 32.7 percent and 36.2 percent during 2008–2013 (Statistics South Africa, 2014).

The third group consists of countries with high poverty in the midst of low inequality. They are a low income group, characterized by non-sophistication of their economies: for example, Burundi, Niger, Mali, Sao Tomé and Príncipe, and Ethiopia. While Ethiopia is succeeding in winning the war on poverty — 41.78 percent reduction during 1995–2010, it is however losing the battle on inequality in recent times — Gini coefficient rose from 0.298 in 2005 to 0.336 in 2010.

The fourth group is characterized by both high poverty and inequality rates. Most of the resource rich countries such as Angola, Republic of the Congo, Democratic Republic of the Congo, Mozambique and Nigeria are in this group. The resource curse associated with Dutch Disease and rent seeking activities are some of the factors explaining the stickiness of poverty and inequality in spite of an avalanche of resources accumulated during the era of commodity boom.

The widening salary and wage compression ratio is an important driver of inequality across the continent.⁶ Many studies have acknowledge the rising share of income going to the top earners as a key driver of inequality (Piketty and Saez, 2006; McCall and Percheski, 2010; Atkinson *et al.*, 2011; Piketty, 2015). ILO (2008) provides some illumination on how wage compression affects wage inequality. Lower inequality in France was induced mainly by wage compressions between the median and lowest wages; in Brazil by narrowing the gap between median and higher wages, and in Mexico by narrowing the gap between the lowest and highest wages.

While countries in other regions are making efforts to narrow wage gaps between the lowest and the highest bands, the opposite is the case in many African countries. A good example of this is the widening gap between the salaries of political office holders and national per capita incomes. Politicians influence allocation of emoluments to themselves with limited recourse to the country's development context. The salaries of some African legislators relative to minimum wages and per capita income at the national level shows some levels of wide wage compression rates. While legislators from the Organization of Economic Co-operation and Development (OECD) countries earned less than eight times their countries per capita income (ranging from 1.3 times in Norway to 7.1 times in Britain), it is 64 times in Nigeria, 60 times in Kenya and 15.1 times in South Africa (see Table 1).

Corruption, which manifests in the form of poor service delivery, is a bane of poverty and inequality in several countries. The lopsided nature of the educational system that is at variance with labor market reality is another factor that tends to complicate poverty. The dynamics of economic structures, especially the predominance of traditional agriculture in the midst of commercial agriculture, enclave extractive sector and sophisticated financial and telecommunication sector, play an important role in shaping poverty and inequality in many African countries. The dichotomy between rural and urban economies is another (Cornia, 2015).

4. Fiscal Space, Poverty and Inequality: What Does the Evidence Say?

Fiscal policies affect poverty and inequality through progressive taxes, well-targeted transfers and pro-poor quality expenditure. An effective redistribution of the total tax burden towards the rich via personal and corporate income taxes and reallocations of

Table 1: Legislators' pay and inequality in pay across highly paid parliamentarians, globally

	Basic salary per annum, 2013	GDP per capita (current US\$, 2013)	Ratio of GDP per capita	Index by GDP per capita	Ranking by GDP per capita	Index by inequality in pay	Ranking by inequality in pay
Nigeria	189,500	2,966.1	63.888610	0.029	20	1.000	21
Kenya	74,500	1,238.5	60.153410	0.012	21	0.942	20
South Africa	104,000	6,886.3	15.102450	0.067	18	0.236	18
Brazil	157,600	11,938.9	13.200550	0.116	17	0.207	17
Italy	182,000	35,477.5	5.130012	0.345	14	0.080	15
Hong Kong	130,700	38,364.2	3.406822	0.373	12	0.053	13
USA	174,000	52,980.0	3.284258	0.515	5	0.051	12
Japan	149,000	38,633.7	3.856736	0.376	11	0.060	14
Australia	201,200	67,473.0	2.981934	0.656	2	0.047	10
Germany	119,500	46,255.0	2.583504	0.450	8	0.040	6
Britain	105,400	14,776.8	7.132803	0.144	16	0.112	16
France	85,900	42,631.0	2.014966	0.415	9	0.032	3
Norway	138,000	102,832.3	1.341991	1.000	1	0.021	1
Israel	114,800	36,050.7	3.184404	0.351	13	0.050	11
Singapore	154,000	55,979.8	2.750992	0.544	4	0.043	8
New Zealand	112,500	42,409.0	2.652739	0.412	10	0.042	7
Ireland	120,400	50,470.3	2.385561	0.491	7	0.037	4
Sweden	99,300	60,364.9	1.644996	0.587	3	0.026	2
Canada	154,000	52,305.3	2.944252	0.509	6	0.046	9
Indonesia	65,800	3,643.9	18.057580	0.035	19	0.283	19
Saudi Arabia	64,000	25,819.1	2.478785	0.251	15	0.039	5

Sources: Author's computation from *The Economist* (15 July 2013) and World Development Indicators (World Bank IBRD-IDA, n.d.).

public spending to favor the poor and the marginalized groups have a strong role in reducing poverty and inequality. Well-targeted public expenditures for education, health, safety nets and agriculture could dent poverty and inequality substantially. A rapid reduction in inequality further enhances growth elasticity of poverty. As argued by Robalino and Warr (2006), pro-poor reallocations of taxes and expenditures can increase the poverty-reducing capacity of economic growth.

