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# ETHIOPIA POVERTY ASSESSMENT 2014

OVERVIEW



POVERTY  
GLOBAL PRACTICE  
AFRICA REGION

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# ETHIOPIA

## POVERTY ASSESSMENT

### OVERVIEW

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**Poverty Global Practice**

**Africa Region**

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Chapter 9: “Gender disparities in Agricultural Production” by Arturo Aguilar (Instituto Tecnológico

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## ABBREVIATIONS AND ACRONYMS

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DHS	Demographic and Health Survey	LEAP	Livelihoods, Early Assessment and Protection project
ERSS	Ethiopian Rural Socioeconomic Survey	MDGs	Millennium Development Goals
GDP	Gross Domestic Product	MPI	Multi-dimensional poverty index
HCES	Household Consumption Expenditure Survey	PPP	Purchasing Power Parity
HICES	Household Income and Consumption Expenditure Survey	PSNP	Productive Safety Net Program
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome	USD	United States Dollars
		WMS	Welfare Monitoring Survey



## OVERVIEW

*In 2000 Ethiopia had one of the highest poverty rates in the world, with 56% of the population living below the international poverty line of US\$1.25 PPP a day. Ethiopian households experienced a decade of remarkable progress in well-being since then and by the start of this decade less than 30% of the population was counted as poor. Agricultural growth drove reductions in poverty, bolstered by pro-poor spending on basic services and effective rural safety nets. However, although there is some evidence of manufacturing growth starting to reduce poverty in urban centers at the end of the decade, structural change has been remarkably absent from Ethiopia's story of progress. The majority of Ethiopian households are still engaged in agriculture and living in rural areas. Additional drivers of poverty reduction will be needed to end poverty in Ethiopia, particularly those that encourage the structural transformation of Ethiopia's economy. Policies that encourage further agglomeration through urbanization would help increase poverty reduction. This will in turn require policies that favor the entry and growth of firms, in addition to support to self-employment in non-agricultural activities. Programs targeted at improving the wellbeing of the urban poor will also become increasingly important.*

### 1. A record of progress and remaining challenges

**In the last ten years Ethiopia has experienced high and consistent economic growth driven largely by growth in services and agriculture.** Since 2004, Ethiopia's economy has recorded an annual average growth rate of 10.9%. GDP growth outpaced population growth (which has averaged about 3% during this period) and Ethiopia recorded annual per capita growth rates of 8.3% over the last decade (World Bank

2013). The contribution of agriculture to value added has been high throughout this period. However, over time the importance of agriculture has fallen (from 52% in 2003/4 to 40% in 2013/14) and the importance of the service sector has increased (from 37% to 46%). And, although growth has been high, inflation has also been high and volatile at the end of this period (World Bank 2012).

**Since 2000, Ethiopian households have experienced a decade of progress in well-being.** The last Poverty Assessment (World Bank 2005) reported little improvement in household consumption between 1996 and 2000 and almost no change in the national poverty rate. However, from 2000 to 2011 the wellbeing of Ethiopian households improved on a number of dimensions and poverty has fallen. In 2000 Ethiopia had one of the highest poverty rates in the world, with 56% of the population living below the international poverty line of US\$1.25 Purchasing Power Parity (PPP) a day and 44% of its population below the national poverty line.<sup>1</sup> In 2011 less than 30% of the population lives below the national poverty line. The national absolute poverty line is set at 3781 Birr per adult equivalent per year in 2011 prices.<sup>2</sup>

**The average household in Ethiopia also has better health, education, and living standards today than in 2000.** Life expectancy increased and progress was made towards the attainment of the Millennium Development Goals (MDG), particularly in hunger, gender parity in primary education, child mortality, HIV/AIDS, and malaria. While in 2000 only 1 in 5

<sup>1</sup> In 1999/2000 less than 10% of countries that conducted household surveys recorded a poverty rate higher than Ethiopia.

<sup>2</sup> 3781 Birr in 2011 prices is equivalent to US\$1.24 PPP using the 2005 International Comparison Project. However the national poverty line was equivalent to US\$1.12 PPP in 2000.

**TABLE 1: Ethiopia then and now: a decade of progress from 2000 to 2011**

	2000	2011
Percentage of the population:		
Living below the national poverty line	44	30
Living on less than US\$1.25 PPP a day	56	31
Without education	70	50
With electricity	12	23
Piped water	17	34
Percentage of children under 5 years that are stunted	58	44
Percentage of rural women receiving an antenatal checkup	22	37
Life expectancy (years)	52	63
Total fertility rate	6.5	4.6
Infant mortality rate	97	59
Child mortality rate	77	31

Sources: Ethiopia Demographic and Health Surveys; Household Income and Consumption Expenditure Surveys; World Development Indicators; Carranza and Gallegos 2013; Canning et al. 2014.

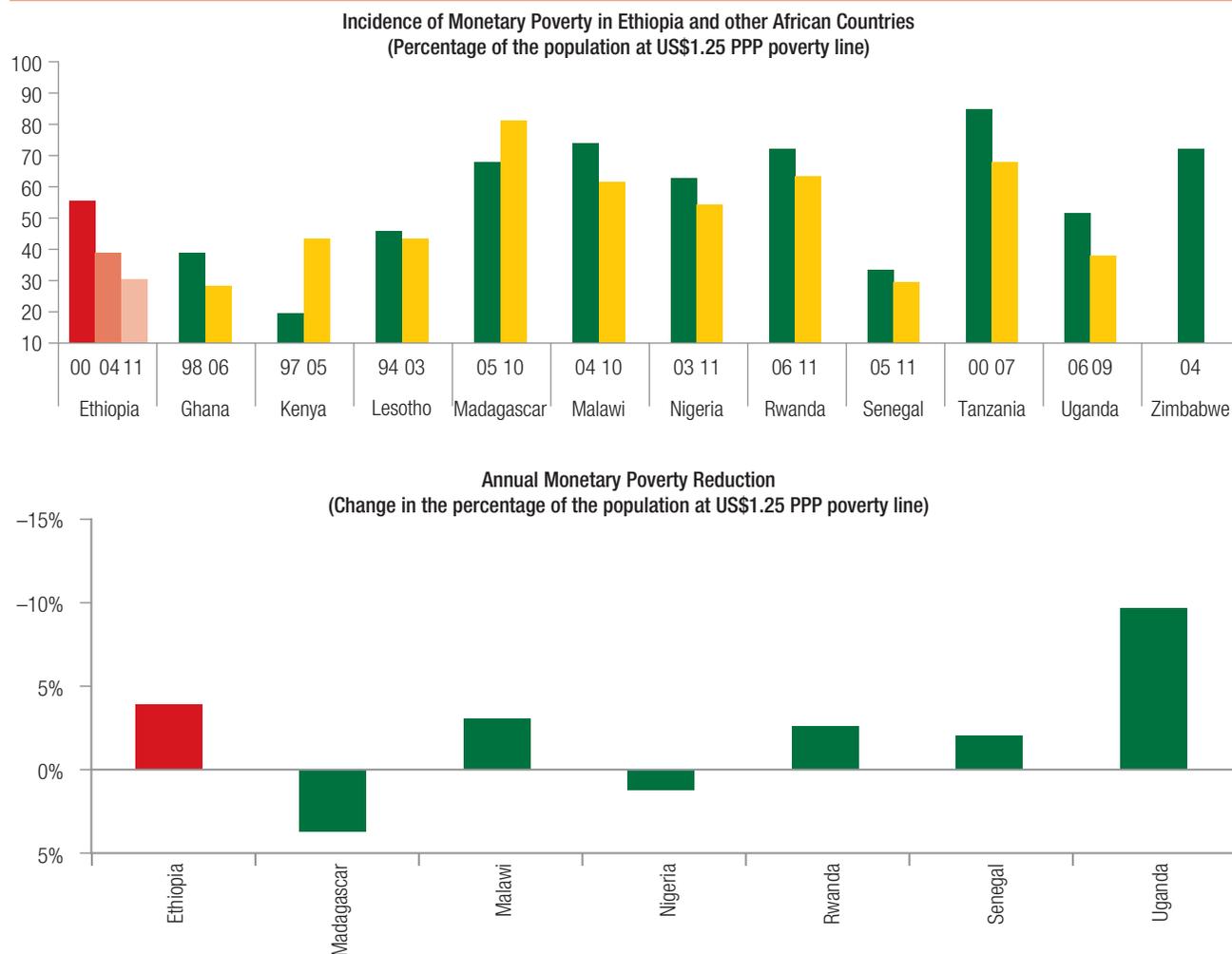
women in rural areas had an antenatal check-up, more than 1 in 3 women attended an antenatal check-up in 2011. Women are now having fewer births—the total fertility rate fell from 7.0 children per women in 1995 to 4.6 in 2011—and infant and child mortality rates dropped considerably. At the same time, the prevalence of stunting was reduced from 58% in 2000 to 44% in 2011 and the prevalence of undernourishment fell from 75% in 1990–92 to 35% in 2012–14. The share of population without education was also reduced considerably from 70% to less than 50%. Finally, the number of households with improved living standards measured by electricity, piped water, and water in residence doubled from 2000 to 2011.

