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Extent of Poverty and Inequality among Households in the Techiman Municipality of Brong Ahafo Region, Ghana

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Abstract
This study identified the poverty status and expenditure inequality among households in the Techiman Municipality. Multistage sampling technique was employed in enumerating three hundred (300) households in six (6) communities through the administration of the pre-tested questionnaire. Data collected were analyzed using Descriptive Statistics, Foster-Greer-Thorbecke (FGT) model, Lorenz curve and Gini Coefficient. The relative poverty line was calculated to be GH¢ 370 per month. The proportion of poor people in the study area was estimated to be 59.7% representing a little over half of the sampled respondents who are unable to meet a monthly per capita consumption expenditure of GHC 370. Based on the indices of the poverty depth, poor households required averagely GH¢156 to escape poverty. Poverty severity index was 0.17 indicating 17.1% of the poorest among the poor. The shape of the Lorenz Curve shows high consumption expenditure equality with a Gini-coefficient value of 0.25. It is therefore recommended that, since livelihood status remained below the required levels for large parts of the populace during this research, identified poorest of poor households should be targeted by Government, NGOs and Municipal Assembly for safety nets such as Livelihood Empowerment Against Poverty (LEAP), in aiding to alleviate poverty among the vulnerable population. In addition, poor households should be targeted by NBSSI and other NGOs involve in entrepreneurship development programmes for training in microenterprise development so as to escape poverty.

Keywords
Poverty, Inequality, Lorenz Curve, Gini, Techiman

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1. Introduction

About 10.7 percent of the world's population lived on less than US$1.90 a day in 2013 indicating about 767 million people lived on less than $1.90 a day who are considered as poor. A vast majority of this global poor live in Sub-Saharan Africa and South Asia. Half of the extreme poor who are in Sub-Saharan Africa live rural areas and are mostly employed in the agricultural sector [1]. As a result, Ghana since independence has rolled out many programmes and interventions such as The Economic Recovery Program (ERP), Structural Adjustment Programmes (SAP), Program of Action to Mitigate the Social Cost of Adjustment (PAMSCAD), Ghana Poverty Reduction Strategy [2] among others to reduce poverty.

Consequently, Ghana made significant progress in alleviating poverty by meeting the first MDG target of halving poverty between 1990 and 2015, reducing it from 51.7 percent of the population in 1992 to 24.2 percent in 2013. Currently, the country's poverty profile is estimated to be 24.2 percent out of the total population of about 24.6 million [2]. It is also reported that progress has also been made in many important areas such as education, healthcare and infrastructure, which clearly reflects in the gains made in reducing poverty among different segments of the population.

Furthermore, the six series of Ghana Living Standards Surveys (GLSS) conducted by the Statistical Service have shown a general decline in poverty over the last three decades. For example, Brong Ahafo region poverty incidence was reported to be 34% in 2006 and 27.9% in 2013 which represented a downward change of 6.2%. Poverty severity also moved from 3.7 in 2006 to 2.9 in 2013 [3]. Despite the relevance of information on poverty problems beforehand and in future, poverty estimates are only measured when the next GLSS data is available. In-between the living standards surveys, no poverty estimates are available hence planning and policy are based on the recent past GLSS estimates. Moreover, the household expenditure data, which is used in estimating poverty indicators, becomes available after every seven years. This has reduced the frequency of measuring poverty indicators [2; 4]. The limitation of data on poverty with regards to frequency is especially striking when compared with data availability concerning other economic variables such as Gross Domestic Product (GDP), inflation and Gross National Income (GNI). Thus, generally, data on poverty are limited both in terms of frequency, coverage and content [5].

This is surprising because a better understanding of the current poverty situations at regular intervals with regard to constraints and opportunities will pave the way for a strategic lessening of rural poverty in most places of the country especially among the top five poor regions in the country [1]. Thus, despite the importance of poverty profile and vulnerability issues to social protection and poverty alleviation strategies, it is very difficult to find micro-level research studies that have an empirical account of poverty profile and vulnerability to poverty (expected poverty) of the different segments of the various districts in the country at regular intervals. This study is therefore interested in generating poverty and inequality profile among different households in Techiman Municipality in the fifth poorest region of the country.

