OVERVIEW

MOZAMBIQUE POVERTY ASSESSMENT

Strong But Not Broadly Shared Growth

THE WORLD BANK
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Executive Summary

Mozambique has experienced strong and sustained economic growth in the last two decades.

Growth of its Gross Domestic Product (GDP) expanded at an annual average rate of 7.2 percent between 2000 and 2016, making it one of the fastest-growing countries in Sub-Saharan Africa (SSA). The economic expansion has boosted incomes and living standards. GDP per capita, for instance, grew annually on average by 4 percent over the same period, climbing from $561 to $1,128 (2011 PPP). Growth has been supported by a rebounding agricultural sector, particularly in the first phase of the post-war period, increased productivity in trade, transport and communications and financial services, sound macroeconomic management, large-scale foreign investments projects and significant donor support. More recently, however, growth has slowed down due mainly to macroeconomic factors and severe natural disasters.

High and stable growth has led to poverty reduction, especially after the late 2000s.

Poverty has been on a declining trend following sustained strong growth in the 2000s. Poverty numbers based on the official methodology show that the poverty headcount fell from 52.8 percent in 2002/03 to 46 percent in 2014/15. This study, which examines the evolution of poverty using a different poverty measurement methodology, also finds a downward trend. As of 2014/15, the share of Mozambicans living beneath the poverty line is 48.4 percent, below the levels of poverty recorded in 2002/03 and 2008/09, 60.3 and 58.7 percent, respectively. This is equivalent to an average reduction in poverty of 1 percentage point per year. In

absolute terms, however, the number of poor increased –owing largely to rapid growth in population, from 11 million in 2002/03 to 12.3 million in 2014/15.

Over the long term, poverty has fallen more slowly than expected considering the strong growth performance, yet growth has become more poverty reducing in recent years.

The fall in poverty in Mozambique is consistent with the trend seen in many other countries in the region. Yet, looking at the last two decades, economic growth and poverty reduction are not as strongly linked in Mozambique as in other countries. Estimates of the growth elasticity of poverty reduction for a group of selected countries in Eastern Africa with two poverty measurements in the last decade show that the responsiveness of monetary poverty to raising levels of income per capita in Mozambique is moderate. For instance, a one percentage increase in GDP per capita in Uganda is associated with a fall in poverty of 0.95 percent. An equivalent change in GDP per capita reduced poverty by 0.3 percent in Mozambique, less than a third than in Uganda. However, the latest numbers indicate that the country may be gradually becoming better at leveraging strong growth for poverty reduction. The elasticity rose from 0.08 (2002/03-2008/09) to 0.68 (2008/09-2014/15).

While household consumption growth accelerated after 2008, it became less inclusive.

Who benefitted the most from economic progress in Mozambique? The answer depends on what period is analyzed. Most of the 2000s (the period 2002/03-2008/09) recorded a

small reduction in poverty because of meagre consumption growth (0.11 percent). However, this slow growth was "pro-poor", namely it benefitted disproportionately low-income households more, amongst all those located in rural areas. Nevertheless, while growth accelerated at the end of the 2000s, its distributional pattern reversed, turning into "pro-rich". Annual growth in consumption per capita picked up, averaging 4.3 percent (2008/09 and 2014/15). Stronger growth for everyone resulted in faster poverty reduction, yet it benefited chiefly the upper parts of the distribution. Annual consumption growth for the top quintile was 7.5 percent, three times faster than the rate of the bottom 40. The "pro-richness" of growth is limiting Mozambique's progress in achieving shared prosperity and reducing inequality. The Gini coefficient increased from 0.47 to 0.56 between 2008/09 and 2014/15 –largely an urban phenomenon, placing Mozambique among the most unequal countries in SSA.

Had growth been more equally shared Mozambique would have achieved twice as much poverty reduction after 2000.

The weaker inclusiveness means that many low-income Mozambicans are missing out on the benefits of progress. Changes in poverty can be decomposed into "growth" and "redistribution" effects. The analysis shows that consumption growth ("growth effect") has been the main force behind the fall in poverty. In contrast, the increase in inequality in the distribution of consumption ("redistribution effect") has offset part of the gains. More specifically, the "growth effect" alone would have reduced poverty by 23.1 percentage points between 2002 and 2014 – bringing the poverty headcount down to 37.2 percent rather than 48.4 percent – had that growth been more inclusive. Instead, inequality in the distribution of consumption growth increased poverty by 11.2 percentage points.

Faster poverty reduction in some of the areas of the country where poverty was lowest a decade and half ago has limited the convergence in welfare levels between regions.

The evolution of poverty displays regional differences. The share of poor households has fallen in both rural and urban areas, from 69 percent to 56.0 percent in the former, and from 41.1 percent to 32 percent in the latter. However, rural areas continue to lag behind urban areas: since the early 2000s, nearly 8 out of 10 poor people have been in rural areas. There are also gaps across provinces. Despite the generalized decline in poverty, welfare levels remain low in the Northern and the Center Regions of the country relative to the South. Poverty continues to be high in Zambezia, Nampula and Niassa, historically the provinces with the highest poverty levels. In contrast, Maputo Province and Maputo City show the largest decline even though they had the lowest poverty levels back in 2002/03.

The increasing role of services in the economy and favorable macroeconomic conditions contributed to faster consumption growth after the late 2000s.

Mozambique is undergoing a process of structural change whereby the sources of growth have gradually shifted away from agriculture. The GDP share of agriculture fell from 38.1 to 25.5 percent between 1996 and 2014. While the emergence of manufacturing is characterized by capital intensive activities (largely "megaprojects" in extractive, export-oriented industries) with higher value added but low job creation, the increasing role of services in the economy has offered a path to jobs outside agriculture. Between 2008 and 2014, the jobs share of services increased fast, moving from 15 to 24 percent. The GDP share of services also increased by almost 6 percentage points, reaching 55.7 percent. After 2008, labor productivity growth – the main engine of economic growth in the last two decades – has been largely driven by the redeployment of labor away from agriculture and into sectors with higher productivity growth, chiefly in services, where productivity is over six times larger despite high levels of informality. Moreover, the macroeconomic framework (fiscal expansion, strong credit growth, large influx of foreign direct investments) provided the conditions for faster private consumption growth.

Economic progress also translated into improvements in non-monetary dimensions of well-being ...

The average household has better standards of living today than at the turn of the century. Progress in closing consumption deficits, albeit at a moderate pace, has been accompanied by improvements in other dimensions of well-being. School enrollment and attendance show continued improvement since the early 2000s. Individuals ages 20 to 65 have on average 5.1 years of schooling, compared to 2.4 in 2002/03. Mozambicans are living longer. Life expectancy increased by nearly 9 years since 2001, from 48.8 to 57.6. Infant mortality, expressed as the number deaths per thousand live births, fell from 99.1 in 2003 to 68.1 in 2011. Other key health indicators as maternal mortality and morbidity are also moving in the right direction. These changes are coupled with improvements in the quality of housing and increased ownership of traditional and modern assets.

But large inequalities of opportunities remain across the population, limiting the degree in which the poor participate in the growth process and share in its proceeds.

While multidimensional poverty has fallen, it remains high. Improvement in several dimensions occurred from low levels, which means that the remaining gaps are still large. Indicators such as access to electricity, food security and stunting, among others, showed little or no improvement during the period with the strongest economic growth on record. Progress has not been even neither across income groups nor across areas. The Human Opportunity Index, a measure that summarizes the level of basic opportunities in a society and how equitable they are distributed, reveals that the chances of Mozambican children later in life are largely influenced by their location and family background, chiefly household income and school attainment of the household head.

Nearly one in two Mozambicans are trapped in chronic poverty and close to 25 percent of the population is highly vulnerable to fall into poverty.

Almost half of the population (46.3 percent) continues to be poor in monetary and non-monetary sense, most of whom (84.9 percent) are in rural areas. This segment of the population is likely to continue trapped into chronic poverty unless they break the cycle of physical deprivation and accumulate human, physical and financial capital to enter a path of stable income growth. Another 25 percent of the population is not monetarily poor but faces a high risk of sliding back into poverty because of the high economic insecurity brought about by its multiple non-monetary deprivations.

Is Mozambique on a path to end extreme poverty by 2030? It is unlikely, but poverty will fall significantly if growth is high, stable and more broadly shared.

Projections under an optimistic (high growth), pro-poor (inclusive) scenario show that poverty is unlikely to be eradicated by 2030 but it can be reduced to 21.8 percent, a remarkable achievement. However, if growth remains strong but pro-rich, as in recent years, the projections indicate that poverty will fall at most to around 32 percent by 2030. If consumption growth is equally distributed across the population but below past performance, reflecting the slower economic growth experienced in recent years, around 36 percent of the Mozambicans will still be poor by 2030. These simulations underscore that achieving robust, inclusive growth is the right mix to maximize poverty reduction moving forward.

Strengthening the linkages between growth and poverty reduction requires a mix of policies aimed at achieving three overarching objectives.

The first objective is to continue expanding the availability of basic services while addressing the remaining large inequalities in terms of access and quality to improve and equalize opportunities for all citizens. Enabling the poor with the skills and assess to participate in the growth process and share in its proceeds will bolster growth and economic progress. The second objective is to foster economic diversification, job growth in productive, labor-intensive production, and agglomeration of firms and markets. The private sector is typically the main engine for broad-based growth through job creation. The government can play a critical role by implementing policies and regulations aimed at promoting an environment conducive

to achieving high private investment rates and strong firm growth. The third objective is to raise productivity in agriculture – a sector that still supports the livelihoods of most rural households and the poor – by addressing the limited linkages of farmers with input and output markets, and the weak resilience to weather risk. Cutting across these three overarching objectives is the need to protect the significant gains in poverty reduction achieved so far to avoid letting the one in four Mozambicans that have high economic insecurity slide back into poverty and deprivation.

1 Progress in Reducing Poverty

Mozambique has experienced strong and sustained economic growth in the last two decades.

1. Mozambique experienced strong and sustained economic growth in the last two decades. Growth of its Gross Domestic Product (GDP) picked up following the end of the war in 1992, expanding at an annual average rate of 7.2 percent between 2000 and 2016, making it one of the fastest-growing countries in Sub-Saharan Africa. Political and macroeconomic stability provided the foundation for robust growth. The economic expansion has been supported by a rebounding agricultural sector, increased productivity in trade, transport and communications and financial services, structural reforms and sound macroeconomic management, large-scale foreign investments projects and significant donor support. The economic expansion boosted incomes and living standards. GDP per capita grew annually on average by 4 percent, climbing from $561 to $1,128 (2011 PPP) (Figure 1.1).

Figure 1.1.   Robust growth has led to a sustained rise in GPD per capita in Mozambique

···· GDP per Capita, PPP 2011 (LHS)   —— Real GDP growth (RHS)
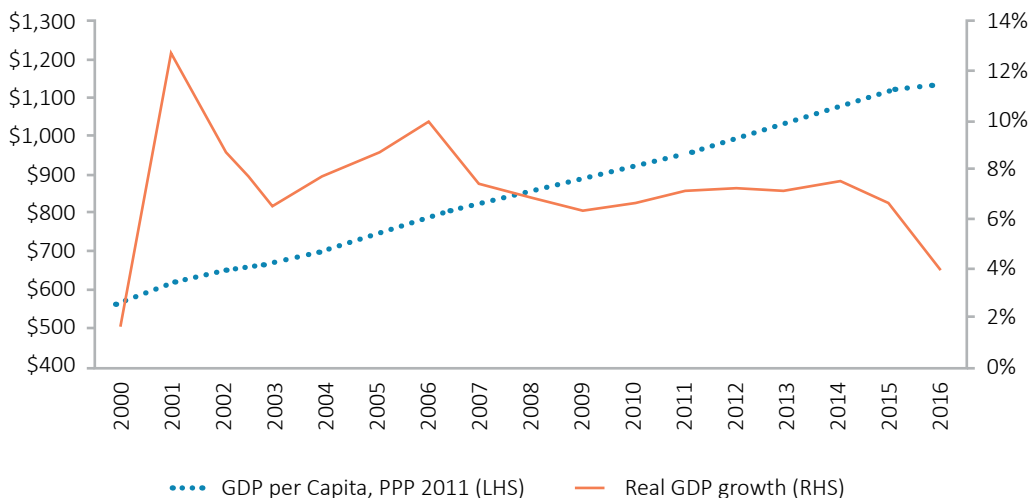
Source: National Institute of Statistics of Mozambique (INE) and World Bank using WDI

The services sector and investments in mega-projects have driven growth since the early 2000s, partly shifting the sectoral composition of employment.

2. An expansion of the services sector and investments in megaprojects contributed to rapid accumulation of physical capital and an increase in total factor productivity. Investments in reconstruction and the incorporation of new workers into the labor force, particularly in agriculture, led growth in the early postwar period. These trends began to change at the end of the 1990s. The contribution of agriculture to GDP growth fell from an average of 6 percentage points in the middle of the 1990s to 1.1 percentage points in the early 2000s (Figure 1.2). At the same time, the services sector increased its role in the economy, from contributing an average 0.9 to 2.8 percentage points to overall growth between the middle of the 1990s and the middle of the 2010s. The manufacturing sector was a large contributor to

GDP growth in the late 1990s and early 2000s (at an average 3.3 percentage points).