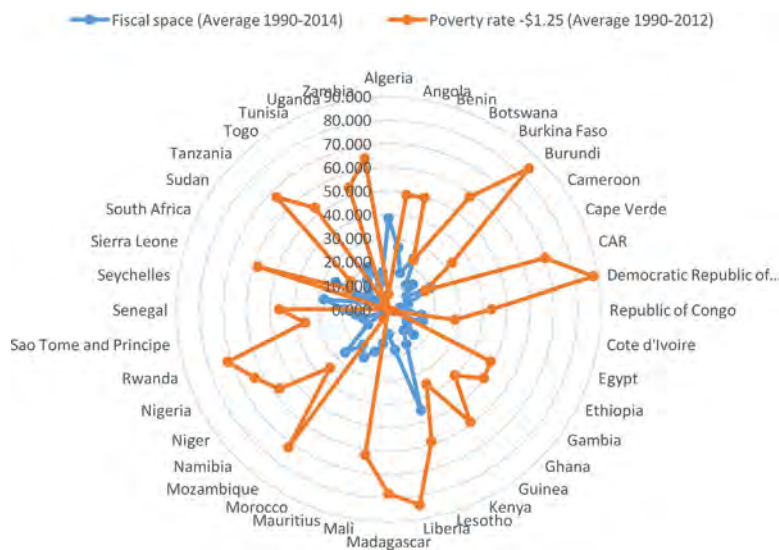
Evidence from Figures 4 and 5 provides a strong negative relationship between fiscal space and poverty in Africa. Countries with high fiscal space such as Algeria, Botswana, South Africa and Seychelles tend to have lower poverty rates than others with lower tax revenue to GDP ratios such as the Democratic Republic of the Congo, Burundi, Liberia and Rwanda. However, countries such as Lesotho, Angola and Namibia are exceptions due to substantial revenues coming from the extractive sector (Figure 4).

Fiscal space alone tends to account for 16.5 percent of changes in reduction in poverty (Figure 5). More than 80 percent of countries with fiscal space of 15 percent and above have a poverty rate of less than 30 percent (e.g. Seychelles, Mauritius, Egypt, Tunisia, Morocco, Algeria and Cabo Verde). The development strategies adopted after independence in the North African countries, for instance, is a major factor that explains the low rate of poverty in the region. The commanding height of government was focused on social objectives, including widescale policies for redistribution and equity (AfDB, 2011). Heavy human capital development in health, education, housing and large-scale public sector employment is key to enhancing the redistributive policies of governments in Algeria, Egypt, Morocco and Tunisia.

The relationship between percentage change in poverty (ranging from 1990–2013) and the average fiscal space (1990–2014) also reveals an inverse relationship. For all countries, a correlation index of -12.6 was established. All the six countries that reduced poverty by at least 50 percent during the period had a fiscal space of more than 10 percent (Tunisia, Egypt, South Africa, Guinea, Botswana and Namibia). About 86 percent of countries that reduced poverty during 1990–2013 recorded a fiscal space of at least 10 percent (Figure 6). All other things being equal, fiscal space tends to support poverty reduction.

For instance, the United Republic of Tanzania's ability to reduce poverty from 70.4 percent in 1991 to 46.6 percent in 2011 has been linked to its distributive policy effectiveness. Younger *et al.* (2016) find Tanzania's redistributive policies more effective

Figure 4: Fiscal space and poverty rates in Africa, 1990–2014



largely because both direct and indirect taxes are more progressive than in other countries. Its conditional cash transfer program is well targeted, and if it were expanded to a size that is typical for lower middle-income countries, it could reduce poverty significantly. However, its electricity subsidies are regressive and not pro-poor as intended.