2. Methodology

2.1 Study area

This study was carried out in the Techiman Municipality. According to the 2010 Population and Housing Census, the population of the Techiman Municipality stood at 147,988 representing 6.4 percent of the region's total population [2]. Males constitute 48.5 percent and females represent 51.5 percent. A greater percentage of the population (64.5%) live in urban areas as compared with 35.5 percent in rural areas. From the 2010 census, the population dependency ratio of 81.3 is below the regional average of 90.5. The composition and structure of the households reflect the social structure of the society. The average household size is 5.1 as compared to the regional average of 5.3. About 34.2% of the households in the municipality are female-headed. The Municipality is the second most urbanized (55.7% urban) in the Brong-Ahafo region. There is considerable movement of people into and out of the Municipality. This significant migrant population is attributable to the advantageous location of the Municipality and the bustling food crop market and commercial centre of Techiman. The famous Techiman market, the largest agricultural products market in the country attracts a floating population of over three thousand for three days every week into the Municipality. The immigrant proportion of labour force is also quite high, about 20%. This makes labour cost cheaper and promotes economic activities, especially farming [6;7]

Again, according to the 2010 census, agriculture (and related activities) is the major occupation in the Municipality accounting for about 57% of the labour force. About 13.7% of the economically active population is engaged as sales workers; production, transport operators and labourers constitute 12.4% of the population. The Techiman Municipality is generally regarded as an Agricultural production corridor. This is largely attributed to the vast fertile lands, especially in the southern part of the Municipality which has attracted migrant farmers from the northern regions of Ghana. There are more males engaged in agriculture than females but females outnumber males in service and sales work. The major crops grown are food crops such as yam, maize, cassava, cocoyam, plantain, cocoa, cashew, fruits and vegetables [6]. Fig.1 shows a map of Techiman Municipality where the study was conducted.

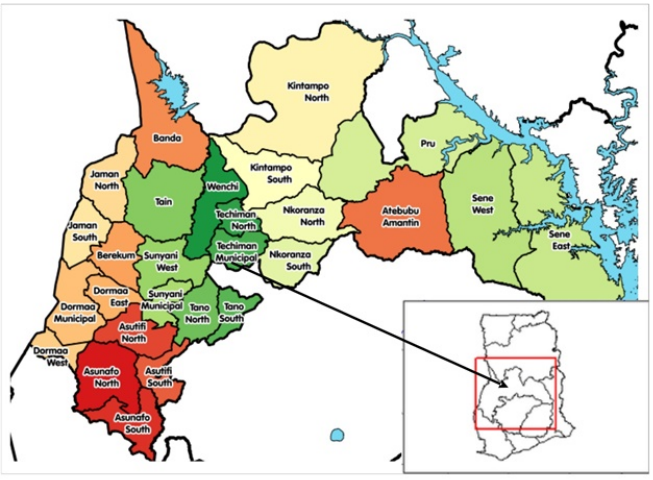

Figure 1. Map showing Techiman Municipality

3. Sampling Procedure

The study employed a cross-sectional survey. The sampling unit was the household, defined for this study as a group of people who eat from the same "pot" and share

common resources. Data was collected on household characteristics, expenditure on food items such as fruits, vegetable and other staple foods and non-food items included utility bills, rent payment, education, health, transport, communication, donation, marriage, funeral, clothing, soap and cosmetics. A multi-stage sampling procedure was adopted in this study. A combination of stratified and simple random sampling techniques was employed in the selection of respondent households. In the first stage, the study area was stratified into urban and rural areas with the help of authorities at the Techiman Municipal Assembly. In the second stage, three (3) communities were selected from each stratum using the simple random sampling. In the third stage, fifty (50) households were selected from each stratum using a simple random sampling procedure. A total of 300 households were selected. Table 1 shows a summary of the respondents' sample.

