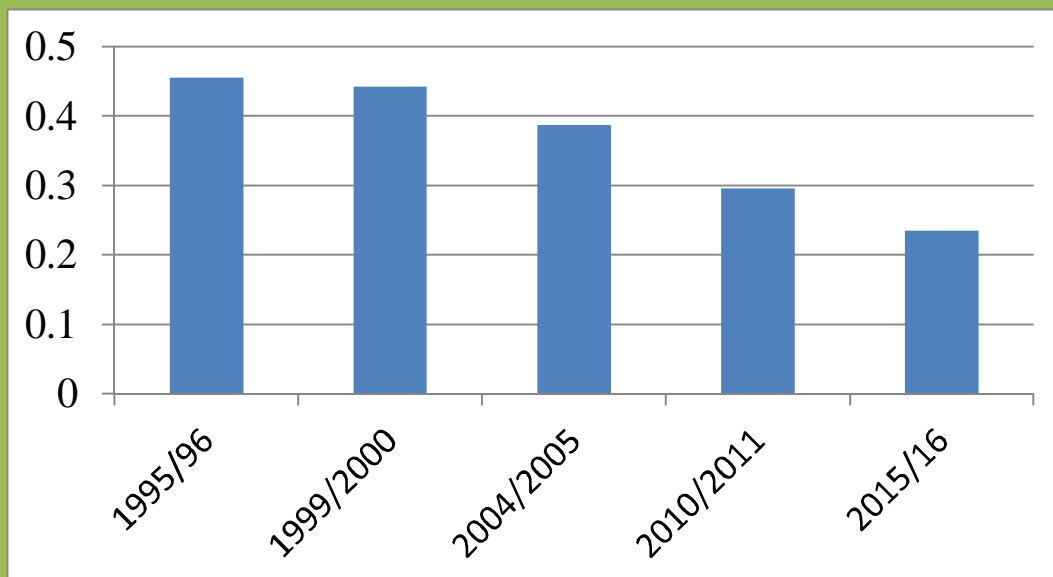




## Federal Democratic Republic of Ethiopia

### Ethiopia's Progress Towards Eradicating Poverty: An Interim Report on 2015/16 Poverty Analysis Study



National Planning Commission

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## **1. Introduction**

In a marked departure from its historical past, Ethiopia has been registering robust economic growth and remarkable social and human development over the past two decades. The country has witnessed one of the fastest growing non-oil and non-mineral economies in the world. Ethiopia economic growth has been higher than the growth rates in most African countries and overtook Kenya as East Africa's largest economy in 2017 (IMF 2017). Given this growth path and having recognized the role that growth plays in poverty reduction, the government of Ethiopia has put a strong poverty and welfare monitoring system to monitor progress in poverty reduction on a continuous basis. To this effect, the Government launched Household Income Consumption & Expenditure (HICE) Survey and Welfare Monitoring System (WMS) in 1995/96 and made poverty analysis to be an integral part of the overall Monitoring and Evaluation (M&E) System as part of its endeavor to address the poverty reduction agenda.

So far, the HICES was conducted five times: in 1995/96, 1999/2000, 2004/05, 2010/11 and 2015/16 and have been used as the main official data source for tracking poverty and welfare, informing the policy making body and helping the Government of Ethiopia designed and implemented a series of poverty reduction strategies and programs since the beginning of 2000s and subsequently national development programs and plans such as the Sustainable Development and Poverty Reduction Programme (2001/02-2004/5); the Plan for Accelerated and Sustained Development to End Poverty (2005/06-2009/10) and the First Growth and Transformation Plan (2010/11-2014/15) and the Second Growth and Transformation Plan (2015/16 – 2019/20) which has already entered in to its third year of implementation (2017/18).

This Interim Report, therefore, aims at updating the status and trends of national, rural, urban and regional poverty incidence, depth and severity as well as consumption inequality in Ethiopia. The result of this updated poverty analysis study is considered to be useful for government and non-government organization, development partners for planning, policy analysis and monitoring and evaluation.

Before going into the details of the 2015/16 HICE survey and trends of poverty analysis, it is important to have an overview of the macroeconomic condition of the country as this gives a bird's-eye view of the country's recent macroeconomic performance such as the trend in economic growth, changes in per capita GDP over time, level of public investment, pro-poor

expenditure and emergency relief and aid redistributed by the government in time of economic shocks in those part of the country affected by drought in 2015/16.

## **Macroeconomic Conditions**

### **1.1 Economic growth**

Ethiopia has witnessed one of the fastest growing non-oil and non-mineral economies in the world during the last 13 years. Ethiopia's economic growth has been higher than the growth rates in most African countries and overtook Kenya as East Africa's largest economy in 2017 (IMF 2017). In an effort to achieve such level of growth, the Government of Ethiopia has been implementing a series of poverty-focused development strategies and programs since the beginning of 2000s. In 2001/2, a comprehensive poverty reduction program called Sustainable Development and Poverty Reduction Programme (SDPRP) was introduced. During this early stage, the GDP per capita of the country was very low (USD 125), but this rose to about USD 205 by the end of the SDPRP in 2005/6 (Figure 1).

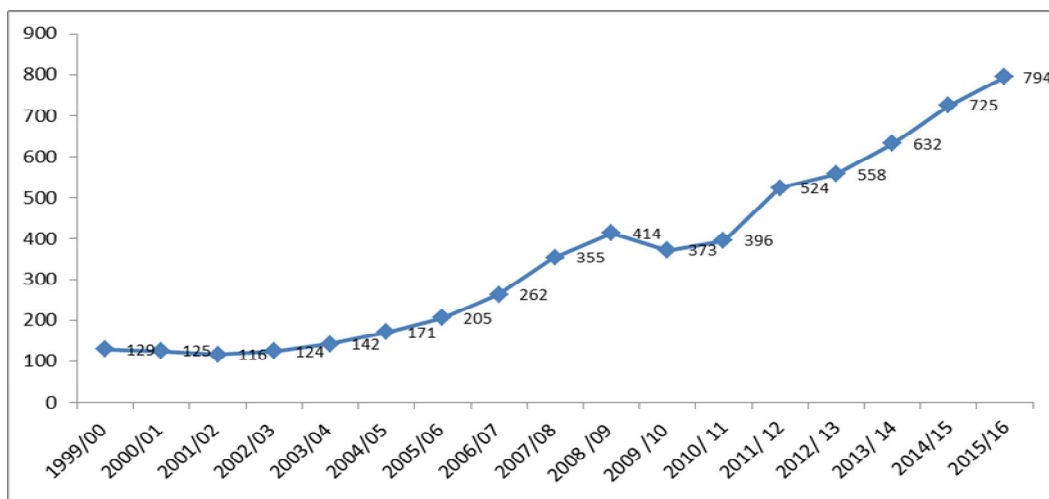
Upon the completion of the SDPRP, the Government adopted the Plan for Accelerated and Sustained Development to End Poverty (PASDEP: 2005/06-2009/10) in which the country enjoyed remarkable economic growth rates throughout the period. A growth rate of 11% was registered between 2005 and 2008 was particularly well above the planned target and as the result the per capita GDP of the country further rose to 373 USD in 2009/10. The growth achieved during this economic plan was backed by improvements across the three sectors of the economy, albeit with some degree of variability. Comparing the three main sectors, the growth rate from the Service sector was very strong, with an average growth rate of 14.6% over the 2005/06-2009/10 period while, the growth rates from the industry and agriculture sectors, respectively were 10% and 8.4% (MoFED, 2010/11).

