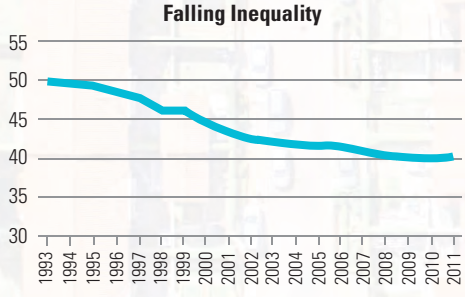
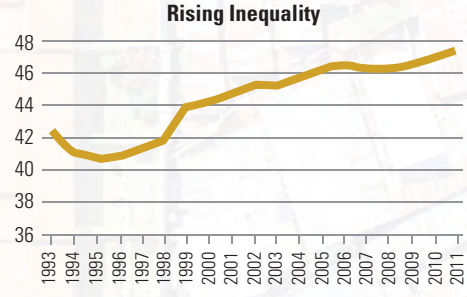
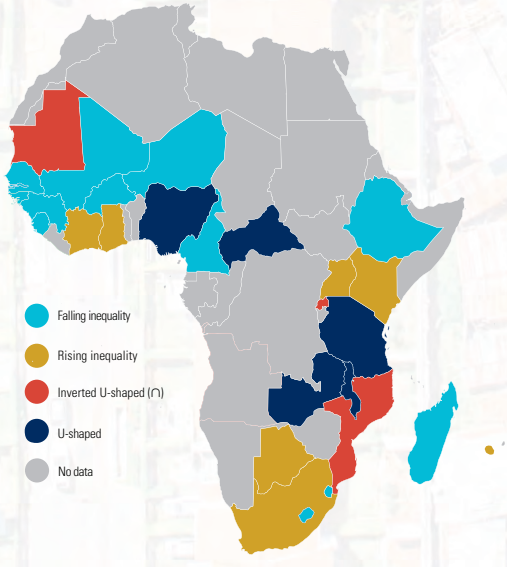
An overview of main changes in income inequality in SSA since the early 1990s





Traditional causes of income inequality

- Output structure
- Smallholder and estate agriculture
- Rural modernization, food production and threat of climate change
- Expansion of mining enclaves
- Urban formal and informal sector
- Tax policy and social transfers
- Impact of democratization on ethnicity and horizontal and vertical inequality

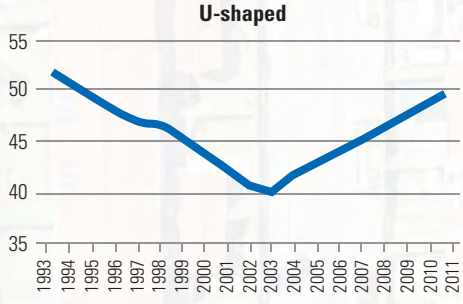


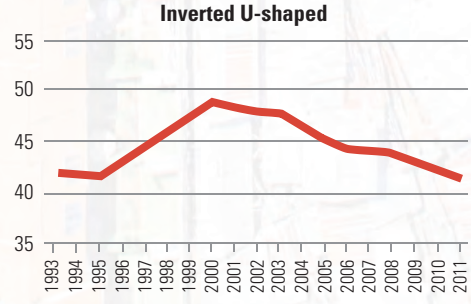
Non-traditional factors affecting income inequality

- Terms of trade gains
- Growing remittances
- Aid flows, FDI and debt relief
- Growth acceleration, but with low poverty alleviation elasticity of growth

Other factors

- Negligible decline in total fertility rate and stable population growth
- Distributive impact of HIV/AIDS
- Technological shocks, including the existence of low-cost and highly divisible communication technologies





2 Inequality Levels, Trends and Determinants in sub-Saharan Africa: An overview of main changes since the early 1990s[1]

GIOVANNI ANDREA CORNIA

2.1 Background, motivation and approach

The last decade has witnessed a renewed interest in the issue of inequality. First, the liberalisation of the 1980s and 1990s led in several cases to a surge in inequality. Second, a growing body of literature has documented the detrimental effects of inequality on long-term growth, poverty, intergenerational mobility, health status, crime rate and political stability. Third, inclusion of inequality among the Sustainable Development Goals (SDGs) has de facto opened the door to scrutiny of the inequality-growth-poverty nexus. Indeed, as shown by Bourguignon (2003) and others, growth elasticity of poverty reduction depends on the initial level of inequality and its change over time. For instance, in Latin America, 40.0 per cent of the poverty decline over 2002-2012 was due to the decline in income inequality. Fourth, greater availability of survey data has made analysis of inequality levels, trends and determinants more practicable than in the past. In addition, recent analyses of health and education inequality and wealth distribution have contributed to the understanding of the interaction among wealth, income, education and health inequality. As a result, policy circles are now paying growing attention to this issue, including in sub-Saharan Africa (SSA) where this debate had received limited attention until the last decade.

The findings of the relevant literature on inequality trends point to: (i) a deterioration of income inequality during the 1980s and 1990s in 70.0 per cent of the 103 countries with acceptable data (Cornia, 2004); (ii) a 'cross-regional bifurcation' of inequality trends during the 2000s – with favourable trends in Latin America, four South-East Asian countries and 17 SSA countries, and worsening ones in the remaining developing and developed regions (Cornia and Martorano, 2012); and (iii) a 'within SSA' divergence in national inequality trends from the early 1990s to 2011. Indeed, inequality rose in 12 countries (40.0 per cent of the countries with data), including large ones such as South Africa, Ghana and Nigeria, and dropped in 17, accounting for 60 per cent of the total. These proportions are inverted when weighing for population size.

[1] The author would like to thank Michael Grimm and UNDP-RBA economists for comments on a prior version of this paper, and Bruno Martorano and Chiara Gualdani for their help with the trend analysis and literature review.

This chapter aims at documenting inequality trends in the region and identifying the factors that explain the early to mid-1990s-2011 inequality changes. Given its path-dependent nature, the chapter first provides a review of inequality's traditional causes. Second, it documents inequality trends over 1991-2011 based on the new Integrated Inequality Dataset for SSA (IID-SSA), presented in Chapter 16. Third, it discusses whether recent inequality shifts could be ascribed to an intensification of structural causes of inequality or to new endogenous, exogenous and policy factors. Tentative conclusions follow about the drivers of recent inequality changes. These will be tested econometrically in Chapter 17 on the entire country sample and for sub-samples of sufficiently homogeneous countries.

2.2 Initial conditions: Post-independence income inequality

Together with Latin America, income inequality in East and Southern Africa and SSA's oil economies has traditionally been one of the highest in the world. With a Gini coefficient of 0.74 for the distribution of income per capita in 1993, Namibia was - and still is - among the top three countries with the highest inequality in the world. However, inequality is substantially lower in West Africa and other parts of the continent dominated by communal land tenure systems. What were the causes of inequality in the 1970s-1980s? A good understanding of these causes is key to explaining the path-dependent nature of today's inequality.

2.2.1 Economic structure and income distribution from post-independence to 1990

During the early decades after independence, income inequality mainly depended on the structure of the economy, asset distribution, returns on assets and policies affecting redistribution in cash and kind. From a distributional perspective, the economy could be broken down into five production sectors, each exhibiting different factors for intensity, output per capita, income inequality and capital share in value added. The features of these five sectors are discussed in the next three sub-items.

2.2.1.1 A dualistic agriculture

Subsistence agriculture absorbed up to 90.0 per cent of the workforce, as in Burundi and Rwanda. Family labour predominated, production focused on food crops and farming practices were rudimentary. Market integration was low because of inadequate road infrastructure. Land yields and output per head were low and remained constant or declined. One of the reasons for the lack of rural modernisation was the urban bias of public policy. For example, in the nine countries analysed by Norton (1987), rural areas received a share of public expenditure ranging from 17.0 to 49.0 per cent of their contribution to gross domestic product (GDP), while rural savings were drained to the cities and domestic terms of trade discriminated against agriculture. Land property rights varied markedly across sub-regions. In then land-abundant West-Central Africa, communal land ownership prevailed, there was no landed gentry (Moyo and Yeros, 2007) and inequality was low (table 2.1). In contrast, in the white settler economies of East and Southern Africa, small family plots, estates and large farms were owned privately, land concentration was high and rural wages were low.

However, also in the land-abundant nations of West and Central Africa, rapid population growth gradually altered farming and land tenure systems. With rapid growth in food demand, most of the new families being formed every year migrated to marginal lands subject to wind and water erosion. This led to declining yields and output and, in extreme cases, soil erosion. These well-documented processes, affecting Burundi, Ethiopia and the Sahel on a massive scale, reflected the inability to

TABLE 2.1 Average Gini coefficients of land concentration by type of land tenure system

Countries with dominant communal land tenure systems		Land Gini	Countries with dominant white-settler dualistic land tenure systems		Land Gini
Burkina Faso	(1993)	39.1	Liberia	(1971)	68.1
Mali	(1960)	45.1	Uganda	(1991)	57.4
Niger	(1980)	31.2	Tanzania	(1960)	70.0
Senegal	(1960)	46.7	Zambia	(1971)	69.9
Guinea	(1989)	45.2	South Africa	(1960)	64.3
Sierra Leone	(1970)	42.4	Swaziland	(1971)	83.5
Côte d'Ivoire	(1974)	41.5	Madagascar	(1970)	80.4
Ghana	(1970)	53.0	Mauritius	(1930)	74.2
Togo	(1961)	45.2			
Cameroon	(1972)	40.7			
Gabon	(1974)	40.2			
Congo (Zaire)	(1970)	53.2			
Ethiopia	(1977)	42.4			
Mozambique	(1999)	36.8			
Average		**43.0**	**Average**		**70.9**

Source: Based on Frankema (2005).
Note: The years represent the dates for the data used for the computation of the land Gini.

manage the transition from a land-abundant shifting agriculture to input-intensive settled farming. For instance, in Niger, in the 1980s, bad harvests occurred every ten years, while over 1998-2010 they occurred every 2-3 years. During years of bad harvest, small-farmers affected by production shortfalls sold their land at distress prices. Increasingly frequent food crises have thus led to the formation of a class of medium-scale farmers and one of landless workers (Cornia and Deotti, 2014).

In contrast, the estate sector operated as capitalist farms. With the introduction of cash crops, land became vastly more valuable and significant land markets emerged alongside the beginning of a system of tenancy and sharecropping (Ghai and Radwan, 1983). This led to radical changes in land concentration, use, tenure and yields, and growing land and income concentration. By the 1970s, large farms and estates were estimated to own 20.0 to 40.0 per cent of the land, while by 1985, 15.0 per cent of rural households were estimated to be landless and another 30.0 per cent near-landless (FAO, 1988). For instance, in Malawi, estates inherited from white settlers expanded in parallel with the emergence of land markets and with shifts in public policy (Chapter 13). Such estates produced cash crops (tea, cocoa, tobacco, cotton, etc.), which were more capital-, inputs- and skill-intensive, and employed landless labourers at low wages. Inequality was higher than in subsistence agriculture (ibid.). While public expenditure on roads, input subsidies and extension services was modest, it favoured estates at the expense of smallholders (FAO, 1986).

