

Review Article on Poverty Status and Income Inequality in Ethiopia

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ABSTRACT

The paper aimed to organize the main findings of different scholars studied on poverty and income inequality in Ethiopia since started from 2015 to 2020 in one window. This paper is a detailed review article based on an intensive reading of both published and unpublished articles and books obtained from different sources. 75% of the reviewed studies have a head count index higher than the national head count index estimated by Ethiopian Plan and Development commission (0.235). All reviewed papers revealed that there is a high level of income inequality variation among households above the national value (0.328) estimated in 2016. The incidence, gap and severity of poverty can vary from region to region or district to district based on their agro-ecological location, resources or socioeconomic factors. This review paper forwarded that, a holistic pro-poor enhanced policies were need for Ethiopians to stop hunger and eradicate the severity of poverty in all dimensions as well as to narrow the income gap among households.

Keywords: Poverty; Income Inequality; FGT; Ethiopia

INTRODUCTION

Ethiopia is a nation characterized by Africa's second most populous country (more than 108 million people) after Nigeria and the fastest growing nation on the region. The main drivers of its economic growth are agricultural production and services, sustained by foreign development aid. In 2019, GDP grows at 7.4%, for this year (2020) it's expected to slightly decrease to 7.2% and will reducing slightly to 7.1% in 2021(IMF, 2020; AEO, 2020). But in actual data, Prime Minister Abiy Ahmed said to the Parliament members as 'Ethiopia's economy grew by 6.1% in the 2019/20 fiscal year to July, less than originally projected because of the impact of the coronavirus pandemic'. In 2019, the share of agriculture in Ethiopia's gross domestic product was 33.88%, industry contributed approximately 24.77% and the services sector contributed about 36.87% [1].

Poverty is pronounced deprivation in well-being. Lack of income and assets to attain basic necessities, lack of access to education and other basic services, and vulnerability to adverse shock are the main causes of poverty. The Government of Ethiopia believes that development

should be manifested through addressing such deprivation of the society. Accordingly, the government has formulated pro-poor development policies and strategies through public participation to ensure overall economic development and eradicate multidimensional poverty.

The food and absolute poverty lines for 2015/16 are determined to be Birr 3,781 and 7,184, respectively. The share of the population below the national poverty line in 2016 was approximately 24% which means that the proportion of population living under the national absolute poverty line was one in four Ethiopians. Time series economic data shows that Ethiopia recorded decrement of poverty rate but still the nation has a lower poverty elasticity (0.33%). For the last two decades between 1997 and 2016, a 1% increment in per capita GDP was associated with a 0.33% decrement in poverty rates. Income inequality also increased slightly from 0.30% in 2011 to 0.33% in 2016, as a result of an increasing disparity in consumption between rural and urban areas.

One of the aim of Sustainable Development Goals (SDGs) were ending poverty and hunger from all people everywhere by 2030.

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However, Ethiopia is identified as one of the poorest country in the world by all standard measures of poverty (SDGC/A, 2019; UNDP, 2018). Even if there is poverty in Ethiopia, the country has a reasonable good resource potentials- including large number of active labor force, arable land, bio-diversity suitable to tourism activity, water resources, minerals, etc. which can be used as a base for development and to eradicate poverty. Besides, the government of Ethiopia has launched different policies to alleviate poverty and narrowing income gaps among peoples by effectively use of these potential resources. So, this paper aimed to organize the main findings of different scholars studied on poverty and income inequality in different parts of the country since started from 2015 to 2020 in one window. Because, the measurement and analysis of poverty and income inequality is crucial for understanding peoples' situations of well-being and the factors determining their poverty situations. The outcomes of the analysis are often used to inform policy making as well as in designing appropriate interventions and for assessing effectiveness of on-going policies and strategies.