In 2009/10 structural transformation emerged as a key agenda alongside sustaining rapid growth. Accordingly, the Government of Ethiopia further introduced a third development plan called the First Growth and Transformation Plan (GTP I). This development plan was very ambitious characterized by huge public investment in infrastructural facilities throughout the country. During this plan period the per capita GDP of the country more than doubled from USD 373 in 2009/10 to USD 794 in 2015/16. Having been encouraged by the growth achieved during GTP I, the Government further embarked on the second generation

Growth and Transformation Plan (GTPII) spanning the five year period of 2015/16-2019/20 with due emphasis on industrialization and structural transformation of the economy.

Though Ethiopia is still among the low-income countries in the world with GDP per capita of \$1608 in PPP terms in 2017 and ranked 164 out of 187 countries (World Bank 2017), its economic growth has been on an upward trajectory over the past decade or so. The Government in GTP II particularly underlines the importance of sustainable and green economy and creating a skilled and competitive workforce to accelerate and sustain economic growth of the country in an endeavor to realize Ethiopia’s Vision of becoming a lower middle-income nation by 2025.

Figure 1: Trends GDP per capita in USD between 2000/00-2015/16



Source: MoFEC (2016/17)

## 1.2 Public expenditure

As mentioned earlier, Ethiopia has been investing heavily on public infrastructure and mega projects such as on roads, railway and power plants in the hope that such investment will help reduce poverty on a sustainable manner. As the result of this big push of public investment, the real total public expenditure (at 2010/11 prices) increased in absolute terms, which was 71 billion in 2010/07/08 and reached 149 billion in 2015/16, showing an average annual growth rate of 10% between 2007/08 and 2015/16 (Table 1). Disaggregating by type of expenditures shows that the capital component is larger than the recurrent component. The difference between the two categories of public expenditure was two billion Birr in 2007/08 and it

further widened in the subsequent periods and a maximum value of 19 billion Birr was recorded in 2012/13. These show the reorientation of public expenditures from recurrent to capital spending to finance social and infrastructural developments to promote inclusive and pro-poor growth in the country. Moreover, increase in public spending is parallel to the GDP growth over the GTPI period. The share of public spending in GDP was 16.7% in 2011/12 and increased 18.4% in 2015/16.

Table1: Trends in public expenditure (in real billions of Birr at 2010/11 prices) and as percent of GDP

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	Average growth
<b>Total Public Expenditure</b>	70.92	70.41	87.23	93.90	92.70	110.00	123.6	136.3	148.62	9.98
Recurrent expenditure	34.48	33.13	39.05	40.70	38.30	44.79	52.07	64.97	72.33	10.20
Capital expenditure	36.44	37.28	48.18	53.30	54.40	65.21	71.60	71.33	76.30	10.06
<b>Total Public expenditure (% GDP)</b>	19.08	17.41	19.15	18.23	16.65	17.76	17.49	17.33	18.38	
Recurrent (% GDP)	9.27	8.19	8.57	7.90	6.88	7.23	7.36	8.26	8.95	
Capital (% GDP)	9.80	9.22	10.58	10.35	9.77	10.53	10.12	9.07	9.44	

Source: Computed based on MoFEC (2016/17)

### **1.3 Pro-poor expenditure, Productive Safety Net and Emergency Relief Aid**

In addition to the huge public capital investment on social infrastructure and mega projects, the Government of Ethiopia has also been allocating significant amount of funds on pro-poor sectors over recent years. Table 2 presents real poverty-targeted expenditures on five categories of pro-poor sectors: education, health, agriculture, roads and water. It appears that the share of the five pro-poor sectors in GDP rose from 10.9% in 2008/09 to 12.1% in 2015/16. In absolute real terms this pro-poor spending amounts 97.1 billion Birr or 65.7% of total public expenditure in 2015/16. The share of pro-poor spending was even as high as 70.4% in 2011/12. Such high proportion of pro-poor expenditure in terms of both GDP and total public spending annual budget shows the extent of Government commitment to up lift millions out of absolute poverty during the periods of the Growth and Transformation Plans (GTP) and those preceding them.



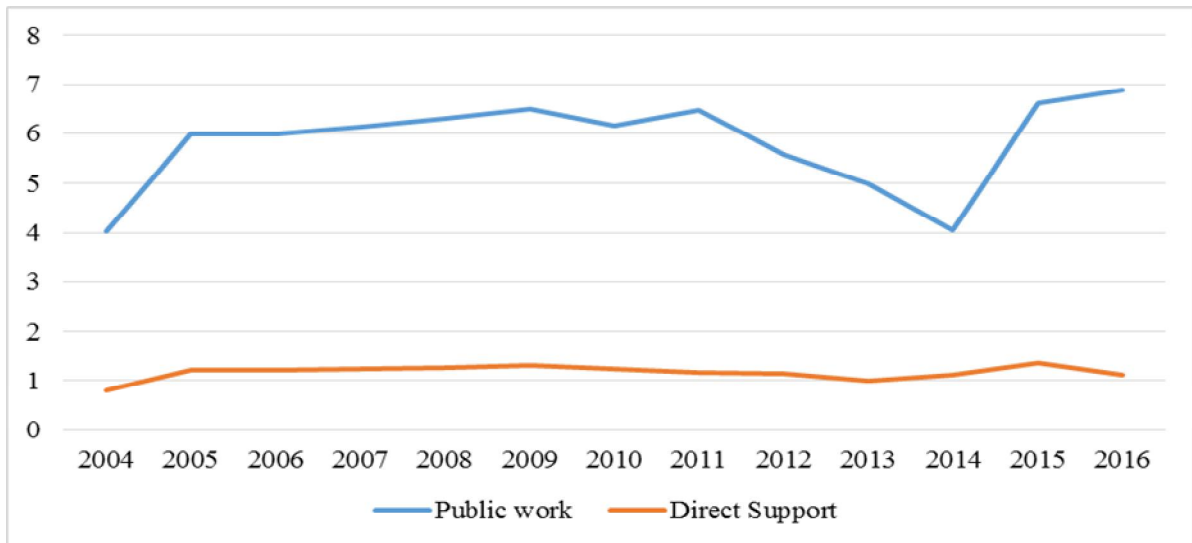
Table 2: Trends total real poverty-targeted expenditures (in billions of Birr) at 2010/11 prices

Real expenditure	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Education	15.5	20.7	23.4	22.2	24.7	26.6	32.2	35.7
Health	4.7	5.6	6.3	5.7	8.1	8.5	10.7	11.5
Agriculture	9.1	8.4	8.3	8.2	10.5	11.1	10.7	16.5
Roads	11.9	16.8	18.5	21.5	24.6	24.1	24.9	22.1
Water	2.8	5.9	5.9	7.6	9.0	8.9	8.7	11.3
Total	44.1	57.4	62.4	65.3	77.0	79.2	87.3	97.1
Total Public Expenditure	70.4	87.2	93.9	92.7	110.0	115.9	132.3	147.8
Share of pro-poor expenditure (%)	62.7	65.8	66.5	70.4	70.0	68.4	66.0	65.7
Share of pro-poor in GDP (%)	10.9	12.6	12.3	11.9	12.4	12.0	11.4	12.1
Total public expense in GDP (%)	17.4	19.1	18.6	16.9	17.8	17.5	17.3	18.4

Source: MoFEC (2016/17)

Besides the sizable pro-poor public investment, the Government of Ethiopia has been also doing a lot with emergency relief aid provided to households and individuals in order to provide support during circumstances which adversely affect their welfare. Besides Ethiopia has implemented since 2006 a big social protection program called Productive Safety Net Program (PSNP) that provides support to the chronically poor households on a regular basis. The Productive Safety Net Program has been implemented only in rural areas until 2015/16. The PSNP has two components: direct support (unconditional) and public work (conditional on providing labor). Figure 2 shows the trends in the number of public work and direct support recipients of the rural productive safety net (here after called RPSNP) programs between 2004/05 and 2016/17. The number of direct RPSNP recipients is roughly close to one million and it has very small fluctuations. The number of public work beneficiaries, on the other hand, is much larger than the size of the direct beneficiaries. There were about 4 million public work beneficiaries in 2004/05 and the size increased to 6 million in 2005/06 and it was slightly larger than 6 million until 2011/12. The number of public work beneficiaries decreased after 2011/12 and reached its lowest level in 2014/15 with about 4 million beneficiaries and it rebound after 2014/15 and reached close to seven million in 2015 and 2016.

