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Development and poverty in sub-Saharan Africa

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Abstract: This paper puts sub-Saharan Africa's economic development into perspective. While much did not go as hoped for at independence, much of the region has been on a more promising development trajectory since the mid-1990s, as we illustrate using growth, poverty, and human development indicators. We identify key weaknesses, including lack of structural transformation and the slow rate of employment growth. We refer to global shocks that have played a critical role in sub-Saharan Africa's economic performance alongside domestic events, policies, and governance. Finally, we discuss a set of critical challenges requiring effective management for sub-Saharan Africa to realize its considerable development potential.

Keywords: sub-Saharan Africa, economic development, transformation, inclusion, sustainability
JEL classification: O1, O2, O55, N00

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1 Introduction

When it comes to reporting on Africa, the international news media has, over time, delivered very mixed messages. *The Economist*, in its issue of 11 May 2000, ran an article under the heading ‘Hopeless Africa’ (The Economist 2000). But in its 2 March 2013 issue, *The Economist* characterized Africa as a ‘hopeful continent’ (The Economist 2013), and the trend in media reports has become more upbeat over the last decade. Yet there are still many which characterize sub-Saharan Africa (SSA) as a region of hunger, economic crisis, and political unrest. Over the years, generalizations about the region have included claims that: African economies cannot grow sustainably; no progress has been made in education and health; natural resource-rich countries will be forever cursed by their resource wealth; corruption is rampant and irreversible; conflict is inherent to the region; and, lastly, SSA is aid-dependent to the point that development is a lost cause.

It is certainly accurate to say that SSA has, since the decade of independence in the 1960s, experienced serious challenges—much too much went wrong, and the high hopes of the early post-colonial era were not fulfilled. When *The Economist* cast its eye over SSA in 2000, the economic, social, and political fall-out from the intense crises of the 1980s and the 1990s was still evident—the region had seen genocide in Rwanda, wars in Angola, Liberia, and Sierra Leone, the disintegration of Somalia, and the collapse of Zaire (the Democratic Republic of the Congo). Today, there are ongoing humanitarian crises in the Central African Republic and South Sudan, as well as hunger in many areas of the Horn of Africa. Across SSA, infrastructure and education systems are generally underdeveloped and often of poor quality. The region’s health systems are too limited in coverage, especially in rural areas, and have been subject to severe stress, mostly lately in the Ebola epidemic. And too many Africans remain in deep poverty.

At the same time, when one takes a somewhat longer-term perspective there is reason to be cautiously optimistic about the region’s development progress. While African societies have experienced deep shocks, many of them have remained remarkably resilient. South Africa peacefully moved on from apartheid, helping to bring independence to Namibia and peace to Mozambique. Angola, Liberia, and Sierra Leone are at peace, and Rwanda has turned into a remarkable African growth story. Many economies have been turned around, and returned to growth, by the hard work of policymakers with the support, in many cases, of international development partners. Flows of foreign direct investment (FDI) as well as portfolio flows have been substantial in recent years, and at levels that would never have been imagined in the crisis-era of the 1980s. There has also been some luck: the region has, over much of the time since 2000, successfully ridden the commodities ‘super-cycle’, driven by rapid and sustained growth in emerging economies, notably in China. The optimism of *The Economist* of 2013 reflected this brighter picture.

Still, SSA and the global economy move on, and the world of 2017 is not that of 2013; during the intervening time there has been a sharp correction in the prices of oil, gas, and metals, and the finance ministries of oil-rich nations which budgeted for oil at US\$100 a barrel are highly unlikely to see it return to those levels. This price correction exposed SSA’s continuing over-dependence on the export of unprocessed commodities, and the long-standing challenge of creating more diversified economies remains to be met. While some countries have moved up to lower middle-income status (Ghana and Kenya, for instance) their brighter economic futures are not yet secure. Growth has stalled in the two biggest economies, Nigeria and South Africa. SSA’s existing pattern of growth is not generating sufficiently good jobs for growing populations, the region’s food security remains vulnerable given that agriculture is still largely rain-fed rather than irrigated (and

has low yields), and environmental shocks—such as droughts and floods—will become more frequent if climate change is uncontrolled.

Our paper discusses where SSA has come from, and where it might now be going. It is structured as follows. After this introduction, Section 2 sets the scene by presenting some of the trends in SSA's economic growth, and reviews what has come to be known as the 'poverty-growth-inequality triangle'. This is followed in Section 3 by an overview of a selected set of non-monetary welfare and human development indicators. Section 4 turns to the structural weaknesses in the region's development process to date, while Section 5 addresses the evolving governance, economic policy, and general societal framework of SSA. In Section 6, we identify and discuss a set of core challenges for the future, while Section 7 concludes on an optimistic yet cautious note.

2 Aggregate economic growth, monetary poverty, and inequality

The 1980s saw severe crisis across much of SSA, as terms-of-trade shocks hit economies and called into question the model of development that had been followed since independence. The 1979 oil-price crisis substantially increased the import bills of oil-importing countries, many of which also saw a fall in the prices of their commodity exports (mainly unprocessed agricultural products) as the global economy slowed in response to the oil-price shock. The resulting foreign exchange shortages undermined the nascent industrial sector, which was highly dependent upon imports of intermediate inputs and capital equipment. The industrial strategy was largely import-substituting in nature and reliant on mostly small domestic markets (with the hope, subsequently dashed, that regional economic co-operation would eventually enlarge the market). SSA's manufacturing did not attain the large economies of scale and learning-by-doing that East Asia achieved, via its export success, in the 1970s and 1980s. In hindsight, warning signals from the first global oil crisis of 1973 had been overlooked, partly because SSA performed as well as anyone from 1976 to 1979.

The global economy in the 1980s saw a move to strict monetary tightening, resulting in a sharp spike in interest rates which caught indebted countries, including those in Africa, unprepared.¹ Having borrowed in international financial markets at low (and even negative) real rates of interest, countries were unable to service their external debts, a problem compounded by the collapse in export earnings. Oil economies such as Nigeria borrowed heavily on the back of the rise in their oil earnings, only to see a slump in those earnings as the price fell back in the 1980s (following the rise in global interest rates and the resulting global economic slowdown).

Caught in a serious debt trap, much of SSA entered more than a decade of stabilization and structural adjustment, assisted by concessional (and conditional) lending from the International Monetary Fund (IMF) and the World Bank as well as loans and grants from bilateral aid donors. The 1980s have been characterized as a disastrous experience and 'a lost decade' in terms of development for Africa, and the clash between economic policy and development paradigms anchored in, respectively, orthodox and heterodox approaches, was fierce. While we do not pursue this topic in detail here,² it is pertinent to recall that it was only after the Heavily Indebted Poor

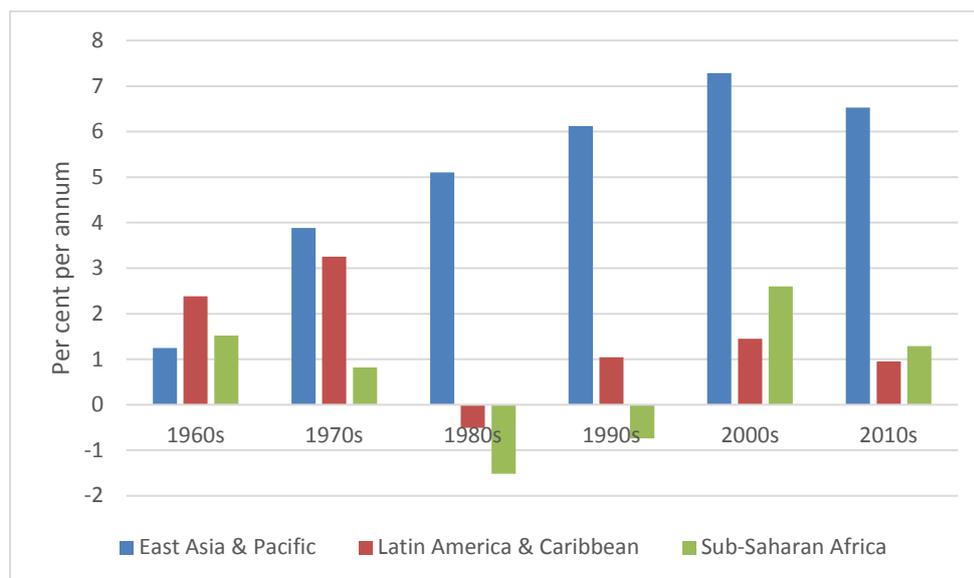
¹ The Fed funds rate went from 6.5 per cent in October 1977 to 20 per cent in December 1980, as the chairman of the US Federal Reserve, Paul Volcker, successfully brought down inflation, but at the cost of inducing a severe global recession. At the time 'Africa was not even on the radar screen', Volcker stated; see <https://www.counterpunch.org/2008/11/12/against-volcker/> (accessed 13 September 2017).

² See Tarp (1993) for a detailed exposition, as well as Addison (2015).

Countries (HIPC) debt relief programme got underway from 1996 onwards that SSA's development prospects started changing more decisively for the better.³

In sum, the shocks of the 1980s exposed the vulnerable nature of African economies, with their low per capita incomes generally small economic size, and a degree of openness to trade—with a large dependence on the export of primary commodities. The disastrous performance in terms of economic growth of SSA in the 1980s, which lasted well into the 1990s, is evident from Figure 1. The figure also illustrates what happened both before and after the 'lost decade' in SSA in comparison to other developing regions.

Figure 1: Real GDP per capita growth rate by region



Note: The region aggregates exclude high-income countries defined as having higher than 12,235 GNI/capita (current US\$).

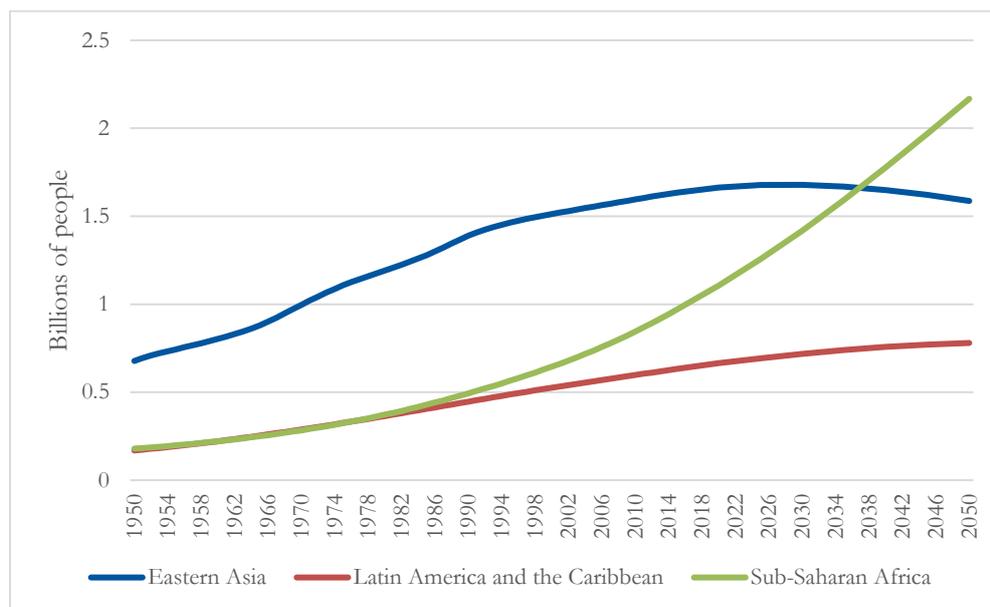
Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

Three observations stand out. First, SSA certainly did experience a 'growth turnaround' when one compares the 1980s and the 2000s. This is important for many reasons, and highlights that the 1997 'financial crisis' only had relatively limited impact on SSA.

Second, while the 'growth turnaround' is clear, actual per capita growth rates in SSA have remained far lower than those experienced in East Asia and the Pacific. With a very high population growth rate, SSA needs its economies to grow at a significantly greater rate than its population for per capita income to show substantial improvement. SSA's population growth is presently (2016) around 2.7 per cent (World Bank 2017), far above that of the two other developing regions, and it will cause the total number of Africans to increase very significantly in the coming decades due to the underlying population dynamics (see Figure 2).

³ On debt relief see Addison (2006), and Addison et al. (2004). Of the 39 countries potentially eligible for debt relief under the HIPC and enhanced-HIPC initiatives, 33 were in SSA. For data on the HIPCs see: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTDEBTDEPT/0,,contentMDK:20260049~menuPK:64166739~pagePK:64166689~piPK:64166646~theSitePK:469043,00.html> (accessed 13 September 2017).

Figure 2: Population projections by region



Note: Data from 2016 are forecasts.

Source: Authors' illustration of data from United Nations Population Division (2017).

Third, comparing the 2000s and the 2010s, the aggregate growth performance has dropped in SSA as elsewhere. This reflects in part the impact of the global financial crisis of 2009 and the falling commodity prices, and it suggests that SSA was not as immune to the 2009 global shock as in 1997.

A fourth observation to consider when reviewing the African growth performance is that the aggregate growth rate for SSA hides very considerable variation both over time and among countries, as shown in Table 1. Ignoring countries for which data are not available for some of the sub-periods/decades under study, only four (Botswana, Burkina Faso, Lesotho, and Seychelles) experienced positive average growth rates in all six decades. Turning to the 2000s and 2010s, there are only six countries (Ethiopia, Mauritius, Mozambique, Rwanda, Sudan, and Tanzania) with per capita annual growth above 3 per cent in both decades, and growth was less than an average of 2 per cent per year in either one or both periods in no less than 35 of the 48 countries included. This includes 11 cases where growth was outright negative in either one or both periods, with Zimbabwe and South Sudan as examples of outright economic collapse. Importantly, regional powerhouses, such as South Africa, and to some extent Nigeria, are among the poorer growth performers since 2000 (with Kenya also experiencing periods of low growth during this time).⁴

⁴ See also Arndt et al. (2016).

Table 1: Real GDP per capita growth in SSA (period average growth rate in per cent)

	1960s	1970s	1980s	1990s	2000s	2010s
Angola	#N/A	#N/A	#N/A	-2.23	5.42	1.34
Benin	1.13	-0.19	-0.31	0.97	0.74	1.89
Botswana	4.28	10.07	6.94	2.46	1.75	2.55
Burkina Faso	1.52	1.48	1.24	2.55	2.30	2.31
Burundi	0.39	0.69	1.23	-3.50	-0.10	-0.71
Cabo Verde	#N/A	#N/A	3.52	7.43	4.54	0.62
Cameroon	-0.36	4.12	1.20	-1.55	0.62	2.59
Central African Republic	-0.08	-0.18	-1.08	-0.77	0.63	-8.14
Chad	-0.91	-3.46	3.10	-0.66	5.83	1.22
Comoros	#N/A	#N/A	-0.28	-1.55	-0.48	-0.02
Congo, Dem. Rep.	0.57	-2.26	-0.91	-7.65	1.04	4.32
Congo, Rep.	0.99	1.89	2.08	-1.69	1.31	1.38
Côte d'Ivoire	3.78	2.21	-2.66	-0.34	-0.85	3.89
Equatorial Guinea	#N/A	#N/A	-2.11	25.46	14.83	-2.77
Eritrea	#N/A	#N/A	#N/A	#N/A	-1.94	#N/A
Ethiopia	#N/A	#N/A	#N/A	-0.82	4.71	7.30
Gabon	4.43	5.37	-1.11	-0.49	-1.30	2.92
Gambia, The	#N/A	1.49	-0.57	0.07	0.26	-0.95
Ghana	-0.32	-1.73	-0.95	1.57	2.58	5.10
Guinea	#N/A	#N/A	#N/A	-0.01	0.42	-0.61
Guinea-Bissau	#N/A	1.12	2.34	-1.87	0.11	0.61
Kenya	1.94	3.93	0.26	-0.77	1.09	2.71

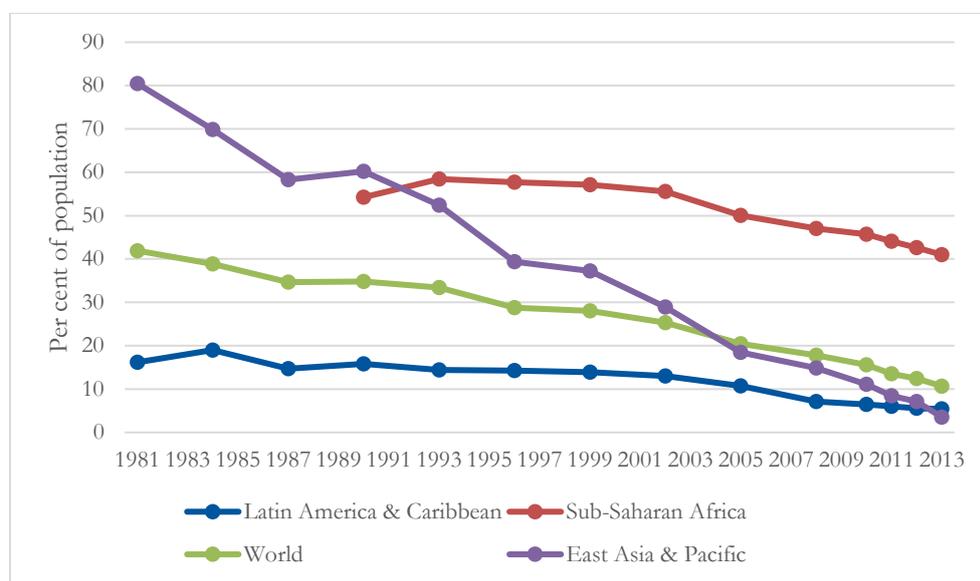
Lesotho	3.06	5.44	1.44	2.38	2.53	2.87
Liberia	2.05	-0.31	-5.58	-2.38	-2.03	2.37
Madagascar	0.17	-1.65	-2.24	-1.53	-0.14	-0.20
Malawi	2.41	3.38	-2.22	1.79	1.52	0.94
Mali	#N/A	2.83	1.16	1.65	2.29	0.47
Mauritania	4.18	-1.29	-0.68	0.11	1.73	#N/A
Mauritius	#N/A	#N/A	4.40	3.34	3.29	3.43
Mozambique	#N/A	#N/A	-0.94	4.12	4.72	4.14
Namibia	#N/A	#N/A	-1.96	0.54	2.80	3.13
Niger	-0.08	-1.06	-2.47	-1.21	0.33	1.80
Nigeria	0.16	1.80	-4.38	-0.93	5.58	1.94
Rwanda	-0.14	1.60	-1.16	-0.85	4.75	4.49
Sao Tome and Principe	#N/A	#N/A	#N/A	#N/A	2.52	2.27
Senegal	-1.45	-0.49	-0.07	0.25	1.17	0.90
Seychelles	1.55	6.27	1.47	2.58	0.69	4.62
Sierra Leone	2.09	-0.02	-1.72	-3.22	2.56	1.61
Somalia	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
South Africa	3.03	0.36	-0.59	-0.45	2.00	0.60
South Sudan	#N/A	#N/A	#N/A	#N/A	#N/A	-14.43
Sudan	-1.46	0.46	0.31	2.11	3.73	4.92
Swaziland	#N/A	2.17	3.78	0.79	2.39	1.35
Tanzania	#N/A	#N/A	#N/A	-0.11	3.24	3.52
Togo	5.34	0.58	-1.94	-0.02	-0.69	2.21

Uganda	#N/A	#N/A	#N/A	3.25	3.63	2.01
Zambia	0.34	-2.06	-1.80	-1.10	3.84	2.00
Zimbabwe	1.11	-1.25	0.29	0.39	-6.63	3.85

Source: Data from World Development Indicators, World Bank (2017).

