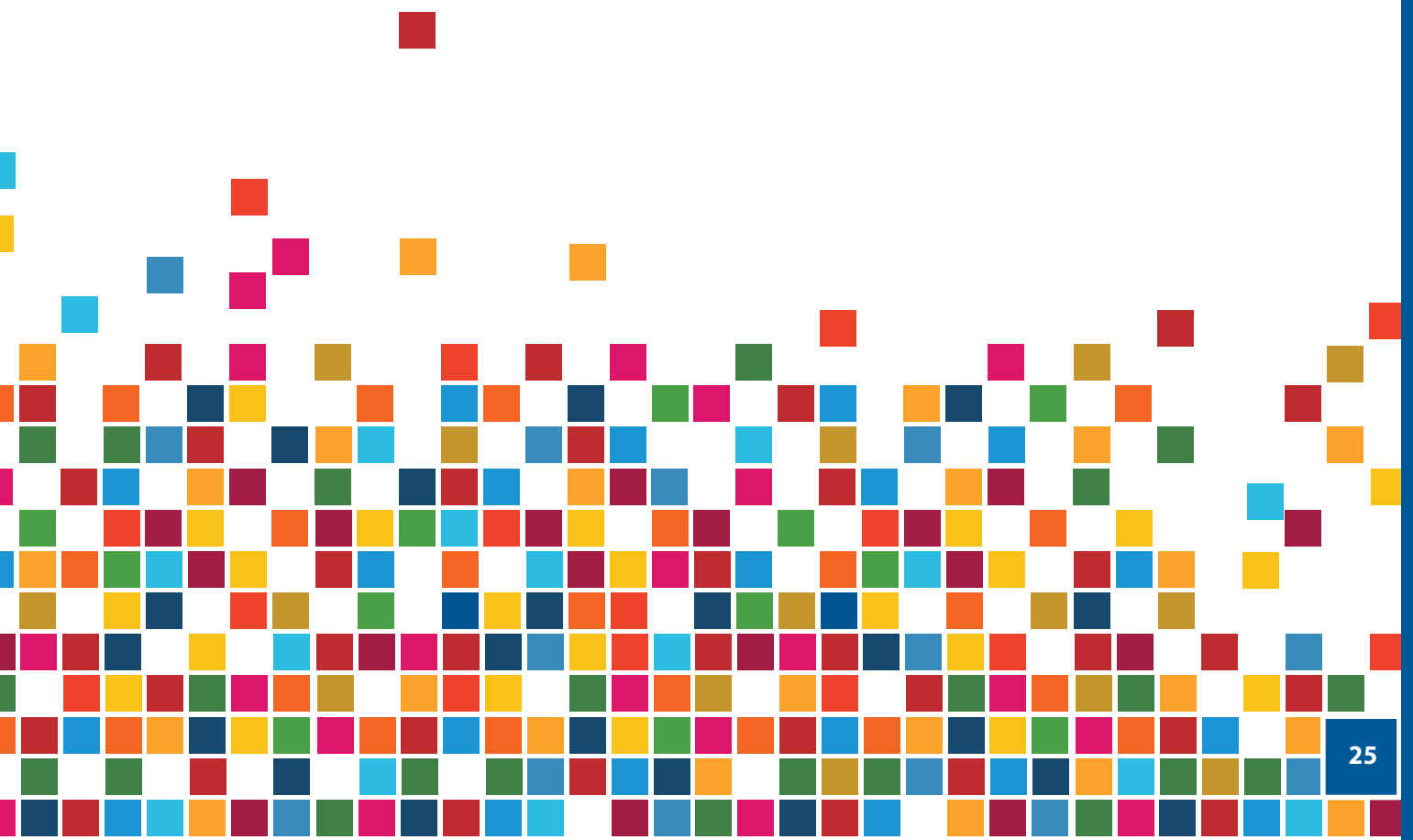# CHAPTER 2

FISCAL POLICY AND DEVELOPMENT FINANCE

D espite substantial fiscal reform, revenue ratios, fiscal balance and debt levels have deteriorated in Africa, reflecting a continuing reliance on commodity revenue and the recent steep decline in commodity prices. Although growth and employment remain primary objectives of fiscal policy, many African economies need to adopt a countercyclical fiscal policy that also focuses on macroeconomic stability. Overall, African countries could increase their government revenue by up to 5 per cent of GDP by shifting from acyclical or procyclical fiscal policy to countercyclical fiscal policy.

African tax authorities should steer clear of the global "race to the bottom" in cutting corporate tax rates to attract foreign companies. The Report's analysis show that cutting taxes will lead to large losses in revenue in return for small and often uncertain gains in investment: to achieve a 1 per cent increase in total investment, governments could lose up to 20 per cent in tax revenue.

Fiscal policy can boost investment in Africa by promoting the African Continental Free Trade Area (AfCFTA). Trade openness has the largest impact on investment in Africa. A 1 per cent rise in Africa's trade can boost private investment by an average of about 0.5 per cent.

INTRODUCTION

Endogenous growth theory provides the analytical framework to explain the impact of fiscal policy on long-run growth (see, for example, Barro and Sala-i-Martin, 1992). Endogenous growth models show that government policy can affect long-term growth, in contrast to neoclassical growth theory, which sees long-term growth as driven by exogenous factors, with government policy having only short-term effects on growth (Solow, 1956; Swan, 1956).

Fiscal policy is a powerful instrument for influencing the economy. By adjusting spending levels and taxes, governments can achieve such desired policy objectives as increased growth and employment, macroeconomic stability, income distribution, allocative efficiency and operational efficiency.

During the 2008 financial crisis, many governments across the globe responded by lowering interest rates and bailing out banks. Disappointed in most cases with the impact of these monetary policies, governments turned to fiscal stimulus policies. The recent indications of global economic recovery owe much to the active use of fiscal stimulus measures to weather the impact of the global crisis (Izvorski, 2018).

Although growth and employment remain primary objectives of fiscal policy, many African economies need to adopt a countercyclical fiscal policy that also focusses on macroeconomic stability.

The role of fiscal policy in mobilizing financial resources to achieve the Sustainable Development Goals (SDGs) is articulated well in the Addis Ababa Action Agenda (AAAA), the outcome document of the 2015 Third International Conference on Financing for Development (UN, 2015). The AAAA recognized the need to mobilize sizeable domestic public resources, supplemented by international assistance, under six action areas aimed at realizing the SDGs. Countries committed to strengthening revenue collection and administration through modernized, progressive tax systems and improved tax policy. Countries also pledged to improve the fairness, transparency, efficiency and effectiveness of tax systems and to scale up international tax cooperation.

This chapter highlights the financing requirements in Africa to achieve the SDGs and discusses fiscal developments since 2000. It assesses the availability of fiscal space and empirically examines the role of fiscal policy in Africa. It also analyses the role of fiscal policy in promoting macroeconomic stability, investments, growth, structural transformation and income inequality.

THE ROLE OF FISCAL POLICY IN THE ECONOMY

The rationale for fiscal policy is threefold: to promote macroeconomic stability, improve resource allocation and address distribution disparities (Musgrave, 1959). Fiscal policy can therefore support growth acceleration and structural transformation in Africa.

MACROECONOMIC STABILITY

Fiscal policy takes three main forms: countercyclical, procyclical and acyclical. Countercyclical fiscal policy means reducing government spending and raising taxes during boom periods and increasing spending and cutting taxes during recessions. Procyclical fiscal policy means the reverse: increasing government spending and reducing taxes during booms and reducing spending and

Acyclical fiscal policy does not take the business cycle into account.

increasing taxes during recessions. Acyclical fiscal policy does not take the business cycle into account.

In the short term applying timely countercyclical fiscal policy in response to macroeconomic shocks reduces the gap between potential output and aggregate demand, thus slowing unemployment and easing inflationary pressures.[1] In the long run prudent fiscal management would ensure the sustainability of the fiscal balance and public debt so that public finance contributes to macroeconomic stability rather than becoming a source of macroeconomic instability. It does this through two main channels. First, it cushions national expenditure shocks through automatic reductions in government savings during downturns and increases during upturns (Blinder and Solow, 1973). Second, it can offset business cycle fluctuations by deliberately changing public spending and tax instruments (Debrun and Kapoor, 2012).