**The pace of poverty reduction in Ethiopia has been impressive and particularly so when compared to other African countries.** Poverty incidence measured by the population living below the international extreme poverty line of US\$1.25 PPP fell from 56% in 2000 to 31% in 11 years. This puts Ethiopia on par with Senegal with a GDP per capita (in PPP terms) double the size of Ethiopia. Only Uganda has had a higher annual poverty reduction during this time (Figure 1).

**Ethiopia’s record of fast and consistent poverty reduction from 2000 to 2011 is robust to a number of sensitivity analyses that can be conducted on the 2011 poverty estimates.** Price deflators allow comparisons to be made across time, but during periods of high inflation such as experienced in Ethiopia from 2008 to 2011, estimating the right deflator to compare living standards across time can be challenging. The official numbers of poverty reduction appropriately use a relatively high deflator and thus provide conservative estimates about the amount of progress that has been made.

**Ethiopia is one of the most equal countries in the world. Low levels of inequality have, by and large, been maintained throughout this period of economic development.** In urban areas, all measures of inequality show a substantial increase in inequality from 1996 to 2005 and a substantial reduction in urban inequality from 2005 to 2011. In rural areas, all measures of inequality suggest there has been little change in inequality over time although inequality fell marginally from 1996 to 2005 and increased from 2005 to 2011. Nationally, urban and rural trends offset each other and many measures suggest inequality

**FIGURE 1: Ethiopia’s experience in comparison to other African countries**



Source: World Bank rates from Povcalnet, June 2014, and may be adjusted over time.

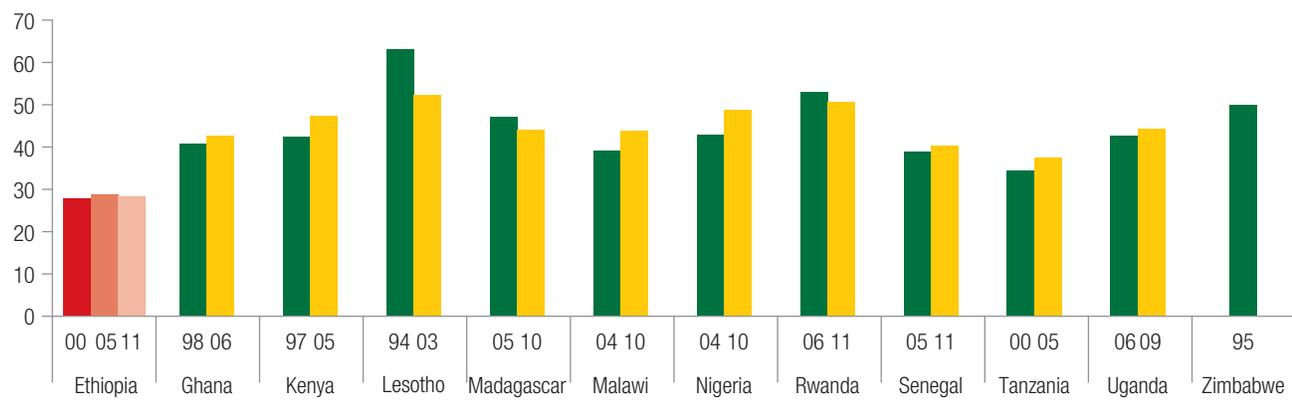
has stayed quite stable from 2005 to 2011 (Figure 2). However, measures of inequality that give more weight to poorer households show national inequality has steadily increased from 2000 until 2011.

**Poverty reduction in Ethiopia has been faster in regions where poverty was highest a decade and a half ago.** The proportion of households living in poverty has fallen in both rural and urban areas, with stronger reductions in urban poverty since 2005. In 1996 poverty rates differed greatly between regions. For example, 56% of the population in Tigray and SNNP were living in poverty compared to 34% of the population of Oromia. Poverty reduction has been

faster in those regions in which poverty was higher in 1996 as a result of particularly strong agricultural growth and improvements in basic services in these regions. Consequently, the proportion of the population living beneath the national poverty line has converged to around 1 in 3 in nearly all regions in 2011 (Figure 3). Geography still matters, for example those who live in more remote locations are consistently poorer than those living in closer proximity to markets and services.

**This progress is not without its challenges, poverty remains widespread and the very poorest have not seen improvements—even a worsening—of**

**FIGURE 2: Gini Coefficient in Ethiopia and other African Countries**



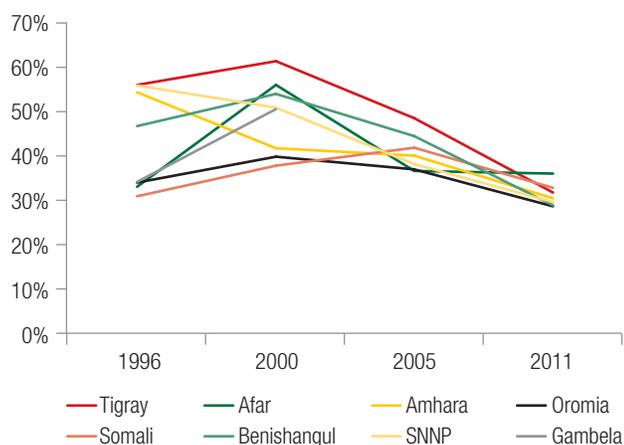
Source: World Bank WDI and authors' calculations.<sup>a</sup>

<sup>a</sup> Note that the Gini coefficient in WDI is calculated based on a parametric Lorenz curve. Only the Gini coefficients for Ethiopia are based on the survey data directly.

**consumption since 2005, which poses a challenge to achieving shared prosperity in Ethiopia.**

Promoting shared prosperity requires fostering the consumption growth of the bottom 40%. Prior to 2005 the growth in consumption of the bottom 40% was higher than the growth in consumption of the top 60% in Ethiopia, but this trend was reversed in 2005 to 2011 with lower growth rates observed among the

**FIGURE 3: Poverty headcount by region from 1996 to 2011**



Source: own calculations using HICES 1996, HICES 2000, HICES 2005 and HICES 2011.

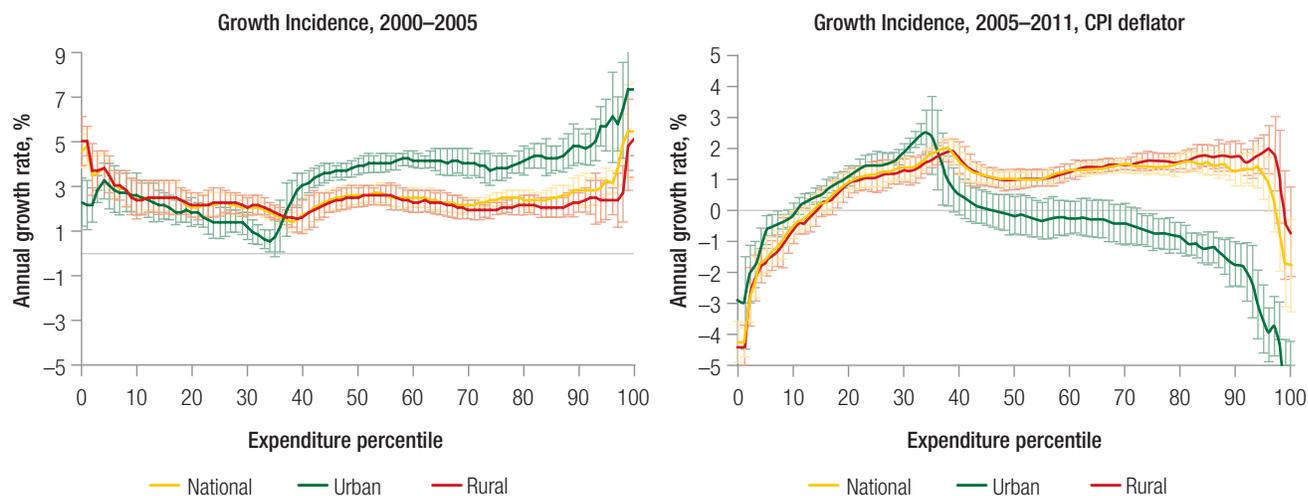
bottom 40% (Figure 4). The highest growth rates were experienced by the fourth decile, but the poorest decile saw no increase in consumption. As a result reductions in poverty rates were not matched by reductions in the depth and severity of poverty for those who remained poor. The negative growth rate of the consumption of the bottom decile is robust to the choice of deflator and is a concerning trend.