A key question facing policymakers in Africa and beyond is whether the growth experienced in SSA has been translated into reduction in consumption-based monetary poverty. Figure 3 suggests this has been the case when focusing on the headcount ratio based on the widely used US\$1.90 a day poverty line. By this measure poverty fell from 54 per cent of the population in 1990 to just below 41 per cent in 2013. It is noted, however, that the rate of progress in monetary poverty reduction has been slower than in other regions, though the absolute improvement has been higher than that of Latin America.

Figure 3: Monetary poverty headcount ratio at US\$1.90/day (2011 purchasing-power parity)



Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

Furthermore, while the monetary poverty headcount ratio decreased, population growth has, as already noted, been very fast. Table 2 shows that the population of SSA almost doubled from just above half a billion in 1990 to almost 1 billion people in 2013. The implication is that the absolute number of people living in monetary poverty in SSA as measured by the \$1.90 a day poverty line increased from 278 million in 1990 to 390 million people in 2013.

Table 2: Population and poverty headcount (in millions of people), and poverty headcount ratio for Sub-Saharan Africa

	1990	1993	1996	1999	2002	2005	2008	2010	2011	2012	2013
Population	511.4	555.8	602.7	652.4	705.9	764.9	830.1	877.0	901.5	926.5	952.3
Poverty headcount ratio at \$1.90 a day (2011 PPP)	54.3	58.4	57.7	57.1	55.6	50.0	47.0	45.7	44.1	42.6	41.0
Poverty headcount at \$1.90 a day (2011 PPP)	277.6	324.8	347.7	372.6	392.4	382.7	390.4	400.6	397.2	394.7	390.3
Poverty headcount ratio at \$3.10 a day (2011 PPP)	73.8	76.6	76.5	76.8	76.5	73.1	70.3	69.1	67.9	66.5	65.0
Poverty headcount at \$3.10 a day (2011 PPP)	377.2	425.8	461.2	501.3	540.2	558.8	583.4	606.3	611.7	616.2	618.9

Note: PPP = purchasing-power parity.

Source: Data from World Development Indicators, World Bank (2017).

There is reason to highlight, as well, that choosing the more stringent—yet still very modest—poverty line of \$3.10 a day implies that the headcount ratio only fell from 74 per cent in 1990 to 65 per cent in 2013, while the total number of people in absolute monetary poverty by this measure increased from 377 million to 619 million. In other words, two out of every three Africans live on less than \$3 per day, making it clear why poverty reduction must remain an important overarching aim for development policy and action in SSA.

Growth, monetary poverty, and income inequality tend to be related in what is sometimes referred to as the ‘poverty-growth-inequality triangle’ (see Bourguignon 2004; Arndt et al. 2016: 38).⁵ To illustrate, with no growth, the only way in which poverty can be reduced in a closed economy is through lower inequality. Experience has shown that this is impossible to achieve in practice. Similarly, if inequality is high the poor will tend to benefit less from a given growth performance. Figure 4 shows that inequality is very high in SSA in international comparative perspective, though substantial heterogeneity exists among countries. For example, inequality in South and southern Africa is particularly high, with an average Gini index in South Africa of more than 65 (see for example Hundenborn et al., 2016, or UNU-WIDER 2017b) weighing heavily in the aggregate picture.

⁵The triangle may not hold in specific circumstances, as discussed by Arndt et al. (2016). If, for example, additional domestic absorption is possible due to capital inflows (e.g. foreign aid) then the triangle is relaxed somewhat. The contrary is the case when negative terms-of-trade shocks put a squeeze on absorption.

Figure 4: Income inequality across geographical regions



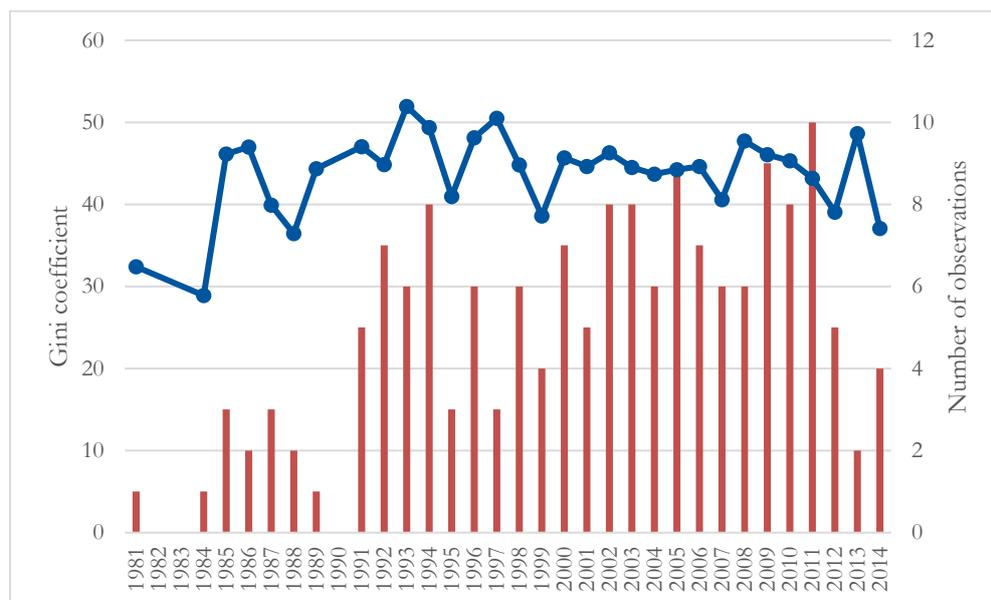
Note: Figures are based on country-year observations of the net income Gini. If the net income Gini was not available, the consumption Gini was used. If there were multiple country-year observations for the net income or consumption Gini, data with household equivalence scale and largest possible age and area coverage were chosen.

Source: Authors' illustration of data from World Income Inequality Database (WIID) (UNU-WIDER 2017b) and own calculations.

Figure 5 takes a more granular look at the movement in inequality in SSA since the early 1980s. After the sizeable rise in inequality in the early 1980s, which was a 'dismal decade' in this dimension also, there is no obvious trend to note. It is highlighted, though, that the level of inequality in SSA (and elsewhere) may well be underestimated due to what is referred to as the top-tail adjustment issue, i.e. the fact that top-income earners are not captured as well as other income groups in the underlying survey data. The extent to which this is a matter of concern is an active area of ongoing research on income inequality by UNU-WIDER.⁶

⁶ See <https://www.wider.unu.edu/project/inequality-giants> (accessed 13 September 2017).

Figure 5: Gini coefficient in SSA



Note: Gini, SSA countries' simple averages (line), number of countries observed (bars).

Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

A key line of argument in development economics is that economic growth is not an end in itself. At the same time, economic growth is critical to delivering sustained poverty reduction and improved welfare in SSA. Higher inequality means less inclusiveness and that the poor benefit less from growth; similar observations can be made for discrimination by gender, ethnicity, and religion. Inequality and discrimination are key concerns in the Sustainable Development Agenda approved by the world community at the United Nations in September 2015, and the underlying rationale goes well beyond that of the moral imperative of aiming for more equal societies per se. This perspective has been expressed as follows:

The observed level of inequality of opportunities in access to basic services—such as health and education—are ethically indefensible, undermine social cohesion, and fuel a spiral of policy capture by elites which further exacerbates inequality. High inequality tends to rob the poor of voice and so results in a weakening of democracy. The empowerment of women and of historically discriminated groups is a priority in its own right, but it also provides a sound basis for economic efficiency. (Stockholm Statement 2016: section 3)

Put differently, income inequality has been found to have a clear negative effect on economic growth in low- and middle-income economies (Castelló-Climent 2010), and gender inequality undermines the health, wealth, and livelihoods of girls and women.⁷ Gender inequality also reduces society's overall wealth by not using to the fullest possible extent the talents of *all* its members; it therefore harms the prosperity of men as well.

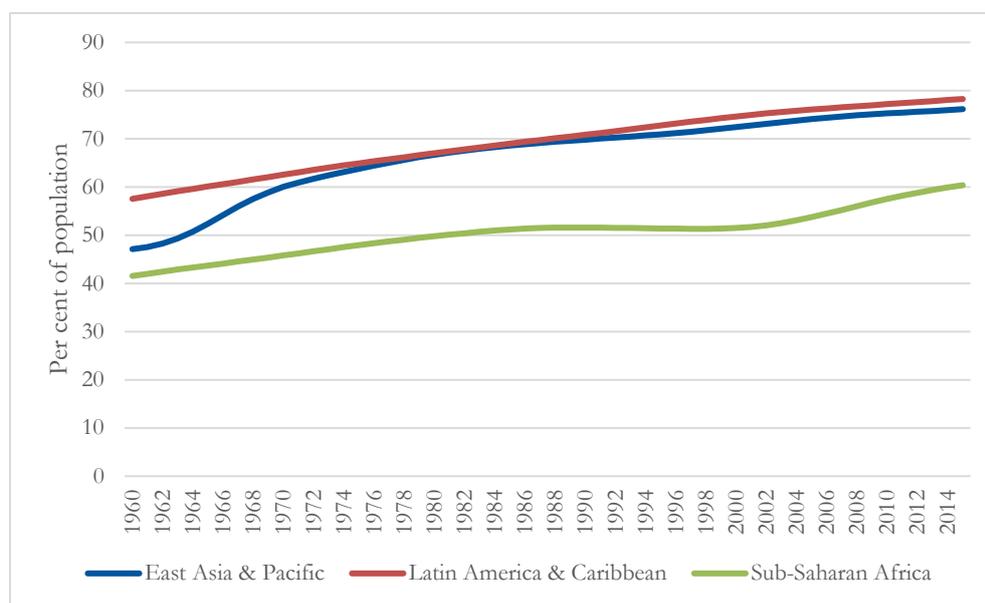
⁷ See Alesina and Rodrik (1994), Atkinson (2015), and Persson and Tabellini (1994).

3 Non-monetary welfare indicators and human development

One drawback of the monetary-consumption-based measures of poverty and welfare is that they have proven to be relatively volatile. Arndt et al. (2016) and Arndt and Tarp (2017a) elaborate, pointing out that non-monetary measures are more stable. In addition, they provide essential insights into the multi-dimensional nature of poverty and the welfare conditions of the poor. We therefore now turn our focus to a set of non-monetary measures, including indicators such as life expectancy at birth, child mortality, health, and school enrolment, after which we discuss insights from existing multi-dimensional welfare indices. Overall, the core message is that while SSA is lagging in development in almost all non-monetary welfare indicators when compared with other continents, there are clear and positive aggregate trends over the past decades (while heterogeneity continues to be characteristic as one moves from one country to the next).

Figure 6 provides a telling insight into how life expectancy at birth has evolved in SSA from 1960 onwards. Steady progress from 1960 until 1980 was followed by a period of stagnation until the late 1990s, when renewed progress set in. From 1960 to 1980 life expectancy increased by 8.3 years from 41.5 to 49.8 years, while it only increased by 1.6 years to 51.4 years between 1980 and 1999. Due to renewed progress after 2000, 9 years were added by 2015, by which point life expectancy in SSA had reached a level of above 60 years. While this remains well below that of the other two developing regions considered here, the gap has nevertheless remained at around 15–18 years, except for the years 1960–75, during which East Asia improved considerably as compared with SSA.

Figure 6: Life expectancy at birth



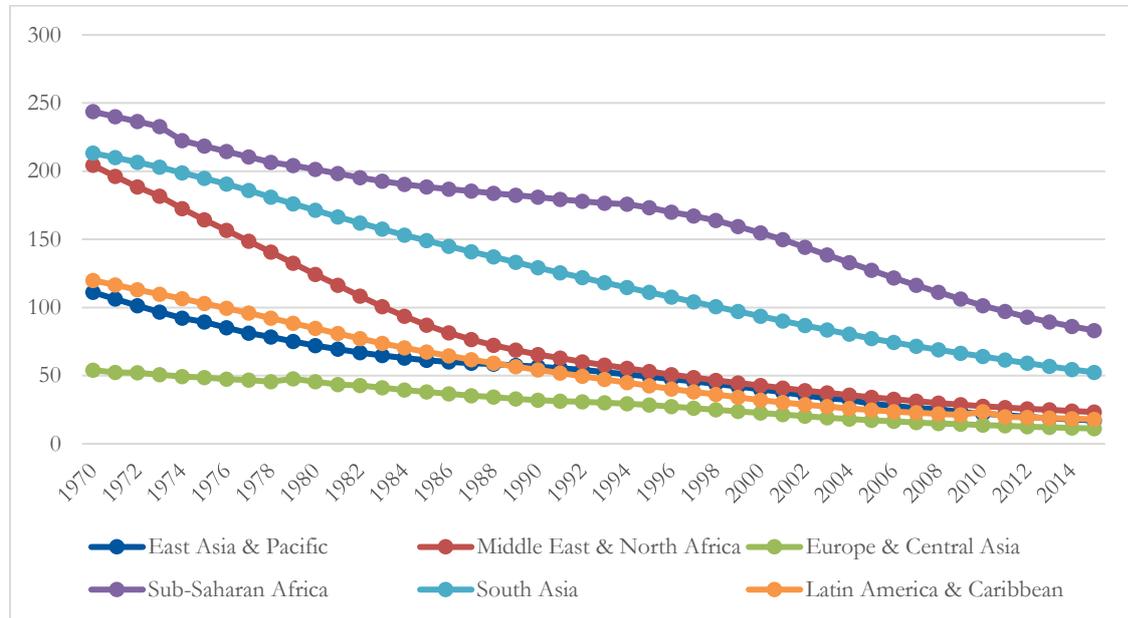
Note: Region aggregates excluding high-income countries defined as having higher than 12,235 GNI/capita (current US\$).

Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

There is a striking similarity between the trends in the evolution of life expectancy in Figure 6 and the growth performance discussed in relation to Figure 1. This underlines that while poverty and welfare are indeed multi-dimensional concepts, economic performance is of critical importance in low-income environments such as those of SSA. This is also evident from Figure 7, which shows that under-five mortality per 1000 live births fell from more than 240 in 1970 to 83 in 2015. Figure

7 reflects again a relative stagnation in progress in the two decades from 1980 to 2000, and there is reason to reiterate that while the overall trend in the progress achieved in this indicator is clear, the level of under-five child mortality remains well above that of other regions, with the partial exception of South Asia.