Table 1. Communities Sampled

Location	Community	No of HH Sampled
Urban	Abanmmu No1 and 2	50
	Tunsuoase/Hausa Line	50
	Pomaakrom/Takofiano	50
Rural	Buoyem	50
	Nkwaeso	50
	Oforikrom	50
Total		300

4. Construction of Relative Poverty Line

In measuring the extent of poverty, expenditure or consumption expenditure was chosen as an indicator for living standard measurement of households in the study area. This is because, consumption expenditure shows relative stability due to a consumption smoothening effort from own saving, borrowing from others, or social risk sharing schemes. The relative poverty line was defined as the minimum amount of expenditure needed in order to maintain the average standard of living in the study area. The poverty line was therefore defined as the two-thirds of the mean value of per capita expenditure in the study area which was GHC 370 per month. Households whose mean per capita expenditure falls below the poverty line are regarded as being poor whiles those with their expenditure above the benchmark are non-poor. The empirical models used in the analysis were defined as follows:

$$PCHME = \frac{THME}{THS} \quad \text{.....(1)}$$

$$MPCHME = \frac{TPCHME}{TNR} \quad \text{.....(2)}$$

$$\text{Relative Poverty Line} = \frac{2}{3} * MPCHME \quad \text{.....(3)}$$

Where:

PCHME = Per Capita Household Monthly Expenditure

THME = Total Household Monthly Expenditure

TNR = Total Household Size

MPCHME = Mean Per Capita Households Monthly Expenditure

THS = Total Number of Respondent

TPCHME = Total Households Monthly Expenditure

4.1 To measure the extent of poverty

Based on individual household minimum consumption expenditure per person, households were classified as poor and non-poor. This study used three poverty dimension instruments that were used by [8] and [9] to measure the extent of poverty in Techiman Municipality. These include headcount index; the poverty gap index; and severity index or Foster-Greer- Thorbecke (FGT) index of poverty.

The mathematical expression of the model for poverty measure is explained by considering P_α as a class of poverty measures. By levelling real per-adult (per capita) household consumption expenditure per person.

$$Y_1 \leq Y_2 \leq .....Y_q \leq Z < Y_q + 1..... \leq Y_n \quad \text{.....(4)}$$

Where:

Z = is poverty line

n = is the total population

q = the number of poor

Then, P_α is given by

$$P_\alpha = \frac{1}{N} \sum_{i=1}^{q} (\frac{Z-Y}{Z})^\alpha \text{.....(5)}$$

Where:

P_α = Poverty measure

Z = Poverty line

N = Population number

q = Number of persons/households below the poverty line

Y_i = real per capita consumption expenditure, in the equation,Z - Y_i = 0 if Y_i>Z.

α = is the weight attached to the severity of the poor which takes the value 0, 1, 2 depending on the degree of concern about poverty.

4.2 Headcount index(P_0)

This is the share of the population whose monthly per capita consumption expenditure is below the poverty line, that is, the share of the population that cannot afford to buy a basic basket of goods. Food expenditure on yam, cassava, rice, maize, plantain, cocoyam, fish, meat, eggs, oil, beverages, bread, sugar and sweetness, fruits and vegetables, whereas the non-food expenditure on utility

bills, rent payment, education, health, transport, communication, donation, marriage, funeral, clothing, soap and cosmetics were considered in the analysis. However, this index does not capture differences among the poor.

$$P_0 = \frac{1}{N}\sum_{i=1}^{q}(\frac{Z-Y}{Z})^0 \text{.....(6)}$$

4.3 Poverty gap index (P_1)

Ths indicates the depth of poverty or this provides information regarding how far households are from the poverty line. This measure captures the mean aggregate monthly per capita consumption expenditure shortfall relative to the poverty line across the whole population. In other words, it estimates the total resources needed to bring all the poor to the level of the poverty line (divided by the number of individuals in the population).

$$P_1 = \frac{1}{N}\sum_{i=1}^{q}(\frac{Z-Y}{Z})^1 \text{.....(7)}$$

4.4 Poverty severity index (squared poverty gap)(P_2)

This 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 line.

$$P_2 = \frac{1}{N}\sum_{i=1}^{q}(\frac{Z-Y}{Z})^2 \text{.....(8)}$$

4.5 Measurement of Inequality

Inequality measurement is an important factor in an economy that indicates weather benefits of the growth have been concentrated or "trickled down" sufficiently to the society. Inequality is a broader concept than poverty in that it is defined over the entire population, not just for the portion of the population below a certain poverty line [9]. Among the most important economic challenges facing Ghana is increasing inequality among the populace that needs attention like poverty. Hence this study, also looked at expenditure inequality among sampled households.