Figure 2: Trends in the number of RPSNP beneficiaries in millions between 2004/05 and 2016/17



Source: Computed based on MoANRS (2017)

The expenditures on the several emergency relief programs for the period 2009/10 to 2016/17 are presented in Table 3 below. The type of assistances during emergency include food, targeted supplementary feeding especially to infants and pregnant women, health and nutrition, water and sanitation services, agriculture and livestock services, school feeding, protection, and emergency shelter (when there are displacements during natural and manmade disasters). The total expenditure increased from 9.3 billion to 9.7 billion Birr between 2009/10 and 2010/11. It reached a highest level of over 13.1 billion in 2015/16 and over 16.8 billion Birr in 2016/17 due to the rapid increase in emergency relief recipients following the 2015/16 severe drought. From the various components of the emergency relief expenditures, food assistance accounts the lion's share with an average of over 78% between 2009/10 and 2016/17 followed by health and nutrition support and targeted supplementary feeding (Table 3 below).

Table 3: Trends in emergency relief aid (in real millions Birr at 2010/11 prices) in Ethiopia

Type of assistance	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Food	7,937.36	7,886.60	3,697.57	3,398.66	4,912.21	3,943.41	10,194.5	15,126.3
TSF (targeted supplementary feeding)	793.42	854.24	588.43	182.58	414.14	276.57	274.62	0.00
Health and Nutrition	375.45	516.37	362.38	322.71	311.59	451.69	1,225.52	757.61
Water and Sanitation	95.82	270.13	251.57	243.31	158.26	309.77	655.81	430.74
Agriculture and live stock	148.05	170.95	102.18	210.80	163.74	191.32	543.33	271.71
School feeding	0.00	65.14	53.76	68.13	66.66	33.10	120.27	98.00
Protection	0.00	0.00	0.00	0.00	0.00	0.00	66.44	69.83
Emergency Shelter (IDPS)	0.00	0.00	0.00	0.00	0.00	0.00	45.79	48.12
Total emergency relief expenditure	9,350.10	9,763.43	5,055.88	4,426.20	6,026.61	5,205.86	13,126.3	16,802.4

Source: NDRMC (2017) and MoFEC (2017)

## 2. The 2015/16 HICE survey sampling and data collection

The HICE survey is of great importance among other household surveys conducted by the Central Statistics Agency of Ethiopia (CSA). This series of HICE survey was started in 1995/96. So far, five subsequent surveys have been conducted since then in the following years: 1995/96, 1999/2000, 2004/05, 2010/11 and 2015/16. Like in the first four surveys, the 2015/16 HCE survey was designed and conducted by CSA. The survey provides empirical evidence that enable to understand the income (through the use of consumption expenditure as proxy to income) dimension of poverty. The survey specifically aims at

- i. Furnishing series of data for assessing poverty situations; for analyzing changes in the households' living standard over time; and for monitoring and evaluation (M&E) the impacts of socio-economic policies and programs on the welfare of people, and
- ii. Establishing databases that serve for compiling household accounts in the System of National Accounts (SNA) such as the PFCE component of the demand side of GDP and for construction and/or rebasing of Consumer Price Indices in the country.

### 2.1 Survey Methodology

**Sample design:** the 2015/16 HICE survey covered all rural and urban areas of the country. Unlike previous surveys all non-sedentary areas in Afar and Somali regional states are also

covered by this survey. A stratified random sampling technique was employed to draw representative sample. The country was first stratified into nine regional states and two city administrations. Then each regional state was further stratified into three broad categories namely, rural, major urban centers and other urban area categories. However, Harari region and Dire Dawa City Administration were stratified into rural and urban categories, while Addis Ababa has only urban category, but stratified by Sub-City. Therefore, each category of a specific region, in most cases, was considered to be a survey domain or reporting level for which the major findings of the survey are reported. Accordingly, the 2015/16 HICE and Welfare Monitoring Surveys have 49 reporting levels.

In the first two categories, namely the rural and major urban, a two-stage stratified sampling technique was implemented whereby the Enumeration Areas (EAs) were considered as a Primary Sampling Unit (PSU) and the households were considered as the Secondary Sampling Unit (SSU). The EAs were selected using the Probability Proportional to Size (PPS); size being the number of households obtained from the 2007 Population and Housing Census, while the sample households were systematically selected from a fresh list of households within the EA made during the survey period.

On the other hand, for the other urban category, a three stage stratified sampling technique was carried out. In this case, the urban centers, EAs and households were used as a PSU, SSU and the Tertiary Sampling Unit (TSU), respectively. Here, the PSUs and SSUs were selected using the PPS, while the selection of households follow the same approach as described earlier.

**Sample Size:** The 2015/16 HICE and Welfare Monitoring Surveys sampled 30,255 households in urban and rural areas of the country. Of which a total of 864 EAs and 10,368 households (12 households per EA) were selected to represent rural areas and a total of 1,242 EAs and 19,872 sample households (16 households per EA) were selected for urban domains, specifically, 744 EAs and 11,904 households and 498 EAs and 7,968 households to represent major urban and other urban areas, respectively. In total the sample size of the 2015/16 HICE survey is 30,255, which is higher than the previous surveys (Table 4). The distribution of the samples across region is provided in Table 5.

**Sample Coverage:** in rural areas, all of the EAs as well as all households were fully covered by the survey. Similarly, in urban areas all EAs were fully covered by the survey. However,

with respect to households, out of the 19,872 sample households, only 11 households were not covered by the survey, which gives a response rate of 99.9%. At the end, it was possible to obtain complete and cleaned raw data set from 30,255 households, which is quite high compared to each of the sample sizes covered in previous HICE surveys.