3. Changes in the sectoral composition of employment reflect the ongoing structural transition of the economy. Notwithstanding the falling share of agriculture in total employment, most people continue to work in this sector. Almost 3 in 4 workers are mostly engaged in agriculture. Led by the modest structural transition of the economy, a growing proportion of workers is employed in the service sector – the share increased from 9 percent in 1997 to 24 percent in 2015. In contrast, the contribution of the industry sector to employment is rather limited, oscillating between 3.4 percent and 4.9 percent in the last two decades despite its larger impact on growth (Figure 1.3). This is largely explained by the concentration of investments in large-scale capital-intensive projects that are characterized by weak backward and forward linkages with other parts of the economy.

Figure 1.2. The services and extractive sectors are increasingly supporting GDP growth
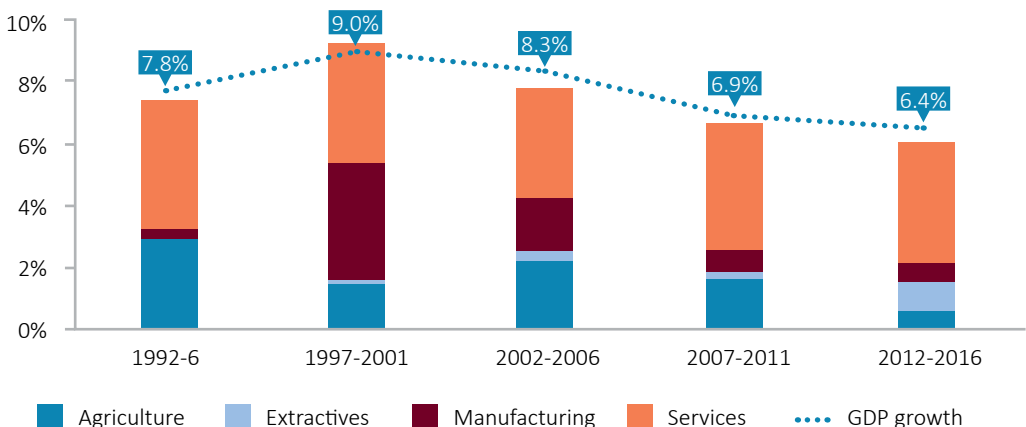
Source: National Institute of Statistics of Mozambique (INE)

4. Recent economic developments have shifted Mozambique to a slower growth trajectory. The economy has been growing at a reduced pace since 2015, largely driven by an ongoing economic downturn, bouts of low commodity prices, the occurrence of natural disasters and the revelation of USD 1.4 billion in previously

undisclosed commercial loans. Together, these events contributed to a sharp pace of currency depreciation and soaring inflation. Confidence in the economy also faltered as the debt crisis continues to be transmitted to the real sectors of the economy, derailing Mozambique's track record for high growth and economic stability.

Figure 1.3. **For most workers their primary job is still in agriculture**
(Employment by economic sectors, selected years)
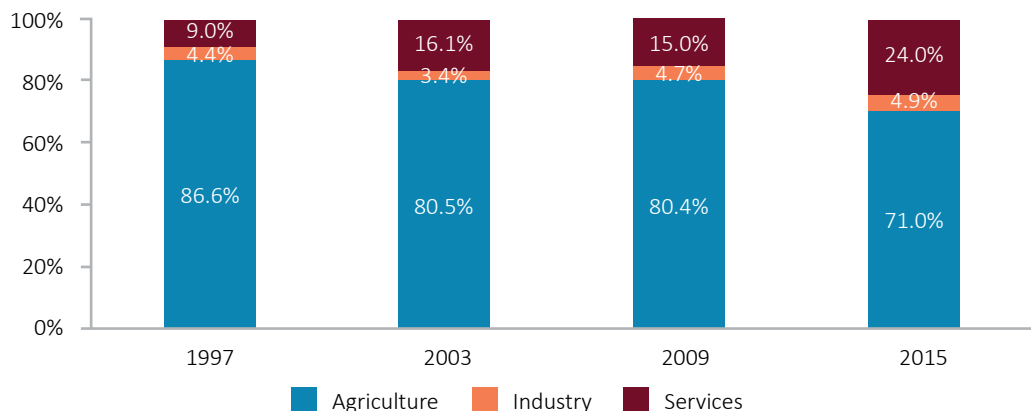
Source: National Institute of Statistics of Mozambique (INE)

High and stable growth has led to poverty reduction, especially after the late 2000s.

5. **The measurement of poverty in Mozambique is based on the value of a "minimum" level of consumption necessary for normal short- and long-term human well-being, which is estimated from household surveys collected nearly every 5 or 6 years.** Under this method, households not deemed poor have consumption levels that are enough to meet their basic food needs and other non-food essential expenditures.[1] The household budget survey used in this study, known as *Inquérito aos Orçamentos Familiares* (IOF) (household survey of living conditions), is collected by the National Statistics Office of Mozambique (*Instituto Nacional de Estatistica,* INE).[2] The surveys are representative at the national, rural-urban, and provincial levels.[3]

6. **Poverty has been on a declining trend following strong economic growth in the 2000s.** Based on data from the IOF-2014/15, 48.4 percent of Mozambicans live beneath the poverty line, lower than the levels of poverty recorded in 2002/03 and 2008/09, 60.3 and 58.7 percent, respectively (Figure 1.4). This corresponds to an annual reduction in poverty, on average, of 1 percentage point. Yet, poverty fell markedly faster in the period 2008/09-2014/15 (on average 1.8 percentage points annually) than in the period 2002/02-2008/09, where the poverty rate barely dropped (on average 0.26 percentage points annually). The official numbers, reported in the Fourth National Poverty Assessment conducted by the Government of Mozambique (2016), also reflect a downward trend in poverty –from 52.8 percent in 2002/03 to 46.1 percent in 2014/15– and faster reduction in recent years.

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[1] The official methodology defines this "minimum" level using 13 different values (poverty lines) for an equal number of regions. The methodology employed in this study also follows the "basic needs" approach but defines only one absolute minimum level of necessary resources for the entire country. The methodology of this study also adjusts household consumption to reflect regional differences in prices and temporal differences in prices over the course of the data fieldwork. See Box 1 and the full report for more details about the methodological differences.

[2] The first survey was collected by INE between February 1996 and April 1997. Due to better comparability of the data, the analysis is based on the last three waves of the household budget survey (2002/03, 2008/09 and 2014/15). Contrary to the previous rounds of the IOF, the survey collected in 2014/15 was implemented as a panel. However, for poverty measurement purposes, the three quarters of data collected as part of the IOF-214/15 have been appended as a pooled cross section.

[3] This decision was made by the Mozambican Ministry of Economy and Finance (MEF) to capture the seasonality of consumption and avoid using the longitudinal nature of the data that was affected by high attrition rates. More details about these issues are discussed in the full poverty assessment report.

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Figure 1.4. **Poverty has been falling since the early 2000s, but the pace accelerated after 2008**

(World Bank methodology)

(Official methodology)
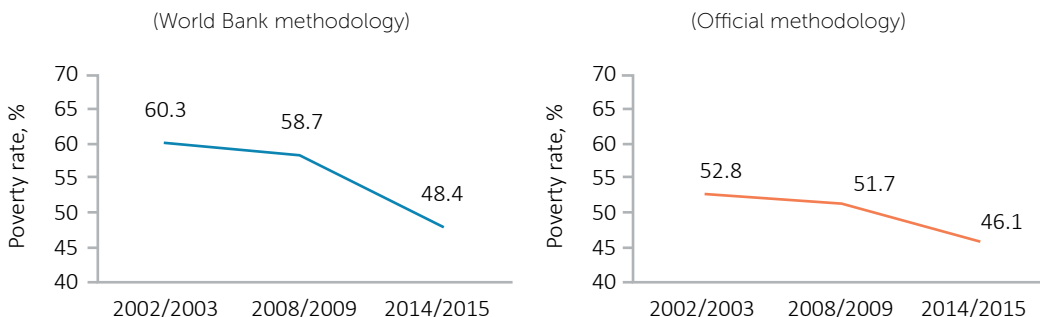
Source: MEF (2016) and World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

Rural areas continue to lag behind.

7. The share of households living in poverty has fallen in rural and urban areas, but poverty remains significantly higher in the former. Poverty in rural areas declined from 69 percent in 2002/03 to 66.4 percent in 2008/09 and to 56.0 percent in 2014/15. Urban poverty shows a similar trend,

dropping from 41.1 percent to 32 percent (Figure 1.5). In relative terms, poverty declined faster in urban centers (23.2 percent) that in rural areas (18.8 percent). Rural households have been concentrated in the bottom part of the distribution. Nearly 8 out of 10 poor people are in rural areas, fairly similar to the urban-rural composition observed in the early 2000s (Figure 1.6).[4]

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Figure 1.5. **Welfare levels have not converged between urban and rural areas**

(poverty rates by area)
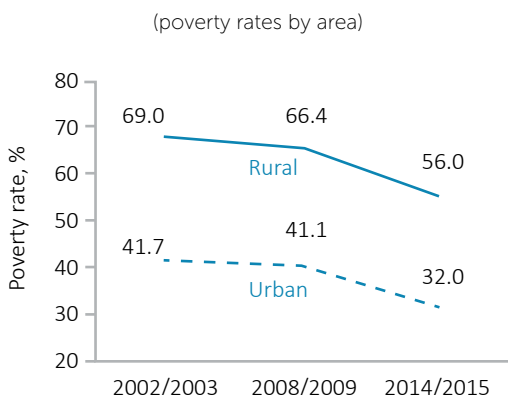
Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

Figure 1.6. **Since the early 2000s, nearly 8 out of 10 poor people are in rural areas**

(Rural and urban poverty shares)
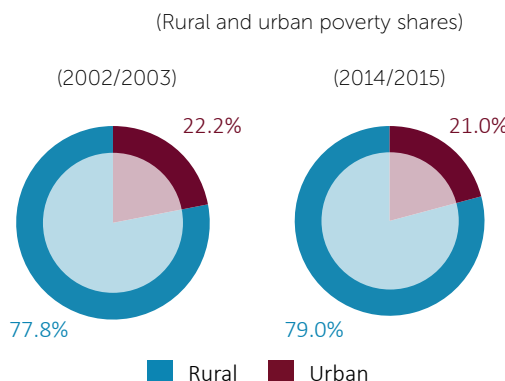
Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

8. The downward trend in poverty is also observed when measured using an international poverty line. The global poverty line of US$1.90

PPP can also be used to examine the level and evolution of poverty in Mozambique. This line is not a substitute of the official poverty line but

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[4] The rural and urban divide in poverty is also evident in the official numbers (Government of Mozambique, 2016). However, the composition of poverty across areas is different. Urban poverty is higher whereas rural poverty is lower in the official estimates relative to the methodology followed in this study.

rather an international threshold that is used to measure and track poverty trends worldwide (see Box 1). The poverty headcount ratio fell from 78.5 percent in 2002/03 to 67.9 percent in 2008/09 and to 62.9 percent in 2014/15 when this poverty line is used as the threshold of reference (Table 1.1).

Table 1.1.   Poverty headcount ratio for national poverty line and the US$1.9 PPP poverty line

	2002/03	2008/09	20014/15
National	60.3%	58.7%	48.4%
Urban	41.7%	41.1%	32.0%
Rural	69.0%	66.4%	56.0%
US $1.9 PPP Poverty Line	78.5%	67.9%	62.9%

Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15 and Povcalnet

9. **Owing largely to the rapid growth in population, the absolute number of poor people in Mozambique has increased over time despite the decline in the overall poverty rate.** Long-term demographic trends, particularly high and stagnant fertility rates, have slowed down the pace of poverty reduction. The population of Mozambique increased from 18 million in 2000 to a projected 28.8 million in 2017, equivalent to an average growth rate of nearly 3 percent. The average total fertility rate is estimated at 5.9 children per woman, nearly one child more than the average for countries in the region. The rapid increase in population is making it more difficult to reduce the number of poor people even though the poverty rates have been falling. Indeed, as of 2014/15, the country has 12.3 million people living below the poverty line, 1.3 million more than in 2002/03 (Table 1.2).