4.6 Lorenz Curve

The Lorenz Curve is obtained as follows: The X-axis records the cumulative proportion of population ranked by expenditure level. Its range is, therefore (0, 1). The Y-axis records the cumulative proportion of expenditure (resource) for a given proportion of the population, i.e. the expenditure (resource) share calculated by taking the cumulated expenditure of a given share of the population, divided by the total expenditure Y [10]. It is defined as follows:

$$L(\frac{k}{p}) = \frac{\sum_i^k yi}{Y} \text{.....(9)}$$

Where

k=1.....n is the position of each individual in the expenditure (resource) distribution

i=1.....k is the position of each individual in the expenditure (resource) distribution

P..... is the total number of individuals in the distribution

y_i.....is the expenditure (resource) of the ith individual in the distribution

$\sum_i^k yi$.....is the cumulated expenditure (resource) up to the kth individual

Y..... is total expenditure

It is obvious that $\sum_i^k yi$ ranges between 0, for k=*0*, and Y, for k=n, therefore the equation value ranges between 0 and 1.

The shape of the Lorenz Curve is, therefore, a good visual indicator of how much inequality there is in an expenditure distribution. It provides an easy way to represent expenditure (resource) equality in terms of graphs; however, it does not work easily in comparative analysis. Comparative analyses, among sampled households, require a discrete value for computation. The common value for representing expenditure inequality is the Gini coefficient.

4.7 The Gini-coefficient

Gini coefficient is by far the most widely used measure of inequality; the reason for this may be the fact that it is a straightforward, easy to understand and not at all complicated to calculate [10]. Its value ranges from 0 to 1, (Although it is commonly multiplied by 100 in empirical studies) being 0 the value of perfect equality and 1 of maximum inequality (i.e. one individual holds the entire marketable surplus and the rest hold no marketable surplus). There are several ways to calculate the Gini coefficient; however, the researchers calculated the Gini coefficient based on the Lorenz curve presented in Fig. 2. This was calculated as the ratio of the area between the Lorenz curve and the absolute equality line, divided over the total area under the 45^o line.

The Gini coefficient is calculated as the area A divided by the sum of areas A and B

$$Gini = \frac{Concentration(A)}{MaximumConcentrationarea(A+B)} \text{.....(10)}$$

$$Gini = \frac{A}{(A+B)}$$

Since, A+B equals 0.5 (Area of equality triangle), the Gini - coefficient will be:

$$Gini = \frac{A}{0.5} \text{ or } Gini = 1 - 2B \text{.....(11)}$$

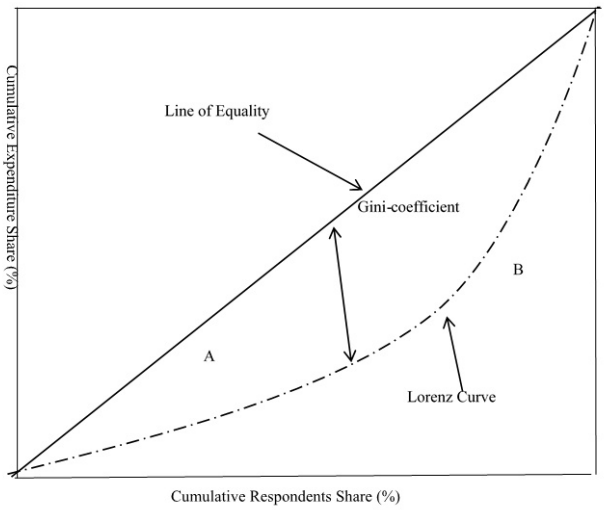

Figure 2. Lorenz curve showing section A and B used in Gini Coefficient

5. Results and Discussion

The poverty line was calculated as the two-thirds of the mean value of per capita expenditure in the study area which was GH¢ 370 per month. Based on this calculation, respondents who fell below GH¢ 370 per month were considered poor while those who fell above were considered as non-poor. From TABLE 2, gender distribution showed that out of the three hundred (300) respondents interviewed an estimated value of 204 (68%) were females while 96 (32%) were males. Considering the females, 101 (63.1%) were poor while 103 (73.6%) were non-poor. The high level of poverty among females in the study area could be due to the fact that, females are mostly found in the house as housewives or supports husbands in the farm or take up petty trading. As a result, most well-paid jobs, high income generating and white-colour jobs are male dominated with very few women in such jobs.

