



USAID | **GHANA**
FROM THE AMERICAN PEOPLE

Monitoring, Evaluation and Technical Support Services (METSS)

A District Level Analysis of the Prevalence of Poverty in Northern Ghana

Vincent Amanor-Boadu,^{*} Yacob Zereyesus^{*} and Jennifer Asiedu-Dartey^{**}

^{*} *METSS Kansas State University Office*

^{**} *METSS Accra Office*

“A District Level Analysis of the Prevalence of Poverty in Northern Ghana” report is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the authors and do not necessarily reflect the views of Kansas State University, USAID or the United States Government.”



METSS-Ghana Research and Issue Paper Series
No. 01-2013 - August 2013

A District Level Analysis of the Prevalence of Poverty in Northern Ghana

Vincent Amanor-Boadu, Yacob Zereyesus and Jennifer Asiedu-Dartey ¹

Introduction

Poverty reduction is a key objective of the Feed the Future (FtF) Initiative and other national and international development initiatives. This brief provides the baseline information on district level poverty prevalence rate in the FtF Initiative Zone of Influence (ZOI), defined as the area above Ghana's 8th Parallel (Latitude 8°N). The ZOI comprises all the districts in three regions – Northern, Upper East and Upper West – and the seven northernmost districts of Brong Ahafo Region. The brief draws on population based survey data collected in the ZOI from a sample of 4,410 households in 2012.

Summary Statistics of ZOI Population

There are 45 districts in the ZOI, with a total population of approximately 5.16 million. Northern Region, with 20 of the 45 districts in the ZOI, account for 56.5 percent of the total ZOI population. Upper East and Upper West regions have nine districts each but account for 18.1 percent and 13.5 percent of the ZOI population respectively. Brong Ahafo's districts in the ZOI account for 12.0 percent of the total ZOI population.

The distribution of the ZOI population by district is presented in Figure 1. Northern Region has five of the six districts with 200,000 or more people. Twelve districts have between 100,000 and 200,000 people and five of them are in Northern Region, three each in Upper East and Brong Ahafo and the remaining one in Upper West. The regional population share accounted for by districts with 100,000 or more people in Northern Region was 73.8 percent compared with 54.0 percent in Brong Ahafo, 52.3 percent in Upper East and 51.7 percent in Upper West. Of the remaining 27 districts with fewer than 100,000 people, 10 are in Northern Region, seven in Upper West, six in Upper East and four in Brong Ahafo.

Consumption Expenditures

Consumption expenditure provides an indicator of poverty. Therefore, to get at poverty, consumption expenditure has to be calculated. Consumption expenditure encompasses four categories: food; housing; durables; and non-durables. Non-durables are all goods that do not fall into the first three categories. They include purchased goods, such as kerosene, transportation, school fees and health care services, and non-purchased goods, such as firewood,

¹ The corresponding author Dr. Vincent Amanor-Boadu, an agribusiness economics and management professor in the Department of Agricultural Economics, Kansas State University, Manhattan, KS. He may be reached by email at Vincent@ksu.edu. Dr. Yacob Zereyesus is a research assistant professor in the Department of Agricultural Economics, Kansas State University. Ms. Jennifer Asiedu-Dartey is the resident GIS specialist at the Accra Office of METSS. The authors are grateful to all METSS staff in Ghana and the U.S. for their support in organizing and preparing the data for this study.

grass thatch for roofing, and home-produced mats and beddings used by the household. The four expenditure categories are annualized and aggregated for each household and divided by the number of people in the household and by 365 (the number of days in a year) to get the per capita daily expenditure.

The average per capita daily expenditure in the ZOI is \$4.01 with a 95 percent confidence interval ranging from \$3.66 to \$4.53.² The average per capita daily expenditure in the districts ranges from \$1.73 in Bongo District in Upper East Region to \$12.01 in Sissala East District in Upper West Region. Figure 2 shows the 45 districts by their average per capita daily consumption. The figure shows that 19 of the 45 districts have average per capita daily expenditures that are higher than the ZOI's average. They include all the seven Brong Ahafo districts, eight from Northern Region, two each from Upper East and Upper West.