Objectives

- The general objective of this review paper was to examine poverty status and income inequality level of households in Ethiopia and specifically;
- To review the level of poverty status of households in Ethiopia,
- To review income inequality among households in Ethiopia and
- To review the determinants of poverty in Ethiopia.

Methodology

This article is a detailed review paper on poverty and income inequality in Ethiopia based on secondary sources obtained from previous researches conducted by different scholars in different parts of the country in between 2015 to 2020. In addition, this article is a desk work based on an intensive reading of published and unpublished journals, articles and books obtained from different sources. In each paragraph of the paper; short conclusions or summaries through descriptive narrations and tables were used as a review technique. The analysis of different scholar's research finding in different parts of a nation is made in comparison of the output estimated by Ethiopian Plan and Development Commission at national level in 2018.

REVIEW LITERATURE

This section briefly discuss the main findings of those researches conducted by different scholars focused on poverty status, income inequality and determinants of poverty at a household level both in rural and urban areas of Ethiopia since started from 2015 to 2020.

Poverty status in ethiopia

Poverty line is a well-defined level of standard of living, in which a person having below that specified level is deemed to be poor. Literatures shows that there are two approaches to fix poverty

line. The first one is a welfares approach which sets poverty line in terms of a reference utility level that can be thought of as a poverty line in utility space while the second one is non-welfares approach which uses caloric requirement. Again in non-welfare approach, direct caloric intake method, food energy intake method and cost of basic needs method are the three most applicable methods to set poverty line. Hence direct caloric intake and food energy intake methods doesn't take in to account the cost of obtaining these calories, ignoring non-food needs and doesn't yield a consistent threshold (poverty line) across groups, regions, and periods. But, cost of basic needs method can handle those problems and all of the researchers included under this review paper has used this method to set the poverty line.

In addition, in those papers consumption or expenditure approach developed by Foster, Greer, and Thorbecke [2] is used as the gauge to measure poverty status among households than income approach because, in Ethiopia consumption is likely to have less measurement error and more accuracy than income method. Those scholars also used headcount index, poverty gap and severity of poverty as a measure of level of poverty status or indices and also 2200 kcal could be used as the lowest calorie intake needed to sustain an adult equivalent for a day in Ethiopia.

Study area	HCI	PGI	PSI	FPL	TPL	GC	Authors and year
Afar	0.337	0.114	0.054	3470.5 2	4670.4	0.592	Araya et al., 2019
Doyogena	0.430	0.232	0.145	2938.8	3820.4 4	-	Girma and Temesgen, 2018
Banja	0.44	0.09	0.02	3232.4 2	4301.8 5	-	Desalegn et al., 2020
Girara jarso	0.45	0.186	0.099	3363.1 1	4163.1 1	0.33	Derege and Hymnot, 2018
N.W. Eth.	0.194	0.047	0.018	-	7828.3 2	0.379	Anteneh, 2020
Dejen	0.49	0.083	0.065		3781	-	Ermiyas et al., 2019
SNNPR	0.180	0.053	0.023	2,694. 33	4,230. 10	-	Mohammed, 2017

Tenta	0.673	-	-	3733.2	4649.1	-	Anten eh and Daniel , 2019
Ethiopia	0.235	0.067	0.028	3781	7184	0.328	PDC, 2018

Table 1: Poverty status Source: Authors compilation from different research papers, 2020

Basically, table 1 above shows the incidence, gap and severity of poverty in different parts of Ethiopia and the following analysis is made in comparison with the report made by Plan and Development Commission on 2018.

The first one measurement of poverty status is head count index (incidence of poverty) which shows the share of the population whose consumption is below the poverty line or in other words it shows, the share of the population that cannot afford to buy a basic basket of goods. Among the reviewed studies, the highest head count index value was recorded on the Tenta district (0.673) and the lowest figure was obtained on Southern Nations and Nationality Peoples of Ethiopia (SNNPE) (0.180). It revealed that 67.3% of households in Tenta district and 18% of the household in SNNPE were fails below the poverty line of the minimum calorie intake required to sustain a healthy life. 75% of the reviewed papers has a head count index above the national head count index estimated by Ethiopian plan and development commission (0.235) while the remaining 25% of them was less than the national figure which revealed that there is high incidence of poverty.

