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Tackling Poverty in Northern Ghana

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CURRENCY EQUIVALENTS
(Exchange Rate Effective as of March 1, 2011)

Currency Unit = Ghana Cedi
GH¢1 = US$0.67
US$1 = GH¢1.50

Weights and Measures
Metric System

ABBREVIATION AND ACRONYMS

CHAG	-	Christian Health Association of Ghana
CPP	-	Convention People Party
CWIQ	-	Core Welfare Indicators Questionnaire
DHS	-	Demographic and Health Survey
GDP	-	Gross Domestic Product
GE	-	General Entropy
GFSP	-	Ghana School Feeding Program
GH¢	-	Ghana Cedi
GLSS	-	Ghana Living Standard Survey
GNI	-	Gross National Income
ICA	-	Investment Climate Assessment
IFPRI	-	International Food Policy Research Institute
IV	-	Instrumental Variable
KVIP	-	Kumasi Ventilated Improved Pit
LEAP	-	Livelihood Empowerment Against Poverty
LCGP	-	Low Carbon Growth Plan
MDG	-	Millennium Development Goal
MESW	-	Ministry of Employment and Social Welfare
MOFA	-	Ministry of Food and Agriculture
MOE	-	Ministry of Education
MOH	-	Ministry of Health
NDF	-	Northern Development Fund
NDPC	-	National Development Planning Commission
NDS	-	Northern Development Strategy
NHIS	-	National Health Insurance Scheme
NYEP	-	National Youth Employment Program
PPP	-	Purchasing Power Parity
PPVA	-	Participatory Poverty and Vulnerability Assessment
PSU	-	Primary Sampling Unit
PURC	-	Public Utilities Regulatory Commission
SADA	-	Savannah Accelerated Development Authority
SADI	-	Savannah Accelerated Development Initiative
VAT	-	Value Added Tax
WFP	-	World Food Program

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EXECUTIVE SUMMARY

Twenty years of rapid economic development in Ghana has done little, if anything, to reduce the historical North - South divide in standards of living. While rural development and urbanization have led to significant poverty reduction in the South, similar dynamics have been largely absent from Northern Ghana (or equivalently the North, defined as the sum of the administrative regions Upper West, Upper East and the Northern region), which cover 40 percent of Ghana's land area. Between 1992 and 2006, the number of the poor declined by 2.5 million in the South and increased by 0.9 million in the North. In sharp contrast with the South, there was no significant decline in the proportion of poor in the population of the North. Ghana's success story in poverty reduction is the success story of its South.

Today, the majority of Ghana's poor live in Northern Ghana, where the poor are also poorer. Participatory and quantitative assessments describe a situation where the poor in Northern Ghana are predominantly rainfall-dependent farmers. These farmers are highly vulnerable to shocks given the limited diversification of their income sources. While the poor have little education, increases in education in Northern Ghana do not seem to have provided greater livelihood opportunities. This is reflective of the absence of better off-farm opportunities in these regions. To cope with the various shocks to which they are exposed (floods, droughts, insects, diseases, conflicts – all of which are preventable with relevant infrastructure, public services, insurance and conflict resolution mechanisms) the poor tend to mortgage their prospects to eventually escape poverty by depleting their human and physical capital and adopting risky behaviors, including child migration or illegal artisanal mining.

Should current economic and demographic trends continue, poverty could be largely eliminated in the South by 2030, while still affecting two-fifths of the population in the North (against approximately three-fifths today). Additionally, the likely oil-related boom in services and cities (mostly located in the South), in addition to climate change, threaten to further widen this gap. Thus, any poverty alleviation strategy for Ghana must put poverty in Northern Ghana at center stage, and acknowledge its specific causes in the design of possible interventions. This consideration is not only important for the sake of efficiency in poverty reduction; but also to mitigate the development of horizontal inequalities, foster national unity through balanced development and consolidate democratic gains achieved in the last two decades. International experience indeed point to significant risks of civil conflict with growing horizontal inequalities, in young democracies in particular.

The North is isolated economically and unable to integrate itself with the more dynamic South, despite adequate connectivity through infrastructure. Yet, integration is essential for the North given the need to tap into external demand and resources to advance out of subsistence livelihoods and escape poverty traps. The last two decades have seen a convergence in human capital endowments between the North and the South (thanks notably to Government, Development Partners and Non Governmental Organizations' programs in this region) but a divergence in poverty and economic outcomes. This reflects a divergence in returns to economic factors - especially human capital, as well as poor mobility of these factors. This report shows that, while national road networks could be further expanded and improved, this is unlikely to have a large impact on regional disparities, given the relatively high road density and degree of connectivity that already exists between the North and the South. Rather, low farm output and

productivity, combined with the low density of farms in some parts of Northern Ghana, make economic integration expensive (in terms of rural network expansion to connect the main North – South backbone of infrastructure and markets) in the presence of high fixed costs and/or the absence of economies of scale.

Migrants from the North to the South are largely economically unsuccessful and motivated by push factors that expel migrants out of desperation to poor quality jobs. Although migrants from the North do not make up the biggest share of migrants in Ghana, they do not do as well from migration as their Southern counterparts. Migrants from the North tend to migrate out of desperation and, given their lower education levels, migration often results in them doing high risk jobs or putting themselves in positions of vulnerability. The young girls who carry heavy loads on their heads in Accra's markets, sleep on the streets and earn 2 Ghana Cedi a day, as well as the illegal miners, who risk their lives and their health are reminders of the risks that people from the North take in search of a better life. Successful North-South migration, in terms of poverty alleviation, is further hampered by the South's low capacity to absorb large numbers of migrants from the North for cultural, social, economic and urban-planning reasons. This limits the development of economic and informational North - South integration channels through Diasporas.

Tackling poverty in Northern Ghana will call for interventions that go beyond spatially blind policies and are well targeted within Northern Ghana with a view to supporting livelihood opportunities and reducing vulnerability to the various climatic, economic and political shocks that plague these regions. This report suggests a number of potential avenues to tackle poverty in Northern Ghana.

People could live well from agriculture in Northern Ghana if low productivity was addressed by a more proactive and spatial approach to addressing infrastructure gaps, technology and business climate constraints. Agriculture in the North has been constrained by the lack of well planned and coordinated investments in infrastructure – particularly rural roads and irrigation. As a result, the Guinea-Savannah region in Ghana is often perceived as having agro ecological conditions that are too difficult for improving the productivity of agriculture, although neighboring Burkina Faso suggests that this does not have to be the case. While providing access within two kilometers to an all-season road to all Ghanaians might be unaffordable in the short run, cost requirements to ensure that there is adequate road accessibility to 80 percent of the agricultural land would shrink substantially. And a same spatial approach could be applied to small scale irrigation schemes. Improved dissemination of technology, improved knowledge and facilities for post-harvest handling, in addition to overall improvements in the value chain, are also needed to reduce loss of harvests. Moreover, innovative institutional arrangements such as out-grower schemes and contract farming, which better link small-holders to markets, and are more dependent on private sector actors, are promising candidates for scaling up and replication.

Greater human development and social protection in the North would also increase the potential for local development while improving the quality of migration. To-date, education, health, and social protection policies in Ghana have been mostly spatially blind and while this has favored the North by lessening disparities in health and education outcomes, difference in the returns to education has widened suggesting that more is needed to improve economic

opportunities in the North and the quality of migration, if regional disparities are to be addressed. Given the high concentration of the poor in Northern Ghana, there is a clear case to be made for using geographical targeting mechanisms much more widely, given their high returns in terms of coverage and cost-effectiveness. Similarly, existing programs that discriminate against households in Northern Ghana must be reformed. Some programs provide a relatively large implicit subsidy to better-off households (primarily in the South) and exclude the poor households in the North. Reducing overhead costs of program delivery can improve their efficiency, while also presenting opportunities for scale up, despite the current difficult fiscal environment. In addition, new social protection strategies, such as labor intensive public works programs, could be developed to provide income opportunities during the lean agricultural season. These programs could reduce the impact of extreme climatic events (e.g., floods and droughts) on communities, for which some climate change adaptation funds could be mobilized, or the risk of localized conflicts through youth employment programs for instance.

Geographical prioritization of the North, however, will not be enough and more sophisticated targeting of resources within the North is needed for concrete results to be achieved. Political considerations often limit the scope for prioritizing public interventions at the local level. However, this principle of geographic prioritization could be applied at a more disaggregated level than North vs. South. Given the low population density and vastness of Northern Ghana, resources must be concentrated in those areas where they are expected to have the largest impact on populations, and avoid the risk of being dissipated. Without this, the North will continue to be a recipient of public and private resource flows that are spread too thin and thus do not achieve concrete results in terms of poverty alleviation. From an economic perspective, this would call for the development of selected growth poles in Northern Ghana. Commercial agriculture relying on out-grower schemes is a promising avenue in this respect. From a social protection perspective, greater use of geographical targeting mechanisms (i.e. the prioritization of poorest districts) would improve the coverage and cost-effectiveness of national programs, while channeling larger amounts of public funds to Northern Ghana.

Furthermore, the provision of public goods at the local level should seek to equalize development outcomes rather than inputs. Even if it remains difficult to assess precisely how public resources are being distributed across local governments, there is a clear perception that some are more deprived than others. This is acknowledged by some social protection programs (e.g. capitation grants for primary schools in deprived districts), and the development of incentive frameworks to attract civil servants, teachers notably, to less favored areas. As long as positive discrimination in input distribution aims at equalizing outcomes in basic service delivery (health, education, security, social protection) it should be encouraged as offering equal public service and opportunities to all citizens. While further decentralization efforts should seek to encourage local decision-making on priorities and implementation, the decision on where to allocate national resources across the country in order to equalize outcomes is clearly a role for the national government.

The Savannah Accelerated Development Authority (SADA), as well as the renewed thrust of the Government of Ghana towards decentralized governance, provide the opportunity for a more comprehensive spatial approach to development. The new administration has committed to supporting the role of SADA and this report underlines its potentially powerful role in attracting investment to growth corridors in the North, on the one hand, while ensuring that public

and private investments are well targeted within Northern Ghana to achieve specific results. Achieving results in the North is clearly a long term process and if SADA can now be empowered to play this proactive role, it could be a powerful facilitator in ensuring that the North benefits from Ghana's growth, like their neighbors in the South.

But the report also underlines the criticality of placing these interventions in a broader geographical, political and temporal context. For a number of geographical reasons (soil fertility, water and mineral resource availability, access to global markets, etc.) there has been rapid agglomeration of economic resources in the South in search of higher returns. This has resulted in spatially uneven development between the South and North of Ghana. From global experience, the traditional policy response to the pervasive existence of lagging regions has been the transfer of additional resources to these regions: public investments, favorable tax regimes, etc. But in many cases this approach failed to simultaneously attract sufficient private resources and to gain long term public support (from taxpayers in leading regions in particular), as unable to decisively offset strong and persistent agglomeration forces. One way to safely circumvent the risk of spatial misallocation in public intervention is to invest in individuals' human capital (education, health, social protection, security) rather than places, given individuals' ability to relocate where economic opportunities are. Another one is to support economic activities in Northern Ghana which, if adopting the right complementary specialization patterns, would benefit from greater economic integration with the South, commercial agriculture for instance.

Finally, North-South migration should not be seen as detracting from the potential development of Northern Ghana. North-South migration is potentially a strong instrument for poverty alleviation. With the right human capital, many individuals could escape from poverty through migration to the dynamic South. This phenomenon however, remains marginal today. By the same token, greater North-South migration will most likely be a consequence of any development in Northern Ghana, at least for some decades. Indeed, with greater economic integration and better public service provision, the probability that residents of Northern Ghana will benefit from migration will tremendously increase, thus their incentive to migrate. Hence, one should not expect lower migration pressures from the development of Northern Ghana in the short run. On the contrary, attention should be paid to the quality of migration, which would entail strengthening social protection mechanisms to reduce negative migration, and raising human capital while increasing the absorptive capacities of cities to encourage positive migration. This migration to the South will further benefit the North, since migrants will add to the pool of remittances sent to Northern Ghana.

1. INTRODUCTION

1.1 **In the last two decades, poverty reduction has been very significant in Ghana.** Successive nationally representative living standards surveys conducted between 1992 and 2006 (respectively, GLSS3 in 1991/2, GLSS4 in 1998/9 and GLSS5 in 2005/6) suggest that monetary poverty (measured by the level of per capita consumption, adjusted for differentiated needs across individuals and prices across regions; see Box 1-1) has significantly reduced. The severity of poverty, the share of poor in total population, and the number of poor all declined substantially. The number of poor went down from 7.9 million people (or 52 percent of the population at that time) in 1992 to 6.3 million people in 2006 (or 29 percent of the population at that time). Thus, while the population in Ghana grew by 6.9 million between 1992 and 2006, the number of poor was reduced by 1.6 million -– a remarkable achievement. And without certainty in the absence of a more recent survey,[1] it is likely that there was further poverty reduction since 2006, given positive real private per capita income consumption growth rates.

Table 1-1: Basic Poverty Indicators, 1992-2006

	1992	1999	2006
Population (millions)	15.34	18.21	22.24
Number of poor (millions)	7.93	7.19	6.34
Share of poor in population (poverty rate)	51.7%	39.5%	28.5%
Average income of the poor (in proportion of the poverty line)	64.2%	64.8%	66.3%
Living in Male-headed households			
Population (millions)	11.21	13.25	17.03
Number of poor (millions)	6.15	5.44	5.36
Share of national poverty (percent)	77.5%	75.6%	84.5%
Average income of the poor (in proportion of the poverty line)	63.4%	64.4%	65.4%
Living in Female-headed households			
Population (millions)	4.13	4.98	5.16
Number of poor (millions)	1.78	1.75	0.98
Share of national poverty (percent)	22.4%	24.4%	15.4%
Average income of the poor (in proportion of the poverty line)	67.2%	66.2%	71.9%

Source: World Bank staff calculations based on GLLS3, GLSS4 and GLLS5.

[1] The Sixth and next Ghana Living Standard Survey (GLSS6) is scheduled for 2011.

Box 1-1: Poverty Measurements

Poverty is measured using per capita consumption. An individual is considered poor if he consumes less than the daily poverty line. Consumption is measured using Ghana Living Standard Surveys (GLSS), which collect information on households' consumption through repeated visits throughout the year. The latter includes estimates of imputed consumption of own production, dwellings and durable goods. As for the GLSS5, 8,687 households were surveyed from September 2005 to September 2006.

As prices of consumption goods vary across regions, account is made of these variations to measure real household consumption in a comparable manner through the use of regional cost of living indexes for food and non-food items and housing. While food and housing are much cheaper in the North, non-food items are on the contrary more expensive than in the South.

When measuring per capita consumption, account is also taken of the composition of the household: infants, children, males and females at different ages. Thus, households of similar sizes (the average in Ghana is 3.7 members) can have a different number of adult equivalents, if their compositions differ.

Finally, a poverty line is constructed. The poverty line defines the minimum food and non-food consumption required not to be poor (the sum of food and non-food poverty lines). The calculation of adult equivalent's food requirements (the food poverty line) involves measuring the local cost of consuming 2900 calories per day under a typical diet. non-food requirements (the non-food poverty line) are measured by the amount of non-food items consumed by those whose total consumption is close to the food poverty line. This is based on the principle that these non-food items are so essential to households that they forgo meeting their food requirements to purchase these non-food items.

For the year 2006, the annual adult equivalent poverty line was established at GH¢370 (at Accra prices), or 46 percent of GNI per adult equivalent. This figure also corresponds to US$1.08 per day in 2009 prices.

A more detailed discussion on all these points can be found in World Bank (2007).

1.2 **During this time of significant poverty reduction, greater strides were made among those living in female-headed households relative to those living in male-headed households.** In both male and female-headed households, while the population was growing, the number of poor was declining (Table 1-1). However, more progress in poverty reduction can be seen in the population living in female-headed households. People living in female-headed households represent approximately one-fourth of Ghana's population across time. In 1992, 22 percent of the poor population was living in a female-headed household, which is commensurate with the percent of the overall population living in female-headed households. However, by 2006, this number had declined significantly to the point where 15 percent of poor people lived in a female-headed household, even though roughly one-quarter of the population lived in a female-headed household.

1.3 **This overall significant poverty reduction achievement was primarily the result of strong job creation outside of agriculture.** World Bank (2007, 2009d) describes this shift of the labor force from agriculture towards informal urban employment, consistent with the structural transformation associated with economic development. Large productivity gains in the agricultural sector (cocoa in particular) and demographic changes freed human and financial resources to be redeployed and invested in higher value-added sectors, such as construction, transport, and financial services.