Table 1.2.   The total number of poor has increased, mostly in rural areas
(in thousands)

	National	Rural	Urban
2002/03	11,032	8,582	2,450
2008/09	12,647	9,959	2,688
2014/15	12,336	9,752	2,584

Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

Poverty reduction has also been uneven across regions

10. **Welfare levels remain low in the Northern and the Center Regions relative to the South.** There are large spatial differences in poverty levels and changes across provinces.[5] Poverty continues to be high in Zambezia, Nampula and Niassa, in contrast to Maputo Province and Maputo City, which recorded the largest decline. By 2014/15, poverty rates in these three provinces are well above the national average (48.4 percent): Niassa (67 percent), Nampula (65 percent) and Zambezia (62 percent). Back in 2002/03 the provincial rankings differed strongly, with Tete, Gaza and Inhambane exhibiting poverty rates above 70 percent. Since then poverty reduction has been faster in

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[5] Mozambique is administratively divided into 10 provinces and one capital city (Maputo) with provincial status.

these provinces, falling by around 40-50 percent. Likewise, Maputo Province and Maputo City recorded the largest improvements in poverty indicators, with a decline of 70 percent, even though they had significantly lower poverty than other areas of the country in 2002/03 (Figure 1.7).

Box 1. Measuring poverty in Mozambique

Official poverty measurement methodology

The official methodology to estimate poverty in Mozambique was developed by the Mozambican Ministry of Economy and Finance with technical assistance from UN-Wider. As most countries in Sub-Saharan Africa (SSA), the poverty estimates are based on aggregate household consumption as the key welfare indicator. The consumption aggregate comprises food consumption, including food produced by households themselves, as well as expenditures on a range of nonfood goods (including durables such as car, TVs, computers, etc.) and services (e.g., housing, clothing, utilities, transportation, communication, health, education, etc.). Price deflators are used to adjust the consumption aggregate for differences in prices across geographic areas as well as differences across time over the course of the IOF fieldwork. The poverty lines are based on the cost-of-basic-needs (CBN) approach. The methodology defines food poverty lines for 13 geographic regions anchored in the cost of region-specific food baskets that provide 2,150 calories per person per day. These lines are augmented to include an allowance for basic non-food needs. The regional poverty lines are re-estimated every time there is a new household budget survey. The poverty rate measures the proportion of people whose monthly price-adjusted total household consumption per capita is below the poverty line in the corresponding year and region. The values of the poverty lines used in the estimation of poverty with the IOF-2014/15 are found in Annex 2.

Poverty measurement methodology followed in this study

This Poverty Assessment followed a methodology that is close to the methods used in most countries within and outside SSA. This methodology is also based on the CBN approach and, for that reason, most of the concepts underlying it are analogous to those underpinning the official methodology. There are, however, some important differences. Regarding the consumption aggregate, the difference lies chiefly in the assumptions adopted to impute the value of services delivered by durable goods. Another difference is the use of a single poverty line. The food poverty line was calculated using the average food basket and price per calorie of households between the percentiles 40th and 60th in the IOF 2014/15. The reference food basket obtained corresponds to 1,460 calories. This value is below the calorie requirement of a typical Mozambican for adequate nutrition – usually around 2,100 calories per person per day. Yet, a decision was made to not scale up the value of the food basket to ensure consistency with the issue of systematic underestimation of calorie consumption in the IAF and IOF surveys and to reflect the behavior of households as depicted in the actual data. Like the official methodology, the non-food poverty line adds the cost of other essentials observed in the reference group. The 2014/15 poverty line was deflated to 2002/03 and 2008/09 values using the official Consumer Price Index (CPI). Finally, the consumption aggregate was adjusted to account for geographic food price variation using a Paasche index for each household. Annex 1 provides more details.

The World Bank $1.9 International Poverty Line

The World Bank uses a global poverty line set at $1.9 per person per day using 2011 prices to measure and track the evolution of poverty line worldwide. This line is not a substitute of the official poverty line, which is defined based on each country's specific economic and social circumstances. The value is derived from the national poverty lines of the 15 countries (including Mozambique) with the highest levels of poverty in 2005. To ensure that the same quantity of goods and services are priced equivalently across countries, the 15 poverty lines are converted to a common currency using 2011 purchasing

power parity (PPP) exchange rates. The average of these 15 lines in PPP terms was $1.9 per person per day. The international line is above the average of the 13 poverty official lines in Mozambique for 2014/15 ($1.54 2011 PPP) and the WB poverty line estimated for this report ($1.49 2011 PPP).

Figure 1.7. Niassa, Nampula and Zambezia are the provinces with the highest poverty rates
(poverty rates across provinces)
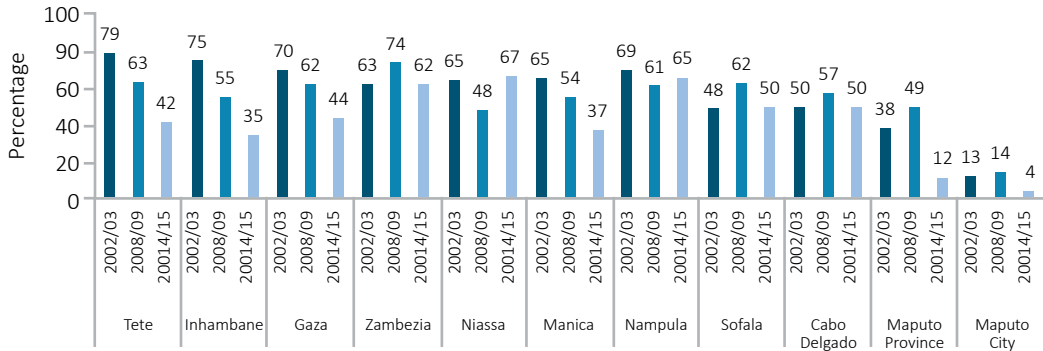
Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

Economic growth and poverty have become more closely linked in recent years.

11. The fall in poverty is consistent with the trend seen in other countries in the region in the last decade or so. Poverty has been falling in most countries in sub-Saharan Africa in the last 10-15 years. Comparisons of poverty levels and changes across countries are difficult because the years of the surveys vary from country to country. Yet, looking at the evolution of numbers circa the middle of the 2000s and early/middle 2010s suggests that the direction and pace of poverty reduction in Mozambique is within the range seen for most countries in the region. For illustration, poverty has fallen by nearly 8 percentage points in Rwanda between 2005 and 2010, by almost 7 percentage points in Zambia between 2010 and 2015 and by close to 4 percentage points in Tanzania – in Mozambique it fell by 5 percentage points in the years between 2008/09 and 2014/15 (Figure 1.8).

Figure 1.8. The incidence of monetary poverty fell in Mozambique and other countries in the region
(Percentage of the population below the US$1.9 PPP poverty line)

Source: World Bank using WDI

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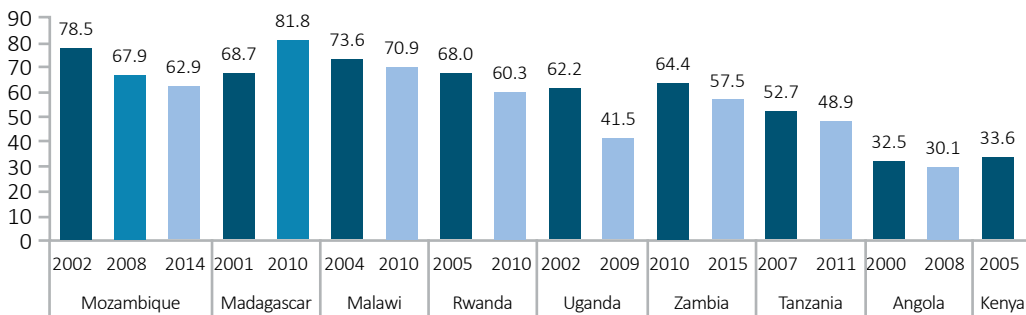
12. The pace of poverty reduction in recent years reveals that economic growth and poverty became more closely linked. The GDP per capita growth elasticity of poverty gives an estimate of how closely (or not) are growth and poverty linked.[6] At 0.3 over the period 2002/03-2014/15, the response of poverty to fast and accelerating economic growth in Mozambique has been relatively modest.[7] This relatively low value is the result of averaging two intervals of time where GDP per capita grew at a stable rate (on average around 4 percent per year) but poverty evolved at different rates. For most of the 2000s (2002/03-2008/09), poverty dropped by a total of 1.6 percentage points, which translates into an elasticity of 0.08. However, the pace picked up remarkably after 2008/09, with the elasticity rising to 0.68 for the period 2008/09-2014/15 (Figure 1.9).

Figure 1.9. In recent years growth has been more poverty reducing in Mozambique

(GDP per capita growth elasticity of poverty, Mozambique)
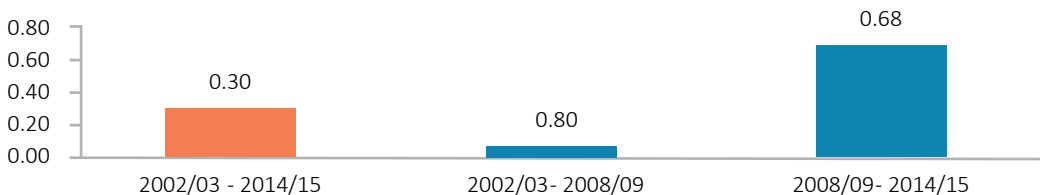
Source: World Bank using WDI, IOF-2002/03, IOF-2008/09 and IOF-2014/15

Mozambique is not yet on a path to end extreme poverty by 2030 but more broadly shared growth can bring the country faster to this target.

13. Projections of consumption growth can give an idea as to whether Mozambique is on a path to end extreme poverty –or reduce it substantially– by 2030. Figure 1.10 shows the trends for the poverty rates between 2015 and 2030 based on three different scenarios.[8] An optimistic pro-poor growth scenario could reduce poverty significantly by 2030 but it will not eradicate it. Monetary poverty would fall from 48.4 to 21.8 percent, but this requires recovering and sustaining strong consumption growth and making it more inclusive. If the pattern of growth is simulated to stay pro-rich, as in recent years, poverty will fall but at a slow pace, and inequality will worsen even further. By 2030 poverty would fall from 48.4 percent to 32.1 percent, over 10 percentage points less than the reduction achieved under a pro-poor growth scenario. A third scenario shows that nearly 36 percent of the Mozambicans would be poor by 2030 if consumption growth is equally distributed population but below past performance reflecting the slower economic growth experienced in recent years.

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[6] It measures the percentage change in poverty with respect to a 1 percentage change in GDP (or consumption per capita).

[7] A 1 percentage increase in GDP per capita in Uganda is associated with a fall in poverty of 0.95 percentage points for similar period (elasticity = 0.95).

[8] The three scenarios are as follows: 1) *neutral but lower growth scenario* – assumes annual distribution-neutral consumption growth of 2 percent, below the average annual growth of mean consumption recorded for the period 2002-2014 (2.9 percent) to reflect the lower economic growth of recent years; 2) *pro-rich growth scenario* – assumes that the speed of consumption growth for the upper half of the distribution is 3.5 percent, more than twice the growth rate of the bottom 50 (1.5 percent) and 3) *pro-poor growth scenario* – assumes the opposite of the growth levels set in the pro-rich scenario for the bottom and upper halves of the distribution, namely 1.5 percent for the top 50 and 3.5 percent for the bottom 50.

Figure 1.10. Poverty will fall markedly moving forward if growth is strong and more equally shared
(poverty headcount projections under different scenarios)
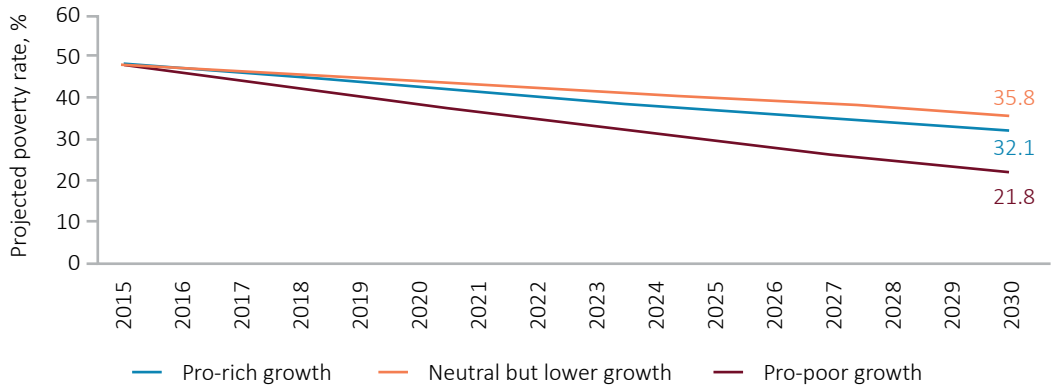
Source: World Bank using IOF-2014/15

2 The Inclusiveness of Economic Progress

While household consumption growth accelerated after 2008, it became less inclusive, limiting the fostering of shared prosperity and raising inequality.

14. While growth picked up in recent years, it has been benefiting proportionally more the wealthier segments of the population. Taking a closer look at changes in the distribution of consumption over time sheds light on which income groups benefitted the most from economic growth. The period 2002/03-2008/09 recorded a small reduction in poverty because of slow average growth in consumption (0.11 percent annually). But despite being low, consumption growth was "pro-poor", namely benefited mostly the bottom 50 percent. The broad-based pattern of growth reversed after 2008. The growth incidence curve (GIC), which shows the percent change in average consumption for each percentile of the distribution, indicates that growth between 2008/09 and 2014/15 became stronger (4.34% as measured by the growth rate at the mean) but "pro-rich", particularly in urban areas (right panel of Figure 2.1). As noted below, these two features explain why faster poverty reduction took place alongside with increasing inequality. Annual consumption growth for the top quintile was in the order of 7.5 percent, nearly three times faster than the growth rate of the bottom 40.