The relationship between fiscal space (1990–2013) and both market Gini and net Gini (after taxes and transfers) coefficients (averages), tends to suggest some elements of regressivity in taxes. Both Gini coefficients are positively correlated with fiscal space (Figure 7).⁷ All countries with revenue to GDP ratio of 20 percent and above (except Algeria, Morocco and Seychelles) have income inequality (market and net Gini coefficients) that are over 0.5. These countries (Algeria, Morocco and Seychelles) are not resource-rich nor do they depend heavily on primary commodities for their exports and revenues. The need to enhance the non-extractive revenues by reducing heavy dependence of governments on revenues from the extractive sectors in countries like

Figure 5: Correlation between fiscal space and poverty (1990–2013 average)

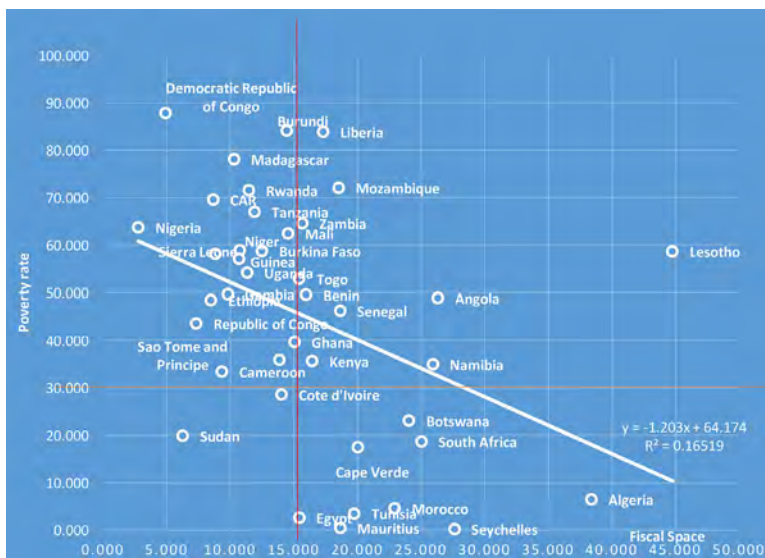
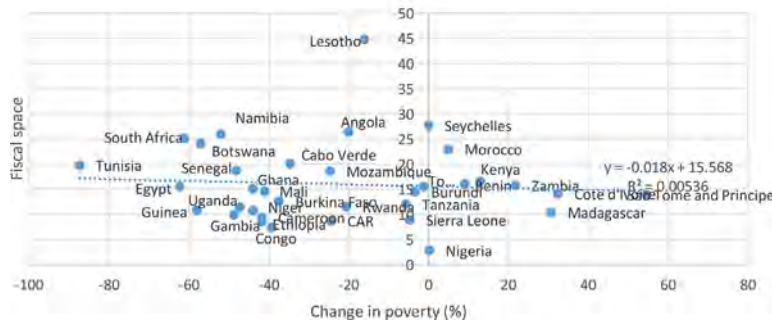


Figure 6: Correlation between fiscal space and percentage change in poverty



Nigeria and Democratic Republic of the Congo, for instance, could help reverse the positive linkage. It also calls for improving progressive taxation in countries with high fiscal space and high income inequality like Lesotho, Namibia, South Africa, Angola and Zimbabwe. The coefficient of determination, which is about 13.3 percent, is relatively high while correlation coefficients for both gross and net Gini is higher than 0.36. To this end, a progressive tax system and diversification of government revenues away from the extractive sector, could help in reducing inequality in the continent.

Improved revenues enhance the capacity and flexibility of the state to make spending choices, especially on health, education and social services, that have a strong impact on poverty and inequality. In this regard, expanding the tax bases in African countries remains critical. This includes: improving enforcement on existing tax handles; levying new taxes (Odusola, 2006); increasing marginal tax rates; and bringing the informal sector into the tax bases in a way that does not discourage underground economic activities. Policies that promote economic growth also increase the tax base of the economy.

Institutions play an important role in increasing fiscal space in Africa (see Figure 8). The Open Budget Index (OBI) provides a comprehensive view of a participatory, transparent and accountable budgetary process, including revenue generation and management.⁸ In 2010, for instance, South Africa was ranked the best globally in terms of OBI. It is therefore not surprising that South Africa is one of the countries with the largest fiscal space in the continent. Namibia, Botswana, Ghana and Uganda also scored very high in OBI over the past years and also among countries with a revenue-GDP ratio of more than 10 percent in Africa. By contrast, countries with low institutional ratings on OBI such as Nigeria, Democratic Republic of the Congo and Cameroon are among countries with very low fiscal space in the continent.

