ISSN: 088855-5117

OGUAA JOURNAL OF SOCIAL SCIENCES

VOLUME 7 NO.3, DECEMBER, 2015

POVERTY AND INEQUALITY IN GHANA: ANALYSIS OF THE DIMENSIONS, TRENDS AND SPATIAL PERSPECTIVES

Samuel Kobina Annim[1]
University of Cape Coast

William Gabriel Brafu-Insaidoo[2]
University of Cape Coast

ABSTRACT

This study assesses the poverty and inequality situation in Ghana using the last four rounds of the Ghana Living Standards Survey (1991–2013). The FGT poverty incidence, Gini and Generalized Entropy inequality measures and regression analysis are used to examine trends, spatial distribution and correlation between poverty inequality and poverty. e ndings suggest that the proportion of population dened as income-poor but non-poor in consumption have increased overtime. Also, a decline in wealth inequality is observed, but rural inequality overtime has increased to outpace urban inequality. Minimizing wealth inequality especially, in rural areas, has the potential of accelerating poverty reduction in Ghana.

Keywords

Income, Consumption, Expenditure, Asset, Poverty, Inequality

Introduction and background to study

Since the late 1990s, Ghana has implemented a number of development policy frameworks as part of its agenda to accelerate and sustain high economic growth rates, and to reduce unemployment and poverty. These include the Ghana Poverty Reduction Strategies I and II from 2002 to 2009 and the Ghana Shared Growth and Development Strategy from 2009 to 2013.

The outcome of such initiatives is the experience of annual GDP growth ranging-from 3.7% to 5.6% for the period 1997 to 2004, and from 4.0% to 15% for the period 2005 to 2013. The lowest rate was experienced in 2000 and the highest in 2011. The country's real GDP per capita has also increased as a result to levels above

Corresponding author:
Department of Economics,University ofCape Coast
Cape Coast, Ghana
Email: sannim@ucc.edu.gh
+233-244-693747

US$500 since 2005, thereby qualifying Ghana as a lower middle income country (refer to Figure 1). Total unemployment, as a percentage of the total labor force, reduced from 10.1% in 1999 to 3.5% in 2005, and has remained at 3.6% in 2012.

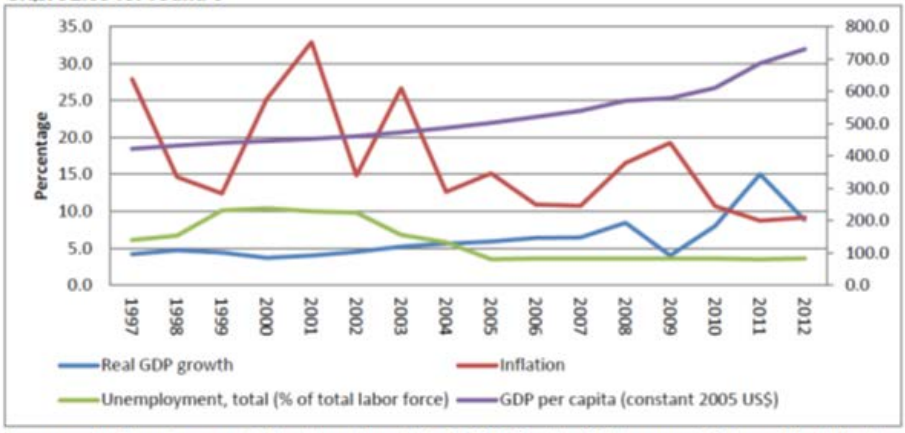
The structure of the economy has shied from a largely agrarian economy towards a more vibrant services sector since 2006. However, the contribution of industry (particularly manufacturing) has remained unchanged due mainly to the relative stagnation of the manufacturing sub-sector, in spite of the noticeable policy emphasis on agricultural modernization and industrial transformation (Data sourced from Ghana Statistical Service's Digest of Macroeconomic data 2009- 2013 and World Development Indicators databases, 2014).

Despite promising economic growth outcomes, Ghana is struggling to keep ination rates stable and at low levels. The rate of ination has ranged from 12.6% to 32.9% for the period 1997 to 2005 and from 9.2% to 19.3% for the period 2006 to 2013. This development tends to have implications for the cost of living in the country.

The size of government, expressed as a share of GDP, increased from 24.7% in 1999 to 36.8% in 2006 but declined to 23.65 in 2013 with an increase in the importance of her recurrent expenditures vis-à-vis her capital expenditures, which have adverse implications for investments and sustained economic growth.

One of the challenges faced by Government is its inability to raise sucient revenues from domestic sources to nance her planned

Figure 1: Selected macroeconomic indicators, 1997 to 2012
GH₵792.05 for round 6



Source: Authors' computation based on data WDI, Bank of Ghana and Ghana Statistical Service

The new Medium Term National Development Policy framework (2014-2017) seeks to address key national development issues including the large scal decits and balance of payments imbalances which have become cyclical, the low growth rate of the agriculture sector and weak linkages between agriculture and industry

expenditures, as her budget position as a percentage of GDP, stood at -6.52% in 1999, -2% in 2006, and increased to -10.1% in 2013 (Ghana Statistical Service's Digest of Macroeconomic data 2009-2013 and World

Development Indicators databases, 2014). Ghana currently has an open trade and external capital accounts transactions, leading to her external trade sector contribute signicantly to gross domestic product (GDP).

In 2013, the external trade sector accounted for 71% of GDP, implying that trade contributes signicantly to total economic activities in the country. Ghana's exports, however, continue to be dominated by primary commodities while her imports mainly comprise manufactured and capital goods.

Her overall balance of payments improved from a decit of US$31.4 million in 1999 to a surplus of US$415.12 million in 2006, but deteriorated to a decit of US$1165.9 million in 2013 (Bank of Ghana Quarterly Bulletin, April-June 2014).

Several interventionist programs have also been executed to ensure that the high and sustained growth rates experienced benefit all segments of the Ghanaian society. However, the big question that remains unanswered is whether the experience of sustained positive growth rates, which has especially been high for the period 2006 to 2013, the reduced rates of unemployment and increase in per capita income have indeed benefited all sections of the Ghanaian populace, including the poor and the vulnerable.

The benefits of sustained high growth rates to the poor and vulnerable should be realized in the form of reduced poverty rates and inequality. To this end, this study analyses trends, spatial situation and contribution, and determinants of consumption expenditure, income and asset poverty and inequality in Ghana.