Figure 2.1. **Growth after the late 2000s benefitted mostly the non-poor, chiefly in urban areas** (Consumption Growth Incidence Curves with 95% confidence intervals nation-wide, urban and rural, 2008/09 – 2014/15)
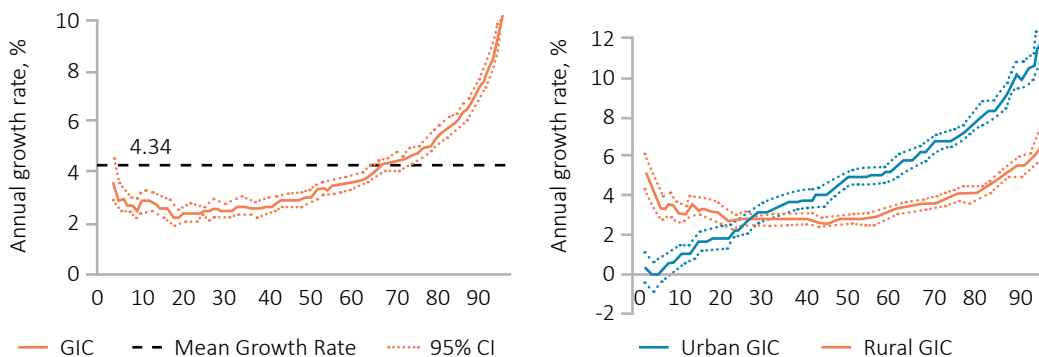
Note: Dotted lines show 95% confidence intervals.
Source: World Bank using IOF-2008/09 and IOF-2014/15

15. A less inclusive pattern of growth limits Mozambique's progress in fostering shared prosperity faster. The Shared Prosperity Indicator captures two key elements, economic growth and equity. Strong and stable economic growth is necessary to increase the living standards of the population. But for robust growth to trickle, it needs to be inclusive of the less well-off. Since consumption growth was higher among the better off after 2008, the shared prosperity premium turned negative relative to earlier years (-3.5 percent) as the average consumption of the top 60 grew faster (6.8 percent on average per year) than the consumption of the bottom 40 (3.2 percent) (Figure 2.2).

Positive shared prosperity reversed after 2008, signaling weaker inclusiveness

(Average annual consumption growth for the bottom 40, top 60 and shared prosperity premium)
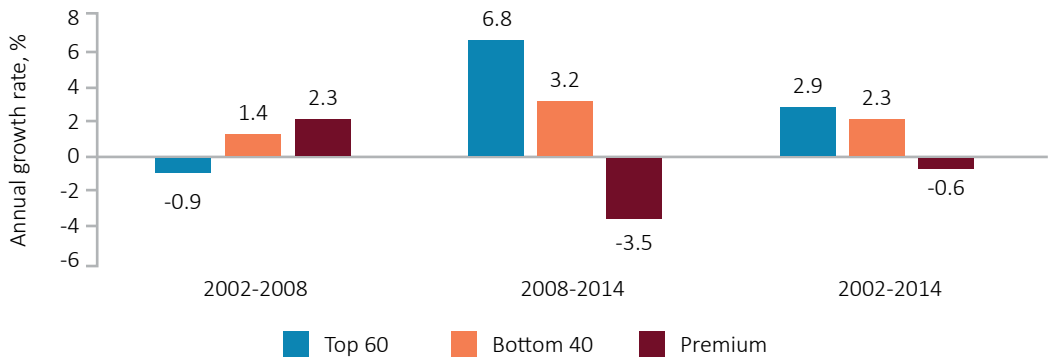
Note: Shared prosperity premium is the difference between the consumption growth rates of the bottom 40 and the top 60.
Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

16. Consequently, inequality is not only high but rising. Mozambique is among the most unequal countries in sub-Saharan Africa as measured by the Gini coefficient[9] (Figure 2.3). The recent pro-richness of growth is contributing to raise it even further. The Gini coefficient increased from 0.47 to 0.56 between 2008/09 and 2014/15. Inequality numbers reported with the official methodology produce the same trend albeit the levels and size of the changes are different (Government of Mozambique, 2016). The Gini coefficient hovered around 0.40-0.42 from 1996/97 to 2008/09 but increased since after reaching 0.47 in 2014/15. Additional disaggregation of the data shows that the worsening of income inequality is largely the result of higher concentration in urban areas (Figure 2.4).

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[9] The Gini Coefficient is the most popular measure of inequality. It is derived from the Lorenz curve, which shows the cumulative proportion of the population on the horizontal axis and the cumulative proportion of consumption or income on the vertical axis, sorted from the poorest to the richest household. The Gini is calculated as the ratio of the area between the Lorenz Curve and the diagonal of perfect equality, namely each household has the same consumption/income share. The Gini coefficient ranges from 0 (perfect equality) to 1 (perfect inequality).

Figure 2.3. **The distribution of household consumption is highly unequal by regional standards**
(Gini coefficient for selected countries and years)
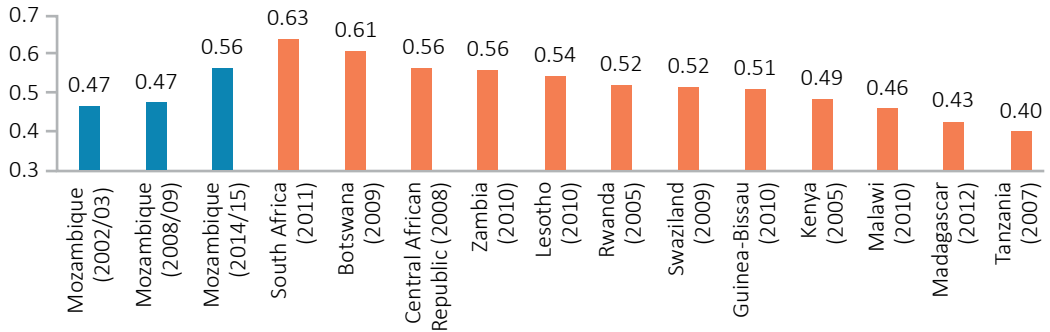
Source: World Bank using WDI

Figure 2.4. **Inequality is high and increasing, a trend driven by worse inequality in urban areas**
(Consumption-based Gini coefficient)
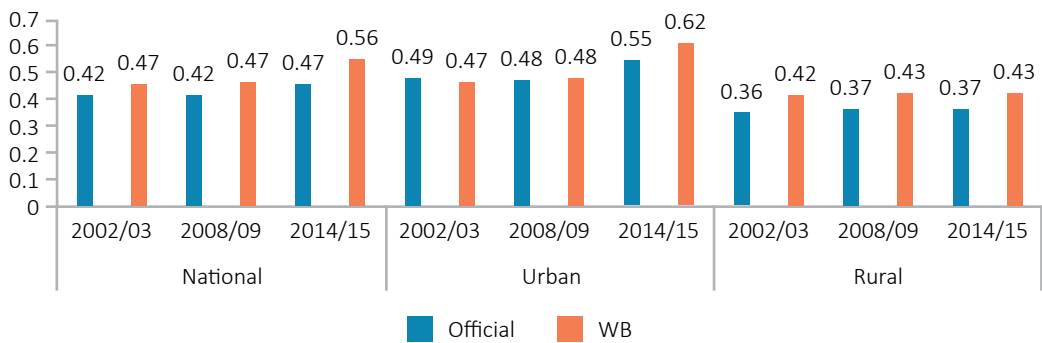
Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

Had growth been more equally shared Mozambique would have achieved twice as much poverty reduction after 2000.

17. The decline in poverty in Mozambique has been hindered by high and rising inequality. Changes in poverty can be decomposed into "pure growth" and "redistribution" elements to shed light on whether the benefits of growth reach the poor.[10] As shown in Figure 2.5, the increase in mean household consumption (growth effect) is driving the fall in poverty. In contrast, the increase in inequality in the distribution of consumption (redistribution effect) offsets half of the contribution of the growth effect to poverty reduction, increasing the incidence of poverty. The growth effect alone would have reduced poverty by 23.1 percentage points between 2002 and 2014 – bringing the poverty headcount down to 37.2 percent rather than the actual 48.4 percent – had the redistribution effect not increased poverty by 11.2 percentage points.

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[10] This report follows the method proposed by Datt and Ravallion (1992). This decomposition is based on the idea that that a measure of monetary poverty can be expressed as the product of mean consumption and a parameterized Lorenz curve. Keeping the Lorenz curve constant gives the distribution neutral growth that would drive the average increase in consumption across the population, for instance, raising the levels of consumption of all households by the same rate. The other part is derived from holding the mean consumption constant (a mean-preserving redistribution) to capture the change in the shape of the consumption distribution driven by, for instance a faster growth in the consumption of the poorest relative to the consumption growth of the richest. There is also a third, much lower "price" effect explained by price adjustments made to the poverty line over time.

Figure 2.5. **Higher inequality has offset the contribution of growth to poverty reduction**
(Growth, redistribution effects on poverty reduction by period, percentages)
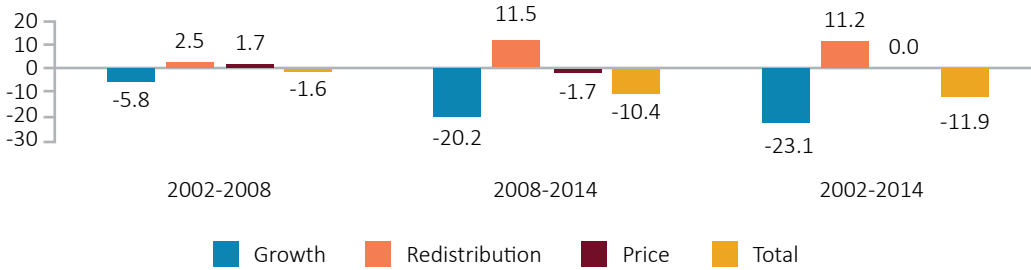
Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

The increasing role of services in the economy and favorable macroeconomic conditions contributed to faster consumption growth after the late 2000s.

18. The increasing role of the services sector, an outcome of the ongoing process of structural transition, has created a path to jobs outside agriculture. In recent years, the sources of growth have gradually shifted away from agriculture. Between the late 1990s and the middle of the 2000s, output growth was pulled by investments in capital intensive industrial activities (largely "megaprojects" in extractive, export-oriented industries) with relatively higher value-added but low job creation. The other emerging economic activity, the services sector, also began to play a larger role in the economy, both in terms of output and employment. Between 2008 and 2014, its share of GDP increased from 49.8 to 55.7 percent

and the contribution to jobs in the economy jumped from 15 to 24 percent (Table 2.1).

19. The transition of workers from agriculture into services has contributed to faster increase in the standards of living after the late 2000s. Decomposition analysis shows that growth in labor productivity has been the main engine of economic growth in the last two decades (Table 2.2).[11] In contrast, changes in employment levels and labor force participation have had a negligible contribution. Labor productivity growth, in turn, has been driven in recent years by the shift of jobs away from agriculture and into sectors with higher productivity. Back in 1996, shortly after the end of war, 86.6 percent of workers were primarily engaged in agriculture. That share fell to 71 percent by 2014 and most of that shift was absorbed by the service sector, where productivity is over six times larger despite high levels of informality.

Table 2.1. **The services sector is gradually playing a greater role in the economy**
(GDP and jobs composition across economic sectors)

Sector shares of GDP	1996	2003	2009	2014
Agriculture	38.1%	31.4%	30.5%	25.5%
Industry	10.2%	21.1%	19.7%	18.8%
Services	51.8%	47.7%	49.8%	55.7%
Total	100%	100%	100%	100%
Sectors shares of jobs	1996	2003	2009	2014
Agriculture	86.6%	80.5%	80.4%	71.0%
Industry	4.4%	3.4%	4.7%	4.9%
Services	9.0%	16.1%	15.0%	24.0%
Total	100%	100%	100%	100%

Source: World Bank Jobs Diagnostics (2017)

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[11] A "growth accounting exercise" can be used to decompose GDP per capita growth into four components: productivity, the employment rate, the labor participation rate and the ratio of the working age population to the total population.