Fiscal policies in Africa and many other developing countries are mostly procyclical (Carmignani, 2010). Fiscal policy was procyclical in almost two-thirds of a sample of 45 African countries during 1980–2000 (Leibfritz and Rottmann, 2013). After 2000, however, this share declined to less than 40 per cent, as spending became countercyclical or acyclical in a majority of countries.

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1 It is debatable theoretically whether fiscal policy is the best policy to reduce the negative consequences of a business cycle.

LONG-TERM GROWTH

Along with the right spending composition, stronger budgetary positions are generally associated with higher economic growth (Gupta et al., 2005). Specific types of public spending can contribute significantly to the level and quality of GDP growth. For example, while public spending may crowd out private investment, efficient public investments can enhance private investment productivity and enhance long-run growth. The government may supply key public goods and services, such as law and order, justice and infrastructure, that the private sector is unable to provide in optimal quantity or quality due to market failures. The production of such key goods and services by the government would boost private sector productivity.

Little is known about the size of the growth effects of different types of public spending in developing countries or the circumstances under which these effects may be influenced.

Another link between fiscal policy and growth is the impact of taxes on factor accumulation. For example, a tax on income from capital would lower the after-tax return on savings and investment, affecting private investment decisions.[2]

EQUITABLE GROWTH

Redistributive fiscal policies can affect such private decisions as whether to seek employment, change labour effort, or save and invest, in turn influencing the level and growth of economic output. For example, the income tax on wages influences private economic agents' allocative decisions on whether to participate in the labour market and how much to work.[3]

Over the short and medium terms, tax and spending policies can affect the distribution of income. For example, education spending can reduce inequality through its impact on future earnings. Other fiscal instruments, such as income taxes and cash transfers, can reduce inequality in disposable incomes, including indirectly through the impact on market incomes due to employment and savings responses (IMF, 2014). Endogenous growth models show that income tax reductions can encourage human capital accumulation and thus growth by increasing the returns to education (Pecorino, 1993). Conditional cash transfers have been used successfully to reduce inequality in Latin America.

Some empirical analyses suggest that greater reliance on income taxes and higher spending on social and social protection reduce inequality and that direct (and progressive) taxes are more redistributive than indirect taxes (Woo et al., 2013).

ECONOMIC DIVERSIFICATION AND STRUCTURAL TRANSFORMATION

Fiscal policy can accelerate structural transformation in Africa by supporting technology, rapid accumulation of human and physical capital, trade openness, financial development, markets, institutions and governments (Mensah et al., 2016). In a study of 21 African countries, governance and fiscal reforms were found to be important determinants of transformation (Mensah et al., 2016). Additionally, empirical evidence shows that macroeconomic policy (including fiscal policy) is critical for the structural transformation of African economies (ECA, 2016).

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2 *The ultimate impact of capital taxes on growth is ambiguous. It depends on how other factors, such as human capital, that cooperate with physical capital in the production process are affected by the tax (Tanzi and Zee, 1997).*
3 *All taxes are non-neutral and distort economic behaviour, resulting in net efficiency loss in the whole economy, even if the government engages in exactly the same activities as the private sector with the tax revenue raised (Tanzi and Zee, 1997).*

THE SCOPE OF FINANCING REQUIREMENTS

ESTIMATING THE DEVELOPMENT FINANCING GAP

Since the launch of Agenda 2030, there have been several estimates of the cost of financing sustainable socioeconomic development in Africa and of the size of the financing gap. Despite notable variations, all estimates indicate huge financing needs and financing gaps in order to achieve the SDGs in Africa (table 2.1).

Schmidt-Traub (2015) estimated Africa's incremental financing needs to achieve the SDGs at $614–$638 billion a year over 2015–2030 and at as much as $1.2 trillion a year in low-income and lower-middle-income African countries, or about 11 per cent of GDP. The United Nations Conference on Trade and Development (UNCTAD, 2014) forecasts an annual financing need for Africa of $210 billion for basic infrastructure, food security, health, education and climate change mitigation and global investment needs of $5–$7 trillion a year

■ Fiscal policy can accelerate structural transformation in Africa by supporting technology, rapid accumulation of human and physical capital, trade openness, financial development, markets, institutions and governments.

to achieve the SDGs. The International Monetary Fund (IMF, 2018a) estimates that the 49 low-income developing countries need, on average, additional annual outlays of $520 billion, or 14 per cent of their GDP, with some countries needing even more, such as Benin (21.3 per cent) and Rwanda (18.7 per cent). However, these estimates vary depending on the growth scenario, from about $300 billion for a high-growth scenario to about $900 billion for a low-growth scenario.

TABLE 2.1.   ESTIMATES OF ANNUAL DEVELOPMENT FINANCING NEEDS IN AFRICA

| STUDY	ESTIMATED DEVELOPMENT FINANCING NEEDS/FINANCING GAP	SCOPE OF THE ESTIMATE
Schmidt-Traub (2015)	$614–$638 billion	Annual incremental financing needed to achieve the Sustainable Development Goals (SDGs)
UNCTAD (2014)	$210 billion	Annual cost of basic infrastructure, food security, health, education and climate change mitigation
IMF (2018a)	14 per cent of GDP (about $520 billion)	Additional annual outlay in all low-income countries (not just in Africa) for meeting the SDGs
AfDB (2018)	$130–170 billion	Annual infrastructure financing gap in Africa
Chinzana, Kedir and Sandjong (2015)	$1.2 trillion	Additional investment needed to meet goal 1
World Bank (2012)	$18 billion	Annual cost of climate change adaptation
World Bank (2015)	$93 billion	Annual financing needed for infrastructure

NARROWING THE DEVELOPMENT FINANCING GAP

Given the huge financing needs and the savings–investment gap in Africa, the key question for policymakers is where to source the financing. Over 2000–2015, when the Millennium Development Goals defined the primary development challenges, official development assistance was a major source of financing. Today, achieving the SDGs (2015–2030) will require many different sources of financing. With dwindling global donor funding and unpredictable economic conditions, domestic resource mobilization—and in particular fiscal policy—has to make a larger contribution to financing development and narrowing the financing gap in Africa. Public finance also has a role to play in catalysing private resources, particularly for long-term investments in infrastructure and public goods.

FISCAL DEVELOPMENTS SINCE 2000

RESOURCE MOBILIZATION

Total government revenue in Africa, including revenue from natural resources, increased from 25.2 per cent of GDP in 2000 to 31.4 per cent in 2008 and then declined in the aftermath of the global financial crisis to 18.6 per cent in 2016 before rising to 21.4 per cent in 2018, the lowest total government revenue to GDP ratio of any region in the world. Its average ratio over 2000–2018 was 24.5 per cent, below that of emerging market and middle-income economies in Latin America (27.8 per cent) and in Europe (34.8 per cent) and that of advanced economies (35.9 per cent). (Figure 2.1)