The strong linkage between institutions and fiscal space points to the urgent need to address institutional issues regarding tax administration and management in order to expand tax revenues. Issues relating to fraud, tax evasion and discretionary tax

Figure 7: Correlation between fiscal space and market Gini coefficients (averages)

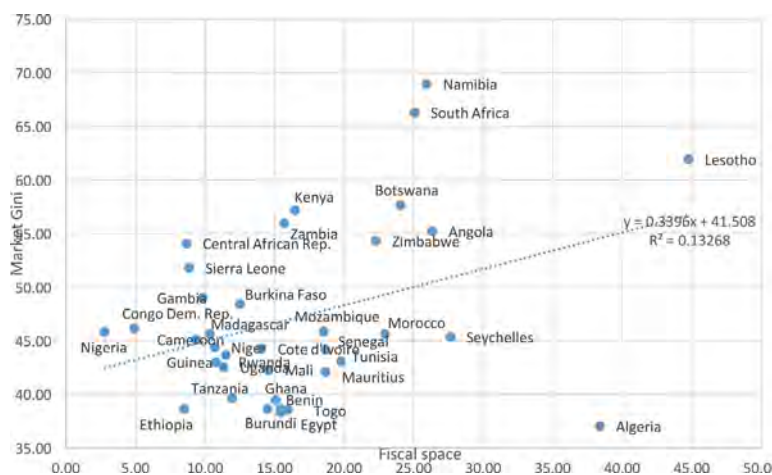
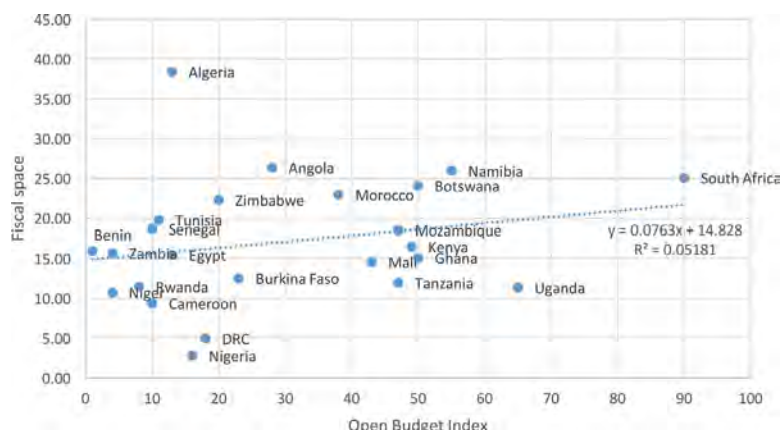


Figure 8: Fiscal space and institutions

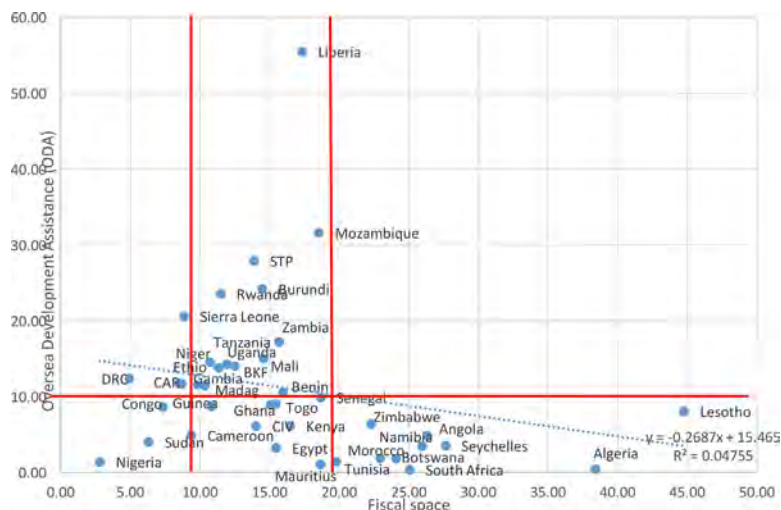


waivers should be thoroughly reviewed and concrete actions taken. The rampant tax holidays to foreign firms create inequality of opportunities between local and foreign firms. This, in many instances, crowds out the activities of local firms.

Decoupling government revenues from the extractive sector helps to avert vicissitudes of revenues from primary commodities such as the current bust in primary commodity prices. Obtaining more revenues from personal and corporate income taxes helps to increase tax progressivity. It also enhances fiscal citizenships across countries. Fiscal citizenship contributes to engendering accountability and transparency in the use of public budgets — public expenditures and revenues. Quid pro quo in tax management also helps to boost and smoothen revenues across countries. The correlation index between OBI and fiscal space is as high as 0.23; the coefficient of determination is 5.1 percent.

Given the potential role of fiscal space in addressing poverty and inequality, it is important to examine other factors that could explain its depth. What is the link between fiscal space and ODA (measured as the share of ODA in GNI)? The relationship tends to be negative with a correlation index of -21.8. Three clear groupings of countries emerge (Figure 9). First, a group of countries with both low fiscal space and ODA to GNI ratio (e.g. Nigeria, Republic of the Congo, Sudan and Cameroon) is evident. These

Figure 9: Fiscal space and ODA in Africa



Note: DRC = Democratic Republic of the Congo; Congo = Republic of the Congo; STP = São Tomé and Príncipe; CIV = Côte d’Ivoire; CAR = Central African Republic; BKF = Burkina Faso; Ethio = Ethiopia; and Madag = Madagascar.