Table 4: Trends in sample size of Household Consumption Expenditure (HICE) Survey in Ethiopia

	Sample HHs
Y1995/96	12,342
Y1999/00	17,332
Y2004/05	21,596
Y2010/11	27, 830
Y2015/16	30,255

Table 5: Regional distribution of sample households covered by the 2015/16 HICE Survey

Region	Rural	Urban	Total	Region's Share (%)
Tigray	1,153	1,156	2,309	7.6
Afar	576	768	1,344	4.5
Amhara	2,016	3,369	5,385	17.8
Oromia	2,306	4,134	6,440	21.3
Somali	569	1,151	1,720	5.7
Ben-Gumuz	576	769	1,345	4.5
SNNP	2,016	3,161	5,177	17
Gambella	576	768	1,344	4.5
Harari	288	388	676	2.2
Addis Ababa	0	3,843	3,843	12.7
Dire Dawa	288	384	672	2.2
<b>All Regions</b>	<b>10,364</b>	<b>19,891</b>	<b>30,255</b>	<b>100</b>

## 2.2 Data collection

The HICE and Welfare Monitoring (WM) surveys are considered as twin surveys as the WM survey is a basis for non-consumption dimension of poverty. Therefore, to avoid any inconsistency of data between the two surveys, that could be observed due to differences in data collection period; unlike the previous survey, the 2015/16 survey was designed to conduct both surveys simultaneously. Accordingly, the data collections of both surveys have taken place for one full year from 8 July 2015 to 7 July 2016. About 88 field operation (i.e. data collection) team, each comprised of three enumerators (one for HWMS and two for HICES) and one supervisor and/field editor organized in order to execute the actual field

work. Furthermore, these 88 teams were organized in 25 Statistical Branch Offices (SBO) of the CSA, each headed by an experienced statistician. Moreover, in each SBO a senior statistician was assigned on permanent basis to coordinate, monitor and evaluate the actual field work. In each SBO, each team was responsible to collect data in 24 EAs throughout the survey year. In the 2015/16 survey (like that of the 2010/11), the data collection was distributed across all months ensuring balanced distribution across seasons. The 2015/16 HICE survey, therefore, has better seasonal distribution compared to the first three previous HICE surveys (1995/96, 1999/00 & 2004/05).

### **3. Method of measuring poverty and poverty line**

**Measurement and aggregation of poverty:** Consistent with the previous surveys, consumption rather than income was used in the conduct of poverty analysis. Consumption to be an indicator of household's welfare, it has to be adjusted for differences in the calorie requirement of different household members (for age and gender of adult members). This adjustment could be made by dividing real household consumption expenditure by an adult equivalent scale computed on the basis of the nutritional requirement of each family member.

Total poverty here refers to an aggregate measure of poverty that takes into account both the food and non-food requirements. Here, it is worth noting how poverty lines are established. The most widely used method of estimating poverty line is the cost of basic needs method because the indicators will be more representative and the threshold will be consistent with real expenditure across time, space and socio economic groups. First, the food poverty line is determined by choosing a bundle of food typically consumed by the poor. The quantity of the bundle of food is determined in such a way that the bundle meets the predetermined level of minimum caloric requirement (2200 kilocalorie). This bundle is valued at local prices or at national average prices if the objective is to get a consistent poverty line across regions and socio economic groups. Then a specific allowance for the non-food goods consistent with the spending pattern of the poor is added to the food poverty line. To account for the non-food expenditure, the food poverty line is divided by the food share of the poorest quintile or quintile.

The most widely used poverty indices are the percentage of the poor below the poverty line (headcount index), the aggregate poverty gap (poverty gap index), and the distribution of income among the poor (poverty severity index). The poverty measure itself is a statistical

function that translates the comparison of the indicator of household well-being and the chosen poverty line into one aggregate number for the population as a whole or a population subgroup. Many alternative measures exist, but the three measures described below are the ones most commonly used.

**Incidence of poverty (headcount index):** Head count index, the share of the population whose income or consumption is below the poverty line; that is, the share of the population that cannot afford to buy a basic basket of goods.

**Depth of poverty (poverty gap index):** Poverty gap index provides information regarding how far households are from the poverty line. This measure captures the mean aggregate income or consumption shortfall relative to the poverty line across the whole population. It is obtained by adding up all the shortfalls of the poor (assuming that the non-poor have a shortfall of zero) and dividing the total by the population. In other words, it estimates the total resources needed to bring all the poor to the level of the poverty line.

**Poverty severity (squared poverty gap):** Poverty severity index measures not only the distance separating the poor from the poverty line (the poverty gap), but also the inequality among the poor, that is, a higher weight is placed on those households further away from the poverty line.

Poverty reports in developing countries use all the three poverty indices described above. This report uses also all the three poverty indices above namely headcount poverty, the poverty gap, and the severity of poverty. The measures of depth and severity of poverty are important complements of the incidence of poverty. It might be the case that some groups have a high poverty incidence but low poverty gap (when numerous members are just below the poverty line), while other groups have a low poverty incidence but a high poverty gap for those who are poor (when relatively few members are below the poverty line but with extremely low levels of consumption or income).

In Ethiopia, the methods described above were first applied in the context of the 1995/96 Poverty Analysis Report. This was based on the cost of 2,200 kcal per day per adult food consumption with an allowance for essential nonfood items. The food and total poverty lines used since 1995/96 in the country are 648 and 1075 birr at national average prices, respectively (Table 6). To use these poverty lines and compute poverty indices, the per adult consumption expenditure has been updated by deflating all food and nonfood consumption

items by spatial price indices (disaggregated at the regional level relative to national average prices) and temporal price indices (relative to 1995/96 constant prices).

To calculate the 1999/00 and 2004/05 poverty indices, first the nominal values of per adult food and non-food consumption items were deflated by the spatial price indices (disaggregated at regional level relative to national average prices) and temporal price indices (relative to 1995/96 constant prices) to arrive at real per adult consumption. Second the 1,075 Birr poverty line is applied to real per adult household consumption expenditure in order to calculate head count, poverty gap and squared poverty gap indices.

**Setting poverty line:** The poverty line based on the 2010/11 Household Income and Consumption Expenditure Survey was set using the consumption groups (basket of goods) defined in 1995/96. These basket of goods which provides 2200 kilo calories are valued at 2010/11 national average prices in order to obtain food poverty line of 2010/11. Then this food poverty line is divided by the food share of the poorest 25 per cent of the population to arrive at the absolute poverty line for year 2010/11. The food and absolute poverty lines for 2010/11 are determined to be Birr 1985 and 3781, respectively.

The 2015/16 poverty line was set by applying the GDP deflator (Figure 3) provided by the MoFEC (2011-2016) to the poverty line figures set for the year 2010/11. The food poverty line for 2015/16 is computed to be Birr 3772 Birr per year per adult person and the absolute poverty line is Birr 7184 per year per adult person (Table 6).

These poverty lines and the real per adult consumption expenditure are used to aggregate consumption poverty indices. The real per adult consumption is obtained by first dividing the nominal consumption expenditure by nutritional calorie based adult equivalence family size to arrive at per adult consumption expenditure. The calorie based adult equivalent scale used varies by age and gender (see MOFED 2008, page. 117, Table B.3). Second, per adult consumption expenditure has been updated by deflating all food and non-food consumption items by spatial price indices (disaggregated at the reporting level relative to national average prices) and temporal price indices to bring them to December 2010 constant prices (see Tables A1 and A2 for Reporting and Regional level spatial price indices). These adjustments result into real per adult food and non-food consumption expenditure measured at December



2015 national average prices (Table 6)<sup>1</sup>. The real per capita consumption expenditure is obtained by dividing consumption expenditure by family size instead of adult equivalent family size. As indicated in Table 4, per capita consumption expenditure is higher in urban areas than in rural areas.