FIGURE 2.1. **GOVERNMENT REVENUE IN AFRICA COMPARED TO OTHER REGIONS (2000-2018)**
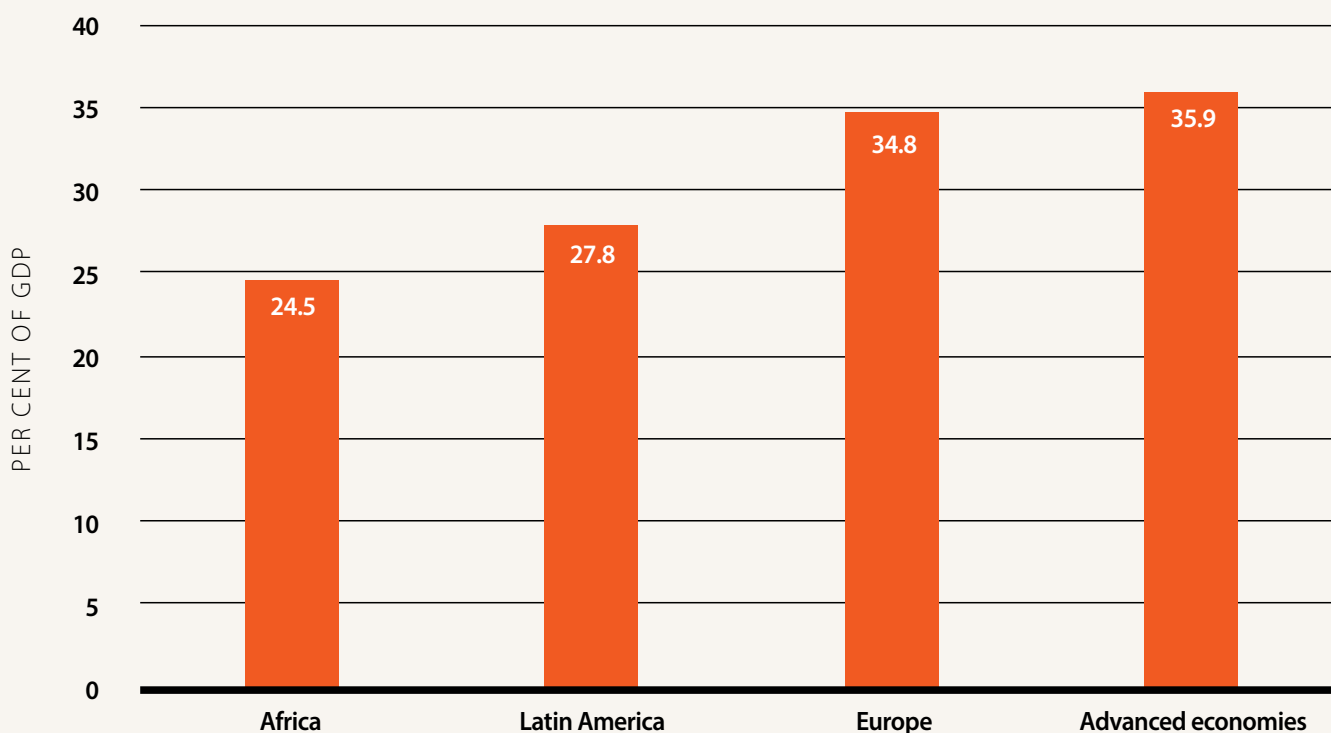
Note: Only emerging market and middle income co untries in Latin America, Europe and Advanced economies are used in the grouping. Data for 2018 are projections by ECA.

Source: Based on data from IMF World Revenue Longitudinal Data (2018).

FIGURE 2.2. TOTAL GOVERNMENT REVENUE IN AFRICA, 2000–2018
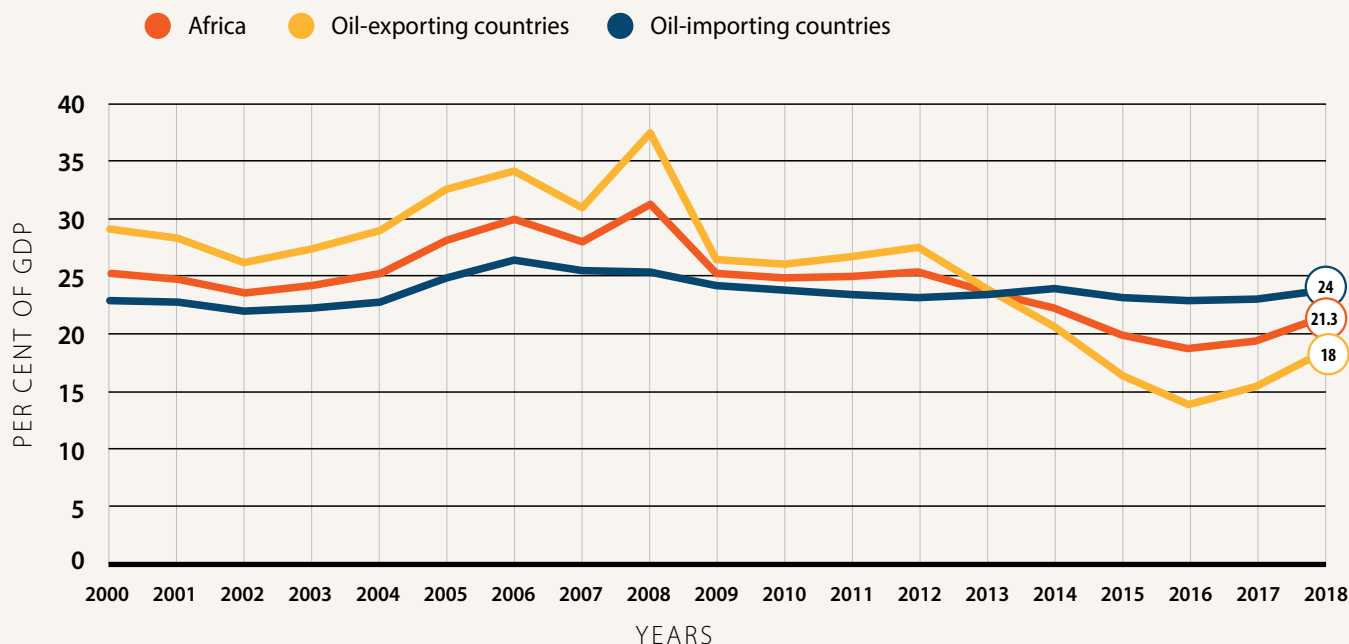
Note: Data for 2018 are projections by ECA.

Source: Based on data from IMF World Revenue Longitudinal Data (2018).

Commodity price shocks had a notably unfavourable effect on total government revenue. Before 2014, the total government revenue to GDP ratio in Africa was higher in oil-exporting countries than in oil-importing countries (figure 2.2). Over 2014–2016 revenue declined in both groups, but they declined more in oil-exporting countries, falling by about 5 per cent of GDP.

Fiscal performance has varied across African countries. Some countries successfully implemented fiscal reforms, resulting in higher fiscal revenue over 2000–2018. Fiscal reforms in Rwanda over 2000–2013 increased revenue by some 18.8 per cent.[4] Similarly, Burkina Faso's fiscal reforms in 2006 resulted in a revenue increase of 3 per cent of GDP in 2007, from 17 per cent of GDP

Fiscal performance has varied across African countries. Some countries successfully implemented fiscal reforms resulting in higher fiscal revenues over 2000-2018.

to 20 per cent. While revenue declined to 16.8 per cent of GDP in 2008, additional reforms in 2008 and 2010 led revenue to rise to 19.7 per cent of GDP in 2010 and to 29.2 per cent in 2017.[5]

4 Reforms included introducing an e-tax information system, reforming customs administration, lowering dependence on import duties, extending working hours at borders and customs offices, reforming tax administration, introducing a new income tax policy and eliminating many exemptions.

5 Reforms included reducing the percentage of late taxpayers and tax evaders from 12 per cent at the beginning of 2007 to less than 7 per cent at the end of the third quarter of 2008, introducing a corporate income tax instead of the existing schedule of taxes on business and industrial income, ending the exemptions for capital gains that are reinvested and for start-up businesses, and creating a manual of tax procedures.

Figure 2.3 shows African countries with highest and lowest government revenue during 2000-2018. Libya and Angola had the highest average government revenue of 58 and 38 per cent of GDP, respectively, whereas Congo Democratic Republic and Guinea had the lowest average of 11 and 13 per cent, respectively. At the upper end, countries such as Congo, Algeria, Angola and Libya registered an average of more than 35 per cent of GDP. By contrast, countries such as Congo Democratic republic, Guinea, Sudan and Madagascar registered an average of less than 15 per cent of GDP.