2.2.1.2 A resource enclave

This comprised oil and mining, which was particularly important in at least 12 countries (table 2.6). Countries endowed with natural resources tend to grow more slowly over the long term and have higher income and asset concentration (Sachs and Warner, 1995). In this sector, production requires

a great deal of capital and few unskilled and semi-skilled workers. This sector was and is mainly operated by multinationals that remit their profits abroad and are staffed by expatriates recruited at internationally competitive pay scales. Overall, the wage share in this sector is low, unequally distributed and the capital share is high.

2.2.1.3 A dualistic urban sector

The formal sector comprises employees of the public sector, foreign firms and manufacturing and service enterprises (e.g. transport and utilities) located in urban areas, as well as well-capitalized businesses operating in trade and services. Because of colonial policies, at independence, most African countries had levels of industrialisation far below the 'Chenery norm' and, at best, employed 15.0-25.0 per cent of the urban workforce (van der Hoeven and van der Geest, 1999). Formal sector earnings were much higher than in agriculture, due to the higher human capital of its employees, higher capital per worker, preferential wage arrangements and collective bargaining. Thus, urban formal sector earnings were 2-4 times higher than rural ones (table 2.2). This bias was not confined to earnings. Sahn and Stifel (2004) found equally large gaps in health and education on Demographic and Health Surveys (DHSs) for 24 countries.

TABLE 2.2 Ratio of average earnings in manufacturing and agriculture

	1980-1982	1986-1988	1989	1990	1991	1992	1993	1994	1995
Botswana	2.95	3.22	2.67	2.38	2.65	2.49	2.78	2.23	2.37
Ghana	1.49	1.82	1.88	2.15	–	–	–	–	–
Kenya	2.95	2.80	2.82	2.82	2.71	–	–	–	–
Malawi	3.81	4.25	3.96	4.36	3.51	–	–	–	–
Zimbabwe	4.53	4.23	4.41	4.35	4.66	6.55	5.09	5.43	6.45

Source: Mazumdar (with Mazaheri) (2000).

In contrast, the urban informal sector employed workers with low human capital and immigrants from rural areas. This sector comprised microenterprises, artisans, domestic servants, daily workers, informal traders and so on. Given an infinitely elastic supply of labour and the neoclassical nature of the informal labour market, wages were much lower than in the formal sector. The formal-informal urban earnings gap was therefore as high as the rural-urban one. The Structural Adjustment Programmes (SAPs) of the 1980s and 1990s raised job informalisation in the urban economy since many manufacturing firms went bankrupt because of trade liberalisation (table 2.13) and their workers had to accept informal jobs. Finally, this sector was characterised by a highly polarized distribution of income.

In view of the above, in most countries, the ranking of average gross income/capita (Yc) of the above sectors was as follows:

(1) $Yc_{\text{resource enclave}} > Yc_{\text{urban formal}} > Yc_{\text{commercial agriculture}} > Yc_{\text{urban informal}} > Yc_{\text{subsistence agriculture}}$

In addition, given the distribution of land, mining assets and human capital, and supply/demand and institutional conditions in the labour market, in countries with low land-concentration and weakly developed commercial agriculture, the Gini coefficients of these sectors were ranked as follows:[2]

[2] For instance, Cogneau et al. (2007) found that for Côte d'Ivoire, Ghana, Guinea, Madagascar and Uganda, the Gini coefficients in agricultural (non-agriculture) incomes were: 0.41 (0.59), 0.45 (0.48), 0.48 (0.53), 0.49 (0.52) and 0.46 (0.50), respectively.

(2) $G_{\text{resource enclave}} > G_{\text{urban informal}} > G_{\text{urban formal}} > G_{\text{commercial agriculture}} > G_{\text{subsistence agriculture}}$

while in those with high land concentration and a developed commercial agriculture, the ranking was as follows:

(3) $G_{\text{resource enclave}} > G_{\text{commercial agriculture}} > G_{\text{urban formal}} > G_{\text{urban informal}} > G_{\text{subsistence agriculture}}$

Finally, the ranking of sectoral output shares varied depending on the relative importance of the five sectors. In countries where the resource sector exhibited a share of total output greater than 20 per cent (table 2.6), output shares were ranked as follows:

(4) $Sh_{\text{resource enclave}} > (Sh_{\text{commercial agriculture}} + Sh_{\text{subsistence agriculture}}) > Sh_{\text{urban informal}} > Sh_{\text{urban formal}}$

while in countries with no or a small mining/oil sector, the same ranking was as follows:

(4') $(Sh_{\text{commercial agriculture}} + Sh_{\text{subsistence agriculture}}) > Sh_{\text{urban informal}} > Sh_{\text{urban formal}}$

2.2.2 Rural-urban migration

Given the large differences in income per capita (Y/c) and access to public services (PS), it might have been expected that rural workers would have tried to migrate to urban areas, as described in the Harris-Todaro model (Harris and Todaro, 1970) below.[3] Migration should have occurred until the following inequality held:

(5) $Y/c \text{ rural} \cdot p_r + PS_r \cdot p'_r < (Y/c \text{ urban formal} \cdot p_{uf} + Y/c \text{ urban informal} \cdot p_{ui}) + PS_u \cdot p'_u$

where p_r, p_{ui} and p_{uf} are the perceived probabilities of finding a job in the rural, urban informal and urban formal sectors. p_r is equal to 1 (as the unemployment subsidy does not exist in rural areas), $p_{ui} > p_{uf}$, and $p_{uf} + p_{ui} = 1$. Decision to migrate was also influenced by the perceived greater access to public services in urban areas (PS_u) relative to rural areas (PS_r), where $p'u$ and $p'r$ are the probability of being able to access such services. This model suggests that job creation and improved access to health, schooling and water in urban areas increase rural-to-urban migration and employment in the informal sector. At the same time, an increase in Y/c_{rural}, due to modernisation of agriculture, tenancy reform, improved services and so on, reduces the propensity to migrate.

In view of the large and persistent urban-rural income and services gap, and of the growing shortage of farmland due to population growth, based on equation (5) one would have predicted much faster urbanisation. This did not occur (table 2.3). In contrast, from 1990 to 2010, urbanisation in SSA grew more slowly than in other less developed regions. This was possibly due to a decline of the formal sector, as a result of deindustrialisation and slow modernisation of services, or to an increase in enclave incomes, which occurred in about 10 cases. A second hypothesis is that, as shown by Sahn and Younger (2014) for five SSA countries, distribution of health gains for children favoured mostly the poor living in rural areas. Finally, in some countries, land policy restrictions (see Chapter 13 on Ethiopia) raised costs of migration due to the risk of land confiscation and loss of local safety nets (Gebeyehu, 2014). Yet, with a continued decline in farmable land per capita and limited opportunities in rural non-agricultural activities, rural-urban and international migration will become unavoidable and will likely entail large unequalising effects.

[3] Alternative theories argue that rural to urban (r-u) migration is due to decreasing land/man ratios, a household risk diversification strategy as urban and rural incomes covariate little, or the irrelevance of formal education in rural areas.

TABLE 2.3 Trend in the percentage share of urban population

	1960	1970	1980	1990	2000	2010
Less developed regions	21.9	25.3	29.4	34.8	39.9	46.1
Difference over prior year		*3.4*	*4.1*	*5.6*	*5.1*	*6.2*
Sub-Saharan Africa	14.8	18.2	22.4	27.1	30.8	35.4
Difference over prior year		*3.4*	*4.2*	*4.7*	*3.7*	*2.4*
Central Africa	17.7	22.0	27.5	32.2	36.8	41.5
West Africa	14.7	18.7	23.6	30.2	34.7	41.6

Source: United Nations Population Division (2015).

2.2.3 Regressive state redistribution

In SSA, during the 1980s-1990s, redistribution rarely improved the lot of the poor owing to the regressive or neutral nature of taxes and transfers. Around 1990, tax revenue on average accounted for 10.4 per cent of GDP on regressive value added tax (VAT), trade taxes and 'other taxes', for 2.0 per cent on (equally regressive) social security contributions, and for 4.0 per cent on progressive corporate income tax (UNCTAD, 2012, table 5.2). Non-tax revenue due to royalties accounted for another 5.6 per cent of GDP (ibid.). In turn, in 1989, social insurance transfers amounted to 1.0 per cent of GDP and were dominated by regressive transfers to formal sector employees, while social assistance was non-existent (ILO, 1996). Similarly, subsidies in kind were affected by a strong urban and class bias, and mostly had a regressive incidence (table 2.4).

TABLE 2.4 Benefit incidence analysis of public spending on education and health in the 1990s, sub-Saharan Africa (unweighted averages of total sectoral spending)

No. of sample countries	All		Primary education		Secondary education		Tertiary education	
	Poorest	Richest	Poorest	Richest	Poorest	Richest	Poorest	Richest
10	12.8	32.7	17.8	18.4	7.4	38.7	5.2	54.4

No. of sample countries	All		Primary health care		Health centres		Hospitals	
	Poorest	Richest	Poorest	Richest	Poorest	Richest	Poorest	Richest
9	12.9	28.6	15.3	22.7	14.5	23.7	12.2	30.9

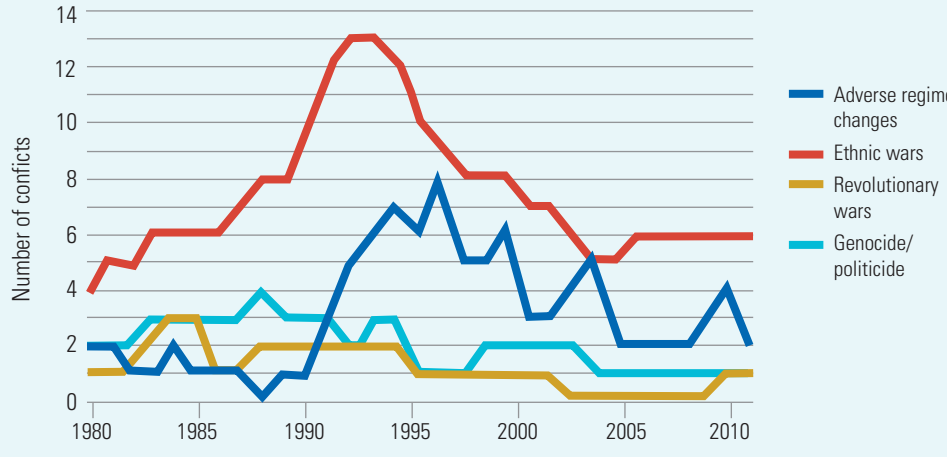
Source: Extracted from tables 2 and 3 of Davoodi, Tiongson and Asawanuchit (2003).

