

CHILD WELL-BEING IN ETHIOPIA
ANALYSIS OF CHILD POVERTY USING THE HCE/ WMS
2011 DATASETS REPORT



Child Well-Being in Ethiopia

Analysis of Child Poverty

Using the HCE/ WMS 2011 Datasets

Central Statistical Agency Addis Ababa

UNICEF, Addis Ababa, Ethiopia

Oxford Policy Management, United Kingdom

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Oxford Policy Management

This child well being study is part of a capacity building programme for Central Statistical Agency on the basis of Annual Work Plan of UNICEF and CSA of 2007/08 EC. The overall capacity building programme is organized by UNICEF with the technical support of Oxford Policy Management. The funding for the study and the capacity building is also provided by UNICEF Ethiopia Country Office. Capacity building being one of the important aspects of the programme, generating evidence at the same time is also equally important. Thus the study has analysed monetary child poverty level in line with the methodologies used to estimate the national level of poverty. Evidence for monetary poverty on children was not available in Ethiopia previously. In the future as new data on HCE/WMS is available in 2016 or 2017, this study can easily be updated as the CSA capacity has been built in undertaking such kind of analysis. The opinions expressed herein are those of the authors and do not necessarily reflect the views of CSA, UNICEF and OPM.

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Preface

This report is produced with the goal of meeting triple objectives. Firstly, it aims to fill in the information gap in terms of monetary analysis of child poverty in Ethiopia. Even though the report mainly focuses on money metric analysis of child well-being and poverty, it also delves into some non-monetary measures of welfare. Secondly, it aims to build the capacity of CSA with regard to undertaking of such kind of analysis with the objective of capacity's institutionalization in the long-run to do both child and national level monetary poverty analysis within GOE. Thirdly, it creates the space and time to critically look through the existing national survey data sets collected and make the necessary improvements for future survey data to increasing utilization for research and policy.

This report builds on an analysis of survey data from the Household Consumption and Expenditure Survey (HCES) and the Welfare Monitoring Survey (WMS) 2010/11. CSA and UNICEF acknowledges the contributions made by OPM, particularly Associate Professeur Breket Kebede, Dr. Sebastian Silvander, Marta Marzi and Luca Tiberti in the provision of continues trainings and technical support for the successful completion of the project. In the coming few years, as new data is available CSA with support of UNICEF will endeavor to continue the production of a series of analysis on children with minimal external support.

Ethiopia has been one of the fastest growing in Africa in the past ten years with an annual average GDP growth of 10%. For this reason Ethiopia has met many targets both in the national Growth and Transformation Plan I and MDGs goals. For sustaining such successes, it is vital to disaggregate the national level targets and look through to make sure that no one is left behind amidst the rapid economic growth. Especially children should be given great attention in this regard to be able to take corrective actions and policy reforms in a timely approach. Once the right time to take the necessary actions have passed for absence of tracking the appropriate indicators, reversing the damage is almost impossible.

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Executive summary

This report was prepared jointly by the Central Statistical Agency (CSA) of Ethiopia and Oxford Policy Management (OPM), with the support of UNICEF. The report builds on an analysis of survey data from the Household Consumption and Expenditure Survey (HCES) and the Welfare Monitoring Survey (WMS) 2010/11. The objective of this report is to address the evidence gap with respect to child poverty and wellbeing statistics in Ethiopia. In so doing, we have opted for a hands-on participatory approach so as to build the capacity of the CSA to analyse data that they collect. The report mainly focuses on money metric analysis of poverty but also looks at some important non-monetary measures of welfare.

The report was prepared through a series of 3 training workshops in which CSA and UNICEF staff themselves, with support from OPM trainers, constructed the indicators and generated the tables that enter into this report. The report itself was written by CSA staffs and reviewed by the OPM team.

This report has been prepared against the background of rapid economic development in Ethiopia over the past decade, with GDP growth averaging over 10% per year, as well as substantial public investment in the social sectors. These factors have enabled a sizeable decrease in poverty levels over the past decade and rapid progress towards MDG objectives. However, progress on reducing poverty has lagged behind economic growth, suggesting that vulnerable groups, such as children, may not have equally benefited from the development process.

Consumption

The first section of the report looks at the structure of consumption for different groups of the population. The analysis shows that Ethiopian households consumed, on average, 5410 birr (around USD 320 at 2011 exchange rate) per adult equivalent per year on all consumption items. More than half of this (54.6%) went to food consumption. Other large consumption categories included – in decreasing order of importance – fuel, clothes and alcohol/ tobacco.

The disaggregated analysis showed, however, that there were significant differences between households in terms of consumption patterns, depending on socio-economic and cultural factors. Female headed households, for instance, tended to spend significantly more on food, health and education, and housing/ fuel than male headed households, and significantly less on alcohol and tobacco. Similarly, expenditures on alcohol and tobacco, as well as food expenditures appear to be negatively correlated with the education level of the household head. The lowest aggregate levels of consumption were found amongst households classified as “other religions” (non-Christian, non-Muslim) (4335 birr per adult equivalent / year) and very large households (more than 9 household members, 4145 birr). In general, rural households tended to have a significantly lower aggregate level of consumption than urban households.

When looking specifically at the characteristics of children, the first thing to note is that households with children tended to have a lower aggregate level of consumption, even after adjusting for differences in physiological characteristics (4964 birr per adult eq./ year). Households with out-of-school children (7-17 years) and working children under the age of 14 were particularly badly off, with aggregate consumption levels of 4774 and 4403 birr per adult eq./ year, respectively. While there were differences between boys and girls, these were not statistically significant at the 5% level. Households that engaged in child labour and households with out-of-school children also

tended to spend a significantly higher proportion of their income on alcohol and tobacco, and significantly less on health and education.

The disaggregation by region and by area of residence shows that the absolute amount spent on food is more or less constant across households at 3000 birr per adult eq./year (less in rural and more in urban areas), while non-food expenditures are highly variable. In particular, we found that urban households tended to spend significantly more than rural ones on housing/ fuel, and transport/ communication. Richer regions (Tigray, Amhara, Benshangul, SNNP and Harari) also tended to have higher rates of savings and investment. The main source expenditure of rural households is the sale of agricultural products, followed by the consumption of own production, whereas in urban areas, the majority of expenditures are sourced by wage. Next to wage the second source in urban area is sale of non-agricultural products. The major contributor to the average gross calorie intake both in urban or rural areas is cereals. However, urban children tended to consume slightly more oils and fats, as well as getting a larger proportion of their nutritional requirements from catering services. In rural SNNP and Oromia, vegetables contribute a significant amount of calories.

Child Poverty

Our analysis shows that child poverty (less than 3781 birr / adult eq. year) and extreme child poverty (less than 1985 birr / adult eq. year) are significantly higher at 1% statistical significance level, as compared to the national poverty rates. The poverty headcount for children is 32.4%, compared to 29.6% for the whole population, whereas the extreme poverty headcount is 5.2% for children, compared to 4.5% for the entire population. This represents 13 and 2 million children, respectively. The gap and severity of poverty/ extreme poverty are also significantly higher for children than for adults.

The disaggregation by household characteristics shows that the highest poverty rates are found amongst children living in very large households with more than 9 members (47.7%) and children in households categorised as other religions (excluding Christian and Muslim households)(49.3%). The largest poverty gap is found among children living in households headed by people employed in the informal sector, who, on average, fall 1289 birr short of the national poverty line. This means that poor children in these households tend to be significantly worse off than children in other poor households. This is confirmed by the fact that this group also has the highest rate of extreme poverty (13.1%) despite having a slightly lower overall level of poverty (41.5%).

When looking at the characteristics of children, we find no significant differences in the poverty headcount between girls and boys, nor in terms of the schooling or working status of children. The latter result is particularly interesting in light of the earlier finding that out-of-school children and children engaged in child labour tended to have a significantly lower overall level of consumption than other children. This suggests that child labour may, in some cases, be a mitigating strategy that allows households to escape poverty. However, unlike working children, out-of-school children do have significantly higher poverty gap, as well as a higher level of extreme poverty (7.0%) compared to in-school children (3.1%).

Inequality

Contrary to poverty levels, we find that inequality amongst children is slightly lower than inequality at large, with a Gini-coefficient of 0.28 for children, compared to 0.30 for the whole population (significant at 1% level). The largest difference is found in urban areas, where the Gini-coefficient for children is more than 3 point lower than the national Gini-coefficient (0.34 vs. 0.37).

The highest levels of inequality are found in Tigray and Addis Ababa, followed by Benshangul and SNNP. The high levels of inequality may explain, for instance, why Tigray has one of the highest levels of child poverty in the country (37%), in spite of having one of the highest average levels of household consumption in the country, after Harari and Addis Ababa. The lowest level of inequality is found Gambella region, which has a uniformly poor population.

The richest households (top quintile) tend to spend significantly more than other households on unincorporated household expenditures, and significantly less on food and housing, as a proportion of total consumption.

Human Development Profiles

The analysis of human development outcomes by economic characteristics of the household, shows that poor children have significantly worse outcomes than non-poor children in almost all dimensions of wellbeing, and the disadvantage tends to be the largest for the poorest households.

Health

The analysis of health indicators shows that out-of-pocket expenditures for health is around 1% of total household consumption for all consumption quintiles¹. However, health outcomes vary widely between income groups. For instance, a child in the bottom decile is 3.5 times more likely to have an untreated diarrhoea and almost twice as likely to have an untreated malaria, compared to a child in the top decile. The poorest children are also 4 times less likely to have had an assisted delivery at birth.

Nutrition

As expected, we find that the share of food expenditures in the total household budget, decreases with household income. In spite of this, there are significant variations in caloric intake by income level, as children in the poorest decile receive less than half the daily caloric intake of children in the top decile. The Food Consumption Score (FCS) also indicates that poor children tend to have a less varied and less nutritious diet, as 47% of extremely poor children are classified as having a poor or borderline FCS, compared to just 26% among non-poor children. Other food security indicators, such as the months of food shortage, appear to vary more by region than by socio-economic status, suggesting that these may be more influenced by local climatic or geographic conditions.

Education

Out-of-pocket expenditures on education (including uniforms, text books, transport and school contributions) are less than 1% of total household expenditures. This is due to the policy of free universal basic education in Ethiopia. Attendance rates are fairly stable across income groups for both boys and girls, with a Net Attendance Rate (NAR) between 62% and 67% for quintiles 2 to 5. However, extremely poor children have a significantly lower attendance rate at 47%. A child in the top decile is more than twice as likely to complete primary school before 18 as a child in the bottom decile. These inequalities also translate into significant differences in educational outcomes, such as literacy. More than half of all children aged 10-17 in extremely poor households are illiterate, compared to a quarter in the top decile.

¹ It should be noted that the survey was not designed specifically to capture health expenditures, so this may be an under-estimate of actual health expenditures.

Child Protection

Most of the child protection indicators selected here did not show statistically significant variations across income groups. Instead, it appears that cultural factors were more important, as these indicators varied greatly by region. For instance, we found that 4.1% of Ethiopian girls aged 10-17 were married, varying only from 3.8% among extremely poor households to 4.5% in non-poor households. However, in Amhara, 8% of girls aged 10-17 were married, compared to just 1% in Somali region. Similarly, there were no statistically significant differences between income groups in terms of girls exposed to Female Genital Mutilation (FGM), although there were significant regional variations. In Afar, for instance, 57% of the girls had suffered FGM, compared to less than 10% in SNNP, and Gambella. The harmful practice of cutting children's uvula was most prominent in Tigray, where 9 out of every 10 children had a cut uvula, compared to just 11% in Addis Ababa. Overall, 3.6% of Ethiopian children are living without their mother, although there are no significant variations across economic groups.

Water and Sanitation

Expenditures on Water and Sanitation amounted, on average, to 161 birr per adult eq./ year. The share of WatSan expenditures in the total household budget is inversely proportional to total household income. There were no significant differences in access to water across the 4 bottom quintiles, at around 42-44%. In the top quintile, however, 52% of children had access to clean water. Similarly, the proportion of households without access to a toilet, varied only slightly from 34% to 37% across the bottom three quintiles. However, this indicator varied greatly by region and area of residence. In rural areas of Afar, Somali and Dire Dawa, over 80% of children did not have access to a toilet. Distance to water also appeared to vary by geographic region and season, more than by socio-economic status. The highest proportion of children living more than 30 minutes away from a water source could be found in Somali region during the dry season (28%).

Housing and Energy

Expenditures on housing and energy represented, on average, around 12% of total household expenditures for all quintiles. The overwhelming majority of this was composed of expenditures for cooking fuel. A child in the poorest decile was 67% more likely than a child in the richest decile to live in inadequate housing (neither adequate roof, nor adequate walls, nor adequate floor), and almost 3 times more likely to live in a crowded house (more than 4 persons per room). Access to electricity was less than 16% in all quintiles, except the top quintile, where 27% of children had access to electricity. Access to improved cooking fuel was almost non-existent in all quintiles, reaching just 3.5% in the richest quintile.

List of abbreviations

CBN	Cost of Basic Needs
CPI	Consumer Price Index
CSA	Central Statistical Agency
EA	Enumeration Areas
FCS	Food Consumption Score
GPI	Gender Parity Index
GTP	Growth and Transformation Plan
HCES	Household Consumption and Expenditure Survey
MDGs	Millennium Development Goals
MOFED	Ministry of Finance and Economic Development
NAR	Net Attendance Rate
OPM	Oxford Policy Management
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
SDGs	Sustainable Development Goals
SDPRP	Sustainable Development and Poverty Reduction Program
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation and Hygiene
WMS	Welfare Monitoring Survey

1 Introduction

Over the past decade, Ethiopia has experienced one of the fastest rates of economic growth in Africa, and indeed in the world, with GDP growth averaging over 10% per year over the period 2005-2014 (World Bank, WDI). Importantly, part of this growth has been redistributed through public spending on social sectors, which represented 65% of total public spending in 2012/2013². These investments have contributed to the remarkable progress made on key Millennium Development Goals (MDG) indicators, such as under 5 mortality rate, which decreased from 166 to 88 deaths per 1,000 live births between 2005 and 2011³.

The government of Ethiopia together with development partners has put poverty reduction strategies high on the agenda, in order to achieve broad-based and sustained economic growth. With firm dedication to sustain current levels of economic growth, the government of Ethiopia has embarked on the third poverty reduction strategic plan, which is referred to as the Growth and Transformation Plan (GTP) for the period 2010/11-2014/15 and GTP supersedes the first (Sustainable Development and Poverty Reduction Program, SDPRP) and the second (A Plan for Accelerated and Sustained Development to End Poverty, PASDEP) poverty reduction strategic plans. In line with this, GTP carries forward important strategic directions and aims at a minimum to achieve the Millennium Development Goals (MDGs). Moreover, the current Household Consumption and Expenditure Survey (HCES) and Welfare Monitoring Survey (WMS) surveys are used to evaluate the achievements and challenges observed during the PASDEP time frame and these surveys are used as a baseline for Monitoring and Evaluation (M&E) of the GTP, which is currently being implemented.

As a result of these efforts, national poverty rates have seen a significant decrease over the past decade, decreasing from 38.9% in 2003 to 29.6% in 2011 (MOFED, 2012). However, the decrease in poverty over the past few years has not matched the rate of economic growth, suggesting that economic growth has partly failed to benefit the most vulnerable sectors of society. Furthermore, despite heavy investments in the Productive Safety Nets Programme (PSNP), food poverty (i.e. the proportion of people spending less on food than the minimum required to meet nutritional requirements) has remained high at 32.7%, and has even deteriorated in rural areas due to poor performance of the agricultural sector.

Children and young people (under 18 years) constitute over half of the Ethiopian population and have distinct developmental needs and experiences of poverty. Children born into poverty are more likely to become impoverished adults and in turn pass on their poverty status to their children. Tackling childhood poverty can break long-term cycles of poverty both life-course poverty and the intergenerational transmission of poverty. In order to tackle poverty in a holistic and child-sensitive manner, it is important to consider the potentially differential impact of economic growth and poverty reduction policies on adults and children, males and females. Yet, very little evidence exists on how monetary poverty is affecting Ethiopian children. The last national child poverty report was published in 2006, using data from 2004/5 (Adem, 2006).

The objective of this report is to address this gap in the evidence base needed to develop policies that address child poverty and its effects on various dimensions of children's wellbeing. In so doing, we have sought to strengthen the capacity of the Central Statistical Agency (CSA) to produce poverty statistics for children using the HCES data that are collected by the agency. This

² MOFED (2014). Growth and Transformation Plan Annual Progress Report for F.Y. 2012/13, Addis Ababa, Ethiopia.

³ EDHS (2012). Ethiopia Demographic and Health Survey 2011, Central Statistical Agency, Addis Ababa, Ethiopia. ICF International Calverton, Maryland, USA.

report has been produced by the CSA of Ethiopia, and Oxford Policy Management (OPM) with the support of UNICEF Ethiopia.

2 Consumption

This section looks at consumption patterns across different types of households in Ethiopia. Consumption patterns tell us about households' preferences and needs and can therefore provide important insights into the mechanisms through which children's wellbeing is affected. In this section, we will disaggregate consumption data by selected population groups, which are of demographic interest, or which are at higher risk of being vulnerable to the effects of poverty.

According to the populations projections based on the most recent Census (2007), there were more than 40 million children in Ethiopia at the time when the HCE survey was conducted (2010/11). The overwhelming majority of these (87%) lived in rural areas. The largest religions in Ethiopia are Orthodox Christianity (44% of all children) and Islam (30%).

One group of children that is thought to be particularly vulnerable are orphans. While the HCE does not specifically identify orphans, it shows that an estimated 104,068 children (0.3% of all children) lived in child headed households. The total number of children living without their mothers was estimated to more than 1.4 million, according to the HCE, which represents 3.6% of all children (see Table 13).

In addition, the HCE data shows that 17% of all children lived in female headed households, and 13% lived in single parent households (unmarried, divorced or widowed). Other vulnerable groups include children living in households with low education and/or insecure income. The HCE data shows that more than half (57%) of all children lived in households headed by an illiterate person, while close to 87% of all children lived in household headed by a person reporting to be "self-employed" (see Table 1).