Figure 7: Under-five mortality (per 1000 live births) by major world region, 1970–2015

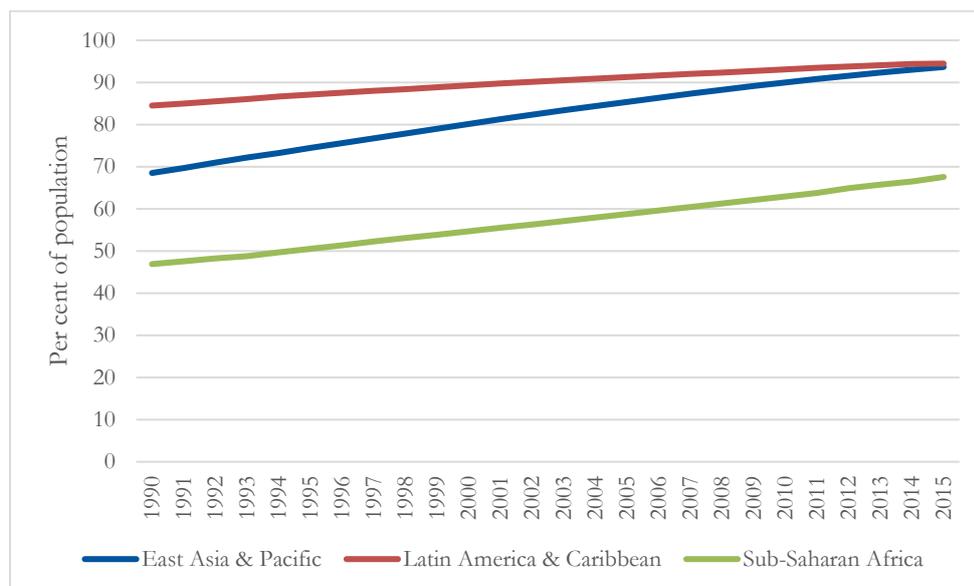


Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

Non-monetary measures of health contain critical evidence as well. Good health is an important indicator of welfare in its own right, and it affects in turn the process of growth and development through the following four channels: labour productivity, education, investment, and demographics. First, healthier people have more energy and are more productive. Second, healthy children are able to attend school and can absorb more knowledge. Moreover, their parents have higher incentives to invest in their education as the returns on schooling only materialize over the long term. Third, healthy populations may also have higher incentives to save for future consumption, increasing capital for investment, combined with a greater ability to attract more FDI. Fourth, a healthier population triggers a demographic transition that leads to higher rates of growth for labour as well as physical capital and human capital (see Bloom and Fink 2013).

The progress in health has been accompanied by improvements in other types of living conditions. For example, the share of population with access to electricity increased from 20.8 per cent to 35.6 per cent from 1993 to 2013, and we have also seen a steady increase of 20.7 per cent from 1990 to 2015 in the share of the population with access to drinking water from an improved source, as illustrated in Figure 8. Such improvements have clearly added positively to the living standards and capabilities of the poor. Still, not all health-related indicators have improved this steadily. Access to sanitation is a case with much more room for improvement. This indicator only increased from 24.2 per cent to 29.8 per cent of the population in the 20 years from 1995 to 2015. Also within countries there are differences in services provided for different people. For example, access to and quality of basic services are lower in rural compared with urban areas (Brinkerhoff et al. 2017).

Figure 8: Access to clean drinking water from improved water source

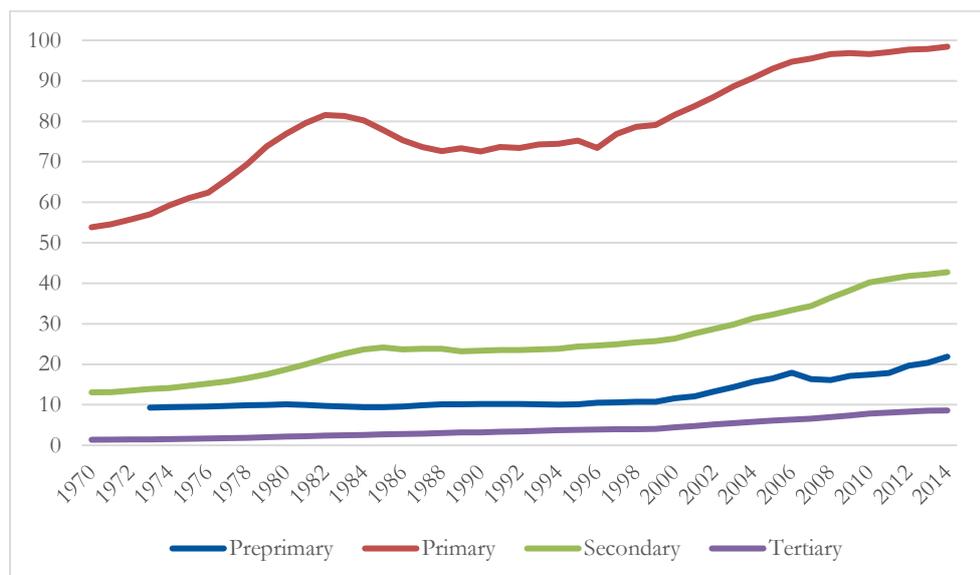


Note: Region aggregates excluding high-income countries defined as having higher than 12,235 GNI/capita (current US\$).

Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

Progress in measures related to health have gone hand in hand with measures related to education, reflecting in large measure the priority given to social sectors in the 2015 Millennium Development Goals (MDGs). The MDGs guided global development efforts from 2000 to 2015, and influenced the sectoral allocation of both foreign aid and domestic resources (Addison, Singhal, and Tarp 2015). The priority associated with education reflected its role as an aim in itself and the understanding that education helps prepare the youth for more productive jobs, increases equal opportunities, and adds to their knowledge in areas that affect both health and welfare. In short, education adds to human capital, fuelling in turn growth and development. The sizeable progress made in school enrolment in SSA from the mid-1990s to date is evident in Figure 9, including almost 100 per cent enrolment in primary school. However, while increasing numbers of African children are attending school, the quality of their education leaves much to be desired, and policymakers are now focusing more on improving the quality of the learning environment.

Figure 9: School enrolment in sub-Saharan Africa



Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

While the share of girls attending school remains lower than that of boys, enrolment rates of both boys and girls have increased significantly over the past 20 years. While the primary-school-level enrolment rate increased from 58 per cent to 80 per cent for boys between 1994 and 2014, the corresponding increase for girls during this period was from 50 per cent to 76 per cent (World Bank 2017). Reflecting the quality issues referred to above, progress has been less impressive in terms of youth literacy. For young men (aged 15 to 24) it only increased from 75 per cent to 77 per cent, and for young women from 62 per cent to 66 per cent, during the 2000s (World Bank 2017). This reflects a whole gamut of factors ranging from issues such as low teacher salaries, poor educational infrastructure, and the challenges for poorer households in supporting the educational advancement of their children. To illustrate, in Kenya in 2013, teachers were absent from classrooms for 42.2 per cent of the time on average and less than 40 per cent of Grade 4 teachers had minimum knowledge in the basic reading, writing, and arithmetic skills needed to be effective in teaching (see Martin and Pimhidzai 2013). That said, and while much remains to be done to catch up with other regions, SSA has made major strides in the educational sector over the past 20 years.

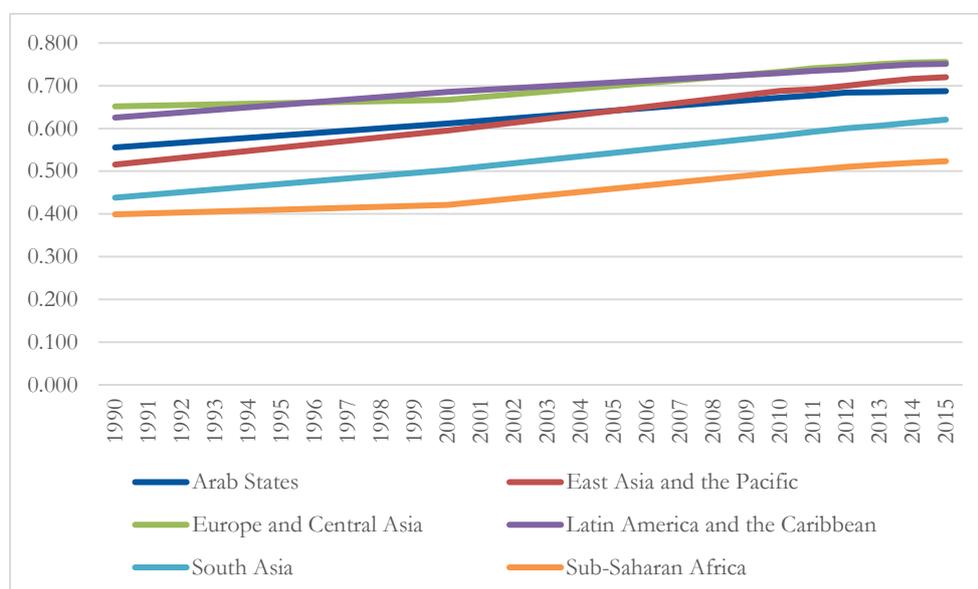
We noted earlier that poverty and welfare are multi-dimensional concepts that cannot be fully captured by any single measure. At the same time, there are helpful indices that combine progress across several dimensions, the most widely used being the Human Development Index (HDI) introduced by United Nations Development Programme (UNDP) and the Multidimensional Poverty Index (MPI) put forward by the Oxford Poverty and Human Development Initiative (OPHI 2017). The HDI is a composite measure of average achievement in three important dimensions of human development—a long and healthy life; being knowledgeable; and having a decent standard of living—and it is calculated as the geometric mean of normalized indices for each of these three dimensions.⁸ The MPI complements monetary measures of poverty by

⁸ See <http://hdr.undp.org/en/content/human-development-index-hdi> (accessed 13 September 2017), from where this definition originates. The HDI, published annually by the UNDP, was not originally designed to capture inequality, which led to its successor, the Inequality-adjusted Human Development Index (IHDI; see <http://hdr.undp.org/en/content/inequality-adjusted-human-development-index-ihdi>, accessed 13 September 2017), which is sensitive to differences in inequality among countries.

considering overlapping deprivations suffered by individuals at the same time. The index identifies deprivations across the same three dimensions as the HDI and shows the number of people who are multi-dimensionally poor (suffering deprivations in 33 per cent or more of the weighted indicators) and the number of weighted deprivations with which poor households typically contend.⁹

The region’s sound progress discussed earlier is also reflected in the HDI. Figure 10 shows steady increase in the HDI from 2000 onwards. While sizeable gaps remain as compared with other regions it appears that SSA is on a promising path as measured by the HDI. This evidence is supported by the Global MPI, which shows that while SSA suffers from more poverty than other regions, countries in SSA are indeed reducing both the headcount ratio and the intensity of poverty (Alkire et al. 2017). Thus, both monetary and multi-dimensional measures of poverty and welfare point to progress in SSA in recent decades. Arndt et al. (2016) and Arndt and Tarp (2017a) emphasize that improvements in non-monetary indicators are also prevalent in relatively weak growth performers.

Figure 10: Human development index by region



Source: Authors’ illustration of data from UNDP (2016).

While both the HDI and the Global MPI are widely recognized internationally and provide helpful overviews of development performance, they have also been subject to discussion including questions such as: why should indicators be aggregated into a single index; which indicators should be chosen; and how should weights for the different indicators included be established? It is beyond the scope of the present paper to pursue these topics in detail,¹⁰ so we merely point out that the weighting underlying these indices is bound to be arbitrary in nature, implying that robustness checking is called for (Ravallion 2010; Gisselquist 2014b). Similarly, the discussion has motivated UNU-WIDER to pursue in its present work programme the development of other

⁹ See <http://hdr.undp.org/en/content/multidimensional-poverty-index-mpi> (accessed 13 September 2017), from where this definition originates.

¹⁰ See also Arndt et al. (2017) and Borhat and Tarp (2016).

analytical approaches, including the first-order dominance (FOD) approach described in Arndt and Tarp (2017a). They stress that the FOD approach:

allows multidimensional welfare comparisons across populations over time and space while requiring no more restrictive assumptions than a preference to be non-deprived as opposed to deprived in any dimension. (2017a: 6)

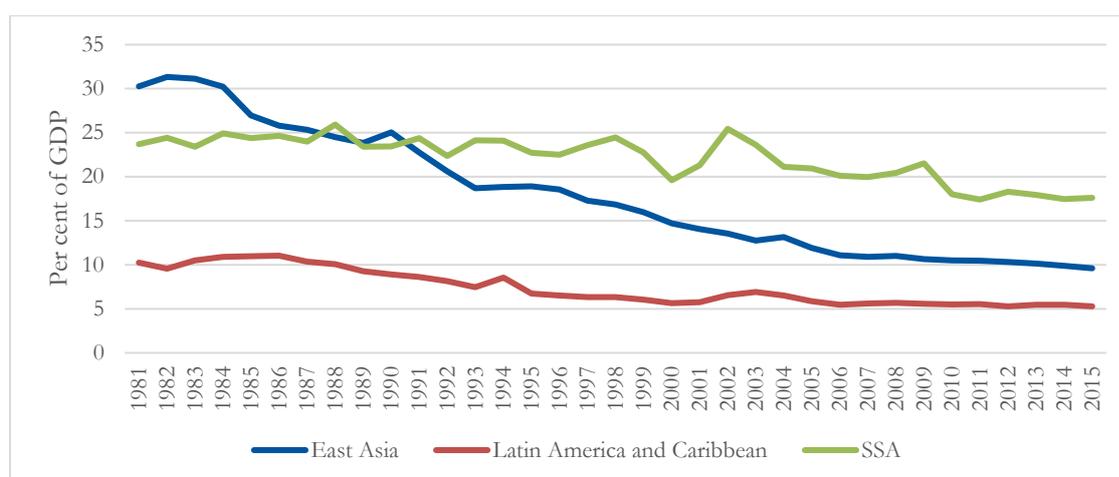
This advantage comes at the cost that the FOD criterion sometimes leads to indeterminate outcomes, and satisfaction of the FOD criterion also gives no sense of the extent of domination. It is, however, important that all the detailed country-specific case studies covered by Arndt et al. (2016) and by Arndt and Tarp (2017a) reinforce the general assessment outlined above.

4 Structural transformation, jobs, and the informal sector

The process of economic and social development is intimately linked to the rate of aggregate growth and its composition; and the inclusiveness of a specific growth trajectory is negatively associated with the level of inequality. High inequality in access to productive assets generally results in high income inequality, requiring a faster rate of economic growth to achieve the same amount of poverty reduction over time as in societies with lower initial income inequality.

Successful development also depends on the extent to which large numbers of people move out of low-productivity agriculture for their livelihoods to higher-productivity activities throughout the economy, including the manufacturing sector, shifting sectoral balances in the process. Figure 11 shows that the share of the agriculture sector in the SSA economies has indeed decreased over the past 15 years. However, it remains very high. Large numbers of people amounting to more than 60 per cent of the population continue to live and work in the rural sector in SSA. On the other hand, the share of manufacturing has, as shown in Figure 12, remained low and decreasing. Thus, aggregate growth in SSA has occurred together with de-industrialization. To compare, in East Asia the agriculture sector share decreased significantly. While the manufacturing share also decreased slightly in East Asia, it remained high after its initial growth.

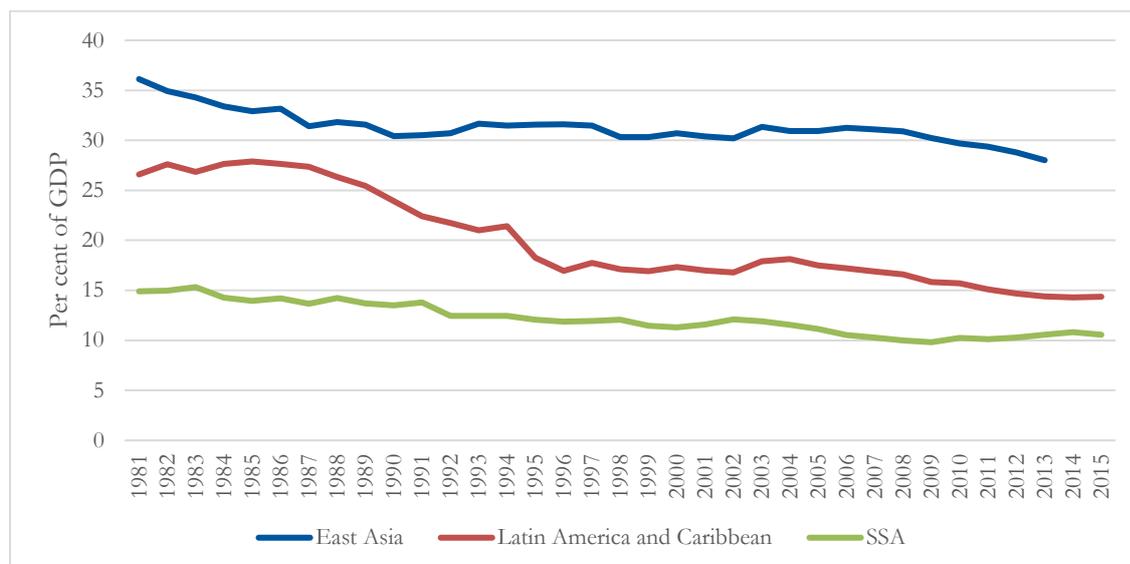
Figure 11: Agriculture value added



Note: High-income countries defined as having higher than 12,235 GNI/capita (current US\$) excluded in the regional figures.

Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

Figure 12: Manufacturing value added

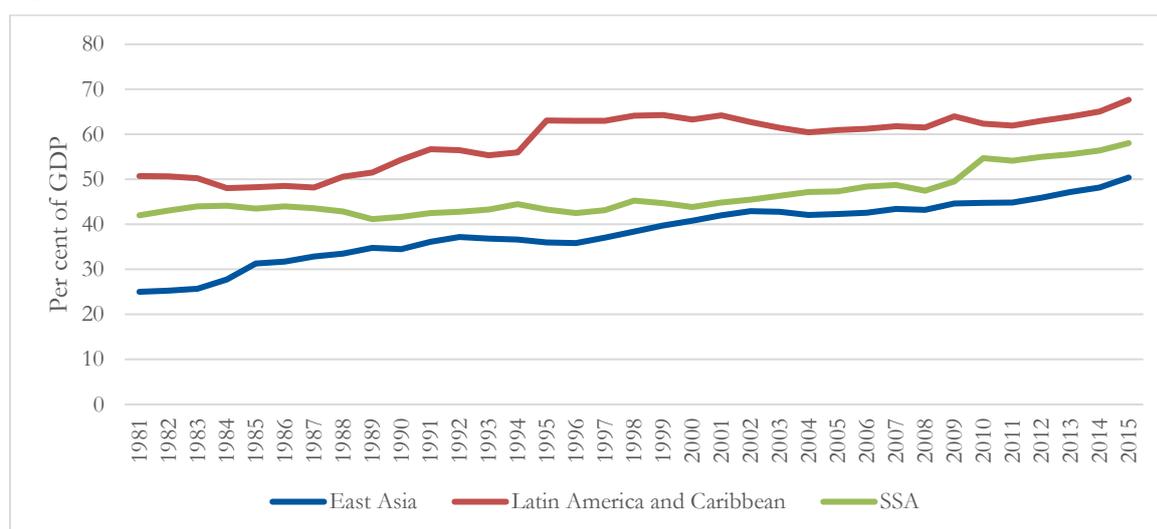


Note: High-income countries defined as having higher than 12,235 GNI/capita (current US\$) excluded in the regional figures.

Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

What has been happening in SSA is that people have indeed been leaving the agriculture sector in search of a better living in urban areas, reflected in the fact that the share of the urban population in SSA, which was around 30 per cent around 2000, reached about 40 per cent 15 years later (World Bank 2017). The transformation and job challenge is that people have not found employment in a thriving, higher-productivity manufacturing sector. Instead they seek out their living in the low-productivity services sector, which has increased its share of GDP as illustrated in Figure 13, and in the informal sector.

Figure 13: Services value added



Note: High-income countries defined as having higher than 12,235 GNI/capita (current US\$) excluded in the regional figures.

Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

Put differently, people have moved from low-productivity agriculture into low-productivity services and the informal sector. The services sector has also been increasing its share in East Asia, but to a lesser extent, and at a much higher level of productivity than in SSA. The Latin American pattern shown in Figures 11–13 reflects much higher income levels, and a manufacturing sector that is giving way to a higher-productivity services sector, in much the same way as agriculture previously gave way to a higher-productivity manufacturing sector: a process that is not currently on track in SSA.

The lack of successful structural transformation of SSA's economies is reflected in the region's jobs crisis. According to the World Development Report 2013 (World Bank 2012), there are 10 million entrants into the labour market each year in SSA, and few find gainful employment in the formal higher-wage sectors. Consequently, while there is limited open unemployment per se, about 75–80 per cent of the jobs in SSA fit the International Labour Office (ILO) definition of vulnerable employment (Sparreboom and Albee 2011).

Vulnerable employment is described as the sum of own-account workers and contributing family workers. They are, according to the ILO:

less likely to have formal work arrangements, and are therefore more likely to lack decent working conditions, adequate social security and 'voice' through effective representation by trade unions and similar organizations. Vulnerable employment is often characterized by inadequate earnings, low productivity and difficult conditions of work that undermine workers' fundamental rights.¹¹

The share of the informal economy, while inherently difficult to measure, accounts, according to the IMF (2017b), for between 20 and 65 per cent of GDP in SSA countries, and includes in the IMF approach both non-registered household enterprises and any productive activity that is illegal or avoids compliance with regulations or the payment of taxes. The estimations of the IMF (2017) highlight that the informal sector share of GDP varies significantly among countries. While the region's oil-exporting countries have an informal sector share of almost 50 per cent on average, the low-income country average is 40 per cent and that of middle-income countries 35 per cent. The highest informal sector share is that of Nigeria (approximately 65 per cent) and the smallest is in Mauritius (approximately 20 per cent).

While SSA's population is growing and the formal sector is at this point unable to absorb all potential employees, it has been widely argued that the informal sector provides both flexibility and much-needed opportunities, at least in the short run. In this sense, the informal sector has significant potential to contribute to economic growth and development—economic policy and government regulations permitting. There is ongoing debate about the extent to which this holds true in the SSA context. Based on the World Bank firm surveys, Porta and Shleifer (2008) conclude that the informal sector is highly inefficient and is neither a threat to firms in the formal sector nor a significant contributor to economic growth, as small informal firms seldom grow to become medium- or large-scale enterprises generating the additional jobs desired.¹² From this perspective, while the informal sector provides millions of people with a (poor) livelihood, economic growth

¹¹https://esa.un.org/unmigration/documents/retreat/UN%20WOMEN_Indicator_vulnerable_employment.pdf (accessed 13 September 2017).

¹² This runs counter to ILO (1973), which argued to the contrary in the case of Kenya. See Page and Söderbom (2015) for an illuminating case study of Ethiopia asking the question 'Is small beautiful?', published in the 2015 WIDER *African Development Review* special issue (edited by Jones et al. 2015). See also Jones and Tarp (2015), in the same issue, on priorities for boosting employment in SSA.

is generated by the creation and growth of formal firms. An increase in the share of the formal sector increases productivity and tax revenue, underpinning efforts to mobilize domestic resources, which must evidently also include concerted efforts to minimize tax evasion and optimize tax compliance.

5 Foreign aid, macroeconomic policy, governance, and conflict

Exogenous shocks and decisions taken elsewhere have played a critical role in the development process on the African continent since independence. Reference has already been made to the impacts of the oil crises of the 1970s and the financial crises of 1997 and 2009. Turning to foreign aid, its impacts have been debated for decades, the main question being the so-called micro-macro paradox (introduced into the aid literature by Mosley 1986). It has generally been agreed (even by aid sceptics) that aid has often been associated with successful projects in the health and education sectors. In the longer term this should lead to increased growth, which analysts have had difficulty in identifying in a convincing manner. The data has often suggested an insignificant impact of aid on growth. Speculation has therefore continued that aid undermines recipient institutions in SSA and has negative macroeconomic effects due to ‘Dutch disease’.¹³

More recently, it has become clear that the micro-macro paradox does not exist. It was embedded in inadequate data and methodological difficulties that led analysts to present insignificant statistical results, which were regularly taken as evidence of no impact. In contrast, when properly analysed, and using up-to-date analytical methodologies, existing data tell a coherent story provided aid is analysed over the appropriate longer-term horizon within which its impact should be assessed. Moreover, it is pertinent to stress that it has also been convincingly established in the literature over the past decade that aid contributes positively to all three cumulative processes that underpin growth processes: physical capital, human capital, and institutional capacity-building.¹⁴

The colonial inheritance has cast long political, economic, and social shadows over the African continent, which we shall not pursue here.¹⁵ Moreover, global shocks have been of critical importance throughout the post-independence period, most recently in the weakening of oil, gas, and metals prices (to the detriment of exporters such as Nigeria and Zambia, but with importers of oil, e.g. Rwanda, benefiting from lower import bills). However, this does not imply in any way that domestic factors have been unimportant in shaping development outcomes over the past half-century or so. It is widely understood that unwise and irresponsible choices have been made by African governments and policymakers—both for good and well-intentioned reasons and sometimes for unscrupulous reasons. Wrong choices were sometimes made based on bad advice (including from aid donors) and sometimes they were made to further corrupt ends (with outsiders facilitating that corruption in, for example, the natural resources sector).

It is now fully recognized that the import-substituting industrial policies pursued in an attempt to accelerate economic growth and transformation in the early post-independence years turned out

¹³ This includes the possibility that an inflow of foreign currency may lead to an overvaluation of the domestic currency and through this channel undermine the international competitiveness of the economy, and the argument that aid has undermined domestic institutions.

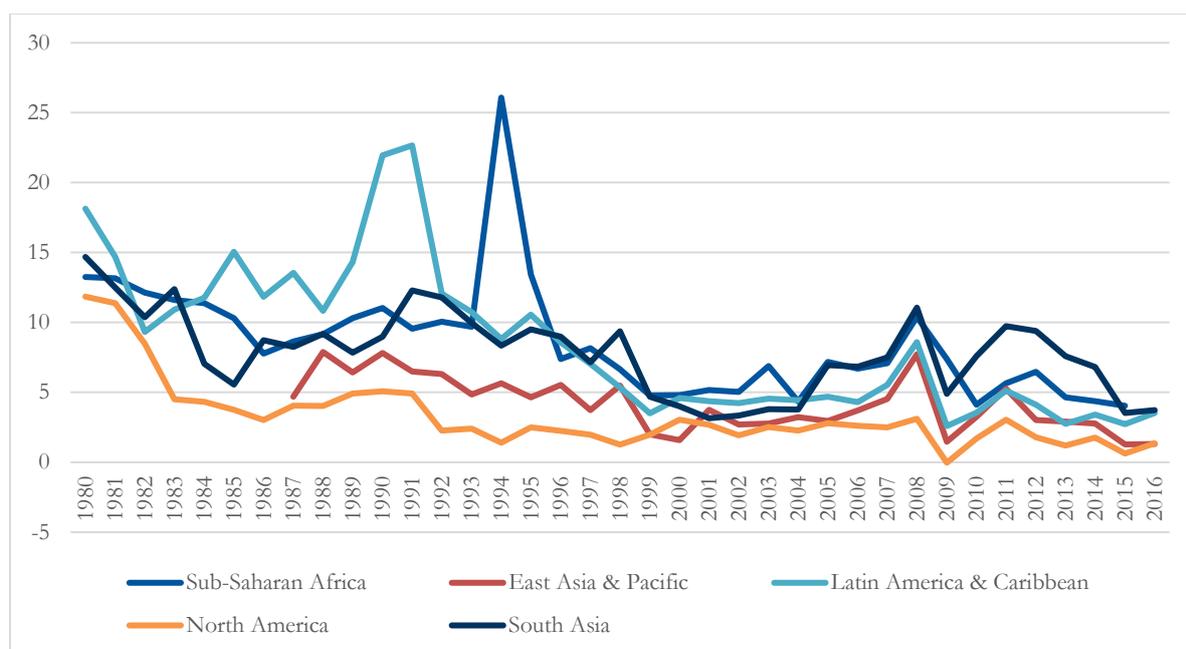
¹⁴ See UNU-WIDER’s ReCom programme at <http://recom.wider.unu.edu/> (accessed 13 September 2017) for comprehensive documentation of the impact of foreign aid, including a detailed position paper with extensive references. Jones and Tarp (2016) and Addison et al. (2017) are recent contributions.

¹⁵ See Davidson (1978) for a telling overview.

to be simply too costly and ineffective.¹⁶ While the underlying theoretical rationale seemed to make sense to many at the time (and the strategy was based on expanding the size of the market for infant industries through greater regional economic co-operation, which sadly disappointed), it led to inappropriate macroeconomic policy choices and furthered an unsustainable industrial policy that proved very costly. This increased the vulnerability of the SSA economies to external shocks and it has subsequently been a major policy challenge to reorient the path taken. It was not that the ambitions were necessarily wrong and ill-intentioned; the ‘medicine’ was not the appropriate one.

The same can be said for the single-minded way in which economic liberalization and privatization was pursued as somewhat of a panacea in the context of the stabilization and structural adjustment process that followed.¹⁷ ‘Getting prices right’ became a rallying call for reformers, overlooking the fact that well-functioning markets require high-quality institutions to reduce transaction costs for all market participants. In any case, macroeconomic stability (as measured by the inflation rate) and policy management (as measured by the central bank policy rate, CBPR) have since then improved very considerably, as illustrated in Figures 14 and 15. Inflation has also come down markedly and the policy interest rates in SSA have converged to a significantly lower level with a smaller variation, as is the case elsewhere in the global economy.

Figure 14: Annual inflation (%) by region



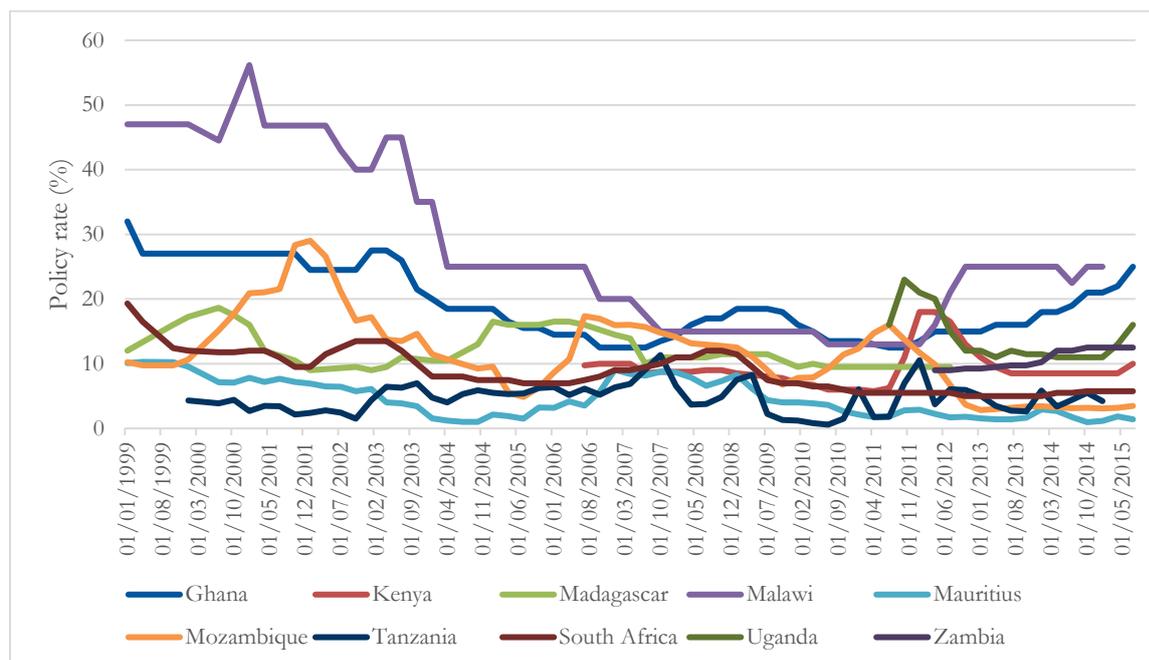
Note: Inflation as measured by the consumer price index (the annual percentage change).

Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

¹⁶ See Newman et al. (2016 a, 2016b).

¹⁷ See Tarp (1993).

Figure 15: Policy rates for SSA countries with floating exchange rates



Note: SSA countries with floating exchange rates. No data available for Sierra Leone. The CBPR is the rate that is used by central bank to implement or signal its monetary policy stance.

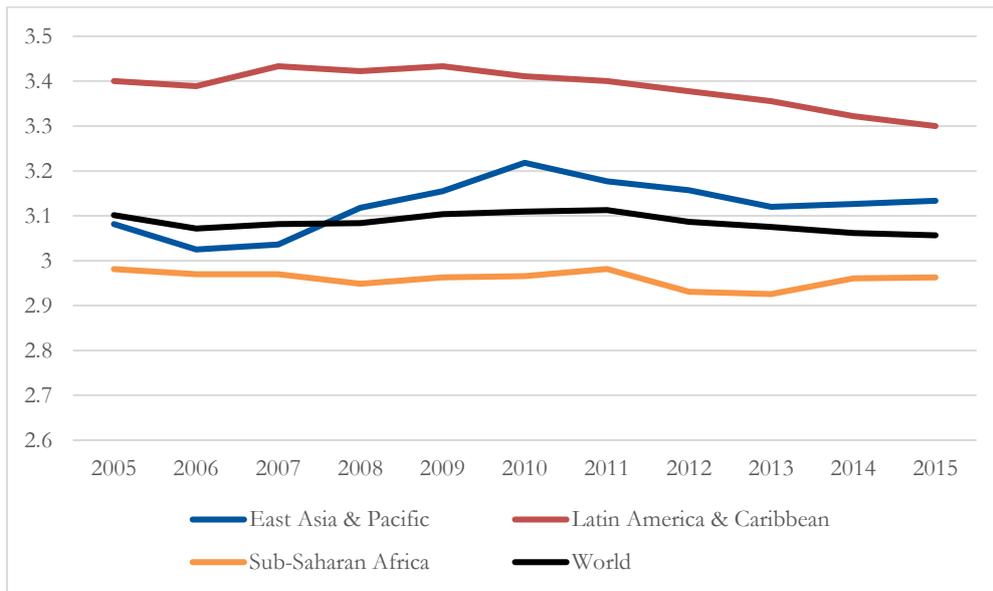
Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

There is debate as to whether ‘good policy’ caused the ‘growth’ revival or whether causality goes the other way round.¹⁸ In practice, good policy will reinforce growth, and growth good policy, and there is little doubt that both the growth turnaround and the improved policy management have both been factors underlying the socioeconomic progress reported in previous sections. That there remains room for improvement in dimensions such as public management, the control of corruption, and the rule of the law is clear from Figures 16, 17, and 18. In all cases SSA finds itself lower-ranked than the other regions considered, illustrating the continuation of corruption as well as fragility in public sector management and institutions. It is also notable that in all three cases there is substantial stability in the performance of SSA. This suggests, as just noted, that concerted policy efforts will continue to be required across the board. It also suggests that a degree of stability has been achieved—circumstances have not grown worse, as one might sometimes be led to believe.¹⁹

¹⁸ See for example Dalgaard and Kreiner (2003).