Again, tertiary education was the highest form of education level for respondents. Among respondents that had had tertiary education, twenty-two (22) out of the total number of fifty-seven (57) were poor. Notwithstanding the high education level of these respondents, due to a high level of unemployment rates among many graduates in the country, many highly educated people are unable to get jobs that meet their educational status hence unable to provide their basic needs [11; 12].

Also, considering the poor, those with a basic education were the highest that is, 50.6% compared to the non-poor of 48.6%. In addition, the results indicate majority (183) of respondents had five (5) or fewer people representing (61%) depending on them. This was followed by 96 respondents representing (32%) who had between six (6) to

Table 2. Household characteristics of respondents

Variable	Poor		Non-Poor		Total		
	Frequency (N=160)	Percentage (%)	Frequency (N=140)	Percentage (%)	Frequency (N=300)	Percentage (%)	
Gender							
Male	59	36.9	37	26.4	96	32	
Female	101	63.1	103	73.6	204	68	
Formal Education							
No Formal Education	17	10.6	5	3.6	22	7.3	
Basic Education	81	50.6	68	48.6	149	49.7	
Secondary Level	40	25	37	26.4	72	25.7	
Tertiary	22	13.8	30	21.4	57	17.3	
Dependants							
0 – 5	72	45	111	79.3	183	61	
6 – 10	68	42.5	28	20	96	32	
Above 10	20	12.5	1	0.7	21	7	
Age (years)							
20-40	113	70.6	120	85.7	233	77.7	
41-60	41	25.6	20	14.3	61	20.3	
Above 60	6	3.8	0	0	6	2	
Location							
Urban	102	63.8	103	73.6	205	68.3	
Rural	58	36.2	37	26.4	95	31.7	
Marital Status							
Single	33	20.6	65	46.4	98	32.7	
Married	101	63.1	64	45.7	165	55	
Divorced	8	5	2	1.4	10	3.3	
Separated	4	2.5	7	5	11	3.7	
Widowed	14	8.8	2	1.4	16	5.3	
Occupation							
Farmer	60	37.5	25	17.9	85	28.3	
Salary worker	33	20.6	58	41.4	91	30.3	
Trader	52	32.5	32	22.9	84	28	
Artisan	11	6.9	16	11.4	27	9	
Student	4	2.5	9	6.1	13	4.3	

Source: Authors computation based on 2016 field data. NB; MSLC= Middle School Leavers Certificate, BECE= Basic Education Certificate Examination, SSSCE=Senior Secondary School Certificate Examination, WASSCE= West African Senior School Certificate Examination

ten (10) dependents while 21(7%) respondents had above ten (10) respondents.

The age distribution revealed the ages of respondents' ranges from 20 to 83 years. The age group with the highest frequency is 41-60 years representing 77.7% of the sample. This is followed by the age group of 20-40 years which represents 20.3% of respondents. Generally, the majority (20-40 years) of respondents belonged to the active labour force in Ghana. The least age group was those above 60 years representing 2%. Among the poor respondents, the ages of 20-40 years were the highest representing 70.6%. The results indicate that majority of the respondents who are poor are of their mid age which implies that jobs that attract the youth should target the study area.

The majority (205) of respondents interviewed represented by 68.3.9% live in urban areas while 95 respondents representing 31.7% live in rural areas. Among those who lived in urban areas, 103 (68.3%) were poor whereas 103 (73.6%) were non-poor. On the other hand, 58 (36.2%) respondents who lived in rural areas were poor while 37 representing (26.4%) were non-poor. The results suggest that, although the urban area has diverse jobs, the main occupation for that in a rural area is farming hence they have large farmlands that make them better off than their urban counterparts who do not own large lands.

Moreover, from Table 2, the majority (101) of those married among the respondents were poor representing 63.1% with non-poor as 45.7% of the sampled households. The high poverty level among married households could be attributed to the reason that, married people have many responsibilities in their homes hence they are most likely not to meet all their basic needs. In contrast from Table 2, the single households among poor and non-poor were estimated to 20.6% and 46.7% respectively, indicating one is able to provide for only him/herself better than being responsible for other people as well.