The second measurement is that depth of poverty (poverty gap).This method provides information regarding how far households are far from the poverty line. This measure captures the mean aggregate consumption shortfall relative to the poverty line across the whole population. The poverty gap index of Doyogena districts have the highest value (0.232) and the lowest value is in north western Ethiopia (0.047). This exposed that, the poor households require an additional 23.2% and 4.7% of the present consumption expenditure to attain their minimum basic needs in Doyogena district and north western Ethiopia, respectively. In addition, 71.43% of the reviewed papers also revealed that there is a highest poverty gap index even larger than the national head count index (0.067).

The last but not the least measurement is poverty severity (squared poverty gap) which takes into account not only the distance separating the poor from the poverty line (the poverty gap), but also the inequality among the poor, that is, a higher weight is placed on those households further away from the poverty. So in the above table 1, the highest severity index was exists on Doyogena district (0.145) implying that there is 14.5% consumption inequality among sampled poor household in the study area while, the lowest severity index was recorded on north western Ethiopia.

As a general, majority of the reviewed studies clearly publicized that the incidence, gap and severity of poverty indices in all measures of FGT were higher than the national figure. It

indicated that, the incidence, gap and severity of poverty can vary from region to region or district to district based on their agro-ecological location, resources or socioeconomic factors. That means some areas may have good environment for agricultural production, some part of the nation may have good geographic location for tourism activity and while others may have a strategic location for industry sector. Therefore, the government or policy makers should design area specific pro poor poverty reduction mechanism based on the resources what the area really have and lacks. In addition, almost in all reviewed papers both the food and total poverty lines are below the corresponding national figure estimated by the Plan and Development Commission of Ethiopia since in 2018.

Income inequality in ethiopia

As measured by Gini-coefficient, income inequality has shown variation among households in different regions of the nation. From table 1, the study conducted on the Afar region has the highest Gini-coefficient (0.592) revealed that there is high level of variation or income inequality among households in Afar region while Girara jarso district has relatively lower income inequality (0.33) than others. As a general all reviewed papers (100%) disclosed that there is a high level of income inequality variation among households above the national value (0.328) estimated in 2018.

Determinants of poverty

On the previous sections, most scholars indicated as poverty is a multidimensional concept in terms of measurement and determinant factors and also its magnitude, depth and severity can vary from person to person or from place to place or from time to time due to difference in demographic, socioeconomic and institutional factors. So, the next section of the paper clarify and deeply review only the main explanatory variables commonly used by researchers and they have a significant influence on poverty status of households both in rural and urban areas of Ethiopia.

Variables	Sign
Gender (female)	Positive
Marital status (married)	Positive
Age	Nonlinear
	Positive
Education	Negative
Family size	Positive
Dependency ratio	Positive
Land holding	Negative
Off-farm income	Negative
	Positive

Livestock holding	Negative
Credit	Negative

Table 2. Summary of the relationship between explanatory variables with poverty in Ethiopia Source: Authors compilation from different research papers, 2020

Gender Vs poverty

Being a male headed or female headed household has its own influence on their livelihood in particular and poverty status as a general. Moreover, vulnerability to poverty and their path out of poverty will also vary from household to household based on the gender features of household head. The study conducted by [3] on determinants of vulnerability to poverty in female headed households in rural Ethiopia based on the time series data of Ethiopian Rural Household Survey from 1999- 2009 also support this argument. The main finding of those authors showed that, the dynamism of into and out of poverty i.e. the number of those who are entering into poverty is (36.14%) relatively higher than the number of those who exit out of poverty (18.80%). More specifically, female headed households (18.58%) face more difficulty to move out of poverty when compared to male headed households (19.01%). On the other hand, female headed households are more vulnerable (37.15%) to enter into poverty than male headed (35.12%) during 2009 survey year.