1.4 **By 2006, Ghana was 'on-track' to meet the Millennium Development Goal (MDG) of halving monetary poverty between 1990 and 2015.** By 2006, Ghana had already achieved 90 percent of the poverty reduction needed to meet the MDG (26 percent of the population in poverty in 2015, against 52 percent in 1990), against the 69 percent reduction needed to be 'on

track'[2] that year. Significant progress was also recorded on a number of non-income poverty MDGs, such as hunger, education, gender and access to safe water. In contrast, progress on health – while very significant between 2003 and 2008[3] – was considered insufficient from a MDG measurement perspective, as was (lack of) progress on sanitation.

Table 1-2: Ghana's Progress towards the Millennium Development Goals

Observation	Initial		Most Recent		Status
MDG1a. Poverty headcount ratio, national poverty line (% of population)	51.7	1992	28.5	2006	on track
MDG1b. Malnutrition prevalence, weight for age (% of children under 5)	27.4	1993	13.9	2008	on track
MDG2. Primary completion rate, total (% of relevant age group)	61.2	1991	88.7	2009	on track
MDG3. Ratio of girls to boys in primary and secondary education (%)	78.5	1991	95.0	2009	on track
MDG4. Mortality rate, under-5 (per 1,000)	120	1990	80	2008	off track
MDG5. Pregnancy-related mortality rate (per 100,000 live births)	740	1990	451	2008	off track
MDG7a. Improved water source (% of population without access)	44.0	1990	16.2	2008	on track
MDG7b. Improved sanitation facilities (% of population without access)	96.0	1990	87.6	2008	off track

Source: World Development Indicators and Ghanaian Authorities.

1.5 **From an international comparison perspective, Ghana's poverty reduction performance has been remarkable.** Indeed, Ghana stands among the countries that have achieved the largest poverty reduction (as measured by the change in the poverty rate, measured at the international poverty line of PPP$1.25 a day) over a sustained period of time (Figure 1-1).[4] Among 66 developing countries for which comparable data exist, Ghana ranks 11th. At 1.5 percentage points of poverty reduction per year, Ghana's performance was below that of Mali or Swaziland (2.9 and 2.6 percentage points respectively) comparable to that of Burkina Faso or Uganda (1.6 and 1.4 percentage points respectively), and much better than that of Guinea or Nigeria, which recorded substantial increases in poverty rates.

1.6 **Poverty reduction resulted from a combination of higher average per-capita consumption and higher inequality.** Between 1992 and 2006, the Gini measure of inequality rose from 0.37 to 0.42, positioning Ghana as an 'average' developing country in terms of income inequalities.[5] In turn, the computation of contributions of growth and changes in inequality to

[2] When at least two observations are available after 1990, with a sufficient number of years separating them, the World Bank determines whether a country is on or off track to meet a given MDG by 2015. To do so, it compares the progress recorded so far with that needed to reach the MDG, under the assumption that progress becomes increasingly difficult the closer countries get to the goal. Technically, this is equivalent to comparing the annual growth rate between 1990 and today with the constant growth rate required to reach the MDG in 2015 from the situation in 1990.

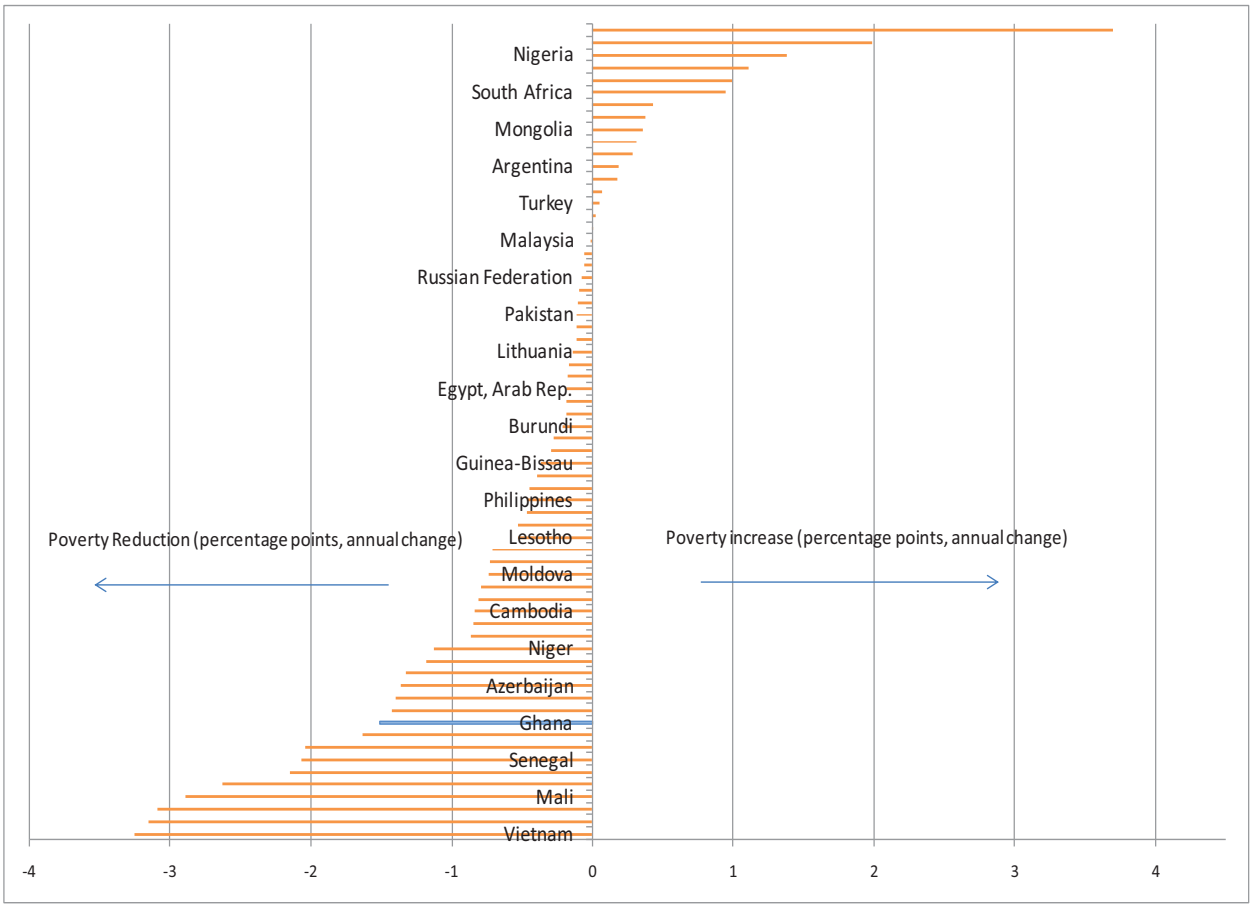
[3] The progress achieved over this period is impressive: under-5 mortality was reduced from 111 deaths per 1,000 births to 80, the proportion of malnourished under-5 children was reduced from 18 to 14 percent, and the proportion of medically assisted deliveries went up from 47 to 59 percent. Health progress results to a large extent from the creation and continued increase in coverage under the National Health Insurance Scheme (NHIS), reaching 13.5 million people by June 2009 (approximately 60 percent of the population).

[4] Figure 1-1 reports all the countries with two poverty data observations since 1990, including at least one since 2000, with an interval of at least 5 years (the actual average interval is 11 years). Data for Ghana are for 1992 and 2006.

[5] Source: World Development Indicators (2009). At the low end of the inequality range, the Gini may be 0.25-0.3 (such as in Eastern Europe). At the high end the Gini may be as high as 0.6 (mostly in Latin America). The average

poverty reduction suggests that, had there been no change in inequality, the poverty rate would have declined by 28 percentage points between 1992 and 2006 (against 23 percentage points actually). In other words, economic growth benefited the non-poor more than it did the poor. Yet, in an international comparison, Ghana stands as one of the countries that have experienced the largest growth contribution and the lowest inequality contribution to poverty reduction. Out of a sample of 61 countries for which data exist, only one country – Lithuania -– managed to achieve higher growth than Ghana without greater inequality changes; see Figure 1-2.

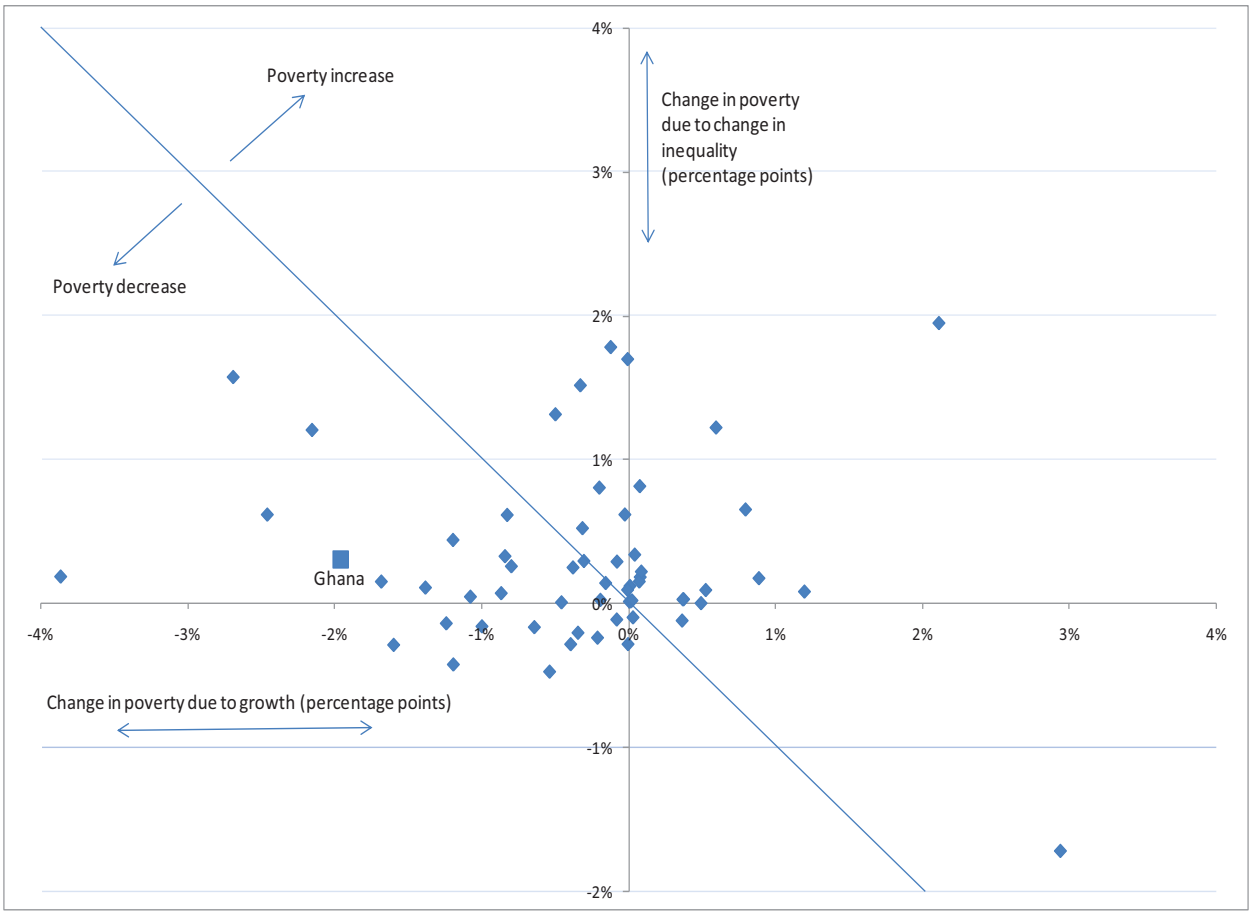
Figure 1-1: Ghana Ranks among the Top Poverty Reduction Performers



Source: World Bank Staff calculations based on World Development Indicators (2009).

Gini in developing countries for which data exist (109 countries for the period 1995-2008) is 0.42. Low and middle-income countries both record an average of 0.42.

Figure 1-2: Ghana's Poverty Reduction Combined High Growth with Low Inequality Changes



Source: World Bank Staff calculations based on World Development Indicators (2009).

1.7 **Even if not unusually high, Ghana's growing overall inequalities reflect to some extent large and growing geographical disparities.** Contrasting with national achievements, Ghana's economic and social development in the last two decades did not help reduce the large and lasting initial disparities between regions, as inequalities widened between the richer Southern Ghana and the poorer Northern Ghana (Upper West, Upper East and the Northern region, thereafter 'Northern Ghana' or 'the North'). As summarized in Box 1-2, contemporary under-development of Northern Ghana has its roots in the historical treatment of these regions which dates back to the Colonial period and has been reinforced by more recent political developments post-independence. While the absolute number of poor declined sharply in the South between 1992 and 2006 (2.5 million fewer poor), it increased in the North (0.9 million more poor). Taking population into account, poverty rates – the proportion of poor in the population – declined in both regions, although to differing extents. The poverty rate in the South fell from 48 to 20 percent, while it only declined from 69 to 63 percent in the North. However, the fact that the population grew faster in the North than in the South (a 3.5 percent annual growth rate in the North, against 2.5 in the South) also suggests the absence of net population shifts from the poorest to the richest regions. In other words, net migration flows out of Northern Ghana, if any, have been insufficient to reverse natural demographic trends leading to higher population growth in these regions.

Box 1-2: An Historical Perspective on Poverty in Northern Ghana

In Northern Ghana, the three regions of Upper East, Northern Region and Upper West trace their origins to three distinct socio-political formations with deep historical roots in the pre-colonial period, dating back to the fifteenth century. While the first two regions were built on existing statist structures, each ruled by unified political authority – the Wala state for Upper West, the Dagomba, Namumba, Mamprussi and Gonja states for the Northern region – the Upper East in contrast was ruled by fragmented political formations. Islam was predominant, even if Animist and Christian religions also prevailed in the Upper East and parts of the Northern region. At that time, population centers evolved largely in response to agro-ecological conditions and in particular access to water sources. In the Northern Region accessing underground water resources was extremely difficult. By contrast the Upper East has better soil fertilities and an abundance of rivers and streams.

Northern Ghana, overall, was lacking major political formations. Located between the large states of Ashanti to the South and Mossi to the North, populations were vulnerable to predatory raidings, from Ashantis notably (these raids were prolonged during the colonial period, for slave trade in particular). The North of Ghana was brought under colonial rule in 1902, somewhat later than Gold Coast and Ashanti which form present-day Ghana. The initial colonization of Northern Ghana by Britain is commonly attributed to the desire to create a strategic hinterland for the valuable territory of Ashanti. By that time the dynamics of the new export economy of the Gold Coast were already well established, based on exports of cocoa and gold (Rimmer, 1992). Accounts of early colonial policy cite the limited investment in infrastructure and services in Northern Ghana, but vary in attributing this to benign neglect (Lentz, 1998) or a deliberate policy to 'under-develop' Northern Ghana in order to create a labor reserve for export production in the South (Shepherd, 1979; Ladouceur, 1979; Konigs, 1986). In any event, the colonial period did not reduce the widespread perception of political discrimination in favor of wealthier social groups of the South based on different cultural forms (e.g. predominantly patri-lineal rather than matri-lineal kinship systems) and language types (Mole-Dagbani languages rather than the Akan language groups of the majority of the South). At independence there was only one secondary school in Northern Ghana (the government Secondary School in Tamale), in contrast to the long history of secondary education in the Gold Coast.

Following independence, Kwame Nkrumah's Convention People's Party (CPP) Government instituted some targeted policies to support the development of Northern Ghana. Redressing the imbalance in education received special attention and disparities have continued to close, albeit slowly. Import-substitution policies benefited Northern Ghana and the CPP governments ensured these regions a limited degree of representation in Government. The current administrative regional construct lies in this period. Following a more conservative period during 1966 – 72, the military regime associated with the National Redemption Council (1972 – 79) was recognized as the last regime with a positive vision of Northern Ghana development (Shepherd et al, 2004). Even so, physical access to Northern Ghana has remained poor over most of the post-independence period (although the North is not unique in this with the West also remaining largely isolated). The main trunk road from North to South has been so bad at certain points that all 'normal' passenger transport has been unable to operate. The most significant urban centre in the North, Tamale, has had a persistent problem with water supply over most of the post-independence period.

Some observers have argued that recent economic policy has returned Northern Ghana to its previous position as a pool of labor. As investments in Northern Ghana provided more local employment opportunities, previous import substitution policies were undermined when cocoa farmers complained about the reduced availability of Northern Ghana laborers. Following the economic liberalization associated with the structural adjustment period, Ghana's economic growth now depends on mercantile and service sector interests and cocoa, mining and timber extraction. The latter are 'point' resources and do not require national integration to be exploited effectively (Shepherd et al, 2004).