Finally, the HCE shows that close to 8% of all households had at least one child under the age of 14 engaged in productive work, while one quarter of all households had one or more school aged children who were out of school (see Table 2).

Table 1 Disaggregation criteria, household

Disaggregation criterion	Category	Mean	Standard Error	95% confidence interval
Area of residence	Urban	13.15	1.97	9.27 - 17.02
	Rural	86.85	1.97	82.98 - 90.73
Gender of head	Male	82.83	0.72	81.41 - 84.25
	Female	17.17	0.72	15.75 - 18.59
Age of head	Adult	87.92	0.29	87.34 - 88.50
	Elderly	11.82	0.29	11.25 - 12.40
	Child	0.26	0.05	0.17 - 0.35
Education of head	Incomplete primary/ no education	57.12	1.06	55.03 - 59.21
	Literacy campaigns/	4.13	0.66	2.82 - 5.43

Disaggregation criterion	Category	Mean	Standard Error	95% confidence interval	
	informal education	26.43	1.01	24.45	28.42
	Complete primary				
	Complete secondary				
	Completed higher	2.72	0.34	2.04	3.39
Livelihood	Highland	13.40	1.39	10.66	16.14
	Moderate	51.86	3.60	44.79	58.92
	Lowland	21.10	2.07	17.04	25.16
	Urban	13.64	1.98	9.76	17.52
HH size	<5	20.21	0.71	18.81	21.61
	5-9	72.94	0.66	71.65	74.23
	>9	6.85	0.56	5.74	7.96
Religion of head	Orthodox	44.36	2.71	39.04	49.68
	Other Christ.	22.54	2.62	17.39	27.68
	Muslim	30.22	2.01	26.27	34.17
	Other	2.88	0.65	1.60	4.16
Current Marital Status of head	Married/ cohab	86.62	0.65	85.34	87.91
	Never Married	1.82	0.13	1.57	2.08
	Divorced / sep	4.01	0.39	3.24	4.77
	Widow	7.55	0.33	6.90	8.20
Employment of head	Self-employed	86.96	1.03	84.93	88.99
	Employer	1.72	0.19	1.35	2.09
	Employed (private)	1.91	0.20	1.51	2.31
	Employed (public)	3.25	0.45	2.37	4.12
	Employed (other)	0.74	0.11	0.52	0.96
	Unpaid / other	5.42	0.46	4.52	6.31

Table 2 Disaggregation criteria, children

Disaggregation criterion	Category	Mean	Standard Error	95% confidence interval
Age	All <5	45.19	1.06	43.11 - 47.26
	All >14	15.43	0.52	14.40 - 16.46
	Mixed	39.38	1.04	37.33 - 41.43
Gender	Boys only	7.32	0.44	6.45 - 8.18
	Girls only	7.09	0.36	6.39 - 7.79
	Mixed	85.60	0.65	84.32 - 86.88
Working	No one <15 working	49.04	1.44	46.20 - 51.87
	At least one <15 working	7.66	0.43	6.82 - 8.49
	N/A (no child <14)	43.30	1.07	41.21 - 45.40
Attending school	All children 7-17 attending	56.84	1.90	53.11 - 60.56
	At least one 7-17 out of school	24.91	1.46	22.03 - 27.78
	N/A (no child >6)	18.26	0.59	17.11 - 19.41

2.1 Composition of Consumption

The composition of consumption at the household level by household type and the composition of consumption for households with children aged 0-17 years by characteristics of the child, are given in Table 4 respectively. Ethiopian households consumed, on the average, 5410 birr per adult equivalent for all items annually. The largest consumption posts for Ethiopian households were food (representing, on average, 54.60% of total household consumption), housing fuel (20.50%), clothes (5.70%), and alcohol/tobacco (3.60%). Health and education expenditures represented only 1.40% of total household consumption, while communication and transport accounted for 2.70%, and 6.70% of consumption was classified as “other”. Savings and investment expenditures represented 4.80% of total household expenditure.

Urban households spent, on average, 8261 birr per adult equivalent for all items annually, compared to 4844 birr for rural households. On the other hand, rural households spent a

significantly greater share on food (55.8% vs. 48.6%). As Table 3 indicates, all the consumption estimates for rural areas are statistically different from urban areas at either 5% or 1%.

Female headed households had a slightly higher overall consumption level in adult equivalent terms than male headed household (5803 birr per adult/year vs. 5325 birr per adult/year). Female headed households also spent more on food, health / education and housing than male headed households, but significantly less on alcohol and tobacco (1.8% of total vs. 4% of total). Female headed households also spent less on clothes (5.4% vs. 5.7%) and investment (3.6% vs. 5.1%) than male headed households. These results are statistically significant.

Surprisingly, we also find that child headed households also have a higher-than-average total consumption level (7254 birr per adult equivalent per year). The detailed analysis of sources of expenditures suggests that this may partly be due to the effect of remittances from extended family and charities, which partly compensate for the shortfall in income experienced by these households (see Figure 3 below).

In general, the amount of household consumption increases with the level of education of the head of household. However, the effect of education on household consumption is most marked above the primary level. On average, a household whose head has reached the tertiary level, consumes more than twice as much per adult/year as a household with an illiterate head.

All religious groups apart from Christians and Muslims had a significantly lower average total household consumption than Christian Orthodox households. Muslim and households with other religions also spent significantly less than Orthodox households on education and significantly more on alcohol and tobacco.

According to Table 3, marital status of the household head also had an effect on consumption patterns of the household: Never married household heads had significantly higher consumption levels than average (9753 birr per adult / year).

The other significant consumption difference is observed due to the employment status of the household head. Households headed by employed heads tended to spend proportionally almost twice as much on health and education compared to self-employed heads and employers.

Table 3 Composition of consumption at household level (Total birr per year per adult equivalent and percent), by household type

Disaggregation criterion	Category	N (obs.)	All items (birr/yr.)	Food (%)	Alcohol/ tobacco (%)	Health/ Educ (%)	Clothes (%)	Housing/ Fuel	Transport/ Com (%)	Saving/ Investment(%)	Other (%)
None	All households	27829	5410	54.6	3.6	1.4	5.7	20.5	2.7	4.8	6.7
Area of residence	Urban	17509	8260	48.6	1.8	2.5	6	22.4	6.8	3.2	8.9
	Rural	10320	4843***	55.8***	4***	1.2**	5.6*	20.1***	1.9**	5.2**	6.2**
Gender of head	Male	19073	5324	54.4	4	1.3	5.7	19.9	2.7	5.1	6.8
	Female	8756	5803***	55.5***	1.8**	1.5*	5.4**	23.2***	2.7	3.6**	6.2**
Age of head	Adult	23218	5465	54.2	3.8	1.4	5.7	20.6	2.7	4.9	6.8
	Elderly	4426	5107***	56.5***	3***	1.4	5.7	19.8**	2.7	4.7	6.1**
	Child	185	7254***	50.4**	1.6**	1.2	7.7**	29.5***	3.3	1***	5.3**
Education of head	Incomplete primary/ no education	11830	4742	56.2	4	1.2	5.4	20.5	1.9	4.9	5.9
	Literacy campaigns/ informal education	749	5225***	54.5*	3.9	1.1	5.7	17.5***	2.5**	6.8**	8***
	Complete primary	5764	5379***	53.6***	3.8	1.3	5.9**	21	2.7**	5	6.7**
	Complete secondary	5983	7307***	51.2***	2.2**	2***	6.1**	21.1	5.1**	4.4*	7.9**
	Completed higher	3503	11016**	44.7***	1.5**	3.2**	7***	19.3**	9.1**	1.4**	13.8***
Livelihood	Highland	1988	4877	56.9	2.4	1	6.1	18.4	2.2	5.5	7.5
	Moderate	4211	4816	56	3.6**	1.1	5.5**	20.3**	1.8	5.5	6.1**
	Lowland	4119	4905	54.3**	6.2**	1.3*	5.6	20.8***	1.9	4.1**	5.7**
	Urban	17511	8152***	48.9***	1.8*	2.4**	6	22.3***	6.7**	3.2**	8.7**
HH size	<5	16008	7239	53.5	3.1	1.3	5	23	3	4.2	6.9
	5-9	11155	4727***	55**	3.8**	1.4	5.9**	19.7***	2.5**	5.1**	6.7
	>9	666	4144***	55.3*	4.5*	1.3	7.1**	17.7***	3.1	5.1	5.8**
Religion of head	Orthodox	14840	5822	54.6	3.3	1.4	5.5	19.1	2.9	5.5	7.8
	Other Christ.	4504	5040***	55.1	1.9**	1.6	5.7	23**	2.5*	3.5**	6.7**
	Muslim	8176	5113***	53.7	5.3**	1.1*	6**	21.1***	2.7	4.9	5.1**

Disaggregation criterion	Category	N (obs.)	All items (birr/yr.)	Food (%)	Alcohol/ tobacco (%)	Health/ Educ (%)	Clothes (%)	Housing/ Fuel	Transport/ Com (%)	Saving/ Investment(%)	Other (%)
	Other	309	4335***	60.9***	6.2**	1***	4.8	18.1	1.2**	3***	4.7**
Current Marital Status of head	Married/ cohab	17922	5220	54.7	3.9	1.3	5.7	20.1	2.6	5	6.7
	Never Married	3346	9753***	48.8***	2.9*	1.8*	6.5**	23.5***	5.1**	3.1**	8.4**
	Divorced / sep	2791	6315***	53.9	2.6**	1.4	5***	23.7***	2.8	3.8**	6.8
	Widow	3764	5249	55.9***	2.3**	1.6**	5.4*	21.6***	2.9	3.9**	6.3*
Employment of head	Self-employed	16062	5106	55.1	4	1.2	5.6	20.2	2.2	5.2	6.4
	Employer	259	6580***	49**	2.9*	1.3	5.9	20	3.9**	8.6**	8.4**
	Employed (private)	2546	7286***	49**	1.7**	2.5**	5.7	25.6***	6.4**	1.6**	7.6**
	Employed (public)	3776	9372***	47**	1.8**	2.6**	6.8**	20	7.2**	1.3**	13.3***
	Employed (other)	718	6632***	51.7**	1.7**	2.2**	6.4	23.2***	6.3**	1.4**	7.1
	Unpaid / other	213	4925	60.2**	2.1**	.6**	6.3	19.1	1.8	3.4*	6.6

Source: Author's computation based on data from the HCES (2010/11)

Note: statistical significance: *=10%; **=5%; ***=1% (first category is base category)

NB: Education expenditures include only direct costs, such as fees. They do not include, school uniforms, school bags, text books, etc. Housing expenditures include furniture/decoration, as well as maintenance / repairs.

The composition of consumption for households with children aged 0-17 years is not the same as that of households without children. There are many factors that can influence the consumption patterns of a household with children. As we have observed above in Table 3, there are variations among households concerning consumption composition. Some spent more for alcohol/ tobacco, some for clothes and some others for housing fuel. Table 4 shows significant variations between households, based on factors, such as children's' age, gender, labour, and school attendance.

There were a total of 56,289 children in households with children aged 0-17 years which were covered under HCE and WM surveys (2010/11). Based on Table 4, average consumption was 4964 birr per adult equivalent for all items in the household, 55.1% for food, 20.3% for housing fuel, 5.2% for clothes, 4.9% for investment, 3.7% for alcohol/tobacco, 1.3% for health/education, 2.4% for communication/transport, and 6.5% for other items.

Households with small children (all aged under 5) tended to spend more on alcohol and tobacco and less on health, education and clothes, compared to households with older children. Similarly,

households with only girls tended to spend slightly less on alcohol/ tobacco compared to households with only boys.

Households with children under 14 that engaged in child labour tended to have a significantly lower overall consumption level. These households also tended to spend a significantly greater proportion of their income on alcohol/ tobacco and less on health / education, compared to similar household that did not engage in child labour, pointing to possible additional factors of risk or disadvantage for these children. Similar patterns were observed for households where at least one school-aged child (6-17) was out of school.

Table 4 Composition of consumption for households with children aged 0-17 years (Total birr per adult equivalent per year and percent), by characteristics of children

Disaggregation criterion	category	N (obs.)	All items (birr)	Food (%)	Alcohol/ tobacco (%)	Health/ Educ (%)	Clothes (%)	Housing/ Fuel (%)	Transport/ Comm. (%)	Saving/ Investment	Other (%)
None	All children	56289	4963	55.10	3.70	1.30	5.70	20.30	2.40	4.90	6.5
Age	All <5	24205	5112	55.2	4.1	1.3	5.2	20.9	2.1	5.1	6.2
	All >14	11796	4906*	54.2*	3.2**	1.5	6.6**	19.9*	3***	4.5**	7.1*
	Mixed	20288	4791*	55.6	3.5**	1.3	5.9**	19.7*	2.5**	4.8	6.7*
Gender	Boys only	7785	5800	54.2	3.9	1.2	5.3	21.8	2.5	4.6	6.6
	Girls only	8472	6085*	54	3.1**	1.3*	5.4	21.9	2.8*	4.3	7.1*
	Mixed	40032	4651*	55.5*	3.8	1.4**	5.8**	19.8*	2.3**	5	6.5
Working	No one <15 working	26427	4725	55.8	3.3	1.4	6	19.6	2.7	4.5	6.6
	At least one <15 working	2583	4403*	54.9	4.3**	1.1**	5.9	20	1.5**	5.9**	6.4
	N/A (no child <14)	27279	5240*	54.6*	3.9**	1.3**	5.4**	20.9*	2.3**	5.1*	6.5
Attending school	All children 7-17 attending	26446	5452	54.2	2.9	1.5	5.7	20.4	2.9	4.9	7.3
	At least one 7-17 out of school	6513	4774*	56***	4.2**	1.2**	5.4	20.9	2***	4.4	5.9*
	N/A (no child >6)	6382	6327*	54	3.9**	1.3*	4.8**	22.8*	2.6*	4.6	6.1*

Source: Author's computation based on data from the HCES (2010/11)

Note: statistical significance: *=10%; **=5%; ***=1% (first category is base category)

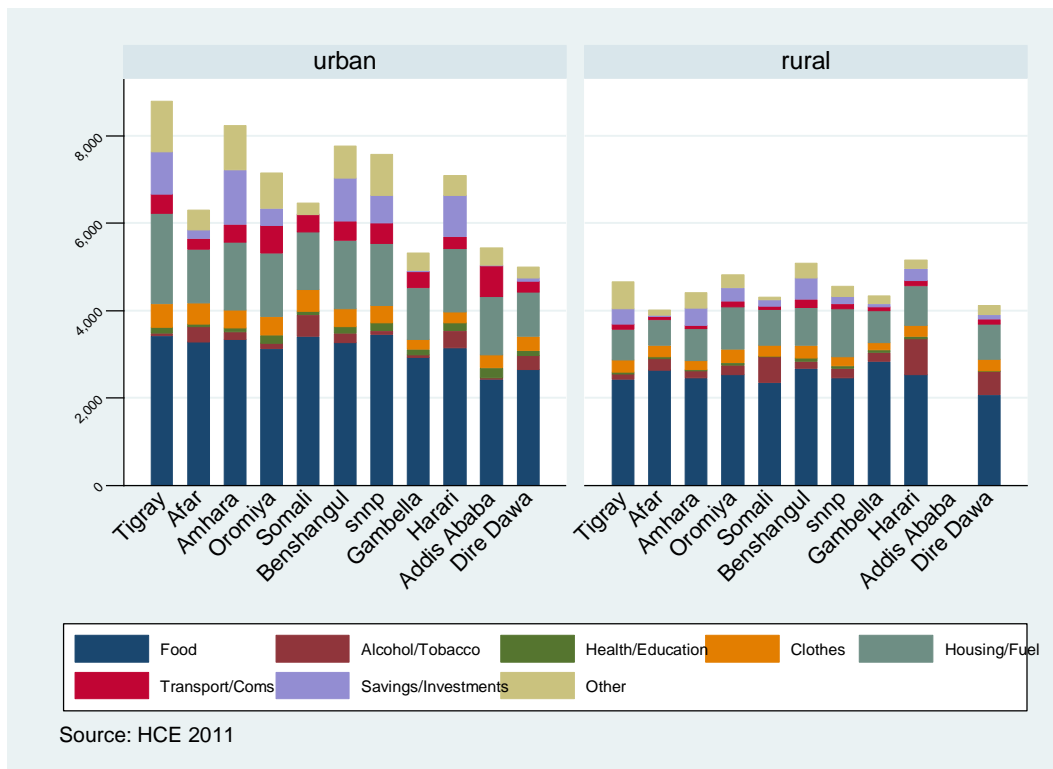
NB: Education expenditures include only direct costs, such as fees. They do not include, school uniforms, school bags, text books, etc. Housing expenditures include furniture/decoration, as well as maintenance/repairs.

Figure 1 shows the average consumption for children aged 0-17 years in Birr per adult equivalent by area of residence for all regions. In all regions, we see a great proportion of expenditure spent on basic needs such as food. Food allocation is actually fairly stable across regions and across areas of residence. According to Figure 1, housing fuel is the second highest expenditure category.

Only urban Tigray and Amhara have average consumption levels in excess of 8,000 birr per adult equivalent/ year. The lowest consumption levels are observed in rural Afar, Dire Dawa, Gambella and Somali regions (around 4,000 birr per adult equivalent/ year).

As we see from Figure 1, the regions with the lowest average consumption levels, also tended to be the ones with the smallest share of savings/ investments. This may both be a consequence of poverty, as there are smaller surpluses to invest, and an aggravating factor, as it hampers productive investments and consumption smoothing in the event of adverse shocks.

Figure 1 Types of expenditure, by region and area of residence (children aged 0-17)



2.2 Sources of Expenditure

While most of the expenditure will be sourced by the primary occupation of the household head and members, there are additional sources of income (cash or kind) that can contribute as well.

This section explores the incidence of all sources of expenditure and the depth of their use in different regions.

Figure 2 indicates the proportion of expenditure sourced from different means for households with children aged 0-17. The main source expenditure of rural households is sale of agricultural products and followed by the consumption of own production, whereas in urban areas majority of expenditure are sourced by wage. Next to wage the second source in urban area is sale of non-agricultural products.