The results further indicate the occupation of respondents. From Table 2, the occupation with highest poverty level is farming. The majority (60) of poor respondents out of the total 160 were farmers representing 37.5% of the total poor households sampled. This can be explained by small-scale production involved in by most these farmers in the study area hence are not able to produce so much in order to get higher returns out of their produce. This finding is consistent with findings from Ghana Living Standards Survey which noted that even though farmers experienced some reduction in poverty over the 7-year period, they are still the poorest in the country [2]. TABLE 3 below shows the description of variables used in the Probit regression analysis.

Table 3 shows the description of variables used in the Probit analysis. From Table 3, age and education

Table 3. Description of variables used in the Probit regression

Variable	Description	Type	Measurement	Expected sign
Dependent variable (Poverty Status)	Poverty Status	Dummy	1 if Poor, 0 if Non-Poor	
Independent variables				
Age	Total number of years	Continuous	Number	-
Education	Number of years of education	Continuous	School Years	-
Dependants	Number of Dependants	Continuous	Number	+
Gender	Sex of the sampled respondents	Dummy	1=Male 0=Female	-
Ethnic Group	Ethnic Group of respondents	Dummy	1=Akan 0=Otherwise	+
Single	Marital Status of respondents	Dummy	1=Married 0=Otherwise	+
Married	Marital Status of respondents	Dummy	1=Single 0=Otherwise	-
Location	Location of respondent	Dummy	1=Urban 0=Rural	+/-
Occupation	The primary job of respondents	Dummy	1=Farmer 0=Otherwise	+

of a household head are hypothesized to have a negative effect on poverty. Ethnic group, occupation and marital status of household heads interviewed which were model as dummy variables were hypothesised to have a positive effect on poverty. Additionally, gender is hypothesised to have a positive effect on poverty is also incorporated in the model as a dummy variable with the value of 1 if the respondent is a male produces rice under and 0 for female. However, the location of the household was modelled to either have a positive or negative effect on poverty.

From Table 4, the likelihood ratio chi-square of 104.08 with a p-value of 0.000 tells us that our model as a whole is statistically significant, that is, it fits significantly better than a model with no predictors. Furthermore, from Table 4, if the average age of a respondent goes up by one year, the probability of being poor increases by 6.8%. These results are similar to findings in Malaysia which found poverty due to old age where as a result of forced retirement, lack of saving during younger years, limited social security coverage, and coupled with changing family structure and lifestyles [13].

Again, a one year increase in the level of education of a respondent decreases the probability of being poor by 5.5%. Similarly, [14] who investigated the impact of educational attainment on poverty in Cameroon suggested that as one's level of education increases, the probability of being poor decreases. This is because higher education level leads to higher status jobs that earn more hence improved the standard of living.

Furthermore, if the number of dependents increases by one, the probability of a household being poor increases by 6.1%. This situation is the same in many developing countries and is not limited to only the study area. Several studies have noted that poverty increases with increasing family or household size since large family size tends to reduce the per capita income available to the household [9;15;16] However, on the average, a male as a household head decreases poverty by 26.2% compared to a female as a household head. This can be attributed to males dominating many families in the study area hence owing and taking care of family lands. In addition, males dominate most well-paid jobs, high income generating and white-colour jobs than women which make them better-off than women.

Moreover, the probability of an Akan becoming poor is 30.2% less than non-Akan in the study area. This result can be attributed to Akans dominate in the study area since they are indigenes or custodians of the lands and other resources. As a result, they are able to sell or hire their properties to other people for a fee to improve their standard of living. Similarly, the differentials in poverty status can be explained to some extent by the fact that ethnic minorities in the study live in the poorest areas, have more children, live in single mother families and