Over 2000–2018 Congo had the highest average government revenue to GDP ratio (35.6 per cent) in Central Africa, followed by Cameroon (17.5 per cent) and Chad (16.4 per cent). In North Africa, two oil-producing countries, Algeria and Libya, recorded remarkably high ratios of 36.7 per cent and 57.7 per cent, respectively, compared with 13.1 per cent in Sudan, 26.2 per cent in Morocco and 24.0 per cent in Egypt. In West Africa, Senegal, Burkina Faso and Niger had government revenue ratios above 20 per cent, while Benin, Mali, Côte d'Ivoire, Guinea and Nigeria recorded ratios of less than 20 per cent. In Southern Africa government revenue exceeded 30 per cent of GDP in Angola, Botswana and Namibia and was as low as 13.1 per cent in Zimbabwe.

Despite widespread tax reforms, tax revenue mobilization in Africa has been mixed, limited by structural factors such as low per capita income, large informal sectors, large peasant agriculture and very small manufacturing and modern services, implying very low effective tax bases.

On average, non-tax revenue increased to 10.6 per cent of GDP in 2008 but has been decreasing since 2009, due to the 2008 financial crisis. Indeed, non-tax revenue, especially resource wealth, has been less resilient than tax revenue to the impact of the 2008 financial crisis. The commodities price shock of 2014 accentuated the decline in non-tax revenue in oil- and other commodity-exporting countries.

GOVERNMENT SPENDING

Government spending increased between 2000 and 2009, peaking at 29.9 per cent of GDP in 2009, and declined to 25.5 per cent in 2017; it is projected to rise to 28.3 per cent in 2018

FIGURE 2.3.   COUNTRIES WITH HIGHEST AND LOWEST GOVERNMENT REVENUE, 2000-2018.
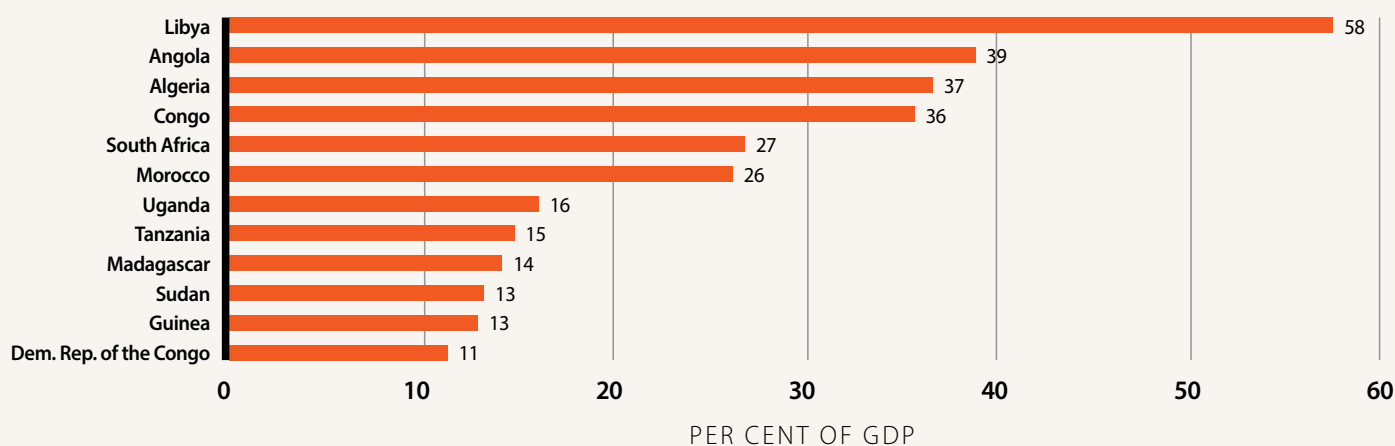
Note: Data for 2018 are projections by ECA.
Source: Based on data from IMF World Revenue Longitudinal Data (2018).

FIGURE 2.4. **GOVERNMENT SPENDING IN AFRICA, BY COUNTRY GROUP, 2000-2018**

Note: Data for 2018 are projections by ECA.

Source: Based on data from IMF World Revenue Longitudinal Data (2018).

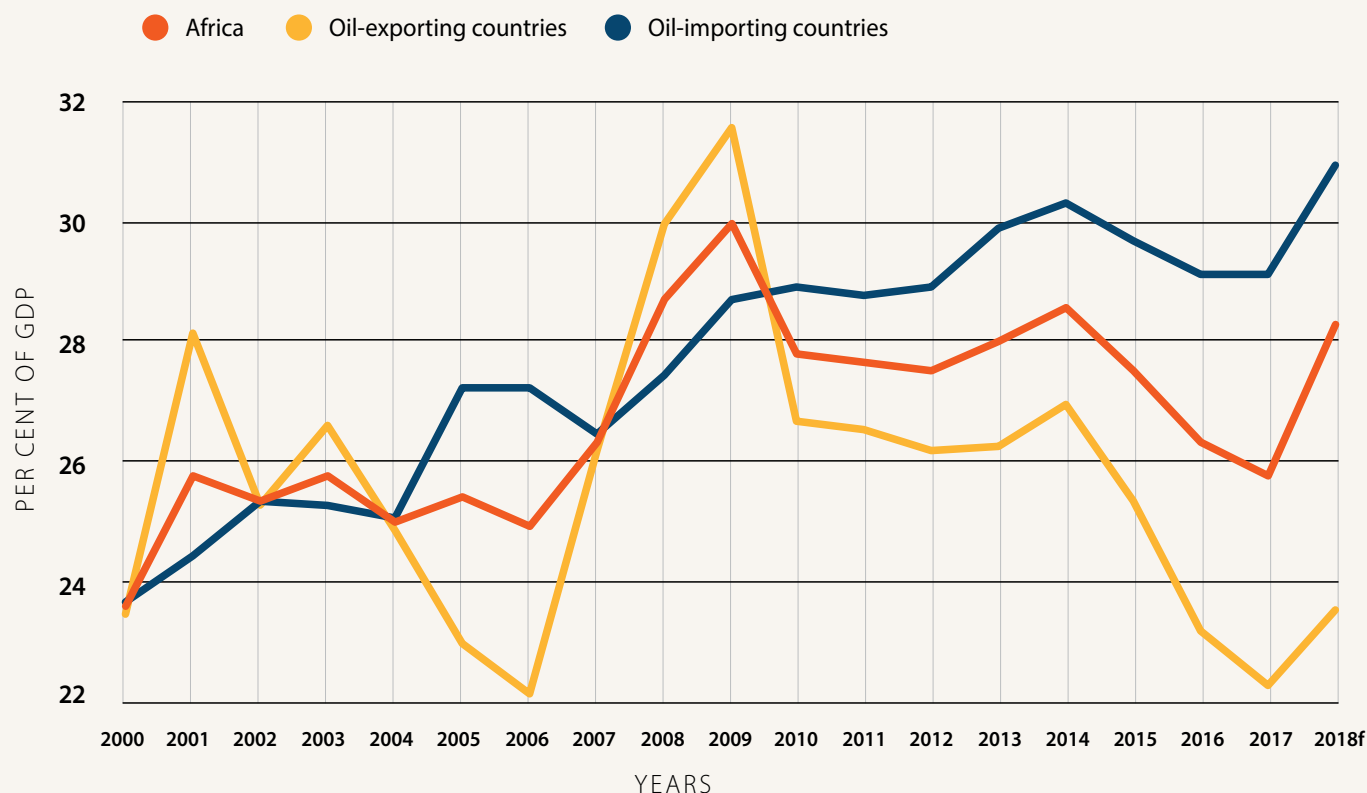(figure 2.4). Trends differed in oil-importing countries and oil-exporting countries. On average, public spending was higher in oil-importing countries over 2000–2017, at 27.5 per cent of GDP, though it declined slightly after 2015. In oil-exporting countries public spending rose over 2006–2009 and then stagnated after 2010 before falling again over 2014–2017 and is projected to recover slightly in 2018 to about 23.5 per cent. A breakdown of government spending during 2000–2018 shows a low and generally stable average share for health and education (see chapter 1).