Own-consumption is more prevalent in rural than in urban areas and is particularly important in Oromia and SNNP.

Figure 2: Sources of expenditure, by region and area of residence (for households with children aged 0-17)

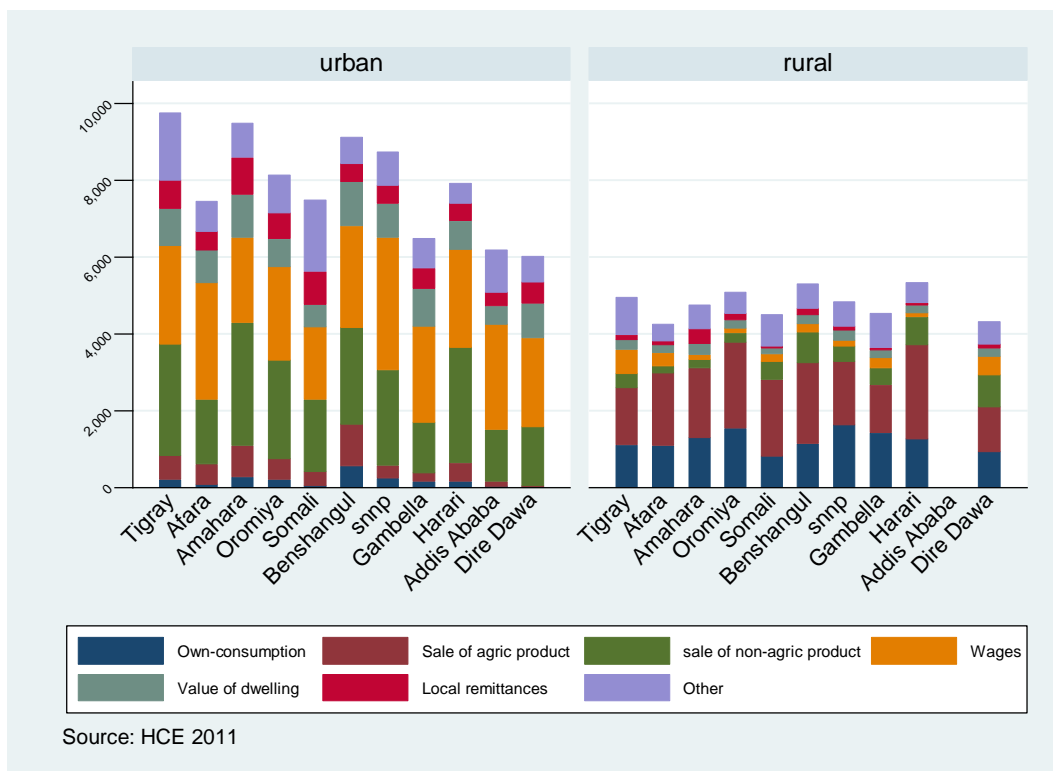
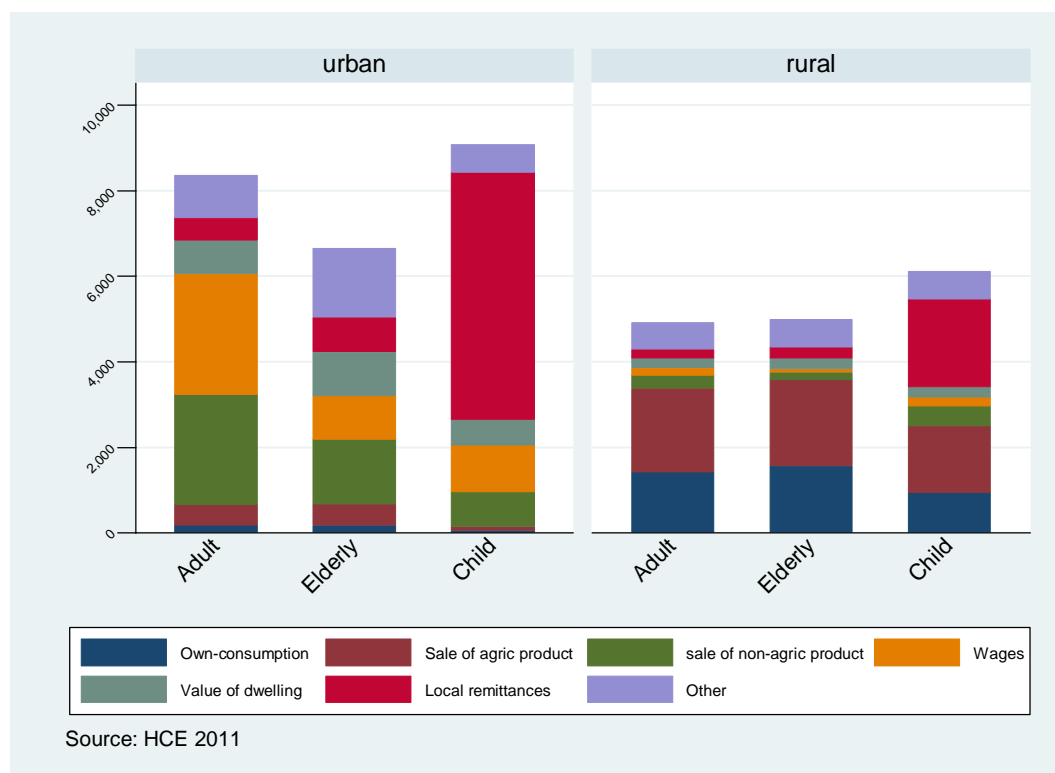


Figure 3 shows the sources of expenditures by the age of the head of household in urban and rural areas. It shows that while child-headed households have a higher overall level of consumption, in adult equivalent terms, this is due to the very large amounts of assistance they get from local family members and charities (local remittances). Local remittances are particularly important in urban areas, where other sources of income are unavailable for children. We will analyse this in more detail in section 3 below.

Figure 3: The source of expenditure by household head and residence area



2.3 Sources of Calories

Food consumption behaviour in Ethiopia is complex. Regional consumption patterns differ considerably with no single staple dominating item. Instead, four different cereals (teff, wheat, maize and sorghum) are major staple foods in many parts of the country and even within most regions, two or more food staples account for relatively large shares of total calories and food expenditures.

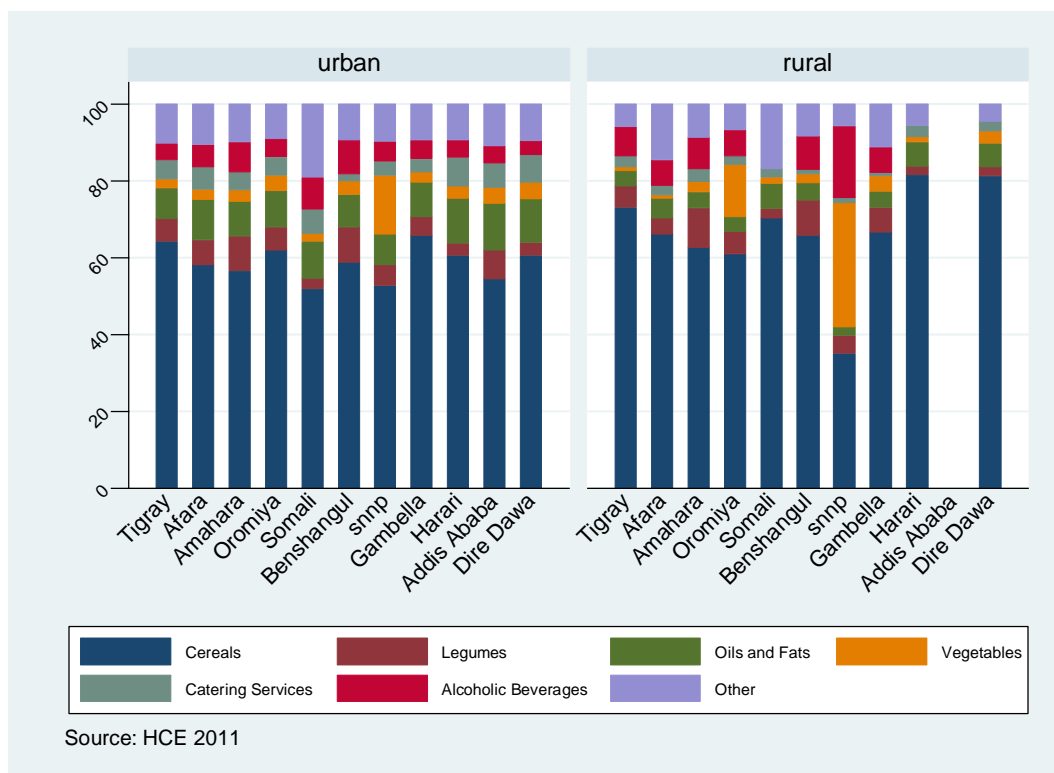
This section deals the calorie intake in the patterns of food consumption across regions and residence for households with children aged 0-17. From Figure 4, we can see that the major contributor for the average gross calorie intake both in urban or rural areas is cereals. The other food groups which are contributing to calorie intake consumption are vegetables, alcoholic beverage, fats and oil. The remaining share of calories is taken by food groups like legumes and catering services.

Figure 4 displays the allocation of selected food groups for urban and rural children. The contribution of different food groups to the calorie intake of children aged 0-17 in urban and rural areas is similar. However, there are a couple of notable differences. For example, although cereals make up the majority of calories for both urban and rural children, it is smaller in urban than

rural areas. The proportion of foods such as vegetables and cereals is expected to be higher in rural areas where the vast majority of the population is engaged in agriculture.

In rural SNNP and Oromia, vegetables contribute a significant amount of calories. In addition, alcoholic beverages are also an important source of calorie intake in rural SNNP. This is due to the particular dietary habits of that region, which include root crops and low level alcoholic porridge. In all regions, oils and fats are a more prominent source of calories intake in urban areas than in rural areas.

Figure 4: Source of net caloric intake per adult equivalent, by area of residence (children aged 0-17)



3 Child Poverty

Alleviating and if possible eradicating poverty is one of the main objectives of the millennium development goals (MDGs) and upcoming Sustainable Development Goals (SDGs). In this section, we review the child poverty and extreme child poverty rates for various subgroups of the Ethiopian population using the HCE 2010/11 datasets.

Our analysis focuses on the prevalence, depth and severity of poverty. For this, we use three separate indicators, namely the poverty headcount ratio, the poverty gap ratio, and the severity of poverty indicator. The poverty headcount ratio is defined as the share of the population whose income or consumption expenditure falls below the poverty line; that is, the share of the population that cannot afford to buy a basic basket of goods and services. In other words, it measures the proportion of people whose total consumption is insufficient to meet basic nutritional and other basic needs. The poverty gap ratio measures the mean aggregate income or consumption-expenditure shortfall relative to the poverty line among poor households. In other words, it looks at how far below the poverty line the average poor person is. This gives us an idea, not only of the prevalence of poverty, but of the intensity or depth of the deprivation experienced by those classified as poor. The severity of poverty measure, finally, looks not only the distance separating the average poor from the poverty line, but also at the distribution of poverty amongst the poor. The severity of poverty measure, therefore, may worsen if inequality increases among poor people, even if it means that the “average” poor is better off.

Each of these indicators will be assessed against two separate poverty lines, namely an extreme poverty line and a standard or national poverty line. In the Ethiopian context, the extreme poverty line is set at Birr 1985 per adult eq./ year, which corresponds to the resources required for an adult to meet the minimum nutritional requirements of 2200 kcal /day using a standard food basket. The national poverty line is 3781 and includes an estimate of expenditures required for essential non-food items, such as clothes, medicines, etc.

Note that although the extreme poverty line used here is the same as the one used to compute the food poverty rate in official statistics, the two rates are not equivalent. This is due to the fact that our extreme poverty rate is computed using total household consumption (i.e. including both food and non-food consumption), whereas the official food poverty rate is computed only on the basis of food consumption compared against the food poverty line of 1985 birr per adult eq./ year. To avoid confusion between the two indicators, we will consistently use the term extreme poverty in this report to indicate that we are comparing the food poverty line against total household consumption, whereas the term “food poverty” will be used to indicate that the same poverty line is compared to food consumption. The national poverty rate is computed in the same manner as in official statistics. National Poverty estimates

Table 5 below shows the national poverty headcount ratio, poverty gap ratio and severity of poverty measure for children and for the total population. According to the HCE 2010/11, 29.59% of the total population are living under poverty, while 32.42% of children are living in poverty, based on the calculation from the same survey. This represents more than 13 million children in total (see Table 7 below). The poverty level of children is statistically higher with 1% significance than the total population poverty. The poverty gap ratio and poverty severity measure are also higher for children with 1% statistical significance. It shows that children are more affected by poverty as compare to the total population.

Table 5: Poverty Indicators

	Children	Total Population
Headcount ratio (%)	32.42 ***	29.59
Poverty Gap ratio (%)	8.71 ***	7.84
Poverty Severity Measure	3.47 ***	3.09

Source: Author's computation based on data form the HCES (2010/11)
Note: statistical significance: *=10%; **=5%; ***=1% (total population is base category)

The analysis shows that 4.53% of the total population are living in extreme poverty, while 5.16% of children are living in extreme poverty, based on the calculation from HCE 2010/11 (see Table 6 below). This represents more than 2 million children in total (see Table 7 below).The extreme poverty level of the household with children is statistically higher with 1% significance as compared to the total population extreme poverty.

The extreme poverty gap ratio and extreme poverty severity measure are also higher among children with 1% statistical significance. In other words, children are more affected by extreme poverty than the adult population.

Table 6: Extreme Poverty Indicators

	Children	Total Population
Extreme Poverty Headcount ratio (%)	5.16 ***	4.53
Extreme Poverty Gap ratio (%)	1.04 ***	0.89
Extreme Poverty Severity Measure	0.34 ***	0.29

Source: Author's computation based on data form the HCES 2010/11
Note: statistical significance: *=10%; **=5%; ***=1% (total population is base category)

Table 7 shows the poverty and extreme poverty of children by household characteristics. Child poverty is higher in rural area (32.85%) than urban areas (29.57%) with 5% statistical significance. When it comes to the extreme poverty, the difference between the rural area and urban area is not significant; 4.9% in urban area and 5.2% in rural area.

Gender of the household head does not seem to be significantly affecting the poverty and extreme poverty level.

Poverty rate of child headed household (16.65%) is lower as compared to the adult headed household (32.28%) or elderly headed household (33.84%) with 5% statistical significance, although this is based on a limited number of observations (185)⁴.This is consistent with the finding reported in section 2.1 above, which showed that child headed households tended to have a higher overall consumption level than adult headed households. It should be noted, however, that these

⁴ Based on the sampling weights, we estimate that this represents approximately 60,249 households across the whole country (approximately 0.3% of all households), containing a total of 104,068 children

results are based on a limited number of observations since the sample only contains 185 child headed households. Furthermore, it is important to note that the per-capita consumption levels (i.e. before adult equivalent adjustment) remain lower among child headed households, meaning that children in these households still have a lower nominal consumption level than people living in adult headed households.

Education of the household head is strongly correlated with child poverty and extreme child poverty: the higher the education level of the household head, the lower the poverty level of children. Children in the household headed by someone without education and illiterate has the highest risk of falling into poverty (37.03%), while only 6.48% of children are poor in households headed by someone with higher education.

In terms of living area, the differences in poverty rates are not statistically significant. However, poor children living in the lowland areas tend to be significantly poorer than those in other areas, with a consumption shortfall of 1124 birr/ adult equivalent-year compared to 944 birr/ adult equivalent- year in the highlands. Furthermore, the extreme poverty rate is significantly higher in the lowlands (7.79%) compared to the highlands).

Household size seem to considerably contributing to the poverty level. The smaller the household size (<5), the lower the poverty and extreme poverty rate. 15.69% of household with less than 5 members experience poverty while 35.62% of household with 5-9 members, and 47.71% of household with more than 9 members living under poverty line. Households with more than 9 members have the highest extreme poverty rate 9.96% followed by household with 5-9 members (5.92%). These figures are significantly higher, at 1% significance, compared to the extreme poverty rate in household with less than 5 members, which is 0.82%.

The poverty rate for children in never married household are low (21.27%). Never married household heads tend to have a relatively high education level (secondary or more), and this could be one of the reasons.

Finally, children in households headed by employers and people employed in the public sector, experience much less poverty (15.13% and 15.16% respectively) with 1% statistical significance, compared to self-employed households (33.01%). With regard to extreme poverty, children in households headed by public sector employees have the lowest rates at 0.73%, compared to 13% among other employees (informal sector or domestic work).