Table 1-3: The Growing North-South Poverty Divide, 1992-2006

	1992	1999	2006
Number of poor (millions)			
Urban North	0.24	0.30	0.22
Rural North	1.68	2.21	2.62
North	1.92	2.51	2.84
Urban South	1.17	0.89	0.68
Rural South	4.84	3.79	2.82
South	6.01	4.68	3.50
Proportion of poor in population (%)			
Urban North	45.4	50.3	31.3
Rural North	74.2	82.4	68.5
North	68.8	76.6	62.7
Urban South	25.7	16.1	8.9
Rural South	60.6	40.2	28.2
South	47.9	31.3	19.8
Average per equivalent adult consumption in real terms (GH¢, Accra, January 2006)			
Urban North	508	434	640
Rural North	296	278	357
North	335	306	401
Urban South	667	844	1088
Rural South	397	524	620
South	495	642	823

Source: World Bank Staff calculations based on GLSS3, GLSS4, GLSS5.

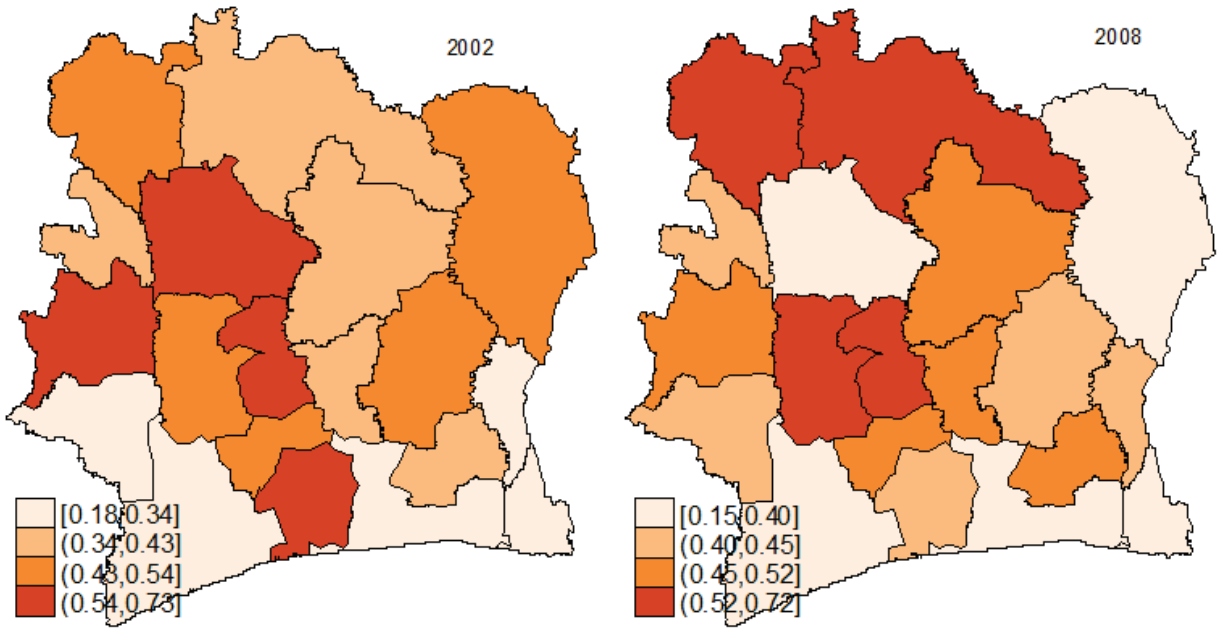
1.8 **Increased poverty in Northern Ghana is not a rural phenomenon.** There were 3.2 million more poor in 1992 in the Rural South than in the Rural North. But between 1992 and 2006, the number of poor dropped by 2.0 million in the Rural South and increased by 0.9 million in the Rural North, making both zones comparable in terms of the absolute number of poor in 2006 (2.6 and 2.8 million respectively). Actually, out of the four zones presented in Table 1-3, the largest poverty reduction (both in absolute and relative terms) occurred in the Rural South. Thus, even if North/South differences are often confused with Rural/Urban differences, it should be noted that differences in poverty alleviation between the North and South stemmed primarily from their respective abilities to reduce rural poverty, which was pervasive in the early 1990s in both regions. In the South, rural poverty alleviation was probably the result of combined rural development (the proportion of poor dropped by 32 percentage points while the population grew by 2.0 million) with urbanization. In the North in contrast, there was no significant urbanization between 1992 and 2006 (the urbanization rate actually dropped from 19 to 16 percent), while the proportion of rural poor only dropped by 6 percentage points – an insignificant decline in statistical terms. Both in terms of level and evolution, these developments differ significantly

from those observed in the neighboring Cote d'Ivoire, underlining Ghana-specific issues; see Box 1-3.

1.9 **Interestingly, rural development was also much more pro-poor in the South than in the North,** with a growth elasticity of poverty almost four times higher in the South than in the North. In other words, the same relative increase in average per capita income was associated with a poverty reduction four times higher in the South than in the North between 1992 and 2006.[6] Measures of inequality within the North and the South tell the same story. The Gini coefficient rose from 38.1 to 42.6 in the North between 1992 and 2006, and from 36.3 to 39.9 in the South. The General Entropy GE(-1) measure of inequality, more sensitive to the lower end of the distribution – the poor, rose from 29.6 to 39.6 in the North over the same period, against 24.4 to 30.0 in the South. Thus, the South combined higher income growth with inequalities growing more slowly than in the North. This means that compared to the North, the South did a better job of including poor and near-poor in the growth process, and that a lot of the overall increase in inequality in the South comes from greater inequalities at the top end of the income distribution.

Box 1-3: Regional Disparities in Côte d'Ivoire

Côte d'Ivoire presents some similar characteristics to Ghana in terms of ethnic composition and agro ecological conditions, as well as overall level and patterns of economic development. Yet, the distribution of poverty between regions has been very different from that of Ghana in the last two decades. Thus, while Côte d'Ivoire's South is richer overall, North-South poverty differences are less pronounced. In line with national poverty, which only declined modestly from 1993 to 2002, this share remained broadly stable over the same period. Observers attribute this low level of regional disparities to the effectiveness of public services provision throughout the country and the surge in Cashew nuts exports in the last decade. The political division of the country between the South and the North since 2002 nonetheless aggravated regional disparities, through reduced regional connectivity and a lower provision of public services in the North.



Source: World Bank 2010e. Regions are colored according to their ranges of poverty headcount.

[6] The use of semi-elasticities leads to similar conclusions.

Table 1-4: Gender and the North-South Poverty Divide, 1992-2006

	1992	1999	2006
Number of poor (millions)			
Urban North			
Male-headed Household	0.22	0.24	0.19
Female-headed Household	0.01	0.06	0.03
Rural North			
Male-headed Household	1.61	1.99	2.45
Female-headed Household	0.08	0.22	0.16
Urban South			
Male-headed Household	0.77	0.56	0.45
Female-headed Household	0.41	0.33	0.23
Rural South			
Male-headed Household	3.56	2.64	2.26
Female-headed Household	1.28	1.14	0.56
Proportion of poor in population (%)			
Urban North			
Male-headed Household	50.0	51.2	32.1
Female-headed Household	16.7	46.8	26.6
Rural North			
Male-headed Household	74.3	82.1	68.8
Female-headed Household	71.3	86.0	63.9
Urban South			
Male-headed Household	26.2	15.2	8.4
Female-headed Household	24.9	17.8	9.8
Rural South			
Male-headed Household	62.7	39.6	30.1
Female-headed Household	55.6	41.8	22.5

Source: World Bank Staff calculations based on GLSS3, GLSS4, GLSS5.

1.10 **In Northern Ghana, urban poverty is increasingly concentrated among female-headed households.** While the proportion of poor among male-headed households declined slightly in both the urban and rural areas in Northern Ghana between 1992 and 2006, the difference was more pronounced for female-headed households, even if their absolute number remains small at 0.3 million. Indeed the proportion of poor female-headed households in cities in the North rose between 1992 and 2006, while it declined in rural areas. In the South in contrast,

poverty among female-headed households declined both in rural and urban areas, as it did among male-headed households.

1.11 **Future poverty alleviation initiatives will need to address poverty in Northern Ghana.** With almost half of Ghana's poor now concentrated in Northern Ghana – and with the poor much poorer in Northern Ghana,[7] future poverty alleviation achievements will necessarily need to tackle North-specific poverty issues. This makes sense for the sake of efficiency given the large and growing reservoir of poor in Northern Ghana, but also for equity and social cohesion reasons, given Ghana's national unity aspirations and desire to achieve balanced development across all regions. Existing conflicts risk being inflamed – see Box 1-4. At current trends, poverty reduction will decelerate and geographical inequalities further widen: by 2030, poverty could be broadly eliminated in the South, while still affecting two-fifths of the North's population. Besides increased environmental variability resulting from climate change and the arrival of oil bring additional challenges to poverty reduction in Northern Ghana. In the absence of climate change mitigation and adaptation measures, poverty could worsen in Northern Ghana through reduced agricultural yields and more frequent natural disasters. The arrival of oil also poses challenges to agricultural competitiveness and social cohesion, through its impact on relative prices and a growing rural urban divide (World Bank, 2009).[8]

Box 1-4: Conflict in Northern Ghana

There is a history of small-scale, highly localized conflict within Northern Ghana. These include a) the conflict in Bawku related to control of land and the chieftaincy (between Kusasi and Mamprusi factions); b) the conflict in Yendi related to control of the chieftaincy of Dagbon; c) conflicts over land between Konkomba farmers and Dagomba or Nanumba land-owners/chiefs (including a particularly serious incident in Bimbilla in 1994, which led to substantial forced displacement – much of it migration to the South). At this point only the conflict in Bawku is active to any substantial extent (e.g. claiming at least 17 lives in June 2008). The ongoing conflict dynamics in Northern Ghana should not be over-stated – some observers have accused the (Southern-based) media of exaggerating the conflict. It should be pointed out that conflicts are localized and have never erupted into major regional or national issues. Moreover, the qualitative participatory assessment undertaken for this Report (and discussed extensively below) noted that "inter-ethnic conflicts were not mentioned as a source of vulnerability in any of the communities assessed." That said, conflicts are, however, very significant, distressing and dangerous for the populations concerned. When engaging in safety net or investment activities in areas of past or present conflicts it is important that the design incorporate effective social and conflict analysis to ensure that interventions do not make the situation worse.

1.12 **The Government proposes to address these concerns through the Savannah Accelerated Development Initiative**. Building on previous efforts to develop the Northern Development Fund (NDF) in 2008, the Government launched in 2009 the Savannah Accelerated Development Initiative (SADI), which seeks to strengthen the institutional framework for

[7] More complex measures of poverty, such as the Poverty Gap (P1) which accounts for households' distance to poverty line, actually suggest an even higher concentration of poverty in the North. Using P1 suggests that 60 percent of Ghana's poverty was concentrated in the North in 2006, against 31 percent in 1992. See also Table 1.5 for measures of poverty in the area covered by SADA (Northern Ghana plus adjacent districts).

[8] Efforts are ongoing on these two specific fronts to address such challenges. The Government is currently developing a Low Carbon Growth Plan (LCGP), to ensure that Ghana's development plans are climate resilient and low-carbon. It will integrate adaptation and mitigation measures into a comprehensive and coherent cross-sectoral plan that brings together current climate initiatives, economic and social development plans and projects across all sectors. The Government is also finalizing the oil revenue management framework, aimed at minimizing oil-related economic volatility, while limiting risks of oil revenue capture by specific groups and vested interests.

funding and coordinating development initiatives in Northern Ghana and adjacent districts, in support of a long term (2010-2030) Northern Development Strategy (NDS). The NDS aims at modernizing Northern agriculture to service neighboring markets (Sahelian countries, Togo and Northern Côte d'Ivoire) through the provision of various public goods (infrastructure, research and extension, social protection). Particular attention is paid to the protection against environmental damage (floods, droughts), forestation, conflict prevention and the development of out-grower schemes, with a view to developing small scale farming in support of commercial agriculture. To this end, the Savannah Accelerated Development Authority (SADA) will be established in 2010, with initial 'seed money' of GH¢25 million (0.1 percent of GDP). SADA's role will consist of advocating, facilitating and coordinating the implementation of the strategy, raising additional funds and monitoring results. The SADI aims at bringing down the poverty rate of Northern Ghana and adjacent districts (which are characterized as Guinea-Savannah ecology) to one-fifth in 2030, down from 58 percent in 2006. Poverty data for the area to be covered by SADA are reported in Table 1-5.

Table 1-5: SADA vs. non-SADA Poverty in 2006

			Poverty indices			Contribution to national poverty		
	Population Share	Number of poor	P0	P1	P2	C0	C1	C2
Region								
SADA	25.0	3.24	0.583	0.249	0.136	51.1	65.0	74.2
Non-SADA	75.0	3.10	0.186	0.045	0.016	48.9	35.0	25.8
National	100.0	6.34	0.285	0.096	0.046	100.0	100.0	100.0

Source: World Bank Staff calculations based on GLSS5. Notes: P0 stands for the poverty rate, P1 for the poverty gap and P2 for the squared poverty gap. C0, C1, and C2 are measures of contribution to national poverty calculated using respectively P0, P1 and P2 measures of poverty.

1.13 Thus, this report aims at providing some additional analytical underpinnings in support of the Savannah Accelerated Development Initiative. In particular, it aims to address three critical policy issues:

- **Is there a compelling case to invest in Northern Ghana, and for what objective?** Are there any untapped economic opportunities in Northern Ghana? Is there a compelling case to ensure 'balanced' growth by investing in Northern Ghana, even if economic opportunities are weak (maybe the very historical reason for not investing so far)? Is there a risk of wasting public resources if it prevents effective resource allocation in the face of spatially uneven economic development? Could this be politically sustained over time through net funding from the South if results are below expectations?

- **How effective is migration for poverty alleviation in Ghana and what would it take to make it more effective?** Could North-South migration be more instrumental for poverty reduction? On the one hand, migration, understood as an individual response to differentiated opportunities, is certainly pro-poor. On the other hand, it can also be the symptom of push factors – inequity, vulnerabilities – which force migration without any genuine expectations to find better economic opportunities elsewhere, thus simply re-locating poverty and exclusion elsewhere, and maybe aggravating it on a net basis, as social networks get weakened. Can policies be mobilized to encourage the 'good'

migration and discourage the 'bad' migration? Could it help close the North-South divide?

- **What can be done to improve social protection in Northern Ghana and equip households to reap economic opportunities wherever they emerge?** Is the current social protection architecture and strategy responding to Northern Ghana's needs? What could be done to reduce households' vulnerabilities, encourage them to take informed risks and reap opportunities – be it in Northern Ghana or elsewhere?

1.14 **The report builds its findings and recommendations on a number of Ghana specific contributions.** Beyond Bank staff contributions for this specific report, the report relies heavily on findings from the World Bank's Country Economic Memorandum (2007), as well as on inputs from other reports in preparation, including health and education Status Reports, and the report on the targeting efficiency of social programs. It also builds on contributions from IFPRI (livelihoods, migration), and a participatory poverty and vulnerability assessment (PPVA) commissioned from Participatory Development Associates (PDA) and co-sponsored by UNICEF and DFID. Finally, findings and recommendations were identified and validated with the support of a small group of individuals from institutions highly involved in various initiatives in support of the development of Northern Ghana.

1.15 **It also relies on two recent World Development Reports: WDR 2008 on Agriculture for Development and WDR 2009 on Reshaping Economic Geography which provide the analytical framework used in this report.** The report on Agriculture for Development deploys, in particular, a large spectrum of evidence regarding the contribution of agriculture to poverty reduction and related policies and public interventions, through improved productivity and sustainability of smallholder farming notably. The Reshaping Economic Geography report identifies conditions for effective geographic interventions, depending on countries' situations. It advocates the use of different instruments, from general and 'spatially blind' policies to connecting infrastructure and spatially targeted interventions. The report points out that economic development is spatially uneven and that policy should accommodate – rather than obstruct -– such a long-term process while making sure that everybody can benefit from it in the shorter term. This can be achieved by seeking unity rather than uniformity, and the use of country-specific policies that will bring the benefits that come from both unbalanced growth and inclusive development.