**There has been considerable progress in reducing the proportion of households experiencing multiple deprivations in health, education, and living standards at once, particularly in rural areas.**

Poverty is multidimensional; trends in non-monetary dimensions of wellbeing also need to be examined in order to build a complete understanding of the nature of progress. In many cases, on any three indicators of deprivation considered—such as access to sanitation and clean water, education, and monetary poverty—the proportion of rural households deprived in all three dimensions fell from 4 in 10 to less than 1 in 10 rural households (Figure 5). In the case of education and sanitation, the proportion of households with improved access has increased, and increases have been largest among disadvantaged groups.

**However deprivation in some dimensions is still quite high. For example Ethiopia still has relatively low rates of educational enrollment, access to**

**FIGURE 4: The incidence of consumption growth, 2000–2011**

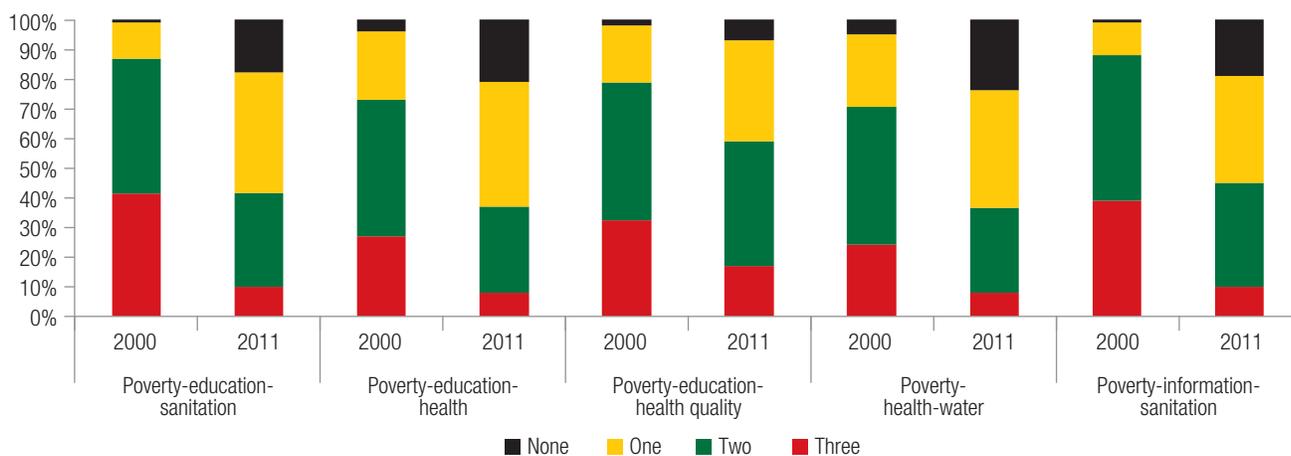


Source: own calculations using HICES 2000, HICES 2005, HICES 2011.

**sanitation, and attended births.** About 80% of rural households and two-thirds of urban households still experience at least one out of three selected deprivations. Although much progress has been made, continued emphasis on investments in education and health and improving living standards is needed. The need for continued further progress is reflected in a

high and slowly moving Multidimensional Poverty Index (MPI). In 2011, 87% of the population was measured as MPI poor, which means they were deprived in at least one third of the weighted MPI indicators. This put Ethiopia as the second poorest country in the world when using the MPI approach (OPHDI 2014). While the MPI is useful in drawing

**FIGURE 5: Evolution of overlapping deprivations over time, 2000–2011 (rural Ethiopia)**



Sources: HICES 2000, WMS 2000 and HICES 2011, WMS 2011

Notes: a household is education deprived if children of school-going age (between 7 and 15 years) are not in school; sanitation deprived if there is no improved sanitation in the household; health deprived if they cannot access a health facility, health-quality deprived if they have no access to health facilities of adequate quality; and water deprived if the source of water is not improved. All percentages are calculated for households with children of school-going age.

attention to the need for further progress in access to basic services in Ethiopia, it not a complete measure of deprivation in Ethiopia today. The higher rates of poverty and slow progress recorded in the MPI arise largely because of the divergence between monetary poverty and the measure of living standards used in the MPI, in part because the assets considered in the MPI do not include assets important in Ethiopia and the cutoff used in some dimensions is too high to reflect recent progress.

**There has been progress in wellbeing for women, but there are still remaining challenges around investment in the health, safety, and education of women and girls.** Almost no rural women recorded giving birth in a health facility in 2011 (4%) and half of urban women were similarly deprived. However, the DHS data shows that the proportion of women who had an antenatal visit during their most recent pregnancy in the previous five years, increased from 27% in 2000 to 43% in 2011 (Carranza and Gallegos 2013). In 2000 more than three quarters of rural households with school-aged girls had at least one girl not in school, but by 2011 this had fallen to less than half of all rural households. However, girls who work as domestic maids are very likely to be deprived of investments in education: only 20% of school-aged children who are non-relatives and employed by the household in which they reside are in school (compared to 65% for all children). Physical violence against women became less socially acceptable during the decade, but the rates of women and men that believe physical violence is justified remains high. Between 2000 and 2011, the share of women who found wife beating acceptable under specific circumstances decreased from 85% to 68%.

## 2. Growth and poverty reduction

**Since the early 1990s Ethiopia has pursued a “developmental state” model with the objective of reducing poverty.** The approach envisages a strong role for the Government of Ethiopia in many aspects of the economy and high levels of public investment to

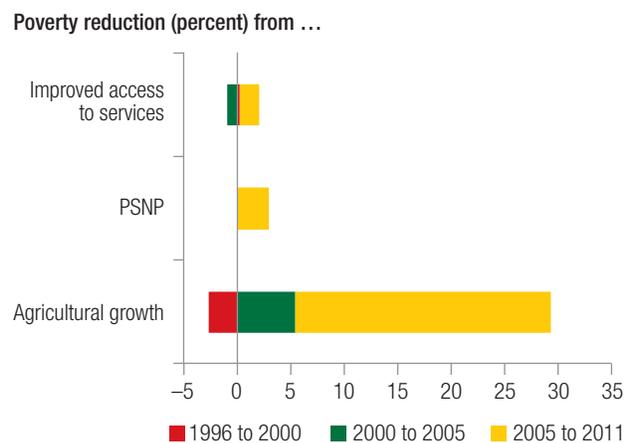
encourage growth and improve access to basic services. The model has been one of Agricultural Development-Led Industrialization in which growth in agriculture is emphasized in order to lead a structural transformation of the economy.

**Growth benefited many and has been the main driver of reduction in poverty over the fifteen year period from 1996 to 2011.** The amount of poverty reduction achieved for the rate of consumption growth experienced has been high. The growth elasticity of poverty reduction is  $-1.53$  when calculated for household consumption growth, which sets Ethiopia close to the world average, and significantly higher than other countries in the region (Christiaensen et al 2013). However, the growth elasticity of poverty reduction is much lower when calculated for GDP growth, given GDP has grown much faster than household consumption. Regression analysis suggests that each 1% of GDP growth resulted in 0.15% reduction in poverty, which, although better than the sub-Saharan African average (Christiaensen et al. 2013), is lower than the global average.

**Growth in agriculture was particularly inclusive and contributed significantly to poverty reduction.** Ethiopia has a rural, agricultural-based labor force: more than four out of every five Ethiopians live in rural areas and are engaged in small-holder agricultural production. Poverty fell fastest when and where agricultural growth was strongest. For every 1% of growth in agricultural output, poverty was reduced by 0.9% which implies that agricultural growth caused reductions in poverty of 4.0% per year on average post 2005 and 1.1% per year between 2000 and 2005 (Figure 6).

**There is some evidence that manufacturing growth and urban employment contributed to poverty reduction in more recent years.** Although nationally growth in manufacturing or services did not contribute to poverty reduction, in urban Ethiopia, manufacturing growth played a significant role in reducing poverty from 2000 to 2011. For every 1% of growth in manufacturing output, urban poverty fell by 0.37%. Although manufacturing only employs 3% of the population nationally, the proportion of

**FIGURE 6:** The contribution of agricultural growth, services and safety nets to poverty reduction, 1996–2011



Source: Regression analysis using HICES, WMS, Agricultural Sample Survey, Large and Medium Scale Manufacturing Census and administrative data, various years.