¹⁹ Institutional-quality data is usually based on assessments, and so should be interpreted carefully. This includes the World Bank assessments for public sector management, control of corruption, and the rule of law.

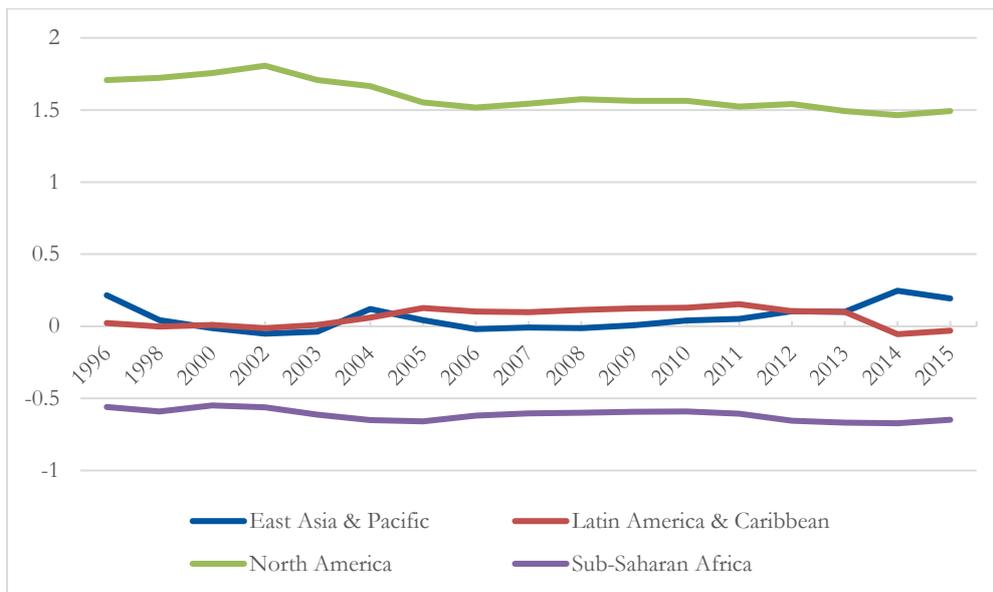
Figure 16: Public sector institutions and management



Note: Country Policy and Institutional Assessment (CPIA) indicator takes values between 1 and 6, with the former reflecting the lowest level of institutions and management.

Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

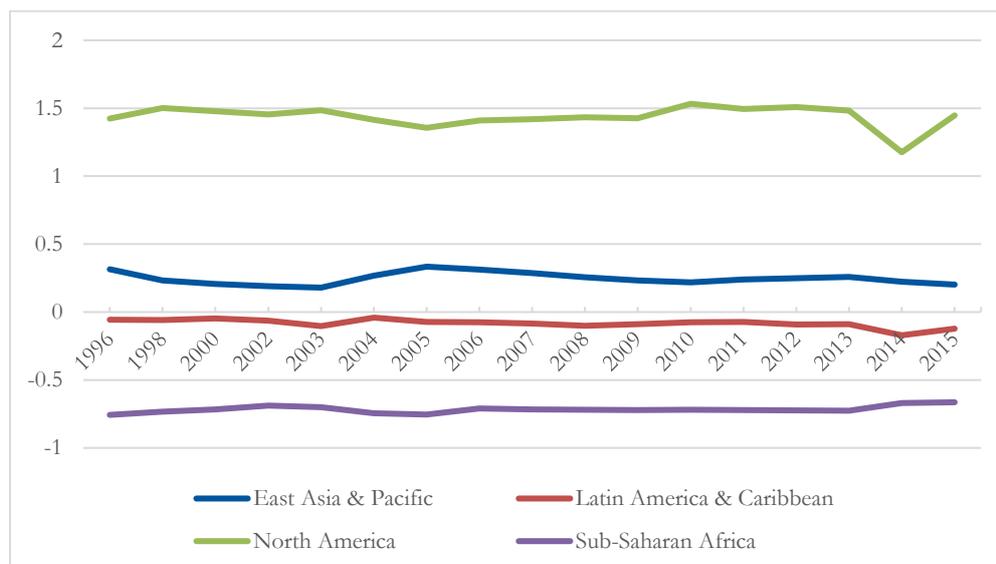
Figure 17: Control of corruption



Note: Region figures are averages of country estimates. Higher value indicates better control of corruption.

Source: Authors' illustration of data from Worldwide Governance Indicators, World Bank (2016).

Figure 18: Rule of law



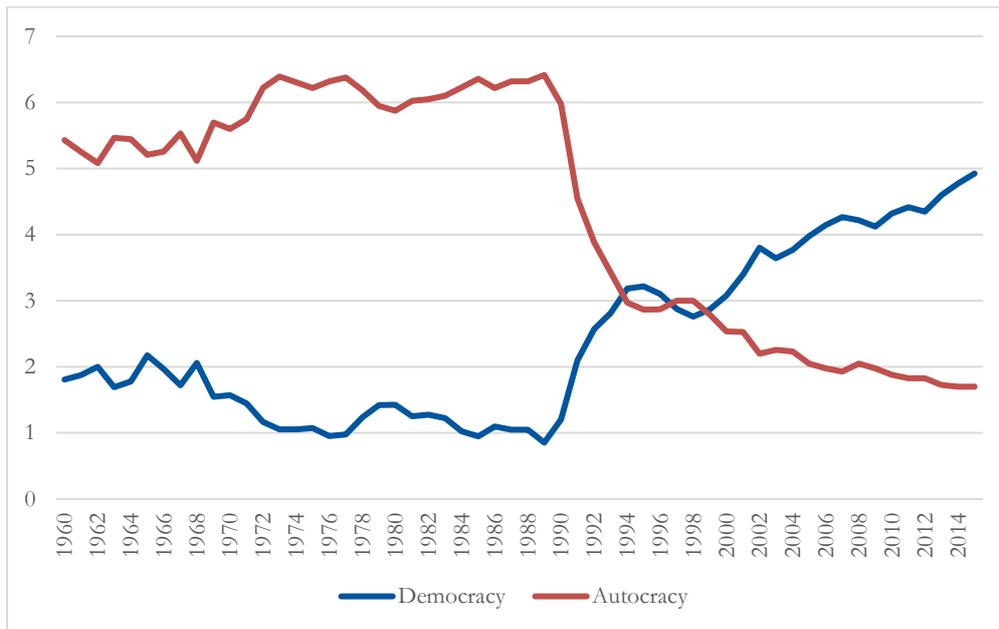
Note: Region figures are averages of country estimates. Higher value indicates better rule of law.

Source: Authors' illustration of data from Worldwide Governance Indicators, World Bank (2016).

The political environment has also stabilized in SSA in general in the last quarter of a century (albeit with major crises and conflicts along the way, e.g. in DRC, Rwanda, and Somalia to name just three). Many former autocracies have introduced multiparty elections since the beginning of the 1990s, and this is reflected in the democracy and autocracy scores of Polity IV (2017), as shown in Figure 19. Importantly, armed conflicts have become less common in the region, as is clear from Figure 20, which supports the assessment that ‘despite shouldering a larger share of the conflict burden, in absolute terms, Africa has become more *peaceful* as well’.²⁰

²⁰ See <http://nationalinterest.org/blog/the-buzz/the-wars-ravaging-africa-2016-14993> (accessed 13 September 2017) for details and note the statement: ‘Modern conflicts in Africa are thus highly localized, and they defy simplistic explanations based on stereotypes’. See also Addison (2003), Addison et al. (2002), and Gisselquist (2015a, 2015b). See also Cilliers (2015) for illuminating background.

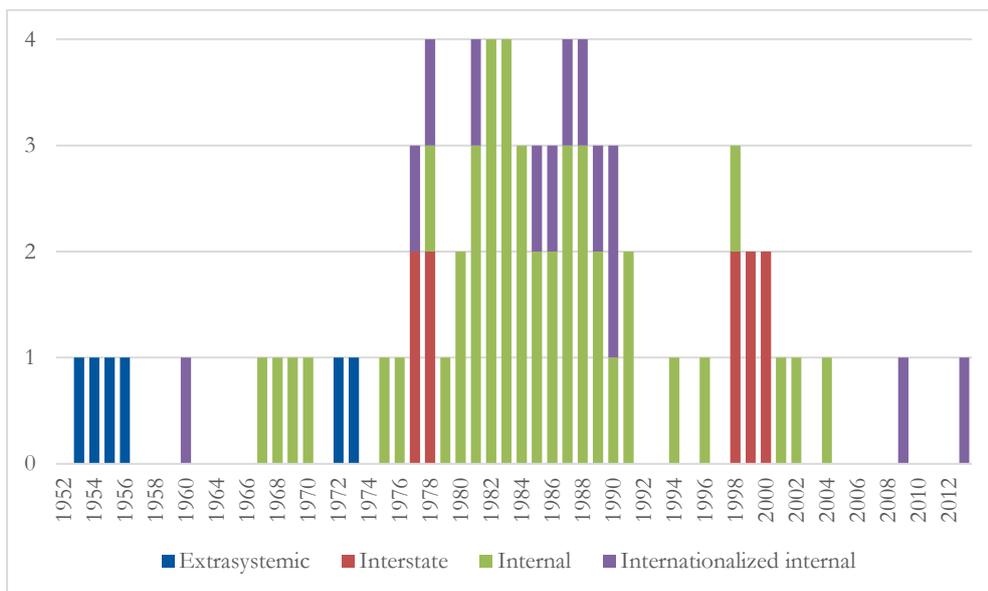
Figure 19: Democracy and autocracy in sub-Saharan Africa



Note: Composite indicators of democracy and autocracy for sub-Saharan Africa.

Source: Authors' illustration of data from Polity IV (2017).

Figure 20: Conflicts in sub-Saharan Africa: number of sub-Saharan countries at war



Note: A conflict is defined as war when there are at least 1000 battle-related deaths in a given year.

Extrasystemic war occurs between a state and a non-state group outside its own territory. Interstate war occurs between two or more states. 'Internationalized internal' refers to internal war with intervention from other states.

Source: Authors' illustration of data from UCDP/PRIO Armed Conflict Dataset (Gleditsch et al. 2002; Themnér and Wallensteen 2014).

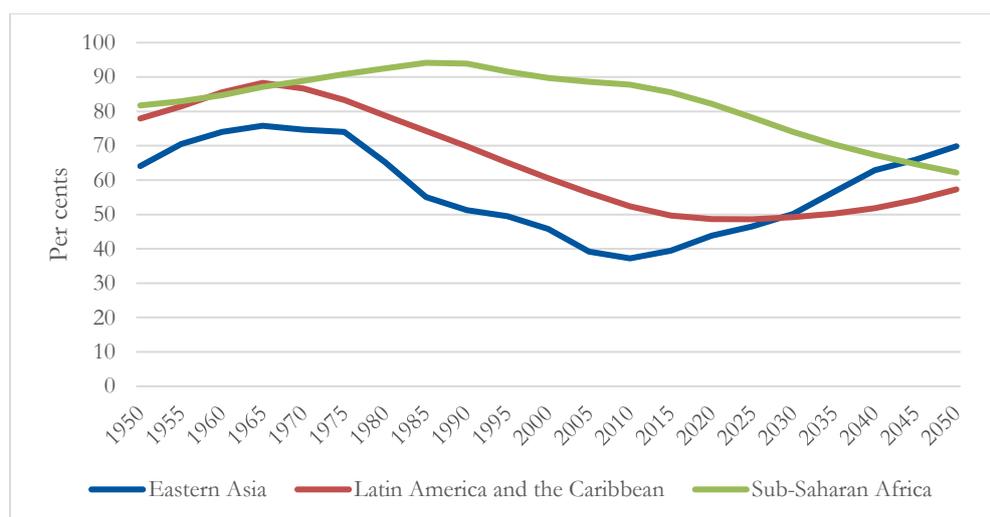
6 Critical issues for the future

At its most basic, economic development is a process of accumulating physical, human, institutional, and technological capacities. However, this process is far from simple or straightforward, since many actors and interlocking factors are at play—both domestically and internationally. Predicting the future is therefore hazardous, and we do not attempt it. Rather, this section highlights selected issues that are likely to occupy centre stage in SSA in the coming decades.

6.1 Demographics and gender equality

Reference has already been made to the region’s high population growth rate of 2.7 per cent per year. This means that large numbers of newborns are being added each year to those below the age of 15, and Africa’s population is set to double to 2.5 billion between 2015 and 2050. By mid-century Africa will outnumber both China and India, and the population of Nigeria will be larger than that of the USA. As shown in Figure 21, the dependency ratio peaked at around 94 per cent in 1985–90 in SSA. This means that there were almost as many persons in the category of younger and older people as in the working-age group of 15–65 years old.

Figure 21: Dependency ratio for major regions



Note: Forecasts since the year 2016. Dependency ratio defined as the share of 0–14-year-old and 65-year-old or older to 15–64-year-old population.

Source: Authors’ illustration of data from United Nations Population Division (2017).

The dependency ratio provides telling insights into the kinds of development challenges the African people and their governments have had to deal with over the past decades. This is so especially when it is recalled that the population includes large numbers of female- (or single-parent-) headed households, mostly in the low-productivity agriculture sector. Under such circumstances it is difficult to generate sizeable economic surpluses, especially when exogenous shocks hit communities and nations.

It is also clear from existing data summarized in Figure 21 that the share of the working-age population in the total population has been on the increase since the mid-1990s, and will continue increasing over the coming decades until around 2050 due to the in-built demographic dynamics. In fact, it is generally expected that some 10 million people will be added to the working-age

population each year until 2050, by which time the dependency ratio is likely to be around 60 per cent. This is roughly on par with that of the two other regions considered here, which have already moved through the demographic transition. To illustrate further, the number of people in the 15–24 age group is projected to increase from 190 million in 2015 to 410 million in 2050 (United Nations Population Division 2017). This corresponds to 6–7 million each year and implies that significant expenditures will be required to address the health and education requirements of all this youth.²¹

It should be highlighted, though, that the decreasing dependency ratio does represent a significant potential demographic dividend in terms of growth and increased income, provided that decent jobs and livelihoods are created. Put differently, it is critically important in the coming years that enough jobs emerge for the new entrants to the labour market. Their expectations are high, seen against a period of relative progress and the greater interconnectedness of local, national, and global communities. Accordingly, it will be essential that growth is maintained and that the pattern of growth is modified in a much more job-intensive direction than so far experienced.

It is therefore encouraging that development efforts over the past two decades have indeed managed to achieve significant advances in both health and education. New entrants into the labour force are not only young, they are also healthier and better educated than their parents. This includes progress on gender issues, though significant further steps are clearly needed in this area.²² Gender inequality hurts the wellbeing of girls as they are more adversely affected by income and price shocks (Bjorkman-Nyqvist 2013). In addition, gender empowerment leads in turn to more development, as it is well established that women tend to make decisions that favour overall household and child welfare as compared with men (Duflo 2003; Qian 2008; Afridi et al. 2012). In short, a focus on improving gender equality would raise household incomes and positively affect the prospects and wellbeing of children who will join the labour market in the coming years. Another challenge in this regard is that while women’s labour force participation rate has slowly increased from the 1990s, it remains lower than that of men. In 2016 the labour force participation rate in SSA was estimated at 62.8 per cent for women and 76.0 per cent for men (World Bank 2017).

6.2 Commodity dependence and economic transformation

One of the thorniest issues is the region’s continued dependence on the export of primary commodities, much of which is unprocessed or only lightly processed for shipment (implying that much of the value in the next stage of processing the commodities, and then their use in manufacturing processes, is captured elsewhere in the global economy). Africa’s commodities are in turn derived from the region’s immense (and often still untapped) wealth of non-renewable resources (oil, natural gas, coal, and minerals) and renewable resources (soils, water, fisheries, sunlight, and wind).