Table 7 Poverty and extreme poverty (Children aged 0-17), by household characteristics⁵

Disaggregation criterion	category	N (obs.)	Poverty			Extreme Poverty		
			#	%	\$	#	%	\$
None	All Households	27,830	13,032,080	32.42	1,016.32	2,075,987	5.16	400.39
Area of residence	Urban	17,509	1,562,698	29.57	1,039.55	259,181	4.9	427.46
	Rural	10,320	11,469,382	32.85**	1,013.15	1,816,806	5.2	396.53
Gender of head	Male	19,073	10,865,061	32.64	1,015.72	1,728,673	5.19	382.56
	Female	8,756	2,167,019	31.38	1,019.32	347,314	5.03	489.13**
Age of head	Adult	23,218	11,405,598	32.28	1,012.82	1,844,848	5.22	400.02
	Elderly	4,426	1,609,159	33.84	1,041.78	227,604	4.79	406.74
	Child	185	17,324	16.65**	953.53	3,535	3.4	186.64***
Education of head	Incomplete primary/ no education	11,830	8,502,419	37.03	1,057.26	1,421,031	6.19	419.49
	Literacy campaigns/ informal education	749	465,163	28.07***	850.36***	42,057	2.54***	304.31
	Completed primary	5,764	3,103,975	29.21***	976.62**	514,707	4.84**	370.2
	Completed secondary	5,983	889,822	23.05***	872.21**	93,116	2.41***	325.35
	Completed higher	3,503	70,700	6.48***	740.69***	5,075	.47***	287.5***
Livelihood	Highland	1,988	1,785,279	33.15	943.73	190,075	3.53	410.56
	Moderate	4,211	6,403,966	30.71	978.25	958,983	4.6	366.26
	Lowland	4,119	3,221,825	38.01	1,124.19***	660,197	7.79***	437.96
	Urban	17,511	1,621,010	29.57	1,032.25*	266,733	4.87	422.88
HH size	<5	16,008	1,274,262	15.69	741.85	66,236	0.82	386.17
	5-9	11,155	10,444,390	35.62***	1,032.36***	1,735,584	5.92***	394.59
	>9	666	1,313,428	47.71***	1,155.02***	274,167	9.96***	440.56
Religion of Head	Orthodox	14,840	5,267,615	29.54	977.9	688,093	3.86	353.81
	Other Christ.	4,504	3,047,109	33.65	1,147.96***	716,503	7.91***	441.18
	Muslim	8,176	4,149,097	34.13	946.67	531,436	4.37	370.54
	Other	309	568,259	49.28**	1,175.01	139,955	12.14**	533.9**
Marital Status of Head	Married/ cohab	17,922	11,354,410	32.62	1,021.32	1,835,007	5.27	399.32
	Never married	3,346	156,425	21.27***	1,197.59	37,699	5.13	400.71
	Divorced / sep	2,791	495,303	30.75	929.71	65,416	4.06	397.11
	Widow	3,764	1,025,943	33.82	975.08	137,864	4.54	416.09
Employment of head	Self-employed	16,062	11,530,642	33.01	1,021.43	1,862,303	5.33	402.1

⁵ Note that in order to ensure that these figures concord with official statistics, we used the consumption aggregates provided by MoFED to compute the poverty rates in Table 7. This dataset contained one more observation than the datasets provided by CSA, which were used to compute Table 3. This explain the discrepancy in the total number of observations between the two tables. The disaggregation variables were constructed from CSA data, and therefore contain the same number of observations as in Table 3.

	Employer	259	104,644	15.13***	993.84	18,205	2.63	104.09***
	Employed (private)	2,546	256,832	33.53	1,033.72	43,835	5.72	369.76
	Employed (public)	3,776	197,644	15.16***	733.13***	9,472	.73***	329.93
	Employed (other)	718	124,041	41.54	1,289.39	39,112	13.1	353.82
	Unpaid/ other	213	98,471	33.85	1,011.93	7,389	2.54*	226.69***

Source: Author's computation based on data from the HCES 2010/11

Note: statistical significance: *=10%; **=5%; ***=1% (first category is base category) ; %: Poverty headcount, #: Number of poor children, \$: Monetary poverty gap (transfer required per poor child to eliminate poverty).

Table 8 below shows disaggregated rates of poverty and extreme poverty by the characteristics of children. From this table, we can see that there are no significant differences between households composed of only boys and those composed exclusively of girls.

Nor are there any statistically significant differences between households where children are engaged in child labour and those, where they are not. This is a particularly interesting finding, given that Table 4 above had shown that households that engage in child labour tended to have a significantly lower total level of consumption, compared to households that didn't. This suggests, that child labour might be used as a poverty mitigation strategy for households with low levels of income.

In terms of education, we find that households where some school-aged children are out of school, had a significantly higher level of extreme poverty (7.03%), compared to households where everyone is attending school (3.13%).

Table 8 Poverty and extreme poverty (children aged 0-17), by characteristics of child

Disaggregation criterion	category	N (obs.)	Poverty			Extreme Poverty		
			#	%	\$	#	%	\$
None	All Children	56,289	13,032,080	32.41	1,016.32	2,075,987	5.16	400.39
Age	All 0-4	24,205	5,465,450	28.73	977.10	837,922	4.4	392.14
	All 15-17	11,796	2,452,743	34.65**	1,002.38	342,692	4.84	348.5
	Mixed ages	20,288	5,113,887	36.26***	1,064.91**	895,373	6.35***	427.97
Gender	All Boys	7,785	1,097,518	22.81	857.35	122,674	2.55	376.44
	All Girls	8,472	1,026,349	20.95	925.17	130,182	2.66	318.16
	Both boys/girls	40,032	10,908,213	35.77***	1,040.89***	1,823,130	5.98***	407.87
Working	None working	26,427	6,175,599	36.82	1,079.05	1,140,907	6.8	425.6

	Some working	2,583	1,093,186	36.85	1,014.05	161,305	5.44	389.85
	N/A (no child 10-13)	27,279	5,763,295	28.16***	949.52***	773,775	3.78***	365.42
Attending school	All attending	26,446	4,170,541	29.07	939.53	449,534	3.13	339.8
	Some attending	6,513	1,994,768	31.74	1,087.46***	442,005	7.03***	416.47
	N/A (no child >6)	6,382	685,675	14.88***	817.94***	70,638	1.53***	257.24

Source: Author's computation based on data from the HCES / WMS (2010/11)

Note: statistical significance: * = 10%; ** = 5%; *** = 1% (first category is base category) ; %: Poverty headcount, #: Number of poor children, \$: Monetary poverty gap (transfer required per poor child to eliminate poverty).

3.1 Geographical distribution of child poverty

Figure 5 shows the poverty headcount by region, as well as the absolute number of children living in poor households. The poverty rate is similar in all regions, except Harari. According to the previous HCE surveys, Harari managed to reduce poverty by half between 2004/05 to 2010/11, while Dire Dawa's poverty rate stay almost the same (MOFED Interim report on 2010-11 Poverty Analysis).

When looking at the absolute number of children affected by poverty, however, there are large differences between regions, which depend largely on the population size of each region. The graph shows that the region that has the largest number of poor children is Oromia (over 5 million poor children), followed closely by Amhara and SNNP, which have around 3 million poor children each. Together these three regions contain more than 85% of all poor children in Ethiopia.

Figure 5: Poverty (children aged 0-17), by region

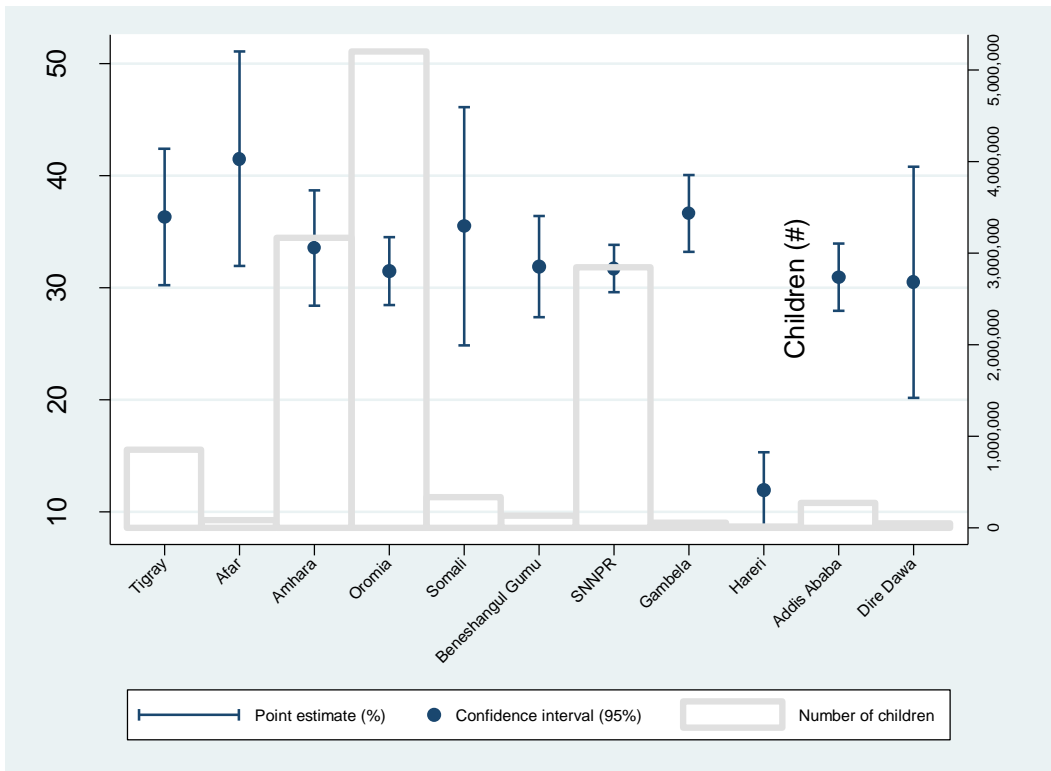
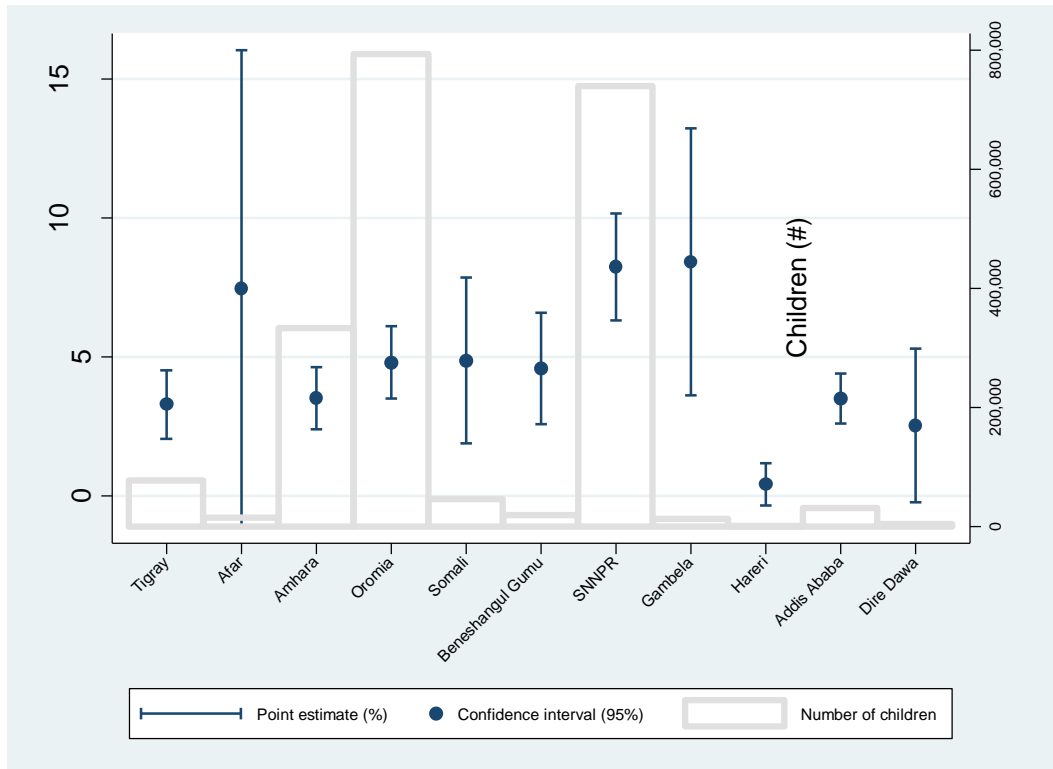


Figure 6 shows the geographical disaggregation of extreme child poverty, as well as the absolute number of children affected. When looking at extreme poverty, we find a greater disparity across regions than for standard poverty. The worst affected regions SNNP and Gambella at close to 8%. Afar also has a high level of extreme poverty, but with an insufficient number of observations to allow us to draw statistically robust inference. The lowest level of extreme poverty is still found in Harari (less than 1%).

In terms of absolute numbers of extremely poor children, Oromia and SNNP stand out with over 700,000 extremely poor children each. In the former case, this is due to the region’s large population, whereas for SNNP it is due to the very high rate of extreme poverty, combined with a large population. These two regions combined account for close to 75% of all extremely poor children in Ethiopia.

Figure 6: Extreme Poverty (children aged 0-17), by region



4 Inequality

Even though the concepts of inequality and poverty are very much related to each other, they differ in terms of their population focus. Unlike poverty, when analysing inequality, we are not just concentrating on a certain proportion of population below a defined poverty line but the whole population. (Haughton, J. and Khandker S.R, 2009).

Most inequality measures focus on outcomes such as income and consumption which may result from the different opportunities individuals, households or the communities are facing. Inequality could also be compared between individuals, households, within households, different communities in the same country or different countries in the world. The time horizon covered also varies depending on the length of the time coverage of the dimension measured usually reflecting a single point in time without capturing annual or lifetime fluctuations (McKay A., 2002).

As seen in the previous sections of this report, consumption expenditure and levels of poverty are distributed unevenly among the overall population and children of Ethiopia. Since the promotion of social equity and the reduction of inequality remain a high priority for the development of national policy based on the GTP, it is important to establish measures that can adequately reflect levels of inequality among various group of population especially for children

Thus measuring the extent of inequality for different parts of the population has become more and more imperative for designing equitable policies. The following sections will present the methods used to measure inequality and the results of the inequalities among children and overall population of Ethiopia.

4.1 Inequality estimates

Figure 7 presents a Lorenz curve for Ethiopia for the overall population and children based on the consumption measure. As can be noted, at all points, the Lorenz curve for children is to the right of the curve representing the population. This implies that, as a group, inequality among children is slightly lower than that of the overall population.

Figure 7: Lorenz Curves: Child and overall population inequality

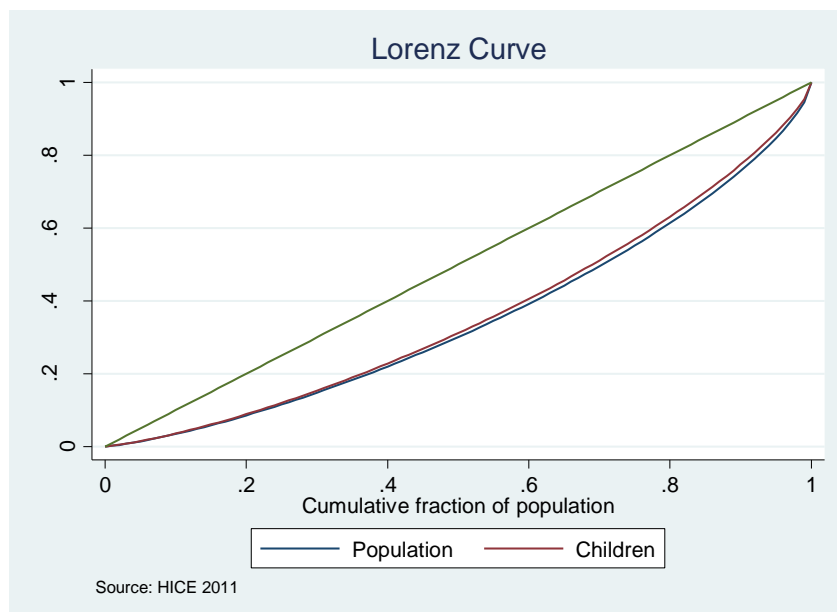


Table 9 provides the value of Gini Coefficients across rural and urban areas for the overall population and children. The table shows that the Gini-coefficient in 2010/11 for the overall population was 0.298, but for children it was 0.278. This confirms that inequality among children is slightly lower than that of the overall population. The significance test results for the Gini coefficient also show that the difference between the overall population and the child population is statistically significant at 1% for rural and urban areas, as well as for the total population.

The total population Gini coefficients for rural and urban areas are 0.274 and 0.371, respectively. This indicates that there is more inequality in urban areas than in rural areas. A similar pattern can also be observed between rural and urban children. The Gini coefficients for rural children is 0.265, whereas for urban children, it is around 0.338. Note that this does not mean that rural children are better off than those in urban areas – as discussed previously, in terms of most welfare measures urban households are in fact better off. But the inequality among rural children is smaller than that of urban areas.

Table 9 also shows the decile dispersion ratio. The ratio is larger in absolute terms for the overall population (3.446 for rural and 4.885 for urban) compared with the child population (3.399 and 4.268) for both at the rural and urban level respectively. However, the difference is only statistically significant for urban areas.

Table 9: Inequality Estimates

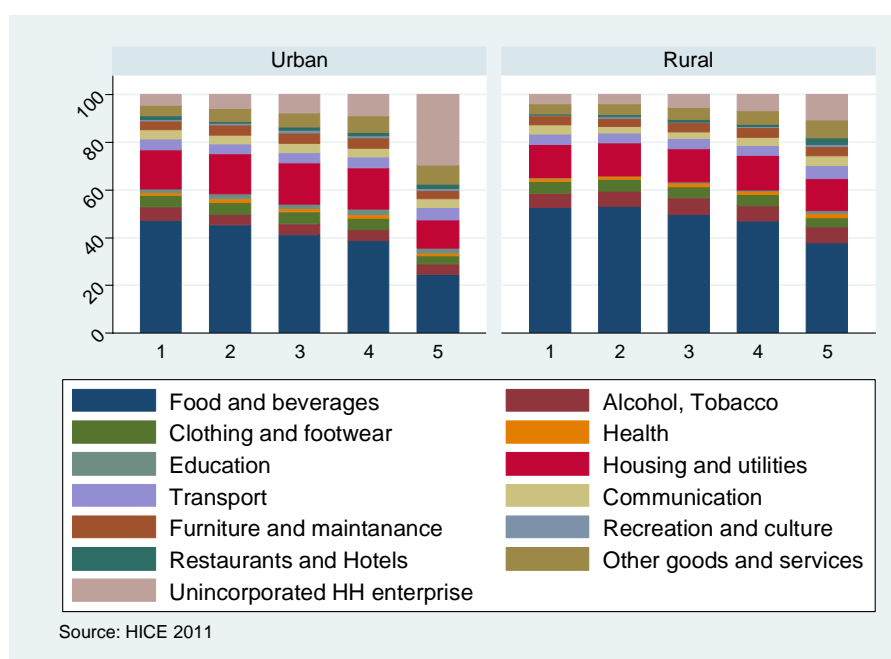
	Rural	Urban	Total
Gini Coefficient for the overall population	0.274***	0.371***	0.298***
Gini Coefficient for the child population	0.265	0.338	0.278
Ratio of 90th to 10th percentile for the overall population	3.446	4.885***	3.620

Ratio of 90th to 10th percentile for the child population	3.399	4.268	3.466
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Source: Author's computation based on data form the HCES (2010/11)
Note: statistical significance for the difference between Gini and 90/10 ratio for overall population and for child population: *=10%; **=5%; ***=1%.