2.2.4 Ethnic-horizontal inequality and conflicts

While there are strong ethical and economic reasons for reducing horizontal inequality among ethnic, religious and other groups, social psychologists have pointed to the difficulty of achieving a 'fair distribution' in heterogeneous societies, as people's sense of fairness is limited to those within a particular community (Stewart, 2014). Kimenyi (2006) notes that in much of SSA, distribution of public jobs, contracts and access to education is often based on ethnicity, a fact that affects regional and overall inequality. Public policy is influenced by ethnic loyalties, which explains the underprovision

of public goods and the diffusion of patronage goods. In these societies, broad redistribution received little support. At the same time, market forces or epochal changes (decolonisation or the erosion of apartheid) possibly reduced ethnic inequality, as in the case of South Africa over the 1975-1991 period. Indeed, racial discrimination represented an obstacle to development and was gradually abolished. While total inequality stagnated, the decline in inter-racial inequality was accompanied by rising intra-racial polarisation among whites and blacks (Jenkins and Thomas, 2004). The first half of the 1990s was also affected by a growing number of ethnic wars, coups and other conflicts (figure 2.1). Collier and Hoffler (2000) attributed them to 'greed' (entailing violent conflicts for control of mining resources) or 'grievances' (due to political repression). In turn, Stewart (2000) emphasised the role of 'horizontal inequality' as a trigger of these conflicts.

FIGURE 2.1 Trend over time in the number of conflicts per year



Source: Menchi-Rogai (2011).

2.2.5 Gender inequality

Regardless of the provisions of legal systems, gender inequality was and is rooted in social and religious norms on women's rights to land, inheritance, marriage, division of labour, access to education, credit, employment and participation in social and political life. For instance, while Kenya's Constitution outlaws gender discrimination, it also upholds gender-biased customary law on marriage, divorce and inheritance. Measurement of gender inequality is problematic due to a near-total lack of data. Household surveys focus on the household as a whole and permit computing 'average household income or consumption per capita', de facto ignoring interpersonal distribution. Consequently, Gini coefficients substantially underestimate the distribution of well-being among individuals. Ad hoc studies help disentangle the sources of gender inequality. Nordman and Wolff (2009) estimated wage regressions controlling for workers' human capital, job characteristics and firm heterogeneity for seven African countries. They found no evidence of difference in male and female earnings in four of these countries once personal, job and firm characteristics were accounted for. Yet, a pure gender bias was evident in two countries. Thus, part of the gender gap is due to discrimination against women

in education, type of employment and the characteristics of the firm where they work, rather than to pure gender bias.

2.3 1991/3-2011 trends in income/consumption inequality

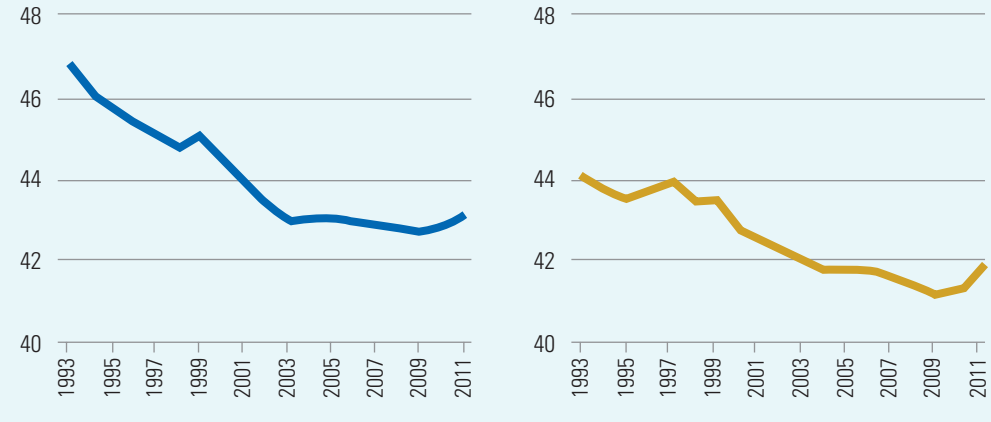
2.3.1 The scant evidence about inequality trends in the region

Little is known about income and consumption inequality in SSA. While there has been an increase in the number of micro studies, very few tried to outline its evolution for a sufficiently large number of countries and years. Pinkovskiy and Sala-i-Martin (2010) argued that since 1995, inequality and poverty declined rapidly, but their results rest on implausible assumptions and data. Instead, Chotikapanich et al. (2014) found that inequality increased from 1997 to 2010 in six countries, while a marginal decrease or inverted U shape was observed in four. Finally, Fosu (2014) found that from the mid-1990s to the late 2000s, the Gini index grew in nine countries, dropped in 13 and remained constant in 1.

2.3.2 Inequality trends 1991/3-2011 derived from the Integrated Inequality Dataset for sub-Saharan Africa

One of the reasons for this contrasting evidence is the lack of a consolidated database of inequality measures. To tackle this problem, Chapter 16 illustrates the Integrated Inequality Dataset (IID-SSA) developed for this study, which compiles in a comparative way the Gini coefficients from all existing data sources for the 29 countries with adequate Gini data. These countries comprise 81.0 per cent of SSA's population and a greater share of its GDP. For each of them, Gini data were fitted with a trend over 1991-1993 and 2011. The resulting average regional inequality trend is summarised in figure 2.2, using both population-weighted and unweighted Gini. With all necessary prudence, given the quality of the data, figure 2.2 shows that the regional Gini fell from 1993 to 2011 by 3.4 points (or 2 points

FIGURE 2.2 Trend in the average Gini coefficient of consumption expenditure per capita for 29 SSA countries, 1993-2011: unweighted data (left panel) and population-weighted data (right panel)



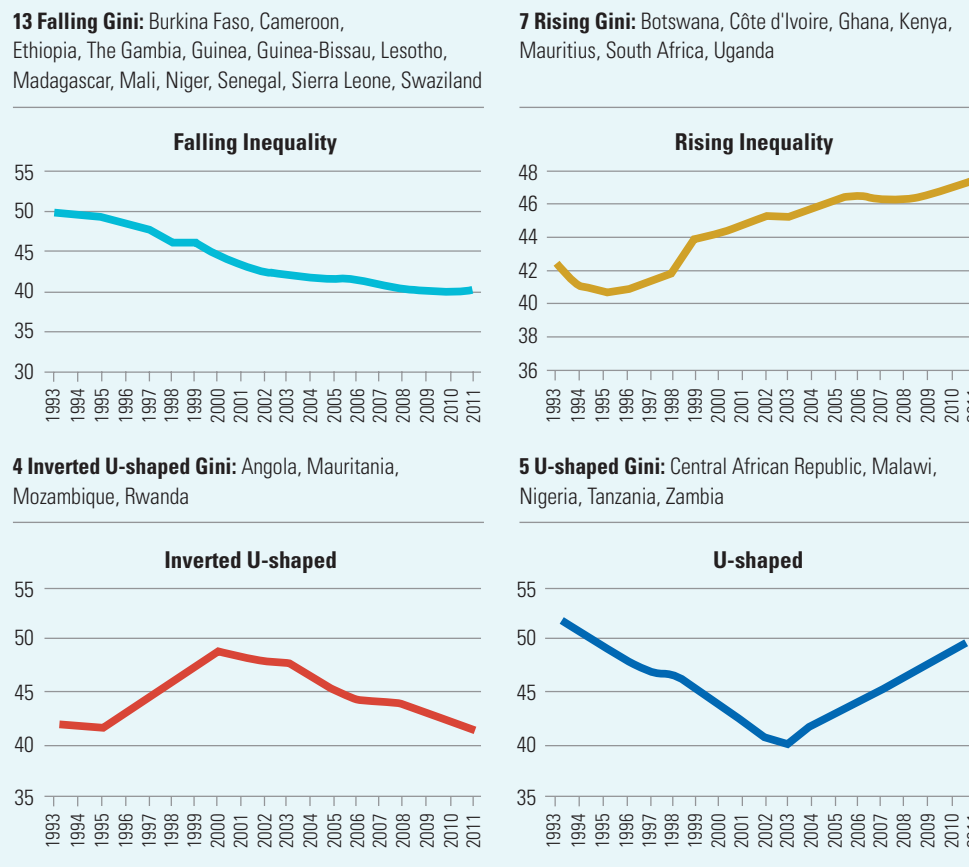
Source: Author's elaboration on the IID-SSA dataset.

for population-weighted Ginis). Yet, from 2009 to 2011, both trends rose by 0.6 points, possibly due to the effects of the financial crises of 2008 and 2010, which also affected SSA.

However, a more detailed analysis of each country's trend shows that figure 2.2 conceals more than it reveals and needs to be broken down into subgroups of countries with similar trends. This disaggregation is shown in figure 2.3, which is based on table 1 of Chapter 16. Based on the shape of their trends, countries were assigned to the falling, rising, ∩-shaped and U-shaped groups. Thus, inequality:

- **fell steadily in 13 countries** (31.0 per cent of the population of the 29 countries analysed). This group overlaps little with the 17 emerging countries identified as 'leading the way' in economic-political areas. Other factors explain their inequality decline;
- **and rose steadily in seven countries** (26.0 per cent of the sample population). Although these countries are few, they have large populations (as in Kenya, South Africa, Ghana, Uganda and Côte d'Ivoire). Their Gini increase was on average less pronounced than the decline observed in the first group;

FIGURE 2.3 Trend in unweighted Gini coefficient of consumption expenditure per capita for four groups of countries, 1993-2011



Source: Elaboration based on IID-SSA dataset.

- followed an **inverted U-shaped** (∩-shaped) in four countries (8.5 per cent of the sample population) and a **U-shaped** in five, including populous Nigeria, whose trend was less pronounced both downward and upward. This latter group represents 35.0 per cent of the sample population. The downward-upward variations of the U-shaped trends were more pronounced than those of the inverted-U trends.

Weighing countries' Gini with their population size does not greatly change the four trends identified, but it alters the extent of the variations (see Chapter 16). Finally, if analysis of the un-weighted Gini is restricted to the 2000s, one obtains flatter trends for the U and inverted-U countries in figure 2.2. This allows aggregating falling with inverted-U countries, and rising with U-shaped ones. This indicates that from 2001 to 2011, there were two groups: 17 countries with an average Gini decrease of 3.8 points; and 12 countries with an average Gini rise of 4.4 points. Repeating the same exercise on population-weighted Gini produces similar results, although the balance favours the 17 falling Gini countries, which recorded a slightly sharper fall, versus the rising ones that recorded a smaller 1.6-point average rise. In brief, even when restricting the analysis to 2001-2011, the 'inequality bifurcation hypothesis' holds. Given data limitations, these results need to be supported by a strong theoretical explanation of the changes observed.