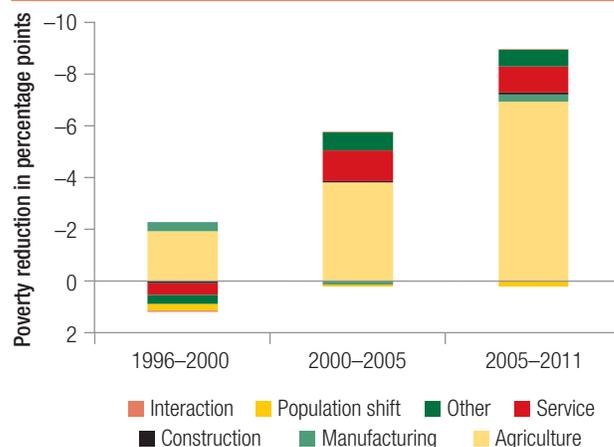
individuals employed in manufacturing in urban centers is much higher.

**The impact of service sector growth on poverty reduction was small relative to growth in value added by the service sector in national accounts.**

Growth in the service sector has been high in recent years, but few poor households are employed in the service sector, and as a result only a tenth of the poverty reduction in recent years took place among those in the service sector (Figure 7). While a shift to technical and professional occupations has helped increase consumption at all consumption levels, this has mainly contributed to increases in consumption among the richest. However there is some evidence that agricultural growth may drive poverty reduction in part by encouraging rural service sector activity. Service sector growth has been highest when and where agricultural growth has been highest (Figure 8), and agricultural income is the source of start-up funds for 64% of non-farm enterprises (often service sector).

**Overall, poverty reduction among rural, self-employed, agricultural households accounts for the major share of poverty reduction from 1996 to 2011. Structural change has not contributed much to poverty reduction during this time (Figure 7).**

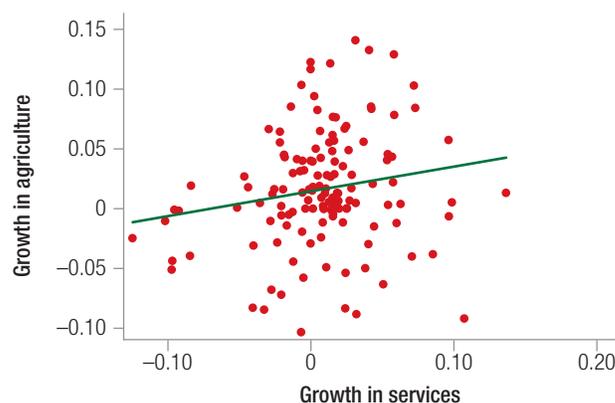
**FIGURE 7:** The contribution of poverty reduction among different sectors



Source: Own calculations using HICES 1996, HICES 2000, HICES 2005 and HICES 2011.

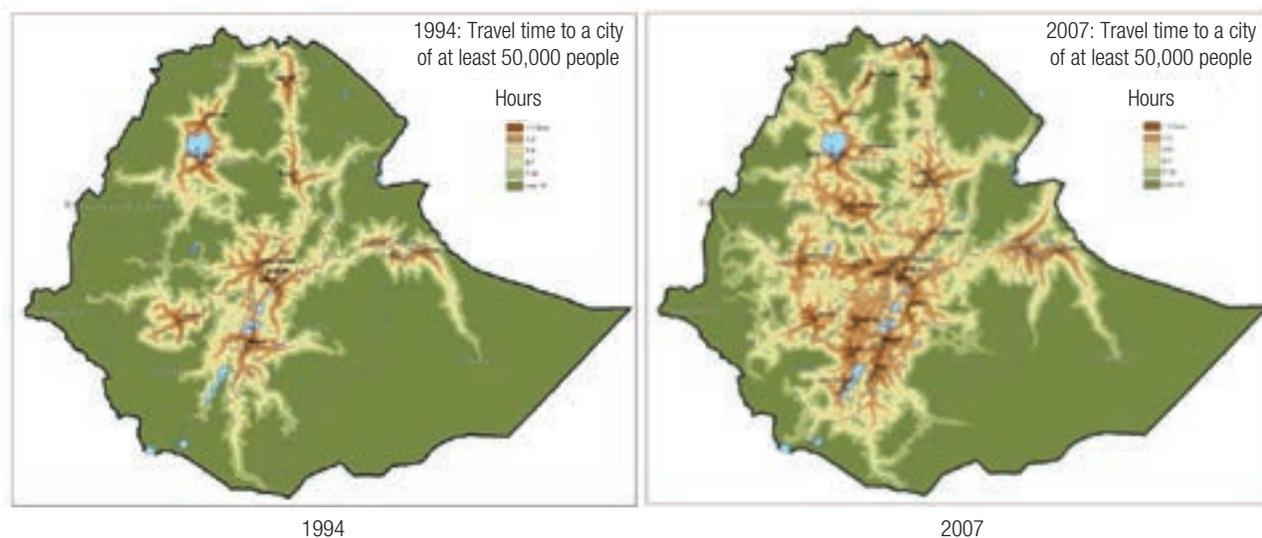
This is in contrast to some other economies in the region and elsewhere. In Uganda and Rwanda agricultural growth was accompanied by growth in the non-farm service sector, which in turn accounted for one third and one sixth of poverty reduction respectively. In Bangladesh (from 2000 to 2005) and in Cambodia in recent years, growth in light manufacturing accompanied agricultural growth and helped spur further poverty reduction.

**FIGURE 8:** Services growth is positively correlated with growth in agriculture



Note: graph depicts average annual growth in output in agriculture and services for each zone, 1996–2000, 2000–2005, 2005–2011.

**FIGURE 9:** Travel time to urban centers of 50,000 people or more in 1994 and 2007



Source: Schmidt and Kedir 2009.

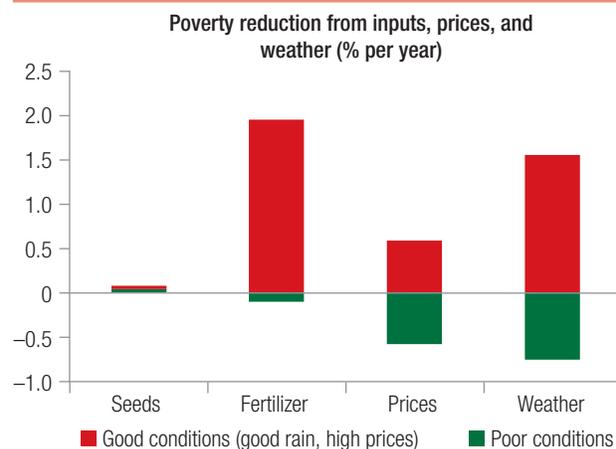
**However, urban growth and increased access to urban centers has been an important complement to agricultural growth.** While agricultural growth had a strong impact on poverty reduction on average, the positive impact of agricultural growth was only found close to urban centers of 50,000 people or more. This indicates that infrastructure investment and growth in non-agricultural urban demand are essential complements to agricultural output growth to achieve poverty reduction.

**Remoteness is still a defining characteristic of extreme poverty in rural Ethiopia.** Investment in roads has reduced remoteness and increased access to markets (Figure 9). However, in 2011, poverty rates still increased by 7% with every 10 kilometers from a market town. Farmers that are more remote are less likely to use agricultural inputs, and are less likely to see poverty reduction from the gains in agricultural growth that are made. This makes poverty reduction more challenging in remote locations.

**High prices and good weather ensured that investments in input use brought high returns and poverty reduction for those well-connected to markets.** Increased adoption of modern input use

in agriculture, such as fertilizer, has been important in reducing poverty but this has only increased agricultural incomes and reduced poverty when good prices and good weather has been present (Figure 10). Food inflation has been high in recent years and this has shaped the nature of development and poverty

**FIGURE 10:** Increased fertilizer use reduced poverty when weather and prices were good



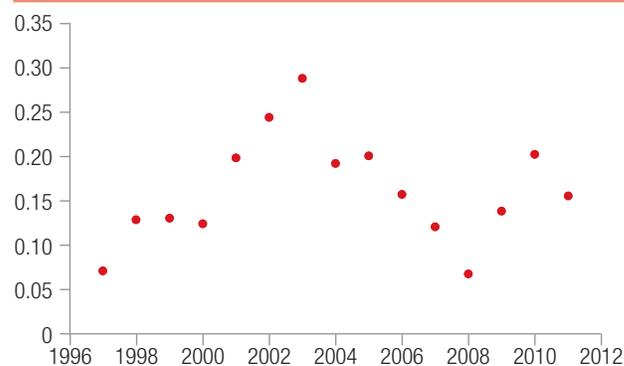
Source: Regression results using Agricultural Sample Survey data and LEAP data from multiple years.

reduction during this period. In 2011 food inflation was 39%, three times the sub-Saharan African average of 13%, and about 12% food inflation in China and 27% food inflation in Vietnam. Over time an increasing proportion of poor households have become self-sufficient in food or net producers and as a result high crop prices have helped poverty reduction.