Table 6: Total (absolute) and food poverty line in Birr (average price)

	1995/96	2010/11	2015/16
Kilocalorie per day per adult	2200	2200	2200
Food poverty line (Birr)	648	1985	3772
Absolute poverty line (Birr)	1075	3781	7184

Source: Computed using HICE survey 1995/96, 2010/11 and 2015/16 and MoFEC (2015)

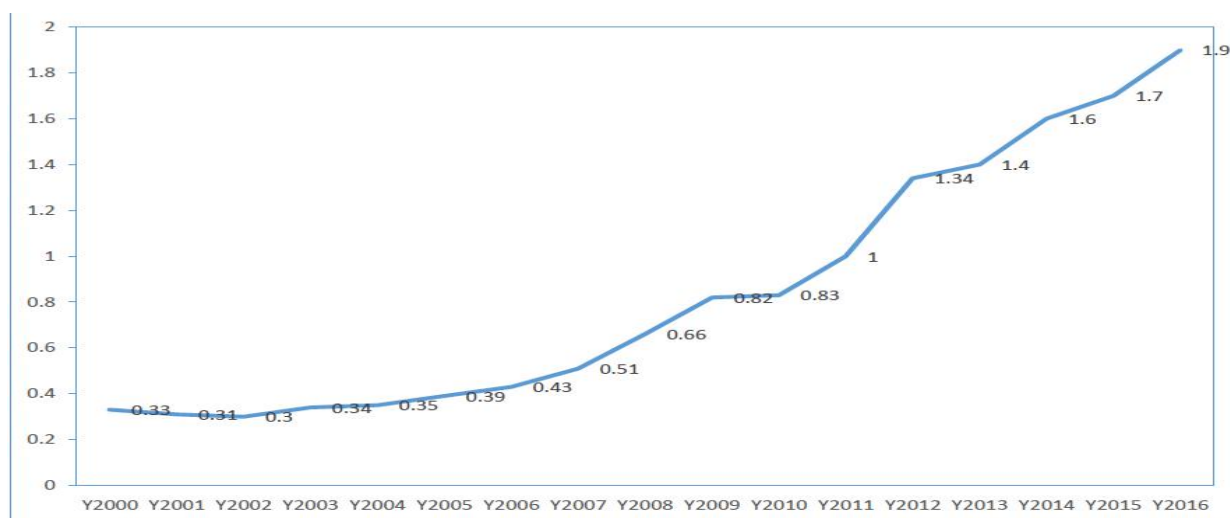
Table 7: Real per capita and per adult consumption expenditure in 2010/11 in Birr

	Urban	Rural	Total
Real per capita food consumption expenditure	7063	4807	5237
Real per capita non-food consumption expenditure	8556	4186	5020
Real per capita total consumption expenditure	15619	8992	10257
Real per adult food consumption expenditure	8376	5862	6342
Real per adult non-food consumption expenditure	10141	5084	6049
Real per adult total consumption expenditure	18518	10946	12391
The share of food in total consumption expenditure	46	53	51

Source: HICE survey 2015/16; Number of observation=30255

<sup>1</sup> See Annex Tables A3, A4 and A5 for regional level real per adult and per capita consumption expenditure.

Figure 3: GDP deflators: Y2000-Y2016



Source : MoFEC (2011-2015)

## 4. Status and trends of consumption poverty and inequality

### 4.1 Status of national, rural and urban poverty in 2015/16

The 2015/16 HICE survey shows that the poverty head count index, which measures the proportion of population below the poverty line in Ethiopia is estimated to be 23.5% in 2015/16, with marked differences between urban (14.8%) and rural (25.6%) areas of the country (Table 8). The poverty gap index that measures the average poverty gap in the population as a proportion of the poverty line is also estimated to be 6.7%. By this measure of poverty depth the rural poverty gap (7.4%) is also a little more than twice the urban poverty gap (3.6%). Moreover, the national poverty severity index is found to be 2.8 % with rural poverty severity index (3.1%) being considerably higher than that of urban areas (1.4%).

As measured by Gini Coefficient the income (consumption) inequality has shown a slight increase from 0.298 in 2010/11 to 0.328 in 2015/16. The rise in inequality was also witnessed in both urban (from 0.37 to 0.38) and rural (from 0.27 to 0.28) areas of the country.

Table 8: Poverty head count indices and inequality in 2015/2016

	Absolute poverty	Food poverty	Gini coefficient
Urban	14.8	15.2	38.0
Rural	25.6	27.1	28.4
national	23.5	24.8	32.8

Source: HICE survey 2015/16; Number of observation=30255

Table 9: Poverty indices in 2015/16

	Estimate	Std. Err.	[95% Conf.	Interval]
Poverty head count index	0.235	0.008	0.220	0.250
Poverty gap index	0.067	0.003	0.061	0.073
Poverty severity index	0.028	0.002	0.024	0.031
Food poverty head count index	0.248	0.008	0.233	0.263
Food poverty gap index	0.067	0.003	0.061	0.073
Food poverty severity index	0.027	0.002	0.024	0.030

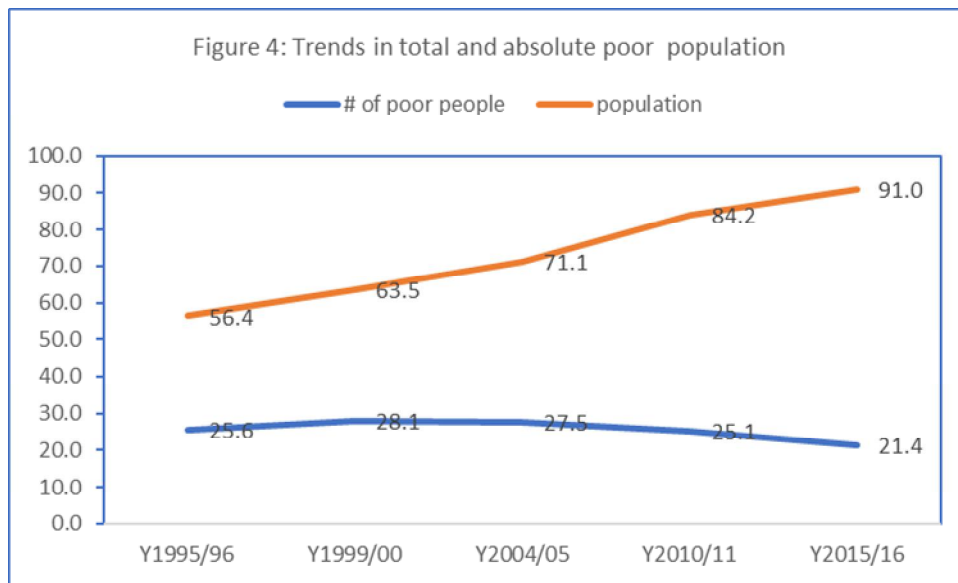
Source: computed from the 2015/16 HICE survey data

## 4.2 Trends in national poverty

Table 10 summarizes the trend in national, rural and urban poverty indices for the years 1995/1996, 1999/00, 2004/2005, 2010/11 and 2015/16. The headcount poverty rate declined from 29.6% in 2010/11 to 23.5% in 2015/16. Comparatively, the 2015/16 incidence of poverty (head count index) is lower than the index for 2010/11 by 19% while the poverty gap and poverty severity indices are lower by 11% and 5%, respectively. Such trend of poverty outcomes may indicate that there has been considerable decline in poverty incidence during the first Growth and Transformation Plan (GTP I) ending in 2014/15.

Figure 4 takes the headcount statistics and translates them into numbers of people using the population size. It is not always true that the proportion of poor people decline when the prevalence of poverty declines. However, like that of 2010/11, the 2015/16 survey and poverty report show that between 2010/11 and 2015/16 about 5.3 million people have been lifted out of poverty. Hence not only poverty incidence declined, but also the number of poor people declined. The total number of population increased from 84 million in 2010/11 to 93 million in 2015/16, while the number of poor-population declined from 25.1 million to 21.4 million. This is a remarkable achievement as the number of poor population is getting much lower than that of 1995/96 while the population is growing by more than 2.5% per annum.