1.16 **Following this introduction, this report comprises four chapters.** Chapter 2 takes stock of our knowledge on geographical disparities in Ghana. It tries, in particular, to assess the extent to which disparities have resulted from 'neglect' in Government's attention to Northern Ghana and inequitable provision of public goods, or from Northern Ghana-specific conditions, which make 'spatially' blind policies insufficient, thus justifying geographically-targeted interventions. Chapter 3 identifies potential pathways out of poverty through expanded economic opportunities that provide for an evolution of households' livelihoods in Northern Ghana, and the necessary public policy actions for these to be realized. Chapter 4 depicts internal migration flows and their contribution to poverty reduction, depending on individuals' characteristics, origin and destination. Chapter 5 assesses the adequacy and effectiveness of the current social protection architecture to Northern Ghana needs and conditions, with a view to improve its efficiency.

2. GHANA'S GEOGRAPHICAL DISPARITIES

A. THE PHOTOGRAPHY OF GHANA'S POVERTY

2.1 **Detailed poverty maps, based on a combination of two surveys, illustrate the difference in poverty rates across districts in Ghana**. A visualization of the headcount index obtained for each district is given in Figure 2-1. Combining information on households' endowments and characteristics from the 2003 Core Welfare Indicator Questionnaire (CWIQ) with estimates of returns to those endowments and characteristics using 2005/6 GLSS data, the presentation of spatial disparities should be understood as depicting the Ghanaian situation between these years. (See Box 2-1). Since then, spatial inequalities between districts might have evolved, yet most likely without radically affecting the big picture.[9] Only one district in the Northern Region, Tamale, recorded a poverty rate lower than 30 percent, while all others approached or exceeded 50 percent. In the Upper West, all districts' poverty rates approached (Wa, 79 percent) or exceeded (all others) 80 percent. In contrast, in the districts not covered by SADA, poverty rates nowhere exceed 40 percent.

Box 2-1: Methodology for Constructing Poverty Maps

Due to their limited sample size, detailed \information-intensive household surveys, such as the GLSS (with a typical sample size of less than 8,000 households) cannot produce reliable estimates of poverty at a detailed geographical level, such as villages, towns, or districts. Only estimates at the regional level can be derived (Ghana has ten regions). However, the availability of the lighter Core Welfare Indicators Questionnaire (CWIQ) survey from 2003, which has the advantage of being representative at the district level (and contains information on roughly 50,000 households), makes it possible to address this shortcoming.

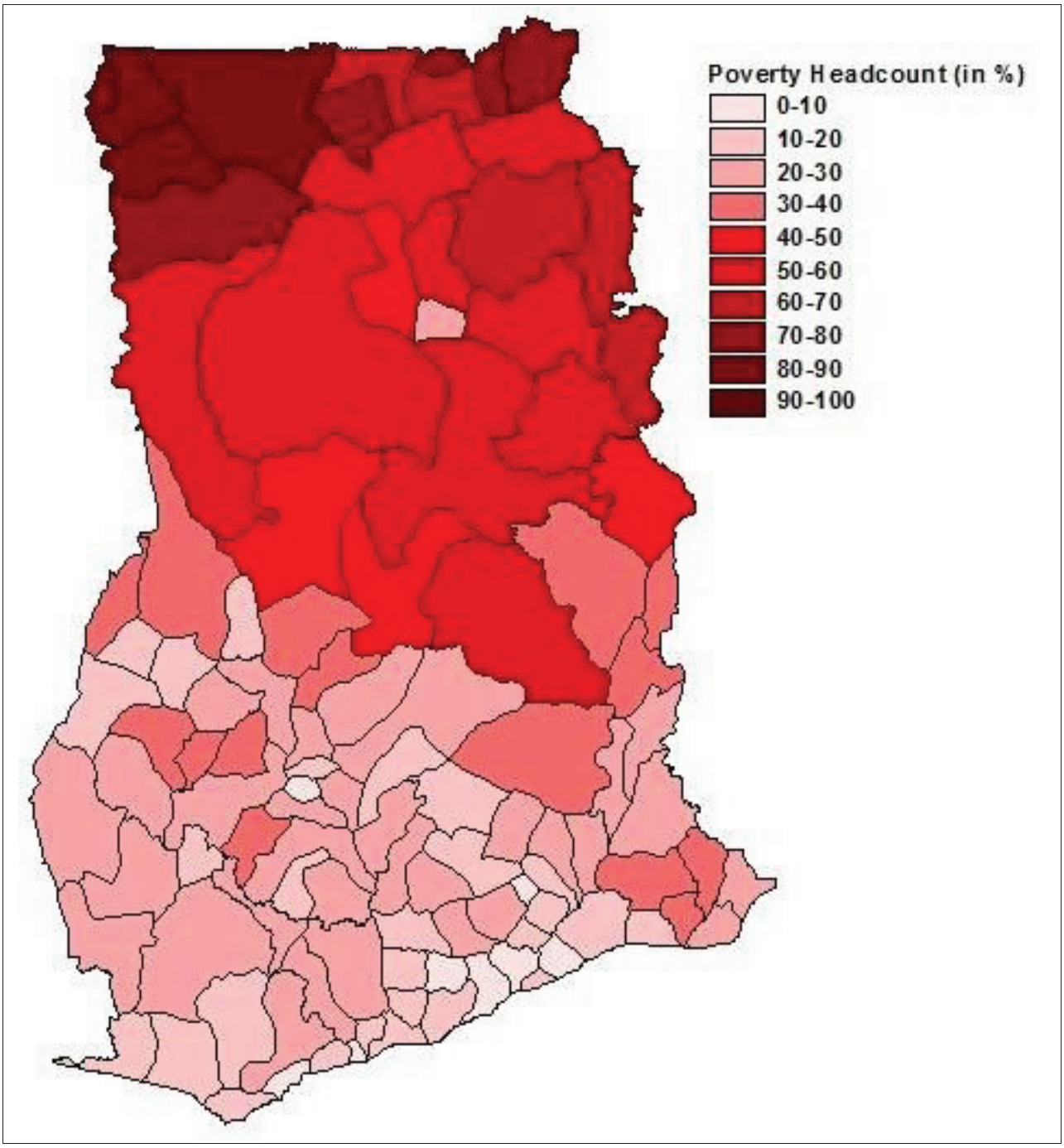
The idea behind the methodology (Elbers, Lanjouw and Lanjouw, 2002; 2003) for the construction of the poverty map is rather straightforward. First, a regression model of adult equivalent consumption is estimated using GLSS5 survey data, limiting the set of explanatory variables to those which are common to both that survey and the CWIQ (typically information on households' general characteristics and assets). Next, the coefficients from that model are applied to the CWIQ data set to predict the consumption level of every household registered in the CWIQ. And finally, these predicted household expenditures are used to construct a series of welfare indicators (e.g. poverty level, depth, severity, inequality) at the district level.[10]

The following poverty maps use data from 2003 and hence adopt district definitions from the same year, thus count 110 entities in the poverty map. However, since 2003 some of these districts were rearranged administratively and Ghana counted 170 districts in 2009. Confidence intervals of poverty estimates are reported in Annex 1, along with central estimates for the various districts. With an average standard error of 4.6 percent, estimates typically range within +/-7.6 percent around the central estimate at the 90 percent confidence level. That is, with a central estimate of 70 percent for the proportion of poor there is a 90 percent probability that the actual proportion stands somewhere between 62.4 and 77.6 percent.

[9] Comparing poverty maps produced using 1998 and 2006 data, Coulombe and Wodon (2009), conclude that poverty rates significantly changed over time in most districts. Yet, broad patterns remain largely unchanged between the two maps.

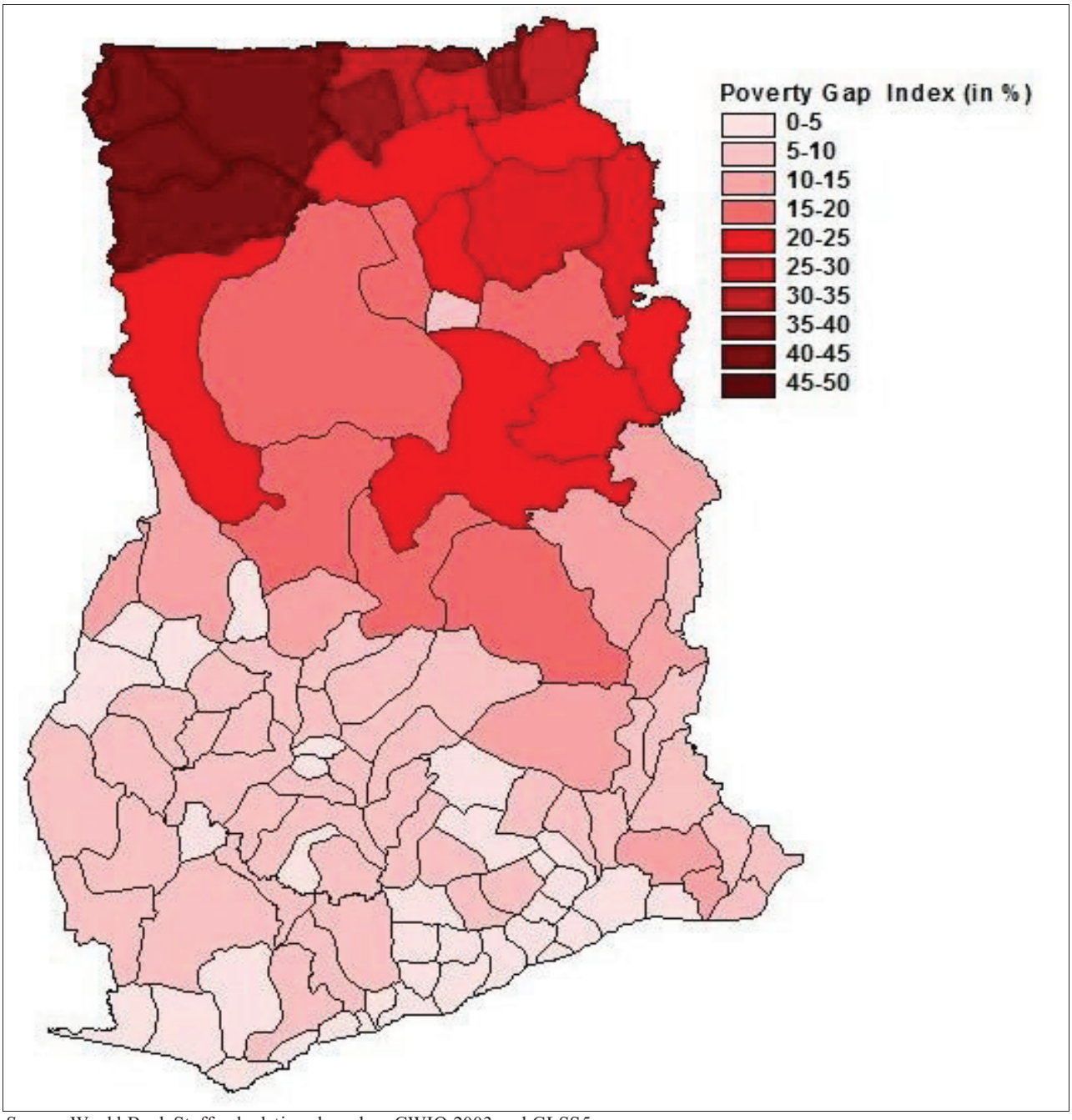
[10] Although the idea behind the methodology is conceptually simple, its proper implementation requires complex computations, see Coulombe and Wodon, 2009 for Ghana

Figure 2-1: The Proportion of Poor across Districts, 2003-6



Source: World Bank Staff calculations based on CWIQ 2003 and GLSS5.

Figure 2-2: The Severity of Poverty across Districts, 2003-6

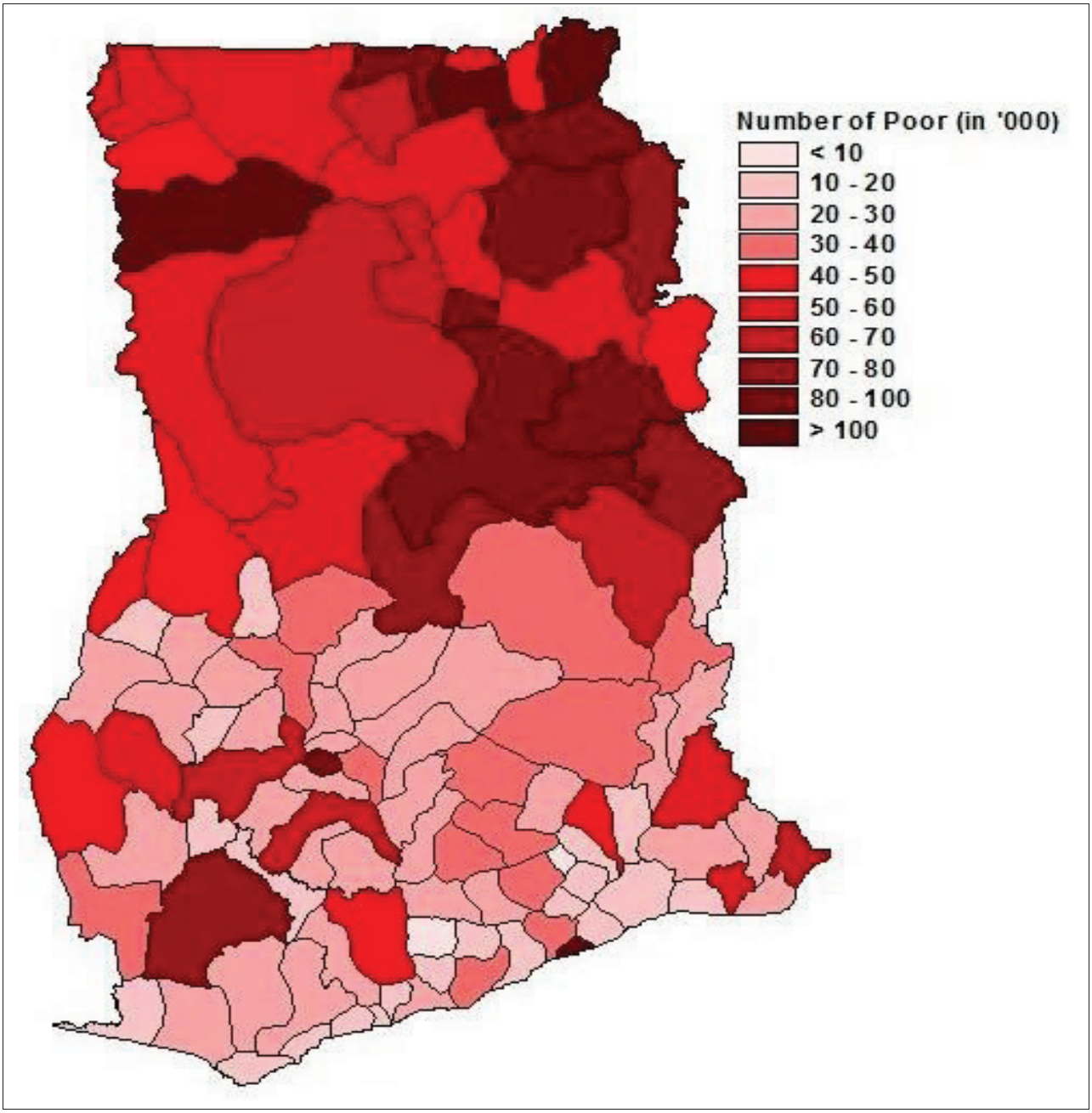


Source: World Bank Staff calculations based on CWIQ 2003 and GLSS5.

2.2 **The distribution of the poor across districts is more uniform, given that the overall population distribution is skewed towards the less poor South and Urban Areas.** Figure 2-3 depicts the number of (adult equivalent) poor in each district. As such, the national capital Accra, even with a low poverty rate (13 percent), ranks second as the district with the highest number of poor, after Bawku East (which records a poverty rate of 74 percent). Similarly, Kumasi and Tamale rank high on this scale, even if they record a relatively low proportion of poor in their total populations. It nevertheless remains the case that the majority of the poor live in Northern Ghana. This is in contrast with many other developing countries with recent records

of strong growth such as Vietnam and Honduras, where the poor live mostly in leading areas, where they seek better economic opportunities and improved service delivery (World Bank, 2009).