In the subsequent subsections, we providethe context in which the comparative investigation of the incidence of income and consumption poverty, and the analysis of spatial and trend inequality are carried out. is includes the relevance of the study, the global understanding of the concepts of poverty and inequality, what the literature says, and their implications for the current study.

Income and consumption poverty

The current method used to identify poverty and to devise policy strategies to tackle poverty appears cluttered coupled with the fact that most studies pick and choose from among the dierent denitions of poverty while acknowledging poverty's multidimensional nature. At both the national and international level, the monetary approach, namely the income and consumption poverty measures, have dominated discussions and analysis of poverty.

This approach to the denition of poverty is appealing because it is based on the assumption that consumers' ultimate objective is to maximize utility and that household expenditures reect the marginal utility they attach to commodities. Household expenditure or income is consequently used as a proxy for household welfare, and any decit against some minimum level of resources required for living is referred to as poverty (Deaton, 1997; Laderchi et. al 2003).

According to Atkinson (1989) and van Parijs (1992), there are two ways by which the use of income and consumption poverty measures is justied. The first is the case in which a certain basic minimum income is considered to be a right based on the freedom of choice it provides.The second is the assumption that the use of income and

consumption measures can conveniently proxy other aspects of welfare and poverty.

The different denitions of poverty suggest the use of dierent measurement indicators, which may in turn lead to the identication of dierent persons and cluster of individuals as poor who require diverse policy measures to tackle and reduce poverty. Deaton (1997) indicates that the existence of dierences between individuals or groups identied as income-poor and those identied as consumption-poor is based on the assumption that individuals have access to credit and saving instruments.

Individuals' access to credit and saving instruments enables them to smoothen their consumption expenditures, thereby making the consumption data an appropriate proxy for long-term income. Atkinson (1989), suggests that the use of income in determining poverty is justied on the basis of a minimum rights perspective.

Another possible reason for the dierences in individuals and cluster of people identied as poor from the use of income and consumption data is the possible incorporation of measures of non-marketed goods and services in the estimates of consumption expenditures. The measures of non-marketed goods and services are, in practice, omitted from the estimates of household income.

In this regard, income may reect only private resources whereas consumption expenditure includes social income (that is a range of public goods and services including health and education services). Consequently, public policy choices that target the income-poor may be inherently biased in favor of the generation of private income over the provision of public goods, and likewise may be biased towards the identication of the poor for targeting purposes for those with insucient private income (Laderchie et. al 2003).

In this study, we present an empirical comparison of the two commonly used monetary approaches (income and consumption expenditure) to the denition/measurement of poverty in Ghana. Our main intention in this study is to explore the dierences and their implications for public policy, instead of analyzing their merit. The data on household income and consumption were sourced from the Ghana Living Standards Survey of the Ghana Statistical Service. The choice of data was also based on the fact that the data represent the only comprehensive and most widely (nation-wide) covered survey.

Spatial and Trend Inequality

Following the seminal works of Lewis (1954) and Kuznets (1995), inequality (distribution) has played a pivotal role in Development Economics discourse, especially its relationship with economic growth and poverty reduction. Conceptually distinct as they may be, inequality is oen studied as part of broader analyses covering poverty and welfare. Inequality is a broader concept than poverty in that it is dened over the whole distribution not only a censored distribution of individuals or households below a certain poverty line (World Bank, 1999; Cowell, 1999).

Inequality, depending on the discourse, is examined as either a cause to a phenomenon or an effect of another variable. One of the most topical discussions is the 'Growth, Poverty and Inequality Triangle' (Bourguignon,

2004). Though the literature on the relationship between economic growth, inequality and poverty reduction is extensive, the nature, extent and direction of eect/causality continue to attract intense discussion among researchers and policymakers (Ostry, Berg and Tsangarides, 2014; Bigsten, 2014; Ravallion, 2001).

The seemingly inconclusiveness of the relationship between economic growth, inequality and poverty reduction is partly attributable to the fact that inequality, like poverty, is generally complex. This is because inequality is phenomenon-oriented (space within which inequality is being analyzed); location-specic; group-dependent (unit of analysis); dynamic and sensitive to choice of measure.

In the context of inequality being phenomenon-oriented, most studies have focused on economic inequality from the perspective of either income or earnings inequality. Empirical studies on the other domains of inequality (assets, education, health and so forth) are relatively limited.

Recent studies on the 'space' of inequality have identied two strands for consideration, namely inequality of outcomes and opportunities (UNDP, 2013). The latter derives its orientation from the human capability argument and, therefore, examines issues such as inequality in education and employment.

In this chapter, a contribution is made to the discourse on 'inequality of what' and 'inequality between whom'. Specically, spatial and trend inequality for consumption expenditure and wealth inequality in Ghana for the period 1991 to 2013 are examined.

Globally, income inequality (between nations) is quite alarming. Milanovic (2012) asserts that variation in Gross Domestic Product (GDP) or mean incomes across nations is 70 Gini-points, implying that 8 percent of the richest people in the world own half of the global income.

Inequality between nations has been observed to be greater than within country inequality. However, in the case of the latter wide dierences are observed across countries. Using the World Income Inequality Database (WIID), this study finds that average income inequality for countries over the period 2008 to 2012 ranges between 64.08 Gini-points for South Africa and 24.51 Gini-points for Slovenia.

This observed wide range coupled with varying levels of poverty and economic growth have incited the plethora of studies on inequality that seek to search for the drivers and consequences of unequal distribution of income. The effect and/or consequences of inequality have been assessed on several factors including broadly development, and other social mishaps such as conict and crime.

This wealth of literature however, is skewed to developed nations. This is partly because of the paucity of data at the household level in developing countries, especially sub-Saharan Africa. Following a search of the available quantitative studies on inequality at the national level in Ghana, the few studies found either used the Ghana Living Standards Survey (GLSS) or the Ghana Demographic Health Survey (GDHS) (Annim, Mariwah and Sebu, 2012; Aryeetey, Owusu and Mensah, 2009; Coulombe and Wodon, 2007; Booysen, Van der Berg, Von Malitz and Du Rand, 2004; Sahn and Stifel, 2003).

Studies on inequality in Ghana have focused on the presentation of trends and

patterns of either consumption expenditure or wealth (asset) inequality.Contrary to the desired expectation, consumption expenditure inequality in Ghana has increased overtime from 0.37 to 0.42 Gini- points over the period 1991 to 2006 (Columbe and Wodon,2007).