Table 4. Probit regression estimates of determinants of poverty

Variable	Marginal effect (dy/dx)	Std. Error	Z	P>(Z)
Age	0.068	0.003	2.22	**0.026
Education	-0.054	0.316	-1.71	***0.087
Dependants	0.061	0.008	7.31	*0.000
Gender	-0.262	0.05	-5.25	*0.000
Ethnic Group	-0.302	0.127	-2.38	**0.017
Single	0.1	0.099	1.01	0.311
Married	-0.145	0.092	-1.58	0.113
Location	0.113	0.611	1.85	***0.065
Occupation	0.16	0.057	2.81	*0.005
Number of observations = 300 Prob > chi2 = 0.000				
Log likelihood = -155.237 Pseudo R2 = 0.251				
LR Chi 2(9) = 104.08				

Source: Authors computation based on field data, NB: Significance; 1%=*, 5%=**, 10%=***

are employed in low-paid occupations. Another reason for poverty differences between minorities and majorities stems from the fact that some minorities differ from the majority by appearance, language and habits. Such circumstances serve as markers and lead to the risk of discrimination from potential employers or customers. In this line of thinking, the behaviour of the majority is the root cause of minority people being more poverty prone than the majority. Another explanation for a higher risk of poverty among minority (non-Akans) persons might also be traced to the behaviour and preferences of the minority persons themselves. Occasionally one can hear the opinion that minorities place less value on economic activity and do not strive to grasp economic opportunities with the same intensity as people belonging to the ethnic majority [17].

Furthermore, the probability of a farmer becoming poor is 16% more than a non-farmer in the study area and also the probability of a respondent in the urban area becoming poor is 11.3% more than someone in the rural area. In the study area, for both rural and urban areas the dominant occupation is farming. Farmlands in the urban area are usually small and limited because the lands available are used for other purposes such as housing projects and other activities compared to the rural areas. As a result rural farmers have large plots of land for farming activities than their urban counterparts hence those in the rural areas are able to produce more to get more income.

In addition to the above explanation, there is a high probability of one becoming poor in urban areas of Techiman because many of the urban poor live in extremely poor conditions in informal settlements with limited access to services. Notwithstanding this phenomenon, government-run services and non-governmental organisations tend to neglect urban poor with most poverty reduction strategies rarely mentioning increasing urban poverty. The result is in contrast to GLSS 6 report which indicated averagely there is increasing poverty among rural folks compare to urban dwellers in the country [2]. The differences in the results of this study and GLSS 6 could be attributed to differences in duration of stay among migrants from rural areas into urban areas who were interviewed; more recently arrived rural migrants to urban areas are poorer than longer established migrants, and non-migrants (urban dwellers) are the richest group of all. Recent migrants are also poorer in income terms [18].

From table 5, the proportion of poor people in the study area was estimated to be 59.7% implying more than half of people living in the study area are not able to meet a monthly per capita consumption expenditure of GH¢ 370. The headcount ratio of a number of poor from this study is two times that of the country and regional

Table 5. Estimates of Poverty Situation Indicators

Poverty Variables	National (2013)	Regional (2013)	Study Area (Techiman)
Headcount Index	0.242	0.279	0.597
	(24.20%)	(27.90%)	(59.70%)
Poverty Gap Index	0.078	0.074	0.28
	(7.80%)	(7.40%)	(28%)
Poverty Severity Index	0.036	0.029	0.171
	(3.60%)	(2.9)	(17.10%)
Gini Coefficient	0.409	0.369	0.25
	(40.90%)	(36.90%)	(25%)

Source: Authors Computation, Ghana Poverty Analysis Report (2016) and Cooke et al., (2016).

averages. Although the number of people living in poverty fell from 34% in 2006 to 31.7% in 2013 at the national level, there exists evidence that there is a wide difference in headcount index at national, regional and district level. This implies that a decline in the proportion of poor at the national level does not necessarily mean equal change in the entire country. This can be attributed also to the fact that national data are accumulated hence it does consider specific districts as a single entity.

Poverty gap index shows how much would have to be transferred to the poor in order to bring their expenditures or incomes up to the poverty line as well as the minimum cost of eliminating poverty [9]. The results on poverty gap indicate that the cost of eliminating poverty in Techiman Municipality is much higher than at the national level because of poverty severity. The national and regional results depict poor households require about 7.8% and 7.4 percent expenditure per capita respectively to reach the poverty line but this research shows otherwise, that is, a requirement of 28% (which is 20.2%) more to escape from poverty group. This implies that poor households require averagely GH¢156 to escape poverty. This amount is 47% more than the livelihood empowerment against poverty, social cash transfer amount of GH¢106. This suggests that the LEAP amount of GH¢106 given to poor households in the Techiman Municipality is not enough to assist them to escape poverty.