Figure 4:Trends in total and absolute poor population



### 4.3 Trends in rural and urban poverty

As pointed out above, poverty has shown a substantial decline over the five year period of 2010/11-2015/16. The decline was reflected in both urban and rural poverty. The decline in urban poverty indices (incidence by 42%, depth by 47% and severity by 47%) are particularly much higher than rural poverty over the five year period of 2010/11-2015/16 while the opposite were the case over the five year period of 2004/05-2010/11 in which the decline of rural poverty indices exceeded the decline of urban poverty. The substantial decline in urban poverty over the recent years could be attributed to the pro-poor activities carried out in cities and towns during the GTP periods waged by the government to creating favorable environment for private sector investment, urban housing development, job creations and distribution of subsidized basic food items provided to the urban poor in response to inflation pressure over recent years.

Likewise, although the percentages of decline in rural poverty indices are small compared to the urban poverty, rural poverty declined in all its forms and dimensions, where the 2015/16 rural poverty head count, poverty gap and severity are lower than that of 2010/11 by 16%, 7% and 3%, respectively. The decline in rural poverty can also be explained by the fact that the Government has been implementing wide-ranging and multi-faceted pro-poor programs in rural areas of the country. Some of these pro-poor programs include expansion of

improved agricultural technologies and farming practices, commercialization of smallholder farming agriculture, rural infrastructural development and a range of food security programs (Productive Safety Net Programs, provision of credit etc) and emergency aid during the drought years.

Notwithstanding the decline of poverty, poverty is still a predominantly rural phenomenon compared to urban areas. As measured by the poverty head count index, rural poverty is nearly two times higher than urban poverty in 2015/16 (27% for rural versus 15% for urban). Besides, although the poverty gap between rural and urban areas had been narrowing until 2004/05, this gap started diverging after 2004/05 and widened in 2015/16, with 3.7% for urban versus 7.4% for rural areas. It is, however worth noting that as it seems a little bit difficult to explain the factors triggering the urban/rural poverty difference over the course of time, it might be important to undertake a full-fledged poverty analysis using triangulated data from all available information on poverty and welfare such as using the Welfare Monitoring Survey, Demographic and Health Survey and Household Income and Consumption Expenditure Surveys to provide policy insights for the factors behind the observed trends in poverty.

Table 10: Trends of national and rural/urban poverty

	Poverty indices over time					Changes (%)	
	1995/96	1999/00	2004/05	2010/11	2015/16	2010/11 over 2004/05	2015/16 over 2010/11
<b>National</b>							
Head count index	45.5	44.2	38.7	29.6	23.5	-23.5	-20.5
Poverty gap index	12.9	11.9	8.3	7.8	6.7	-5.5	-13.9
Poverty severity index	5.1	4.5	2.7	3.1	2.8	14.4	-10.8
<b>Rural</b>	0.0	0.0	0.0	0.0	0.0		
Head count index	47.5	45.4	39.3	30.4	25.6	-22.7	-15.9
Poverty gap index	13.4	12.2	8.5	8.0	7.4	-5.5	-7.1
Poverty severity index	5.3	4.6	2.7	3.2	3.1	17	-3.4
<b>Urban</b>							
Head count index	33.2	36.9	35.1	25.7	14.8	-26.9	-42.3
Poverty gap index	9.9	10.1	7.7	6.9	3.7	-10.1	-46.6
Poverty severity index	4.1	3.9	2.6	2.7	1.4	5.1	-48.4

Source: HICE survey of 1995/96, 1999/00, 2004/05, 2010/11 and 2015/16

#### **4.4 Food poverty status in 2015/16**

Achieving national food security is one of the main objectives of the Government of Ethiopia as expressed in its Growth and Transformation Plans and Rural Development Policies and Strategies, which is also in line with the SDGs goal of eradicating poverty in all its forms and dimensions.

To that effect, to estimate the proportion of food-poor people that fall below the food poverty line, different measures of aggregate poverty are computed for food poverty. Table 11 below reports the result of food poverty indices. Food poverty head count index is found to be 24.8% in 2015/16, but with a marked disparity between urban and rural areas (27.1% in rural versus 15.2% in urban areas). The food poverty gap index is also estimated to be 6.7%, with rural food poverty gap index (7.4%) is much higher than that of urban food poverty gap index (3.6%). The national food poverty severity index is estimated at about 0.027 with rural food poverty severity index (0.03) being markedly higher than that of urban areas (0.014).

The overall results show that all forms of food poverty indices are found to be higher than the aggregate poverty indices throughout the report. This may signify that much of the persistent poverty in Ethiopia is triggered by lack of sufficient food at household level. It is also true that all measures of food poverty indices (incidence, depth and severity) are substantially higher in rural than in urban areas in the 2015/16 HICE survey data.

#### **4.5 Trend in food poverty**

In terms of historical trend of food poverty a clear improvement is observed over time (Table 11). The national food poverty index was about 42% in 1990/00 but it declined to about 33.6% in 2010/11 and further to 24.8% in 2015/16. This implies the national food poverty index declined by 9% over the period of 1999/00-2004/05 and by 12% from 2004/05 to 2010/11. Similarly, between 2010/11 and 2015/16 it declined by 26% which is much higher than reduction experienced in the previous surveys.

Looking at poverty levels by rural and urban dimensions it appeared that there have been huge decline in rural food poverty across all measures: head count, depth and severity indices. But between 2010/11 and 2015/16 the decline in urban poverty head count index (by 46%) was much higher than the decline in rural poverty index (by 22%).

On the whole what is important to remark here is that it is encouraging to witness a reduction in food poverty indices in both urban and rural areas in spite of the recent El Niño driven drought that drastically hit many parts of the country. The decline can be explained by the fact that households are becoming vibrant and resilient to economic shocks, maybe as a result of broad based economic growth recorded over recent years and the Government's commitment to pursue pro-active policies in managing economic crisis by redistributing resources and providing emergency food aid in time of drought incidence in any part of the country.

Table 11: Trends of national and rural/urban food poverty

National	1995/96	1999/00	2004/05	2010/11	2015/16	2010/11 over 2004/05	2015/16 over 2010/11
<b>National</b>							
Head count index	49.5	41.9	38.0	33.6	24.8	-11.6	-26.2
Poverty gap index	14.6	10.7	12.0	10.5	6.7	-12.5	-36.6
Poverty severity index	6.0	3.9	4.9	4.6	2.7	-6.1	-41.5
<b>Rural</b>							
Head count index	51.6	41.1	38.5	34.7	27.1	-9.9	-22.0
Poverty gap index	15.2	10.3	12.1	11.1	7.4	-8.3	-33.5
Poverty severity index	6.2	3.8	4.9	5.0	3.0	2	-40.1
<b>Urban</b>							
Head count index	36.5	46.7	35.3	27.9	15.2	-21	-45.6
Poverty gap index	10.7	12.7	11.7	7.3	3.6	-37.6	-50.4
Poverty severity index	4.4	4.7	4.8	2.9	1.4	-39.6	-51.6

Source: HICE survey of 1995/96, 1999/00, 2004/05, 2010/11 and 2015/16

#### 4.6 Status and trend in consumption inequality

The trends in consumption inequality as measured by the Gini Coefficient over the period of 1995/96-2015/16 are reported in Table 12 below. Despite the decline in national poverty across all measures (incidence, depth and severity) as discussed earlier, inequality at national level appeared to increase over the course of time. The Gini Coefficient inequality at national level was about 0.29 in 1995/96 and rose to 0.3 in 2010/11 and further to 0.33 in 2015/16. This may imply that there is relatively less shift of economic gains from higher income households to lower income households in the country. The ever-increasing national inequality over time warrants further attention as rising inequality of this kind may pose a risk of economic growth and could result in the rolling back of development path.