To highlight the unequal distribution of income in Ghana, Columbe and Wodon (2007) make a further claim that whereas the poorest average income has fallen from 6.9 in early 1990s to 5.2 in the mid-2000s, the richest incomes have increased from 44 to 48.3 over the same period. From a spatial perspective, inequality in Ghana has evidenced changes overtime in terms of the group (for instance, rural or urban) with the highest (lowest) levels of income inequality.

Assessing trends and patterns of income inequality from a rural- urban perspective, Columbe and Wodon (2007) show that lately, inequality in rural areas is higher than inequality in urban settlements. Precisely, inequality observed in 1991/92 (Round 3 of the GLSS), for urban settlements was 34.71 Gini-points compared to 34.17 for rural areas. However, in both 1998/99 (Round 4 of the GLSS) and 2005/06, inequality for rural areas were 36.86 and 40.73 Gini-points, while in the case of urban settlements 34.93 and 37.38 Gini-points were respectively documented.

In another spatial domain namely, regional distribution of income inequality, Annim et al. (2012) and corroborating earlier studies (Aryeetey et al., 2009 and Columbe and Wodon, 2007), shows that the Northern Region until the 2005/06 (Round 5 of the GLSS) recorded the highest inequality in Ghana (ranked tenth). However, in 2005/06, the Northern Region was ranked third with the Upper West and Central Regions taking the first and second spots (regions with least inequality), respectively. To further understand the varying inequality across the different spatial domains overtime, Annim et al. (2012) and Columbe and Wodon (2007) decomposed the distribution of income inequality to assess the relative inequality accruing within and between the spatial domains.

As expected, inequality within rural-urban residence and regions were higher than inequality between these spatial domains. For both within-inequality and between-inequality, no discernible trends were observed with the exception of a consistent increase in within-inequality for rural-urban settlement over the period 1991 to 2006.

In interrogating the issue of 'inequality of what', two studies on asset inequality and with a national sample for Ghana were identied (Booysen, Van der Berg, Von Malitz and Du Rand, 2004; Sahn and Stifel, 2003). Both studies were conducted for a number of African countries including Ghana. Both studies, initially estimate asset (wealth) poverty and based on that to calculate inequality.

Like the studies on income inequality, the aim was to document patterns (rural-urban gaps) and trends in wealth inequality over time in Ghana. The two main findings from these studies for Ghana are higher asset inequality for rural settlements than urban areas (Sahn and Stifel, 2002) and decreasing trends of asset inequality overtime (Booysen, Van der Berg, Von Malitz and Du Rand, 2004). The latter is in contrast with the popular observation that income inequality is increasing in Ghana.

The forgoing incites further work to document issues of 'inequality of what' and 'inequality among whom' in Ghana. The contribution of this paper is to provide a synthesis of both consumption expenditure and wealth inequality in Ghana based on the same survey and update the documentation on both consumption expenditure and wealth inequality in Ghana using the 2012/13 GLSS (Round 6).

In lieu of the above discussions on the context in which the current study is conducted, the overarching objective of this exercise is in two-folds. The first is to make an empirical comparison of indicators for the incidence of income and consumption poverty by exploring their differences, identifying the possible causes of household poverty and their implications for public policy.

The second is to provide a synthesis of consumption expenditure and wealth inequality in Ghana, discuss the relationship between poverty and inequality and draw implications for public policy choice. The approach to the study and the data used for the achievement of the mentioned overarching objective are discussed in the subsequent sections.

Approach and data

Income and consumption poverty Folloing the methodology used by the Ghana Statistical Service in the computation of aconsumption-based standard living measure, an income-based standard of living measure was constructed and used to determine the proportion of the population whose standard of living falls below an adequate minimum dened by a poverty line.

In this study, the poverty line set in the Ghana Living Standard Survey Report by the Ghana Statistical Service was adopted for the analysis of the incidence of income poverty in Ghana (refer to the Ghana Living Standard Survey GLSS 6 report for details on the methodology).

The data used for the analysis were derived from the third, fourth, fifth and sixth rounds of the Ghana Living Standards Survey. The Ghana Living Standards Surveys gather adequate information to estimate totalincome and consumption of each household. is covers wage income, income from non- farm enterprise, income from agriculture, remittances and other income. The study relies on four out of the six rounds of the GLSS, specically the last four rounds (1991/92; 1998/99; 2005/06 and 2012/13).

Spatial and Trend Inequality

To situate the discussion in this chapter in the context of the earlier studies mentioned above, the two most popular techniques of measuring inequality, the Gini and the Generalized Entropy, were used to estimate both consumption expenditure and asset inequality in Ghana. For detailed discussions on the methods and relative capabilities of the inequality measures as used for Ghana, reference should be made to Annim et al., (2012); Aryeetey et al., (2009) and Columbe and Wodon, (2007). For both consumption expenditure and wealth (asset) inequality, the unit of analysis was the household.

In the case of asset inequality, the analysis was preceded with a calculation of wealth (asset) poverty using the principal component analysis. The estimation followed the procedures used by Filmer and Pritchett (1998),

Sahn and Stifel (2000) and Booysen, Van der Berg, Von Malitz and Du Rand, 2004).

To validate the results, this exercise compared the patterns of asset poverty at the regional level with earlier studies on regional asset holdings as well as consumption expenditure poverty. Household assets used in calculating asset inequality in the country were access/ownership/functionality of radio, dwelling, television, fridge, sewing machine, stove, bicycle, boat, car, land size, improved water, flush toilet facility and electricity.

In addition to ensure comparison with earlier studies, these assets were selected based on their availability across the different rounds of the survey used and their ability to discriminate both across and within rich and poor households. In the context of their discriminatory power, some assets like bicycle and car were chosen given the disparity in their use in the Northern divide and Southern parts of the country.

The Ghana Statistical Service (2007) showed that for 1991/92, 2.4 percent of households in Accra owned bicycles while 44 percent of households in Rural Savannah owned bicycles, and 6.3 percent of households in Accra owned cars as 0.7 percent of households in Rural Savannah owned cars. The situation was not different in the case of the 2005/06 GLSS.

That is, 4.9 percent of households in Accra owned bicycles, compared to 61.5 percent in Rural Savannah and in the case of ownership of cars, 0.8 percent of households in Rural Savannah owned cars, compared to 8.9 percent of households in Accra. Data for estimating consumption expenditure and asset inequality were obtained from the Ghana Living Standards Survey (GLSS), which was carried out by the Ghana Statistical Service (GSS).