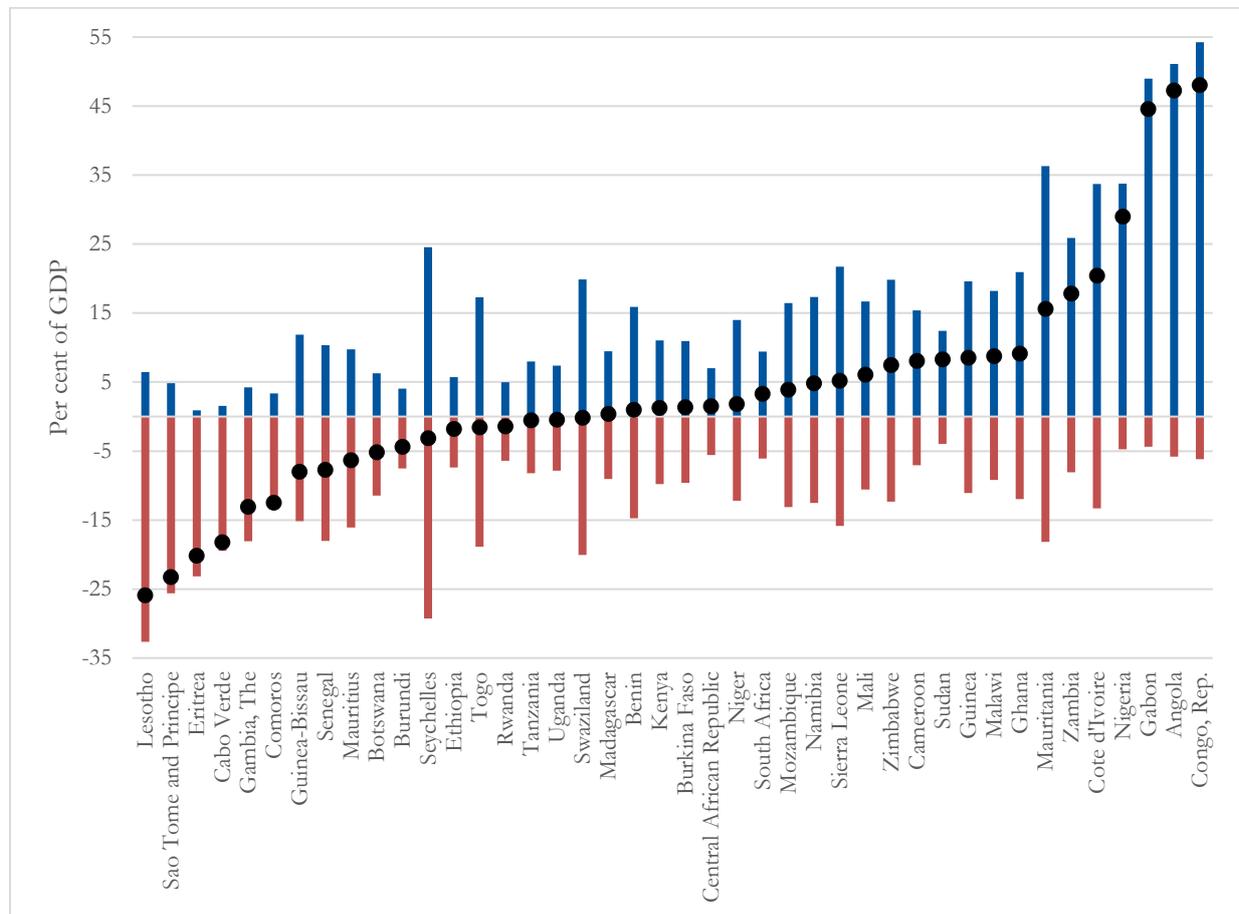
While the region’s overall dependence on commodities is high, there is some substantial variation in that dependence across countries, as shown in Figure 22. At the top in terms of commodity dependence (as a percentage of GDP) are the long-standing and big oil and gas exporters (Angola, Gabon, and Nigeria), the major and long-standing mineral exporters (DRC, Mauritania, and Zambia), and the big agricultural exporters (notably Côte d’Ivoire, the world’s largest cocoa

²¹ See Resnick and Thurlow (2015) and Resnick (2015).

²² See Addison, Grown, and Tarp (2015).

producer), some of which are also big mineral (and now oil) exporters (notably Ghana’s cocoa, gold, and oil).

Figure 22: Commodity exports, imports, and net exports from SSA countries



Note: Commodity exports (blue bar), imports (red bar), and net exports (dots) per GDP by sub-Saharan African countries. Country averages since the year 1990. Commodity exports include agricultural raw materials, food, fuel, and ores and metals exports.

Source: Authors' illustration of data from World Development Indicators, World Bank (2017) and own calculations.

In sum, SSA needs to add increased value to its commodities, be they minerals or agricultural produce, to move itself up global value chains. It must also create new sectors of activity in manufacturing through, for example, more agro-processing.²³ In the extractives sector, it needs to maximize the benefits from the large revenues for inclusive development, while keeping a close eye on international price trends. More broadly, it needs to conserve its renewable resources, including its unique wildlife, both for the planet’s biodiversity and as the basis of the region’s tourism sector.

Until the price downturn commenced in 2014, the commodity ‘super-cycle’ which began around 2000 constituted a positive economic shock for SSA, especially for those with oil and gas (e.g. Angola, Ghana, Nigeria) or mineral resources (e.g. Guinea, Liberia, and Sierra Leone) (Andersen et al. 2014). This commodity boom had been one of the most powerful since 1945 (see for example Radetzki 2006; Humphreys 2013). The FDI inflows associated with the boom have become a

²³ See Page’s (2016) blog on commodities, industry, and the African growth miracle.

major component of Africa's overall capital flows over the last decade, and mark a welcome turnaround for the region, which has traditionally been dependent on official flows. This FDI has also brought in much-needed technical expertise which is vital to the effective discovery, extraction, and management of oil and mineral wealth. New oil and gas producers, or countries which are expected to be major producers, have received welcome attention from foreign investors, thereby reducing their aid dependence (e.g. Mozambique, Tanzania, and Uganda).

China was one of the main drivers of the commodities price boom until 2014 (Erten and Ocampo 2013). China is a net importer of most metals, as well as most of the oil and gas that it uses. China accounted for more than 50 per cent of the increased global demand for metals over 2001–06 (Francis 2007: 20). Africa's bauxite, copper, iron ore, nickel, uranium, and other minerals all saw strong growth in production, prices, and earnings (Pigato and Tang 2015). China is Africa's largest bilateral trading partner: trade totalled US\$211 billion in 2013, with commodities, especially oil, dominating Africa's exports to China. The US was a significant importer of African oil a decade ago (the region supplying roughly 10 per cent of total US oil imports around 2005) but the US largely ceased to be a buyer of oil and gas from Africa as its own supplies of shale oil and gas came on stream (this is one reason why total US trade with Africa is, at US\$83 billion in 2013, less than half that of China). In sum, Africa has seen a major shift in its trading patterns over the last decade or so, and has benefited greatly, as a commodities supplier, from China's robust growth.

Economies that ride booming commodity prices must also ride them on the way down. Oil illustrates the risks. The oil price fell from US\$115 a barrel (for Brent, the international benchmark) in June 2014 to a range of \$43–50 by mid-2015; there have been some small price recoveries since then, but the price currently languishes at under \$50, with little prospect of rising from there. While this has been good news for net oil importers (e.g. Kenya and Rwanda) and has helped boost their growth, it is very bad news for the budgets (and the currencies) of oil producers, many of which were predicated on oil staying above \$100 for the indefinite future. Moreover, many of the large oil producers failed to create sufficient fiscal buffers to ride out the adjustment to the oil-price fall; Nigeria's fiscal reserves are small in relation to its total public budget. Currencies came under pressure: Angola devalued, thereby leading to a jump in inflation, while Nigeria tried to defend a fixed exchange rate, burning through a considerable sum from its foreign exchange reserves.

Just before the price collapse, oil accounted for some 57 per cent of Africa's total export earnings in 2013 (AfDB et al. 2013: 66). The market for oil, but especially for coal, faces strong headwinds, not least from the accelerating move to renewable energy, in which China itself is a major innovator and producer (China now accounts for over half the world's production of lithium-ion batteries, for example). For the metals used in such technologies we can expect strong future demand in, for example, cobalt and lithium, to the benefit of producers such as the DRC and Zimbabwe, while copper will be required whatever the source of energy supply (to the benefit of producers such as Zambia). Hence, the sharp downturn in some metals prices in recent years should prove temporary. It is likely that gas exporters will face growing demand as Asia and other regions switch from coal-fired power plants to natural gas, the use of which in electricity generation emits roughly half the amount of carbon dioxide per megawatt-hour of electricity that coal does. However, the global gas market is well supplied (perhaps over-supplied) and countries with exports coming on stream over the next decade (e.g. Tanzania) may be disappointed in their earnings expectations.

Aside from the price volatility, as well as the potentially adverse long-term trends for some commodities, the management of resource wealth is problematic for other reasons. Research shows that natural-resource-dependent economies tend to grow at a slower pace when other determinants of growth are controlled for (Sachs and Warner 1995, 2001). While this view has been challenged (Alexeev and Conrad 2009; Maloney 2002) it remains widely agreed that resource wealth poses serious difficulties for economic policy, irrespective of the level of development.

Resource-rich countries in Africa have been prone to ‘Dutch Disease’: large inflows of foreign exchange cause a rise in aggregate demand (when not ‘sterilized’ by central bank sales of treasury bonds). With low supply elasticities (reflecting structural constraints on the ability of producers to expand output) the rise in demand causes an increase in prices. For imported goods, supply increases via extra imports (which are also encouraged by the tendency of the currency to appreciate) which are financed from oil earnings. The currency appreciation tends to depress the incentive to produce agricultural exports and domestic food crops (which are now subject to increased competition from food imports). Non-tradeable sectors see the largest price rises of all as their supply elasticities are very low. Typically this manifests itself in an urban property boom.²⁴ The net result, as exemplified by Nigeria in the 1970s and 1980s, is a contraction of previously competitive sectors such as agriculture and manufacturing, accelerated urbanization (as farmers give up and head for the city), and an economy ever more dependent on imports (leading to a great reluctance to devalue when the oil price slumps). Commodity price booms also typically lead to over-borrowing, as illustrated by the cases of Nigeria and Ghana (a new player in the African oil economy).²⁵

Most seriously, resource wealth is associated with an increased propensity to corruption and violent conflict. This may be particularly prone to happening in ethnically diverse contexts where group-motivated policies tend to be characteristic (Berman et al. 2017). States and rebel groups can contest for control over natural resources (both renewable and non-renewable) and the revenues they generate. Such conflicts may be localized, taking the form of either continued but low-level fighting and theft (e.g. Nigeria’s Delta region) or outright attempts to secede by well-organized rebel armies (e.g. the DRC). It is important, however, not to reduce war in Africa to simple economic determinants: the wars in Angola, DRC, and Mozambique were as much (or more) the product of the Cold War and regional politics as of the existence of resource wealth (e.g. apartheid South Africa’s military interventions and financing of rebel groups in Angola and Mozambique, and the interaction of Zaire/DRC’s breakdown with the genocide in Rwanda) (Addison 2003). But for sure, ‘blood diamonds’ and other resource wealth can finance conflicts for long periods after they have broken out. The region’s governments and organizations as well as the international community must do more, given the terrible economic and human impact of violent conflict in Africa.

In sum, commodities constitute a strength of Africa’s economy—in generating livelihoods, economic growth, and export earnings—but also a source of vulnerability, as they expose the region to price instability (and adverse longer-term price trends in the case of fossil fuels) and the associated macroeconomic difficulties in managing booms and slumps. SSA has done better in managing recent price shocks than was the case in the 1970s and 1980s; macroeconomic policy responses, especially exchange-rate adjustments, have been activated at an earlier stage as commodity prices weakened (one exception is Nigeria, as noted above) and fiscal policy has been more prudent, though fiscal buffers are still not high enough (AfDB et al. 2013). The fundamental problem, however, remains: how best to invest resource wealth into infrastructure, education, and health in ways that really transform the supply side of economies, and which secure the move up to lower middle-income country (MIC) status, and eventually upper MIC (and higher-income country, HIC) status, in the coming decades.

²⁴ See UNU-WIDER’s (2012) research brief.

²⁵ See Osei (2012).

6.3 Agriculture and industrialization

Both the agriculture and manufacturing sectors have performed below their potential in SSA over the past decades. By the 1980s, SSA's agriculture was in crisis, with deepening rural poverty, and famine in the Sahel and Horn of Africa. The widespread confidence of the 1960s that Africa could feed itself, and become a major player in global agricultural markets, had eroded away, with many donor-financed agricultural projects in serious trouble. Weak project selection, project mismanagement, and the impact of deepening foreign exchange shortages on imported inputs to the sector combined, in some cases, with exchange-rate misalignment that reduced farmer incentives (particularly the case in oil economies subject to Dutch Disease, notably Nigeria).

In the stabilization and structural adjustment programmes of the 1980s it was assumed that price liberalization ('getting prices right'), and the privatization of agricultural marketing boards, would lead smoothly to a strong revival in agricultural production and exports.²⁶ By the late 1980s the World Bank was committed to the view that it could pull back on its project and sector support to African agriculture, and the share of agriculture in its SSA portfolio fell from the 1980s to the 1990s.

This was a naïve view. At the time, critiques of 'getting prices right' focused on the distinction between supply elasticities for individual crops and the aggregate elasticity of agricultural production; the latter is smaller than the former, since farmers have some ability to shift between crops (as their relative prices change) but the sector's ability to expand total output—of both food crops and non-food crops—is limited by the multiple constraints on SSA's farmers, especially its women farmers (who account for much of the region's smallholder food production). These constraints include: lack of irrigation and water storage that make agriculture and pastoralism dependent on rainfall; the inability of many poor farmers to afford key inputs (and often erratic supplies of inputs, especially in areas deficient in transport infrastructure); poor-quality extension services resulting from under-funding (and hindered by the low education levels of many farmers); time constraints on women farmers, resulting from the time that they must also commit to childcare, household tasks, and family health care; and under-investment in agricultural research that is appropriate to the conditions faced by Africa's smallholders, leading to a lack of new seed varieties and of new solutions to plant and animal diseases (and environmental stress). These challenges were well known by the 1980s, and indeed the World Bank's own research had contributed to the stock of knowledge available by that time. Today, we must also add climate change; there are many tasks necessary to increase the resilience of agriculture and food security to weather shocks, which will accelerate if the world community fails to curb greenhouse gas emissions.

In sum, there is a compelling case for more agricultural investment, both public and private, to achieve job-creating economic growth, export diversification (especially into crops with higher value in world markets), and poverty reduction (given the numbers of rural people still in poverty, which is often of the deepest kind). Agriculture continues to be neglected both in the allocation of public expenditure by SSA governments and in foreign aid. The Maputo declaration on agriculture and food security—agreed by the New Partnership for Africa's Development (NEPAD) in

²⁶ See Tarp (1993).

2003²⁷—calls for agriculture to be allocated 10 per cent of public expenditure; not even half of that target is being achieved.

The 2008 World Development Report entitled ‘Agriculture for Development’ (World Bank 2007) provides a comprehensive overview. In a succinct summary of lessons from the report, de Janvry and Sadoulet (2008) list seven reasons behind agriculture’s neglect. They remain relevant and are therefore reproduced here in summary form:²⁸

- (i) Low profitability of investment in agriculture under conditions of low and continuously falling commodity prices;
- (ii) Policy priorities geared toward stabilization and adjustment;
- (iii) Focus on rapid poverty reduction via transfers and social assistance programmes; with pressures for quick success being enhanced by the urgency of meeting the 2015 MDGs, resulting in strategies that frequently disregarded the role of agriculture and focused instead on the role of the macro-fundamentals and of social safety nets;
- (iv) Concerns by donors and environmentalists with the negative environmental effects of agriculture, creating reticence to invest in a sector with large negative externalities, particularly water and climate change;
- (v) Development theories that looked at agriculture as a backward and declining industry;
- (vi) Ill-defined roles for the state, the private sector (market), and civil society (producers’ organizations) that place barriers to private sector investment in replacement for descaled public roles—severely reducing the quality of the investment climate for private investment, and limiting the possibility of public–private partnerships in opening new areas of economic activity; and finally,
- (vii) A low rate of success in investment projects involving agriculture due to poor design and weak implementation.

The agricultural development and policy reform menu is a large one, and ‘business as usual’ will not be sufficient to address the present state of affairs. A complete overhaul of agricultural policy and investment is called for, and to be effective will require action at the highest policymaking levels in both African countries and the international community. An instructive perspective on this is available in the policy responses to the 2007 international food-price crisis, in which prices spiked upward (studied in detail by Pinstrup-Andersen, 2014, and his colleagues). The 16 SSA country cases studied by Arndt et al. (2016) demonstrate that those that achieved agricultural progress experienced aggregate growth and poverty reduction as well.