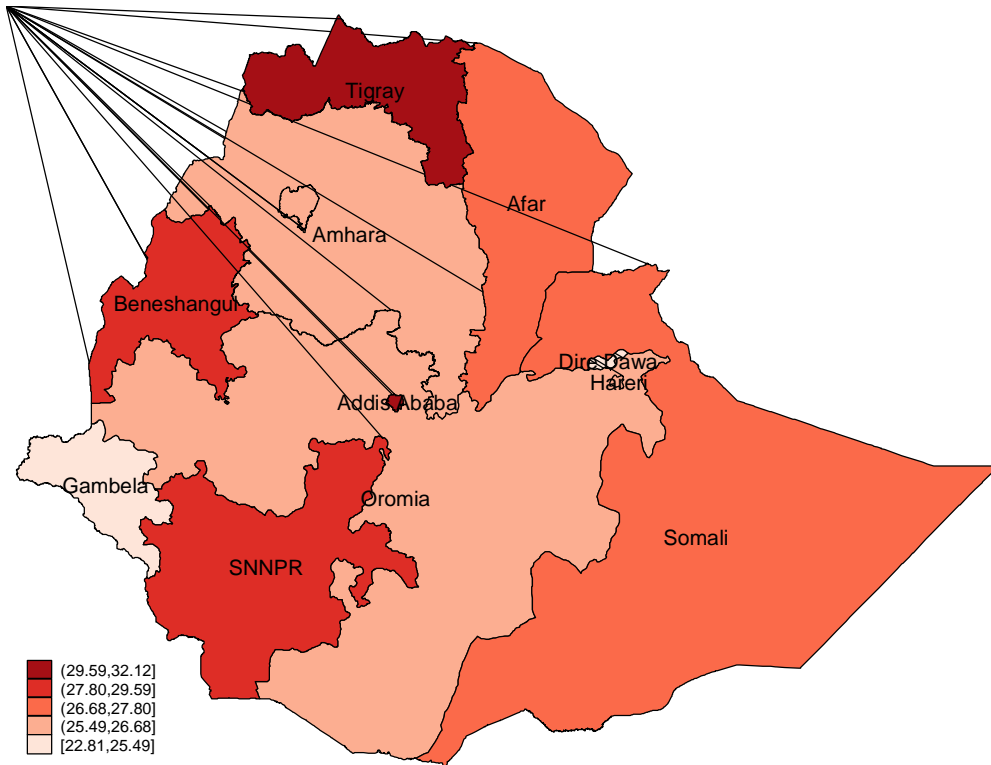
Figure 8 shows the consumption patterns of households by quintile for urban and rural areas. In the figure, it is observed that the food share of households is lower for richer quintiles. This result is consistent with Engel's law, which states that, as income rises, the proportion of income spent on food falls, even if actual expenditure on food rises. From the figure it is also observed that the richest (5th quintile) in urban areas have a higher share for unincorporated HH enterprise.

Figure 8: Consumption patterns, by quintile



The disaggregation of the Gini-coefficient by region (see Figure 9 below) shows that the highest levels of inequality can be found in Addis Ababa and Tigray, followed by SNNP and Benishangul. The lowest level of inequality is found in Gambella region. In the case of Addis Ababa, it is likely that the high level of inequality is driven by the concentration of high-income households, rather than by a particularly disadvantaged position of poorer households. However, in the case of Tigray, and to a lesser extent in the case of SNNP, we find that the high level of inequality is accompanied by an above-average level of poverty (see Figure 5 above).

Figure 9: Gini-coefficients: Child inequality by region



5 Human Development profiles of Ethiopian Children

In this section, we will review the achievements of Ethiopian children in various dimensions of human development, including health, education, nutrition, child protection, water and sanitation and housing. The chosen indicators will be disaggregated by the socio-economic criteria developed in sections 3 and 4 above.

5.1 Health

A healthy population and a population with healthy children is vital for economic growth and development, as well as being a valuable human development objective in its own right.

The WMS, by its very design, focuses on health service utilization rather than health status of individuals. Data are collected on health and related issues from which indicators such as illness episodes, incidence of health consultation, types of health institutions visited, access to health services, etc., are computed. Based on 2010/11 HCE and WM surveys data, Table 10 below displays the health of children aged (0-17) by poverty status, quintile and the gap between the richest 10% and the poorest 10% of the population. From the table below, we can see that average health expenditure for children aged 0-17 was 55.52 birr per adult equivalent / year. The share of total consumption going on health is relatively constant across quintiles, around 1% of total household consumption. However, the absolute value differ greatly, as the poorest households only spent 16.4 birr per adult equivalent for each child, compared to 69.46 birr per adult equivalent for non-poor households.

63 % of all sick children visited health centres /got medical assistance. However, among the poorest quintile, only 54% visited health centres, compared to 74% in the richest quintile. Similarly, the proportion of untreated diarrhoea was nearly three times higher in the bottom quintile (32%) compared to the top quintile (11%). For extremely poor children, the rate of untreated diarrhoea was 42%. Untreated malaria was only 1% among rich children, whereas more than 1/5 of children with suspected malaria in the bottom quintile did not get any treatment. The table also shows that only 5% of children who are extreme poor were assisted during delivery, whereas 13% of non-poor children.

Table 10 Health (children aged 0-17), by poverty status / quintile

Disaggregation criterion	Category	Health inputs			Health indicators (WQ3104-3106 in WMS)		
		Health exp.	% of total	Visited health ctr. (if sick)	Untreated Diarrhoeas	Untreated Malaria	Assisted Delivery
None	All children	55.52	1.03	63	23	19	12
Poverty Status	Extreme poor	16.4	1.01	56	42	26	5
	Moderately poor	28.37***	.94	53	34	26	9***
	Non-poor	69.46***	1.06	67**	18	16	13***
Quintile	Bottom	22.06	.92	54	32	23	8
	2 nd	36.1***	.95	57	33	30	9
	3 rd	47.63***	.98	66**	23	13	8
	4 th	68.76***	1.12	66***	2	20	13***
	Top	120.14***	1.22***	74***	11	10	21***
Gap	Bottom/ Top Deciles	0.119***	0.741	0.686***	3.570***	1.908***	0.235***

Source: Author's computation based on data from the HCES/ WMS (2010/11).
 Note: statistical significance: *=10%; **=5%; ***=1% (first category is base category).

5.2 Nutrition

Table 11 shows selected nutrition indicators by poverty status and quintile. Food expenditure is calculated based on the food and drink items. Extremely poor household have significantly lower expenditures on food (842.81 ETB) than moderately poor household (1,654.89ETB) and non-poor household (3,063.44ETB).

Interestingly, extremely poor households also appear to spend a smaller share than moderately poor households on food consumption⁶, which is unusual⁷. These households also have a very low absolute level of nutritional intake (1524 kcal/ adult equivalent –day compared to 3268 kcal/ adult equivalent- day for non-poor). On average, children living in the poorest 10% of households consume less than half (42.6% of) the calories consumed by children in the richest decile. This is far less than the minimum caloric intake required for a health development of the child.

⁶ Note that these estimate include own production valued at local market rate.

⁷ Further investigation would be required to determine the source of this anomaly. One possible explanation might be that that extremely poor households may be heavily depend on food sources that are not properly captured by the survey (e.g. gifts from relatives, beginning, informal markets for food, etc.).

Food quality is also an issue amongst poor households. Overall, 47% of extremely poor households have a food consumption score (quality + quantity of food) that is poor or borderline, meaning that they have insufficiently varied diet. This ratio drops to 23% when looking at children in the richest quintile.

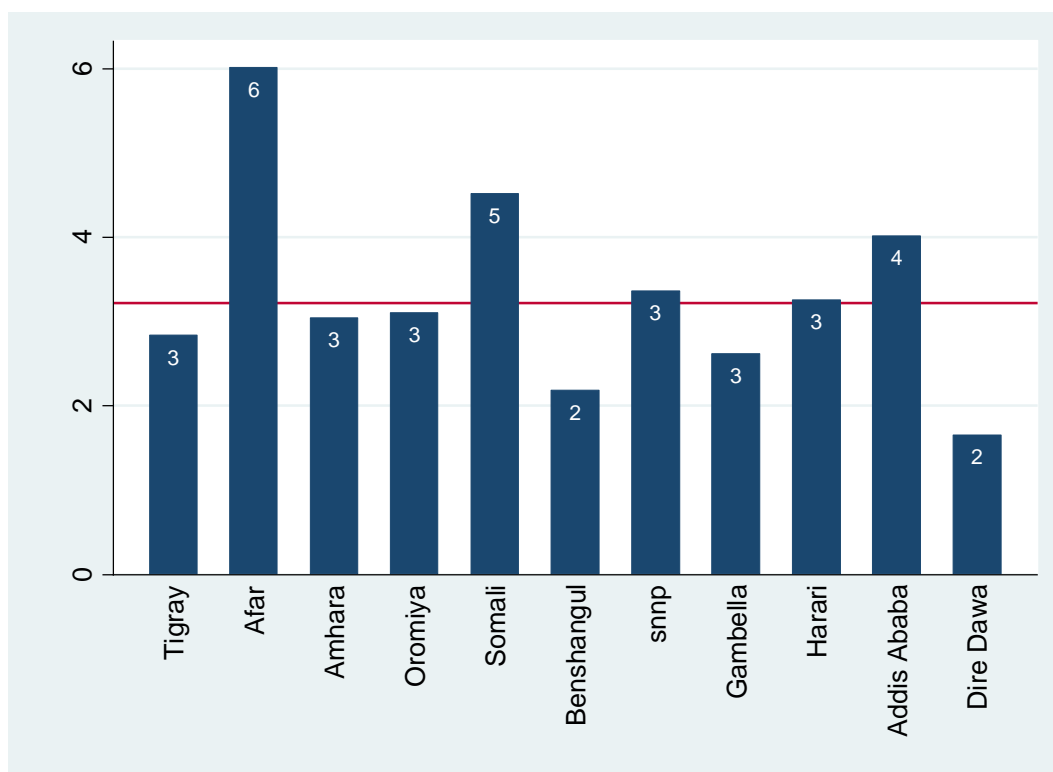
Table 11 Nutrition (children aged 0-17), by poverty status / quintile

Disaggregation criterion	Category	Nutritional inputs			Nutritional outcomes				
		Food exp.	Food exp. share	Calorie intake	Months of food shortage	Number of Meals / day	Food Security (got worse)	Food Security (got better)	Poor Borderline FCS
None	All children	2564.85	50.62	2860.96	3.22	2.83	50.63	21.38	28.42
Poverty Status	Extreme poor	842.81	50.46	1523.62	3.59	2.64	65.19	12.34	47.12
	Moderately Poor	1654.89***	53.28***	2104.52***	3.32	2.78***	52.5***	19.78**	30.93***
	Non-poor	3063.44***	49.56	3268.23***	3.12*	2.87***	48.77***	22.7***	26.01***
Quintile	Poorest	1324.15	52.26	1846.09	3.5	2.73	55.51	17.81	34.95
	2 nd	2110.01***	54.38***	2532.72***	3.12*	2.81***	51.56	19.94	30.29**
	3 rd	2555.25***	52.32	3032.62***	3.18*	2.86***	50.12**	23.86***	27.34***
	4 th	3078.69***	49.23***	3390.2***	3.02**	2.87***	50.89**	20.3	24.71***
	Richest	4232.01***	43.02***	3813.54***	3.11	2.92***	43.21***	26.22***	23.07***
Gap	Bottom/ Top Deciles	0.215***	1.299***	0.426***	1.220***	0.920***	1.357***	0.606***	1.825***

Source: Author's computation based on data from the HCES/ WMS (2010/11)
Note: statistical significance: *=10%; **=5%; ***=1% (first category is base category)

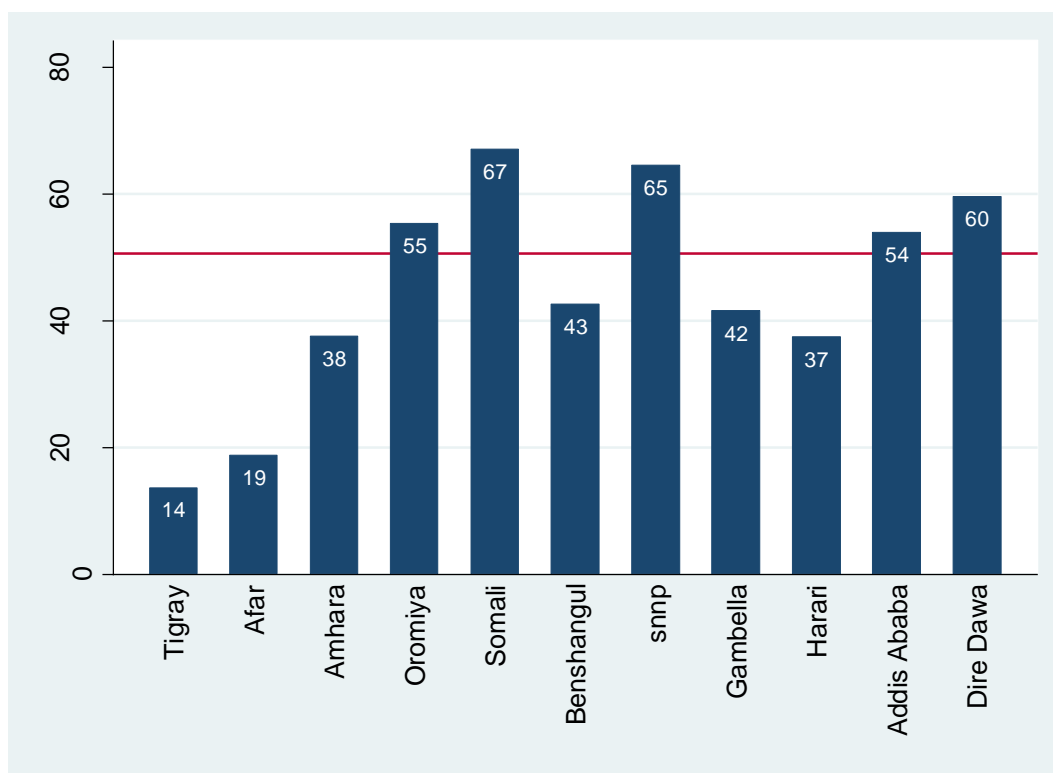
Months of food shortage is relatively constant both in poor and rich households. However, Figure 10 below shows that there is considerable regional variation: On average, households in Afar region experienced 6 months of food shortage, whereas Somali region experienced 5 months, and Addis Ababa experienced 4 months. Dire Dawa has the shortest period of food shortage, at less than 2 months of food short.

Figure 10: Months of food shortage, by region



Across the whole country, 50.63% of children live in households that report a worsened food security over the past year. Among extremely poor households, close to two thirds (65.19%) have seen their food security deteriorate. Figure 11 shows the regional variation: The highest proportion of households that report worsened food security can be found in Somali (67%) and SNNP (65%). Despite having the shortest average food shortage period, Dire Dawa has a high proportion of households that report a worsened food security (60%). By contrast, only 19% of households in Afar report a worsened food security, even though the average period of food shortage is 6 months. This might be due to the exceptionally bad conditions in Afar in the base line year. It should also be noted that the food security question is self-reported and therefore liable to subjective variations, depending, for instance, on prevailing climatic conditions.

Figure 11: Percentage of households who report a worsened food security level over the past year



5.3 Education

The education expenditure per adult equivalent per year for all children is on average Birr 30.68. This expenditure reported in Table 12 is composed of mainly direct costs such as uniforms, text books, transport and school contributions⁸. The expenditure per adult equivalent by poverty status are significantly different at 1% level when we compare the extreme poor’s expenditure on education which is Birr 9.44 compared with the moderately poor (Birr 17.45) and non-poor (Birr 37.41). The education expenditure per adult equivalent increases from the first quintile (poorest) to the fifth quintile (the richest). The richest households spend almost five times more than the poorest households on their children’s education. The gap ratio shows that the bottom decile (poorest) spend about 12% of the education expenditure of the top decile.

The share of education expenditures out of the total expenditure of households, is very low across all the different profiling variables. Overall, the average education share is 0.53% of total expenditure.

Even though school fees are very low or eliminated in all public schools in Ethiopia due to the presence of government subsidy in public schools, there are other costs (uniforms, textbooks, transport and school contributions). These costs constitute a financial barrier that could prevent the poorest children from accessing school. In addition to this, there is an indirect cost (opportunity

⁸ Note that these costs are likely to be an underestimate of real expenditures on education, since the survey did not contain an education module designed to accurately cover all education costs. Hence, we have, for instance, only included transport costs explicitly labelled as “school transport”. We did not include costs incurred, for instance, by children using public transport to school, or fuel costs for children in households using their own vehicles.

cost) to the poorest children in going to school, as it may prevent them from participating in income generating activities. Thus, even though both the absolute education expenditure figures and the share of education expenditures are seemingly low, in reality these costs may be preventing many poor children from going to school.

Table 12 shows the attendance rate, by different characteristics of children, which is the proportion of children between the ages of 7 and 17, who are currently attending school. Overall, 65% of children are currently attending school. The poorer the children, the lower the attendance rate. Among the extreme poor children, only 52 % are currently attending school as compared with 66 % for the non-poor. The attendance rate for the non-poor or moderately poor is statistically different from the rate for the extreme poor at 1% significance level. There are also variations across quintiles (61% for the bottom quintile vs 69 % for the top quintile). The significance tests indicate that the top and the 4th quintiles are significantly different from the bottom quintile at the 1% level.

The proportion of children aged 14-17 having completed primary level of education for all children is 12.2%. There are slight variations by poverty status, quintiles and when comparing bottom 10% and top 10%. The proportion of children completing primary school for the non-poor (13.4%) is slightly higher than for the extreme poor, the difference being statistically significant at 10%. Differences are also observed by quintiles, the 5th quintile having a primary completion rate of 17.1%, which is statistically different from the first quintile at 1% level. The completion rate among the poorest decile is less than half that of the richest decile.