The first survey was conducted in 1987/88 and since then six rounds of the GLSS have been conducted with the recent survey undertaken in 2012/13. The GLSS is a nationally and regionally representative household survey undertaken with the aim of tracking the standard of living of Ghanaians and providing information for the construction of Ghana's national accounts.

The instrument for the survey covers a variety of issues including demographic characteristics, education, health, economic activity, migration and tourism assets and non-farm enterprise. The survey targets households as the observational unit, but collects information on individuals within the household and on the communities in which the households are identied. Households are sampled based on a two-stage probabilistic sampling technique.

The first stage is the selection of enumeration areas and the second stage involves sampling of households. e number of targeted households overtime has been increased to reflect the change in the increase in population. In this regard, the survey uses the population and housing survey as the sampling frame.

This exercise relies on four out of the six rounds of the GLSS, specically the last four rounds (1991/92; 1998/99; 2005/06; and 2012/13). The reason is that, in several respects, notably capturing of household asset ownership/functionality, the first two rounds are not comparable with the last four rounds. The respective sample sizes for the last four rounds used for this exercise were: 1991/92

(Round 3) – 4,523; 1998/99 (Round 4) – 5,998; 2005/06 (Round 5) – 8,687 and 2012/13 (Round 6) – 16,772.

Results and discussion

Income and consumption poverty incidence: a comparative analysis

This sub-section of the report focuses on discussing Ghana's income poverty profile by analyzing trends and patterns in the incidence of income poverty overtime using the four recent rounds of household poverty survey data obtained from the Ghana Living Standards Survey.

The income poverty incidence, which is also referred to as the income poverty headcount index, measures the proportion of the population that is income poor. The objective of this section is to examine the income poverty situation across administrative regions and areas of residence overtime.

Table 1 indicates trends and patterns in the incidence of extreme poverty, using the previous extreme poverty line of the equivalent of GH ¢70 for rounds 3, 4 and 5 of the GLSS, and the current extreme poverty line GH ¢792.05 for round 6 of the GLSS, the proportion of the population that can be dened as extremely income poor fell from 66.6% in 1992 to 50.7% in 2006, and further to 35.7% in 2013.

These percentages indicate that the number of people who can be dened as extremely income poor increased marginally from 10.3 million in 1992 to 11.1 million in 2006 but declined to 9.3 million in 2013.The rate of extreme income poverty has consistently been highest in the three northern regions of Ghana, namely the Northern, Upper East and Upper West Regions. Also, the rate of extreme income- poverty in the

Table 1: Incidence of poverty (%) - Extreme poverty line = GHc70 [rounds 3, 4 and 5]: GHc792.05 [round 6]

	Round 3 - 1992		Round 4 - 1999		Round 5 - 2006		Round 6 - 2013	
Region	Income	Consumption	Income	Comsumption	Income	Consumption	Income	Consumption
Western	60.91	42	52.12	13.6	42.77	7.9	28.2	5.6
Central	69	24.1	72.23	31.5	30.72	9.7	44.24	6.8
Greater Accra	44.79	13.4	41.85	2.4	39.88	6.2	22.61	1.5
Volta	61.6	34.8	74.21	30.4	49.7	15.2	39.02	9
Eastern	79.55	42.1	65.01	20.4	23.06	6.6	27.54	6
Ashanti	62.07	25.5	55.71	16.4	65.1	11.2	27.82	2.9
Brong Ahafo	63.96	45.9	57.77	18.8	58.1	14.9	35.48	6.6
Northern	82.32	54.1	81.45	57.4	68.61	38.7	56.71	22.8
Upper East	87.77	74.3	87.56	68.3	80.13	60.1	65.66	21.3
Upper West	88.5	53.5	85.85	79.6	72.44	79	67.15	45.1
Locality								
Rural	73.53	47.2	68.81	34.4	56.24	26.2	42.17	15
Urban	52.57	15.1	53.26	11.6	40.79	3.8	29.29	1.88
Ghana	**66.58**	**36.5**	**63.64**	**26.8**	**50.73**	**18.2**	**35.72**	**8.4**

Table 2: Incidence of poverty (%) - Absolute poverty line = GHc90 [rounds 3, 4 and 5]: GHc1,314 [round 6]

Region	Round 3 - 1992		Round 4 - 1999		Round 5 - 2006		Round 6 - 2013	
	Income	Consumption	Income	Comsumption	Income	Consumption	Income	Consumption
Western	71.7	59.6	65.16	27.3	52.12	18.4	41.55	20.9
Central	79.08	44.3	82.06	48.4	0	18.9	60.76	18.8
Greater Accra	56.8	25.8	51.06	5.2	46.56	11.8	37.13	5.6
Volta	74.4	48	82.34	43.7	0	31.4	54.11	33.8
Eastern	86.26	57	77.46	37.7	38.11	15.1	46.53	21.7
Ashanti	70.26	41.2	65.68	27.7	78.15	20.3	43.9	14.8
Brong Ahafo	70.71	65	69.51	35.8	65.07	29.5	52.27	27.9
Northern	87.64	63.4	86.19	69.2	69.58	52.3	71.47	50.4
Upper East	92.63	88.4	93.37	83.9	86.14	70.4	78.85	44.4
Upper West	91.77	66.9	91.02	88.2	79.94	87.9	78.04	70.7
Locality								
Rural	81.48	63.6	78.39	49.5	62.04	44.6	58.79	37.91
Urban	63.53	27.7	62.86	19.4	49.85	4.8	43.68	10.62
Ghana	**75.52**	**51.7**	**73.23**	**39.5**	**57.69**	**28.5**	**51.22**	**24.2**

rural areas has remained consistently higher than in the urban areas although the rate has declined steadily overtime.

The observed trends and patterns in extreme income poverty can be compared to that of consumption poverty. Similar to what is observed for extreme poverty in income, the incidence of extreme poverty in consumption has also declined overtime at the national level and also by region and area of residence. The incidence of extreme poverty in both income and consumption has been highest in the three northern regions, in spite of the steady decline experienced overtime.

Table 2 shows trends in the incidence of poverty using the upper poverty line of the equivalent of GH ¢90 for the Ghana Living Standards Survey (GLSS) rounds 3, 4 and 5, and the current upper poverty line of GH ¢1314 for the GLSS round 6, the proportion of the population defined as income poor has declined steadily from 75.5 % in 1992 to 57.7 % in 2006,and further to 51.2 % in 2013.