Turning to the manufacturing sector, there is reason for concern here as well, and repeated calls for reform have been made in recent years. While agricultural progress has been essential for development throughout history and across all regions of the world, industry has been a driving force behind structural transformation. SSA’s low level of manufacturing is a problem because it denies SSA countries an essential source of economic growth (Rodrik 2016). Rodrik (2013) shows that whereas poorer countries only partially reach the income levels of richer countries, productivity in poorer countries’ manufacturing tends to reach richer-country productivity levels. This is explained by the international competition faced by manufacturing; accordingly, poor countries which are able to industrialize tend to grow faster than those which do not. The rapid

²⁷ See <http://www.nepad.org/resource/au-2003-maputo-declaration-agriculture-and-food-security> (accessed 13 September 2017).

²⁸ See also Arndt et al. (2016) for pointed cases that highlight the importance of agriculture. Thorbecke and Wan (1975) is an early study showing this in the case of Taiwan. Tarp (2017) and colleagues study the case of Viet Nam.

economic growth experienced by South-East Asia's 'Tiger' economies in the 1970s and 1980s is a classic example.

Why, then, is there so little industry in Africa? Newman et al. (2016a, 2016b) set out the reasons why industry matters for Africa, and why the region has not performed well. They subsequently study the realities and opportunities, summarizing the results of a major UNU-WIDER research programme into Learning to Compete (L2C),²⁹ and identify a strategy for future industrial development. They recognize that industry is a high-productivity sector potentially capable of absorbing large numbers of workers, and argue that it is essential to remove traditional barriers such as poor infrastructure, low skills, and intrusive regulation. However, the agenda does not end here. To compete, African governments will have to formulate new policies to promote exports, build the capabilities of domestic firms, and foster industrial clusters. FDI also underpins productivity growth, as it facilitates the transfer of knowledge and capabilities to the host country.

For SSA to succeed in manufacturing development, donors will need to move on from their single-minded focus on deregulation, which has prevailed since around the 2000s, paradoxically replacing the equally single-minded focus on 'getting prices right'. Donors need to put their energies and finance into helping countries scale up and create competitive economies, aimed at taking advantage of a fast-moving global economy; this entails creating sectors which sell goods and services with more value added (thereby helping the diversification from unprocessed commodities). Deregulation has been prominent in the support to investment climate reforms practised throughout Africa. Newman et al. (2016a: 206) note:

As originally conceived the investment climate reform agenda was intended to balance reducing the physical constraints to industrialization, mainly infrastructure and skills, to the regulatory and institutional environment. As implemented by the donors, however, the focus has been on a narrow set of regulatory reforms defined in Washington.

In sum, 'getting the investment climate right' is more than simply deregulation (which is not always desirable in any case, when there is a public interest to be protected, e.g. in curbing private sector monopoly power or curtailing the imposition of bad environmental externalities on society via air and water pollution). This implies overcoming an interacting set of constraints which hold back enterprises from the small- and medium-scale to the very large. One hopes that these lessons have by now been learnt by African governments and their partners in the international community.

6.4 Infrastructure³⁰

One major constraint on Africa's households and enterprises is infrastructure. There is now much attention to Africa's infrastructure challenge, and for good reasons. To begin with, Africa faces a power crisis, with an estimated 600 million people having no electricity connection; and some 30 African countries face regular power shortages (with households and enterprises paying high prices for emergency supplies). Low-income SSA lags behind the low-income country averages, by all key infrastructure measures, and by significant margins, as can be seen from Table 3, and the gaps

²⁹ See also Page and Tarp (2017), Newman et al. (2016b), and Söderbom (2017).

³⁰ The next three paragraphs draw on the excellent keynote by Dr J. Page at the UNU-WIDER conference 'Public Economics for Development', held on 5–6 July 2017 in Maputo, Mozambique. The complete set of slides is available from the conference web-site at <https://www.wider.unu.edu/event/public-economics-development> (accessed 13 September 2017).

are growing. Africa is presently expanding its paved roads, telephone main lines, and power generation much more slowly than other developing regions; this is illustrated by three key observations: (i) investment in power has not matched population growth; (ii) over 80 per cent of the road network remains unpaved; and (iii) the road stock is actually contracting.

Table 3: Infrastructure measures for SSA low-income countries and other low-income countries

	Sub-Saharan African low-income countries	Other low-income countries
Roads		
Paved-road density	31	134
Total road density	137	211
Telecommunications		
Main-line density	10	78
Mobile density	55	76
Internet density	2	3
Electricity		
Generation capacity	37	326
Electricity coverage	16	41
Water and sanitation		
Improved water	60	72
Improved sanitation	34	51

Note: Paved-road density and total road density are measured in km/1000 km²; main-line density and mobile density in subscribers per 1000 people; internet density in subscribers per 100 people; generation capacity in MW per 1 million people; electricity coverage, improved water source, and sanitation coverage in % of households with access to services.

Source: Data from Pierce et al. (2008)

There are many reasons to focus on infrastructure in the SSA context. High transaction costs are a widely recognized reason for lower productivity at the farm, household, and firm levels (see Escribano et al. 2010) and they result in lower economy-wide multipliers and lower impacts from economic policy measures.³¹ Infrastructure development has positive impacts on long-run growth, and is critical for reaping the benefits of improved agricultural technology (see Arndt et al. 2000). One estimate referred to by Page in his UNU-WIDER keynote is that the current infrastructure deficits contribute to a loss of about 2 percentage points per year,³² so appropriate investments have high economic and social returns.

Various measures of the infrastructure financing gap exist. Foster and Briceño-Garmendia (2010) estimate that US\$93 billion is required annually to meet existing needs, whereas actual spending is \$51 billion (IMF 2014), leaving a shortfall of \$42 billion (see Sy and Copley 2016). Page makes the point that this is probably an underestimate and needs obviously vary considerably among individual countries—for example depending on whether they are fragile or not. IMF (2014) has

³¹ See Arndt et al. (2012) for a comparison of Viet Nam and Mozambique.

³² See NEPAD, AU, and AfDB (2011).

estimated that national budget spending was about 73 per cent of total funding for infrastructure in 2012, or 63 per cent excluding financing by international financial institutions.

It is therefore evident that African countries will need to increase their fiscal effort to close the infrastructure gap, but the challenge goes further than this. Increased efficiency and improving the quality of public services will also be critical. While it is beyond the scope of the present paper to address the details, the challenge is evident, and it is one that aid donors have not addressed head-on, via either their old ‘getting the prices right’ approach or the present focus on the ‘investment climate’ (with its de facto emphasis on deregulation).

6.5 Public sector, development finance, and private sector development

Domestic resource mobilization will constitute a more significant component of the region’s development finance envelope in the years to come. SSA has made reasonably good progress in raising the tax/GDP ratio over the last decade (though not in conflict-affected countries), as tax administrations have been reformed and compliance improved. This was motivated by the need to shift revenues from a dependence on trade taxes (initiated under the trade liberalizations from the 1980s onwards), to introduce value added tax (VAT) to make up for the reduced reliance on trade taxes, and to reduce the burden of cumbersome tax procedures on enterprise development. As the commodity super-cycle led to large inflows of FDI into Africa’s extractives sector, the region has also had to revisit its taxation of the sector, balancing revenue generation relative to the incentives of companies to invest in what are very large and complex projects of often long duration. Over-taxing the extractives sector leads to a loss of total revenue in the long term as it discourages investment, and countries need the advanced technology that oil and mining companies bring if they are to maximize output and earnings from the sector. But countries understandably want to get reasonable deals in the many contracts that are underway in natural-resource extraction, and they are concerned that foreign companies can shift taxable earnings and profits out of the country to affiliates in jurisdictions with lower tax rates. There are a number of ongoing tax disputes in the extractives sector with many millions, sometimes billions, of revenues at stake.

In summary, progress has been made in domestic revenue mobilization, but there is still quite a way to go. One major question is how to judge progress in improving tax administration (i.e. whether it is near or far from being ‘optimal’) to reduce the compliance gap (the difference between what tax is legally due and what is collected).³³ Reducing the compliance gap to zero is not feasible: it is too costly in terms of administrative costs or behavioural responses to insist on perfect compliance. But how far should it be reduced? Whereas economists have over the years created a framework for assessing whether tax rates are optimal, there has until recently been no analytical framework to guide institution-building in the reform of tax administrations. This is starting to change through, for example, the work of the IMF on optimal tax administration (Keen and Slemrod 2017). Practical and informed assessments are called for in concrete country and case contexts.³⁴

³³ See the excellent keynote by Professor Michael Keen at the UNU-WIDER conference ‘Public Economics for Development’, held on 5-6 July 2017 in Maputo, Mozambique. The complete set of slides is available from the conference website at <https://www.wider.unu.edu/event/public-economics-development> (accessed 13 September 2017).

³⁴ See Microsimulation model SOUTHMOD—simulating tax and benefit policies for development (UNU-WIDER 2017a).

Taxes and non-tax revenues are only one dimension of fiscal policy: the others are public expenditure management, and public debt management. On the expenditure side, SSA went through considerable pain, starting in the era of structural adjustment, as it put in place better systems to control and monitor public expenditures: ‘cash budgeting’ was used for many years to reign in expenditures in line with revenues, the numbers of civil servants were reduced, hiring frozen, and wholesale civil service reform implemented. Better systems to ensure parliamentary oversight of spending (as well as taxation and debt management) were put in place. Turning around public expenditure management systems took longer than anyone expected, not least the IMF.

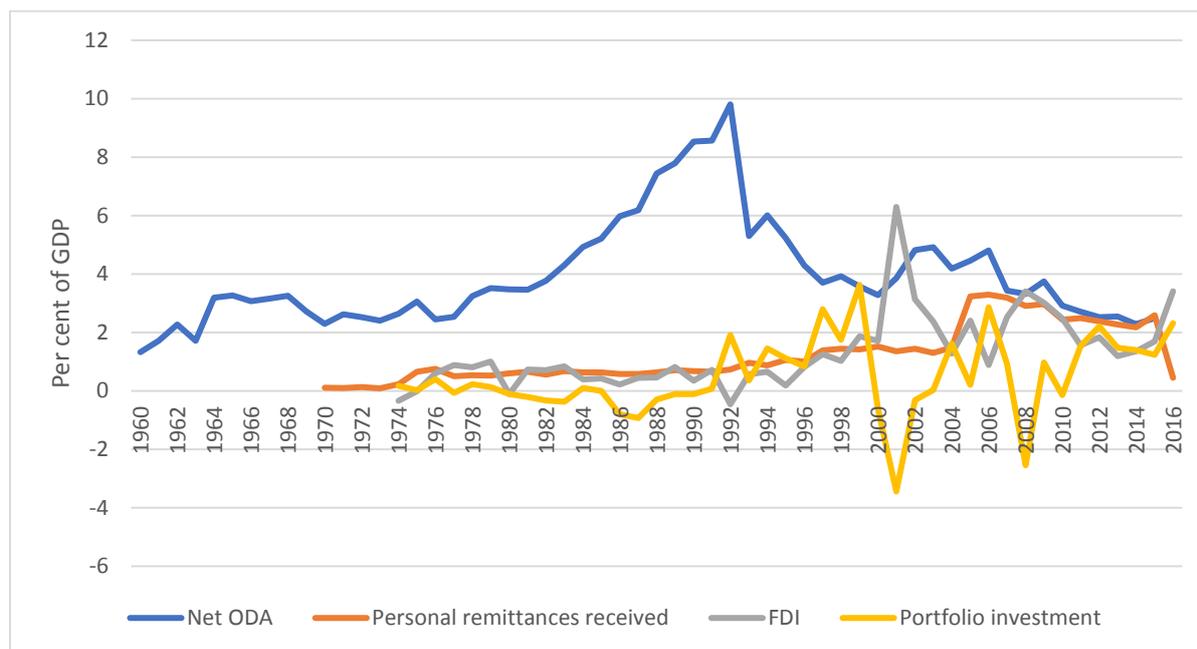
Better expenditure management is vital: achieving the ambitious goals of the MDGs (and now the Sustainable Development Goals, SDGs) requires large-scale expenditures (in the social sectors, for example). Aid donors will not supplement domestic revenues in financing these expenditures if they are not reassured that the money is being wisely spent. And domestic tax payers will be reluctant to comply with their obligation to pay taxes if they believe public money is being misspent (hence expenditure management reform is a key element of the ‘good governance’ agenda).

Good expenditure management is especially important in countries deriving ample and growing revenues from natural resource wealth. Many countries have histories in which revenues have been used for personal gain rather than the public good. Transparency in the management of oil, gas, and mining revenues is especially important, and has been assisted in recent years by the Extractives Industries Transparency Initiative (EITI). The task for countries rich in non-renewable resources is to transform those resources into physical and human capital that supports a development process associated with higher per capita incomes over time—and one that sustains itself after the natural resources are mined out. This can only be done with a well-functioning fiscal system that collects the revenue, accounts for it transparently, and then allocates it to areas of spending with high social rates of return. Education is a good example: funding the creation of a high-quality school system results in human capital formation that can drive inclusive development for many decades.

The resource-rich countries also illustrate the importance of the third pillar of fiscal management: debt policy and management. Hydrocarbon-rich countries have a tendency to over-borrow on international capital markets. This was the case with Nigeria in the 1970s and 1980s, and Ghana and Mozambique have also recently experienced an over-accumulation of foreign debt. Typically, much of this debt is contracted in dollars at floating interest rates, making the debtor vulnerable to any shift upward in global interest rates (which have been unusually low as central banks cut rates to cope with the 2008–09 financial crisis) as well as any depreciation of the domestic currency (which raises the domestic-currency cost of servicing foreign-currency debt). Debt crises have undesirable fiscal consequences, as they claim revenues that otherwise fund development and social spending. Given the experience of the HIPC countries in the 1980s and 1990s, this is a danger that SSA needs to guard against.

Turning now to development finance from external sources, net overseas development aid (ODA) to SSA has grown sizeably in absolute terms over recent years. This absolute increase goes together with a falling trend, since the early 1990s, as a share of GDP in aid recipient countries, as shown in Figure 23, reflecting in large measure the growth turnaround in SSA. In fact, this falling trend, together with the marked relative increase in the ODA/GDP ratio from the mid-1970s to its all-time high in 1992, is striking; it confirms that ODA has become a much smaller player in relative terms. In fact, from 2010 to 2016, ODA accounted for about one third of the net financial inflows, as indicated in Table 4.

Figure 23: Net financial flows to sub-Saharan African countries



Source: Authors' illustration of data from Balance of Payments Statistics, IMF (2017a), World Development Indicators, World Bank (2017), and authors' own calculations.

Table 4: Average financial inflows and outflows to sub-Saharan Africa as a share of GDP (%)

		1980s	1990s	2000s	2010–16
Inflows	FDI	0.60	1.33	2.84	4.16
	Net ODA received	5.26	5.89	4.08	2.58
	Personal remittances	0.63	1.02	2.27	2.11
	Portfolio investment	-0.33	2.23	1.06	2.19
Outflows	FDI	0.11	0.63	0.13	2.23
	Portfolio investment	-0.03	0.85	1.09	0.75

Source: Authors' illustration of data from Balance of Payments Statistics, IMF (2017a), World Development Indicators, World Bank (2017), and own calculations.

Among major changes, one also notes that official financing from China to SSA has in recent years picked up very considerably to US\$5 billion per year. This exceeds any other bilateral or multilateral source.³⁵

While the share of ODA has decreased from a high of about 10 per cent in 1992, significant increases have taken place in the role of FDI, personal remittances, and portfolio investment flows. Portfolio flows, and to a somewhat lesser extent FDI, have experienced sizeable fluctuations, whereas remittances have tended to be more stable (noting the increase around 2004 and a more recent dip in 2016).

³⁵ See the keynote by Dr J. Page, cited above.

It is also clear in Table 4 that FDI outflows from SSA have become important in the 2010s; and the overall increase in the relative importance of non-aid-related sources of external development finance since 1992 is striking for the region as one. Moreover, Table 4 illustrates financial inflows to SSA and outflows from SSA separately, and even though SSA countries are not as closely connected to global financial markets as some other regions, the connection is getting closer, as reflected in increasing gross inflows and outflows over time. It must, however, be highlighted that this aggregate picture hides very significant differences among the most robustly performing economies in SSA and those that continue to struggle to break out of fragile circumstances.

The above changes have a series of implications for the assessment of future financing prospects, where private sources have obviously assumed much more importance than previously. Individual countries have also started issuing foreign-currency-denominated sovereign bonds. While this is a logical extension of a more normalized relationship with international capital markets, the need for care and proper management of the consequent debt to avoid a repetition of the failures of the early 1980s should be kept in mind throughout (as noted earlier in relation to the fiscal dimension). Similarly, the whole ODA architecture is undergoing review and discussion,³⁶ both in general and because of the policy signals about drastic cuts in foreign aid issued by the Trump administration in the USA.

It can be confidently stated that an international co-operation system exists that has contributed to the achievement of shared development goals over the past decades.³⁷ There is, nevertheless, ample reason to think hard about this system in the changing global context.³⁸ In 1970, most absolutely-poor people resided in low-income countries. Partly due to successful aid efforts, today there are far fewer such countries (and they have relatively small populations). As a result, about three out of four of the approximately 800 million absolutely-poor people in the world now reside in middle-income countries.