Figure 2-3: The Number of Poor in each District, 2003-6

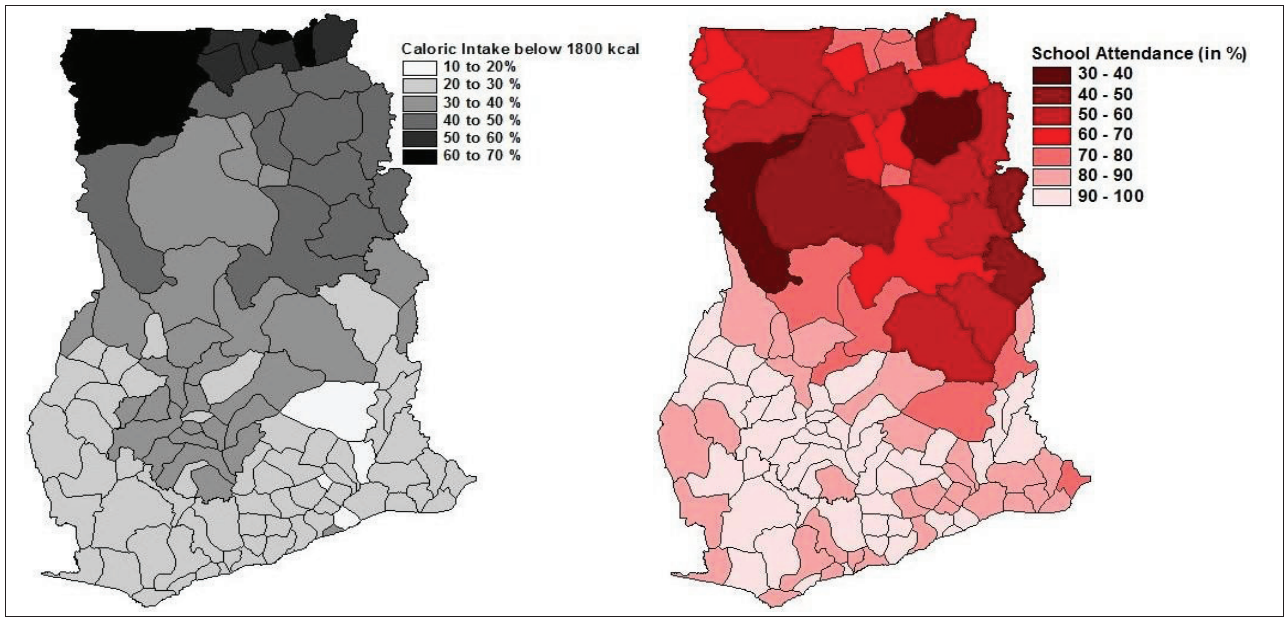


Source: World Bank Staff calculations based on CWIQ 2003 and GLSS5.

2.3 **Using similar techniques, other welfare maps can be produced**. The caloric intake map reported below is also based on estimation techniques combining data from CWIQ 2003 and GLSS5. Other MDG maps are directly derived from data registered in the CWIQ 2003. Indeed, consumption based measures of poverty might not properly encompass the multi-faceted

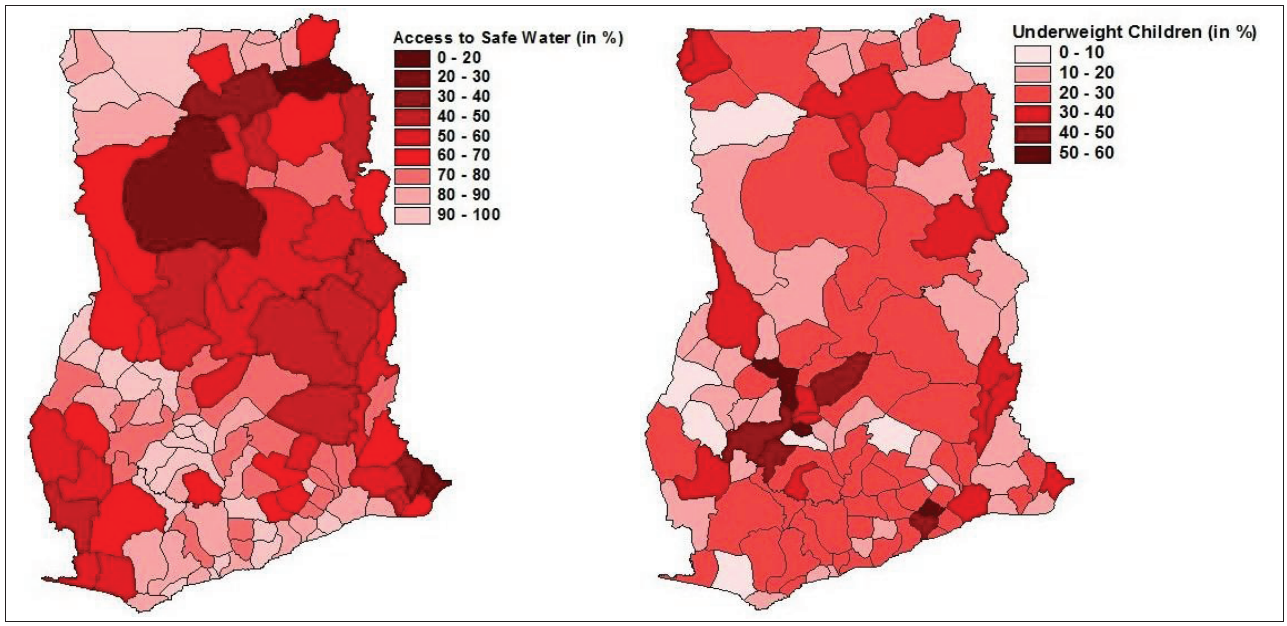
dimensions of poverty. Access to health, education, water – and demand for these resources when they are available – might not be effectively captured by monetary measures. Poverty is multi-dimensional and various indicators are not necessarily well correlated. While consumption based poverty differences between districts mirror differences in caloric intake and school attendance (Figure 2-4), the relationship becomes less pronounced when it comes to access to safe water or child nutrition (Figure 2-5). It is important to acknowledge that the poor and marginalized suffer different manifestations of poverty. Operationally, this implies that a single targeting criterion will not achieve the same coverage for all forms of poverty; rather different indicators will be required for different interventions, should the principle of geographical targeting be retained. A poverty map, such as Figure 2-1, could be used for social protection interventions, but not for improving access to safe water.

Figure 2-4: Caloric Intakes, School Attendance across Districts, 2003-6



Source: World Bank Staff calculations based on CWIQ 2003 and GLSS5.

Figure 2-5: Access to Safe Water, Children Nutrition across Districts, 2003



Source: World Bank Staff calculations based on CWIQ 2003.

B. GEOGRAPHICAL POVERTY PROFILES

2.4 **Geographical disparities can be decomposed into the disparities in (i) households' endowments, and (ii) the returns to those endowments**. Such a decomposition is useful if spatial differences stem from differences in individuals' characteristics, or if the same characteristics yield different outcomes in different places. Table 2-1 below provides interesting insights in this regard, by comparing SADA and non-SADA households. The first set of columns ('poverty rates') reports the proportion of the poor in the total population according to various characteristics, in Ghana, SADA, and non-SADA. For instance, while 31 percent of individuals living in male-headed households are poor in Ghana, this proportion goes up to 60 percent in SADA. The second set of columns ('characteristics of the poor') reports the distribution of the poor according to various characteristics, in Ghana, SADA, and non-SADA. For instance, 88 percent of the poor in SADA live in male-headed households. The third set of columns ('households' characteristics') reports the distribution of households – poor and non-poor – according to different characteristics. For instance, 72 percent of Ghana's population lives in male-headed households. The following are the key conclusions from the data:

- Overall, similar differences in individual characteristics are associated with similar differences in poverty outcomes in SADA and non-SADA, even if magnitudes differ;
- Gender matters for poverty: female-headed households have lower poverty rates, although as the previous chapter indicates, this varies depending on whether households are in urban or rural areas;
- Age matters for poverty: getting older increases the probability of being poor, up to the age of 60 old after which the probability decreases;
- Marital status matters for poverty: married households are poorer;

- Household size matters for poverty: larger households tend to be poorer;
- Education matters for poverty: the higher the education level of the head of household the lower the probability of being poor;
- Employment sector and status matter for poverty: formal sector wage workers have a lower probability of being poor as compared to non-working individuals; the probability of being poor working in utilities is much lower than that of working in agriculture; and
- Migration matters for poverty: households with migrants have lower poverty rates.

2.5 **Nevertheless, taking similar individual characteristics into account, the probability of being poor is much higher in SADA than in non-SADA.** With the exceptions of working in transport and communication and being an informal wage worker, similar characteristics lead systematically to worse poverty outcomes in SADA. This is notably the case for non-working individuals: in SADA, 72 percent of non-working individuals are poor, against 15.5 in non-SADA. This difference in poverty rates between SADA and Non-SADA is also stark in large households, or for household heads working in the mining sector. Interestingly, gender differences – in favor of women – are more pronounced in SADA than in non-SADA.

2.6 **The distribution of characteristics also differs widely between SADA and non-SADA.** There are significant differences in the proportion of uneducated individuals (70 percent in SADA vs. 22 percent in non-SADA) and the proportion of individuals living in large households (22 percent in SADA vs. 7 percent in non-SADA). In turn, the combination of different distributions of characteristics across households in SADA and non-SADA, and the different probabilities of being poor associated with each characteristic in SADA and non-SADA, explain the difference in the distribution of poverty according to various characteristics between SADA and non-SADA. It is noteworthy, for instance, that 80 percent of the poor in SADA are uneducated (against 32 percent of the poor in non-SADA), and that 12 percent of the poor live in female-headed households in SADA, against 28 percent in non-SADA.

Table 2-1: Characteristic's of the Poor, SADA vs. non-SADA, 2006

	Poverty Rate			Characteristics of the Poor			Household Characteristics		
	Total	SADA	Non-SADA	Total	SADA	Non-SADA	Total	SADA	Non-SADA
Sex of head									
Male	31.4	59.8	19.5	81.1	88.3	71.7	72.2	84.8	67.7
Female	19.0	44.3	16.1	18.9	11.7	28.3	27.8	15.2	32.3
Age of head									
Less than 30	16.7	40.9	10.7	10	9	10.7	16.5	12.5	17.8
30 to 39	25.3	49	17.6	22.2	21.1	23.8	24.2	24.6	24.1
40 to 49	30.2	61.3	20.1	24.6	24.7	25.2	22.5	23.0	22.4
50 to 59	33	66.4	21.2	20.1	20.5	19.6	16.8	17.6	16.5
60 and over	31.8	63.1	19.1	23.1	24.7	20.6	20.0	22.3	19.2

Household size									
1 individual	3.6	16	2.6	3.6	2.7	5.1	20.2	8.4	24.6
2 to 3 individuals	10.2	30.3	6.5	12.6	12.3	13.7	25.0	20.1	26.4
4 to 5 individuals	22.4	47.7	16.3	30	27	34.9	27.1	28.1	26.8
6 to 7 individuals	30.2	60.9	20.3	25.4	26.9	24.8	17.0	21.9	15.3
8 individuals or more	53.6	71.7	39.4	28.4	31.2	21.6	10.7	21.6	6.9
Education level of head									
No education	46.9	65	26.7	57.7	80.2	32	34.5	70.1	22.1
Some Primary	33	53.6	27.5	10.9	7.9	14.3	9.3	8.4	9.6
Primary	25.1	50.4	22.6	9.8	4.4	16.1	10.9	5.0	13.1
Secondary (lower)	17.3	36.1	16.1	18.6	5.4	33.1	30.1	8.5	37.9
TVET	7.3	27.9	5.8	0.8	0.6	1.2	3.1	1.2	3.8
Secondary (higher)	8.4	19.1	6.9	1.8	1.2	2.5	6.0	3.6	6.7
Post Secondary	2.3	5.3	1.9	0.5	0.3	0.7	6.1	3.2	6.8
Marital Status									
Never married	10.7	35.5	6.3	3.9	3.1	4.1	9.7	5.0	11.3
Married	30.9	59.7	19.8	78.5	82.9	72.6	67.7	79.1	63.7
Divorced	16.8	33.1	15.3	7.5	3	12.7	11.9	5.2	14.4
Widowed	25.3	58.5	17.5	10.1	11	10.6	10.6	10.7	10.5
Industry of head									
Non working	32.9	72.3	15.5	17.6	21.9	12.1	14.9	17.6	13.9
Agriculture	39.4	62.1	27.9	65.1	66.7	63.1	46.2	62.4	40.3
Mining/Quarrying	5.1	100	4.8	0.1	0.1	0.3	0.5	0.1	1.1
Manufacturing	16.5	49	12	4.9	3.9	6.4	8.3	4.6	9.5
Construction	13.4	48.3	8.8	1.2	1	1.4	2.5	1.2	2.8
Trading	11.5	25.7	9.6	5.5	2.9	8.4	13.4	6.6	15.6
Transport/Communication	13.6	12.7	13.6	1.7	0.2	3.4	3.5	0.9	4.5
Financial Services	8.2	40.3	4.8	0.4	0.6	0.5	1.4	0.9	1.9
Community/Other Services	10.5	27.5	7.5	3.5	2.7	4.4	9.3	5.7	10.5
Employment status of head									
Public	8.4	26.5	5.2	2.2	2.4	2.3	7.3	5.3	7.9
Wage Private Formal	9.9	27.4	9.1	2.7	0.7	5	7.6	1.5	9.8
Wage Private Informal	15.5	8.1	16.1	3	0.2	5.9	5.4	1.4	6.5
Self-employment Agriculture	40.3	62.3	28.7	64	66.4	61.1	44.1	62.0	38.0
Self-employment non-agr.	14	39.4	10.1	10.5	8.2	13.5	20.8	12.1	23.8
Non Working	32.9	72.3	15.5	17.7	22	12.1	14.9	17.7	13.9
Migration									
No	29.2	58.9	19.4	88.1	85.4	90.7	85.8	84.4	86.4
Yes	23.9	54.5	12.6	11.9	14.6	9.3	14.2	15.6	13.6
Total	28.5	58.3	18.6	100	100	100	100	100	100

Source: World Bank Staff calculations based on GLSS5.

2.7 **Interestingly, it appears that female heads with the same characteristics as male heads are less poor.** Table 2-2 examines poverty rates by characteristics of male and female heads of households in both SADA and non-SADA areas. A female-headed household is less poor than a household with a male head of equivalent age in both SADA and non-SADA areas. This is also true of household size and education. As with the general trend, larger households are poorer but given the same household size, a female-headed household is most often less poor than its male-headed equivalent. Similarly, households with female heads with the same education as male heads have lower poverty rates. The association between marital status and poverty is, however, different when examining the gender of the head of household. Among both male and female-headed households, widowed heads lead the poorest households. As expected, there are industry differences in poverty rates by sex of the household head. For instance, female heads in trading have lower poverty rates in SADA compared to non-SADA, while this is true of male heads in community services. Female heads in the same sectors lead less poor households than male heads overall, but this is not always true across SADA and non-SADA areas. Finally, migration is associated with lower levels of poverty for female-headed households, particularly in the SADA region. These simple tabulations are suggestive of correlations between poverty and household characteristics but do not prove causal relationships.

Table 2-2: Characteristics of the Poor by Gender, SADA vs. non-SADA, 2006

	Poverty Rate, M-HoH			Poverty Rate, F-HoH		
	Total	SADA	Non-SADA	Total	SADA	Non-SADA
Age of head						
Less than 30	17.9	42.0	10.0	13.5	30.3	12.3
30 to 39	27.8	50.2	19.0	14.0	29.4	12.8
40 to 49	31.9	63.4	20.0	23.5	44.4	20.5
50 to 59	37.1	67.9	23.6	18.6	50.6	14.8
60 and over	36.8	64.9	20.4	21.0	50.9	17.3
Household size						
1 individual	4.2	18.8	2.9	2.4	9.2	1.9
2 to 3 individuals	10.8	31.4	5.8	9.5	27.4	7.4
4 to 5 individuals	22.3	47.7	14.6	22.7	47.8	20.0
6 to 7 individuals	31.4	61.4	20.2	24.3	54.8	20.5
8 individuals or more	55.3	71.7	40.7	37.0	72.8	31.6
Education level of head						
No education	53.9	66.3	30.6	27.8	53.0	22.1
Some Primary	39.9	56.4	33.5	19.1	33.2	17.9
Primary	29.5	53.1	26.3	15.3	14.1	15.3
Secondary (lower)	18.8	39.0	17.3	10.6	8.9	10.6
TVET	6.2	27.4	4.7	12.4	30.3	11.2
Secondary (higher)	9.5	19.9	7.8	1.8	0.0	1.8
Post Secondary	2.6	5.9	2.1	0.0	0.0	0.0

Marital Status						
Never married	10.7	37.1	5.3	10.5	28.8	8.6
Married	32.4	60.4	20.3	18.0	34.4	16.8
Divorced	17.1	40.0	13.4	16.7	29.8	15.8
Widowed	36.9	66.6	23.2	23.4	56.1	16.7
Industry of head						
Non working	40.5	76.6	14.6	20.1	46.8	16.5
Agriculture	41.7	62.1	29.1	27.8	62.7	23.6
Mining/Quarrying	5.4	N/A	5.4	3.1	100.0	0.0
Manufacturing	16.8	48.0	12.9	15.9	50.8	10.2
Construction	13.4	48.3	8.8	0.0	N/A	0.0
Trading	13.4	32.2	9.4	9.9	11.3	9.8
Transport/Communication	13.5	11.2	13.6	19.6	26.1	17.2
Financial Services	8.6	43.5	5.0	0.0	0.0	0.0
Community/Other Services	10.3	29.7	6.6	11.4	8.2	11.8
Employment status of head						
Public	8.8	29.0	5.1	4.9	0.0	5.7
Wage Private Formal	9.9	26.8	9.1	9.9	34.3	8.6
Wage Private Informal	15.8	8.5	16.5	12.5	0.0	13.1
Self-employment Agriculture	42.8	62.2	30.2	28.2	63.2	23.9
Self-employment non-agr.	15.9	44.6	10.0	11.8	28.2	10.2
Non Working	40.5	76.6	14.6	20.1	46.8	16.5
Migration						
No	32.1	60.2	20.5	19.7	46.9	16.7
Yes	26.6	57.3	13.1	13.1	26.7	11.2
Total	31.4	59.8	19.6	19.0	44.3	16.1

Source: World Bank Staff calculations based on GLSS5.