2.4 Decomposing total inequality into between- and within-sector inequality

This section discusses a methodology to identify factors affecting inequality and its changes over time by means of a two-step approach. The first focuses on 'between-sector inequality'; i.e., inequality due to differences in Gini coefficients among main sectors (agriculture, estates, resource enclaves, manufacturing, various types of services, etc.). The second focuses on 'within-sector inequality', which depends on distribution of income by its sources (sales of agricultural output, wages, capital incomes, transfers, etc.) within each sector. If data on income sources are not available, within-sector inequality can be proxied by household characteristics determining income formation (i.e., asset ownership, education, dependency rates and female-headed households). In symbols, a country's overall Gini can be decomposed into between- and within-income/consumption inequality:

(6) $\text{Gini}_t = \text{Gini}_t \text{ between sectors} + \sum w_{it}\, \text{Gini}_{it} \text{ within sectors} + \text{Residual}_t$

where the weights w_{it} are the sectoral value-added shares of sectors i (i.e., subsistence and commercial agriculture, resource enclave, urban informal and formal services), or similar sectoral classifications used, for instance, in Chapters 12 and 13 on Malawi and Ethiopia. By applying decomposition (6) at two points in time, it is possible to derive by difference whether the change in the total Gini between t and $t+n$ can be attributed to changes in between-sector inequality (due, for instance, to a shift toward high-inequality sectors such as mining and modern services), or to changes in within-sector distributions by income sources (e.g. due to a rise in low-inequality wages in the total).

The post-independence literature on SSA mainly emphasised 'between-sector' inequality caused, *inter alia*, by 'urban bias' (see above). In terms of policy, if 'between-sector' inequality dominates, one can question the sectoral allocation of public spending, insufficient redistribution of mineral rents, lack of modernisation of agriculture and manufacturing, limited safety nets, and so on. If, instead, the main source of inequality is 'within sectors', the key policy issues concern the sectoral distribution of assets and human capital, and their rates of return. Elbers et al. (2003) found for Mozambique in 1996/97 and Madagascar in 1993 that 70.0 and 82.0 per cent, respectively, of inequality was explained by 'within-sector' inequality; that within-rural inequality is often greater than within-urban inequality;

and that there should be no presumption that inequality is less severe in low-income communities. Such microeconomic decompositions of within-sector inequality are applied in Chapters 12 and 13 on Malawi and Ethiopia, while the panel regression analysis of Chapter 16 explains the inequality changes of 1991-2011 by focusing mainly on between-sector inequality and macroeconomic changes.

2.5 Changes in traditional causes of income inequality, 1991-2011

2.5.1 Changes in output structure

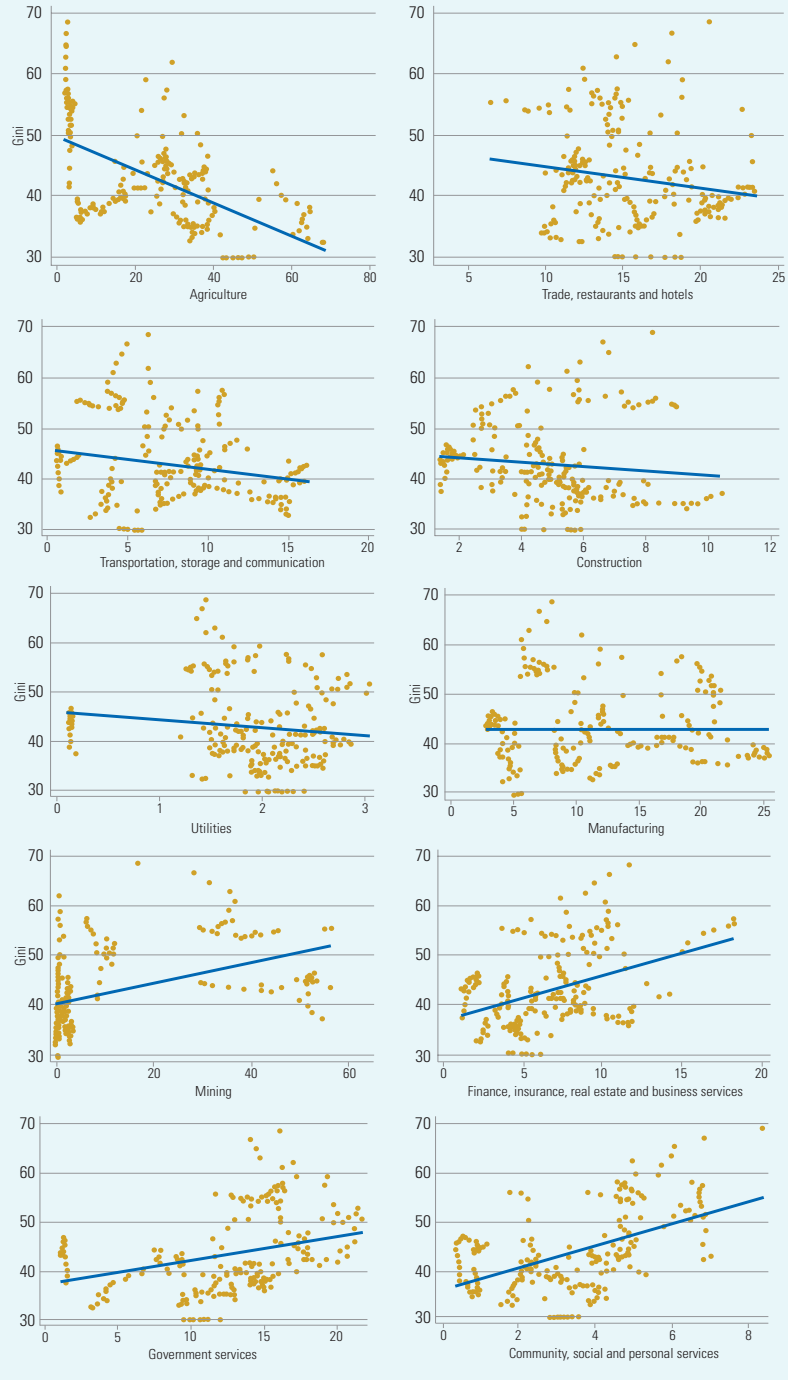
While at independence, most SSA countries tried to increase the value added of the modern sector, particularly manufacturing, with the trade liberalisation and subsidy cuts imposed by SAPs in the 1980s and 1990s, manufacturing mostly shrank and the economy experienced a 'reprimarisation' and informal tertiarisation, which are analysed below. Gini fell where the value added share of modern agriculture, labour-intensive manufacturing and modern services did not decline or rose. In contrast, it increased in countries with stagnant land yields, a drop in manufacturing, a rise of the resource enclave and skill-intensive services, and urban informalisation. The World Bank (2014) underscores that such sub-optimal transition from low- to high-inequality sectors underlies SSA's low poverty alleviation elasticity of growth. There were, however, differences. An equalising pathway was followed by Ethiopia (Chapter 13), Cameroon and Madagascar, as the share of labour-intensive manufacturing rose and that of mining fell, while the shift to high capital-intensive sectors such as utilities; finance, insurance, real estate (FIRE) and transport was less marked; and food output rose in a context of a fairly egalitarian land distribution (table 2.1). These examples confirm that, at the stage of development of most SSA countries, a reduction in inequality requires raising agricultural productivity under egalitarian land distribution (Kelsall, 2013). Figure 2.4 confirms the bivariate relation between income inequality and sectoral shares of value added based on data for 1980-2011 covering Botswana, Ethiopia, Ghana, Kenya, Malawi, Mauritius, Nigeria, Senegal, South Africa, United Republic of Tanzania and Zambia. The first four figures from the top show that, *ceteris paribus*, inequality drops following an increase in the share of agriculture; trade, restaurants and hotels (all of them labour-intensive); transport, storage and communications; and less pronouncedly, construction. In contrast, it changes little in relation to a rise in the value added share of manufacturing (that includes utilities). Finally, inequality clearly rises following a surge in the value added share of capital- and/or skilled labour-intensive mining, FIRE, government services, and community and personal services (that include domestic services).

These different patterns of structural transitions affected not only inequality, but also poverty. As noted by the World Bank (2014), a 1.0 per cent increase in GDP in Cameroon, where agricultural output per capita rose, led to a decline in poverty twice as large as that in Zambia where the mining sector expanded from already high levels (table 2.6).

2.5.1.1 Changes in smallholder and estate agriculture

Since the 1990s, land scarcity has worsened in most of SSA due to population growth, conflicts between farmers and herders, weakening of customary institutions, no or limited land reforms and the purchase of large tracts of land ('land grabs') by foreign investors. All of this had – *ceteris paribus* – an unequalising effect on land distribution and created an army of landless workers seeking employment in rural non-agricultural activities. To respond to these problems, SSA governments attempted since the mid-1990s to reshape land relations by registering customary land rights, liberalising land

FIGURE 2.4 Relation between the share of value added (VA) (x axis) in ten production sectors and the Gini coefficient (y axis) for 11 SSA countries, yearly values over 1980-2011



Source: Elaboration using the GGDC 10 Sector Database; see www.rug.nl/research/ggdc/data/10-sector-database.

markets and redistributing land to achieve a more egalitarian distribution. While state controls over land remain widespread, new tenancy reforms allow land transfers and purchase of land by foreign investors. In Rwanda, nine million plots were registered, enabling smallholders to invest and increase productivity.[5] Concurrently, due to high transaction costs of official titling, local administrators designed informal but registered land transactions systems.

Land redistributions were rare. Approaches ranged from market-assisted reforms (as in Southern Africa) to compulsory acquisitions (as in Zimbabwe) and land redistribution (as in Kenya and Ethiopia). In the latter, the state organizes recurring land redistributions to accommodate population growth (Gebreselassie, 2006), although this risks eroding property rights and incentives to invest. As a result, during the last decade, the government issued property certificates to owners of 20 million small plots that ensure the right of continued land use for 20-30 years and compensation if land is expropriated from registered occupants. A survey of the impact of land certification found evidence of growing investment, benefitting the poor and women (Cheong, 2014).