The inequality is even much worse in urban areas as it stood above the national average throughout the HICE surveys from 1995/96 to 2015/16. In 2010/11, the Gini coefficient was 0.37 in urban areas and further increased to 0.38 in 2015/16, while it was respectively 0.27 and 0.28 in rural areas over the same period of time. In fact, the urban inequality reached historically high in 2004/05 with Gini coefficient of 0.44 up from 0.34 in 1995/96, thus the rise in inequality between 2010/11 and 2015/16 is marginal relative to the increase seen from 1995/96 to 2004/05. The lower inequality over the period of 2010/11-2015/16 than during the period of 1995/96 -2004/05 could be attributed to the change in urban development policy in 2005 on which the Government introduced urban focused development activities including urban infrastructural development (road, private and condominium housing construction), promotion of labor intensive activities (use of cobblestone to construct urban roads), promotion of micro and small scale enterprises via the provision of training, credit and business development support, and the distribution of subsidized basic food items to urban poor in times of crisis.

Table 12: Trends national, rural and urban Gini Coefficients

Year	Rural	Urban	Total
1995/96	0.27	0.34	0.29
1999/00	0.26	0.38	0.28
2004/05	0.26	0.44	0.30
2010/11	0.27	0.37	0.30
2015/16	0.28	0.38	0.33

Source: HICE survey of 1995/96, 1999/00, 2004/05, 2010/11 and 2015/16

#### 4.7 Status of regional poverty

Besides the poverty analysis at national level, looking at the status of regional poverty may also provide further insights in an effort to design and implement better equitable development policy across regional states. To this effect, Tables 13 and 14 present the regional distribution and trend of total and food poverty in Ethiopia.

According to the analysis results based on the 2015/16 HICE survey data it seems that regions like Tigray (27%), Benshangul Gumuz (26.5%) and Amhara (26.1%) have experienced poverty head count index above the national average poverty incidence (23.5%), while Harari region (7%), Dire Dawa city administration (15.4%) and Addis Ababa (16.8%) have total poverty head count index much lower than that of the national average. With



regards to food poverty, Tigray (32.9%) followed by Amhara (31.3%), Afar (28.3%) and Benshangul Gumuz (23.7%) have seen higher observed food poverty incidences than other regions of the country. The lowest food poverty is found again in Harari (6.3%) followed by Dire Dawa (12.2%) and Addis Ababa (19.1%).

Compared to total poverty, food poverty is slightly higher than total poverty in all regions just similar to the national poverty measure presented above. But what is interesting is that both absolute total and food poverty have declined over the period 2010/11-2015/16 in all regions except Harari Region where food poverty almost remain unchanged, perhaps owing to the influence of the 2015/16 widespread drought that drastically affected many parts of the country. All said, despite the occurrence of severe economic shocks such as drought and inflation over recent years, a marked regional poverty reduction is recorded across all regional states in the country during the First Growth and Transformation plan (GTP I). This might suggest that the ability of the Ethiopian Government to protect vulnerable section of the society from economic shocks through various means such as Productive Safety Net Program (PSNP), emergency relief aid and increasing resilience that comes from the broad-based economic growth of the country.

Table 13: Trends in regional poverty headcount indices

Region	1999/00			2004/05			2010/11			2015/16		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Tigray	61.6	60.7	61.4	51	36.7	48.5	36.5	13.7	31.8	31.1	14.2	27.0
Afar	68	26.8	56	42.9	27.9	36.6	41.1	23.7	36.1	26.5	10.6	23.6
Amhara	42.9	31.1	41.8	40.4	37.8	40.1	30.7	29.2	30.5	28.8	11.6	26.1
Oromia	40.4	35.9	39.9	37.2	34.6	37	29.3	24.8	28.7	25.3	15.3	23.9
Somale	44.1	26.1	37.9	45.2	35.3	41.9	35.1	23.1	32.8	22.3	22.9	22.4
B.G	55.8	28.9	54	45.8	34.5	44.5	30.1	21.3	28.9	28.7	17.7	26.5
SNNP	51.7	40.2	50.9	38.2	38.3	38.2	30	25.8	29.6	21.9	14.4	20.7
Gamb.	54.6	38.4	50.5	-	-	-	32.5	30.7	32	26.4	16.6	23.0
Harari	14.9	35	25.8	20.6	32.6	27	10.5	11.7	11.1	8.5	6.0	7.1
AA	27.1	36.2	36.1	29.9	32.6	32.5	-	28.1	28.1	-	16.8	16.8
DD	33.2	33.1	33.1	39.8	32.9	35.2	14.2	34.9	28.3	23.3	11.1	15.4
<b>Total</b>	<b>45.4</b>	<b>36.9</b>	<b>44.2</b>	<b>39.3</b>	<b>35.1</b>	<b>38.7</b>	<b>30.4</b>	<b>25.7</b>	<b>29.6</b>	<b>25.6</b>	<b>14.8</b>	<b>23.5</b>

Source: HICE survey of 1995/96, 1999/00, 2004/05, 2010/11 and 2010/11

Table 14: Trends in regional food poverty headcount indices

	National		Rural		Urban	
	2010/11	2015/16	2010/11	2015/16	2010/11	2015/16
Tigray	37	32.9	40.2	37.2	24.9	19.8
Afar	32	28.3	33.9	32.1	28.1	11.7
Amhara	43	31.3	44.6	34.9	28	11.9
Oromia	33	20.5	33.3	21.9	31.7	12.1
Somali	27	25.5	28.9	24.9	17.1	28.8
B.G	35	23.7	36.5	25.1	26.1	17.8
SNNP	26	24.5	25.8	26.1	27.1	15.3
Gambella	26	17.2	24	19.4	30.2	12.7
Harari	5	6.3	4.3	8.8	4.9	4.3
A.A	26	19.1			26.1	19.1
Dire Dawa	22	12.2	13.7	16.6	25.4	9.8

Source: HICE survey of 2010/11 and 2015/16

## 5. Summary and conclusion

Ethiopia has witnessed one of the fastest growing non-oil and non-mineral economies in the world during the recent years. The economic growth has achieved has been higher than the growth achieved by most African countries and overtook Kenya as East Africa's largest economy in 2017 (IMF 2017). The Per capita GDP of the country has more than doubled from USD 396 in 2010/11 to about USD 794 in 2015/16. In an effort to achieve such economic gains, the Government has been implementing a series of poverty-focused development strategies and monitoring the progress in poverty reduction on a continuous basis.

This interim report, therefore, updates the status and trends of national, rural, urban and regional level poverty measures of different forms as well as income inequality of the country. It is continuing work of the previous Household Income Consumption Expenditure Surveys (HICES) conducted by Central Statistical Agency (CSA) of Ethiopia in 1995/96, 1999/00, 2004/05, 2010/11 and 2015/16 that have been used to analyze poverty. The major findings of the interim report are the following:

- The national poverty incidence has declined markedly over recent years, in which the national headcount poverty rate fell from 29.6% in 2010/11 to 23.5% in 2015/16. Over the same period, regional poverty headcount index has also declined across all regional states. This indicates that Ethiopia had been doing well to meet MDGs poverty targets during the GTP I period and beyond.