Prevalence of Poverty

Per capita daily expenditure is used as a proxy metric for poverty. This research used the World Bank's threshold of \$1.25 to estimate district level poverty prevalence rates in the ZOI. The average poverty prevalence rate in the ZOI is 22.2 percent, with a 95 percent confidence interval of 19.2 percent to 25.2 percent. Given the ZOI population, this implies the number of people living below the poverty line in the ZOI is approximately 1.2 million. Figure 3 shows the distribution of districts by poverty prevalence rates for each region. Twenty-four of the 45 districts have average poverty prevalence rates lower than the ZOI's average and 13 of these are in Northern Region, two each in Upper East and Upper West and seven in Brong Ahafo. There are 14 districts with poverty prevalence rates lower than 10%: six of them are in Northern Region; five are in Brong Ahafo; two in Upper East and one in Upper West – Sissala East District, which also happens to have a poverty prevalence rate of zero.

It is observed in Figure 3 that districts in Northern Region with the highest poverty prevalence rates are in the northeastern parts of the region while those with the lowest are found in the southwestern parts. For example, Bole District, in the southwestern corner of Northern Region has a rate of 6.3 percent while Mamprusi East District and Bunkpurugu Yonyo in the northeastern part of the region present the highest poverty prevalence rates. Districts in Upper East Region with the lowest poverty prevalence rates are in the central part of the region. There was statistical difference in poverty prevalence rates between rural and urban districts in all regions with the exception of Brong Ahafo. The difference in Upper West and Northern region are significant at the 1 percent level while Upper East's was significant at the 5 percent level. Overall, rural districts exhibited about 14.8 percent higher poverty prevalence rates than urban districts in the ZOI.

² The money metric is in 2010 U.S. dollar equivalent after adjusting for inflation and exchange rate.

Conclusion

One of the principal objectives of development is poverty reduction. This brief report shows that the overall poverty prevalence rate in the ZOI is 22.2 percent. That is, a little over one out of every five people in the ZOI is living below the poverty line of \$1.25 per person per day. The average poverty prevalence rate in Brong Ahafo was only 6.1 percent compared to Upper West's of 34.6 percent, Upper East's of 28.1 percent and Northern's of 21.6 percent. Figure 3 supports this because the majority of districts with higher than average poverty prevalence rates are located in the northwestern and northeastern parts of the ZOI, the locations of Upper West and Upper East regions. The figure also shows, for example, that of the twelve districts with poverty prevalence rates in excess of 35 percent, 10 have borders with neighboring countries – Cote d'Ivoire, Burkina Faso or Togo. On the other hand, of the 14 districts with poverty prevalence rates below 10 percent, only two (Sissala East in Upper West and Talensi Nabdam in Upper East) are share borders with Burkina Faso in the north. The remaining are all non-border districts or are in the southern part of the ZOI. So, what could this mean?

First, the majority of the districts in the northwestern and northeastern parts of the ZOI are more rural than those in the southern parts, i.e., a lot more red and gold than yellow and green. It is a known fact that rural communities have lower levels of built infrastructure, such as roads and electricity, mostly because of their lower population densities which increase the per capita costs of these investments. While infrastructure situation analysis was not part of this study, a map of Ghana's road network superimposed on Figure 3 shows that the prevalence rate of poverty strongly correlates with the lack of roads, and this happens as one moves away from the major centers in the ZOI towards the nation's borders.³ This would suggest that any attempt to address poverty's challenges may need to go beyond the obvious – gender, education, etc. – and explore more intensely the effects of locational antecedents, such as market access constraints and human capacity building resource constraints.

³ See Ghana Map – Road Map of Ghana, available at <http://www.ezilon.com/maps/africa/ghana-road-maps.html>. The Center for Remote Sensing and Geographical Information Service (CERSGIS) is currently developing a Map Referencing System for Ghana's Road Networks (GHlocator) to provide more real-time information the road situation in Ghana.