The last two decades witnessed a rise of state-agreed 'land grabs'. The Land Matrix database lists 375 land transactions in 27 countries (see table 11 in Cornia, 2015). In at least nine of them, the land to be transferred exceeds 20.0 per cent of total arable land. While recognizing the potential benefits of foreign investment in the land, governments should legislate equitable land rights and appropriate institutions for land governance. Indeed, the impact of land grabs is controversial. Deininger and Byerlee (2010) argue that the emphasis on smallholders needs to be reconsidered in the light of their limited success in raising productivity. Yet, before accepting land grabs, it is necessary to ensure that foreign farms generate enough rural employment (an uncertain outcome in view of their high degree of mechanisation), help small producers access new technologies and markets, promote broad development, and do not infringe on the rights of traditional users.

2.5.1.2 Rural modernisation, food production and the threat of climate change

As noted in Section 2.1, SSA experienced a steady decline in agricultural output per capita until the early 1990s (table 2.5).

Since the 1990s, agricultural production per capita grew at low but positive rates, with a likely equalising effect in countries with moderate land concentration such as Ethiopia, Malawi, Rwanda, Cameroon, Angola and Senegal. Except for Zambia and Liberia (that have medium-high land concentration), countries with high land concentration recorded a slower rise or decline of agricultural output per capita. Thus, most countries that raised food/agricultural output per capita recorded a fall in inequality, suggesting a possible causal relationship between these two variables.

What explains this surge in agricultural output per capita? During the early days of the Green Revolution, SSA achieved smaller or no increases in yields for food crops compared to other regions. Yet, some maize yield breakthroughs were recorded since the mid-1990s in East Africa (table 2.5 and figure 2.5). These gains were due to stronger investments in National Agricultural Research Systems and Maize Breeding Programmes, which produced seed varieties adapted to local conditions, while the State stabilised input and output prices, provided some extension services and at times subsidized seeds and fertilizers. Ethiopia (Chapter 13) is a good case in point.

[5] See http://blogs.worldbank.org/developmenttalk/land-rights-and-the-world-bank-group-setting-the-record-straight

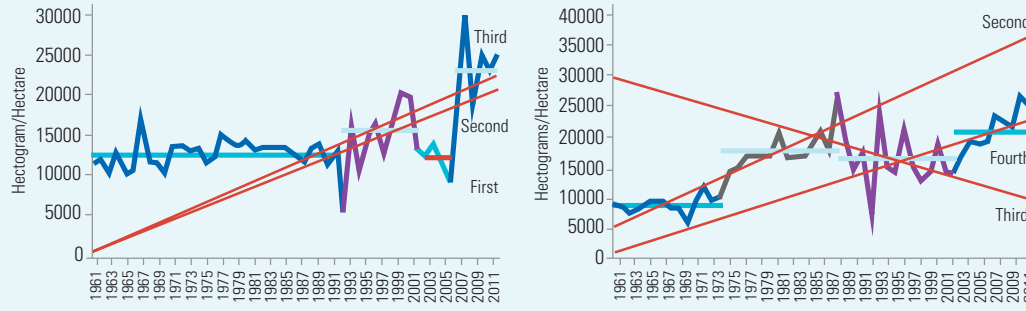
TABLE 2.5 Index of agricultural output per capita (2004-2006 = 100) for 26 of the 29 IID-SSA countries with inequality data

	1961-1965	1971-1975	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011
Ethiopia					76.16	87.32	92.97	109.04	123.54
Kenya	104.42	104.90	103.07	103.93	103.29	91.44	95.51	104.90	103.04
Madagascar	150.40	157.75	134.52	128.36	115.79	103.09	96.03	104.63	103.95
Malawi	80.45	94.11	87.92	74.13	70.16	94.16	98.91	127.94	132.51
Mozambique	138.97	145.78	89.65	84.78	73.38	95.08	97.72	111.54	145.68
Rwanda	94.40	108.18	118.08	100.75	100.82	92.19	98.11	111.15	134.78
Uganda	147.59	196.25	118.25	114.36	111.08	107.07	108.01	94.10	91.03
Tanzania	104.31	101.11	102.07	97.46	85.27	80.02	93.58	101.20	115.42
Zambia	97.39	112.84	84.30	100.88	82.42	82.38	87.44	109.37	146.86
East Africa	**122.83**	**135.41**	**112.66**	**109.36**	**98.30**	**101.02**	**97.84**	**104.21**	**114.43**
Angola	142.18	140.91	57.52	52.36	52.86	57.06	88.73	132.18	176.05
Cameroon	89.04	103.05	87.22	80.85	80.12	85.56	90.02	116.78	134.27
Central African Republic	133.76	144.77	121.85	108.65	100.65	112.26	103.02	103.21	105.41
Central Africa	**134.39**	**131.23**	**110.34**	**105.95**	**101.26**	**98.74**	**98.32**	**106.06**	**113.26**
Botswana	181.06	200.36	122.51	123.03	109.13	100.73	105.36	80.27	93.38
Lesotho	204.22	155.85	116.81	137.84	102.38	134.98	112.01	95.61	100.81
South Africa	104.99	127.40	114.18	114.64	94.64	104.68	102.83	98.54	98.21
Swaziland	68.44	116.66	136.86	132.40	103.20	97.98	97.02	95.21	95.19
Southern Africa	**133.65**	**140.30**	**116.94**	**118.90**	**96.32**	**104.22**	**101.95**	**94.14**	**98.68**
Côte d'Ivoire	56.22	57.27	55.82	67.60	81.20	99.03	104.95	98.95	98.27
The Gambia	53.07	52.97	60.95	76.60	80.34	83.13	97.88	95.85	83.50
Ghana	93.77	101.26	97.28	98.73	94.99	106.69	100.79	97.68	101.03
Guinea	271.09	243.95	156.83	122.16	83.71	87.06	97.45	96.59	67.25
Mali	84.75	88.45	93.51	92.27	92.16	90.13	96.36	100.56	101.42
Mauritania	127.21	150.85	132.31	130.70	75.93	104.21	104.21	87.42	75.22
Niger	56.55	58.94	63.22	80.30	90.57	98.43	102.72	106.56	115.08
Nigeria	163.15	84.78	86.15	120.57	117.58	131.85	102.41	108.11	114.73
Senegal	113.57	77.21	75.60	75.87	78.61	82.54	100.17	125.11	124.87
Sierra Leone	68.78	63.53	47.07	59.02	81.39	88.43	93.25	91.70	86.68
West Africa	**118.99**	**103.40**	**87.47**	**92.98**	**88.62**	**97.28**	**99.63**	**102.15**	**97.26**
Sub-Saharan Africa	**127.47**	**127.58**	**106.86**	**106.80**	**96.12**	**100.32**	**99.43**	**101.64**	**105.91**

Source: Author's compilation based on FAOSTAT (http://faostat3.fao.org/home/E).

Open questions remain about the future of African agriculture. Given the bimodal land distribution prevailing in several countries, should governments aim to raise yields on large-scale farms or on small farms too, to also achieve food security and low inequality? Should governments subsidize productivity growth of smallholders (see Chapter 12 on Malawi)? Or, should they just liberalise

FIGURE 2.5 Phases of maize yields (hectograms/ha) in Malawi (left) and Zambia (right), 1961-2011



Source: Author's elaboration based on FAOSTAT (http://faostat3.fao.org/home/E).

agricultural markets? This approach has some potential but may increase inequality as small-scale farmers with low access to credit and inputs, and living in remote areas are unreached by private markets. Future trends are also threatened by rapid population growth and climate change. Some Sahelian countries are on the brink of a Malthusian trap that will affect poverty and inequality.

As noted by Grimm, Wetta and Nikiemea (2014), in Burkina Faso, an equalising 1.0 per cent growth in food output per capita over the 2000s was achieved by expanding cultivation to semi-arid land and is therefore not sustainable. Also, the Intergovernmental Panel on Climate Change suggests that SSA is expected to be the most affected in the future (Ringler et al., 2011). By 2050, output of several crops is projected to fall by 3.2 per cent despite a rise in cultivated land, as yields will fall by 4.6 per cent due to climate change.

2.5.1.3 Expansion of mining enclaves

During the last 20 years, many of the 27 countries in table 2.6 recorded a rise in the mining rents/GDP ratio. There are no data on inequality for ten of them, but theory suggests that it likely rose due to the lack of redistributive institutions. For the countries with Gini data, there is evidence that the mining rents/GDP ratio rose in parallel with the Gini (figure 2.4). Indeed, as noted in Section 2.2, this sector has the highest 'within-sector' inequality, while the rise of its incomes increased 'between-sector' inequality. Expansion of the resource sector also generates well-known effects on the non-resource tradable sector that is affected by the real effective exchange rate (REER) appreciation caused by commodity bonanzas.

2.5.1.4 Changes in the urban formal and informal sectors

The SAPs introduced in the 1980s and 1990s with support of the International Monetary Fund and World Bank were expected to reduce urban-rural inequality by raising the tradable/non-tradable price ratio and removing the anti-agricultural biases of the 1960s-1970s. The effect on 'between-sector' inequality was expected to be favourable (Christiansen, Demery and Paternostro, 2003). However, things turned out to be more complex than expected. In evaluating the impact of SAPs, Eastwood and Lipton (2004) found that reduction in between-sector inequality was accompanied by rising within-sector inequality in both urban and rural areas. In addition, the urban–rural income

TABLE 2.6 Evolution of the percentage share of natural mining rents on GDP, 1990, 2000 and 2010

Country	1990	2000	2010	Country	1990	2000	2010	Country	1990	2000	2010
(a) % share >20%				(b) % share btw 10-20%				(c) % share btw 5-10%			
Angola*	30.5	42.3	46.9	Burkina Faso	3.5	3.3	10.5	Côte d'Ivoire*	3.0	4.5	6.4
Chad*	4.5	5.9	38.4	Burundi	9.5	9.3	10.9	Ethiopia	6.5	10.1	6.4
Congo (Dem. Rep.)	16.0	21.1	31.8	Cameroon*	11.3	12.7	9.0	Ghana	4.4	5.4	8.9
Congo (Rep.)*	46.0	75.6	66.4	Guinea-Bissau	10.1	11.2	4.8	Malawi	6.7	5.9	3.9
Equatorial Guinea*	12.6	67.0	46.0	Guinea	18.3	10.0	18.2	Mozambique	8.6	4.5	8.7
Gabon*	34.7	50.7	50.0	Liberia	…	16.7	11.0	Sierra Leone	12.6	7.7	3.5
Mauritania	11.6	12.3	18.0	Mali	2.4	2.9	12.3	Tanzania (United Rep. of)	8.3	2.7	7.9
Nigeria*	47.5	46.9	27.7	South Africa	6.3	2.2	9.9	Uganda	9.7	6.7	5.8
Zambia	19.3	4.4	25.8	Sudan	…	12.8	17.6	Zimbabwe	3.2	2.4	9.9
Average	**24.7**	**36.2**	**42.7**	**Average**	**7.7**	**9.0**	**11.6**	**Average**	**7.0**	**5.5**	**6.8**

Source: Author's elaboration based on World Development Indicators (WDIs).
Note: * identifies oil producers according to the IMF Economic Outlook; btw = between.

gap declined only in part, because the higher education of urban residents allowed them to better exploit opportunities brought about by liberalisation, while the urban bias of public spending did not go away. Human capital and access to land emerged as key in determining distribution of the benefits of liberalisation. In addition, the SAPs bypassed remote areas poorly connected to markets because of the lack of roads. Thus, the rural-urban gap may have dropped in areas close to the cities but not in remote areas, so that spatial inequality often rose, as shown by Kanbur and Venables (2005).