are countries facing some institutional challenges including rent-seeking activities from the extractive sector. The second group is the aid orphans (i.e. countries with ODA to GNI ratio of 10 and above), whose fiscal space is between 10 percent and 20 percent (e.g. Liberia, São Tomé and Príncipe, Niger, Zambia and Benin). It is interesting to note that most ODA recipients tend to have stronger fiscal space than many other countries with limited access to ODA. There seems to be some institutional enhancement on domestic resource mobilization by most ODA orphans. Scaling up the proportion of ODA dedicated to building human and institutional capacity for fiscal space is critical to accelerating fiscal space in Africa. The third group consists of countries that do not depend on aid with strong fiscal space history (e.g. Algeria, South Africa, Morocco and Seychelles). These are countries with relatively sound and accountable revenue institutions; they provide some good cases for benchmarking on fiscal space in Africa.

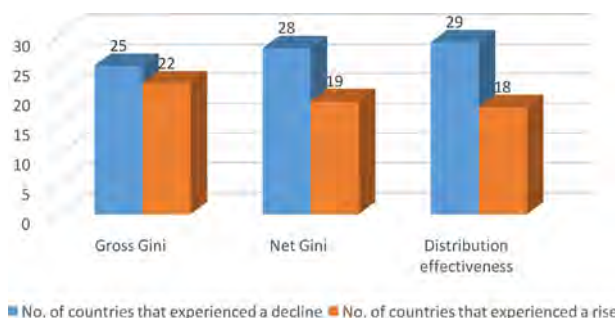
5. Distributional Effectiveness of Fiscal Policy in Africa

The effectiveness of income distribution is affected by many factors including fiscal policy instruments — taxes, transfers and public expenditures. The Standardized World Income Inequality Database (SWIID) provides a framework of examining distributional effectiveness of fiscal policy on income distributions across countries (e.g. Solt, 2009; Cevik and Correa-Caro, 2015). This is often measured as the difference between the gross Gini (before taxes and transfers) and the net Gini (after taxes and transfers).

Many countries experienced faster rate of increase in net Gini coefficient than the market Gini coefficient. When this occurs, it indicates an erosion in the distributional impact of fiscal policy. Of the 47 countries where data are available, 29 countries recorded declines in the distributional effectiveness of fiscal policy (see Figure 10 and Table 2). Examples of countries with stellar performance in this regard (35 percent increase and above) are Angola, Mozambique, Democratic Republic of the Congo, South Africa and Togo. For instance, between 1965 and 2011 in South Africa, market Gini rose by 17.6 percent while net Gini rose by 14.9 percent; the dismantling of apartheid, the expansive social protection coverage and innovative revenue management in South Africa made this possible.

The effectiveness of fiscal policy, measured by the difference between the market and net Ginis, across countries with available data in Africa is shown in Figure 11. South Africa had the highest performance on this indicator. This is followed by Burkina Faso, Kenya and Gabon. This tends to suggest that the level and composition of taxes and quality of spending as well as its distribution across groups and spatial locations are contributing to reduction in inequality in most of these countries. Many countries are deepening their direct taxation, while some are shifting away from indirect to direct taxation as a way of narrowing down income inequality. The reform in the tax collection system, which is blocking tax evasion from companies and individuals in South Africa, is also contributing to the enviable performance in fiscal distribution in the country. The implementation of fiscal decentralization in Kenya, which has been adjudged to have promoted allocative efficiency and equity (Bagaka, 2008), could be one of the factors explaining fiscal distribution effectiveness in the country. The increasing wave of public participation in budgeting and the introduction of social accountability matrix in service delivery at the country level (World Bank, 2015) is also another factor driving the distributional effectiveness of fiscal policy in Kenya.

Figure 10: Summary of changes in income inequality and fiscal distribution



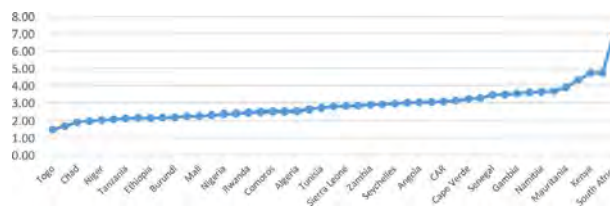
Source: Author's computation from the Standardized World Income Inequality Database (SWIID).