FISCAL BALANCE

Most African countries recorded fiscal surpluses over 2000–2008. Since then, deficits have prevailed and have mounted. The expanding fiscal deficits have been driven by commodity price shocks, weak domestic resource mobilization and increased government spending. The overall primary deficit in Africa averaged 1.9 per cent of GDP in 2000–2017, with considerable variation across countries. Oil-exporting countries had primary fiscal balance surpluses until 2013 and deficits thereafter. Oil-importing countries had fiscal deficits over the entire period.

Fiscal consolidation has been a key feature in the region in recent years, leading to narrowing deficits over 2015–2017. Nevertheless, the fiscal deficit is projected to widen through 2023, since heavy investments will continue in Africa to build infrastructure and advance social development to achieve the SDGs by 2030.

FISCAL SPACE

A 2016 pilot assessment of fiscal space based on an International Monetary Fund (IMF) framework reveals that very few countries globally have substantial fiscal space. Of the five African countries included in the assessment, none had adequate fiscal space: Algeria and Morocco had the most, while Egypt, Nigeria and South Africa had very limited fiscal space.

An assessment by the United Nations Economic Commission for Africa measures fiscal space as the difference between a country's debt limit[6] and current debt level at two total public debt limit thresholds: 50 per cent of GDP, as recommended by the IMF for developing countries, and 40 per cent, the African average (OECD, 2016; Pienkowski, 2017). Fiscal space in Africa over 2016–2018 was moderately constrained in both scenarios, at –9.6 per cent of GDP for the 50 per cent debt limit and –19.6 per cent for the 40 per cent limit.

In the 50 per cent debt limit scenario, 40 per cent of African countries have positive fiscal space that

can be tapped to finance sustainable development (figure 2.5). That share goes down to 30 per cent in the 40 per cent debt limit scenario. (figure 2.6). Botswana has the highest positive fiscal space, at 34.7 per cent of GDP in the 50 per cent scenario and 24.7 per cent in the 40 per cent scenario, while Sudan is the most constrained African country, at –81.3 per cent of GDP in the 50 per cent scenario and –91.3 per cent in the 40 per cent scenario. The number of countries with fiscal space of 10 per cent of GDP or less is 6 in the 50 per cent scenario and 11 in the 40 per cent scenario. In absolute terms, at the 40 per cent debt threshold, the total fiscal space available among the 16 African countries with limited or substantial fiscal space is about $155 billion, which is tiny compared with the huge financing gap on the continent (see the section above on "The Scope of Financing Requirements").

Governments need to build fiscal space for priority social and economic development by strengthening spending controls and boosting the efficiency of spending. Creating fiscal space also requires assessing all public spending to ensure not only that it is directed towards improving productivity but also that it is aligned to achievement of the SDGs. Additionally, governments will need to leverage public–private partnerships to enhance resource mobilization and investment in priority areas.

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6 *The debt limit approach to estimating fiscal space is based on the assumption that governments borrow only as a last resort, after exhausting all other financing options.*

FIGURE 2.5. **FISCAL SPACE IN AFRICA, AS MEASURED BY A DEBT THRESHOLD OF 50 PER CENT OF GDP, 2016-2018**

Country	Per cent of GDP
Botswana	34.7
Dem. Rep. of the Congo	34.3
Nigeria	26.7
Algeria	23.4
Comoros	20.5
Eswatini	19.9
Djibouti	19.1
Cameroon	16.8
Liberia	16.2
Mali	14.2
Lesotho	13.5
Madagascar	12.4
Tanzania	11.5
Burkina Faso	10.8
Uganda	10.8
Rwanda	10.3
Guinea-Bissau	6.4
Equatorial Guinea	4.6
Niger	4.1
Côte d'Ivoire	2.9
Namibia	2.2
Chad	-1.0
Central African Republic	-2.7
South Africa	-3.1
Benin	-3.1
Kenya	-5.7
Burundi	-6.3
Ethiopia	-6.5
Sierra Leone	-9.0
Malawi	-9.1
Mauritius	-10.1
Senegal	-10.7
Gabon	-11.5
Zambia	-12.8
Seychelles	-13.6
Morocco	-14.4
South Sudan	-17.9
Tunisia	-18.5
Ghana	-21.4
Angola	-22.7
Zimbabwe	-24.5
Togo	-28.6
São Tomé and Príncipe	-34.7
Mauritania	-37.4
Egypt	-47.1
Mozambique	-60.4
Congo	-64.7
Gambia	-67.7
Cabo Verde	-76.7
Eritrea	-81.1
Sudan	-81.3

PER CENT OF GDP

Source: Based on data from IMF World Economic Outlook database (2018).

FIGURE 2.6. FISCAL SPACE IN AFRICA, AS MEASURED BY A DEBT THRESHOLD OF 40 PER CENT OF GDP 2016–2018

Country	Per cent of GDP
Botswana	24.7
Dem. Rep. of the Congo	24.3
Nigeria	16.7
Algeria	13.4
Comoros	10.5
Eswatini	9.9
Djibouti	9.1
Cameroon	6.8
Liberia	6.2
Mali	4.2
Lesotho	3.5
Madagascar	2.4
Tanzania	1.5
Burkina Faso	0.8
Uganda	0.8
Rwanda	0.3
Guinea-Bissau	-3.6
Equatorial Guinea	-5.4
Niger	-5.9
Côte d'Ivoire	-7.1
Namibia	-7.8
Chad	-11.0
Central African Republic	-12.7
South Africa	-13.1
Benin	-13.1
Kenya	-15.7
Burundi	-16.3
Ethiopia	-16.5
Sierra Leone	-19.0
Malawi	-19.1
Mauritius	-20.1
Senegal	-20.7
Gabon	-21.5
Zambia	-22.8
Seychelles	-23.6
Morocco	-24.4
South Sudan	-27.9
Tunisia	-28.5
Ghana	-31.4
Angola	-32.7
Zimbabwe	-34.5
Togo	-38.6
São Tomé and Príncipe	-44.7
Mauritania	-47.4
Egypt	-57.1
Mozambique	-70.4
Congo	-74.7
Gambia	-77.7
Cabo Verde	-86.7
Eritrea	-91.1
Sudan	-91.3

PER CENT OF GDP

Source: Based on data from IMF World Economic Outlook database (2018).

THE IMPACT OF FISCAL POLICY

ON MACROECONOMIC STABILITY

Over 1980–2015 only 4 of 45 African countries with available data had countercyclical fiscal policies (Ethiopia, Morocco, Nigeria, and Zimbabwe), 7 had procyclical policies (Central African Republic, Eswatini, Egypt, Ghana, Madagascar, Rwanda, and Seychelles) and 34 had acyclical policies, which are associated with macroeconomic instability.[7] More countries had acyclical policies after 2000 than before then.

---

7 *The analysis established a correlation between the change in government spending and real GDP growth. Countries are found to follow a countercyclical policy when the coefficient is negative and significant at the 10 per cent level, a procyclical policy when the coefficient is positive and significant at the 10 per cent level and an acyclical policy when the coefficient is insignificant. The correlation coefficient results are presented in table A2.1 in the annex.*

African countries could improve their fiscal performance by shifting to a countercyclical fiscal policy. That shift brings about changes in tax rates and revenue over the business cycle and has the potential of boosting taxes as a share of GDP by 5 percentage points. Over 2010–2015 taxes averaged 14.8 per cent of GDP for countries that followed an acyclical fiscal policy and 15.1 per cent for Africa overall, well below the 19.6 per cent average for countries that followed countercyclical policies (figure 2.7).

Shifting from an acyclical fiscal policy to a countercyclical fiscal policy could also lower the fiscal deficit by about 1 percentage point, reducing the average fiscal balance over 2015–2018 from –6.7 per cent to –5.8 per cent (figure 2.8). Additionally, the greater macroeconomic stability that comes with countercyclical fiscal policy is associated with higher investment and economic growth, which also enhance revenue collection and reduce the fiscal deficit.