Figure 1: Projected Total Population by District in the Zone of Influence (2012)

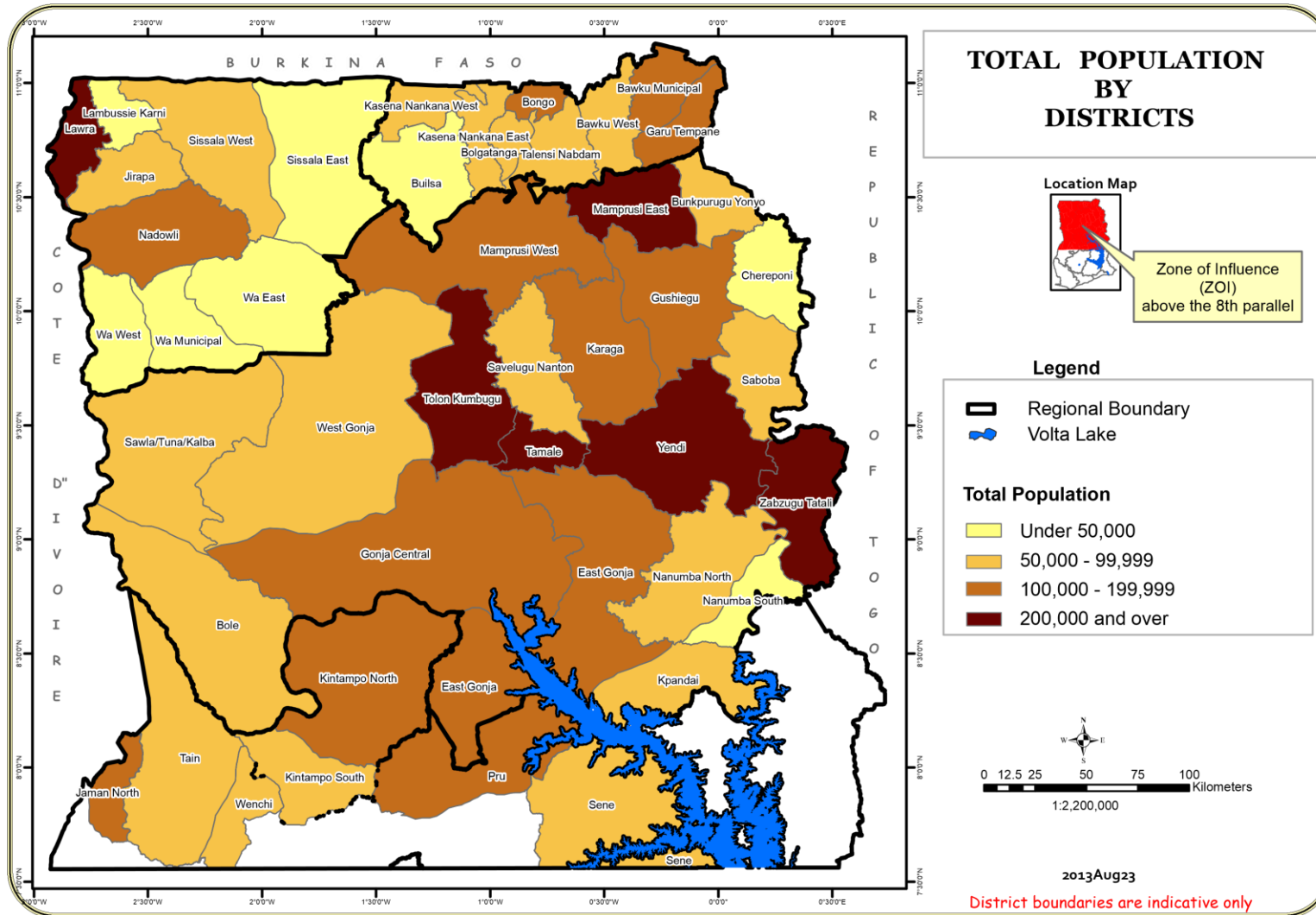


Figure 2: Per Capita Consumption Expenditure by Districts in the Zone of Influence (2012)