Table 2.2.   Labor productivity growth is the single greatest contributor to growth in GDP per capita
(sources of GDP per capita growth)

	1996-2014	1996-2003	2003-2008	2008-2014
Annual Growth of GDP per capita	4.85	5.41	5.30	3.83
% Yearly Contribution to Growth of:				
Productivity (Y/E)	5.36	5.01	6.30	4.89
Employment Rate (E/LFP)	-0.07	0.27	-0.27	-0.30
Participation Rate (LFP/WAP)	-0.34	0.28	-0.49	-0.87
Demographic Change (WAP/P)	-0.09	-0.15	-0.24	0.11

Source: World Bank Jobs Diagnostics (2017)

20. Macroeconomic conditions were favorable for private and public consumption growth. Macroeconomic expansionary policies provided the right conditions for faster private consumption growth in the period 2008/09-2014/15. Public expenditures, measured as a proportion of the GDP, increased steadily between 2008 and 2014, raising from 24 percent to 39 percent. Mozambique also experienced several years of expansionary monetary policy over the past decade. Annual credit growth to the private sector averaged 23 percent between 2009 and 2015. All this happened along a sharp increase in external inflows of resources. Foreign direct investments into Mozambique increased continuously, reaching almost 40 percent of GDP in 2013, up from 5 percent in 2008.

Internal migration had a small effect on poverty reduction.

21. While Mozambique is slowly becoming more urbanized, rural-urban migration appears to have contributed little to poverty reduction. An increasing share of the population now lives in urban areas owing in part to migration flows form rural areas, which are pulled mostly by the prospect of better economic opportunities.

Data on internal migration is scarce but numbers from the populaiton census of 2007 indicate that 8 percent of the Mozambicans live in a district different from the one in which they were born and half of them are located in a province outside the place of birth.[12] Decomposition analysis suggests that that most of the poor that left their rural homes stayed poor after they settled in urban areas.[13] The gains in consumption growth that lifted people out of poverty were concentrated on individuals that already lived in rural or urban areas and did not migrate. Scarce employment opportunities, skills mismatch, low productivity and high costs of living are factors that undermine the chances for rural migrants to improve their livelihoods after settling in urban centers.[14]

Other factors such as location, demographic structure and limited ownership of and lower returns on assets continue to keep people in poverty.

22. Geographic location, demographic structure, education, type of work and isolation matter for poverty. As noted before, poverty is overwhelming rural in Mozambique. As of 2014/15, the poverty rate is 24 percentage

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[12] The lack of information about the place of origin of migrants in the Census 1997 and the Census 2007 does not allow establishing the share of migrants that moved from rural to urban areas.

[13] This analysis follows the methodology proposed by Ravallion and Huppi (1991). It decomposes changes in poverty over time into "intra-regional effects" (poverty changes within urban and rural areas assuming no migration between the two of them), "inter-regional effects" (allowing for changes in the distribution of the population between rural and urban areas keeping poverty rates constant) and an "interaction" term that can be interpreted as a measure of the correlation between the population shifts and the intra-regional changes in poverty.

[14] After controlling for human capital and occupation, earnings are not significantly higher in urban areas than in rural areas. On average, nominal earnings are 26 percent higher in urban areas than in rural areas, not enough to offset the differences in the costs of living. The undermines the possibility of a potential urban wage premium among the unskilled (World Bank, 2017c).

points higher in rural areas than in urban areas, 56 percent and 32 percent, respectively. Poor households are larger, having on average nearly 1.1 more members. In addition to family size, the age structure of poor households implies higher levels of dependency since they have relatively more children in ages 0 to 14. The level of schooling of the household head is associated with the poverty status of the family. Household heads that are poor have on average 0.8 fewer years of education than those that are not poor. The sector of work also matters. Regression results show that employment in agriculture remains a strong predictor of poverty. Coverage and accessibility to critical infrastructure and services such as electricity, water and sanitation, transportation and markets are systematically lower among poor households (Table 2.3).

23. Poor households are also characterized by having limited ownership of basic assets and earning lower returns on them. Despite having improved over time, endowments such as physical, financial and human capital remain lower among poor households relative to the non-poor. In addition to this, decompositions of consumption growth show that returns on these endowments also help explain the welfare gap, particularly in recent years.[15] The better off are found to benefit relatively more from higher returns on their endowments relative to the returns earned by the poor.

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[15] This study performed regression analysis to disentangle the changes in consumption into changes in two components: 1) household *endowments* such as demographic characteristics, education, experience, assets, access to basic services, location, proximity to markets and occupation, among others; and 2) *returns* to those characteristics such as returns to education, experience, land productivity, etc. More details of the methodology employed are available in the long version of this poverty assessment.

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Table 2.3. The livelihoods of the poor differ from those of the non-poor in many key aspects

Variable	Poor	Non-Poor	Significance (t-test)	Significance (Model)
Household socio-demographics				
Age of household head	43.5	43.9	**	***
Female-headed (%)	23.3	24.2	**	***
Household size	6.8	5.7	***	***
Proportion of children aged 0 to 14 (%)	55.0	42.8	***	***
Lives in rural area (%)	79.0	58.2	***	***
Years of education of household head	3.5	4.3	***	***
Household head is illiterate	19.7	12.8	***	***
Sector of work				
Head works in agriculture (%)	74.6	49.7	***	***
Head works in manufacturing (%)	3.2	4.5	***	
Head works in services (%)	6.6	20.2	***	
Head employed in private sector (%)	1.9	8.9	***	***
Head employed in public sector (%)	6.3	13.5	***	
Access to services				
Improved water	48.0	69.2	***	***
Improved sanitation	14.0	42.4	***	***
Electricity	11.5	42.0	***	***
Within 30 minutes of walking distance to …				
Road (%)	46.3	66.6	***	***
Market (%)	48.3	65.8	***	***
School (%)	66.5	77.8	***	***
Health facility (%)	64.4	71.3	***	
Asset ownership				
Household has a car	0.4	8.2	***	***
Household has a bicycle	40.1	35.4	***	***
Household has a T.V.	11.0	43.1	***	***
Household has a fridge	4.4	30.7	***	***
Household has a phone	46.1	75.3	***	***

Note: Column *t-test* shows significance values from a standard unconditional t-test of differences between the means. Column *Model* shows significance values from a binary dependent variable (poor =1, = 0 otherwise) model (probit) controlling for all variables shown and province fixed effects. *, **, and *** indicate significance level at 10%, 5%, and 1%, correcting for the clustered nature of the errors in the probit regressions.
Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

3 Evolution of Living Conditions and Economic Mobility

The average household in Mozambique has better standards of living today than at the turn of the century, but there are still major gaps.

24. **Several education indicators show improvements in human capital accumulation since the early 2000s.** Mozambican children are now more likely to participate in school than before. Back in 2002/03, 43 percent of children ages 5 to 14 were not enrolled in school, a value that fell to 24.2 percent in 2014/15. There has also been a decline in late and overage enrollment. Furthermore, the increase in school enrollment has gone in hand with an increase in educational attainment. Figure 3.1 shows two snapshots of the school attainment across education levels for the population 20-65 years old, one for 2002/03 and the other one for 2014/15. The increase is evident, with fewer people without education and instead a higher share of the population that either accumulated some years of primary and secondary education or completed both levels. Overall, average school attainment increased to 5.1 years of schooling, up from 2.4 in 2002/03.

Figure 3.1. **Higher school participation is slowly increasing educational attainment**
(school attainment by educational levels)

(2002/03)

	Male	Female
Higher Education	0.3	0.3
Some technical	1.4	0.6
Completed secondary	2.8	1.8
Some secondary	5.1	3.0
Completed primary	12.4	13.4
Some primary	25.1	26.2
None	53.0	54.2

(2014/15)

	Male	Female
Higher Education	3.5	2.1
Some technical	2.2	1.1
Completed secondary	10.0	7.3
Some secondary	16.2	11.7
Completed primary	20.1	14.3
Some primary	38.9	41.8
None	9.2	21.8
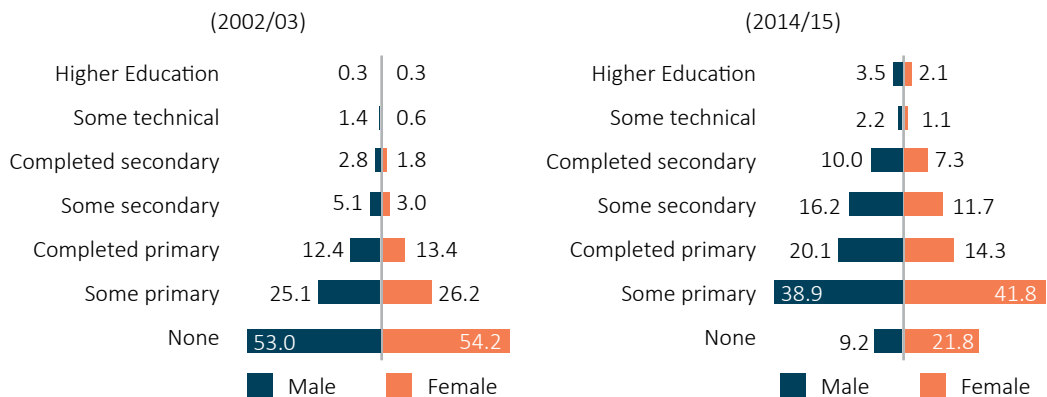
Source: World Bank using IOF-2002/03 and IOF-2014/15

25. Health outcomes such as life expectancy, infant and maternal mortality, and morbidity are also moving in the right direction. Since 2001, longevity has increased by almost 9 years from 48.8 to 57.6. The infant mortality rate, expressed as the number deaths per thousand live births, fell from 99.1 in 2003 to 68.1 in 2011. Child mortality rates have followed a comparable downward trend. Over the same period, maternal mortality from any cause related to or aggravated by pregnancy have fallen too, from 804 to 596 deaths per 100,000 live births (Figure 3.2). The fraction of workers that reported not working due to sickness dropped from 16.8 percent in 2002/03 to 13.9 percent in 2008/09. The improvement in health outcomes is associated with a modest increase in access to and utilization of health services. In 2011, 90.8 percent of pregnant women underwent an ante-natal check, a higher fraction than in 2003 (84.5 percent). Over the same period, the proportion of children under five with full immunization coverage raised from 43 percent to 46 percent. More births were delivered in a health center or with the assistance from a health professional in 2011 than in 2003,

54.3 percent and 47.7 percent, respectively.

26. Access to basic services such as water and sanitation improved but large disparities in coverage remain across different groups of the population. Almost 70 percent of the population has access to safe water, a 28-percentage point increase from the level in 2002/03. Regarding access to improved sanitation, nearly 4 in 10 households were covered in 2014/15, twice the coverage level in the early 2000's. Improvements in access to electricity are positive (increased from 12.2 percent to 40.9 percent) but overall electrification rates are low (Figure 3.3). There are, however, large gaps between income groups and rural and urban areas. Household location and income levels are strong determinants of access to basic services. For instance, access to safe water and sanitation among urban households is 89.4 percent and 69.4, respectively. The corresponding rates for rural households are 46.6 percent and 7.5 percent. Similarly, nearly 60 percent of urban households are connected to the distribution network compared to 15.1 percent amongst rural households (Figure 3.4).

Figure 3.2. **Infant and maternal mortality rates have fallen**

(infant mortality: infant deaths per 1,000 live births)

(maternal mortality per 100,000 live births)
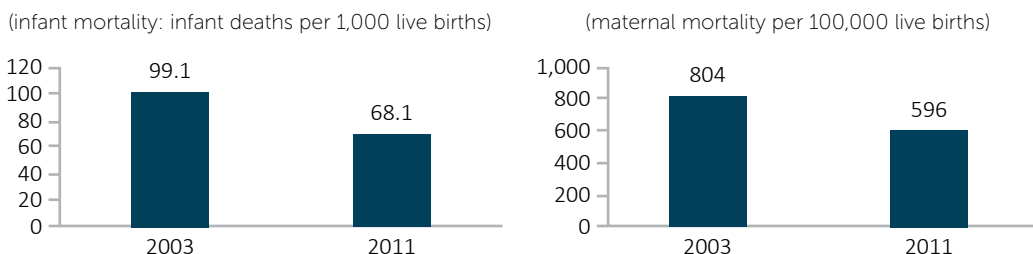
Source: World Bank using DHS-2003 and DHS-2011

Figure 3.3. **Access to basic services is improving but are yet far from being universal**
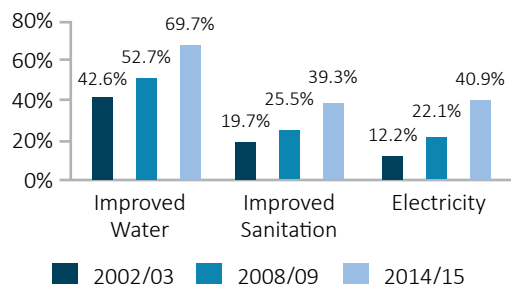
Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF-2014/15

Figure 3.4. **Location is a strong determinant of access to basic public services**

Source: World Bank using IOF-2014/15

Source: World Bank using IOF-2014/15

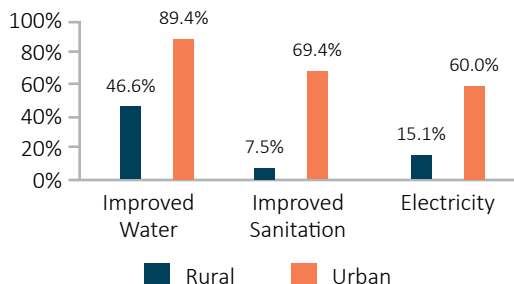**27. Households have also experienced improvements in their housing conditions and the ownership of basic assets.** All indicators measuring the quality of housing such as improved floor, improved roof and improved walls show positive development between 2002/03 and 2014/15, providing evidence for rising living standards. Along the same lines, Mozambicans now own more assets than what they used to own in the past. Ownership of traditional household items such as beds, irons and fridges, among others, has increased, especially in rural areas. There have also been improvements in ownership of bicycles, motorcycles, TVs and, above all, cellphones, which record the most marked increase. The share of households having a mobile phone has multiplied by 15 from 4 to 61 percent, including increased ownership among poor households, which reached 46 percent in 2014/15 (Figure 3.5). While in general these positive trends are observed in urban and rural areas, they are more marked in the former, and especially for households from the top of the distribution.