Poverty severity index (squared poverty gap index) takes into account inequality among the poor. Hence, by squaring the poverty gap index, the measure implicitly puts more weight on observations that fall well below the poverty line, in other words, the poorest among the poor. Poverty severity index is 0.17 in the study area but, it is 3.6 and 2.9 at national and regional levels respectively. The lower your standard of living, the poorer you are deemed to be. The implication is, the severity of poverty among the poor households in the study area is 17.1%. This indicates government policy intervention should target this 17.1% of the poorest among the poor; these are the group of people or as it were the percentage of the population in Techiman Municipality that needs policy intervention by the government and other stakeholders.

The Gini Coefficient in TABLE 5 measures the degree of expenditure inequality in a population. The Gini Coefficient is equal to the area between the actual income distribution curve of the Lorenz curve in figure 3 and the line of perfect income equality, scaled to a number between 0 and 100. The Gini coefficient is the Gini index expressed as a number between 0 and 1. The wider the space between the perfect income equality line and the actual income distribution curve, the higher the degree of inequality as shown in figure 2 and 3. In this study, the measure of Gini coefficient is 0.25 which indicates that the level of inequality in the study area is lower than the national figure of 0.47. From Fig. 3 shows Lorenz curve depicting the level of inequality estimates based on Gini coefficient among respondents in the study area. The Gini coefficient for the nation and region is estimated to be 0.41 and 0.37 respectively whereas that of the study area was estimated to be 0.25. The differences in inequality at the national and regional compared to the study area level could be because people in the study have similar characteristics hence the inequality gap is not too wide compared to the national one which has many diverse characteristics.

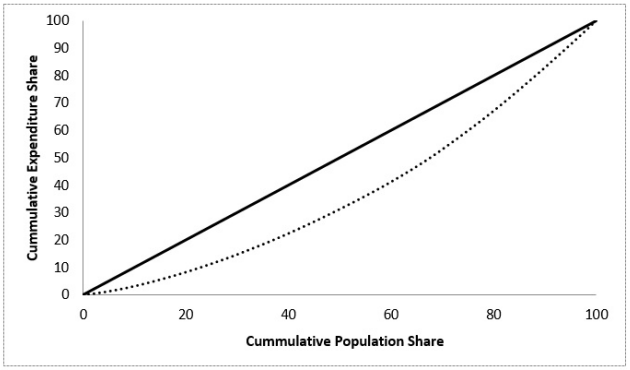

Figure 3. Lorenz Curve showing Inequality in the Study Area

6. Conclusion and Recommendations

This study identified the poverty status and expenditure inequality among households in the Techiman Municipality. The study revealed that the factors affecting poverty include age, educational level, number of dependents or household size, male headed households, ethnicity, location of respondents and occupation in the study area.

Relative poverty line which is the minimum amount of expenditure needed in order to maintain the average standard of living in the study area was calculated to be GH¢ 370 per month. Based on that, the proportion of poor people in the study area was estimated to be 59.7% representing a little over half of the sampled respondents who are unable to meet a monthly per capita consumption expenditure of GHC 370.

In context of policy recommendations, it is recommended that, since majority of the respondents livelihood status remained below the required levels for large parts of the populace during this research, identified poorest of poor households should be targeted by Government, NGOs and Municipal Assembly for safety nets such as Livelihood Empowerment Against Poverty (LEAP) to aid in the alleviation of poverty among the vulnerable population. In addition, the LEAP amount given to poor households in Techiman Municipality should be GH¢156

to escape poverty since the current LEAP amount is not enough.

In addition, poor households should be targeted by NBSSI and other NGOs involve in entrepreneurship development programmes for training in small and micro enterprises development so as to escape poverty.

Lastly, Government in collaboration with other stakeholders should scale up policies and public education that focus on addressing gender discrimination which can have far-reaching consequences on poverty reduction, especially in the study area where prevailing cultural practices limit women's access to resources and ability to generate income.

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