[4][5][6] and [7] also stated in their study that, being female headship in their household is positively affect the likelihood of remaining poor or in other word the probability of being poor for male headed households are lower than female headed. This might be due to female headed households are more busy on child care activities or women's may not get equal opportunity in the labor market, education access and asset ownership.

Marital status Vs poverty

Marital status of a household head has their own implication on income, consumption expenditure and poverty status of a household as a whole. Regarding to its effect, there are two arguments supported by researchers. The first one is a married household head has lower incidence for poverty as a result of married household heads have an advantage of having on average a higher income than the other categories [8]. But, this case is true only for other nations except Ethiopia. The second argument is that married households are more vulnerable for poverty and this argument is true for Ethiopia where there is early marriage and economically inactive cases are popular. Teshome and Sharma and [9] also argued that as compared to a single individual, a married household heads has more likely to being poor in Ethiopia.

Age Vs poverty

In most cases different authors argued that age and poverty has no linear relationship. Because under the young and retired age the possibility of being poor is higher while at the working age group (14 to 64) it might be lower. Therefore, to handle such

problem researchers like Alemi and Derege and Mohammed used age square. The argument made by Fasil shows that on average as age of household head increases vulnerability to poverty will also increase. Because in developing countries, peoples have less saving capacity and habit which tends to decrease accumulate assets.

Educational status of households Vs poverty

Education is the weapon to eradicate poverty because it helps to understand information easily and increase their knowledge how to effectively use their resources. Education also used as an indicator to measure poverty by some scholars like as [10]. By having thus as a background information let us see the empirical findings on the relationship between education and poverty.

Educated household heads are less likely to be poor than those uneducated household heads. Because, educated household heads know how to lead their family members economically and also they have an opportunity to earn more off-farm income and conduct any economic activities based on knowledge that makes profitable enough [11]: Teshome and Sharma, Mohammed.

Family size Vs poverty

Family size means the number of individuals including parents, children and relatives living in one house under a common decision making process. The study conducted by Teshome and Sharma, [12], Fasil, Ermiyas, Desalegn revealed that, households with a large family size have more probability of being falling into the poor category than those having less family size in Ethiopia. Because if the numbers of families are larger and larger it is difficult to meet the food and non-food requirements and the problem is sever if they are economically inactive.

Dependency ratio Vs poverty

In addition to family size dependency ratio has its own influence on poverty. Dependency ratio is a ratio of the number of economically inactive population (aged <14 and >64) compared with working age group (15 to 64). The larger the dependency, economically active population takes burden of supporting the large dependent group of population which substantially increase the probability of being poor by reducing individual's income and consumption shares (Teshome and Sharma, Mohammed, Ermiyas).

Land holding Vs poverty

Agriculture, especially crop production is the mainstay of livelihood in Ethiopia, so land holding size for crop production has its own typical influence on poverty. Authors like Teshome and Sharma, Muhdin, Fasil, Anteneh and Daniel, revealed in their study that, as land holding size of a household increased by one hectare, the probability of being poor could be decreased noticeably and also the nature of poor households have either no land or small in size. The main reason behind it is that, land can be used as a source of employment, source of asset, source of income, means of livelihood and as a general land is everything for rural households. Therefore, the poverty status of a household depends on the size of land that he/she have.

Off-farm income vs poverty

Even if agriculture is the main source income for households in Ethiopia, other source of income including trade, remittance, aids from different sources (like safety net program), wage and salary have its own impact for households to enter in to or exit out of poverty trap. The researchers Fasil, [13] and Anteneh argued that, income diversification from different sources other than agriculture and its allied activities helps to reduce the likelihood of households being poor by satisfy households income constraints for consumption availability and also it contribute a certain percentage of poor households to escape from extreme poverty. On the contrary to this, authors like Anteneh and Daniel revealed that as a household has engaged in off-farm activities increases the probability of being poor. Because off-farm activities were not practiced as a means of accumulating more wealth for further profitability and productivity rather they used it as a means of coping mechanisms and alternative activities to sustain their hand to mouth livelihood. As a general the effect of off-farm income on poverty status of a household in Ethiopia depends on their ability to get access to and handle non-farm/off-farm income opportunities [14].