The net attendance rate (NAR) for primary schools is the percentage of primary-school age (7-14 years) population that is attending primary school. For all children, 62.4 % are attending primary school. There are variations by poverty status. For the extreme poor, the NAR is 47.4% compared with 61% for the moderately poor and 64.2% for the non-poor, the difference is statistically significant at 1% level. There are also variations at 1% significance level across quintiles when compared with the bottom/poorest children.

The attendance ratio/Gender Parity Index (GPI) is defined as the percent of girls from age 7-17 currently attending school divided by the percent of boys 7-17 currently attending school. It shows gender related differences in school attendance ratios. When GPI is greater than or lower than 1, it indicates gender disparity in favour of females or males, respectively. A GPI lower than 1 indicates a gender disparity in favour of males—that is, a higher proportion of males than females attend that level of schooling. A GPI higher than 1 indicates a gender disparity in favour of females. The GPI for school attendance for all children is greater than one for all quintiles, indicating disparity in favour of girls. However, among the poorest 10% of the population, the GPI is only 0.93, indicating that girls are less likely to attend than boys.

The proportion of children aged 10-17 that cannot read or write is 36.2%. There are variations by poverty status, quintiles and when comparing the bottom and top deciles. The rate of illiteracy for the extreme poor (50.4%) is higher than for the moderately poor (38.7%) and non-poor (33.9%). The values for the latter two groups is different at 1% significance level. The top quintile illiteracy rate (27.6%) is different at 1% significance level compared with the illiteracy rate for the bottom quintile (41.7%). The Gap ratio (1.767) indicates that the poorest 10% of children are 77% more likely to be illiterate than the richest 10%.

In terms of ability to operate basic arithmetic, for all children between age 10 and 17, 88% have the basic skills. No significant variations are observed by poverty status, quintiles or when comparing the top and bottom 10%.

Table 12 Education (children aged 0-17), by poverty status / quintile

Disaggregation criterion	Category	Educational inputs				Educational outcomes			
		Educ exp.	% of total	Attendance (7-17)	Gender parity (attend.)	Illiterate (10-17)	Basic arithmetic (10-17)	Completed Primary (14-17)	Net primary enrolment (7-14)
None	All children	30.68	0.53	64.52	1.04	36.16	88.08	12.22	62.43
Poverty Status	Extreme poor	9.44	.55	51.89	0.99	50.41	88.34	9.56	47.41
	Moderately poor	17.45***	.54	63.71***	1.03**	38.68***	86.39	9.95	61.03***
	Non-poor	37.41***	.52	65.9***	1.05***	33.85***	88.76	13.37*	64.24***
Quintile	Bottom	14.49	.56	61.1	1.05	41.65	86.63	9.95	57.73
	2 nd	20.03***	.49**	63.65*	1.01***	38.17**	87.16	10.22	61.72**
	3 rd	25.31***	.49**	64.68**	1.05	36.49**	89.38*	12.73*	63.61***
	4 th	33.94***	.51	66.2***	1.05	33.64***	88.9*	12.41*	63.82***
	Top	67.44***	.6	68.64***	1.05	27.63***	88.6	17.12***	67.23***
Gap	Bottom/Top Deciles	0.12***	0.80***	0.78***	0.93***	1.77***	0.97***	0.41***	0.75***

Source: Author's computation based on data from the HCES/ WMS (2010/11).

Note: statistical significance: *=10%; **=5%; ***=1% (first category is base category).

5.4 Child Protection

The term 'child protection' is used in different ways by different individuals and organizations. UNICEF defines it as preventing and responding to violence, exploitation and abuse against children – including commercial sexual exploitation, trafficking, child labour and harmful traditional practices. Child protection covers a wide range of important, diverse and urgent issues such as; birth registration and the right to identity, children and armed conflict, sexual exploitation of children, trafficking and sale of children, harmful traditional practices, violence and neglect, alternative care, juvenile justice, child labour and the rights of child victims (Donnell, 2004).

Based on 2010/11 HCE and WM surveys data, in this analysis we have tried to see harmful tradition such as; female genital mutilation/cutting, cutting uvula and child marriage. Harmful traditions are common in many developing countries. In Ethiopia too, female genital mutilation/cutting, child (early) marriage and cut uvula are common practices, even in the urban centres where people have good access to information. Cutting uvula (uvulectomy) is done with the belief that it will reduce the risk of throat related problems but the risk from infection and related complications is rather high. In Ethiopia as well as many Sub-Saharan African countries marriage of young children is also widespread; marriage below the age of 18 is considered as child marriage in Ethiopia.

According 2010/11 HCE and WM surveys data result, seen in Table 13, 3.61% of children were living without their mother. The majority of those children are likely to be orphans. At the same time, the table shows that 4.11% of girls aged 10 to 17 reported being married; 33.4% or 1/3 of the total child population had a cut uvula and 23.4% of the girls under 18 were circumcised all over the country.

While the proportion of circumcised girls remains unacceptably high, it is important to note that the analysis of recent surveys suggests that there has been a decreasing trend in FGM over the past decade. Indeed, the DHS reported FGM rates of 52% and 38%, respectively in 2000 and 2005 for girls under 15.

With the exception of cut uvula, which is lower for richer households, the other child protection indicators here did not vary significantly by the income/consumption level of the household.

Table 13 Child protection (children aged 0-17), by poverty status / quintile

Disaggregation on criterion	Category	Child protection outcomes						
		% Children not living with their mothers	Girls (10-17) married		Children (<15) with cut uvula		Girls (<18) circumcised	
			#	%	#	%	#	%
None	All children	3.61	311055	4.11	11237328	33.35	3897647	23.42
Poverty Status	Extreme poor	3.279	13952	3.839	675934	40.301	158627	19.9
	Moderately poor	3.243	71121	3.345	3084451	35.059*	1096951	25.589
	Non-poor	3.742	225983	4.458	7472787	32.185**	2642069	22.867
Quintile	Bottom	3.585	66050	3.907	2577029	36.62	800128	23.327
	2 nd	3.737	50170	3.074	2373917	33.036	843454	24.647
	3 rd	3.89	59034	4.11	2397252	34.897	790885	23.617
	4 th	3.666	59237	3.909	2176514	31.956**	842897	24.629
	Top	3.171	76564	5.962*	1708461	29.506** *	620285	20.575
Gap	Bottom/ Top decile	1.122** *		0.664** *		1.272***		1.028** *

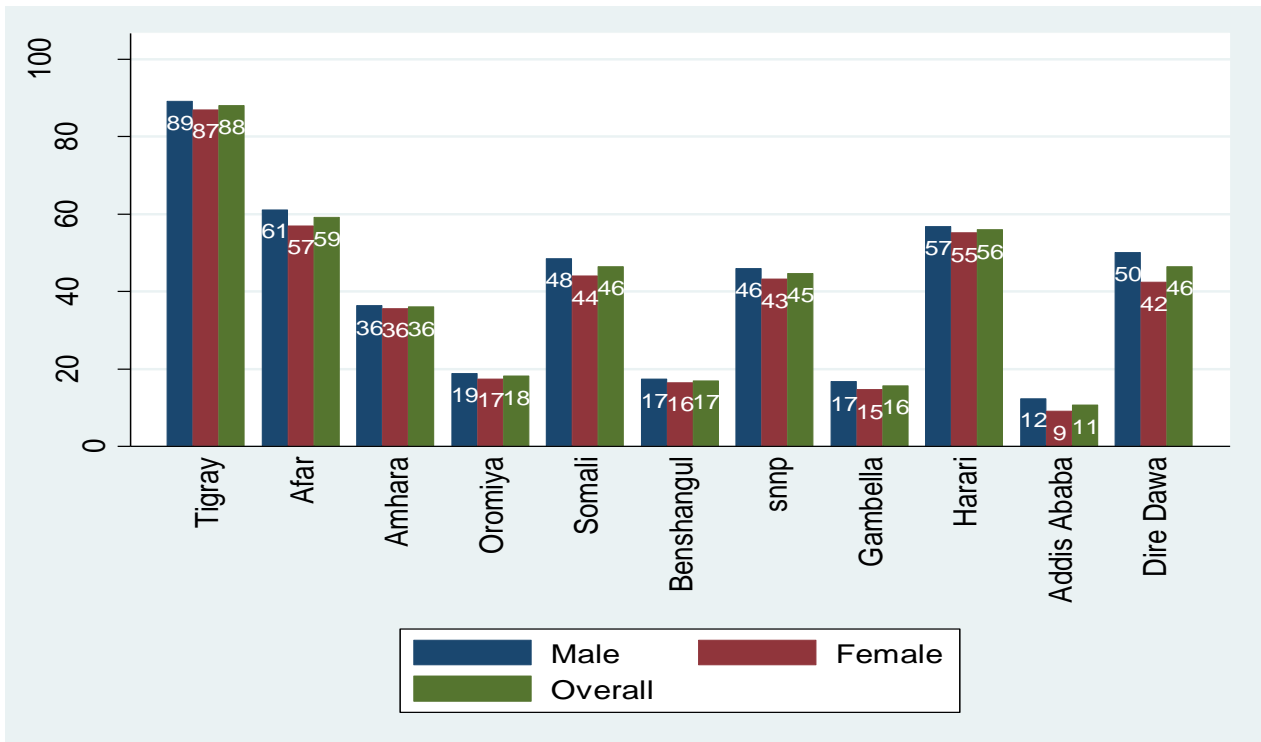
Source: Author's computation based on data from the HCES/ WMS (2010/11).

Note: statistical significance for % outcomes: *=10%; **=5%; ***=1% (first category is base category).

#: Number of children; % Percentage of children

The distribution of harmful traditions is not uniform across regions. Figure 12 below indicates the percentage of boys and girls with cut uvula across regions in the country. As we see from the graph, male children cut uvula is a little bit higher in all regions. The rate of children with cut uvula is highest in Tigray, followed by Afar, Harari, Somali and Dire Dawa. In Tigray, almost 9 in 10 children had a cut uvula. Being an urban centre and exposed to information, Addis Ababa (11%) has the lowest rate.

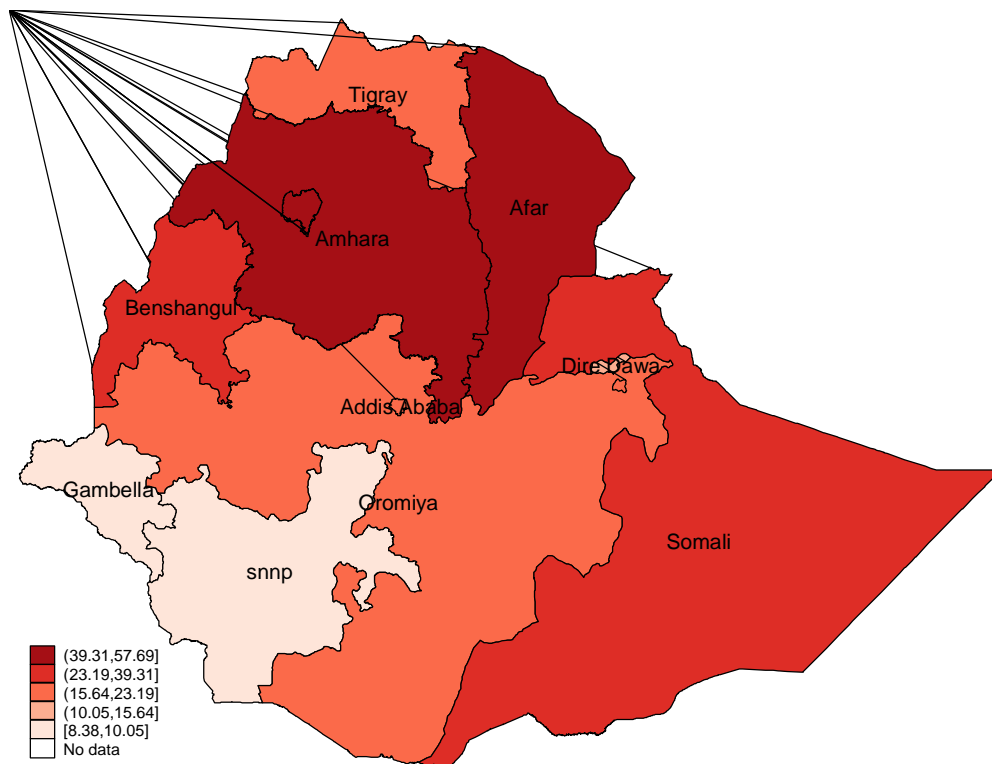
Figure 12: Indicates Cut Uvula variations in Ethiopia among regions



The other harmful tradition, female genital mutilation is considered as one of the harmful tradition that should be avoided in any society.

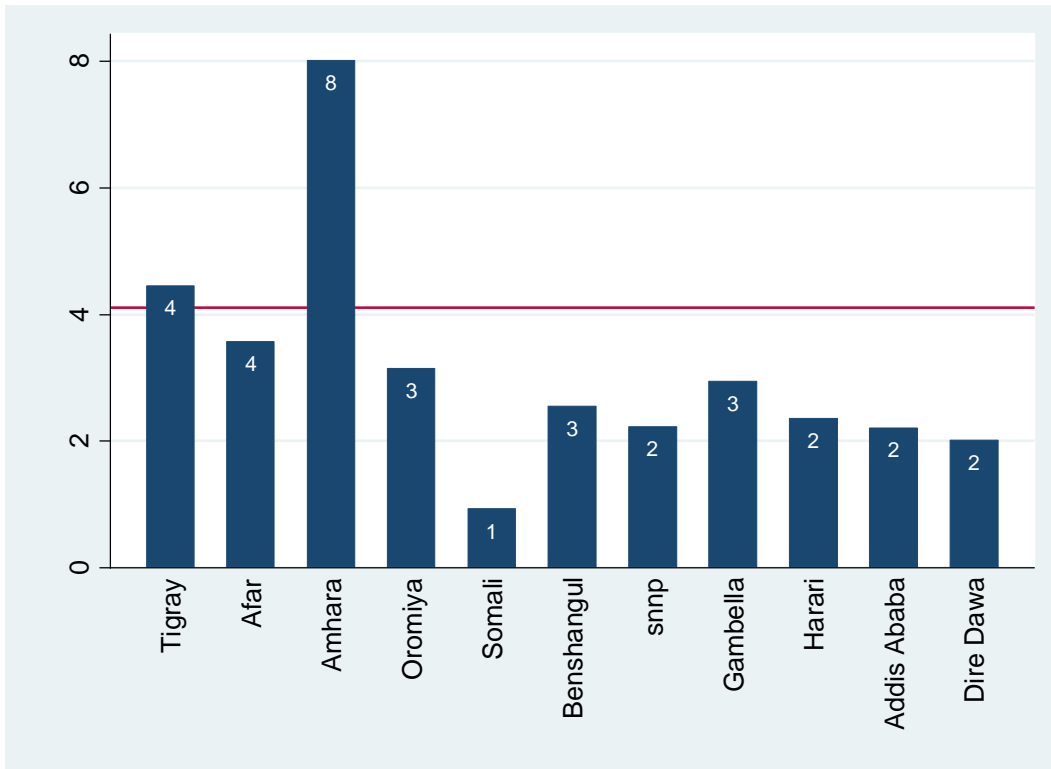
Even though the federal law forbids female genital mutilation, it is still practiced in all regions of Ethiopia. But the intensity is not the same all over the country. It varies from region to region according to the societies' cultural conditions. Based on Figure 13, Afar and Amhara showed the largest amount of circumcised girls. More than half (57.7%) of girls were circumcised in Afar. More than 47% of the girls were affected by female genital mutilation in Amhara. In Somali region, 31.2% of the girls had a similar fate. In Benishangul, Oromia and Tigray, around one fifth of girls were affected. In the other regions (Harari, Dire Dawa, Addis Ababa, SNNP and Gambella), circumcised girls accounted about one in ten girls. Being urban areas and exposed to available information, it is not surprising to see lower amounts of circumcised girls in Harari, Dire Dawa and Addis Ababa.

Figure 13: the Map of Ethiopia Indicating Circumcised Girls (0-17) by Region



Regarding child marriage, it can be said that the practice is common all over Ethiopia. Figure 14 indicates the distribution of child marriage across regions. As the figure shows, even the urban areas (Addis Ababa Harari and Dire Dawa) had about 2% child marriage. On the other hand, there is great variation among regions considering the severity. More than 8% of the girls aged 10-17 in Amhara were married, whereas only about 1% of girls were victimized by child marriage in Somali. In Tigray, Afar, Oromia, Gambella and Benishangul there were also considerable amount of (3% to 4%) child marriage. It should be noted that these figures are considerably lower than those reported in the DHS. This may be due to the question posed, which in the DHS is a recall question asked to girls aged 15-49. In the WMS, the question is a current marital status question asked to girls aged 10 to 17.