- The decline in poverty incidence was also experienced in both rural and urban areas. Rural poverty headcount index declined from 30.4% in 2010/11 to 25.6% in 2015/16, while that of urban poverty incidence declined from 25.7% to 14.8% over the same period. Despite the decline of poverty incidence in both rural and urban areas, rural poverty incidence is still almost twice as high as the urban poverty that warrants further attention.
- In terms of less aggregate measure, food poverty declined substantially at national, rural, urban and regional levels over the period of 2010/11-2015/16. National food poverty incidence declined from 36.6% to 24.8%. While the rural food poverty fell from 34.7% in 2010/11 to 27.1% in 2015/16, the urban food poverty declined from 27.9% to 15.2% over the same period. In spite of the recent El Niño driven drought that drastically hit many parts of the country, regional food poverty also declined in all regional states except in Harari which remains almost unchanged.
- Between 2010/11 and 2015/16 about 5.3 million people have been lifted out of poverty. While the total number of population increased from 84 million in 2010/11 to 93 million in 2015/16, the number of poor-population declined from 25.1 million to 21.8 million. This is quite a remarkable achievement as the number of poor population is getting much lower than that of 1995/96 while the population is growing more than 2.5% per annum.
- Income inequality measured by Gini coefficient of consumption expenditure slightly increased from 0.30 to 0.33 at national level. In urban areas, inequality increased marginally from 0.37 to 0.38, while it increased from 0.27 to 0.28 for rural areas.

The sizeable decline in rural and urban poverty indicates that Ethiopia had managed to meet MDG poverty targets. Such achievement in the reduction of poverty could be attributed to the wide-ranging and multi-faceted pro-poor programs that have been implemented in rural and urban areas such as intensification of agriculture, infrastructural development, food security programs, the pro-poor urban development activities (such as development of micro and small scale enterprise and use of cobblestone in urban road construction, housing construction, etc), and the food aid distributed during droughts and the incidence of higher food inflation in urban areas. The on-going efforts undertaken by the government to create favorable environment for private sector investment and job creations, and the distribution of subsidized food items to the urban poor over the last five years has also contributed to the poverty reduction achievement of the country.

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## Appendix

**Table A1: Spatial price index of 2015/16 by reporting levels (national average=100)**

Reporting Level	Food	Non-food
Tigray Rural	1.010	0.783
Mekele	1.146	1.168
Other Tigray Urban	0.999	0.973
Afar Rural	0.927	0.804
Asayta Town	1.065	0.803
Other Afar Urban	1.138	0.989
Amhara Rural	0.895	0.762
Bahir Dar	0.894	1.113
Gonder	0.990	1.184
Dessie	1.031	1.193
Debreberhan	1.002	0.972
Other Amhara Urban	0.985	0.940
Oromia Rural	1.055	0.960
DebreZeite	1.031	1.105
Jimma	0.915	1.134
Adama	1.085	1.113
Nekemte	0.940	0.922
Shasheme	0.971	0.984
Other Oromia Urban	0.936	1.014
Somali Rural	1.184	1.333
Jijjga	1.015	1.162
Other Somali Urban	1.668	0.936
BenshangulGumuz Rural	0.780	0.760
Assosa	0.949	0.866
Other Benshangul Urban	0.902	0.901
SNNP Rural	0.804	0.997
Awassa	1.050	1.028
Hosaena	1.010	0.890
Dila_tow	1.000	0.947
Arba_min	1.032	1.098
Sodo	1.050	0.903
Other SNNP	0.919	0.972
Gambella Rural	0.953	0.750
Gambella	1.057	0.958
Other Gambella Urban	1.003	0.949
Harari Rural	0.859	0.965
Harari Urban	1.009	1.381
Addis Ababa	1.235	1.616
Dire Dawa Rural	0.995	1.020
Dire Dawa Urban	1.054	1.283

Source: HICES 2010/11

**Table A2:Regional level spatial price index in 2015/16 (national average = 100)**

Region	Food	Non food	Total
Tigray	1.02	0.84	0.93
Afar	0.97	0.84	0.91
Amhara	0.91	0.80	0.86
Oromia	1.04	0.97	1.01
Somale	1.24	1.28	1.25
B.B.G	0.81	0.79	0.80
SNNP	0.83	0.99	0.90
Gamb.	0.98	0.82	0.92
Harari	0.94	1.19	1.06
AA	1.24	1.62	1.44
DD	1.03	1.19	1.11

**Table A3:Regional (rural + urban) consumption expenditure in Birr (at 2015/16) national average price)**

Region	Per capita			Per adult		
	Total	Food	Non-food	Total	Food	Non-food
Tigray	11643	4935	6708	14108	5990	8118
Afar	10032	4991	5041	12282	6115	6167
Amhara	10314	4858	5456	12340	5822	6518
Oromia	9908	5180	4728	12022	6299	5723
Somale	8438	5130	3308	10408	6344	4064
B.B.G	11118	5744	5374	13373	6933	6440
SNNP	10074	5655	4418	12204	6865	5339
Gamb.	11592	6302	5290	13854	7564	6290
Harari	17529	8647	8882	21061	10397	10664
AA	13762	5968	7794	16237	7018	9219
DD	14571	6761	7810	17428	8115	9312
<b>Total</b>	<b>10257</b>	<b>5237</b>	<b>5020</b>	<b>12391</b>	<b>6342</b>	<b>6049</b>

Source: HICE survey 2015/16; Number of observation=30255

**Table A4:Regional rural consumption expenditure in Birr (at2015/16 national average price)**

Region	Per capita			Per adult		
	Total	Food	Non-food	Total	Food	Non-food
Tigray	9907	4348	5560	12038	5287	6751
Afar	8741	4429	4311	10820	5478	5342
Amhara	8789	4360	4428	10557	5243	5314
Oromia	9026	4764	4262	11022	5832	5191
Somale	7973	5103	2870	9868	6326	3542
B.B.G	9963	5445	4518	12112	6636	5476
SNNP	9135	5392	3742	11157	6589	4568
Gamb.	9756	5586	4170	11746	6742	5004
Harari	14138	8333	5806	17479	10311	7168
AA						
DD	9243	5012	4231	11393	6176	5216
<b>Total</b>	<b>8992</b>	<b>4807</b>	<b>4186</b>	<b>10946</b>	<b>5862</b>	<b>5084</b>

Source: HICE survey 2015/16; Number of observation=30255

**Table A5:Regional urban consumption expenditure in Birr (at 2015/16 national average price)**

Region	Per capita			Per adult		
	Total	Food	Non-food	Total	Food	Non-food
Tigray	17033	6760	10273	20535	8173	12363
Afar	15655	7438	8217	18644	8884	9759
Amhara	18475	7524	10951	21879	8923	12956
Oromia	15256	7702	7553	18080	9133	8947
Somali	11044	5283	5761	13433	6445	6989
B.B.G	15836	6965	8870	18524	8146	10378
SNNP	15317	7125	8192	18050	8402	9647
Gamb.	15151	7690	7461	17941	9157	8784
Harari	20340	8907	11433	24031	10469	13562
AA	13762	5968	7794	16237	7018	9219
DD	17477	7715	9762	20718	9173	11545
<b>Total</b>	<b>15619</b>	<b>7063</b>	<b>8556</b>	<b>18518</b>	<b>8376</b>	<b>10141</b>

Source: HICE survey 2015/16; Number of observation=30255