Table 2: Percentage changes in income inequality and fiscal distribution in Africa

	Period	Percentage change in net Gini	Percentage change in market Gini	Percentage change in fiscal distribution
Angola	1995–2009	7.536607	22.44999	399.8369
Benin	2003–2006	-1.44039	-1.98971	-11.1907
Botswana	1985–2005	-1.34347	-2.37015	-20.0497
Burkina Faso	1994–2009	-11.6111	-10.371	18.76314
Burundi	1992–2006	-0.92649	0.273022	22.1063
Cameroon	1983–2007	-21.2913	-20.6016	-6.44125
Cabo Verde	1989–2005	0.298458	0.745976	9.132903
Central African Rep.	1992–2008	-0.15446	-3.45496	-45.7216
Chad	2003–2005	0.085515	-0.29234	-8.17598
Comoros	2002–2005	24.53076	23.97486	10.66307
Congo (Dem. Rep.)	2005–2008	-0.59315	0.946813	37.05975
Côte d'Ivoire	1985–2008	3.186386	2.174278	-18.7182
Djibouti	1995–2005	9.16312	8.203351	-7.30916
Egypt	1964–2009	-21.332	-22.8399	-40.9409
Ethiopia	1981–2010	3.318852	4.216217	20.62047
Gabon	1960–2005	-28.4157	-31.7466	-69.201
Gambia	1992–2003	13.24117	10.00816	-38.0648
Ghana	1987–2006	15.37641	16.01069	27.08115
Guinea	1991–2007	-14.3393	-19.8591	-67.8113
Guinea-Bissau	1991–2005	-25.9429	-27.4751	-55.3848
Kenya	1960–2007	-37.8861	-25.2186	-694.358
Lesotho	1986–2003	-15.1648	-14.6453	-6.38731
Madagascar	1960–2010	-4.13055	-7.09782	-39.6741
Malawi	1985–2011	-18.8675	-22.5133	-60.1562
Mali	1989–2010	-9.29927	-8.25665	13.56232
Mauritania	1987–2008	-7.80479	-6.17556	13.2716
Mauritius	1972–2005	4.914293	1.047171	-43.2907
Morocco	1960–2007	-7.17481	-14.4327	-63.5183
Mozambique	1996–2008	6.490042	8.507051	60.19714
Namibia	1993–2010	-13.4343	-13.1215	-6.93023
Niger	1960–2008	12.46645	8.657433	-40.1515
Nigeria	1981–2011	30.80966	27.81144	-10.0861
Rwanda	1985–2011	114.1855	106.7586	5.286143
Senegal	1960–2011	-24.4037	-25.1084	-32.3771
Seychelles	1978–2007	-3.10475	-3.79327	-11.0075
Sierra Leone	1968–2011	-24.8326	-28.2184	-60.2816
Somalia	2001–2006	-6.25385	-9.25452	-45.612
South Africa	1965–2011	14.97815	17.5531	35.48452
Sudan	1968–2009	-14.7934	-18.3861	-58.1852
Swaziland	1994–2009	-15.4307	-14.9943	-7.08211
Tanzania	1964–2011	-28.5194	-31.7145	-73.7383
Togo	2005–2011	13.92555	14.69394	35.39809
Tunisia	1965–2010	-28.9259	-30.5842	-50.6625
Uganda	1983–2011	19.35845	19.63701	23.95057
Zambia	1972–2010	0.309067	1.232789	13.99951
Zimbabwe	1990–2011	-21.0352	-20.9206	-18.6783

Note: The change in fiscal distribution in Kenya is large due to a decline of 1.257 in the base year, 1960.

Source: Author's computation from the Standardized World Income Inequality Database (SWIID).

Figure 11: Effectiveness of fiscal distribution in Africa

Source: Author's computation from the Standardized World Income Inequality Database (SWIID).

6. Conclusions and Recommendations

Fiscal policies play important roles in reducing poverty and inequality in any society through such instruments as taxes, transfers and government spending. These instruments are needed to vigorously reduce poverty and inequality in a way that ensures that no one is left behind in the development equation. In addition to using fiscal instruments to directly impact on poverty and inequality, they could also be used to influence structural factors affecting poverty and inequality, particularly human capital accumulation, factor endowment and labor market transformation. The evidence from this paper, using bivariate analysis, shows that the relationship is not automatic.

Countries with high fiscal space tend to have lower poverty rates than those with lower tax revenue to GDP ratios. Fiscal space alone tends to account for 16.5 percent of changes in reduction in poverty. All the six countries that reduced poverty by at least 50 percent between 1990 and 2013 had a fiscal space of over 10 percent (Tunisia, Egypt, South Africa, Guinea, Botswana and Namibia). By contrast, the positive correlation between fiscal space and inequality (gross and net Ginis) tends to suggest some elements of regressive taxation. Frivolous tax exceptions and waivers should be decisively addressed. The coefficient of determination, at around 13.3 percent, is relatively high while correlation coefficients for both gross and net Ginis is higher than 0.36.

Institutions play an important role in increasing fiscal space in Africa. Countries with an increasing participatory, transparent and accountable budgetary process tend to have a stronger impact of fiscal space on poverty and inequality reduction. Fiscal citizenship contributes to engendering accountability and transparency in the use of public budgets, and better service delivery also offers potential to boost and smoothen tax revenues.