2.8 **Drawing a profile of poverty is a necessary step to identify the characteristics of the population groups that are poor, but it is not sufficient to measure the impact of various households' characteristics on poverty.** Indeed, individuals combine various characteristics, and it is necessary to understand which ones have a significant impact on poverty. Hence the need to assess correlates of poverty using regression analysis. In doing so, it is more useful to rely on the richer information contained in differences in consumption, rather than on a binary measure of whether that household is poor or not.

2.9 **Table 2-3 reports results of regressions of determinants of consumption in SADA and non-SADA areas in 2006.** Rural and urban areas are also distinguished, for the sake of comparability. Since the dependent variable (the variable being explained) is the logarithm of per adult equivalent consumption, the coefficients can be understood as a proportionate change in consumption resulting from each specific variable being relevant or not. For instance, in rural SADA, an individual living in a female-headed household is correlated with consumption being 28 percent higher than an individual that is similar in every other way except that they live in a male-headed household. (Statistical significance levels are indicated by asterisks. Estimated

coefficients lacking an asterisk are not significantly different from zero, that is, they do not provide a significant explanation of differences in consumption across individuals.)

Table 2-3: Determinants of per capita consumption, SADA and non-SADA, 2006

	Urban		Rural	
	SADA	**Non SADA**	**SADA**	**Non SADA**
Age Groups				
Age 0 to 4	***-0.304	***-0.202	***-0.137	***-0.183
Age 5 to 14	**-0.154	***-0.189	***-0.213	***-0.229
Age 15 to 60	0.031	***-0.217	***-0.159	***-0.177
Age 61 and over	0.125	0.026	-0.005	-0.020
Age 0 to 4 squared	*0.090	**0.045	***0.032	0.011
Age 5 to 14 squared	0.012	***0.024	***0.021	***0.026
Age 15 to 60 squared	-0.015	***0.015	***0.010	***0.016
Age 61 and over squared	-0.127	-0.049	***-0.056	-0.055
Sex of head (a)				
Female	0.116	***0.156	***0.276	0.054
Education level of head (b)				
Some primary	***0.454	**0.122	-0.011	**0.063
Primary completed	0.245	***0.179	0.019	*0.059
Secondary 1	***0.261	***0.288	***0.221	***0.157
Secondary 2	0.146	***0.427	***0.430	***0.311
Superior	***0.481	***0.796	**0.360	***0.591
Education level of spouse (c)				
Some Primary	0.033	-0.060	*0.140	0.028
Primary completed	0.154	-0.059	0.118	**-0.064
Secondary 1	***0.417	0.048	0.163	0.052
Secondary 2	0.126	*0.144	***0.523	0.267
Superior	***0.811	***0.303	***1.354	-0.094
Marital Status (d)				
Married/Informal	0.095	0.053	-0.117	0.057
Separated/Divorced	0.258	**-0.100	-0.194	0.008
Widowed	0.055	-0.063	***-0.481	-0.054
Industry of head (e)				
Agriculture	0.110	0.025	***0.394	0.035
Mining/Quarrying	..	0.099	0.112	-0.020
Manufacturing	0.092	*-0.173	*0.572	-0.179
Utilities	0.418	0.014	..	***-0.519
Construction	-0.006	-0.241	0.459	0.017
Trading	0.164	*-0.147	***0.948	-0.107
Transport/Communication	0.011	-0.103	0.615	-0.111
Financial Services	-0.164	-0.050	*0.652	-0.211
Community & Other Services	0.120	**-0.242	**0.669	-0.125
Employment status of head (f)				
Public	0.146	***0.397	-0.028	**0.257
Wage/private/formal	0.441	***0.391	0.236	***0.329
Wage/private/informal	0.344	0.151	0.143	**0.153
Self-non-agriculture	0.172	***0.382	-0.411	***0.325
Migration and land ownership(g)				
Migration –- Yes	0.004	0.007	-0.076	0.046
Observations	420	3,191	1,843	3,215
R-squared	0.394	0.311	0.291	0.331

Source: World Bank Staff calculations based on GLSS5. Notes: *, ** and *** denotes statistical significance at the 90, 95 and 99 percent levels respectively. For each of the following categories, the reference is (a) male; (b) no education; (c) no education; (d) never married; (e) not working; (f) self-agriculture; (g) no migration.

2.10 **The comparison of returns to characteristics between SADA and non-SADA suggests important differences in opportunities, notably those outside self-agriculture.** In rural areas, the association between primary education (or lack thereof) and consumption seems to differ between SADA and non-SADA. Acquiring primary education in rural SADA is not correlated with higher consumption, **whereas** in non-SADA it is. This is cause for concern given that 85 percent of people do not have more than primary education and it is often assumed that improving primary education status is an important intervention to reduce poverty (as measured by consumption). If there is no correlation in the SADA region, this suggests that increasing primary enrollment and completion rates will not have the desired effect. In contrast, secondary education and above is correlated with higher consumption in both rural SADA and non-SADA.[11] Also noteworthy is the lack of correlation between consumption and working in the wage (public and private) or non-agricultural sectors in rural SADA, which strongly contrasts with non-SADA. In urban areas, the pattern is similar. While moving out of self-agriculture is correlated with much higher consumption levels in non-SADA (except when transitioning to the urban informal sector), it is not in SADA. This result could point to the seeming absence of opportunities outside of self-agriculture in SADA – as discussed in more detail in Chapter 3. This is evidenced by the apparent absence of urbanization dynamics observed so far, and the fact that two-thirds of the poor in SADA (that is, almost two-fifths of Ghana's poor) are in self-agriculture. Finally, migration out of rural SADA is not associated with higher consumption in the origin household.

2.11 **The comparison of returns to characteristics across gender also suggests important differences in economic opportunities.** Notably, some primary education is associated with higher consumption only for female heads in non-SADA areas, although the industry in which the head works does have a significant association with consumption. In contrast to Table 2-3, the industry of the head shows a significant correlation with consumption in SADA areas irrespective of the industry, a household will have higher consumption compared to a non-working head. Interestingly, working in agriculture for female-headed households is not associated with increased consumption relative to those not working, in either SADA or non-SADA areas. However, female-headed households in the SADA region in public and formal wage work and self-employed non-agriculture work have lower consumption than those in self-employed agricultural work. Finally, the effect of employment status is different across all four types of households. Male-headed households in non-SADA areas always have higher consumption than self-employed agriculture, irrelevant of formality or self-employment.

[11] In rural SADA too, the education level of spouses plays a significant and positive role, above primary education. This is to be contrasted with the situation of widowed, which tend to suffer much more in rural SADA than in rural non SADA.

Table 2-4: Determinants of per capita consumption, Gender, SADA and non-SADA, 2006

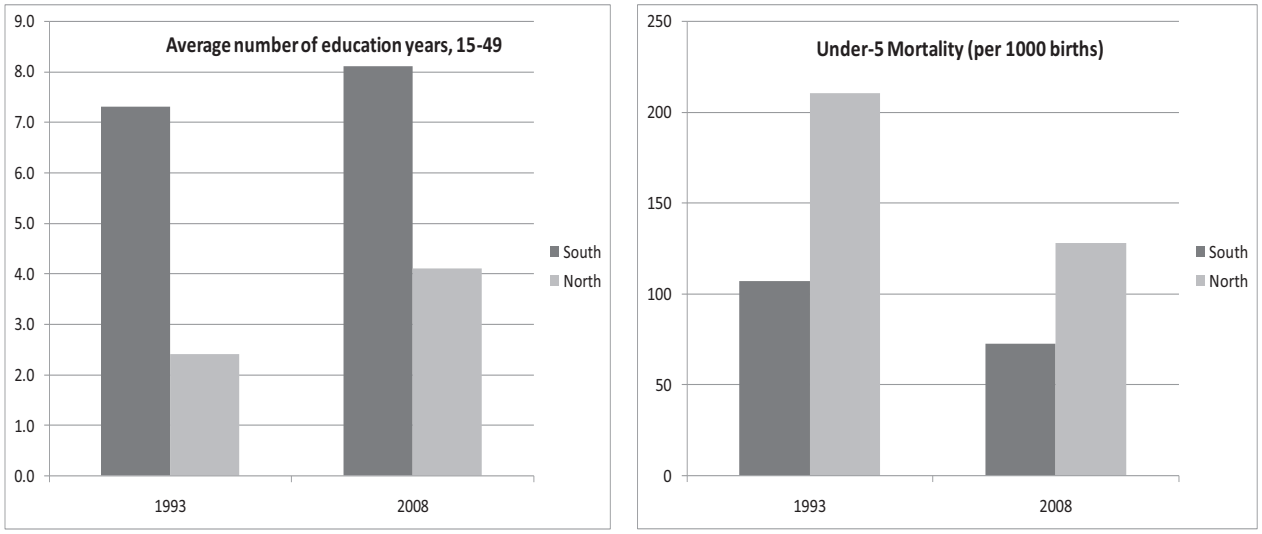
	Male-headed		Female-headed	
	SADA	**Non SADA**	**SADA**	**Non SADA**
Household Composition				
(# of household members per age group)				
Age 0 to 4	***-0.158	***-0.179	-0.213	***-0.177
Age 5 to 14	***-0.198	***-0.178	***-0.357	***-0.274
Age 15 to 60	***-0.139	***-0.211	-0.066	***-0.211
Age 61 and over	0.004	0.048	**0.520	-0.071
Age 0 to 4 squared	***0.038	**0.016	0.020	0.016
Age 5 to 14 squared	***0.018	***0.019	***0.060	***0.035
Age 15 to 60 squared	***0.007	***0.016	-0.011	***0.017
Age 61 and over squared	***-0.055	**-0.073	***-0.576	-0.043
Education level of head (a)				
Some primary	0.054	0.034	0.122	***0.124
Primary completed	0.018	0.026	**0.412	***0.201
Secondary 1	***0.220	***0.134	0.201	***0.286
Secondary 2	**0.223	***0.264	*0.258	***0.566
Superior	***0.409	***0.627	0.354	***0.807
Education level of spouse (b)				
Some Primary	*0.118	0.000	***1.092	-0.105
Primary completed	**0.187	**-0.053	-0.258	***-0.333
Secondary 1	***0.317	**0.066	**-0.420	-0.200
Secondary 2	*0.295	***0.202		**-0.513
Superior	***0.863	***0.273		-0.439
Marital Status (c)				
Married/Informal	-0.057	*0.068	0.244	-0.053
Separated/Divorced	-0.152	-0.068	0.287	*-0.113
Widowed	-0.240	-0.043	-0.091	**-0.121
Industry of head (d)				
Agriculture	***0.439	**0.102	-0.078	-0.008
Mining/Quarrying		0.127	***1.490	-0.227
Manufacturing	**0.459	-0.103	***1.993	-0.074
Utilities	***0.834	0.053		-0.188
Construction	*0.453	-0.081		-0.156
Trading	***0.698	-0.037	***2.337	-0.029
Transport/Communication	***0.581	-0.021	**0.808	-0.335
Financial Services	0.173	0.001	***2.626	0.246
Community & Other Services	**0.509	**-0.152	***2.093	-0.125
Employment status of head (e)				
Public	0.075	***0.337	***-1.658	0.242
Wage/private/formal	0.227	***0.364	***-1.470	0.115
Wage/private/informal	0.124	**0.142	***0.632	0.006
Self-non-agriculture	-0.172	***0.362	***-1.957	0.176
Migration and land ownership (f)				
Migration -– Yes	-0.094	0.009	-0.000	0.061
Urban and rural (g)				
Urban	***-0.384	***0.248	***0.349	***0.256
Observations	1,920	4,346	344	2,077
R-squared	0.352	0.406	0.492	0.406

Source: World Bank Staff calculations based on GLSS5. Note: *, ** and *** denotes statistical significance at the 90, 95 and 99 percent levels respectively. For each of the following categories, the reference is (a) no education; (b) no education; (c) never married; (d) not working; (e) self-agriculture; (f) no migration; (g) rural..

C. THE EVOLUTION OF SPATIAL DISPARITIES OVER TIME: ENDOWMENTS VS. RETURNS

2.12 **Beyond differences in individual characteristics, it is also instructive to look at collective differences to understand spatial disparities**. Indeed, the treatment of information on individual characteristics does not allow an assessment of the influence of externalities, agglomeration forces and collective assets (infrastructure, environment, social capital, etc.), which matter greatly in spatial economics. For instance, the productivity of an uneducated wage worker might increase significantly if working with more educated colleagues. Returns to farming might rise with reliable access to a large market and related outlets. Conflict, on the other hand, would tend to reduce economic linkages between economic agents. Economic density, often closely related to population density, might favor a division of labor in line with comparative advantages and economies of scale, for instance, in access to infrastructure.

Figure 2-6: North and South Converged in Terms of Educational and Health Outcomes



Source: World Bank staff calculations based on DHS 1993 and 2008

2.13 **In the last two decades, there has been a convergence in households' health and education endowments – or human capital – between the North and the South**. For instance, between 1993 and 2008, people aged 15-49 gained an extra 0.6 years of education in the South, compared to 1.2 in the North. Over the same period, the proportion of people aged 15-49 without any education dropped by 10 percentage points in the South, and by 21 percentage points in the North. These numbers reflect North-South convergence in educational attainments for both males and females, although the convergence was nonetheless more pronounced for males. Similarly, under-5 mortality dropped much more rapidly in the North, though starting from (and ending at) higher levels (Figure 2-6). Table 2-5 compares health and education endowments in the two regions, as measured in 1993 and 2008 by Demographic and Health Surveys (DHS). On all accounts, absolute convergence can be measured; that is, higher progress in the North than in the South. The picture is nonetheless more nuanced when accounting for the greater difficulty to progress, starting from higher welfare levels, as reported using the Kakwani index of relative convergence (Kakwani, 1993). In that case, convergence in access to education and gender parity cannot be observed for the population aged 15-49. Encouraging female access to school in deprived districts (most of which are in the North) is currently among the Government's main priorities in education, and progress is being recorded for younger cohorts.

Table 2-5: North-South Convergence in Education and Health Outcomes, 1993-2008

	South	North	South	North	Absolute Convergence	Relative Convergence
	1993		2008			
Proportion of 15-49 without any education	20.0	71.3	10.1	50.0	yes	no
Average number of education years, 15-49	7.3	2.4	8.1	4.1	yes	yes
Gender parity at school, 15-49*	90.7	77.6	93.8	81.9	yes	no
U-3 stunting	24.2	32.0	18.0	22.9	yes	yes
U-3 underweight	24.2	39.1	16.8	26.3	yes	yes
U-5 mortality	107	210	72	128	yes	yes

Source: World Bank staff calculations based on DHS 1993 and 2008.* Gender parity is measured by the ratio of the female average number of years of education divided by the male average number of years of education.