Livestock holding vs poverty

Rearing of livestock is the main means of livelihood in pastoral areas and also for highlanders together with crop production. So, livestock holding and poverty has a strong relationship. Fasil, Muhdin, Ermiyas, Desalegn, revealed that increment in livestock ownership by one TLU could reduce the chance of households to fall in poverty. The main reason is that livestock rearing and possession of livestock can increase the wealth of the rural household and raises the income earning potential, as well as it can be used as a source of cash income, insurance against drought, store of value, etc... So, in order to eradicate poverty in pastoral areas positive intervention on livestock production through different policy package is necessary [15].

Credit vs poverty

The study conducted by Fasil and Desalegn shows the negative relationship between poverty and credit amount that is as a household receives credit, the probability of a household being poor decreases. Because credit plays a vital role when cash constraint happened either to finance farm input and/or purchase other immediate food and non-food basic requirements. Besides, credit helps for households to involve in long term income generating activities that ultimately help them move out of poverty trap.

CONCLUSION

In all reviewed papers, consumption or expenditure approach developed by FGT is used as a gauge to measure poverty status among households than income approach because, in Ethiopia consumption is likely to have less measurement error and more accuracy than income method. In addition, 2200 kcal could be

used as the lowest calorie intake needed to sustain an adult equivalent for a day in Ethiopia.

Among the reviewed studies, the highest head count index value was recorded on the Tenta district (0.673) and the lowest figure was obtained on Southern Nations and Nationality Peoples of Ethiopia (SNNPE) (0.180). It revealed that 67.3% of households in Tenta district and 18% of the household in SNNPE were fails below the poverty line of the minimum calorie intake required to sustain a healthy or normal life. Among eight researches reviewed on the topic, 25% of them shows a head count index which is less than the national head count index estimated by Ethiopian Plan and Development Commission (0.235) while the remaining 75% of them was above the national figure. 71.43% of the reviewed papers also revealed there is a highest poverty gap index even larger than the national head count index (0.067). The highest severity index was exists on Doyogena district (0.145) implying that there is 14.5% consumption inequality among sampled poor household in the study area while, the lowest severity index was recorded on North western Ethiopia [16]. As a general, majority of the reviewed studies clearly revealed that, the incidence, gap and severity of poverty indices in all measures of FGT were higher than the national figure. All reviewed papers revealed that there is a higher income inequality variation among households which is above the national value (0.328) estimated in 2018. In addition, almost in all reviewed papers both the food and total poverty lines are below the corresponding national figure estimated by the Plan and Development Commission of Ethiopia since in 2018.

Poverty is a multidimensional concept in terms of measurement and determinant factors which indicated that the incidence, gap and severity of poverty can vary from region to region or district to district or time to time due to difference in demographic, agro-ecological location, resources or socioeconomic and institutional factors. That means some areas may have good environment for agricultural production, some part of the nation may have good geographic location for tourism activity and while others may have a strategic location for industry sector. Moreover; gender, marital status, age, educational status, family size, dependency ratio, land holding, livestock ownership, off-farm income and credit have a statistical significant effect on poverty status of households in Ethiopia.

As a whole, this review paper recommended that, a holistic pro-poor enhanced policies were needed for Ethiopians to stop hunger and eradicate the severity of poverty in all dimensions as well as to narrow the income gap among households. More specifically, the government or policy makers should design area specific pro-poor poverty reduction mechanism based on the resources what the area really have and lacks.

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