**However high food prices have hurt marginal farmers in rural areas and poor city dwellers who have to purchase their food.** The poorest decile are more likely to report producing less than three months of consumption than other poor households, and were more likely to report suffering from food price shocks than any other group. Broad based growth for the poor is aided by high food prices, but the high food prices that benefit the majority of the agricultural poor in Ethiopia hurt the very poorest decile that continue to purchase much of their food and this group of households needs compensatory interventions. The majority (92%) of households own land, and thus agricultural wage employment is more limited in Ethiopia than in other countries. Those in non-agricultural unskilled wage employment are negatively impacted as wages take four to five months to adjust to food price increases. As such, high food prices do not help urban poverty reduction in large urban centers where the majority of the labor force is in wage employment. Indeed, consumption growth was negative for many households in Addis Ababa from 2005 to 2011.

**Consistently good rainfall has benefited agricultural production and poverty reduction in recent years, but the dependence of agricultural growth on good weather highlights a key vulnerability.** Agricultural output is vulnerable to poor rains given the predominance of rain-fed production and the dependence of yield-increasing technologies (such as fertilizer) on the weather. Since 2003 the proportion of farmers experiencing crop losses greater than 30% has not been more than one standard deviation above the average (Figure 11). Were a drought similar to 2002 to be experienced in Ethiopia today, regression estimates suggest poverty would increase from 30% to 51%. Increasing uncertainty around climate change

**FIGURE 11: Proportion of farmers experiencing more than 30% crop loss, 1997–2011**



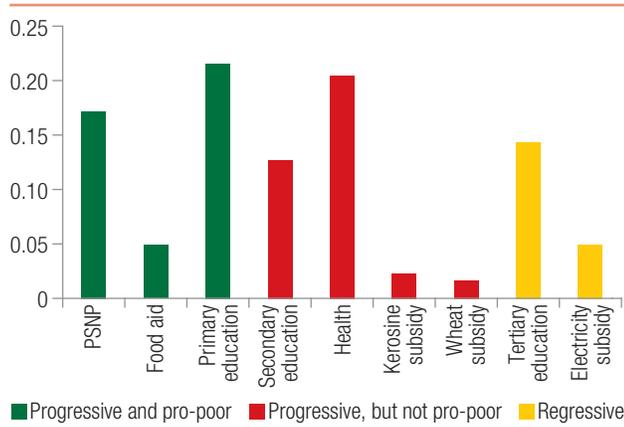
Source: Rainfall induced crop loss is calculated for each woreda using the LEAP database. These estimates are then weighted using the population living in each woreda. Belg and Meher are added in each year, so 1997 represents crop loss from Meher rains of 1996 harvested in January 1997 and crop loss from Belg rains harvested around June of 1997.

will need to be managed through increased irrigation, development of drought-resistant seed varieties and strengthened financial markets. Further diversification of the Ethiopian economy out of agriculture is also important.

### 3. Expansion of basic services, rural safety nets and poverty reduction

**Public investment has been a central element of the development strategy of the Government of Ethiopia over the last decade and progressive public spending has contributed to poverty reduction since 2005.** This coincides with the introduction of large-scale safety net programs in rural areas and the expansion of basic services. Public spending is guided by the Growth and Transformation Plan and is particularly targeted to agriculture and food-security, education, health, roads and water. Accordingly 70% of total general government expenditure is allocated to these sectors. Education comprises a quarter of total spending followed by roads, agriculture, and health at 20%, 15%, and 7% respectively. About half of the agricultural budget is allocated to the Productive

**FIGURE 12:** Ethiopia. Public Expenditure Programs (percent of spending included in analysis)



Source: Own estimates based on HCES 2011 and WMS 2011.

Safety Net Program (PSNP). A comprehensive analysis of the incidence of fiscal policy in Ethiopia using the Commitment to Equity methodology (Lustig and Higgins, 2013) assesses the incidence of fiscal policy in 2011 and includes 83% of tax revenue and 43% of government spending. In general spending is progressive (Figure 12). In many cases spending is also pro-poor, providing more to poorer households in absolute terms.

**The Government of Ethiopia has reduced poverty through the direct transfers provided in the Productive Safety Net Program (PSNP) established in 2005.** The PSNP comprised 1% of GDP in 2010/11, and it is the largest safety net program in Sub-Saharan Africa. The immediate direct effect of transfers provided to rural households in the PSNP has reduced the national poverty rate by two percentage points. The PSNP has also had an effect on poverty reduction above and beyond the direct impact of transfers on poverty. PSNP transfers have been shown to increase agricultural input use among some beneficiaries thereby supporting agricultural growth.

**Large scale public investments in the provision of basic services such as education and health have also contributed to poverty reduction both by contributing to growth and by preferentially increasing**

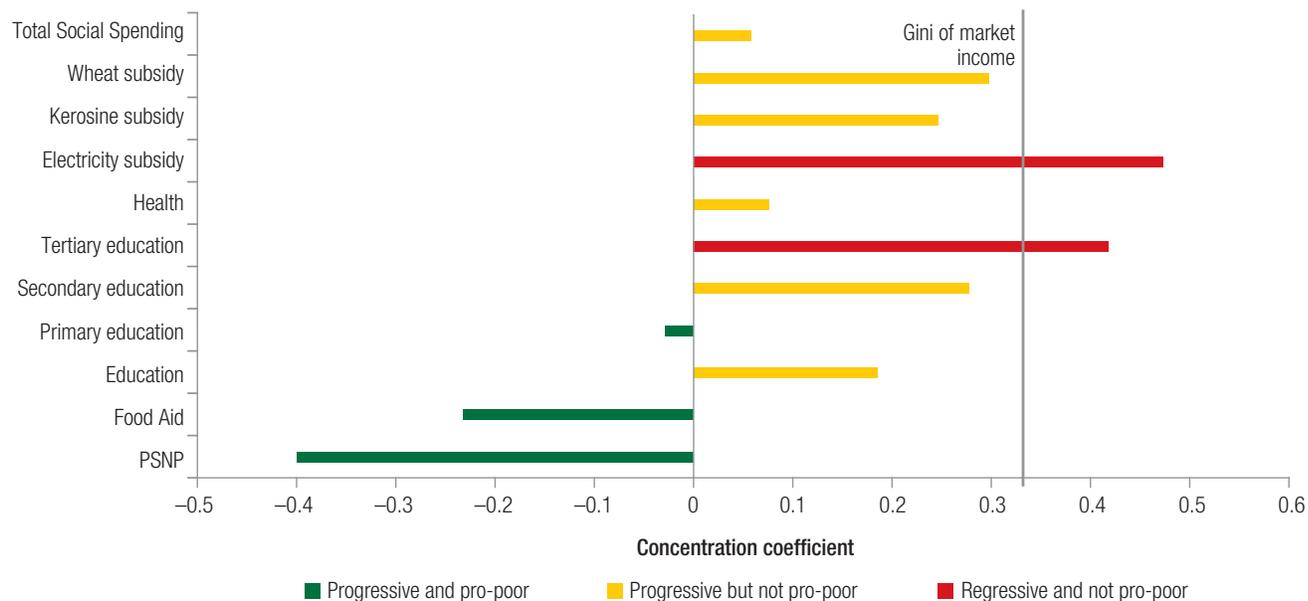
**the welfare of the poor (see Figure 6).** Access to, and utilization of, education and health services has increased over the last decade in Ethiopia. From 2006 to 2013 the number of health posts increased by 159% and the number of health centers increased by 386%. From 2005 to 2011, the primary net school attendance rate for 7–12 year olds increased from 42% to 62%.

**Spending on primary health care and education is pro-poor, but becomes less progressive for secondary and tertiary services.** Spending on services that are well accessed by poor households such as primary education and preventative health services is pro-poor (Figure 13) which means poorer households receive a larger share of benefits than richer households. However spending is less progressive on programs where challenges remain in ensuring utilization by poor households, such as enrollment in secondary and tertiary education or use of curative health services.

**On the other hand, expenditures on subsidies which are meant to benefit the poor are generally less progressive and are not actually pro-poor.** The largest indirect subsidy is electricity, and this is particularly regressive because access to electricity is limited among poorer households. Wheat and kerosene subsidies are however progressive, as these goods comprise a larger share of spending among poorer households than richer households.

**Direct and indirect taxes are pro-poor and progressive, with high-income groups generally paying a larger proportion of their income than low income groups.** Most of the tax incidence on households comes from indirect taxes, which are slightly less progressive than direct taxes. However, the progressivity of indirect taxes in Ethiopia is much higher than in other countries, on account of the exemptions on goods that form a larger share of the consumption of poorer households. Direct tax is progressive, but there is a scope to make it more so. Personal tax is the largest of the direct taxes on households. Inflation in recent years has increased the tax burden on lower income deciles as the tax thresholds have not changed since 2002.