Although 29 countries recorded declines in the distributional effectiveness of their fiscal policies over time, some countries such as Angola, Mozambique, Democratic Republic of the Congo, South Africa and Togo made stellar progress in enhancing their fiscal policy effectiveness — the distributional impact rose by 35 percent or more.

There is an urgent need to enhance the non-extractive revenues by reducing heavy dependence of governments on revenues from the extractive sectors in countries such as Nigeria, Republic of the Congo and Democratic Republic of the Congo. This paper also calls for the need to improve progressive taxation in countries with high fiscal space and high income inequality like Lesotho, Namibia, South Africa, Angola and Zimbabwe. To this end, a progressive tax system and diversification of government revenues away from the extractive sector, could help to reduce inequality in the continent.

Fiscal policy, through heavy investment in quality and accessible education and health services, is a common factor in simultaneously denting poverty and inequality in Egypt, Tunisia, Mauritius and Morocco. Fiscal policy could also be used to proactively expand employment opportunities, modernize their economies, and maintain effective and well-targeted social protection mechanisms that benefit the marginalized. Deepening skills acquisition programs for unskilled and uneducated individuals is vital to addressing inequality.

Notes

1. The values for Gini range from 0 where every individual earns the same income and 1 when one individual owns everything.
2. Other countries include Uganda, Seychelles, Kenya, Central African Republic and the Islamic Republic of The Gambia.
3. The failure of Kuznets' hypothesis, where the tickle hypothesis has failed to generate growth that reduces inequality, has been well documented (e.g. Reid-Henry, 2015 and Stiglitz, 2015).
4. Salotti and Trecroci (2015) provide further clarification on this linkage and how various studies have tried to handle the linkage.

5. For instance, see Salotti and Trecroci (2015) and Benhabib Bisin and Zhu (2011) on how taxation (including taxes on capital income and property) could be an instrument of reducing inequality.
6. Several factors account for this including technological progress, international trade, democratization that leads to state capture, and market and tax reforms.
7. The relationship between fiscal space and income inequality for both market and net Gini coefficients are the same. Only the net Gini is presented here.
8. The Open Budget Survey (OBS) measures the state of budget transparency, participation and oversight across countries. A minimum set of standards has been established for national budgets. These include having in place: pre-budget statements, Executive Budget Proposals, Citizens' Budgets, Enacted Budget, mid-year budget reports, year-end budget reports, audit reports, public engagement in the budgetary process, legislative strength and audit institution strengths (International Budget Partnership, 2012).

References

- AfDB (2011), 'Poverty and Inequality in Tunisia, Morocco and Mauritania', *Economic Brief*. Available at: www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/North%20Africa%20Poverty%20Anglais%20ok_North%20Africa%20Quarterly%20Analytical.pdf
- Atkinson, A. B., T. Piketty, and E. Saez (2011), 'Top Incomes in the Long Run of History', *Journal of Economic Literature*, Vol. 49, No. 1, pp. 3–71.
- AUC, ECA, AfDB and UNDP (2014), *Assessing Progress in Africa toward the Millennium: Development Goals Analysis of the Common African Position on the post-2015 Development Agenda*.
- Bagaka, O. (2008), 'Fiscal Decentralization in Kenya: The Constituency Development Fund and the Growth of Government', paper prepared for presentation at the 20th Annual Conference of the Association for Budgeting and Financial Management, 23–25 October, Chicago. Available at: <http://coppfs1.asu.edu/spa/abfm2008/new/Bagaka.pdf>
- Barro, R. (2000), 'Inequality and Growth in a Panel of Countries', *Journal of Economic Growth*, Vol. 5, pp. 5–32.
- Barro, R. (2008), 'Inequality and Growth Revisited', Asian Development Bank Working Paper, No. 11.
- Benhabib, J., A. Bisin and S. Zhu (2011), 'The Distribution of Wealth and Fiscal Policy in Economies with Finitely Lived Agents', *Econometrica*, Vol. 79, No. 1, pp. 123–57.
- Bertola, G. (2010), 'Inequality, Integration, and Policy: Issues and Evidence from EMU', *Journal of Economic Inequality*, Vol. 8, pp. 345–65.
- Bouvet, F. (2010), 'EMU and the Dynamics of Regional Per Capita Income Inequality in Europe', *Journal of Economic Inequality*, Vol. 8, No. 3, pp. 323–44.
- Cevik, S. and C. Correa-Caro (2015), 'Growing (Un)equal: Fiscal Policy and Income Inequality in China and BRIC+', IMF Working Paper WP/15/68.
- Cornia, G. A. (2015), 'Income Inequality Levels, Trends and Determinants in Sub-Saharan Africa: An Overview of the Main Changes', a technical report on UNDP's project on 'Inequality in SSA', 28 February.
- Duclos, J.-Y. and A. Verdier-Chouchane (2011), 'Growth, Poverty and Inequality in Mauritius and South Africa', *ADB Africa Economic Brief*, Vol. 2, Issue 3, April.
- Feld, L. P. and J. Schnellenbach (2014), 'Political Institutions and Income (Re)Distribution: Evidence from Developed Economies', *Public Choice*, Vol. 159, Nos. 3–4, pp. 435–55.
- Heller, P.S. (2005), 'Understanding Fiscal Space', IMF Policy Discussion Paper.
- ILO (2008), *World of Work Report 2008: Inequalities in the Age of Financial Globalization*, International Institute of Labour Studies, ILO, Geneva.
- IMF (2014), 'Fiscal Policy and Income Inequality', IMF Policy Paper.