In nearly all developing countries, human and institutional capabilities are manifestly superior to three or four decades ago, and alternative sources of finance are—as alluded to above—more readily available. The value of aid flows relative to economic size is typically small, particularly for middle-income countries, though traditional aid flows are, and should remain, important in the dwindling number of low-income countries. Finally, environmental issues, to which we shall turn below, are far more salient. Middle-income countries will be key players in determining future global concentrations of greenhouse gases and hence the fate of the environment of the planet.

The evidence for aid effectiveness also indicates that aid has rarely been decisive on its own. Looking forward, development assistance will be, almost always, a complement to nationally determined policies and programmes. The main route to success for development institutions, whether bilateral or multilateral, runs through the formation of genuine, long-run, and sustained partnerships that help to facilitate better decision-making and effective action at country, regional, and global levels. Within this 21st-century context, development institutions should place increasing emphasis on fostering the human and institutional capabilities for good decision-making. How to put such a system in place remains a major challenge, as does continued attention

³⁶ See Addison, Singhal, and Tarp (2015).

³⁷ See UNU-WIDER's ReCom website at <http://recom.wider.unu.edu/> (accessed 13 September 2017) for a multitude of studies carried out by UNU-WIDER under five headings: Growth & Employment, Governance & Fragility, Social Sectors, Gender Equality, and Environment & Climate Change. This includes five UNU-WIDER position papers on these topics.

³⁸ See Arndt and Tarp (2017c), on which the following paragraphs draw extensively.

to how the private sector can be best supported in mobilizing its dynamic potential to promote inclusive growth.

As alluded to, in externally generated strategies for development in Africa there has been a tendency to assume that ‘getting prices right’ or ‘getting the regulatory framework right’ would suffice to provide a supportive environment for private sector development. It is now generally understood that a much broader set of interventions are needed, ranging from the provision of public goods to supporting public–private partnerships actively. It is beyond the scope of this paper to address this topic in detail; however, see Newman et al. (2016a, 2016b), Arndt et al. (2016), Gisselquist (2014a, 2015b), and Resnick and Gisselquist (2014) for further background and inspiration.

Finally, whatever the source of development finance—be it domestic or external—its use in achieving development must rest on a sound analytical framework. There is never enough finance for every conceivable project: the task is therefore to select the projects with the best returns to society as whole, to maximize the overall gain within the existing and expected resource constraints. Since the benefits of any project can never be known with certainty, and the costs are subject to variance as well (between the expectation and the outcome), countries need to develop the analytical capacity to manage risk and uncertainty.³⁹ This is of vital importance when they finance their projects via the issuance of domestic or foreign debt: for the repayment of that debt, and the servicing of its interest cost, depends on achieving a reasonable rate of return from the project. Unfortunately, Africa has had a history of projects that failed to meet expectations due to bad design, cost-overruns in their construction, or sheer bad luck (as well as exogenous shocks including political instability). One of the biggest sources of future risk and uncertainty is climate change, to which we now turn.

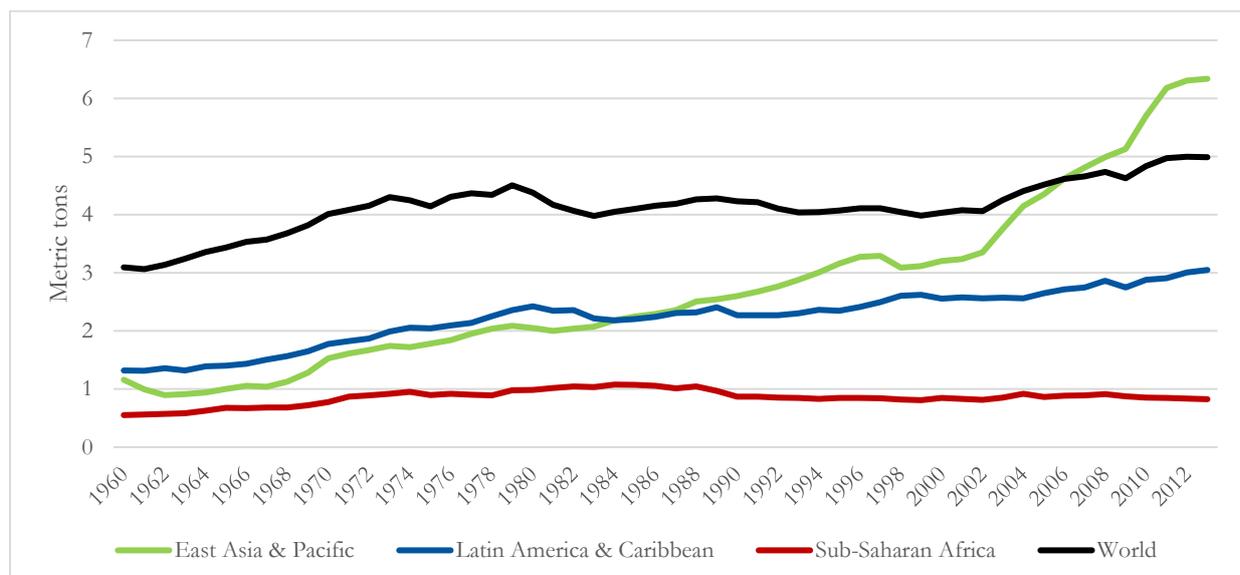
6.6 Climate change⁴⁰

Climate change is one of the defining challenges of the 21st century: how to pursue appropriate mitigation and adaptation policies and strategies is a vital and urgent set of questions. We note that CO₂ emissions per capita from SSA are extremely low in international comparative perspective, as illustrated in Figure 24. Africans are rightly concerned that their development prospects and chances for a better standard of living are being harmed by a global threat which is not of their making. Adaptation is especially crucial for the African continent, and large volumes of finance, both public and private, must be mobilized. With many Africans still reliant on rain-fed smallholder agriculture and pastoralism, an infrastructure that is vulnerable to flooding (and a number of large coastal cities), and a unique biodiversity and wildlife which is globally important, the region is highly vulnerable to climate change.

³⁹ See Bell (2017).

⁴⁰ A useful summary is available in a UNU-WIDER overview of ‘Aid in a Post-2015 World’, on which this sub-section draws, available at <https://www3.wider.unu.edu/sites/default/files/News/Documents/ReCom-summary-aid-post-2015-world-5668.pdf> (accessed 13 September 2017).

Figure 24: CO₂ emissions per capita



Source: Authors' illustration of data from World Development Indicators, World Bank (2017).

Inevitably, climate change will impact countries in different ways. For the region as a whole, and while estimates vary for Africa, the Working Group II contribution to the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment (AR4) states that:

projected reductions in yield in some countries could be as much as 50 per cent by 2020, and crop net revenues could fall by as much as 90 per cent by 2100, with small farmers being the most affected. (Parry et al. 2007)

Lobell et al. (2011), using experiment station data on maize field trials in Africa, find that:

roughly 65 per cent of present maize-growing areas in Africa would experience yield losses for 1 degree centigrade of warming (very likely to occur prior to 2050) under optimal rain-fed management.

These are significant impacts, even if they do appear to be an upper-bound in academic work.

More recent assessments that consider growth and development implications up to 2050 conclude that:

while expected climate change is likely to negatively affect overall growth/development with strong negative effects for some sectors and regions, climate change is unlikely to derail development prospects at least over the next three decades or so.⁴¹

However, independently of precise estimates, there is a huge difference between development impacts if the global temperature rise can be restricted to a maximum of two degrees and those at,

⁴¹ Cited from the UNU-WIDER position paper on 'Aid, Environment and Climate Change', on which this sub-section draws; see <https://www.wider.unu.edu/sites/default/files/PP2014-Aid%2C%20Environment%20and%20Climate%20Change.pdf> (accessed 13 September 2017). See also Arndt and Tarp (2017c), Arent et al. (2017), Akpalu and Arndt (2015), and Tarp et al. (2015).

say, four degrees or more; and Africa is one of the most vulnerable regions to climate change. Food security is going to be an issue as agricultural production is affected by rising temperature and more limited water availability. Exposure to infectious diseases, such as malaria, is going to change as average temperature increase and rainfall patterns change (Boko et al. 2007).

It follows from the above observations that what will happen in SSA depends critically on what happens to global mitigation efforts as well as on government policies to adapt to climate change in SSA. Regarding the latter, one of the five lessons identified by Arndt and Tarp (2015) relates to the inseparability of the development and climate agendas; and UNU-WIDER ReCom work concludes that the existing window of opportunity must now be used in planning for long-term investments such as infrastructure and energy. The Stern Report argued that early action on climate change is essential and will save money in the long run.⁴² If this chance is not taken, the efforts of countries to meet their development challenges will become progressively more difficult—and then more assistance will have to be allocated to disaster relief, putting further pressure on quite limited aid. If climate change becomes acute, then the welcome recent progress of countries from low-income to middle-income status will be halted or reversed, and they will slide back into increased aid dependence.

It is therefore evident that very substantial amounts of finance will have to be mobilized and allocated to climate-change-related investments. This is so for infrastructure, training, and capacity-building, and in support of technology development and innovation (including agricultural technology). One of the specific recommendations of the UNU-WIDER ReCom programme is the distinct need to support mechanisms to mobilize, catalyse, and leverage private and domestic public investment (Arndt and Tarp 2017b). Given the high investment costs of private investment in this area, it is critical to think creatively about ways to encourage more private investment, recognizing that SSA possesses vast amounts of so-far untapped and high-potential renewable energy sources. If they are properly developed, SSA will be able to produce and use more energy, which is indispensable as an integral and sustainable element of the countries' development strategies. It is, however, clear that they cannot be expected to do so unless action against 'dirty' energy sources is taken and supported worldwide. At present, global fossil fuel subsidies vastly exceed the amount of foreign aid annually, and cheapen fossil fuels relative to renewables. For Africa to sustain the recent improvement in its living standards, and to achieve the SDGs, global climate action combined with Africa-specific assistance and investment are vital.

7 Conclusion

We started this paper by noting that it is easy to encounter gloomy assessments of the future development prospects of sub-Saharan Africa. Such views are understandable: the region has been through many crises since independence, not least in the 1980s (the era of structural adjustment and debt crises) and in the early 1990s (the Rwandan genocide), while today the DRC, Somalia, and South Sudan remain unstable or in conflict. Nevertheless, compared with the situation some 30 years ago, real progress has been made.

SSA experienced much-needed growth recovery from around the mid-1990s. Between 1993 and 2015, average household consumption (in purchasing-power parity terms) increased by more than one third from US\$1580 to \$2080, according to the World Bank's World Development Indicators

⁴² See <https://www3.wider.unu.edu/sites/default/files/News/Documents/ReCom-summary-aid-post-2015-world-5668.pdf> (accessed 13 September 2017).

(WDI). This achievement rests on: an overall decline in the incidence of conflict in the region (with the exceptions noted above); the successful transition from apartheid in South Africa (which benefited the whole of southern Africa); some progress in improving governance (e.g. in the management of public expenditures and revenues); improved macroeconomic management, driven by an increasing number of well-qualified African economists in government and universities; and assistance from the international community via peace-keeping as well as bilateral and multilateral aid. Looking forward, SSA has immense potential, including: untapped natural resources, both non-renewable and renewable (such as solar and wind energy); a young population and a decreasing dependency ratio; a better-educated and healthier population than ever before; and an accelerating uptake of information technology.

It is often argued that none of the growth experienced in SSA has benefited poor people; or even worse, that growth led to a deterioration in the conditions of the poorest. This does not seem to be the case based on available empirical evidence. A reduction of 13 percentage points in the poverty rate was experienced between 1990 and 2013, and non-monetary indicators improved, in some cases quite substantially (across a range of indicators), in ways summarized in this paper.

This, and the region's other achievements, are no small accomplishments given the complex historical heritage—including slavery and colonialism—and the global-, regional-, and national-level shocks and disturbances experienced (and to which reference was made throughout this paper). These events have largely been beyond the immediate control of African policymakers, who have had many extraordinarily difficult issues to deal with—and with their task not made any easier when leaderships sometimes engage in abuse of power and corruption. Still, the nations and peoples of SSA have demonstrated a high degree of resilience to adverse circumstances and shocks. This resilience should make SSA an attractive candidate for continued and increasing FDI; perceptions of investor risk have fallen, and can fall further if the region continues to progress.

Nevertheless, the pattern of SSA's growth needs to change. This paper has emphasized the structural characteristics of SSA's economies, including their lack of infrastructure and poor integration, which limit economic 'multiplier effects' from investments. These structural factors also impede the growth of self-employment and wage-employment opportunities. This is especially so for remoter regions with poor-quality transport and communications infrastructure. Sectors such as oil, gas, and mining are highly capital-intensive; investments in the sector have low multiplier effects on the rest of the economy—in the absence of policy action and complementary investments to increase the backward and forward linkages from the extractives sector. To produce more goods and services at higher levels of skill and value added—thereby yielding more jobs and more income—SSA will need industrial policy to overcome the constraints, and realize the opportunities, of each economy (with its own special and unique characteristics and problems). The present momentum for greater integration into the global economy on terms more favourable to SSA is achievable—if the region builds on its gains over the last two decades. This should certainly be possible provided that supportive policy decisions and investments are made, combined with adequate inflows of foreign financing.

For these reasons, public investments in the social sectors are not enough. Better education and health care have been real achievements, and ones facilitated by the MDGs; however, the implementation of the MDGs gave, in practice, more priority to the social sectors than to livelihood creation via agriculture and manufacturing. This was reinforced by the allocation of donor aid, which favoured the social sectors. Investments in education and health improve non-monetary welfare indicators, which is a key objective with widely agreed importance. They also have relatively long gestation times, meaning that the material (monetary) returns take a relatively long time to emerge (e.g. once a young person enters the workforce after their primary, secondary, and tertiary education). While investments in the social sectors are vital to reducing inequality in

health status and educational outcomes, they are insufficient to reduce Africa's high income and wealth inequality, which is the result of insufficient employment opportunities (itself reflecting insufficient structural transformation). Scaling up job creation stands out as a central task for economic policy in SSA in the coming years with wide-ranging implications for getting both growth and sector policies in tune with existing realities and for investments in social sectors and family planning.

High income and wealth inequality implies that while growth has helped to reduce the incidence of poverty over the period 1990–2013, that reduction is less than it would have been if (initial) inequality had been lower (i.e. SSA must raise its growth–poverty elasticity). More than 40 per cent of the African population remains poor, as measured by the \$1.90 a day criterion; and the total number of poor increased from 278 million in 1990 to 390 million people in 2013 as the population grew. Two out of every three Africans are presently living on less than \$3 per day; and inequality has remained stubbornly high in SSA. Moreover, high inequality has probably reduced the growth rate itself, as lower inequality implies a larger and more prosperous set of consumers for local products and services. Therefore, reducing Africa's high inequality can help economies achieve more growth via a bigger domestic market—an important dimension of structural transformation.

The inequality–growth relationship reinforces an important point of strategy: 'hands-off' or 'trickle-down' approaches to economic policy and strategy will be insufficient in coming years. African policymakers and their international development partners need to act on this, to ensure that progress continues—and accelerates. The 'Stockholm Statement', prepared by a group of leading international economists, provides a critique of the 'trickle-down' approach and presents consensus-seeking policy guidance of value to the region in the years ahead (Stockholm Statement 2016).

The potential pitfalls are many. In the short term, the region must cope with the weakening in commodity prices of the last few years: this has been especially severe for the oil economies and their budgets, which are now being revised downwards in the light of lower revenues. In the medium and longer term it is the issue of climate change that is a possible 'game changer' unless appropriate policy action is taken as a matter of urgency. While mitigation is critical at the global level, the climate change agenda for most SSA countries must first focus on adaptation. It is fortunate that there is, according to existing evidence, a high degree of convergence between what is required to promote inclusive development and the actions needed to adapt to ongoing and expected changes in the physical environment resulting from climate change. The global community must generously assist SSA to take on the climate change challenge. Climate change will have major impacts on Africa, and adaptation is very expensive. While domestic resource mobilization has improved in SSA in recent years, foreign aid, climate funds, and private investment (and philanthropy) all have a major role to play in ensuring that Africa stays on a sustainable development path. If the international community does not help Africa in adapting to climate change, fragility will rise, and so will the demands on already stretched budgets for humanitarian assistance.

There is, in conclusion, every reason to push decisively forward in sustainable African development over the next 20–25 years, keeping in mind that economic output will double every 23 years if the annual growth rate can be kept at around 3 per cent. If SSA could achieve 7 per cent—which is the growth rate that East Asia achieved—then output would double every decade. If that growth was more inclusive—providing new and more remunerative opportunities for the talents of all Africans—then the region could match East Asia's success, and deliver a significant fall in the absolute numbers, not just the percentage, in poverty. The UN High-Level Panel on the post-2015 development agenda called for a decisive 'quantum leap' forward in employment and livelihood opportunities. The UN Sustainable Development Goals approved by the world

community in September 2015 reaffirmed this ambition. Such a leap will, however, require concerted action at all levels, including by the international community and national governments. At the same time, unless progress is successfully made the world is going to witness even greater migration than seen so far by people in legitimate search of improved livelihoods for themselves and their families.

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