2.5.2 Changes in tax policy and social transfers

The years 1991-1993 to 2011 witnessed some improvements in income inequality due to improved tax collection. This was not the case, however, in oil and mining economies suffering from growing tax-dodging and illegal outflows (Ndikumana, 2014). While in the early 1990s, taxation was mostly regressive, since then, the tax/GDP ratio has risen by 6.1 percentage points on average for the region as a whole (table 2.7). The weight of regressive VAT and trade taxes did not increase, while that of income taxes rose by two points. Other revenues (mostly royalties) explain most of the surge. Their distributional impact depends, however, on whether they are taxed and transferred to the poor, a decision that depends on a favourable political economy and the development of redistributive institutions. Christian Aid (2014) offers a pessimistic assessment of the taxation-inequality nexus based on analyses of Ghana, Kenya, Malawi, Nigeria, Sierra Leone, South Africa, Zambia and Zimbabwe. It criticizes the current tax consensus on reducing income tax and expanding VAT. It also argues that heavy reliance on the taxation of natural resources increases tax dodging, exemptions and capital flight.

TABLE 2.7 Trends in tax/GDP ratio and relative importance of tax instruments in Africa

	1990-1995	1995-2000	2000-2005	2005-2010
Total revenue and grants	22.1	21.0	23.8	28.2
- Tax revenue	14.4	14.0	15.0	16.4
- Value added tax	4.4	4.4	4.9	5.4
- Trade taxes	5.3	5.0	4.2	4.2
- Income tax	4.0	4.2	5.1	6.2
of which corporate income tax	*2.5*	*2.4*	*2.3*	*3.4*
- Other tax revenue	0.7	0.4	0.8	0.6
- Social security revenue	2.0	1.8	2.3	2.7
- Other revenues	5.6	5.3	6.5	9.1

Source: UNCTAD (2012).
Note: includes North Africa.

What about changes in social insurance and assistance? Niño-Zarazúa et al. (2012) and the International Labour Organisation (ILO, 2014) show that over 1998-2005, social insurance covered between 1.2 (Niger) and 51.0 per cent (Mauritius) of the working-age population, with an average of 4-5 per cent. Such schemes are rarely progressive. In contrast, non-contributory social assistance transfers (old age pensions, in particular) have become more common in Southern Africa where, with the end of apartheid, white-only transfers were extended to all citizens at a cost of 1.0-3.0 per cent of GDP (table 2.8). In other SSA countries, social assistance programmes lack adequate financing and institutions. In this regard, Garcia and Moore (2012) review the extent and effects of non-contributory cash transfers in the region. While their number increased quickly (up to 123 in 2012), such programmes are generally at the pilot stage and are donor-financed. Lacking a detailed analysis of their incidence, it is plausible to assume that these measures are micro-economically efficient but too small to affect inequality, except in Southern African and Ethiopia. Yet, social assistance has the potential to be expanded massively, at least in a dozen oil/mineral-rich countries that have the fiscal space to introduce new initiatives in this area.

TABLE 2.8 Non-contributory pension programmes in Southern Africa

Country	Age of eligibility	Selection criteria	Monthly income transfer (US$)	% of targeted population	Cost as % of GDP
Botswana	65+	Age and means test	27	85	0.4
Lesotho	70+	Age and citizenship	21	53	1.4
Mauritius	60	Age	61–260 depending on age	100	1.7
Namibia	60+	Age and citizenship	28	87	2.0
Seychelles	63	Age	165	80	3.0
South Africa	63+ men 60+ women	Age and means test	109	60	1.4
Swaziland	60+	Citizenship and means test	14	60	n.a.

Source: Niño-Zarazúa et al. (2012).

2.5.3 Impact of democratisation on ethnicity and horizontal and vertical inequality

The inequality decline recorded in Latin America over the 2002-2012 period was preceded by a return to democracy and the election of progressive regimes (Cornia, 2014). Genuine democracy and electoral participation can reduce the concentration of power and facilitate the transition towards non-ethnic and non-clientelistic policies (Gyimah-Brempong, 2001).

Since the mid-1990s, developments in this area have been encouraging. The end of the Cold War and the demise of client states opened the door to a slow process of democratisation (figure 2.1). Also, the decline of autocratic regimes allowed a return to more accountable institutions in 20 countries. This may have affected inequality through the adoption of less clientelistic policies. Yet, institutions are persistent, and their evolution takes time. There is no evidence, for instance, that with the shift to democracy, horizontal inequality declined (Stewart, 2014). Multivariate analysis shows that the spread of democratic institutions is positively associated with GDP growth, although there is no evidence of its impact on inequality (ibid.). Even democratically elected regimes uprooted only in part the deep-seated corruption existing in most SSA. The Corruption Perception Index for 2005 and 2014 suggests improvements in almost 30 countries (but with only 12 of them recording gains of more than 10-15 points), a deterioration in seven countries and no change in two.

2.6 New factors affecting inequality: A better global economic environment

2.6.1 Terms of trade gains

During the 2000s, rapid growth of the emerging economies resulted in a significant increase in export prices and volumes for several African countries. As a result, between 1998-2002 and 2003 to 2010, the trade/GDP ratio rose (table 2.13), while regional terms of trade jumped from 100.7 in 1997-2001 to 141 in 2011 (IMF, 2013). Although such gains in terms of trade were highly favourable for oil and metal exporters, they generated negative effects in 15 oil-importing SSA countries.

What does economic theory suggest about the impact of these changes on inequality? Most oil, mining and cash crops are produced in enclaves or estates where, as seen in Section 2, asset ownership is highly concentrated, production is capital-intensive and the supply of labour is infinitely elastic. Thus, the recent gains in terms of trade likely generated, *ceteris paribus*, a rise in the share of mining and land rents in total income, and a worsening of between-sector inequality. Under democracy, these rents may be taxed by the State and redistributed through transfers. This option was not available, however, to energy-importing countries. Finally, as argued in Section 2.2, the distributive impact of increasing cash-crop prices (table 2.9) depends on land distribution. The effect of changes in global conditions is tested econometrically in Chapter 17.

2.6.2 Growing remittances

Though smaller than in other regions, SSA's official remittances rose sharply (figure 2.6). Overall, in SSA, remittances are more underreported than elsewhere because informal and often unrecorded remittances from richer neighbouring countries, such as Côte d'Ivoire and South Africa, are more important than in other regions (Ratha et al., 2011). Remittances are particularly important in small countries such as Lesotho (24.4 per cent of GDP) and Senegal (11.0 per cent). Official remittances exceed official aid and have almost reached foreign direct investments (FDI). If including the unrecorded ones, they represent the main source of foreign exchange.

TABLE 2.9 Unit prices of main agricultural commodities exported by SSA

	Unit price	2005	2006	2007	2008	2009	2010	2011	2011/2005
Banana (US)	($/mt)	602	677	675	844	847	868	968	1.61
Cocoa	(cents/kg)	153	159	195	257	288	313	298	1.95
Coffee (Arabica)	(cents/kg)	253	252	272	308	317	432	597	2.36
Cotton	(c/kg)	121	126	139	157	138	228	332	2.74
Groundnut oil	($/mt)	1060	970	1352	2131	1183	1404	1988	1.87
Logs (Cameroon)	($/m^3)	...	318	381	527	421	428	484	1.52
Maize	($/mt)	98	121	163	223	165	185	291	2.97
Palm oil	($/mt)	422	478	780	948	682	900	1125	2.67
Rubber (US)	(cents/kg)	…	231	248	284	214	386	482	2.09
Sugar (US)	(cents/kg)	47	48	45	47	55	79	84	1.79
Tea (Mombasa)	(c/kg)	148	195	166	221	252	256	272	1.84
Tobacco, US import	($/mt)	2789	2969	3315	3588	4241	4304	4485	1.61

Source: UNCTAD (2012).

The theoretical literature suggests that remittances have a favourable effect on short-term growth, reserves accumulation and poverty alleviation, but are mainly unequalising, as only middle-class people are able to finance the high costs of mostly illegal migration (IMF, 2005). Micro-evidence from Ghana and Ethiopia, which send many doctors, pharmacists and nurses to the United Kingdom and the United States of America, confirms this hypothesis. Similar conclusions are reached by Ratha et al. (2011) for Nigeria, Senegal and Uganda. In all likelihood, remittances from neighbouring countries are more equally distributed, because migrants also originate from poor rural areas, and migration is often seasonal and its cost, lower.

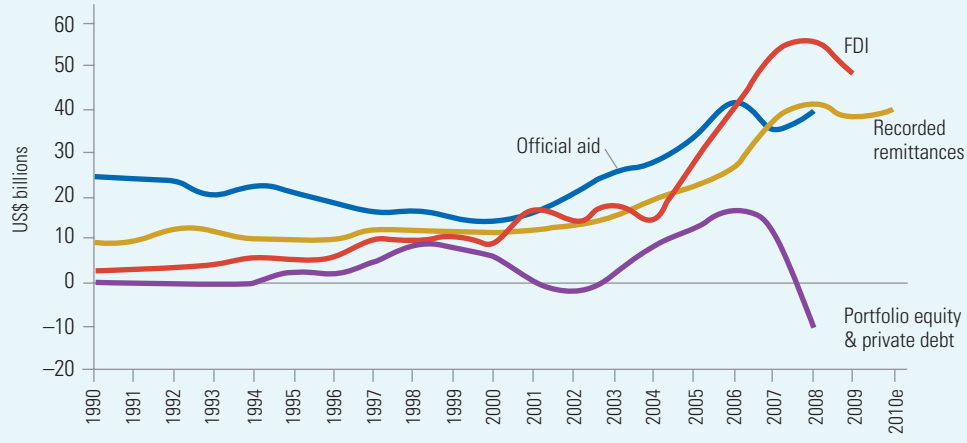
2.6.3 Aid flows, FDI and debt relief through heavily indebted poor countries

On average, since 1997, SSA (excluding Nigeria and South Africa) have received aid flows of around 3.0 per cent of GDP, with little change over time (figure 2.6). Low-income countries received on average 3.0-4.0 per cent of GDP, fragile countries 5-6 per cent (table 2.10) and countries exiting from conflicts much more. The poorest half of SSA recorded a sustained inflow of official grants equal to 3.0 to 6.0 per cent of GDP, which remained unaffected by the onset of the 2008 world recession.