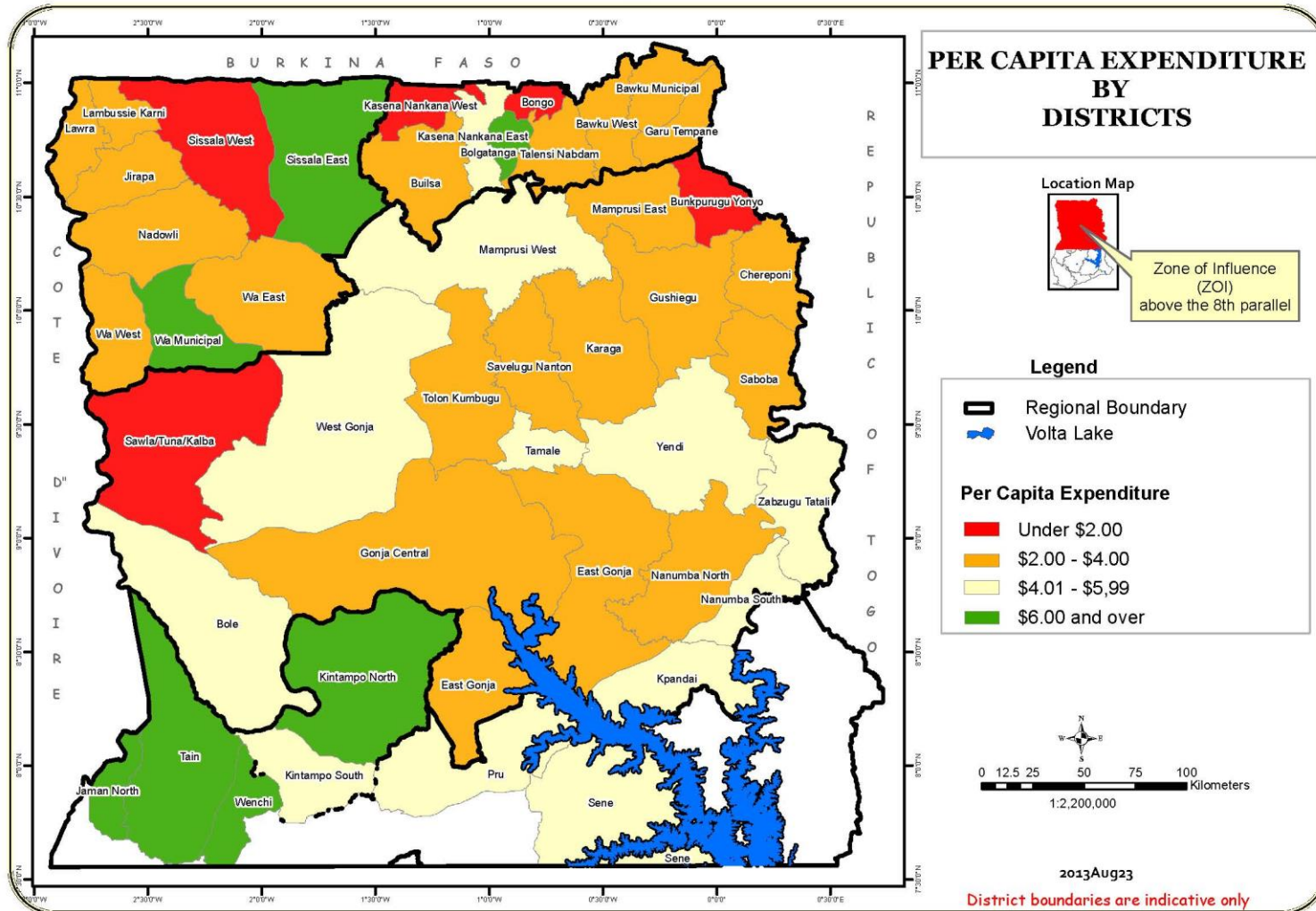


Figure 3: Poverty Prevalence Rate by District in the Zone of Influence (2012)