FIGURE 2.7. **AVERAGE RATIO OF TAXES TO GDP IN AFRICA BY FISCAL POLICY STANCE, 2010-2015**
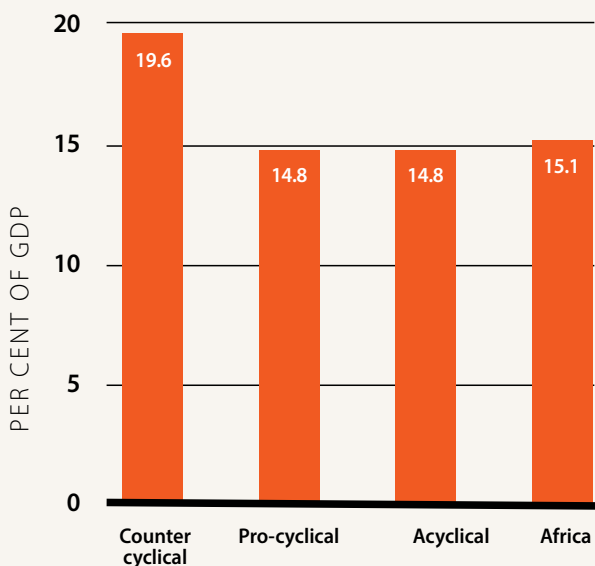
Source: Based on data from UNU-WIDER (2018).

FIGURE 2.8. **AVERAGE FISCAL BALANCE IN AFRICA BY FISCAL POLICY STANCE, 2015-2018**
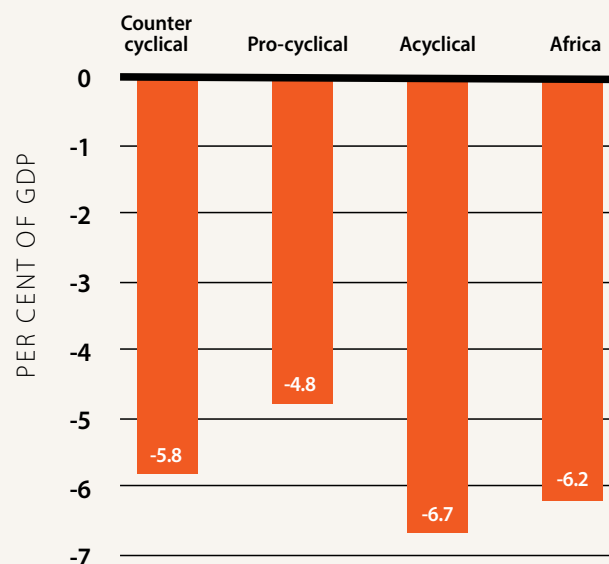
Source: Based on data from AfDB (2018).

ON LONG-TERM GROWTH

The impact of fiscal policy on growth in Africa was assessed by examining the effects of fiscal components on investment and on real GDP per capita in 45 African countries over 1980–2015.[8] Investment responds significantly and negatively to total tax revenue, direct tax revenue, income taxes, profit and capital gains taxes, and taxes on goods and services and positively to taxes on international trade.[9] However, the tax impact on investment is small. For example, tax revenue has to decline by 20 per cent to raise investment by 1 per cent.

This means that taxes are not an obstacle to investment in Africa, because they have only a marginal impact on investor decisions. These results are in line with a UNIDO (2011) survey of 7,000 firms in 19 African countries that found that tax incentives ranked 11 out of 12 factors that influence investment decisions. It also means that African governments should stay out of the global race to attract foreign investment by offering lower taxes.

In contrast, investment responds positively and strongly to government consumption in Africa: a 1 per cent increase in government consumption is associated with a 0.3 per cent increase in total investment.[10] Thus, government consumption policies can redirect investment to particular sectors and products. Investment also responds positively and significantly to government spending on health and education but not to military spending. At a constant level of government spending, increasing spending on either education or health at the expense of consumption can boost investment in Africa.

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8 *The assessment used the autoregressive distributed lag procedure, which has several advantages over the traditional co-integration models: the estimates are consistent even if the variables do not have same level of integration, the estimates are unbiased even in the long run and the estimates are more efficient in cases of small and finite samples (Harris and Sollis, 2003). The regression results are presented in table A2.2 in the annex.*

9 *All variables are taken as a percentage of GDP.*
10 *See regression results in table A2.3 in the annex.*

Taxes are not an obstacle to investment in Africa, because they have only a marginal impact on investor decisions.

Investment in Africa is most strongly and positively correlated with trade openness: a 1 per cent increase in total trade raises total investment by 0.4–0.7 per cent. This implies that full implementation of the AfCFTA would drive investment in the continent. Investment is negatively and significantly associated with increasing debt and lending rates and positively correlated with GDP growth. Thus, the recent increase in domestic and foreign debt in Africa not only increases the risk of default in many African countries but also harms investment. Thirty-eight African countries have exceeded the 40 per cent of GDP public debt threshold, meaning that any additional borrowing in these countries will reduce debt sustainability and discourage investment.

Real GDP per capita is also positively correlated with non-tax revenue and with all types of tax revenue (direct, indirect, goods and services, income, profits and capital gains) except revenue from international trade taxes. A 1 per cent increase in tax revenue is associated with a 0.6 per cent increase in real GDP per capita in the long run, and a 1 per cent increase in non-tax revenue is associated with a 0.7 per cent increase, reflecting the importance of fiscal policy for economic growth. However, a 1 per cent increase in trade taxes is associated with a 0.5 per cent decline in real GDP per capita because of trade's role as an engine of growth.

Finally, private investment has the largest effect on GDP per capita: a 1 per cent increase in private investment is associated with a 1.4 per cent rise in GDP per capita in the long run. Fiscal policy has a

FIGURE 2.9.   INCOME INEQUALITY IN AFRICA, BY SUBREGION, 2000-2014
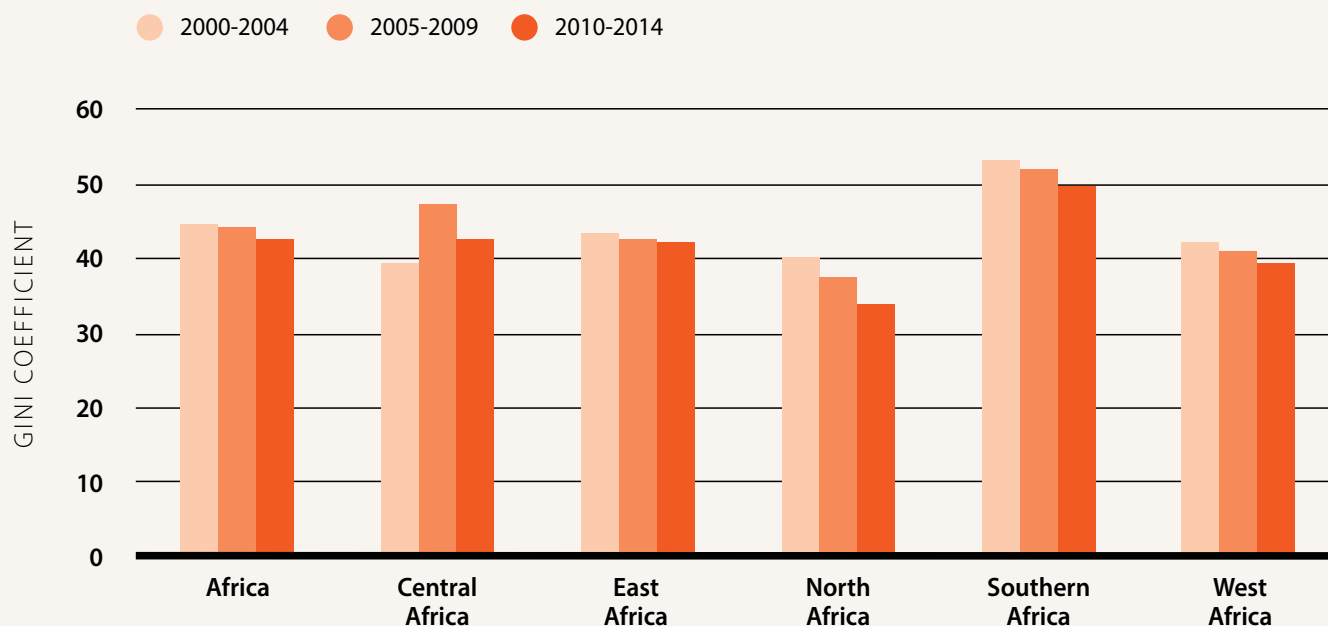
Note: The Gini coefficients in the figure are unweighted averages.
Source: Based on data from World Bank (2017).

crucial role in boosting private investment in Africa by increasing spending on health and education and by developing a fair tax system. Fiscal policy can also boost private investment through public–private partnerships and by spending more on infrastructure and encouraging the adoption of new technology.