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Figure 3.5.   Ownership of traditional and modern assets has increased
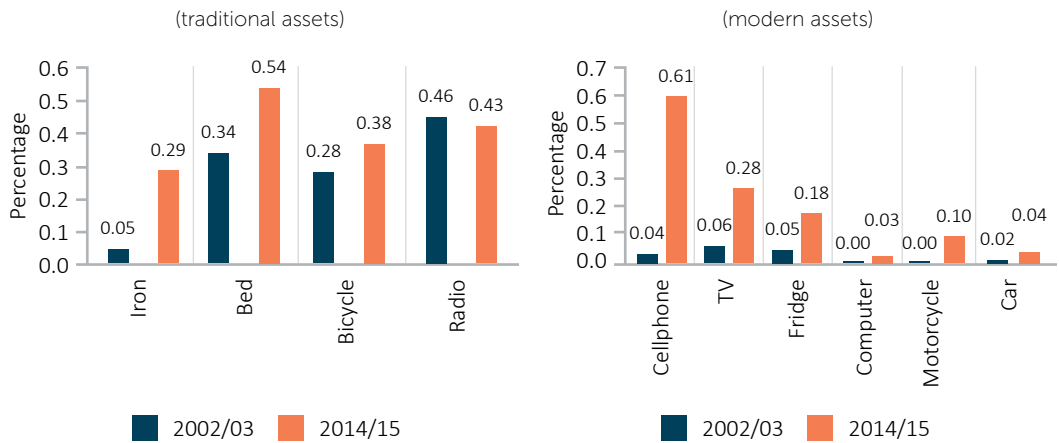
Source: World Bank using IOF-2002/03 and IOF-2014/15

Multidimensional poverty has been falling, but more so in the last decade and in urban areas.

28. While it has fallen, multidimensional poverty remains high, with 7 in 10 Mozambicans still deprived in several key aspects of human welfare. Looking at deprivations in multiple dimensions of wellbeing (human capital, access to services, housing conditions, asset ownership and monetary poverty) all at once sheds light on how they overlap and possibly reinforce each other.[16] A household is multidimensionally poor if it is deprived in a given number of indicators – for this analysis the threshold is set at 3 out of the 8 indicators.[17] The findings show a drop in multidimensional poverty, from 92.8 percent in 2002/203 to 71 percent in 2014/15, but most of the gains were achieved in the period of faster poverty reduction (2008/09- 2014/15) (Figure 3.6). The gains are concentrated in urban areas, where the share of the population experiencing multidimensional deprivation fell steadily from 78.6 percent to 32.0 percent. In contrast, progress has been noticeably slower in rural areas, where 9 in 10 rural households are poor in multidimensional sense.

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[16] The eight indicators used for this part of the analysis are the following: education (no household member completed primary schooling, at least one school-age child in the household is out of school), access to services (no access to electricity, improved water and improved sanitation); housing conditions (poor quality dwelling), asset ownership (no ownership of at least two of the following assets: fridge, TV, phone, bicycle, car or motorcycle) and the prevalence of monetary poverty (household's consumption per capita is below the poverty line).

[17] Results of the analysis are qualitatively similar for higher values of this threshold.

Figure 3.6.   **The prevalence of multiple deprivations has declined but mostly in urban areas**
(households experiencing three or more monetary and/or non-monetary deprivations)
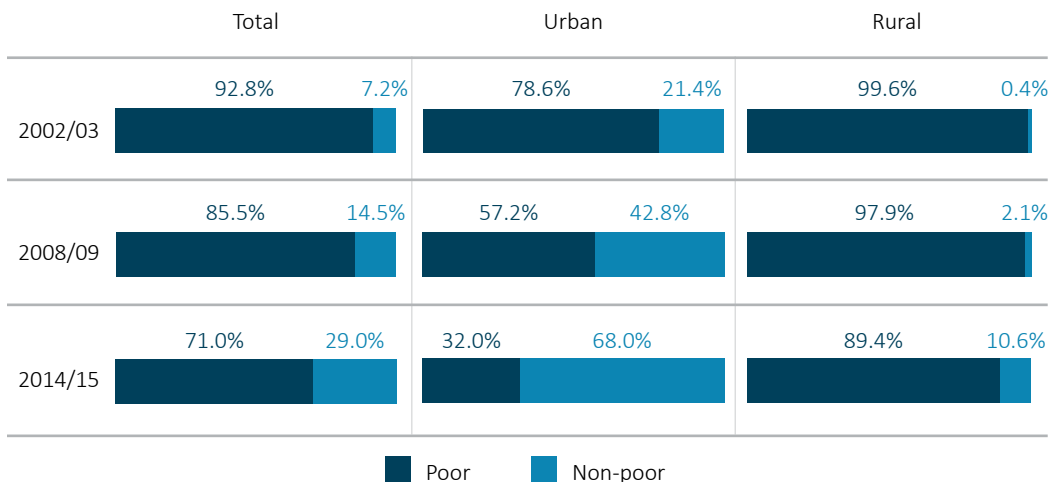
Source: World Bank using IOF-2002/03, IOF 2008/09 and IOF 2014/15

The incidence of both monetary and non-monetary poverty is strongly correlated.

29. Compared to households above the poverty line, monetary poor households are also remarkably more likely to be deprived in each of the non-monetary indicators analyzed. For example, 49.4 percent of the monetary poor live in dwellings that lack access to safe water whereas 27.1 percent of the monetary non-poor are deprived in this indicator (Figure 3.7). Data from previous surveys reveal that the strong association between monetary and non-monetary poverty has changed little over time.

Figure 3.7.   **Non-monetary deprivations continue to be larger among the monetary poor**
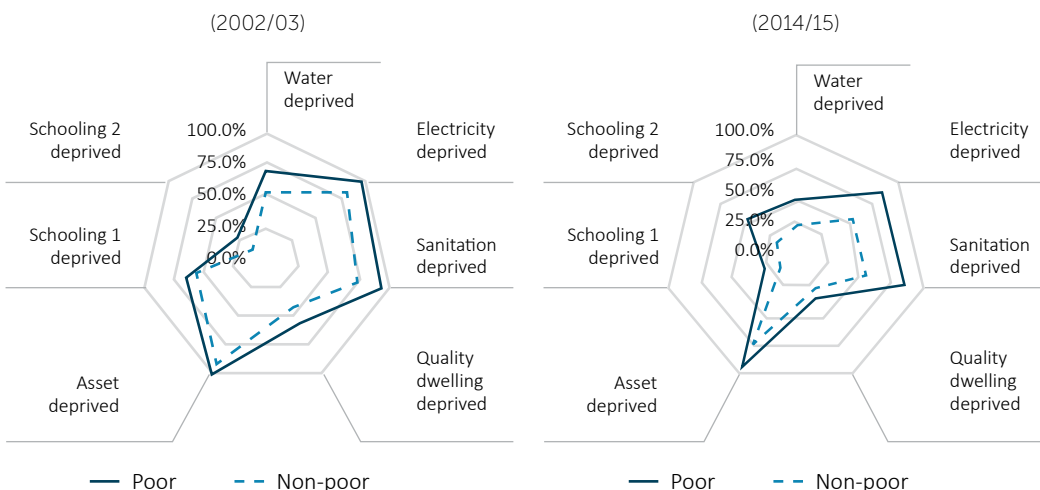
Note: Schooling deprived 1 = no member in the household completed at least 5 years of education, Schooling deprived 2 = at least one primary-school age children out of school.
Source: World Bank using IOF-2002/03 and IOF-2014/15

The chronic poor continues to be the largest welfare group.

30. The share of people in chronic poverty has fallen but continues to be the largest group, signaling a poverty trap problem. In the absence of panel data, the overlay of monetary and non-monetary poverty can be used to categorize the population into welfare groups with high and low risks of staying poor.[18] Results of this analysis show that the share of Mozambicans in chronic poverty fell from 53.6 percent to 46.3 percent between 2002/03 and 2014/15 (Figure 3.8). In other words, as of 2014/15, more than 4 in 10 individuals are both unable to afford basic food and non-food baskets and are deprived in at least three core, non-monetary measures of human welfare (education, access to basic services, housing conditions and ownership of basic assets). A continued persistence of these deprivations is expected to keep trapping these households into a condition of monetary poverty. Most of the households likely to be chronically poor are in rural areas (84.9 percent), particularly in the provinces of Zambezia, Niassa and Nampula.

Figure 3.8.   **The chronic poor remains the largest welfare group in the population**

(welfare groups,2002/03)

(welfare groups, 2014/15)

0.6% Transient poor **5.5%** Better off **40.3%** Not poor but deprived **53.6%** Chronic poor

6.3% Transient poor **22.8%** Better off **24.7%** Not poor but deprived **46.3%** Chronic poor
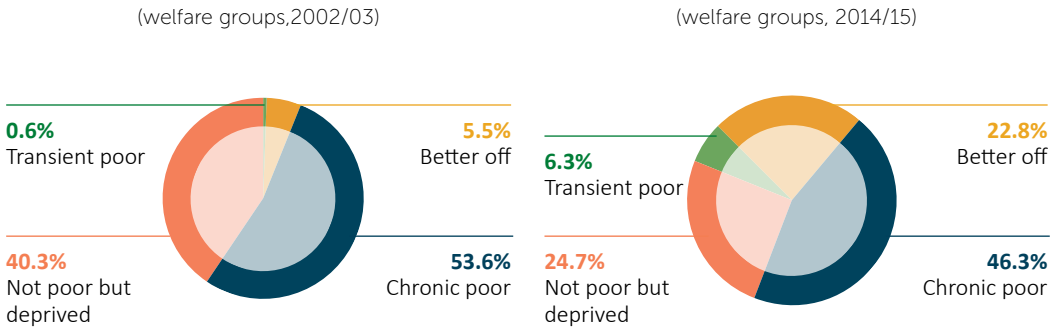
Source: World Bank using IOF-2002/03 and IOF 2014/15

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[18] More specifically, the population can be divided into four groups: 1) the *chronic poor*, namely those that are poor in multidimensional and monetary sense and thus are less likely to depart the condition of poverty; 2) the *not poor but deprived* is comprised of households whose consumption is above the poverty line but are multidimensionally poor; 3) the *transient poor* corresponds to households that are not deprived in any of the non-monetary dimensions despite being consumption *poor*; and 4) the *better off* represents households that are not poor by either approach.

4 Inequality of Opportunities

There is an increase in the availability of human and economic opportunities in the Mozambican society, but their allocation across the population is still largely unequal.

31. Economic progress has brought more economic opportunities, but not everyone in the population can seize them. A context where poverty reduction has gone in hand with higher inequality makes it important to measure the availability of basic opportunities and how equitable these opportunities are distributed across the population. The Human Opportunity Index (HOI)[19]

shows that Mozambique has registered an increase in the coverage of basic opportunities, but some groups of people have remarkably lower chances of capitalizing on these opportunities.[20] As noted before, the coverage of indicators capturing human capital, access to basic services and quality housing opportunities have increased. Yet, a large share of this coverage would need to be reallocated from the more advantaged to the less advantaged groups to achieve equality of opportunity: 3.8 percent in education, 15.9 percent in water, 34.6 percent in sanitation, 53.3 percent in electricity and 5.0 percent in quality housing (Table 4.1).[21]

Table 4.1. **The distribution of opportunities is highly unequal but is slowly improving**
(fraction of opportunities unequally distributed across the population)

	Education	Water	Sanitation	Electricity	Quality Housing
2002/2003	8.7%	16.9%	55.3%	67.4%	12.3%
2008/2009	5.1%	16.6%	46.3%	65.2%	12.5%
2014/2015	3.8%	15.9%	34.6%	53.3%	5.0%

Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF 2014/15

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[19] The HOI can shed light on the influence of personal "circumstances" –exogenous variables such as gender, race or place of birth for which individuals have no control or responsibility– on the access that people get to the basic services that are necessary for achieving a fully productive life. The index has two components. The first one measure the average coverage rate of basic services. The second component –the equity of opportunity distribution– measures the gap in access rates for a certain service in a group defined by personal "circumstances" relative to the average access rate for that service for the whole population (Barros et al. 2009). The second component discounts the average coverage rate by the fraction of the opportunities that needs to be reassigned from the better-off groups to the worse-off groups to attain equal opportunity in the population under study. The higher the inequality in the allocation of opportunities, the higher the rate of discount.