2.14 **Spatially-blind policies, such as free access to education, helped to narrow the North-South gaps in education and health, since the obstacles in the North were more considerable.** A number of policies most likely contributed to narrowing the gap in endowments. These were 'spatially blind' in that they did not set out to target Northern Ghana *per se* but by benefiting the poor more than the non-poor, they did in fact have an implied spatial focus since a disproportionate number of the poor reside in Northern Ghana. The first is the progressivity of the tax system,[12] which tends to exempt the poor from financing public health and education programs.[13] Second is the direct provision of public education and health programs. Benefit incidence analysis suggests that primary education disproportionally benefits poor and near poor (in contrast with secondary and tertiary education, which benefits non-poor). Moreover, even where public health systems disproportionally benefit the non-poor (in Northern Ghana notably) the extent of this bias declined between 1992 and 2006. All in all, 32 percent of general funding for primary education and 31 percent of general funding for health was accruing to the poor in 2006 – see Tables 2-6 and 2-7. Recently introduced programs, such as capitation grants for primary education, or the exemption of National Health Insurance Scheme fees for indigents are also probably contributing to the further narrowing of the North-South gap. Judged against the historical perspectives summarized in Box 1-2, these recent efforts suggest a sea-change from the 'lasting neglect' of the needs and problems of the North by political elites.

[12] Ghana's tax system is considered generally progressive. The VAT net covers a selected number of goods and services (mostly imports) that are largely consumed by the upper quintile households in the country, with the poorest households still largely dependent on auto-consumption. As a result, although on average 53% of total household expenditure consists of VAT eligible goods and service, only 45% of expenditures from households in the lowest quintile are value added taxed, compared to 75% for the highest income quintile. Direct taxes are also largely progressive, as almost entirely paid (96%) by employees and firms from the formal sector (the poverty rate in the formal sector was at 9% in 2006, against 32% in the informal sector). In contrast, a number of tax exemptions or subsidies are considered as poorly targeted, not benefiting the poor. This includes in particular petroleum and electricity subsidies, and tax exemptions on imported food introduced during the food crisis in 2008.

[13] In 2009, domestically financed health and education programs represented 47 percent of Government's tax revenue.

Table 2-6: Benefit Incidence Analysis: Public Education, 2003

	Primary	Junior High School	Senior High School	Tertiary
Poorest	18.9	13.2	9.3	4.0
2nd	24.9	20.5	11.8	4.1
3rd	23.7	23.3	15.9	7.8
4th	19.5	22.8	24.9	19.2
Richest	13.0	20.2	38.0	64.8
Total	100.0	100.0	100.0	100.0

Source: World Bank staff calculations.

Table 2-7: Benefit Incidence Analysis: Public Health, 1992-2006

	Hospitals		Clinics	
	1992	2006	1992	2006
Poorest	9.4	9.1	15.7	18.3
2nd	14.2	15.0	17.1	20.0
3rd	17.7	19.3	20.8	19.0
4th	24.3	23.6	19.2	22.0
Richest	34.4	33.1	27.2	20.8
Total	100.0	100.0	100.0	100.0

Source: World Bank staff calculations.

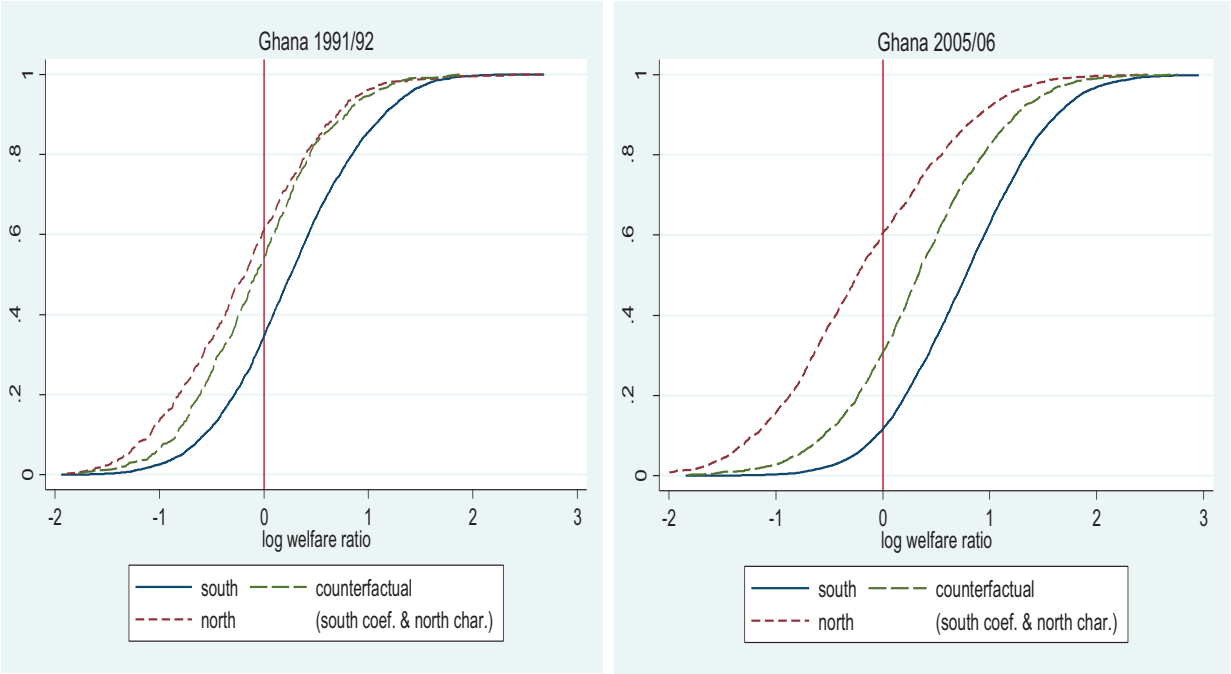
2.15 **In addition, recently additional incentives for public sector staff to move to the North of Ghana have been introduced.** In recent years, the difficulty of attracting and retaining education and health staff in the North and in some other deprived districts, has led the Government to provide specific incentives to staff. Although these policies are deliberately biased in favor of specific regions, they remain spatially neutral from an impact perspective, since the objective is to provide the same level and quality of public services to all citizens, wherever they reside. This is similar to the case of rural electrification programs, which aim to provide universal access to electricity, even if unit costs of access differ geographically.

2.16 **However, one can observe a divergence in returns to human capital endowments between North and South over the period 1992-2006.** Figure 2-7 depicts the distribution of households' consumption in the North and South in 1992 and 2006. It also reports what would have been Northern households' consumption, had they received Southern returns to their endowments (age, education, sector of employment, etc.). The comparison of consumption distributions over time and between the two regions suggests first that spatial difference in poverty widened over time, as already observed in Table 1-3.[14] It also suggests that while the upper end of the distribution in the North (red dashed line) realized welfare improvements, poor households in the North were left behind, with the poverty headcount (read off the vertical axis at the point where the distribution crosses the red vertical line) essentially unchanged at around 60 percent from one survey to the next. This is consistent with the observation made earlier that growth was much more pro-poor in the South than in the North. Lastly, it indicates that returns to endowments diverged over time between the North and South. Indeed, while most of the gaps in welfare between the South and the North in 1992 could be explained by differences in

[14] Differences with Table 1-3 lies in the fact that distributions of households are reported in Figure 2-6, against distributions of adult equivalent in Table 1-3.

endowments in 1992 (especially for non-poor), a growing share – approximately half of the gap – could be explained by differences in returns in 2006. A comparison of the observed rural distribution with the counterfactual distribution (green line), which represents the welfare distribution if households in the North received Southern returns, illustrates this point.[15]

Figure 2-7: Returns to Endowments Diverged between North and South



Source: World Bank Staff calculations based on GLSS3 and GLSS5.

Table 2-8: Estimated North-South Differences in Returns, 1992-2006

	1992	1999	2006
Urban	0.026	***-0.390	***-0.255
Rural	***-0.165	***-0.520	***-0.405

Source: World Bank Staff calculations based on GLSS3, GLSS4 and GLLS5. Note: *** denotes significant at the 99 percent level.

2.17 **Widening returns are also evidenced in econometric analysis.** Another way to look at the same phenomenon is to observe the evolution of regional dummies when explaining the determinants of consumption in both Southern and Northern households together. In this frame, all regional differences in returns (to similar endowments) are exclusively and entirely captured by the regional dummy, see Table 2-8. Consistent with previous analysis, results suggest that North-South differences in returns in favor of the latter increased from 17 percent in 1992 to 41 percent in 2006 in rural areas and from 0 to 26 percent in urban areas. In other words, the North

[15] The relative importance of endowments and returns in explaining the difference is also seen using the Oaxaca-Blinder decomposition of means. In 1991/92, differences in household endowments/characteristics accounted for 64% of the welfare difference between the North and the South, and differences in returns to those endowments accounted for 36% of the welfare difference. In 2005/06, both returns and endowments each accounted for 50% of a wider welfare gap.

– South difference in returns to similar endowments grew by more than 20 percent between 1992 and 2006.

2.18 **As a result, the North-South convergence in health and education was insufficient to bring convergence in poverty**. This conclusion is also robust to different methodologies to assess the degree of convergence, be it in absolute or relative terms. While measures of absolute convergence were already discussed in Table 2-5, the measure of relative convergence, which accounts for the greater difficulty in reducing poverty from already low levels, confirms that the South did much better than the North in terms of poverty reduction, both in terms of the proportion of population and the depth of poverty. The observation is also consistent with the view that human development outcomes, health outcomes in particular, are not necessarily strongly correlated to income poverty outcomes, as seen in Figure 2-5.

Table 2-9: North-South Poverty Convergence Measures

	South	North	South	North	Absolute Convergence	Relative Convergence
	1992		2006			
Poverty rate (P0)	0.479	0.688	0.198	0.627	No	No
Poverty gap (P1)	0.156	0.315	0.048	0.283	No	No

Source: World Bank Staff calculations based on GLSS3 and GLSS5.

2.19 **The North-South divergence in returns to endowments suggests the limitation of spatially blind policies, among other factors**. First, convergence in endowments can actually mask persistent difference in the quality of these endowments. This could be the case for instance for education where the same number of years at school conceals differences in terms of educational achievements such as literacy, etc. The fact that returns to education in the North remain low could support this view. At the same time, growing demand for education in the North suggests that households have some interest in keeping their children at school, even if returns are lower in the North than in the South. Second, public policy efforts to narrow the gap between the North and the South could be undermined if those benefiting most from such efforts in the North were to migrate to the South. But if this phenomenon exists (see Chapter 4) it does not lessen convergence in endowments, as demographic and health surveys (DHS) measure the health and education status of individuals residing in the North and South at the time of the survey. Third and most importantly, it most likely reflects the fact that spatially blind policies were insufficient to offset agglomeration forces in the leading South.

2.20 **The divergence in returns is symptomatic of poor economic integration between the North and the South.** Poor economic integration is also evidenced by the fact that prices of similar goods differ substantially between the North and the South, as discussed later in Chapter 4. Indeed, integrated (goods and/or factors) markets would prevent such a divergence in returns. A number of reasons could explain such poor integration. These include lack of connectivity infrastructure (roads, communication), regulatory barriers to trade and entry, lack of human and physical capital portability, ethnic and linguistic divisions, etc. Some households, subsistence farmers for instance, might also be simply too poor to grow -– as insufficiently equipped to migrate to leading areas, and/or engage in trade with leading areas to reap associated opportunities.

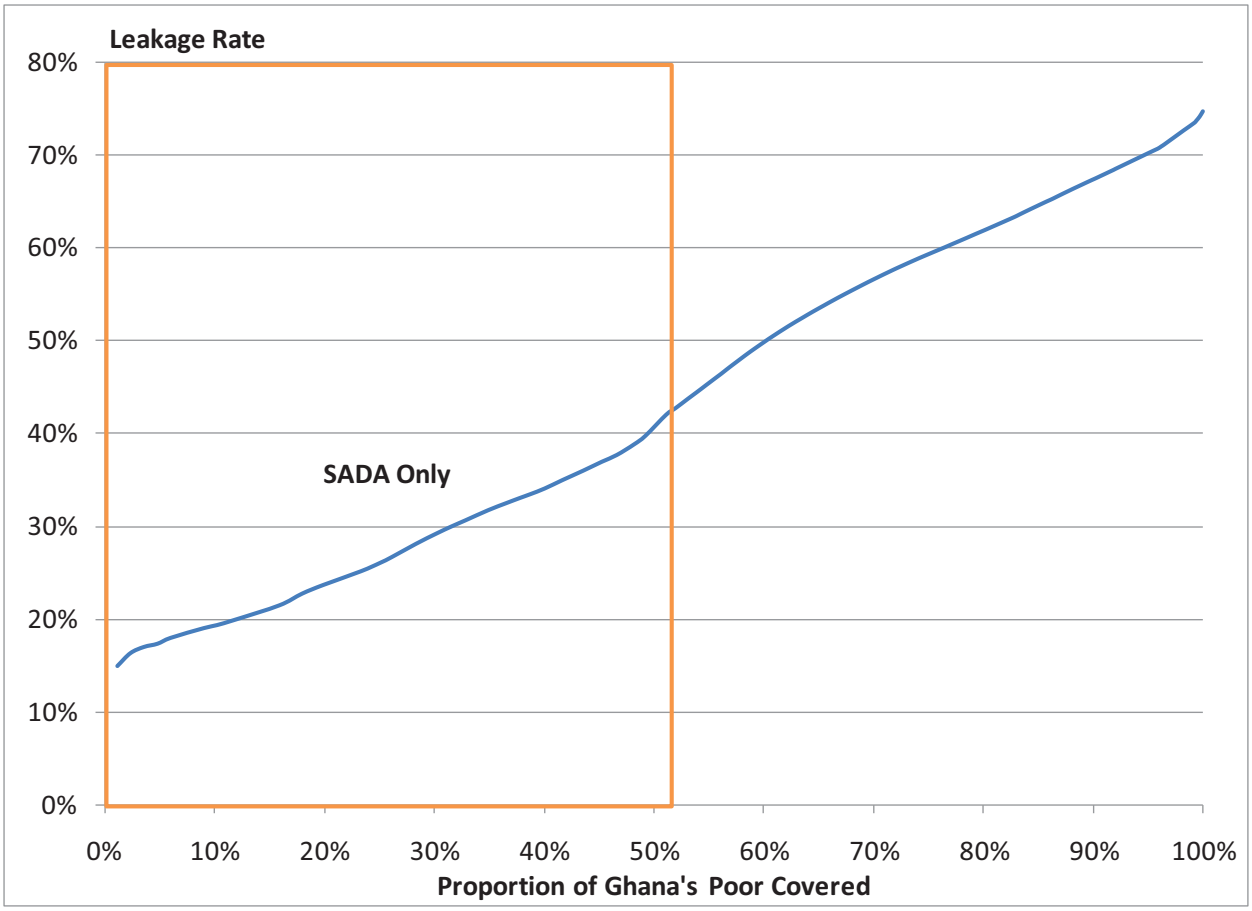
2.21 **Observed poor market integration between the North and the South is consistent with the recent Investment Climate Assessment** (ICA, World Bank 2009b). The ICA records large variations between urban North and South in terms of firm size and productivity, which are interpreted as symptoms of poorly integrated national markets and limited competition. These characteristics translate into poorly organized markets where transactions are small and infrequent and price, quality and quantity of goods and services are subject to high levels of uncertainty. Consequently, the lack of incentives among firms to perform better, which results from uncompetitive markets, is compounded by disorganized markets that present few incentives for firms to plan and invest. As a result, firms in Tamale stay relatively smaller in terms of employment and turnover (the median firm size is 6 employees in Tamale compared to 12 in Accra while the average annual sales of a manufacturing firm is US$24,224 and US$60,157 respectively). Moreover, more of these small-scale formal manufacturing firms Tamale evolved from the informal sector rather than having been established directly as formal enterprises (55 percent started as informal enterprises compared to 29 percent in Accra). In addition econometric evidence indicates that large and small firms in the same sector use different technologies for production, leading to the conclusion that it would be difficult for one or the other not to adapt if they were in head-to-head competition. In locations such as Tamale limited competition and small, isolated markets may not provide sufficient impetus to improve performance at the levels found in other regions. With respect to market integration, while 43 percent of firms in Accra use information technology in their businesses only eight percent of firms in Tamale do the same. Six percent of firms in Tamale sell some of their product to international markets or import some of their inputs from these markets, while 23 percent do so in Kumasi.