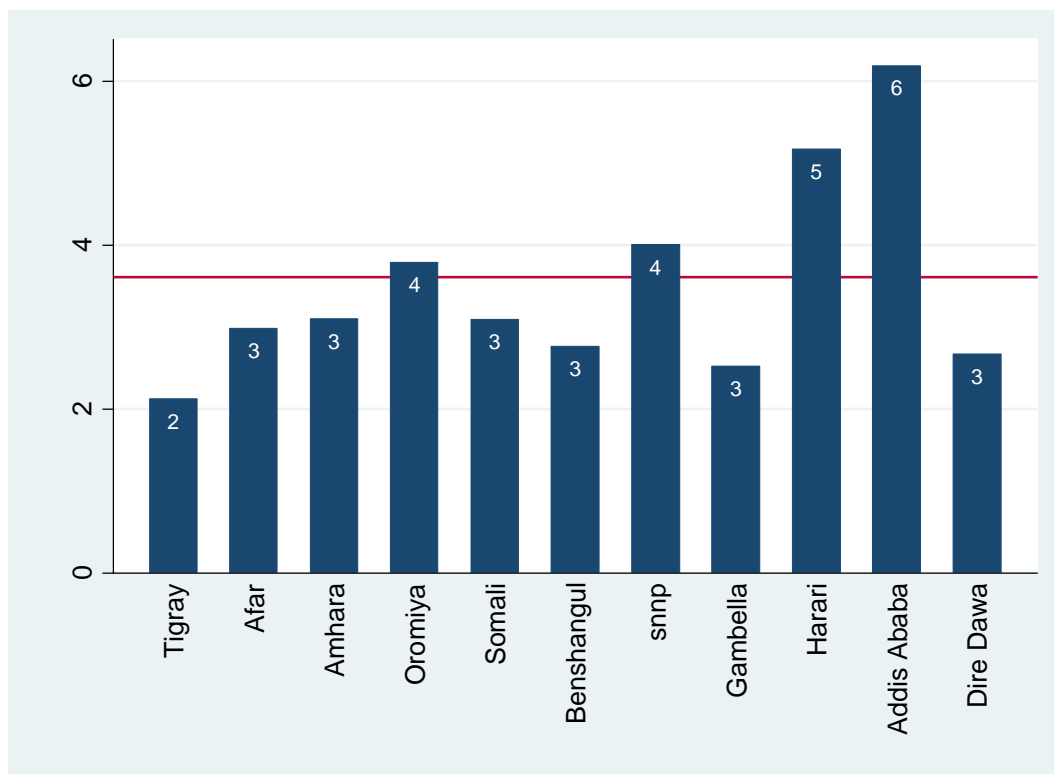
Figure 14: Married girls 10-17 years



The other child protection issue that affects children’s lives is living without their mother. Children may separate from their mothers for many reasons, including conflict (war), parents’ separation, adoption, parents’ (family) poverty, trafficking, and others. These may expose children for many negative impacts and affect their future.

As seen in Figure 15, the proportion of children not living with their mother varies from 2% in Tigray to 6% in Addis Ababa. Contrary to other child protection issues, there are more children living without their mother in urban centres such as Addis Ababa, Harari and Dire Dawa. This may be due to the fact that orphans are sent to live with better-off relatives in urban areas.

Figure 15: Children not living with their mother



5.5 Water and Sanitation

Table 14 shows the Water, Sanitation, and Hygiene (WASH) indicators by poverty status and quintile. WASH expenditure is calculated based on the expenditure relating to water, sanitation, and hygiene related items, including electrical boiler or soap/ detergent. WASH expenditure is

higher in richer households with 1% of statistical significance. Particularly, the top 10% richest household spend more than four times as much as the bottom decile on WASH expenditures.

Access to improved water is significantly lower amongst extremely poor households (36%), compared to moderately poor (44%) and non-poor households (46%). However, there is little difference between the bottom 4 quintiles in access to improved water sources (rates vary from 42% to 44%). The only statistically significant difference is found with respect to the top quintile, where access to water reaches 52%.

Table 14: Water, Sanitation and Hygiene (children aged 0-17), by poverty status / quintile

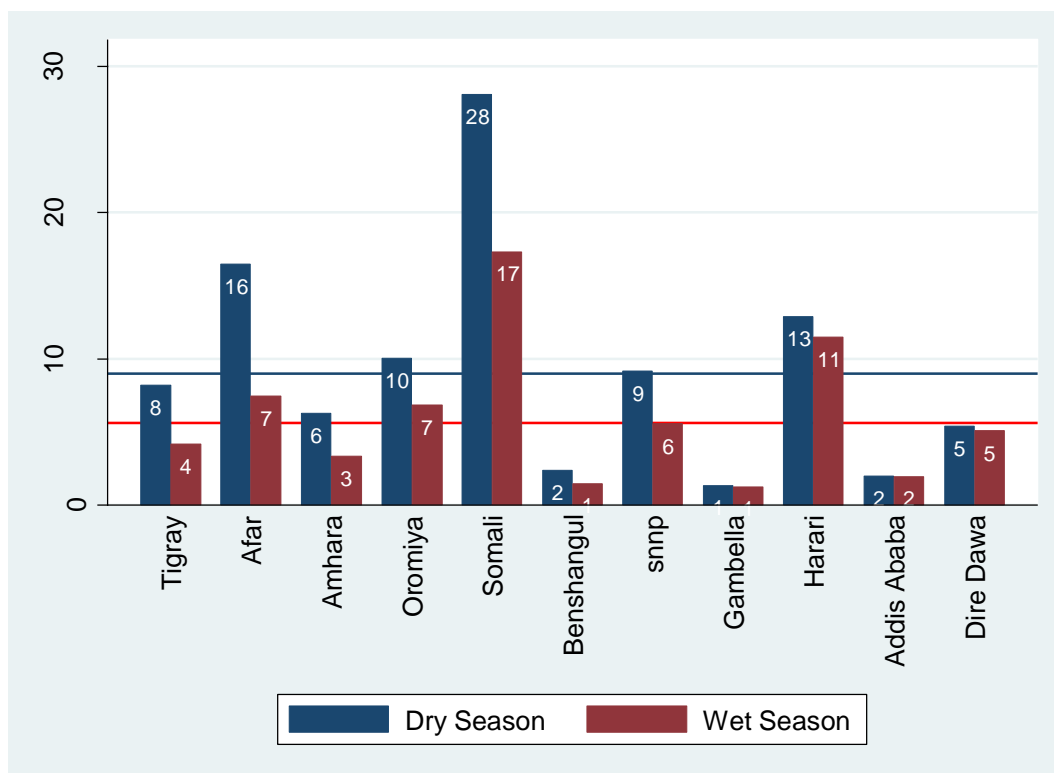
Disaggregation criterion	Category	WASH expenditures	WASH indicators					
			Access to improved water	>30 mins to water (Dry)	>30 mins to water (Wet)	Shared Toilet	Private Toilet	No toilet
None	All children	161.47	44.76	8.97	5.61	11.94	54.83	33.23
Poverty Status	Extreme poor	67.51	35.75	13.07	8.18	8.14	54.27	37.59
	Moderately Poor	104.18***	43.64***	8.79*	5.86	10.71	54.02	35.28
	Non-poor	191.56***	45.89***	8.72	5.31	12.73***	55.21	32.06*
Quintile	Poorest	88.02	41.51	10.56	6.63	10.08	53.25	36.68
	2 nd	123.74***	43.95	7.87*	5.6	10.4	54.79	34.81
	3 rd	160.36***	44.48	8.6	4.38**	11.13	55.16	33.71
	4 th	180.75***	43.77	9.45	6.14	13.34***	55.73	30.93**
	Richest	287.69***	51.7***	8.14	5.14	15.81***	55.57	28.62***
Gap	Bottom/Top Decile	0.228***	.657***	1.634** *	1.477***	0.419***	1.010***	1.407***

Source: Author's computation based on data from the HCES/ WMS (2010/11).

Note: statistical significance: *=10%; **=5%; ***=1% (first category is base category)

Water fetching time in wet and dry seasons means the percentage of household who takes more than 30 minutes to fetch water. It shows only a slight variation between richer and poorer households. However, as shown in Figure 16, there are significant variations between regions: 28% of household in Somali region spend more than 30 minutes to fetch water during the dry season, and 17% of them spend more than 30 minutes to fetch water even during the wet season. In Harari, 11% of households spend more than 30 minutes to fetch water during wet season. This is higher than the Afar region (7%) during the wet season, although Afar has the second highest rate (16%) in the dry season.

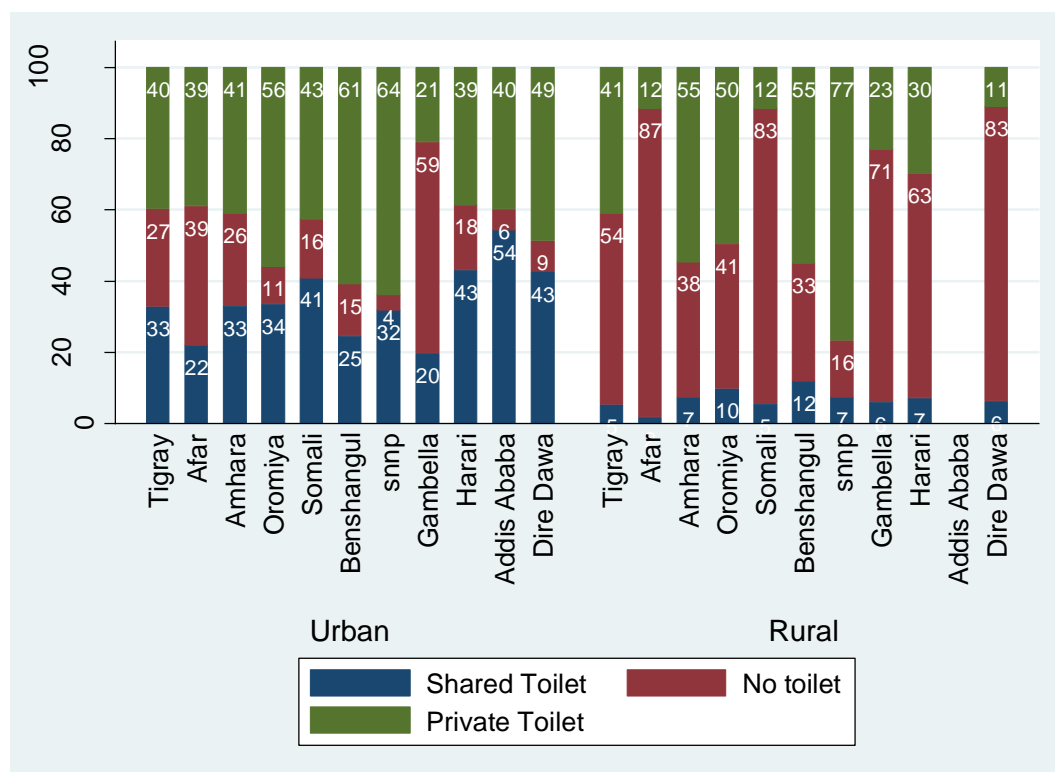
Figure 16: Distance to water in dry season



Access to Sanitation is more than 40% higher in the richest decile, compared to the poorest decile. When we disaggregate by region and area of residence (Figure 17), we find that a relatively high proportion of children in SNNP region have access to a private toilet (64% in urban area and 77% in rural area). This could be due to the SNNP regional policy to improve the access to sanitation. By contrast, only 1 in 5 children in Gambella have access to a private toilet in urban areas.

In all regions, open defecation in rural area is higher than in urban area. Particularly, more than 80% of the household in rural area of Afar, Somali, and Dire Dawa practice open defecation.

Figure 17: Access to Sanitation



5.6 Housing and Energy

Table 15 shows the housing characteristics by poverty status/quintiles. The average housing expenditure per adult equivalent per year for all children is Birr 36.9. This expenditure is composed of costs of materials and services for maintenance and repairs. We have not included rent in this indicator, since most rents in rural areas were imputed and were deemed unreliable and were therefore excluded from the final consumption aggregate used to compute official poverty statistics. There are significant variations in this expenditure by poverty status and quintiles. Non-poor households spend, on average, 20 times more than extremely poor households on housing (2.5 Birr per adult eq. /year vs. 50.6 Birr per adult eq. / year). For the top quintile, the housing expenditures rise to 107.4 per adult eq. / year.

Fuel expenditure per adult equivalent per year for all children is on average Birr 593.80. There are much smaller variations between households in terms of their fuel expenditures, as these vary from 183.6 Birr per adult eq. / year for the extreme poor to 727.5 Birr for non-poor households, reaching 1139.3 Birr among the richest 20% of households. The combined share of housing/ fuel expenditures is almost constant across income groups, at around 12% of total household consumption.

For all children about 49.9 percent live in houses that have neither adequate walls, nor adequate roof nor adequate floor (see footnote of the table for definitions⁹). There are statistically significant

⁹ The indicators were defined in a workshop with CSA based on MDG definitions, which were adapted to match the country-specific categories provided in the HCE.

variations by poverty status (63.8% for extreme poor vs. 47.4% for the non-poor). The top three quintiles are significantly different from the bottom quintiles. From the top quintiles, 39.9% live in inadequate housing as compared with 56.5% for the bottom quintile. The gap ratio is 1.64 indicating that children in the poorest decile are almost twice as likely to live in an inadequate house as those in the richest decile.

Another important characteristics of housing is overcrowding. This study has used the WHO standard, which states that a house is overcrowded if the ratio of the total number of household members divided by the total number of rooms is more than or equal to 5. Accordingly, about 36.8% of all children live in crowded housing. The poorer the children, the greater the proportion of children living in crowded housing. There are also statistically significant variations by poverty status and quintiles. For example about 32.7% of non-poor children live in overcrowded housing compared with 54.4% of the extreme poor. More than twice the proportion of children from the bottom decile live in crowded housing, compared with the top decile.

In general, there is a very low level of electricity coverage. For all children, only 15.4% have access to electric power. There are statistically significant variations by poverty status and quintiles. For the extreme poor, the electricity coverage is only 8.8% compared with 17.2% for the non-poor. 27.4% has electricity coverage for the 5th quintiles while only 11.1% for the bottom quintile. The variation is even wider when the gap ratio (0.304) is considered between the bottom and top decile.

Use of adequate fuel for all children on average is very low (1.2%). Even though there are statistically significant variations by poverty status, quintiles or when comparing the top decile with the bottom decile, the maximum proportion is 5.5% for the top decile, which shows that there is very minimal use of adequate fuel in the country.

Table 15 Housing (children aged 0-17), by poverty status / quintile

Disaggregation criterion	Category	Housing expenditures			Housing indicators			
		Exp. On Housing	Exp. on Fuel	% of total	Inadequate Housing	Crowded Housing	Access to electricity	Adequate cooking fuel
None	All children	36.90	593.80	12.02	49.92	36.81	15.35	1.20
Poverty Status	Extreme poor	2.5	183.56	11.14	63.8	54.35	8.87	.36
	Moderately poor	9.3***	337.72***	11.54	53.66**	43.78**	11.96**	.61*
	Non-poor	50.58***	727.53***	12.27	47.37**	32.69**	17.19**	1.5***
Quintile	Bottom	5.35	272.77	11.38	56.47	45.92	11.13	.5
	2 nd	14.24***	427.39***	11.65	52.76	43.59	11.94	.68*
	3 rd	29.44***	548.95***	12.01	50.08**	35.83**	13.63**	.78**

	4 th	45.96***	726.3***	12.67*	47.7***	32.61** *	15.52** *	1.09** *
	Top	107.44** *	1139.73** *	12.58	39.89** *	21.99** *	27.41** *	3.47** *
Gap	Bottom / Top Decile	0.02***	0.16***	0.92** *	1.67***	2.92***	0.30***	0.07** *

Source: Author's computation based on data from the HCES/ WMS (2010/11).
Note: statistical significance: *=10%; **=5%; ***=1% (first category is base category).
NB: Inadequate housing = inadequate walls¹⁰ + roof¹¹+ floor¹²
NB: Crowded housing= five persons or more per living room.
NB: Adequate fuel for cooking: kerosene, butane, electricity, bio-gas.

¹⁰ Adequate walls- made of stone only, bricks, blocks unplastered, blocks plastered with cement, stone and cement and stone and mud. Inadequate otherwise (wood&mud, wood&thatch, wood only, blocks unplastered, mud).

¹¹ Adequate roofs- those made of corrugated iron sheet and concrete or cement; otherwise (thatch, wood, mud, reed/bamboo, plastic canvas) considered as inadequate.

¹² Adequate floor: made of parquet or polished wood, cement screed, plastic tiles, cement tiles, ceramic/marble tiles. Inadequate otherwise (mud/dung, reed/bamboo and wood planks).

6 Conclusions and Recommendations

Children represent more than 50% of Ethiopia's population. They are a group with specific developmental needs and challenges. For instance, children are more vulnerable than adults to the effects of poverty, because issues such as malnutrition, can affect their long term development and have repercussions on their productive capacity in adulthood. This also has repercussions on the wider economy by hampering human capital formation and entrenching inter-generational transmission of poverty. Yet, surprisingly only little recent evidence exists on child poverty in Ethiopia.

This report, which was produced jointly by CSA and OPM, with the support of UNICEF, has aimed to fill some of the evidence gap in this area by providing an initial overview of the state of child poverty in Ethiopia. The main focus of this exercise has been on capacity building in order to enable CSA staff to carry out such research independently in the future.

Some of the key findings coming out of this report include:

- We found that there are 13 million Ethiopian children who live in poor households. Furthermore, more than 2 million Ethiopian children live in extreme poverty, meaning that their total household expenditures would be insufficient to meet the children's minimum nutritional requirements even if they spent it all on food.
- Children are more severely affected by poverty than adults. Indeed, the poverty headcount ratio for children (32.4%) is almost 3 percentage points higher than the national poverty rate. This is statistically significant at the 1% level. Similarly, extreme poverty among children is 5.2%, compared to 4.5% for the entire population (significant at 1%).
- The poorest children are found in households whose head is employed in the informal sector. 13.1% of these children live in extreme poverty. The highest rates of child poverty are found in very large households (more than 9 members) and non-Christian/ non-Muslim households.
- Children engaged in child labour and out-of-school children tend to have lower aggregate levels of consumption than other children, but do not have higher poverty rates. This suggests that child labour may, in some cases, be a mitigating strategy that allows households to escape poverty.
- The highest rates of inequality among children are found in Tigray and Addis Ababa. Inequality hampers the fight against poverty, as evidenced by the fact that Tigray has one of the highest levels of child poverty in the country (37%), in spite of having one of the highest average levels of household consumption.
- The largest gaps between rich and poor children are found in the areas of health and nutrition. Children in the poorest decile receive less than half the daily caloric intake of children in the top decile. Furthermore, we find that a child in the bottom decile is 3.5 times more likely to have an untreated diarrhoea and almost twice as likely to have an untreated malaria, compared to a child in the top decile. The poorest children are also 4 times less likely to have had an assisted delivery at birth.
- There are also significant differences between rich and poor children in terms of access to schooling, and to adequate housing. A child in the poorest decile was 67% more likely than a child in the richest decile to live in inadequate housing, and almost 3 times more likely to

live in a crowded house. Similarly, a child in the top decile is more than twice as likely to complete primary school before 18 as a child in the bottom decile.