[20] The five opportunities considered in the index for children ages 5 to 11 are: 1) the child is enrolled in primary education, 2) the household uses either piped water, public tap or mineral/bottle water for human consumption; 3) the dwelling is connected to a sewer system or has access to a sceptic tank and/or improved latrine; 4) the energy for lighting is electricity; and 5) the housing material is adobe, cement and/or brick. The seven children circumstances defined are: 1) location, 2) gender of the child, 3) child's area of residence (urban or rural), 4) per capita household consumption, 5) years of schooling of the family head, 6), number of siblings and 7) if the child lives in either a single-parent or two-parent household.

[21] Inequality of opportunity in sanitation, for instance, implies that 34.6 percent of the total available coverage would have to be reallocated among the six circumstance groups (as shown below, mostly from urban to rural households) to equalize the probability of access across all children.

32. There is large variation in the availability of opportunities across provinces and across personal circumstances within provinces. The increasing coverage of basic opportunities masks large regional variation. Provinces where monetary poverty has been historically high (such as Zambezia, Nampula and Niassa) show lower availability of human and economic opportunities. The largest gap of the dimensions analyzed is in electricity. As of 2014/15, nearly 8 in 10 households in

Maputo Province have access to the grid compared to 13.6 percent in Zambezia (Figure 4.1). Furthermore, the opportunities available are also more unevenly allocated in the poorest provinces. 67.2 percent of the coverage in electricity in Zambezia needs to be reallocated away from the better-off groups to achieve equal coverage. On the other side of the spectrum is Maputo Province, where 13.2 percent of the coverage is unequally assigned across personal circumstances (Figure 4.1).

Figure 4.1.   Human opportunities are more unequally allocated in the poorest provinces
(unequal distribution of opportunities across personal circumstances and poverty rates by province, 2014/15)

The chances of Mozambican children later in life are largely influenced by their location and family background.

33. Location, household consumption and parental education drive the inequality of opportunity. Three personal circumstances beyond the control of children are the most salient in explaining the severity of opportunity deprivation: whether the household is located in an urban center, household's per capita consumption and the school attainment of the household head. For instance, almost all

(98.4 percent) of the unequal access to water is driven by location (59.3 percent), household per capita consumption (31.9 percent) and head's human capital (7.2 percent). These three characteristics are also important drivers of inequitable distribution of opportunities with relatively high HOIs, such as education (94.8 percent) or housing (89.8 percent) (Figure 4.2). This pattern has remained constant over time. Decomposition analysis for the HOI in 2002/03 shows that back then this sub-set of circumstances was also the largest contributor to the overall inequality of opportunity.

Figure 4.2. Location, consumption and parental education drive the inequality of opportunity
(contribution of each circumstance to inequality of opportunity, 2014/15)

Source: World Bank using IOF-2002/03, IOF-2008/09 and IOF 2014/15

# 5 Productivity, Market Development and Vulnerability in Agriculture

Productivity in agriculture is low, partly driven by low input intensity and weak market orientation.

34. **Agriculture, the mainstay of Mozambique's economy, especially among the poor, is characterized by low levels of productivity.** The country is rich in natural endowments well suited for agriculture such as extensive fertile land, abundant water and favorable climate. The agricultural sector accounts for around 25 percent of the GDP and employs nearly 75 percent of the labor force. Close to 94 percent of the poor are primarily engaged in agriculture. But productivity in this sector is low by global and regional standards (Figure 5.1). The gap between average cereal yields in Mozambique and global averages is large and has been growing by more than 2 percent annually between 2000 and 2009 (World Bank 2016c). There are also large productivity gaps with respect to other sectors in the economy. Data for 2014 shows that the productivity level in agriculture was about one-third of the average productivity for the whole economy (World Bank, 2017a).

Figure 5.1. Average maize yields are lower in Mozambique than in other neighboring countries
(maize yields in kilograms per hectare)
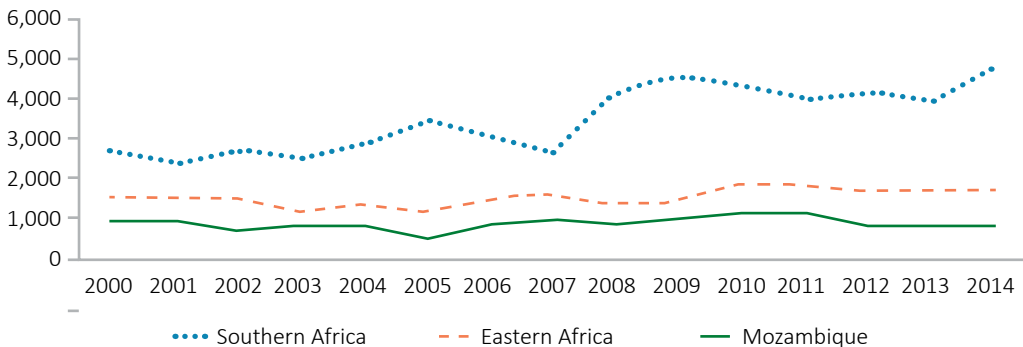
Source: FAOStat

35. Most of the rural poor are smallholders engaged in subsistence agriculture with low utilization of modern inputs. The median farm size in the Integrated Agriculture Survey (AIS-2015),[22] was 1.27 hectares. Most of the crops that smallholders grow is for their own consumption and only a few (13 percent) commercialize their production or grow cash crops. Rates of adoption of productivity-enhancing technologies (such as fertilizers or improved seeds) appear to be remarkably low, as shown in Figure 5.2.

**Figure 5.2.** There is low adoption of modern agricultural inputs among farmers in Mozambique
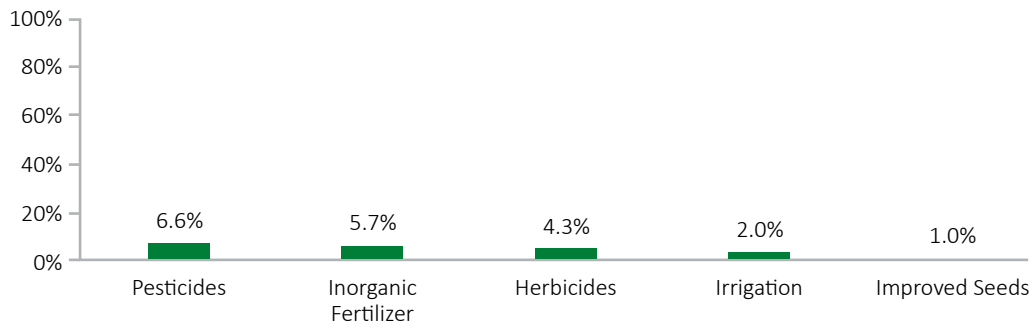
Source: World Bank using AIS 2015

36. Poverty tends to be higher in provinces where agricultural productivity is lower. Maize is the most commonly grown crop and is thus a useful proxy indicator to measure productivity. A comparison of maize yields per hectare across regions in Mozambique shows that farmers in the poorest provinces are less productive, on average, than those in the rest of the country (Figure 5.3). In Nampula and Zambezia, for instance, where headcount poverty rates are particularly high, the average maize yield was 593 kg per hectare. In the rest of the country, the average yield equals 951 kg per hectare, almost twice the productivity levels of the poorest provinces.

Figure 5.3. Poverty rates are higher in provinces with lower maize yields per hectare

(all provinces)

(excluding Maputo City and Maputo Province)
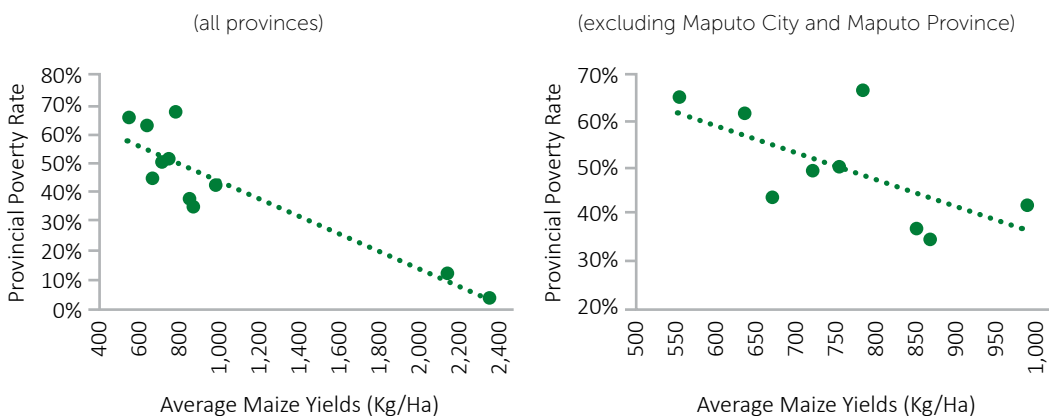
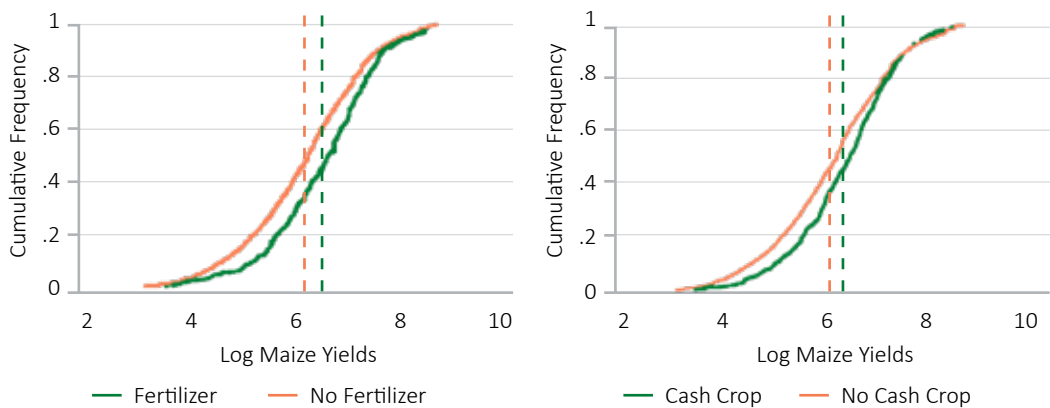*Source:* World Bank using AIS 2015 and IOF 2014/2015

[22] The survey is administered every other year by the Ministry of Agriculture and Food Security with technical support from the University of Michigan. It collects data on socio-demographics, farm size, agricultural production outcomes and market access from 7,485 agricultural households. Like the household budget surveys (IOFs), data from the Agricultural Integrated Survey is representative at the national and provincial levels.

37. Farmers with higher use of modern technologies and stronger market orientation are more productive. Adoption of technologies such as irrigation, fertilizer, and pesticides among Mozambican farmers is correlated with higher levels of productivity. For instance, maize yields per hectare are 27 percent higher among farmers that apply fertilizers compared to those who do not (Figure 5.4). Similarly, farmers that cultivate cash crops are generally more productive than those that only cultivate staple crops. Data from the AIS survey shows that the median maize yields per hectare for the first group is 33 percent higher than the median maize yield for farmers who did not produce cash crops (Figure 5.4). In addition, smallholder farmers also have low access to extension and credit services. Data from the AIS-2015 shows that 6 percent received information from an agricultural extension program and less than 1 percent obtained agricultural credit.

Figure 5.4. Modern inputs and market orientation are correlated with higher agricultural productivity

(maize yields per hectare)

Note: Cumulative distribution functions trimmed at 1st and 99th percentiles. Vertical lines show mean values.
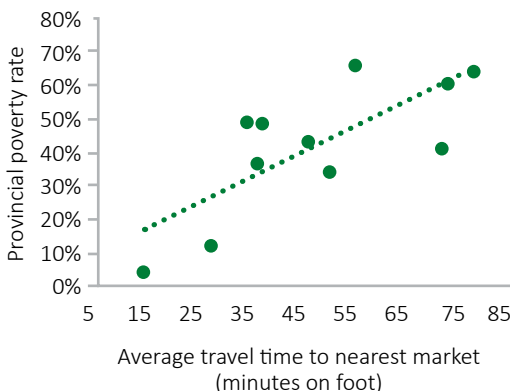*Source:* World Bank using AIS 2015

Several aspects constraint the commercialization of agricultural output.