The impact of international aid is controversial. Boon (1996) argues that it mainly raises unproductive expenditures; others, that it is effective only if structural reforms have been implemented. Bourguignon and Sundberg (2007) instead trace its impact to the nature of conditionality and governance, and to the adoption of specific policies, as countries with more flexible conditionality and good governance recorded better outcomes. Overall, the majority view is that international aid can have a role in stimulating growth and fighting poverty, and hence reducing inequality. Juselius, Møller and Tarp (2011) showed that aid had a positive long-run impact on the macroeconomy and investment in 33 of the 36 countries analysed.

FDIs in SSA have historically been marginal, but have been increasing since 2004. They are mainly directed to capital-intensive extractive industries and therefore are unlikely to have an equalising

FIGURE 2.6 Remittances and other resource flows to sub-Saharan Africa, 1990-2010



Source: Ratha et al. (2011).
Note: The 2010 data are preliminary estimates.

TABLE 2.10 Official grants/GDP in main aid receivers and in the aggregate

	1997-2001	2002-2003	2004-2008	2009-2010		1997-2001	2002-2003	2004-2008	2009-2010
Lesotho	16.8	15.2	33.0	29.2	Congo (Dem. Rep.)	3.8	8.8	6.4	8.9
Burundi	4.8	14.3	17.2	16.5	Ethiopia	4.3	7.6	5.7	5.7
Rwanda	9.2	10.6	10.6	10.8	Uganda	5.5	6.3	5.2	2.2
Malawi	7.1	10.7	10.4	12.6	Guinea-Bissau	12.5	8.3	5.8	5.6
Namibia	11.6	9.6	10.8	12.5	Tanzania	4.9	4.5	3.5	3.1
SSA	1.0	1.1	1.0	1.3	Low-income SSA			3.6	3.5
SSA excluding Nigeria and South Africa	2.8	2.7	3.0	2.9	Fragile countries			5.1	5.9

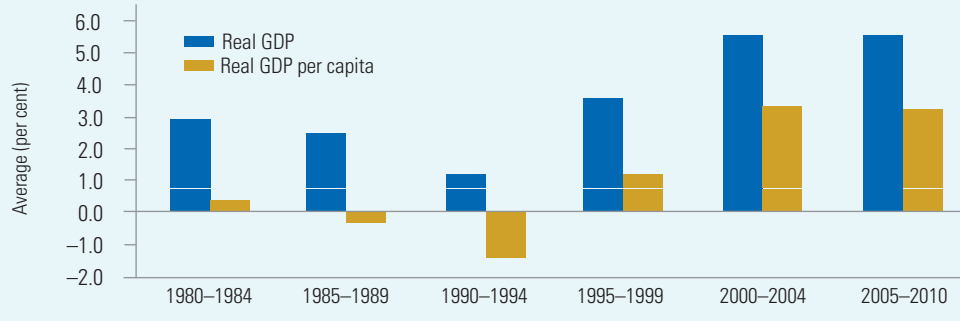
Source: Author's compilation based on various issues of the IMF's World Economic Outlook for Africa.

impact. As noted, this conclusion depends on the extent of the sector's taxation of profits and rents. But, as argued by Ndikumana (2014), at least 8.0 per cent of petroleum rents earned by oil-rich countries ends up in tax havens in advanced countries. In contrast, FDIs in labour-intensive manufacturing and infrastructure (as in Ghana, Ethiopia, Mozambique and South Africa) raised the integration of domestic and world markets and favourably affected inequality via growth.

2.6.4 Growth acceleration, but with low poverty alleviation elasticity of growth

A potentially important determinant of recent inequality changes has been the growth acceleration that began in 1995 and continued until 2011 (figure 2.7). GDP per capita growth was 1.5-2 points higher in oil-exporting countries, where inequality mostly rose. Overall, poverty alleviation elasticity of growth has been low; i.e., 0.27 versus around 2.0 in other developing regions (IMF, 2011). This suggests that, on average, the present growth pattern is far from inclusive, as it does not generate enough jobs or subsidies for the economically inactive population. The main reasons for this are that, during the last 20 years, inequality has risen hand-in-hand with GDP growth in half of the countries, while in the other half, high initial inequality reduced the poverty alleviation elasticity of growth (ibid.). In countries where inequality rose, growth took place mainly in the oil/mining, real estate and urban formal sectors, rather than in agriculture, labour-intensive manufacturing and modern services (figure 2.7). A second factor is that, in many countries, returns to capital and skilled labour rose faster than returns to unskilled labour. Case studies by IMF (2011) suggest that growth was equalising only where employment opportunities in rural areas and labour-intensive manufacturing improved.

FIGURE 2.7 Growth rate of real GDP and real GDP/capita, selected sub-periods



Source: IMF (2011).

2.7 Domestic endogenous and policy changes

2.7.1 Negligible decline in total fertility rate and stable population growth

United Nations Population Division (2015) data show that from 1990-1995 to 2010-2015, total fertility rate (TFR) dropped only from 6.4 to 4.9 in East Africa, 6.8 to 5.8 in Central Africa, and 6.4 to 5.5 in West Africa. In the extreme case, in Niger, the drop was from 7.7 to 7.6. In Southern Africa, it dropped from 3.5 to 2.5, which was in line with the average for less-developed regions. There are, however, a few examples of rapid TFR decline, as in Rwanda and Ethiopia, where public policy explicitly addressed this issue (Chapter 14). The slow TFR decline and the high proportion of women of fertile age have led to persistently high population growth during the period analysed (table 2.11). High population growth and dependency rates have negatively affected inequality and will continue to do so over the next few decades, as shown by the empirical evidence. For instance, Leite, Sanchez and Ruggeri Laderchi (2009) found that the increase in urban inequality recorded in Ethiopia from 1995 to 2004 was also due to the fact that the middle class had younger well-educated

TABLE 2.11 Trends in population growth rates by main sub-regions of SSA

	1960-1965	1970-1975	1980-1985	1990-1995	2000-2005	2010-2015
Less developed regions	2.26	2.39	2.15	1.81	1.43	1.33
Sub-Saharan Africa	2.38	2.66	2.81	2.69	2.61	2.65
East Africa	2.62	2.86	2.92	2.54	2.74	2.83
Uganda (highest)	3.32	2.73	3.11	3.36	3.37	3.33
Central Africa	2.29	2.52	2.82	3.33	2.90	2.74
Angola	1.80	2.26	3.42	3.16	3.45	3.09
Southern Africa	2.56	2.67	2.55	2.39	1.41	0.85
Namibia	2.49	2.98	2.53	3.12	1.32	1.87
West Africa	2.14	2.50	2.75	2.68	2.61	2.73
Niger	2.79	2.78	2.78	3.35	3.64	3.85

Source: United Nations Population Division database.

heads of households who lived alone or lived with a partner with few or no children. In turn, evidence for Uganda shows that high population growth retarded economic development and was in part responsible for slowing poverty reduction and raising inequality (Klasen, 2004).

2.7.2 Distributive impact of HIV/AIDS

In 2011, 80 per cent of the 34 million HIV-infected people lived in SSA, where an even higher share of the related deaths occurred. The HIV/AIDS rates of increase from 1995 to 2011 were highest in East and Southern Africa (table 2.12). HIV/AIDS raised inequality and the rural-urban income gap (Cornia and Zagonari, 2007). GDP dropped by an estimated 0.2-0.3 a year in low-HIV countries and 1.3 per cent in those with prevalence rates greater than 20 per cent. At the outbreak of the HIV pandemic, infection rates were higher among the urban middle class. This changed when prevention campaigns raised awareness among this group, which also gained access to antiretroviral drugs, but this was less the case for poorer rural families. Since the mid-2000s, its prevalence started declining due to better prevention and greater availability of antiretrovirals.

TABLE 2.12 HIV prevalence among 15-49-year-olds in countries with rates greater than 5%

	1990	1995	2000	2005	2011
Southern Africa	3.3	14.3	21.1	21.1	19.7
West Africa	2.4	5.7	5.8	4.6	4.3
East Africa	6.1	8.9	8.5	8.0	7.5
Average sub-Saharan Africa	3.9	9.6	11.8	11.2	10.5

Source: Author's compilation based on WDIs.

2.7.3 Technological shocks

Kaplinsky (2014) argued that imported Western technologies promote exclusionary growth since they are capital-, energy- and standards-intensive. Yet, the last decade has witnessed the birth of low-cost and highly divisible technologies such as cell phones, Internet and solar power, which have helped integrate previously marginalised producers and consumers into the market. The new technologies with the highest potential effects on equity are the Internet and cell phones. For both, the number of subscriptions has increased sharply since 1998. These technologies have low service costs, and in rural areas, shared cell phones are the main source of communication, in this way favouring low-cost market integration of the poor in the fields of transport, postal services, information and mobile banking. These technologies affect inequality favourably due to low entry barriers, investments and transaction costs, and no economies of scale. While the poorest may still be unable to access them, the low-middle class became integrated into the market exchange through their diffusion.

2.7.4 Impact of domestic policy changes

2.7.4.1 Economic policies

According to Ndulu et al. (2008), SSA's macro problems of the 1970s, 1980s and early 1990s were rooted in excessive state regulation and intervention, inefficient redistribution between ethnic-regional groups, unsustainable public spending covered by foreign borrowing, and state breakdown. Since the mid-1990s, many countries have adopted more sensible economic policies, the impact of which has been enhanced by a favourable global environment and the completion of the Heavily Indebted Poor Countries (HIPC) initiative. Table 2.13 summarises the main policy changes and outcomes. Domestic markets were substantially liberalised. For instance, Ethiopia eliminated compulsory food delivery by farmers, relaxed restrictions on private grain trade, devalued the birr and liberalised the foreign exchange market. In Uganda, coffee and cotton marketing and exports were liberalised, export taxation abandoned and the exchange rate depreciated (Christiansen, Demery and Paternostro, 2003). SSA's import tariffs were cut by three-quarters, the capital account was partly liberalised and the financial sector was reformed, while, outside the CFA zone, there was a shift toward flexible exchange rates. Fiscal deficits were cut by raising revenue rather than cutting public expenditure. As noted, a key change was the conclusion of the HIPC initiative, which ended a drawn-out debt crisis, reduced the net transfer of resources abroad, reduced the foreign debt to sustainable levels and allowed social spending to rise.