On regional basis, the three northern regions of Ghana have persistently been the regions with the highest incidence of income poverty in the country in spite of the steady decline in the rate of poverty in these three administrative regions. The rate of poverty in the Northern, Upper East and Upper West Regions have declined steadily from 87.6 %, 92.6% and 91.8% respectively in 1992 to 71.5%, 78.9% and 78% respectively in 2013.

Considering area of residence, the rate of poverty in the rural areas remains comparatively higher than in the urban areas. About 58.8 % of the rural population in 2013 can be defined as poor compared to about 43.7 % of the urban population.The observed trends and patterns in income poverty can be compared to that for consumption poverty.

Similar to what is observed for income poverty, incidence of consumption poverty has also declined overtime at the national level

Table 3: Contribution to national income poverty incidence by area of residence (%)

	Extreme poverty			
	1992	**1999**	**2006**	**2013**
Rural	73.7	69.26	72.19	64.85
Urban	26.3	30.74	27.81	35.15
Ghana	100	100	100	100
	Poverty			
	1992	**1999**	**2006**	**2013**
Rural	59.46	62.22	55	60.05
Urban	40.54	37.78	45	39.95
Ghana	**100**	**100**	**100**	**100**

and also by region and area of residence. The incidence of poverty in both income and consumption has been highest in the three northern regions in spite of the steady decline experienced overtime.

Table 3 shows the relative contribution to national poverty incidence by area of residence. The data indicate that the rural areas have contributed significantly moreto the incidence of income poverty than the urban areas in spite of the steady decline in the rate of income poverty overtime. The rural localities contributed to 60 % of national income poverty incidence and to about 65% of national extreme income poverty incidence compared to the urban localities' contribution to income poverty and extreme income poverty incidences of about 40% and 35.2% respectively in 2013.

With regard to the mean incomes and expenditures of the poor, Table 4 indicates that the mean consumption expenditures for

Table 4: Mean income and expenditure (GHc)

Poverty status	Mean Icome	Mean Expenditure
1992		
Extremely poor	31.04	49.87
Poor	79.46	79.77
Non poor	202.69	200.02
1999		
Extremely poor	27.15	48.77
Poor	79.73	79.82
Non poor	210.46	221.21
2006		
Extremely poor	29.75	53.67
Poor	79.28	80.28
Non poor	273.82	240.06
2013		
Extremely poor	207.18	5556.73
poor	1039.98	1060.03
Non poor	5428.48	4035.44

Computed from GLSS 6 --- 2012/2013

the income-poor and extremely income-poor exceed their respective mean incomes. This suggests that people who can be defined as income-poor and extremely income-poor averagely spend on consumer goods and services (food and non-food items) in excess of their income.

The observed trend could be a pointer to the fact that the income-poor and extremely income-poor depend on other sources of financing their expenditure on food and non-food consumer items, including engaging in borrowing activities and/or receipt of non-monetary assets as gifts. On the contrary, the income non-poor spend less than their income.

This observation may be explained by a savings and investment culture developed by the income non-poor populace in the country. The only exception to this case is in 1999 where the mean income of the income non-poor is less than their respective mean expenditure.

Share of population in poverty

Tables 5a to 5d show the share of population that can be defined as being both income and consumption poor. The share of population who are both extremely income-poor and extremely consumption-poor decreased from 38.7% in 1992 to 32.5% in 2006 and further to 20.9% in 2013.

This observation indicates reduced dependence on earned andunearned income for consumption expenditure among the extremely poor populace. A plausible reason is increased borrowing activity and receipt of

Table 5a: Share of population in poverty - 1991/1992

Expenditure poverty	Income poverty		
	Extremely poor	Poor	Non poor
Extremely poor	38.69	16.71	7.37
poor	16.17	14.5	7.37
Non poor	45.14	68.8	85.25
	100	100	100

Computed from GLSS 3 --- 1991/1992

Table 5b: Share of population in poverty - 1998/1999

Expenditure poverty	Income poverty		
	Extremely poor	Poor	Non poor
Extremely poor	37.76	7.71	2.89
poor	14.14	11.09	3.68
Non poor	53.1	81.2	93.42
	100	100	100

Computed from GLSS 4 --- 1998/1999

Table 5c: Share of population in poverty - 2005/2006

Expenditure poverty	Income poverty		
	Extremely poor	Poor	Non poor
Extremely poor	32.45	10	3.1
poor	13.25	10	3.68
Non poor	54.3	80	93.02
	100	100	100

Computed from GLSS 5 --- 2005/2006

Table 5d: Share of population in poverty - 2012/13

Expenditure poverty	Income poverty		
	Extremely poor	Poor	Non poor
Extremely poor	20.85	6.91	1.97
poor	21.61	18.32	3.68
Non poor	57.55	74.44	91.05
	100	100	100

Computed from GLSS 6 --- 2012/2013

gifts among the extremely poor.

The shares of the population who are both income poor and declined from 14.5% in poor consumption 1992 to 10% in 2006, but had increased to 18.3% in 2013. The observed trend suggests the poor's decreasing dependence on income for consumption from 1992 to 2006, but their increasing dependence on income for consumption after 2006.

Another key observation in the data presented in Tables 5a to 5d is the increase in theproportion of the population who are poor in income but non-poor in consumption from 68.8% in 1992 to 81.2% in 1999, followed subsequently by a steady fall in the share to 74.4% in 2013.The observed trend reflects a decrease in dependence on income from 1992 to 1999, and a plausible fall inborrowing activities among the group of the populace who can be classified as non-poor in consumption but poor in income.

Determinants of household poverty in Ghana

The empirical discourse on the determinants of household poverty (income or consumption expenditure) is wide and well established. While a plethora of poverty determinants have been established in the literature,

only a few have consistently proven to be statistically significant across studies under taken overtime and in different countries.

Among the correlates that have mostly been observed as statistically significant are household head characteristics specifically, education and employment status and type; don 2007 and Litchfield and Waddington, 2003).

Spatial and Trend Inequality in Ghana

Trends of consumption expenditure and wealth (asset) inequality for Ghana andhousehold characteristics namely, number ofchildren and land ownership and contextual variables such as rural-urban residence.

In Ghana, poverty correlates that have consistently been observed to be statistically significant are rural-urban residence, sector and/or status of employment of head of household as well as education of household head and dependency ratio/household size (Annim et al., 2012; Columbe and Wodisaggregated for rural and urban settlements are presented in Figure 3.