**FIGURE 13: Concentration coefficients of public spending**



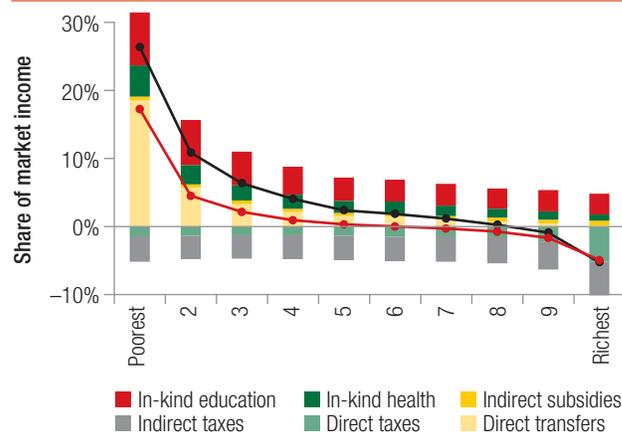
Source: Own estimates based on HCES 2011 and WMS 2011.

The Government of Ethiopia has reduced inequality and poverty through fiscal policy, however because Ethiopia is a poor country this reduction in inequality has come about at a cost to some households who are already poor. Poor households pay taxes—both direct and indirect—although the amounts paid may be small. For most poor households, the transfers and benefits received are higher than the amount paid in taxes (Figure 14). As a result, fiscal policy brings about poverty reduction. Good fiscal policy is designed to meet a number of objectives, not just equity, and is also an important part of the social contract. However it is worth noting that 1 in 10 households are impoverished (either made poor or poor households made poorer) when all taxes paid and benefits received are taken into account. There are two means by which this negative impact could be reduced: (i) by reducing the incidence of direct tax on the bottom deciles and increasing the progressivity of direct taxes, particularly personal income tax and agricultural taxes; and (ii) by redirecting spending on subsidies to spending on direct transfers to the poorest.

#### 4. Ending extreme poverty in Ethiopia: accelerating structural transformation

Ending extreme poverty in Ethiopia requires protecting current progress and ensuring that those who are non-poor but vulnerable are protected

**FIGURE 14: Ethiopia. Incidence of Taxes and Transfers (by market income deciles)**



Source: Own estimates based on HCES 2011 and WMS 2011.

**against shocks.** Many non-poor households in Ethiopia today consume only just enough to live above the poverty line, making reductions in poverty vulnerable to shocks: 14% of non-poor rural households are estimated to be vulnerable to falling into poverty. Weather shocks remain an important source of risk in rural areas. In urban areas, food price shocks have become increasingly important. However, although vulnerability does have a geographic footprint in Ethiopia today, it is not fully determined by location of residence. Factors such as individual access to assets, or lifecycle events are often defining features of vulnerable households. The primacy of access to the labor market as a determinant of poverty and vulnerability in urban areas is particularly evident.

**Individuals everywhere—in every woreda of Ethiopia—are vulnerable and as a result safety net programs targeted only at specific rural woredas will necessarily result in many vulnerable Ethiopians being left without support.** This has implications for how safety nets function in Ethiopia, suggesting that a move from geographically targeted programs to systems that provide specific support to individuals at defined points in time may be warranted as Ethiopia develops.

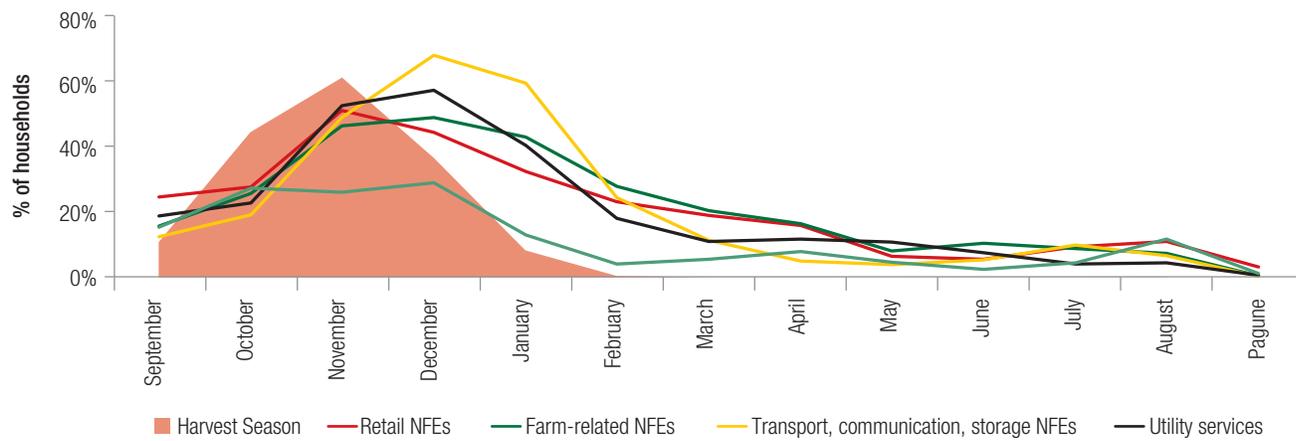
**Further gains in reducing poverty are also needed: in an optimistic growth scenario, extreme poverty will be substantially reduced to 8%, but not eradicated, by 2030.** In an optimistic growth scenario, all households will experience annual growth in consumption of 2.5% which is higher and more equal than the consumption growth Ethiopia experienced in the last decade. In a less optimistic scenario annual consumption growth rates might be lower, approaching the annual consumption growth rate for the last decade of 1.6% and poverty would be 13%. Or consumption growth rates may vary for poorer and richer households as they did from 2005 to 2011 in which case poverty would be higher. Achieving 8% extreme poverty by 2030 requires both higher and more equal growth than experienced in the last ten years. Even very high rates of growth will not result in poverty falling below 12% if the pattern of income losses of

the bottom decile from 2005 to 2011 is not reversed. Higher growth rates for the poorest households are also essential to ensuring shared prosperity. In the last five years incomes of the poorest 40% have, on average, not grown faster than average incomes.

**In addition to continuing the successful mix of agricultural growth and investments in the provision of basic services and direct transfers to rural households, additional drivers of poverty reduction will be needed, particularly those that encourage the structural transformation of Ethiopia's economy.** Structural transformation will entail the transition of labor from agricultural activities into non-agricultural activities and it may also entail the movement of people from rural to urban areas. However, although non-farm enterprise ownership in rural areas and rural to urban migration are important realities in Ethiopia today, both have remained quite limited. Neither have been significant contributors to poverty reduction as they have in some other countries in the region (for example the role of non-farm enterprises in Rwanda and Uganda) and elsewhere (for example the role of rural to urban migration in China).

**Self-employment in non-farm enterprises provides an additional income source for some poor, but the size of the sector is relatively small, constrained by limited demand for goods and services in rural areas.** In addition to being the primary sector of activity for 11–14% of the population, a further 11% of rural households earn about a quarter of their income from operating non-farm enterprises in the service sector. In contrast, 67% of rural Rwandan households reported operating a non-farm enterprise (one of the highest rates in the region). While non-farm enterprises provide some secondary income in rural areas and a source of income for those unable to secure employment in rural towns, the contribution of this sector is small in comparison to other countries. Estimates from the 2011 Household Consumption Expenditure Survey suggest it comprises about 10% of household earnings in Ethiopia. In comparison, the rural non-farm sector is estimated to account for an average of 34% of rural earnings across Africa (Haggbalde et al. 2010).

**FIGURE 15:** Harvest season and non-farm enterprise operation, by type of non-farm enterprise



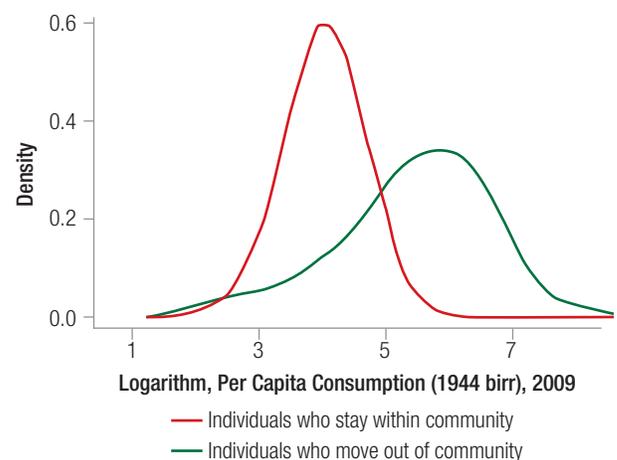
Source: own calculations using ERSS 2012.