- International Budget Partnership (2012), *Open Budget Survey 2012. Open Budget Transforms Lives*. Available at: <http://internationalbudget.org/wp-content/uploads/OBI2012-Report-English.pdf>
- Kuznets, S. (1955), 'Growth and Income Inequality', *American Economic Review*, Vol. 45, pp. 1–28.
- Marreo, G. A. and J. G. Rodríguez (2013), 'Inequality of Opportunity and Growth', *Journal of Development Economics*, Vol. 104, pp. 107–22.
- McCall, L. and C. Percheski (2010), 'Income Inequality: New Trends and Research Directions', *Annual Review of Sociology*, Vol. 36, No. 1, pp. 329–47.
- Odusola, A. (2006), 'Tax Policy Reform in Nigeria', UN-WIDER Research Paper No. 2006/03, January.
- OECD (2008), *Growing Unequal? Income Distribution and Poverty in OECD Countries*, OECD, Paris.
- Piketty, T. (2015), 'Putting Distribution Back at the Center of Economics: Reflections on Capital in the Twenty-first Century', *Journal of Economic Perspectives*, Vol. 29, No. 1, pp. 67–88.
- Piketty, T. and E. Saez (2006), 'How Progressive is the U.S. Federal Tax System? A Historical and International Perspective', NBER Working Paper Series No. 12404.
- Ramos, X. and O. Roca-Sagalés (2008), 'Long-term Effects of Fiscal Policy on the Size and Distribution of the Pie in the UK', *Fiscal Studies*, Vol. 29, No. 3, pp. 387–411.
- Reid-Henry, S. (2015), *The Political Origins of Inequality: Why a More Equal World Is Better for Us All*, University of Chicago, Chicago.
- Robalino, D. A. and P. G. Warr (2006), 'Poverty Reduction through Fiscal Restructuring: An Application to Thailand', *Journal of the Asia Pacific Economy*, Vol. 11, No. 3, pp. 249–67.
- Roy, R. and A. Heuty (2009), *Fiscal Space: Policy Options for Financing Human Development*, Earthscan, Sterling.
- Salotti, S. and C. Trecroci (2015), 'Can Fiscal Policy Mitigate Income Inequality and Poverty?', available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2379441
- Solt, F. (2009), 'Standardizing the World Income Inequality Database', *Social Science Quarterly*, Vol. 90, pp. 231–42.
- Statistics South Africa (2014), *National and Provincial Labour Market*. Available at: <http://beta2.statssa.gov.za/publications/P02114.2/P02114.22014.pdf>
- Stiglitz, J. E. (2015), *The Great Divide: Unequal Societies and What We Can Do about Them*, W.W. Norton and Co., New York.
- Tanzi, V. (2000), 'Os determinantes fundamentais da desigualdade, pobreza e crescimento', *Distribuicao de riqueza e crescimento economico*, Estudo NEAD 2, Brazilia.
- UNDP (2013), *Humanity Divided: Confronting Inequality in Developing Countries*, UNDP, New York.
- UNDP (2016), *Africa Human Development Report 2016: Accelerating Gender Equality and Women's Empowerment in Africa*, UNDP Regional Bureau for Africa, New York.
- World Bank (2015), Kenya Devolution: Working paper – Summary Overview. Available at: www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/08/07/090224b082c25763/1_0/Rendered/PDF/Kenya000Enhanc0t000Summary0overview.pdf
- World Bank IBRD-IDA (n.d.), <http://data.worldbank.org/indicator/SI.DST.05TH.20>
- Yao, G. A. (2007), 'Fiscal Decentralization and Poverty Reduction Outcomes: Theory and Evidence', Dissertation, Georgia State University. http://scholarworks.gsu.edu/econ_diss/26
- Younger, S. D., F. Myamba and K. Mdadila (2016), 'Fiscal Incidence in Tanzania', *Africa Development Review*, Vol. 28, No. 3, pp. 264–76.