Consistent with earlier findings (Aryetey et al., 2009 & Annim et al., 2012), it is observed that consumption expenditure inequality has increased overtime.However, for the last two rounds (2005/06 and 2012/13) consumption expenditure inequality has been stable (0.43 Gini-points for both rounds).

Over the 22-year period, an increasingtrend is also observed for rural-urban spatial domain. The increase is linear among rural households (about two-percentage point increase between the rounds) and for urban settlements, periods of stagnation in the trend of consumption inequality are observed

Figure 3: Consumption Expenditure Inequality

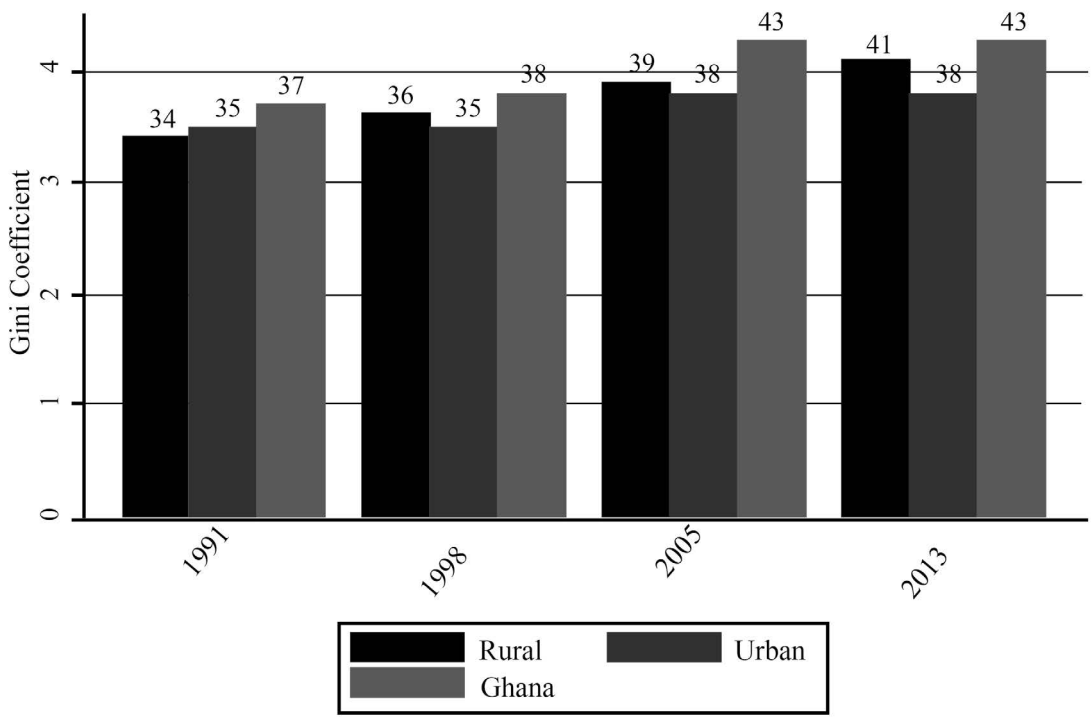
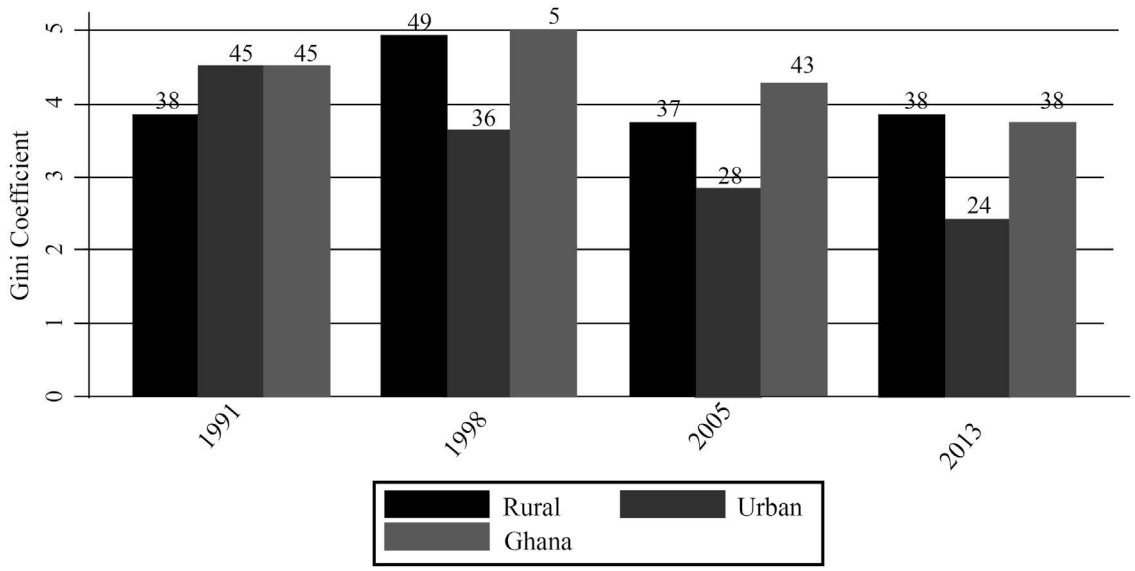


Figure 3: Asset Inequality



(1991/92 to 1998/99 and 2005/06 to 2012/13).

This implies that the increase in consumption expenditure inequality in Ghana is driven more by the unequal distribution of income among rural households compared to urban dwellers.In contrast to the increasing trend in consumption expenditure inequality, unequal distribution of household's ownership and/or access to basic needs (wealth/asset) has decreased overtime in Ghana.

Over the period 1991/92 to 2012/13, a decrease of seven-percentage points is observed. This observation is in contrast with the global experience that overtime, wealth inequality between countries is higher compared to income inequality (Milanovic, 2011). The situation among rural dwellers is different as the asset Gini points for 1991/92 and 2012/13 are the same, indicating that comparing the two periods, inequality has remained stable.

Indeed, among rural households, a one-percentage point increase is observed over the period 2005/06 and 2012/13. This implies that the decrease in wealth inequality in Ghana is mainly driven by the fall in urban settlements. For both consumption expenditure and wealth inequalities for rural and urban settlements in Ghana, it is observed that in 1991/92, urban inequality was higher compared to rural settlements.

However, a reversed pattern is observed for the other three rounds (1998/99; 2005/06; and 2012/13), and this shows that rural inequality is higher compared to ownership and/or access to basic needs (wealth/asset) among urban households. A possible conjecture is the takeover of the services sector in terms of contribution to GDP.