**An initial assessment of constraints on non-farm enterprises suggests that limited demand constrains the role of non-farm enterprises in rural income generation and poverty reduction.** On the supply side, non-farm enterprises appear to depend on agricultural income for inputs and investment capital. On the demand side, they rely heavily on increased local demand during the harvest period to generate household income. As a result they are most active during harvest and in the months immediately thereafter and are not an important a source of income in the lean season (Figure 15). The need for capital does not appear to be a major cause for the current seasonality of non-farm enterprises, but many do report access to market demand as a major constraint. Interventions to increase demand—e.g. continued improvements in rural accessibility and agricultural productivity—will have the largest impact on increasing the vibrancy of this sector and its role in reducing poverty. However, growth in this sector may be more likely in areas that are more densely populated or proximate to such areas.

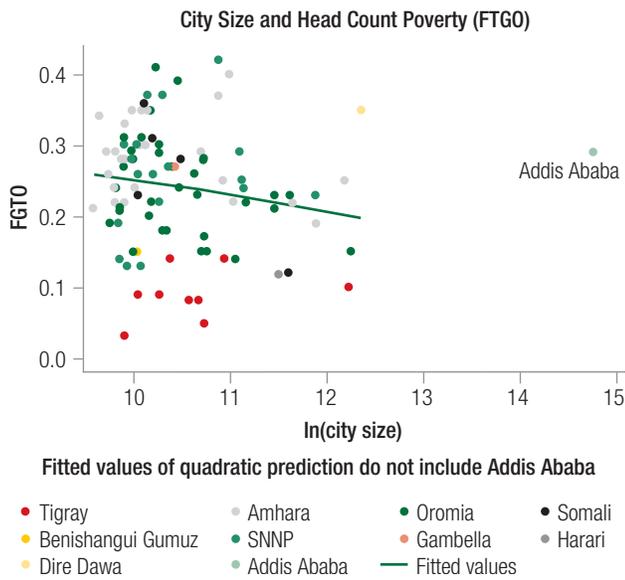
**Migration from rural to urban areas is an inherent component of the development process, but since 1996 rural to urban migration contributed very little to poverty reduction in Ethiopia because there was so little of it.** About 1 in 10 rural

workers migrates in Ethiopia, in contrast to 1 in 5 rural workers in China. Migration has been beneficial for poverty reduction when it occurred. On average, evidence indicates that those that migrate experience substantial welfare benefits: de Brauw, Mueller and Woldehanna (2013) find large gains in consumption expenditure per capita which remain after controlling for differences in characteristics across migrants and non-migrants (Figure 16), although subjective

**FIGURE 16:** Distribution of consumption for migrants and non-migrants



Source: De Brauw, Mueller and Woldehanna (2013).

**FIGURE 17: City size and poverty in Ethiopia**

Source: Own calculations using 2007 census and city poverty rate estimates generated using the 2007 census and HCES 2011.

wellbeing was no higher among migrants. However, not all gain equally, and female migrants experience about half (56%) of the consumption gain experienced by male migrants. This is in part because employment outcomes of female migrants are not as good as employment outcomes of the average migrant. Female migrants are 4% less likely to gain employment and seven percentage points more likely to be an unpaid family worker than the average migrant. Policies that protect more vulnerable groups as they migrate would increase the poverty reducing effects of migration. The evidence suggests migration poses little loss for sending households: migration was found to have no negative impact on agricultural productivity in that households that sent migrants were just as productive, post-migration, as households without a migrant.

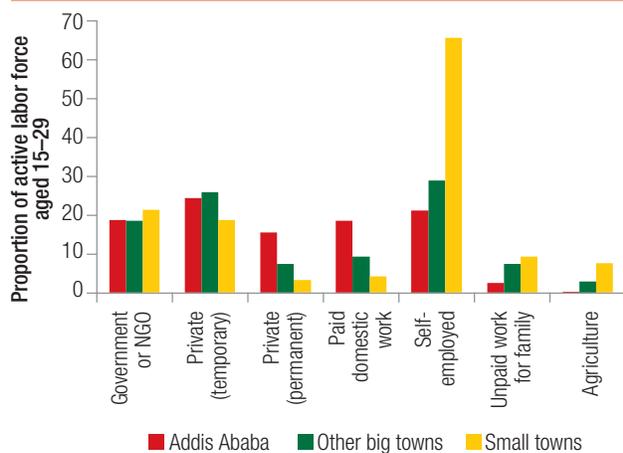
**Given the clear welfare benefits to internal labor migration and the limited negative effect on the sending household, why are migration rates not higher in Ethiopia?** The focus on service provision in rural areas and for agricultural livelihoods has been very good for poverty reduction but it preferentially favors rural areas, and may be acting as a check on migration trends in Ethiopia. Land policy that has

been so good for ensuring an equitable distribution of income in rural areas may also act as a break on migration flows by prohibiting those planning on migrating from liquidating their land. In addition, the costs associated with migration and searching for a job in urban areas limit the ability of liquidity-constrained poor households to invest in migration. Policies that (i) make it easier to transfer land and (ii) reduce the costs of job search would likely increase migration.

**Ethiopia is urbanizing. Further agglomeration would likely enhance the pace of structural transformation.** As Ethiopia urbanizes so too does poverty. In 2000, 11% of Ethiopia's poor lived in cities, but this rose to 14% in 2011. In Ethiopia, just as in other countries, poverty rates fall and inequality increases as city size increases, however poverty rates in the two largest cities of Addis Ababa and Dire Dawa are much higher than this trend would predict (Figure 17). Improving welfare in large urban centers may in turn make further agglomeration more likely by making cities more attractive places to live.

**Addressing poverty in large urban centers will thus become an increasingly important focus of development policy, and increasing the productivity of urban work will be central to this.** The nature of work is much different in larger urban centers than in rural Ethiopia and small towns. Rates of self-employment and work in family enterprises decrease and waged employment increases with city size (Figure 18). In urban centers where waged employment is higher, poverty rates are lower. However, as rates of waged employment increase so to do the number of people searching for these jobs, resulting in very high rates of unemployment in the largest urban centers in Ethiopia. In Addis Ababa unemployment is strongly correlated with poverty: nearly half of all households with an unemployed male in Addis Ababa live in poverty (Figure 19). Yet those with the lowest levels of education are more often engaged in informal self-employment, out of necessity, rather than being unemployed looking for a wage job. These individuals can be thought of as choosing self-employment not because it is more profitable but because the cost of

**FIGURE 18: Employment type and city size**

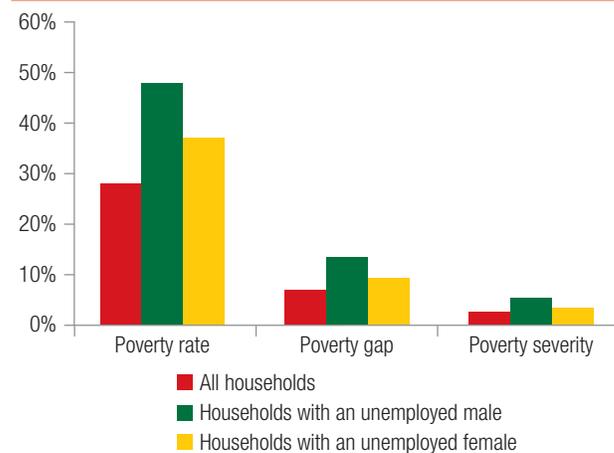


Source: CSA Urban Employment and Unemployment Survey.

being unemployed while searching for waged employment is too high relative to the expected benefit.