ON INCLUSIVE GROWTH

Africa has the second highest income inequality in the world, after Latin America. Despite remarkable economic growth, income inequality (as measured by the Gini coefficient) in Africa fell only slightly, from 44.7 in 2000 to 42.5 in 2014.[11] On average inequality increased in 20 countries and fell in 17. Guinea-Bissau, Central African Republic, Zambia, Malawi and South Africa recorded the largest rise in inequality, while Angola, Niger, Burkina Faso, Mauritania and

Despite remarkable economic growth, income inequality in Africa fell only slightly.

Sierra Leone recorded the largest decline. Changes in income inequality also varied by subregion (figure 2.9). Expansion in social protection programmes in Africa has been limited (UNCTAD, 2012).

Estimates of the impact of fiscal policy on inclusive growth (a measure combining growth and equity) in Africa reveal a positive and significant effect of

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11 The Gini coefficient is used to measure income inequality based on a sample of African countries for which data on inequality were available in the 2017 World Development Indicators database (World Bank, 2017).

government spending on inclusive growth.[12] A 1 per cent increase in government spending leads to a 0.3 percentage point increase in inclusive growth, other things remaining equal. In contrast, tax incidence has a negative impact on inclusive growth. These findings suggest that government spending that effectively targets the poor could reduce inequality as long as government transfers and subsidies do not distort prices in the economy and as long as governments pay attention to the source of finance (taxes and deficit financing) and to the efficiency and effectiveness of spending.

AS A KEY DRIVER OF STRUCTURAL TRANSFORMATION

An assessment of the effects of fiscal policy on Africa's structural transformation over 1960–2014 reveals that household consumption and government consumption have a larger impact than other variables (including investment, trade openness, urbanization, capital–labour ratio and human capital) on manufacturing value added. [13] A 1 per cent increase in government consumption leads to an increase of 0.7 per cent in manufacturing value added, 0.3 per cent in services value added but just 0.003 per cent in agricultural value added.

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12 The analysis used data from the World Development Indicators database for 42 countries for which at least two observations were available for inclusive growth (World Bank, 2017). Previous studies on the effect of fiscal policy on inclusive growth are mixed. On the one hand, studies such as Okun and Summers (2015; originally, Okun, 1975) argue that there is a trade-off between growth and equality. Thus, an increase in fiscal redistribution could hinder growth since redistribution through taxes and subsidies could dampen the incentive to work and invest. On the other hand, studies such as Benabou (2000) and Saint-Paul and Verdier (1993) point out that fiscal policies that increase health and education spending benefit the poor while enhancing growth through improved human capital. Ostry, Berg and Tsangarides (2014) conclude that the combined direct and indirect effects of income redistribution are on average pro-growth.

Using cross-section analysis, a set of regressors that affect growth and inequality is included as independent variables since both macroeconomic policies and non-policy factors could affect the inclusivity of growth. These sets of regressors include initial GDP per capita in purchasing power parity terms, investment, trade openness, inflation, GDP volatility, official development assistance, information and communication technology, financial deepening, indicators of the quality of institutions and governance, natural resources rent and abundance, and dummy variables for economic groupings.

13 A generalized method of moments instrument variable regression model was applied using unbalanced panel data for 54 African countries. Measured structural transformation, by sectoral output, is regressed on variables including lagged real GDP per capita, household consumption, government consumption, investment, trade openness, urbanization, capital–labour ratio and human capital.

> **A 1 per cent increase in government spending leads to a 0.3 percentage point increase in inclusive growth.**

CONCLUSIONS AND POLICY IMPLICATIONS

Fiscal policy has the potential to be a key driver of Africa's growth and development. However, the fiscal reforms and adjustments introduced since 2000 have had a mixed impact on fiscal performance across countries. In many countries increased government revenue supported investment in infrastructure and services, fostering economic growth. However, several African countries are experiencing persistent fiscal deficits and a narrowing fiscal space with high and rising debt, threatening macroeconomic stability. Most countries continue to practice acyclical fiscal policy. To reduce fiscal vulnerability, countries need to change their fiscal practice. Countries could increase their tax revenue by up to 5 per cent of GDP by shifting from acyclical to countercyclical fiscal policy. African governments should therefore put more effort into strengthening macroeconomic management and improving spending efficiencies.

African countries are advised to re-allocate more funds to health and education to achieve higher investment and growth. Fiscal policy can also crowd in private investment in infrastructure and health, encouraging research and development and enhancing the business environment.

African governments should not take part in the ongoing global race to the bottom, as countries rush to cut corporate taxes to enhance competitiveness and attract investment. Empirical analysis shows that such cuts will cause large losses

of tax revenue in African countries in return for small gains in investment. Taxes on income, profits and capital gains would have to be cut by half to increase total investment by just 1 per cent.

This chapter has also shown how fiscal policy can speed structural transformation in Africa, since government consumption has the second largest impact on manufacturing valued added.

The factors affecting fiscal performance are interconnected and thus require a holistic policy framework to address them. The rest of the report examines in detail the performance, challenges and opportunities related to tax revenue mobilization (chapter 3), non-tax sources of revenue (chapter 4), tax policy and tax administration (chapter 5), efforts to tax multinational enterprises (chapter 6) and the role of fiscal policy in macroeconomic management and debt sustainability (chapter 7). Chapter 8 summarizes the key issues and findings of the report and proposes a policy framework for African countries that can enhance the efficiency and effectiveness of fiscal policy in financing development.

African governments should not take part in the ongoing global race to the bottom, as countries rush to cut corporate taxes to enhance competiveness and attract investment.

ANNEX

TABLE A2.1. **CORRELATION COEFFICIENTS OF GROWTH IN GOVERNMENT EXPENDITURE AND REAL GDP GROWTH IN AFRICA, 1980-2015**

COUNTRY	COEFFICIENT
Algeria	−0.44
Angola	−0.10
Benin	0.31
Botswana	−0.03
Burkina Faso	−0.18
Burundi	−0.08
Cabo Verde	0.35
Cameroon	−0.41
Central African Rep.	0.47**
Chad	−0.23
Comoros	−0.19
Côte d'Ivoire	−0.17
Dem. Rep. of the Congo	0.08
Egypt	0.46*
Equatorial Guinea	−0.16
Eswatini	0.29*
Ethiopia	−0.34*
Gabon	0.13
Gambia	0.01
Ghana	0.50***
Guinea	0.21
Guinea Bissau	0.24
Kenya	−0.16

COUNTRY	COEFFICIENT
Lesotho	−0.19
Madagascar	0.46***
Malawi	0.37
Mali	−0.22
Mauritania	0.22
Mauritius	−0.28
Morocco	−0.46**
Mozambique	−0.17
Namibia	0.24
Niger	−0.15
Nigeria	−0.72***
Rwanda	0.47**
Senegal	0.12
Seychelles	0.32*
South Africa	0.25
Sudan	−0.02
Tanzania	−0.01
Togo	−0.26
Tunisia	−0.22
Uganda	−0.31
Zambia	−0.38
Zimbabwe	−0.64**