The slowdown of agriculture activities, which are a dominant economic activity among rural dwellers, might be contributing to the in creasing trend in both consumption expenditure and asset inequality in the rural areas. In addition, the transfer of labor from the agricultural sector to the modern sector is also another potential cause of the increased inequality. In addition, another possible

reason could be rural-urban migration, culminating in remittances to beneficiaryrural households and, therefore inequality, resulting in (Ackah and Medvedev, 2010).

Tables 6 and 7 present regional estimates and rank of consumption expenditure and wealth (assets) inequality in Ghana. The discourse on regional inequalities overtime is expected to unravel, if any, the effects of policies and development trajectories within regions in a country. One school of thought argues that growth within regions initially spurs on inequality (Hirschman model).

In spite of the consistent increase in consumption expenditure inequality at the national level, all the regions with the exception of Brong Ahafo, experienced fluctuating trends of inequality. Indeed some regions notably, Greater Accra recorded the maximum of two turning points over the four data points.

That is, consumption expenditure inequality dropped between the period 1991/92 to 1998/99, increased between the period1998/99 to 2005/06 and between the last two rounds of the GLSS, another decrease was recorded. The fluctuating trends in consumption expenditure inequality over the 22-year period present a challenge in making a claim that inequality is being driven by targeted policies or development trajectories in the regions.

It is also observed from Table 6 that the Upper West Region recorded the highest increase of 0.153 Gini points over the period 1991/92 to 2012/13. This increase can be attributed to the historical treatment of this region, which dates back to the colonial period. Other post- independent socio-economic factors such as extreme droughts, flooding and windstorms are also major factors that contribute to the high rate of inequality.

The next two regions with the largest increase in consumption expenditure inequality were the Volta and Upper East Regions. The Ashanti Region, on the other hand, experienced a minimal decrease in inequality of 0.002 Gini points over the period 1991/92 to 2012/13.

This disaggregation provides a platform to interrogate the drivers of variations in

Table 6: Estimates and Ranks of Consumption Expenditure Inequality by Regions and Overtime

Region	1991	1998	2005	2013
Western	0.326(1)	0.318(5)	0.345(3)	0.363(2)
Central	0.338(4)	0.322(6)	0.381(6)	0.371(3)
Greater Accra	0.354(8)	0.308(2)	0.420(9)	0.372(4)
Volta	0.327(3)	0.351(7)	0.344(2)	0.402(8)
Eastern	0.339(5)	0.312(3)	0.328(1)	0.361(1)
Ashanti	0.376(9)	0.369(9)	0.379(5)	0.374(5)
Brong Ahafo	0.349(7)	0.352(8)	0.357(4)	0.377(6)
Northern	0.400(10)	0.38(10)	0.402(7)	0.402(8)
Upper East	0.326(1)	0.303(1)	0.402(7)	0.399(7)
Upper West	0.346(6)	0.316(4)	0.439(10)	0.499(10)
Ghana	**0.373**	**0.380**	**0.429**	**0.430**

inequality and also, the culminating consequences on issues such as crime and conflict. In terms of inequality in asset holdings and/or access to basic needs such as improved water, the regional rankings are somewhat different from consumption expenditure.

For instance, in 1991/92, Northern Region had the highest inequality for consumption expenditure but ranked fifth for the same year in the case of wealth inequality. Also, Upper East region had the lowest consumption expenditure in 1991/92, but rankedeighth with regard to wealth inequality.

The variation between consumption expenditure and wealth inequalities is observed in all the four rounds of the GLSS.In comparing the observed decreasing trend in wealth inequality at the national level with the estimates for the individual regions, the Northern and Upper West Regions over the 22-year period recorded an increase in Gini-points, thus, unmasking wealth inequality at the regional level.

Some regions experienced upward trend overtime in contrast to the observation at the national level. This implies that efforts geared towards a reduction in inequality should be targeted based on experiences of the regions.

The Greater Accra and Ashanti Regions recorded the largest drop in Gini-points over the period 1991/92 to 2012/13. The Greater Accra Region experienced more than 100 percent decrease over the 22-year period. Indeed, in terms of regional ranking, Greater Accra was the last (region with highest wealth inequality) in 1991/92, but ranked first (region with least wealth inequality) for the 2005/06 and 2012/13 of the GLSS.

With the exception of the Upper East and Upper West Regions, all the other regions consistently experienced a declining wealth inequality since 1998/99.Thus in contrast to the fluctuating trends observed with consumption expenditure inequality at the regional level, there appears to be the influence of policy or the occasioning of the outcomes of a development agenda with regard to the minimization of wealth inequality. This conjecture,however, would require detailed

Table 7: Estimates and Ranks of Wealth (Asset) Inequality by Regions and Overtime

Region	1991	1998	2005	2013
Western	0.383(4)	0.491(6)	0.374(6)	0.302(4)
Central	0.317(1)	0.425(2)	0.368(5)	0.297(3)
Greater Accra	0.495(10)	0.512(8)	0.260(1)	0.213(1)
Volta	0.392(6)	0.517(9)	0.387(7)	0.331(5)
Eastern	0.341(2)	0.475(5)	0.356(2)	0.342(6)
Ashanti	0.488(9)	0.451(4)	0.361(3)	0.285(2)
Brong Ahafo	0.426(7)	0.438(3)	0.364(4)	0.359(7)
Northern	0.384(5)	0.493(7)	0.437(10)	0.398(8)
Upper East	0.436(8)	0.569(10)	0.405(9)	0.424(10)
Upper West	0.356(3)	0.395(1)	0.390(8)	0.401(9)
Ghana	**0.453**	**0.496**	**0.433**	**0.381**

analyses.

Tables 8 and 9 offer a decomposition of consumption expenditure and wealth (asset) inequality by groups, namely, rural-urban residence, ecological zones, regions and districts. The rationale is to find out whether the increase (decrease) in inequality overtime is driven by inequality within or between the groups.

Also presented in Tables 8 and 9 are the shares of between group inequality to overall inequality. As expected, within group inequality for each of the rounds and across the groups is greater than between-inequality. This suggests that although there are more differences between various areas of the country, there are also changes that are not geographically oriented which tend to expandthe disparities between households.

Some of these changes may be related to changes in the returns to education. For both consumption expenditure and asset inequality, the decomposition overtime fails to show a consistent discernible trend. However, in comparing within inequality over the 22-year period, an increase is observed for consumption expenditure inequality, while a decrease is observed for wealth (asset) in equality.