38. Even if farmers increased their agricultural productivity, several factors hinder their ability to participate in market. Low storage and processing capacity are critical constraints to reduce post-harvest loss, strengthen market development and increase food security. Data from 2015 shows that 56 percent of the population do not own any type of silo and hardly any farmers posses knowledge related to processing of agricultural goods. Seasonal price fluctuations of agricultural goods further compound the need for farmers to access market smoothing mechanisms. Farmers who sell their surplus harvest tend to sell immediately after harvest, often creating a market glut and pushing down prices. Conversely, during the lean season, few farmers are selling their production, and this leads to higher food prices. Isolation and transport costs are another major barrier to access input and output markets. Nampula and Zambezia, the two provinces with the highest poverty rates, are the provinces where rural households face longer travel times to reach markets and other basic services (Figure 5.5).
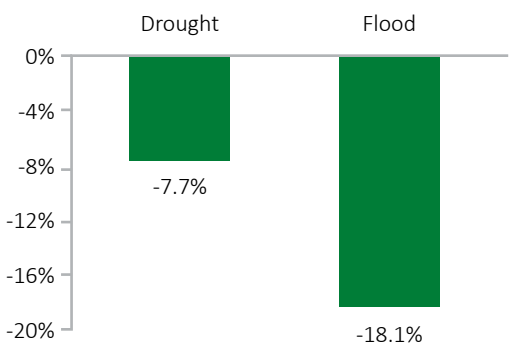

Figure 5.5. The more isolated a province is from the nearest market the higher is its poverty rate

Source: World Bank using AIS 2015

Figure 5.6. Maize yields per hectare are lower for farmers that experienced droughts and/or floods

Notes: productivity measured by maize yields in Kg/Ha.
Source: World Bank using AIS 2015

Agriculture is particularly risky in Mozambique, hindering output and rural livelihoods.

39. Climatic shocks exert both direct and indirect effects on agricultural output and rural livelihoods. Agriculture by nature is a risky activity but more so in Mozambique where the incidence of weather shocks is high by regional –and even global– standards. The country is often subject to erratic rainfall, droughts, floods, cyclones, pests, and diseases. In 2015, almost 8 in 10 farmers lost part of their crops, animals or productive assets due to climatic shocks. Drought is the largest risk, affecting a large share of farmers, with devastating effects on crops. Floods and cyclones are also common, both of which inflict high damages on farm infrastructure and crops. In fact, the relationship between the occurrence of shocks and maize yields suggest that droughts and floods are negatively associated with crop productivity. Yields among farmers that experience droughts and floods are on average 8 and 18 percent lower, respectively, compared to unaffected farmers –even after controlling for differences in observable characteristics. (Figure 5.6)

6 Human Capital, Labor Force and Jobs

*Human capital is increasing but progress is uneven across areas and population groups.*

40. The availability of basic education services has expanded in hand with increases in school attainment. Investments in public education as a share of GDP increased from 2.7 to 3.1 percent between 2009 and 2014, reaching levels above the average for several countries in sub-Saharan Africa. School fees for primary education were abolished in 2004. The increase in the number of schools and teachers has been met by an increase in the demand for education, partly driven by demographic trends. Increased supply and demand in education has resulted in higher levels of enrollment, attendance in primary education, literacy and school attainment. As of 2014/15, over 90 percent of primary-aged children reported attending primary school. More schools and higher attendance rates have resulted in increased educational attainment as measured by the average years of schooling of the population.

As of 2003, average educational attainment in Mozambique was 2.6 years of schooling among the adult population (21 years and older). Starting from that low base, Mozambique more than doubled the average educational attainment for all adults, to 5.7 years in 2015 (Figure 6.1).

41. However, progress in raising human capital varies across regions and income groups. Most schools in rural areas cover only the first level of primary education (grades 1 to 5) whereas most of the schools offering secondary education (grades 8 to 12) are in urban areas. Enrollment rates in secondary school have more than doubled relative to the early 2000s, reaching 38 percent, benefitting proportionally more the upper half of the distribution. Overall, children from households below the poverty line are on average around 30 percent less likely to go to school compared to non-poor households. Rural children have 47.8 percent lower probability of attending school than urban children.

Figure 6.1. **Educational attainment in Mozambique is increasing across the board**
(average years of schooling for adults 21 years and older)
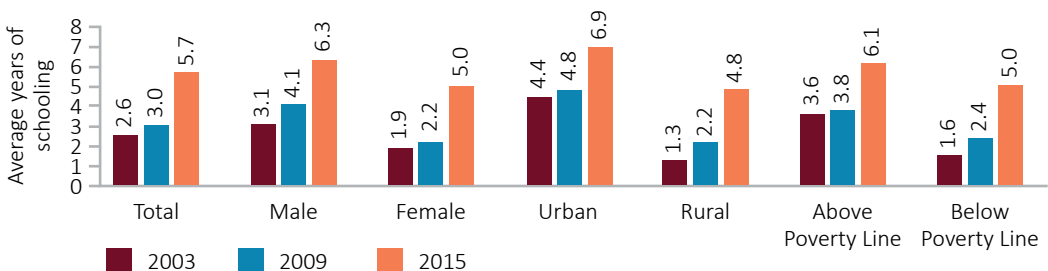
Note: Average years for 2003 were calculated based on the highest education level achieved by the respondent (e.g. completed lower primary = 5 years of schooling).
Source: IOF 2002/2003, IOF 2008/2009, IOF 2014/2015

Low rates of school completion and quality continue to constraint skill development, particularly among the poor.

42. Progress in increasing access to education is overshadowed by underperforming efficiency in the sector and quality constraints. Late enrollment is widespread. Per the school system, the expected age of a first-grade student is six years. However, almost half of the children had never been to school at this age. Even at age nine, 15 percent of children were still not enrolled in primary school (Demographic and Health Survey, 2011). High dropout rates, especially among the poor, also reduce the efficiency of the educational system and create inequalities in human capital

accumulation. Figure 6.2 shows the fraction of children 6 to 21 years old in 2014/15 that attend that primary or secondary school by grade and whether they belong to a household that is below or above the poverty line. Dropout rates start to pick up at age 14 and are more marked for poor children relative to the noon-poor. Less than half of the Mozambican children that start primary education manage to complete it, over 20 percentage points below the rate for sub-Saharan Africa (World Development Indicators). Mozambique also faces major challenges in terms of school quality and student learning. As of 2014, student learning outcomes were dismally low—with only 6.3 percent of third-grade students mastering the required reading abilities (World Bank 2014).

Figure 6.2. The risk of dropping out of school is higher for children from poor households
(share of children not attending school regularly by age)
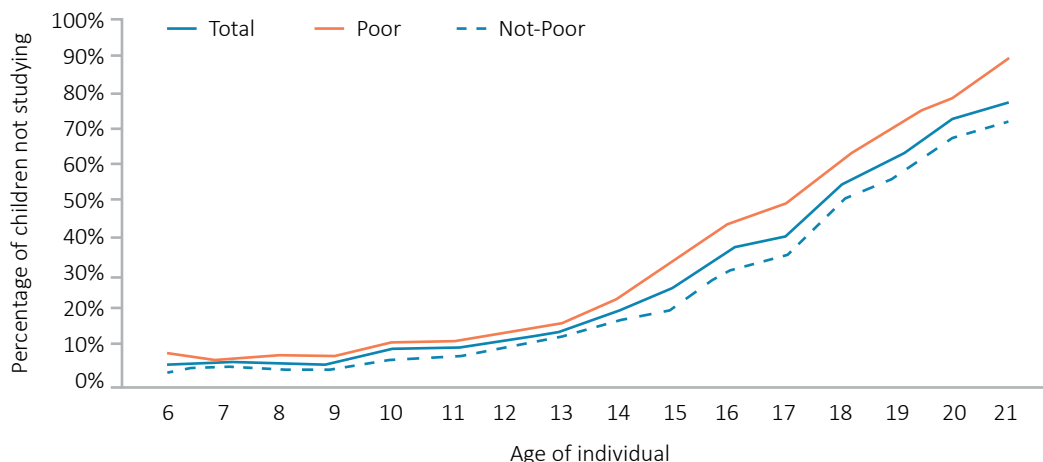
Note: Sample includes individuals who have studied previously and are no longer studying, thus measuring actual dropouts and not those who never went to school in the first place. The sample also excludes individuals who have already completed secondary school.
Source: World Bank using IOF 2014/2015

*Investing in education offers households a path out of poverty.*

43. The welfare of households is positively associated with the school attainment of the household head, above all for those that reside in urban areas and transition into secondary and higher education. Estimates of the returns to schooling indicate that on average each additional year of education increases household consumption per capita by nearly 9 percent. However, the average

return masks differences across areas and educational levels. The returns to schooling are highest in urban areas and at the secondary and tertiary levels of education, which provides an indication of excess demand for skilled labor. An additional year of education increases consumption by more than twice in urban areas relative to the average return estimated for rural households, 10.6 percent compared to 5.1 percent (Figure 6.3). Similarly, the highest payoffs are concentrated in secondary and tertiary education (11.1 percent and 12.1

percent, respectively), around four times larger than the returns experienced by workers with some or completed primary education. These differentials in returns signal a growing demand for skilled labor in Mozambique, particularly in urban areas.

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Figure 6.3. Skilled workers in urban areas experience the highest returns to schooling
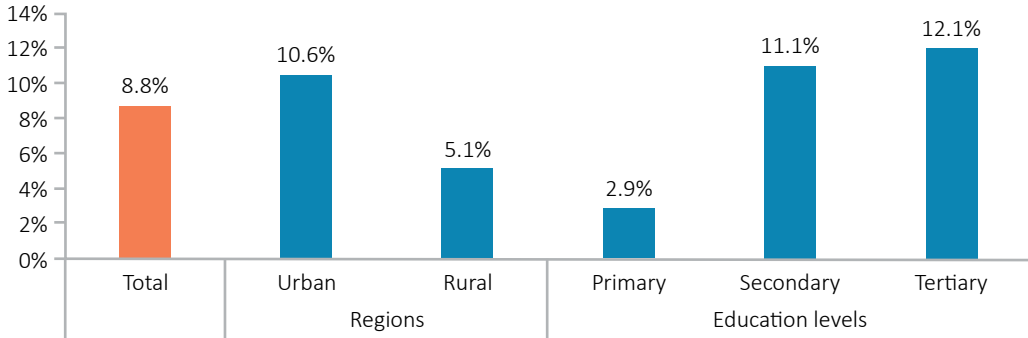
Notes: The rates of returns shown were obtained from estimating a model of consumption per capita on years of schooling (as a continuous variable and grouped by education levels) and a set of covariates that includes age and experience (linear and quadratic terms), dummies for area of residence and province fixed effects.
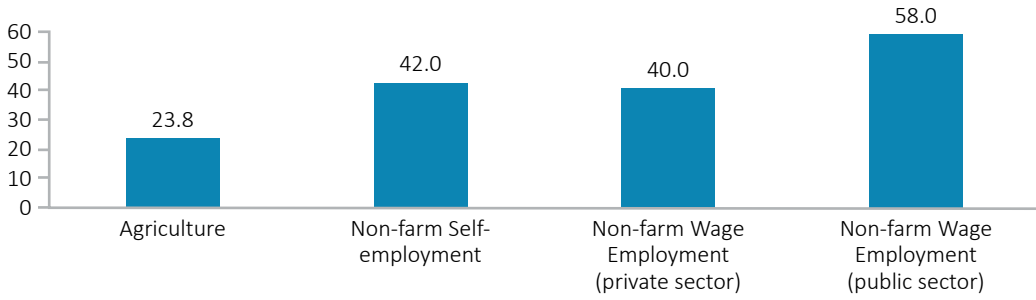*Source:* World Bank using IOF 2014/2015

A slow process of structural change is gradually shifting the job structure away from agriculture and into urban areas.

44. The modest effects of the structural transformation on employment are highly concentrated in the capital city, Maputo, and its surrounding areas, possibly driving its faster poverty reduction. The share of jobs in agriculture has steadily declined from 86.6 percent in 1995/96 to 71.5 percent in 2014/15. Much of the transition away from agriculture has taken place within non-farm self-employment (highly represented in retail trading through household enterprises), whereas private wage-based activities are largely concentrated in the services sector. Regional employment patterns show that the shift into higher quality jobs is concentrated in the capital city. Maputo Province concentrates almost 40 percent of private wage jobs in the country even though it accounts for 12 percent of the total population. Commercial and financial activity is largely clustered in Maputo city.

45. Livelihood patterns are largely influenced by the sector of work and the ability of the ability of workers to enter the higher paying non-agricultural jobs. In the absence of comprehensive income data, information on household consumption provides an approximation of the earnings of household heads across different types of jobs. Figure 6.4 shows that the median consumption per capita of households whose head is employed primarily in non-farm wage jobs in the private and public sectors is 68 percent and 143 percent higher than those working primarily in agriculture. Non-farm self-employment is also correlated with higher living standards compared to employment in agriculture. But the opportunities to get higher paying non-agricultural jobs are skewed towards urban, male and more educated workers. Not surprisingly, workers that are poor –even the urban ones– are also highly underrepresented in wage and skilled employment. The clustering of formal enterprises and jobs in Maputo City has led to higher labor productivity and opportunities for sustained poverty reduction, but they are largely confined to the capital city.

Figure 6.4. **Per capita expenditures are higher in households with jobs outside agriculture**

(Median household expenditure per capita by sector and type of job of household head, 2014/15)

Source: World Bank using IOF 2014/2015

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