*Note: * $p<0.1$; ** $p<0.5$; *** $p<0.01$.*

TABLE A2.2.   REVENUE SIDE OF THE INVESTMENT MODEL:
DEPENDENT VARIABLE — GROSS CAPITAL FORMATION (% OF GDP)

VARIABLE	EQUATION 1	EQUATION 2	EQUATION 3	EQUATION 4	EQUATION 5	EQUATION 6	EQUATION 7
Total government revenue *(% of GDP)*	−0.0317	—	—	—	—	—	—
Total tax revenue *(% of GDP)*	—	−0.0478**	—	—	—	—	0.0037
Total non-tax revenue *(% of GDP)*	—	0.0233	—	—	—	—	—
Direct tax revenue *(% of GDP)*	—	—	−0.0150***	—	—	—	—
Indirect tax revenue *(% of GDP)*	—	—	—	0.0137	—	—	—
Tax on international trade *(% of GDP)*	—	—	—	—	0.0856***	—	—
Tax on goods and services *(% of GDP)*	—	—	—	—	−0.0782***	—	—
Tax on income, profits, capital gains *(% of GDP)*	—	—	—	—	—	−0.0230***	—
Indirect tax revenue *(% of total tax revenue)*	—	—	—	—	—	—	0.0359*
Lending interest rate *(%)*	−0.0090***	0.0002	−0.0076***	−0.0057***	−0.0086***	−0.0069**	−0.0061***
Trade openness *(% of GDP)*	0.3767***	0.4334***	0.4343***	0.3832***	0.4005***	0.4288***	0.3595***
GDP growth *(%)*	0.1169***	0.0705***	0.0541***	0.0917***	0.0761***	0.0706***	0.0791***
Constant	0.4145***	0.3878***	0.3570***	0.4076***	0.4219***	0.3553***	0.4900***
Error correction term *(speed of adjustment)*	−0.2869***	−0.3248***	−0.3181***	−0.2744***	−0.2861***	−0.3070***	−0.2896***
Number of observations	1,083	1,081	1,083	1,083	1,078	1,082	1,082
Log likelihood	726.59	752.00	687.18	699.28	741.16	692.62	736.16

Note: The regression results are based on panel autoregressive distributed lag autoregressive distributed lag model estimation for 45 African countries using pooled mean group technique.

* p<0.1; ** p<0.5; *** p<0.01.

TABLE A2.3. EXPENDITURE SIDE OF THE INVESTMENT MODEL:
DEPENDENT VARIABLE—GROSS CAPITAL FORMATION (% OF GDP)

VARIABLE	LONG-RUN COEFFICIENTS						
	EQUATION 1	EQUATION 2	EQUATION 3	EQUATION 4	EQUATION 5	EQUATION 6	EQUATION 7
Total government expenditure *(% of GDP)*	0.0357***	—	—	—	—	0.1323***	0.0307***
Government consumption expenditure *(% of GDP)*	—	0.2913***	—	—	—	—	—
Government health expenditure *(% of GDP)*	—	—	0.0642***	—	—	—	—
Government education expenditure *(% of GDP)*	—	—	—	0.162**	—	—	—
Government military expenditure *(% of GDP)*	—	—	—	—	0.0024	—	—
Government health expenditure *(% of government expenditure)*	—	—	—	—	—	0.1352***	—
Government education expenditure *(% of government expenditure)*	—	—	—	—	—	—	0.0159***
Total debt *(% of GDP)*	−0.0284***	−0.0189***	−0.0548***	−0.0128**	−0.0178***	−0.0951***	−0.0171***
Trade openness *(% of GDP)*	0.6803***	0.6676***	0.6549***	0.6668***	0.7156***	0.4041***	0.6380***
GDP growth *(%)*	0.0520***	0.0694**	0.0627***	0.0639***	0.0588***	0.0693***	0.0653***
Constant	0.0200	−0.1189***	0.1474***	0.028***	0.0168	0.4719***	0.1148***
Error correction term *(speed of adjustment)*	−0.2998***	−0.2501***	−0.3346***	−0.3046***	−0.2812***	−0.2796***	−0.3123***
Number of observations	1,064	1,064	1,064	1,064	1,064	1,079	1,079
Log likelihood	579.27	685.24	579.24	568.73	560.18	696.66	683.75

Note: The regression results are based on panel autoregressive distributed lag model estimation for 45 African countries using pooled mean group technique.

$*p<0.1; **p<0.5; ***p<0.01.$

TABLE A2.4.   REVENUE SIDE OF THE GROWTH MODEL: DEPENDENT VARIABLE—REAL GDP PER CAPITA

VARIABLE	LONG-RUN COEFFICIENTS						
	EQUATION 1	EQUATION 2	EQUATION 3	EQUATION 4	EQUATION 5	EQUATION 6	EQUATION 7
Total government revenue *(% of GDP)*	0.9941***	—	—	—	—	—	—
Total tax revenue *(% of GDP)*	—	0.6377***	—	—	—	—	0.1576
Total non-tax revenue *(% of GDP)*	—	0.7113***	—	—	—	—	—
Direct tax revenue *(% of GDP)*	—	—	0.4750**	—	—	—	—
Indirect tax revenue *(% of GDP)*	—	—	—	0.3159***	—	—	—
Tax on international trade *(% of GDP)*	—	—	—	—	−0.4657***	—	—
Tax on goods and services *(% of GDP)*	—	—	—	—	0.3831***	—	—
Tax on income, profits and capital gains *(% of GDP)*	—	—	—	—	—	0.4059***	—
Indirect tax revenue *(% of total tax revenue)*	—	—	—	—	—	—	−0.5931***
Private investment *(% of GDP)*	1.3428***	1.6169***	1.7642***	1.6537***	1.7099***	1.5391***	1.6471***
Population growth *(%)*	−0.4405**	−0.3447	0.5043	−0.4097*	−0.4312***	−0.4484***	−0.3733**
Constant	0.0727***	0.0884**	0.0481***	0.0678***	0.1355**	0.1066***	0.0423*
Error correction term *(speed of adjustment)*	−0.0094***	−0.0079**	−0.0072***	−0.0102***	−0.0218**	−0.0136***	−0.0077**
Number of observations	1,485	1,478	1,486	1,485	1,481	1,485	1,481
Log likelihood	2,953.01	3,002.42	2,929.39	2,920.30	2,950.87	2,917.31	2,996.03

Note: The regression results are based on panel autoregressive distributed lag model estimation for 45 African countries using pooled mean group technique.

* $p<0.1$; ** $p<0.5$; *** $p<0.01$.

TABLE A2.5. EXPENDITURE SIDE OF THE GROWTH MODEL: DEPENDENT VARIABLE—REAL GDP PER CAPITA

VARIABLE	EQUATION 1	EQUATION 2	EQUATION 3	EQUATION 4	EQUATION 5
Total government expenditure *(% of GDP)*	0.3399***	—	—	—	—
Government consumption expenditure *(% of GDP)*	—	0.0899	—	—	—
Government health expenditure *(% of GDP)*	—	—	0.1931***	—	—
Government education expenditure *(% of GDP)*	—	—	—	0.1355***	—
Government military expenditure *(% of GDP)*	—	—	—	—	-0.1387*
Private investment *(% of GDP)*	1.713***	1.7322***	1.0576***	1.4788***	1.4081***
Population growth *(%)*	−0.5307*	−0.6542***	−0.2044	−0.6551***	−0.5765***
Constant	0.05351***	0.0722***	0.1188***	0.0708***	0.0821***
Error correction term *(speed of adjustment)*	−0.0094***	−0.0255***	−0.0181***	−0.0116***	−0.0136***
Number of observations	1,485	1,485	1,485	1,485	1,485
Log likelihood	2,916.67	2,931.02	2,919.56	2,893.43	2,908.81

Note: The regression results are based on panel autoregressive distributed lag model estimation for 45 African countries using pooled mean group technique.

$* p<0.1; ** p<0.5; *** p<0.01.$

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