Other indicators, such as child protection and water and sanitation, showed more variation by area of residence and geographic location than by income level, suggesting that local climatic or cultural conditions may be more determining factors than income.

The descriptive nature of this report does not lend itself easily to the formulation of policy recommendations. However, some obvious empirical regularities appear to emerge from the above findings, which merit further investigation, and which should inform the way in which policy makers approach the various aspects of child wellbeing reviewed in this report. In particular, we distinguish between the three following types of dimensions of child well-being:

1. **Strongly Correlated with monetary poverty:** Most aspects of child wellbeing, including health outcomes, school completion, and housing quality appears to be strongly correlated with household income or consumption, as is to be expected. Reducing income poverty and providing better economic opportunities to parents must therefore remain a key tenet of the approach to addressing poverty. As the case of Tigray shows, however, it is important to focus not only on stimulating economic growth, but also on reducing inequality by ensuring growth is sufficiently broad-based and inclusive to benefit the poorest segments of society. Furthermore, it is important to identify hard-to reach pockets of extreme poverty, which can persist even in the midst of relative abundance. For instance, our analysis shows that poverty rates remain high in Addis Ababa, in spite of it having the highest average income per capita. In particular, the data suggest that children living in household headed by persons working in the informal urban sector are particularly vulnerable to extreme poverty. Similarly, the data show that children living in non-Muslim/ non-Christian religion are particularly exposed to poverty.
2. **Partially or moderately correlated with monetary poverty:** The detailed analysis of human development outcomes reveals a more complex picture, in which, financial barriers are only one of the issues holding children back from accessing public services. For instance, we saw that school attendance indicators did not vary much by income levels, except for the poorest households. This suggests that supply side constraints have largely been eased through the provision of free universal primary education. However, reaching the extreme poor might require a more refined set of demand-side interventions, addressing both opportunity costs, and non-financial aspects, such as geographic isolation, parental awareness, cultural attitudes and/ or discrimination. Similarly, we observed that some aspects of food security appeared to be only weakly influenced by income level, once geographic aspects were taken into account. In such cases, public investments in transport or irrigation infrastructure may be required to address structural bottlenecks that prevent entire regions from accessing certain goods.
3. **Weakly correlated with monetary poverty:** a final group of child well-being indicators did not seem to be strongly correlated with monetary poverty. These included cultural practices, such as FGM and other child protection issues, which varied mostly by gender and geographic location. This points to the predominant role of cultural norms and other factors that are only indirectly and weakly related to economic status. For these issues, an altogether different approach will be required, focusing on cultural and non-financial barriers.

While these conclusions are significant, they are still only scratching the surface of the condition of children in Ethiopia. In particular, our research, and our ability to draw policy conclusions from it, were constrained by the following factor:

- Consumption data is collected at the household level. Child poverty estimates are therefore based on per capita assessments of total household consumption, adjusted for demographic composition of the household. It does not allow us to explore intra-household allocation to, for instance, identify gender imbalances, or discrimination against particularly vulnerable groups, such as disabled children or orphans.
- Monetary poverty is estimated based on a standard consumption basket based on typical nutritional requirements of a representative adult. It does not take into account the specific developmental needs of children. Nor does it capture non-monetary deprivations related to psycho-social wellbeing, etc.
- The most recent available survey is the HCES 2010/11, which is now 5 years old. Furthermore, this survey was designed to estimate national poverty rates and was not specifically designed to identify issues relevant to children. It will therefore be important to update these findings when new data are collected in the HCES which is scheduled for next year. It will also be important, to the extent possible, to ensure that future surveys are designed to capture issues that are relevant to children.
- Finally, we note that our analysis identified very large households as being amongst the poorest. However, we also note that the adult equivalence scale used in Ethiopia, while providing a very detailed breakdown of nutritional requirements by age and gender, does not take into account possible economies of scale arising as a result of shared household resources. For this reason, it is possible that the poverty of large households is overestimated in our study. This suggests that it would be useful to scrutinise and possibly refine the adult equivalence scale to take into account these issues.

In order to address these issues and gain a deeper understanding of the problems affecting Ethiopian children, it will be important to complement this initial study with further in-depth investigations of intra-household distribution of poverty, as well as multi-dimensional child poverty.

The need for high quality and in-depth evidence on the situation of children is all the more important in light of the impending completion of the MDG framework and its replacement by new Sustainable Development Goals (SDGs) stretching until 2030.

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Annex A Methodological Notes

A.1 'Annex heading 1' style

Body text.

A.2 Datasets

This study was conducted using the 2010/11 HCES and WMS surveys, which were designed and conducted by the CSA. Consumption aggregates, inequality estimates and poverty estimates were computed using HCES data, whereas human development indicators are computed from WMS data. The HCES and WMS data were collected at different times during the year, but use the same household identifiers. They can therefore be merged and analysed jointly at the household level, but not at the individual level.

- **Sample design:** The 2010/11 HCE survey covered all rural and urban areas of the country except non sedentary area in Afar and Somali (three and six zones, respectively) . For the purpose of representative sample selection, the country was divided in to three broad categories, i.e. rural, major urban centres and other urban areas. In the first two categories, a two stage stratified sampling technique was implemented whereby the Enumeration Areas (EAs) were considered as a Primary Sampling Unit and the households were considered as the Secondary Sampling Unit. The EAs were selected using the Probability Proportional to Size, size being the number of households obtained from the 2007 Population and Housing Census while the households were systematically selected from the fresh list of households within the EA made during the survey. For the other urban category, a three stage stratified sampling technique was utilized. In this case, the first stage of sampling involved selecting urban centres.
- **Sample size:** At country level, a total of 864 EAs and 10368 households (12 households per EA) were selected to represent rural and a total of 1104 EAs and 17,664 sample households (16 households per EA) were selected for urban domains, specifically, 576 EAs and 9216 households and 528 EAs and 8448 households to represent major urban and other urban areas, respectively.
- **Sample Coverage:** In rural areas out of the 864 EAs 862 EAs and out of the 10368 households, 10320 households were successfully covered by the survey which gives a response rate of 99.7%. Similarly, in urban areas all EAs were fully covered by the survey. However, with respect to households, only 150 households were not covered by the survey. In the end it was possible to obtain clean data from 27830 households. The WMS had a coverage of 863 and 11037 EAs in rural and urban areas respectively.
- **Data collection:** The data collection of the HCE survey has taken place for one full year from 8 July 2010 to 7 July 2011. A total of 82 data collection team, each composed of two enumerators and one supervisor/field editor, were organized in order to execute the field work. Furthermore, these 82 teams were organized in 25 CSA branch offices, each headed by an experienced statistician. Each team was responsible to collect data in at most 24 EAs. WMS data collection took place from 27 April to 25 June 2011. A total of 366 enumerators and 167 field supervisors with an average supervisor-enumerator ratio of 1 to 2, 25 heads of branch offices and 25 statisticians were involved in the field work.

A.3 Consumption Aggregates

There are a number of conceptual approaches to the measurement of welfare in a household (World Bank Institute, 2005). The most common one is to measure economic welfare based on household consumption expenditure or household income. The actual final consumption of a household is the sum of its household consumption expenditure plus the value of consumer goods and services acquired or used through transfers from government, non-profit institutions and other households (HCES 2012 statistical report). This is the most appropriate concept for welfare analysis, as it takes into account all consumer goods and services available to a household for the satisfaction of the needs and wants of its members. However, some social transfers, such as free education, health, etc., which are received in the form of services from government and non-profit institutions and in the form of other services from households are extremely difficult to value and have therefore been excluded from all HCE data in the Ethiopian context.

On the other hand, household expenditure is defined as the sum of household consumption expenditure and non-consumption expenditures of the household. “Non-consumption expenditures” are those that are incurred by a household without acquiring (receiving) any goods or services in return for the satisfaction of the needs of its members (i.e., ignoring any potential goodwill). Household expenditure represents the total outlay made by a household to satisfy its needs and meet its “legal” commitments. The non-consumption expenditures of households include current transfers of cash, goods and services to other households such as gifts donations, remittances, alimony, child support, etc. Other items included are contributions to non-profit institutions that do not give rise to the provisions of goods and services to the donor household: compulsory transfers to government such as income and other direct taxes (e.g. wealth taxes), compulsory fees and fines, and social security contributions (CSA, 2012).

The following adjustments have been made when constructing the consumption aggregates used in this section:

Adult Equivalence: For 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). 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)¹³.

Price Index: 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. The spatial price index used to adjust consumption levels across regions, was computed by MOFED using Consumer Price Index (CPI) data.

Consumption aggregate: For the training, consumption aggregates were computed using the above described method. However, in order to replicate the official poverty statistics the consumption aggregates provided by MoFED was used. Consequently, to compute poverty and inequality figures, we used ready consumption aggregates provided by MOFED. Further computations were done for all indicators requiring disaggregated consumption figures.

¹³ MoFED. (2008). Dynamics of growth and poverty in Ethiopia (1995/96-2004/05). Development Planning and Research Department, Ministry of Finance and Economic Development. April, 2008, Addis Ababa, Ethiopia.

A.4 Poverty

The poverty line was computed using a Cost of Basic Needs (CBN) approach. The poverty line was first computed in the context of the 1995/96 Poverty Analysis Report (MoFED, 2012). This was based on the cost of 2,200 kcal per day per adult food consumption with an allowance for essential non-food items.

The food and total poverty lines used since 1995/96 in the country are 648 and 1075 birr at national average prices, respectively. To use these poverty lines and compute poverty indices, the per adult consumption expenditure has been updated by deflating all food and non-food 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 do so groups of consumption items defined in 1995/96 that generate 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% 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.

A.5 Inequality

Measures of Inequalities

The most common methods of measuring inequalities are used in this study for measuring inequalities for the child and overall population.

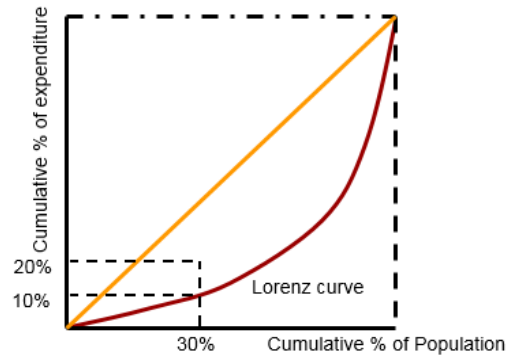
1. Lorenz curve

The popular way of expressing inequality graphically is through a Lorenz diagram, which plots the cumulative share of consumption expenditure against the cumulative share of population.

The Lorenz curve plots the cumulative proportion of consumption expenditure consumed by the poorest x% of the population for different values of x. On the horizontal axis the cumulative proportion of the overall population and the child population is taken into account after ranking the population from the poorest to the richest. On the vertical axis, the cumulative proportion of consumption expenditure is represented.

The Lorenz curve tells us what percent of the consumption expenditures/wealth is owned by x% of the poorest population. Generally Lorenz curve has the following appearance:

Figure _: Lorenz curve



In the above figure for example the poorest 30% of the population have 10% of the total consumption. The Lorenz curve has a positive slope which means that as the cumulative proportion of population increases the cumulative consumption expenditure increases. The further away from the 45 degree line the higher the inequality and vice versa.

2. Gini coefficient

Another method used for measuring inequality is the Gini coefficient. The Gini coefficient is derived from the Lorenz curve, and is defined as the area between the Lorenz curve and the 45 degree line divided by the total area under the 45 degree line. This inequality index takes the value from 0 (perfect equality) to 1 (perfect inequality where one person earns all the income). The Gini coefficient can also be mathematically computed using the following formula:

$$G = \frac{1}{2} n^2 \sum_{i=1}^n \sum_{j=1}^n |y_i - y_j|$$

where G is the Gini coefficient

n is number of sample

y_i is the consumption expenditure the i^{th} observation

y_j is the consumption expenditure of the j^{th} observation

3. Decile Dispersion Ratio

The decile dispersion ratio presents the ratio of the average consumption of the 10 percent of the population (90th percentile) to the average consumption of 10 percent (10th percentile) of the poorest population to measure the extent of inequality. It is easily interpretable in that it compares the average consumption of top 10 percent- the rich-against the average consumption of the poorest decile. It does not take into consideration the consumptions of the middle income group and does not also use the distribution of consumption within the top and bottom deciles.

4. Quintiles

A quintile represents 20% of the population, where the population has been ranked from poorest to richest. The first or bottom quintile thus represents the 20% poorest individuals in the population, whereas the fifth, or top quintile refers to the richest 20%.

Annex B Concepts and Definition

The terms and basic conceptual points are grouped by: Household Survey, Area of residence, Household characteristics, Employment & Enterprise, Household expenditure and Calorie/food energy.

Household Survey

Household survey is a method of data collection using interviewer/enumerators with designated households as to obtain and record responses (with application of practical measurement if necessary) to a specific list of questions and/or area of interest. A survey differs from a census in that only a sample of households is covered.

Area of Residence

Urban Centre: An urban centre, in principle, is defined as a locality with 2000 or more inhabitants. In this survey, however, for practical purposes an urban centre includes the following regardless of the number of inhabitants.

- i. All administrative capitals (Regional, Zonal and Wereda capitals),
- ii. Localities with Urban Dweller's Areas (UDAs) not included in (i),
- iii. All localities that are not included either in (i) or (ii) and which have a population of 1000 or more persons and whose inhabitants are primarily engaged in non- agricultural activities.

Urban Kebele (UK): is the lowest administrative unit in an urban centre with its own jurisdiction. It is a locality (commonly known as Kebele) formed by the inhabitants of urban dwellers and usually constitutes a part of the urban centre.

Rural Kebele (RK) is the lowest administrative unit in a settled rural area with its own jurisdiction. It is an association of rural dwellers formed by the inhabitants of a given area whose members are engaged either in agricultural and/or non-agricultural activities.

Enumeration Area (EA): is a unit of land delineated for the purpose of enumeration housing units and population without omission and duplication. An EA usually consists of 150 to 200 households in rural areas and 150 to 200 housing units in urban areas. An enumeration area should be related to an urban or a rural kebele in one of the following ways.

- An EA may be equal to an RK if the number of the households in the RK is less than or equal to 150 – 200 in rural areas; and is equal to a UK in urban areas if the number of housing units in the UK is 150 – 200.
- An EA may be a part of an RK or a UK and its delineation cannot extend outside the boundary of the corresponding an RK or a UK.

Collective Quarter: A collective quarter is a premise (a housing unit, a building or a compound) in which a number of unrelated persons reside together, and share common facilities. Examples of

collective quarters are monasteries, prisons, boarding schools, home for aged, children's homes, work camps, military barracks, etc. It is important to note that in the premises of some collective quarters, there may be private households.

Household Characteristics

Household: Constitutes of a person or group of persons, irrespective of whether related or not who normally live together in the same housing unit or group of housing units and who have common cooking arrangements.

Head of Household: head of a household is a person who economically supports or manages the household or for reasons of age or respect, is considered as head by members of the household or declares himself as head of a household. Head of a household could be male or female.

Member of Household: Person constituting a household is called member of the household. The following are considered as members of a household:

- i. All persons who lived and ate with the household for at least six months including those who were not within the household at the time of the survey and were expected to be absent from the household for less than six months.
- ii. All guests and visitors who ate and stayed with the household for six months and more.
- iii. Housemaids, guards, baby-sitters, etc. who lived and ate with the household even for less than six months.

Household Size: Is the total number of members of a household.

Household Expenditure

Consumer goods and Services: goods and services used by a household to directly satisfy the personal needs and wants of its members

Household consumption expenditure: is the value of consumer goods and services acquired, used or paid for by a household through direct monetary purchases, own account production, barter or as income in kind for the satisfaction of the needs and wants of its members.

Actual final consumption: The actual final consumption of a household is the sum of its household consumption expenditure plus the value of consumer goods and services acquired or used through transfers from government, non-profit institutions and other households. This is the most appropriate concept for welfare analysis as it takes into account all consumer goods and services available to a household for the satisfaction of the needs and wants of its members. However some social transfers, such as free education, health, etc, which are received in the form of services from government and non-profit institutions and in the form of other services from households are extremely difficult to value and have therefore been excluded from all HCE data in the Ethiopian context.

Household expenditure: is defined as the sum of household consumption expenditure and non-consumption expenditures of the household. “Non-consumption expenditures” are those that are incurred by a household without acquiring (receiving) any goods or services in return for the satisfaction of the needs of its members. (i.e., ignoring any potential goodwill) Household expenditure represents the total outlay made by a household to satisfy its needs and meet its “legal” commitments. The non-consumption expenditures of households include current transfers of cash, goods and services to other households such as gifts donations, remittances, alimony, child support, etc. Other items included are contributions to non-profit institutions that do not give rise to the provisions of goods and services to the donor household: compulsory transfers to government such as income and other direct taxes (e.g. wealth taxes), compulsory fees and fines, and social security contributions.

Household Expenditure Quintile: The household expenditure quintiles are used to disaggregate households by total household expenditure levels. The quintiles are calculated by first ordering all households in ascending order by value of household expenditure and then dividing them into five equal parts such that the first group includes the 20% of households with the lowest annual expenditure and the last group includes the 20% of households with the highest annual household expenditure.

Calorie/Food Energy

Calorie: is an energy required to heat a gram of water by one degree Celsius. A kilocalorie, termed as Kcal, is equivalent to 1000 calories.

Gross calorie: The total number of calories/Kilocalories in a given weight of food product, prior to discarding any inedible materials. In other words, Gross calorie refers to crude calorie that is estimated based on total purchased/produced weight of consumed food items without discarding any inedible. These are determined mainly, based on the Food Composition Tables (FCT) prepared by the Ethiopian Health and Nutrition Research Institute (ENHRI) and the Food and Agriculture Organization of the United Nations (FAO), 1998.

Net Calorie: The total number of Calories/Kilocalories in a given weight of food after removing the inedible portions. It is the gross calorie deflated by (or minus) the proportion of the inedible portion (part/material), termed as refuse. It is also derived from the FCT calculated by the ENHRI and the FAO, 1998.