Shares of between group inequality to national inequality, on the other hand, have increased over the 22-year period for all groups and across the two dimensions of inequality, consumption expenditure and wealth (asset). For instance, the share of inequality between regions increased from 0.22 in 1991/92 to 0.25 in 2012/13. This observation is revealing since the overall asset inequality in Ghana has reduced overtime.

Table 8: Decomposition of Consumption Expenditure Inequality Overtime

Spatial Domains	1991/92			1998/99			2005/06			2012/13		
	Between	Within	Share	Between	Within	Share	Between	Within	Share	Between	Within	Share
Rural	0.037	0.212	0.148	0.035	0.224	0.135	0.052	0.249	0.174	0.043	0.240	0.153
Urban												
Zones	0.016	0.233	0.063	0.027	0.232	0.106	0.036	0.265	0.120	0.047	0.236	0.166
Regions	0.028	0.221	0.112	0.061	0.198	0.236	0.046	0.255	0.153	0.048	0.235	0.169
District				0.098	0.161	0.379	0.082	0.219	0.272	0.091	0.193	0.320
Ghana		**0.249**			**0.259**			**0.301**			**0.283**	

Table 8: Decomposition of Wealth (Asset) Inequality Overtime

Spatial Domains	1991/92			1998/99			2005/06			2012/13		
	Between	Within	Share	Between	Within	Share	Between	Within	Share	Between	Within	Share
Rural	0.003	0.282	0.008	0.000	0.345	0.000	0.088	0.165	0.321	0.069	0.129	0.347
Urban												
Zones	0.038	0.334	0.010	0.030	0.378	0.072	0.040	0.219	0.145	0.048	0.150	0.244
Regions	0.082	0.304	0.216	0.093	0.368	0.225	0.048	0.200	0.177	0.050	0.148	0.253
District				0.185	0.271	0.448	0.100	0.145	0.366	0.093	0.106	0.467
Ghana		**0.378**			**0.413**			**0.301**			**0.283**	

Relationship between Poverty and Inequality

In the context of the relationship between poverty and inequality, the empirical literature on Ghana is scanty. Of the few studies, Annim et al. (2012) find inconclusive evidence on the relationship between district-level inequality

and household consumption expenditure. That is, in estimating full models (include a lot more explanatory variables) for rural-Ghana, urban-Ghana and the entire country, a positive association between poverty and inequality is observed.

However, in the case of models with limited independent variables either negative or statistically non-significant results are observed. In effect, the relationship between poverty and inequality is moderated by other factors. To contribute to the knowledge on the relationship between poverty and inequality, this study examines the relative effects of asset and consumption expenditure inequality on poverty using the recent round of the GLSS (2012/13 – round six).

That is, we estimate two equations with the same set of explanatory variables but vary the dimension of inequality. The results point to a negative association between district-level inequality and household poverty (Table 10). This confirms the viewpoint that inequality is detrimental to well being. A comparison of the coefficients of asset and consumption inequality suggests that the difference is significant and that the former has a greater effect.

Conclusion and Recommendations

Ghana's experience of an impressive economic growth rate of an annual average of 4.5% between 1992 and 2006, and 8% between 2006 and 2013 seem to have translated into reduction in the incidence of income and consumption poverty over the same period. This is especially so as the mean values of household income and consumption have increased in tandem with increases in economic growth over the same period.

The proportions of the population that can be defined as poor and extremely poor in income and consumption have reduced steadily overtime.However, the proportion of the population that can be defined as poor in income is higher than the share of the population that is poor in consumption, suggesting that far more people are income-poor compared to those who are consumption-poor.

This trend and pattern are observed at both the national and regional levels and by area of residence. In view of this, it is important for the government to offer income generation interventions including opportunities to nurture entrepreneurial abilities. In spite of the impressive record of reduction in income and consumption poverty overtime, the three Northern regions have persistently recorded the highest incidence of income and consumption poverty in the country.

The rate of poverty in both income and consumption has also been consistently lower in the urban areas than in the rural areas. In addition, the mean consumption expenditure of the poor has also consistently exceeded the mean income received by the poor. Furthermore, the proportion of population that are extremely poor in income and consumption have reduced overtime whilst the proportion of population that can be defined as being income poor but non-poor in consumption have increased overtime.

This suggests that the proportion of the poor populace who consume more than they earn has increased overtime and reflects a plausible decrease in the income-poor's dependence on their income for consumption. This is likely to increase the proportion of

Ghanaians who are vulnerable to poverty and therefore long-term interventions including capacity building and 'big-push' investments are worth considering.

Akin to the observed trends and patterns in income and consumption poverty, the study also reveals steady decline in wealth (asset) inequality over the last fifteen years (from 1998 to 2013) in spite of the initial rise (from 1991 to 1998). The story, is however, different for the observed trend in consumption expenditure inequality overtime.

Consumption expenditure inequality has increased overtime with the highest inequality in consumption recorded in the Northern Region (in 1991 and 1998) and Upper West Region (in 2005 and 2013). The observed trend in wealth and consumption expenditure inequalities could reflect a possible increase in access to essential services including utilities such as electricity and portable water, and sanitation facilities, and widening inequality in terms of expenditure on private goods. The reduction in wealth inequality is promising for Ghana, and therefore, government should further deepen its efforts in the provision of infrastructure that serves the needs of poor households.

The finding that a comparatively lower proportion of the population are consumption-poor and that there has been a fall in the income-poor's dependence on their income partly confirms the preposition that individuals have access to credit facilities and savings instruments. In addition, the findings may imply that the income data reflects only private income while consumption expenditure incorporates a range of non-marketed goods and services particularly the provision of public goods, which could be referred to as social income. Examples of public goods that may be captured in the household consumption expenditure data are health and education services. Consequently, public policy choices that target the income-poor may be inherently biased in favor of the generation of private income over the provision of public goods, and likewise may be bias in the identification of the poor for targeting purposes towards those with insufficient private income. A conceivable recommendation could be to find a way to improve on the estimates of household income to include social income by incorporating measures of non-marketed goods and services. Nevertheless, targeting of the income-poor could improve welfare as long as having a certain basic minimum income is considered to be a right based on the freedom of choice it provides.

The observation that district-level inequality is associated with household poverty provides another strategy for reducing poverty. More specifically, efforts geared towards the provision of infrastructure to minimize both within and between wealth inequalities especially in rural areas, will accelerate the poverty reduction agenda.

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VOLUME 7
NO.3
DECEMBER, 2015

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