**Poverty in large urban centers may be better addressed by encouraging the entry and growth of firms rather than by encouraging self-employment.** Supporting small scale entrepreneurs can reduce poverty by increasing the productivity of those who currently earn marginal profits from self-employment. However, supporting entrepreneurs that employ others can also be poverty reducing—if not more so. High productivity entrepreneurs earn substantial profits, but also employ workers, and contribute to higher overall wage levels through their demand for labor. As the value of

**FIGURE 19: Unemployment and poverty**

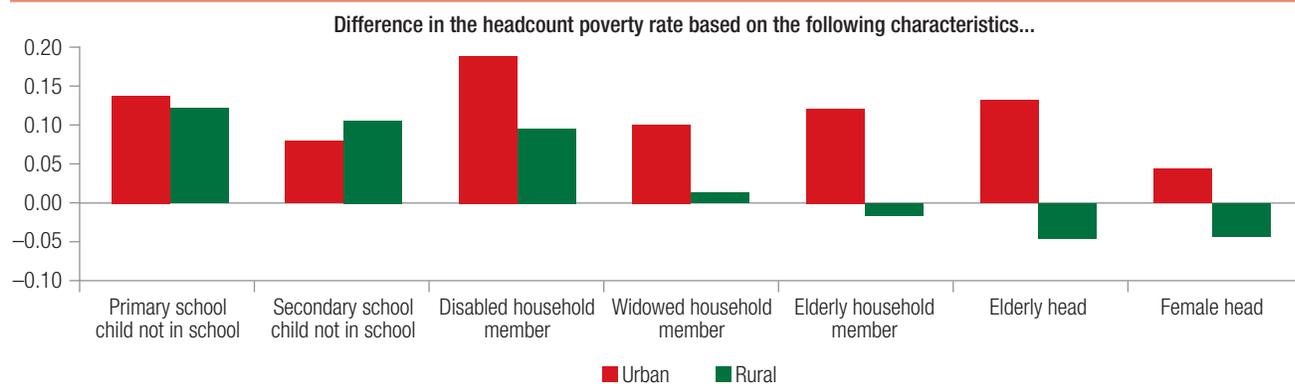


Source: 2012 and HCES 2011.

employment increases so does the value of job-search. This encourages necessity entrepreneurs to search for and gain employment. To the extent job search is costly, reducing the costs of job search would also encourage the necessity self-employed to upgrade to wage employment and potentially reduce unemployment.

**However, addressing urban poverty will take more than encouraging employment. Increased safety nets to support those who do not participate in the urban labor market are needed.** The elderly, disabled, and female-headed households are much poorer relative to their neighbors than in rural areas (Figure 20). Households with disabled members and

**FIGURE 20: Being disabled, widowed, and elderly is more associated with poverty in urban areas**



Source: HCES and WMS 2011.

headed by the elderly are also more vulnerable to shocks in urban areas than in rural areas. In part this is as a result of informal safety nets being weaker in urban areas, but also in part as a result of inadequate urban safety nets. Direct transfers are only provided to rural households, with subsidies in electricity, kerosene, and wheat in place to reach the urban poor. Although urban households do benefit more than rural households from subsidies this is not enough to compensate for the lack of direct transfers to urban households among the bottom percentiles. Poverty, particularly urban poverty, would be reduced further were spending on indirect subsidies (on electricity, kerosene, and wheat) converted to direct transfers. Simulations suggest that direct transfers of 1500 Birr per year to poor households in Addis Ababa targeted using proxy means testing would halve poverty rates in Addis Ababa from 28% to 14%. This program would cost one fifth of spending on the PSNP.

**An urban safety net can also have productive benefits.** Introducing a safety net in large urban centers will have a direct effect on poverty. Evidence suggests that transfers can encourage income growth among recipients by increasing job search, increasing the productivity of the self-employed, and encouraging some to upgrade from necessity self-employment to employment.

**Finally, although accelerating poverty reduction will require looking beyond agriculture for sources of pro-poor growth, agricultural growth will remain an important driver of poverty reduction in the near future. Ensuring that women in rural areas participate in this growth is essential to poverty reduction.** Female farm managers in Ethiopia are 23% less productive than their male counterparts. They have less time to spend on farm work and farm less land, more of which is rented. In addition, female managers obtain lower output from the productive factors that are employed compared to men. Differences in productivity arise, in part because women are often relegated to, or choose, low-risk low-skilled activities while men choose high-risk, high-value crops and engage in commercialization. Increasing women's access to land, extension, oxen, and labor markets will help address

gender-productivity differences, but policies that help change institutions and gender norms that keep female farmers in low-return activities are also needed.

**In summary,** the Government of Ethiopia's focus on agricultural growth and investments in basic services for all has ensured improvements in wellbeing for many poor households in Ethiopia. The proportion of the population living below the national poverty line fell from 44% in 2000 to 30% in 2011. Looking forward, further investment in basic services are required to ensure that Ethiopia continues to make further, needed, progress in education, health, and living standards. Investments in safety nets remain important to reduce vulnerability. The predominance of agriculture as a source of income for Ethiopia's poor also suggests that agricultural growth will remain an important driver of poverty reduction in the future. Poverty reduction from agricultural productivity increases has occurred in places with better market access when cereals prices have been high, underscoring the dependence of agricultural growth on increased urban demand for agricultural products in a land-locked country such as Ethiopia. However, the structural change in value addition that has occurred during the last decade has not been fully matched by structural change in employment. The analytical findings presented here are consistent with the idea that further agglomeration through urbanization would help increase poverty reduction. This will require policies that favor the entry and growth of firms, in addition to support to self-employment in non-agricultural activities. Further urbanization and growth in non-agricultural sectors would continue to exert upward pressure on food prices. This will need to be met by agricultural productivity growth in order to keep labor costs competitive, but high prices incentivize the required agricultural investments. Although beneficial for many poor rural households, high food prices carry costs for the urban poor. Improving the fiscal position of poor urban households—such as through higher direct transfers or raising the minimum income above which personal income tax is levied—would help offset this effect.

**ANNEX: Poverty, inequality, wellbeing and sector of employment, 2000–2011**

	2000	2005	2011
National absolute poverty headcount (National Poverty Line)	44.2%	38.7%	29.6%
Urban	36.9%	35.1%	25.7%
Rural	45.4%	39.3%	30.4%
International extreme poverty headcount (US\$1.25 PPP Poverty Line)	55.6%	39.0%	30.7%
Population (thousands)	63,493	71,066	84,208
Number of people living beneath the national poverty line (thousands)	28,064	27,523	25,102
Poverty depth (National Poverty Line)	11.9%	8.3%	7.8%
Urban	10.1%	7.7%	6.9%
Rural	12.2%	8.5%	8.0%
Poverty severity (National Poverty Line)	4.5%	2.7%	3.1%
Urban	3.9%	2.6%	2.7%
Rural	4.6%	2.7%	3.2%
Gini coefficient	0.28	0.30	0.30
Urban	0.38	0.44	0.37
Rural	0.26	0.26	0.27
Nutritional outcomes among children under 5 years of age*			
Stunting	58%	51%	44%
Wasting	12%	12%	10%
Underweight	41%	33%	29%
Life expectancy (years)	52		63
Net attendance rate: Primary education (7–12 years of age)*	30.2%	42.3%	62.2%
Urban	73.6%	78.8%	84.9%
Rural	24.3%	38.8%	58.5%
Immunization Rates (BCG, DPT1–3, Polio, Measles)*			
At least one shot	83.5%	76.0%	85.5%
All vaccines	14.3%	20.4%	24.3%
Proportion of households reporting shocks			
Food price	n.a.	2.0%	19.0%
Drought	n.a.	10.0%	5.0%
Job loss	n.a.	1.0%	0.0%
% crop loss (from LEAP)	22.4%	23.5%	13.8%
Share of population living in urban areas	13.3%	14.2%	16.8%
Proportion of households with at least one member engaged in			
Agriculture	78.8%	79.7%	78.4%
Industry	3.4%	8.7%	8.0%
Service	23.0%	20.8%	23.1%

Notes: The data source is the HICE and WMS surveys unless otherwise stated. \*Denotes that the statistic was calculated using the DHS. Some of the statics are taken from MOFED 2013 using these datasets. Life expectancy data is from the World Development Indicators. International extreme poverty rates estimated using a line of US\$1.25 PPP per capita per day are taken from Povcalnet (June 2014).



## REFERENCES

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- Canning, David, Sangeeta Raja, and Abdo Yazbeck. 2014. People powered growth for Africa's Young Lions. World Bank Report, Africa Region.
- Carranza, E. and J. Gallegos. 2013. Ethiopia Trends of Wellbeing 2000-2011. Poverty Reduction and Economic Management, Africa Region, World Bank.
- de Brauw, A., V. Mueller, and T. Woldehanna. 2013. Does Internal Migration Improve Overall Well-Being in Ethiopia? Ethiopia Strategy Support Program Working Paper 55.
- Haggblade S., P. Hazell, and T. Reardon. 2010. "The Rural Nonfarm Economy: Prospects for Growth and Poverty Reduction." *World Development*, Vol. 38, No. 10, pp. 1429–1441.
- Lustig and Higgins. 2013. Measuring Impoverishment: An Overlooked Dimension of Fiscal Incidence. Tulane University Economics Working Paper 1315, New Orleans, Louisiana, April 2013 and CEQ Working Paper No. 14, New Orleans, Louisiana, April
- Oxford Poverty and Human Development Initiative. 2014. Global Multidimensional Poverty Index Databank. OPHI, University of Oxford.
- World Bank. 2013. Ethiopia Economic Update II: Laying the foundation for achieving middle-income status.
- World Bank. 2012. Ethiopia Economic Update I: Overcoming inflation, raising competitiveness.



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