These measures improved macroeconomic stability. But the impact on the economic structure and inequality were mixed, because they led to deindustrialisation and 'reprimarisation' of exports and output. In 2011-2013, fuel and metals alone represented 64 per cent of exports (World Bank, 2014). Inequality was affected in several ways: a competitive real effective exchange rate (until the early 2000s) improved profitability of the labour-intensive tradable sector, although, as noted, reduction of import tariffs led to an unequalising decline in manufacturing. The expansion of primary exports relaxed the balance-of-payments constraint to growth, but generated new jobs only in the resource sector and, due to Dutch disease effects, the non-tradable urban sector. Higher taxation of natural resources could have reduced inequality by raising public expenditure on social transfers, human capital and infrastructure, but this occurred only in Southern Africa and a few other countries. In turn, lower inflation, a rise in revenue/GDP ratio and a more prudent fiscal policy reduced the frequency of highly unequalising budget crises. Financial regulation, in contrast, was not able to stem large capital flights.

TABLE 2.13 Summary of average macroeconomic shocks, policy changes and outcomes, sub-Saharan Africa

	1982-1990	1991-1997	1998-2002	2003-2010
Policy changes				
Average import tariff	40.0	19.0	12.2	10.6
Trade /GDP ratio	66.9	68.3	73.9	79.3
KAOPEN Index of capital account openness***	-0.91	-0.82	-0.59	-0.56
Index of domestic financial liberalisation**	4.5	5.1	6.6	7.4
Exchange rate regime for non-CFA countries (1=peg; 5=free falling)	1.81	2.77	2.98	2.43
External shocks				
Terms of trade (goods) 2000=100	107.2	100.77	100.57	98.49
Aid flows (% of Gross National Income-GNI)	14.9	16.4	11.1	10.0
FDI (% of GDP)	0.91	1.77	3.34	3.86
Macroeconomic outcomes				
Budget balance/GDP (deficit <0)	-5.1	-3.9	-3.5	-0.7
Government revenue/GDP			21.2	24.8
Rate of inflation	20.1	165.5	35.0	8.2
Average yearly change in REER (2005=100)1/	-20.00	-2.10	-5.13	7.32
Public debt/GDP ratio	93.1	105.8	105.0	69.2
Current account balance/GDP (including grants)	-6.9	-6.5	-2.5	-0.8
External debt stocks (% of GNI)	103.4	118.2	107.0	47.9
Currency reserves as a share of GDP	7.0	10.1	12.1	15.9
Development performance				
Growth rate of GDP*	3.6	2.7	3.7	5.3
Growth rate of GDP/capita	0.7	0.2	1.1	2.8
Investment/GDP ratio	19.2	20.2	19.9	22.2

Source: Cornia (2012), based on: *Economic Freedom Dataset (2011 version), ** World Development Indicators (2011 version), ***Chinn and Ito data for 2012, http://web.pdx.edu/~ito/Chinn-Ito_website.htm

Notes: The Chinn-Ito index (KAOPEN) rises with capital openness. The Index of Domestic Financial Liberalisation ranges from 0-10, where 10 corresponds to a high degree of liberalisation; 1/a minus sign means real depreciation.

2.7.4.2 Social policies

From 1990 to 2010, average public expenditure on education stagnated at around 4 per cent of GDP while that on health rose from 2 to 2.9 per cent (WDI, 2014). Millennium Development Goal-driven education policies led to visible gains in primary education but less so in secondary education. In Botswana, South Africa, Zimbabwe and Ghana, average number of years of education rose from

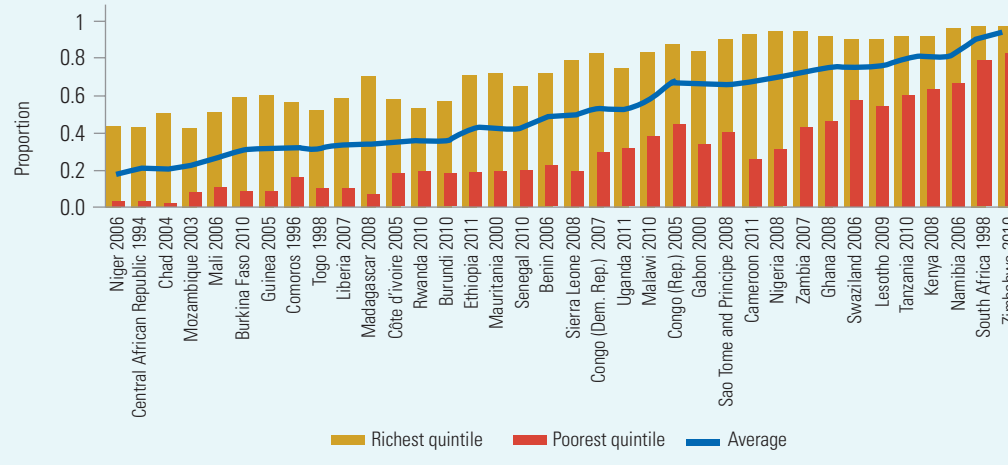
5.4 to 7.7 over the 1990-2009 period, and in six countries of East Africa, from 4.5 to 6.2. However, in six poor and rural East African countries (including Rwanda and Burundi), the increase was from 2.1 to 3.3. Finally, in six poor West African countries, average number of years of education rose only from 1.7 to 3.0, underscoring the huge imbalance in the supply of skilled versus unskilled workers. For instance, in 2009, in Niger and Mali, there were 4 and 7 workers with secondary/higher education for every 100 with primary or no education. In Botswana and South Africa, these ratios were 284 and 193, respectively (see Cornia, 2015, table 23). A related problem was that, also during the 2000s, public expenditure was allocated in a regressive way. In primary school, completion rates of children belonging to the bottom 40.0 per cent were 20-40 points lower than those of the top 60.0 per cent (World Bank, 2014). Enrolment differentials by income groups were even greater at the secondary level (figure 2.9). Problems were particularly marked in countries with a high share of rural population, especially in West and Central Africa.

While the low level of human capital formation and its unequal distribution reflect limited and poorly targeted investment in education, low enrolments in rural areas are due to a persistent urban bias. In addition, in rural areas low enrolments may also reflect rational decisions of households engaged in subsistence agriculture. Without modernisation of farming techniques, it makes little sense to invest in education, because lack of complementary inputs does not increase productivity of human capital. An expansion of primary and secondary education in rural areas therefore requires greater accompanying efforts at modernizing agriculture and raising land yields.

2.8 Conclusions

A key finding of this chapter is that over 1991/3 to 2011, there was a divergence of inequality trends among the 29 countries analysed. The causes of this divergence, which is tested econometrically in

FIGURE 2.8 Enrolment rates of the poorest (blue) and richest (green) quintiles of 15-19-year-olds who completed grade 6, late 2000s



Source: Ferreira (2014).
Note: CAR is Central African Republic, DR Congo is Congo (Dem. Rep.) and Congo Rep. is Congo (Rep.)

Chapter 16, are explained by several factors, starting from the fact that in many countries, the value-added composition evolved toward unequalising mining enclaves, cash-crop estates and capital- and skill-intensive urban services. Less common was an evolution toward high-yielding labour-intensive agriculture, manufacturing, construction and labour-intensive formal services. Such sub-optimal transition was due in part to limited modernisation of food agriculture, a rise in world commodity prices and policy mistakes that led to deindustrialisation, reprimarisation, premature tertiarisation and urban informalisation, all of which tend to be unequalising. In contrast, where agriculture was modernised and integrated with the rest of the economy through transport and communication infrastructure, food output per capita and rural incomes rose and labour absorption in labour-intensive manufacturing surged, there were favourable distributive effects.

The land issue has become more acute. Distribution of farmable land did not improve. While tenancy reforms improved the security of tillers, with the exception of Ethiopia, Rwanda and a few other countries, land distribution did not improve, while land grabs and population pressure raised land concentration. While this may not depress output, it affects inequality and – through that – long-term growth. As a result, the rural-urban income gap rose – despite SAP-driven liberalisation and devaluation, which in the absence of adequate infrastructure, raised the urban bias. Low investment in manufacturing, a slow increase in rural schooling and informalisation of the labour market are behind the slow rate of urbanisation of much of SSA, a trend that poses a challenge for internal and international migration (and inequality) in the future.

With the end of the Cold War, there was a decline in the number of unequalising conflicts. Democracy spread to one-third of the region, while autocracies have declined. Yet, it is unlikely that these changes have led to non-ethnic-based redistribution, due to deeply rooted ethnic fractionalisation and high levels of corruption existing in the region. The limited new evidence seems mixed, and much more needs to be learned in this field with the help of political scientists. In turn, lack of data on interpersonal distribution of income does not allow assessing whether the gender bias declined. Gains in MDG-driven female education and health have – *ceteris paribus* – reduced it, but data on land ownership, employment and political participation suggest the opposite (see Chapter 12 on Malawi).

The evolution of inequality was also driven by global changes and domestic policies. From a theoretical perspective, FDIs in mining/oil, remittances and exports were unequalising, although they promoted growth and some poverty alleviation. In contrast, sustained aid and the HIPC initiative had a favourable effect on inequality, growth and poverty. Exogenous shocks also affected inequality. In countries with high incidence, HIV/AIDS affected growth and inequality. Its recent slight decline may help reduce inequality in the future. In turn, diffusion of low-cost computers and cell phones improved market integration of remote producers and consumers, improving the position of the low-middle class, but, less likely, of the poorest.

The impact of domestic policy changes was mixed. Correction of past policy biases stabilised the macroeconomy, with positive effects. Yet, REER appreciated on average during the last decade, and trade liberalisation did not help to preserve the nucleus of manufacturing created after independence. Whenever subsidies for rural modernisation and infrastructure were cut, both between- and within-sector inequality rose (see Chapter 12 on Malawi). The opposite was also true. Revenue/GDP ratios have risen but lack of tax incidence data suggests suspending judgement about their progressivity. Despite a large increase in the number of small transfer programmes, the absence of fiscal space and economy-wide institution of social protections have retarded progressive redistributions, with the

exception of Southern Africa, Ethiopia and a few other countries. Yet, in countries that experienced export windfalls there is now sufficient fiscal space for redistribution. The main task now is to get the institutions and politics right.

Public spending on human capital formation is known to have a large impact on wage inequality, social mobility and overall inequality. On average, recent policies in this field focused on reaching basic targets of the MDGs. Yet they were not sufficiently well funded and targeted, especially for secondary education. There is evidence that educational inequality contributes to feeding intra-urban and rural-urban inequality. Lack of modernisation of agriculture reduced the demand for secondary education in countries dominated by subsistence smallholders.

Finally, the impact of high population growth on inequality has, to date, received limited attention. In many countries, TFRs have declined little, and population growth did not slow outside Southern Africa. Only a few countries benefit now from a 'demographic dividend', and in the others, continued population pressure is raising inequality. This is a central – but neglected – development issue that needs to be addressed vigorously by public policy if a future increase in inequality is to be avoided.

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