D. THE CASE FOR GEOGRAPHICAL INTERVENTIONS

2.22 **There are several arguments in favor of geographical interventions focused on Northern Ghana**. Geographical interventions are policies and investments that are spatially biased in that they seek to better connect the North to the rest of the country and the world**,** and/or promote economic activity in Northern Ghana. Examples include productive infrastructure, targeted subsidies, special tax regimes, etc. As discussed in the previous section, spatially blind policies – that is, progress towards a similar provision of public goods and services across the country – has failed to deliver spatial convergence, with convergence in endowments being offset by growing divergences in returns. Spatially biased interventions to ensure 'catch-up' should be a temporary measure (although the actual duration could be considerable) in that once convergence has been achieved a return to spatially blind interventions would be appropriate. The medium term objective from spatially biased interventions would be to achieve threshold effects (whereas a minimum number of educated workers in Northern Ghana would improve the productivity of each educated worker for instance), and to reduce differences in the quality of services (e.g. more trained teachers in Northern schools, better basic service delivery through decentralization). In all cases, efforts should be pursued and amplified to provide people with the same quantity and quality of public services in the North as in the South. But the recent experience in Ghana discussed above, reinforced by cross-country evidence, tends to suggest that this will not suffice to trigger convergence in welfare across regions. Indeed according to World Bank (2009), on balance, the forces for regional divergence (in favor of rich regions) are dominant and only diminish as countries reach upper-middle income status (a GNI per capita at US$3,595). Assuming Ghana conforms to the global average, with a robust economic growth of 6 percent per year, this point will not be reached for three

decades. Expectations and aspirations for rapid development in Ghana are high and such a timeframe is probably politically infeasible. It is certainly developmentally unacceptable to consign another generation of Ghanaians in the North to continue to lag behind developments in the South, especially in light of balanced growth in an age of oil.

Figure 2-8: Leakage and Coverage Rates Through Geographical Interventions



Source: World Bank staff calculations.

2.23 **Geographical targeting is an efficient instrument.** Given the large differences in poverty rates across districts, prioritizing poorest districts – i.e. geographical targeting – would make sense from an operational perspective. Efficient targeting implies: (i) ensuring that all the program resources go to eligible beneficiaries with non-eligible individuals excluded; (ii) that all eligible beneficiaries are included in the program; and (iii) the operational costs of this targeting are small – or, more accurately, smaller than the leakages that would occur with a universal approach that failed to distinguish beneficiaries from non-beneficiaries.[16] Geographical targeting scores well on both counts. First, the administration costs are low. Second, in the district of Nadowli, for instance, which records a poverty rate of 85 percent, the probability of reaching the

[16] The fertilizer voucher scheme implemented in 2008 and 2009 has been criticized by some observers as being disproportionately costly to administer. Proponents of a subsidy-at-the-port approach argue that the cost of the increase in leakages would still be less than the administration costs of distributing and redeeming vouchers. Ultimately this is an empirical question that requires further analysis.

poor through any untargeted intervention (e.g. cash handouts)[17] is also 85 percent. As such, maximal efficiency (from a poverty alleviation perspective) could be attained by allocating all resources to poorest districts (with sufficient resources to alleviate poverty in each of them – that is a function of the districts population and poverty gap). Obviously, as poverty rates decrease, leakage rates symmetrically increase given the greater difficulty to identify poor; but coverage rates (the proportion of the poor in the country benefiting from the program) would augment, as depicted in Figure 2-8.

2.24 **There are many reasons why geographical targeting might prove difficult in practice, the most binding one being its political feasibility.** The poor can be found in all districts (SADA and non-SADA report the same numbers of the poor) and as such districts that are not targeted – by definition the richest districts – might be opposed to financing such programs.[18] In areas, where the poor and non-poor groups are coincidentally divided along ethnic and religious lines, this risk becomes higher. Additionally, migration could reduce the overall efficiency of geographical targeting if benefits are so large that the non-poor from non-targeted districts move to targeted districts to receive benefits. However, migration risks should not be of great concern, given that current patterns (see Chapter 4) show little permeability between the North and the South.

2.25 **Nevertheless, geographical targeting would far surpass all existing programs from a targeting efficiency perspective.** Indeed, a program designed to eliminate all poverty in SADA (that is a program covering 51 percent of Ghana's poor) through pure geographical targeting would record a targeting efficiency of 58 percent. This is in contrast with current programs (see Table 5-2) the best of which, LEAP (the Livelihood Empowerment Against Poverty program), has a targeting efficiency of 57 percent, and covers only about 1 percent of the poor (see Chapter 5). Figure 2-8 illustrates this fact, with SADA districts ranked in decreasing order of poverty rate, followed by non-SADA districts ranked according to the same criteria. As the vast majority of poorest districts are in SADA, the relationship between leakage and coverage rates is broadly identical to that which would be obtained by ranking districts only according to their poverty rates. And obviously, geographical targeting could be combined with other methods (means and proxy means testing, community-based targeting, etc.) to improve its overall efficiency – while noting that the costs of administration would increase too.

2.26 **But if geographical interventions could make sense in principle, questions of their design, scale and location remain open**. Beyond the obvious need for internal efficiency, the design of possible interventions in Northern Ghana should consider several factors. First and foremost is the degree of coordination and consistency with efforts to connect lagging regions in Northern Ghana between themselves, with the rest of the country, and with wider West African sub-region and beyond. With greater connectivity, some economic activities can become more productive (gains of trade through economies of scale, reliability of outlets and inputs, exploitation of comparative advantages, etc.), but others may fail due to exposure to greater competition. For example, a new road to a market brings new economic opportunities, but also greater competition in the remote area. With greater connectivity, factors of production, including labor, become more mobile. A new road might favor outmigration before it favors the

[17] See Moss and Young (2009) for a discussion on the technical possibility to develop untargeted cash transfers in Ghana.

[18] A program aimed at lifting all people out of poverty in SADA through geographical targeting would cost a minimum of 2.6 percent of GDP each year (broadly 25 times the current allocation to SADA, GH¢25 million).

development of new activities – since it lowers the costs of 'push' migration. Other constraints may inhibit those remaining from taking advantage of new opportunities that arise. Thus, if greater connectivity is needed, it will also likely strengthen agglomeration forces. These considerations point to the need to design interventions with a view first to equip lagging regions with greater capacity to integrate in a larger and more uncertain economic environment, rather than subsidizing directly some activities with a view to artificially increase their competitiveness vis-à-vis outsiders, as it will become increasingly costly to do so. It also points to the need to focus interventions on equipping households to become economically and geographically more mobile. Lastly, it suggests the need to avoid any geographical interventions that could weaken regional integration.

2.27 **The second consideration is long-term sustainability through medium-term financing for geographical interventions.** Trying to accelerate regional convergence will require sustained efforts over time – at least two decades, according to the SADI. Since funding implies inter-regional transfers – primarily from the South – the risk of fatigue and even opposition might grow rapidly, more so if these transfers displace regional integration efforts as the latter tend to reduce this opposition (World Bank 2009a). A number of factors could mitigate this risk. First is the reliance on progressive taxation mechanisms and spatially blind pro-poor policies rather than earmarked allocations to regions. Current political tensions around the oil revenue management framework illustrate the difficulty to put in place inter-regional transfer mechanisms. Second is the management of expectations. While Ghana might succeed in reducing spatial disparities in poverty, it might not achieve balanced development across regions in the next two decades. Third is the geographical concentration of interventions within SADA, to generate sufficiently visible results, when combined with appropriate monitoring and evaluation. With confirmed funding of GH¢25 million – equivalent to US$3 per year per SADA inhabitant – SADA risks being spread too thinly and these funds alone are unlikely to generate a substantial impact across the entire SADA region. Targeting of the poorest districts within the SADA region is necessary. Fourth is the direct contribution of Northern households to the financing of their own development. As discussed previously, income inequalities are particularly large in Northern Ghana, and this situation could provide scope for greater internal redistribution, between individuals and/or districts, to accompany national redistribution efforts. Fifth is the possibility to tap additional external aid resources in favor of mitigation and adaptation to climate change. Given the different geographical and climatic issues between the South and the North, these funds will not be fungible between the two regions.

2.28 **The third consideration regards location and the fact that pro-North interventions could be better placed elsewhere.** With greater connectivity, it is hoped that Northern households will be able to move more easily and in greater numbers to the South, as well as deepen trade relationships with the South. As far as North-South migration is concerned, this might point to the need to improve Southern cities' labor market absorptive capacities, particularly in the informal sector, through skills development and improved urban planning (See Box 4-5). As far as North-South trade is concerned, it points to the need to mitigate oil-related Dutch Disease pressures, which could reinforce the regional divide, by increasing returns to factors of production employed in the non-tradable sector. The majority of non-tradable activities are located in cities, most of which are in the South, and contain the most non-tradable activities, and will receive the bulk of revenue while agriculture will suffer from the real exchange rate appreciation and related loss of competitiveness (World Bank, 2009c).

3. POVERTY ALLEVIATION OPPORTUNITIES IN NORTHERN GHANA

A. INTRODUCTION

3.1 **This Chapter draws on evidence from GLSS5 as well as the Participatory Poverty and Vulnerability Assessment (PPVA) commissioned specifically for this report.** The PPVA, supported by DFID, UNICEF and the World Bank, was commissioned to inform the design of poverty reduction policies in Ghana with a focus on Northern Ghana.[19] The PPVA set out to do two things: firstly to capture people's experiences of coping with poverty and vulnerability in Northern Ghana and secondly to investigate the livelihoods and realities of various groups of migrants of Northern origin in Southern Ghana.

3.2 **The PPVA drew on fieldwork using participatory methods in seventeen sites, twelve of which were in Northern Ghana** – three in the Upper West Region, three in the Northern Region, and six in the Upper East Region. The experience of migrants of Northern origin was explored through fieldwork in five communities in the South of Ghana. The sites were selected based on thematic and practical criteria in relation to the objectives of the assessment (see Table 3-1). These included the need for a mix of: sites in all Northern Ghana's regions, rural, peri-urban and urban sites (with emphasis on the rural given the poverty picture) and a mix of ethnic groupings. Some sites were then selected from an initial shortlist for their additional characteristics such as their reputation for a high level of out-migration, or because they were known to be recipients of social protection programs. Communities in the South were purposefully selected to reflect different kinds of migration experience – from the girls' head-portering in Southern markets, to share-cropper communities in cocoa farming areas, and informal mining in the Western Region. Lastly, practical criteria also came into play (language, access and existence of intermediary organizations). The first round of the PPVA concentrated on understanding the key features of poverty and vulnerability, and local perceptions of effective actions to help people sustain their livelihoods. The second round concentrated on validating findings by discussing key conclusions with the participating communities. The report on a third round (which focused on education) is currently being finalized.

[19] See Participatory Development Associates, 2009.

Table 3-1: Field Sites for the PPVA

Community name/ Region	District	Rural/ urban	Km to district capital
Upper West Region			
Dambolteng	Lawra	Rural	Approx 40
Dornye	Wa West	Rural	Approx 35
Karne	Lambussie-Karne	Peri-urban	District capital
Upper East Region			
Bansi	Bawku Municipal	Peri-urban	5
Bongo Soe	Bongo	Rural	7
Nyogbare	Talensi Nabdam	Rural	30
Shia	Talensi Nabdam	Rural	3
Tempane	Garu Tempane	Urban	10
Tindonmoligo	Bolgatanga Metropolitan	Peri-urban	Approx 15 min walk to Bolgatanga centre
Northern Region			
Jakpli	Tolon Kumbungu	Rural	25
Tamale Metro	Tamale Metropolitan	Urban	Regional capital
Wungu	West Mamprussi	Rural	12
Southern Ghana			
Alikrom	Akontombra (WR	Rural	8, on very bad road
Atta-ne-Atta	Asunafo North (BA)	Rural	18
Mallam Atta	Accra Metropolitan	Urban	National capital
New Kokrompeh	Atebubu Amanten (BA)	Rural	6
Somanya	Somanya (ER)	Urban	District capital

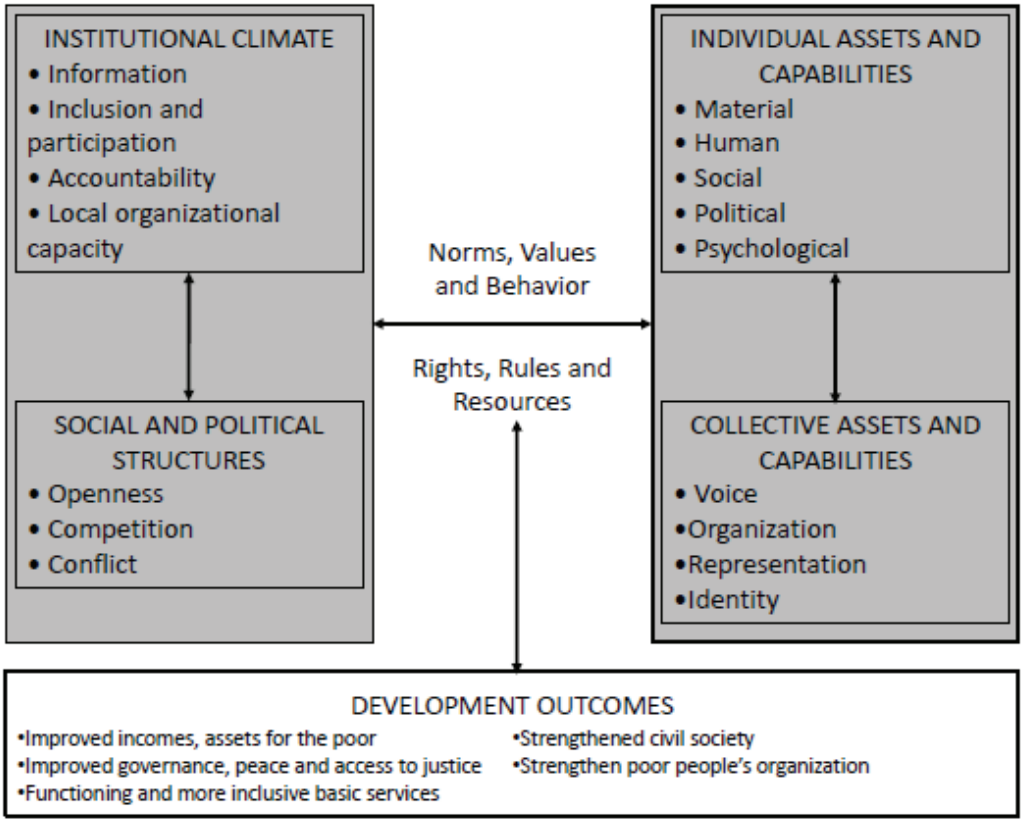
3.3 **Alleviating poverty is largely dependent on improved livelihoods being realized by poor households.** 'Livelihoods' matter more than 'incomes', and 'households' matter more than 'individuals'. This is because of the mechanics of how poverty is measured in which the household is the unit of analysis (see Box 1-1) and also because of the complex intra-household dynamics and the position of both working members and dependents. Ellis (2000) defines livelihoods as "the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household." Box 3-1 expands briefly on the conceptual framework for understanding livelihoods in the development context.

3.4 **The living standards survey and the PPVA provide complementary perspectives.** Broadly speaking, the GLSS-based tool concentrates on assets and activities but ignores institutional and social relations. The PPVA is better placed to record these aspects but acknowledges that even this is imperfect, since "the testimonies sometimes missed the asymmetric social orders into which [respondents] are locked". In accordance with Box 3-1, the evidence is stronger for individual than collective assets and capabilities. Juxtaposing aggregate economic data provides a partial view the PPVA illustrates social and political structures that provide some insights into the opportunity structure. In the following, we use the terms livelihoods, activities and occupations interchangeably.

Box 3-1: A Summary Conceptual Framework for Livelihoods Determinants

Observed livelihoods are the outcome of a range of factors that affect both the available economic opportunities and the ability of households to take advantage of them. Opportunities are determined by overall economic climate, the size of the economy, basic agro-ecological conditions and other sources of growth and the like. These can be considered largely exogenous to the individual and household and are typically referred to as opportunity structure. The ability of households to take advantage of prevailing opportunities is determined by household endowments, attitudes and preferences, as well as social norms and others determinants. These are collectively defined as agency since they are concerned primarily with the household (Narayan and Petesch 2007). As illustrated below, opportunity structure and agency embody both economic and non-economic determinants and the development outcomes extend beyond only economic livelihoods.

Opportunity and Agency as Determinants of Development Outcomes



The definition and conceptual framework of livelihoods adopted here implies the task of observing livelihoods across the full spectrum of assets, activities, opportunity and agency, which is extremely demanding. Gathering data is both costly and time consuming (for the researcher as well as the respondent) and a range of methodologies are required that reflect both economic and social dimensions. Although there is increasing attention to cross-disciplinary approaches and substantial efforts in this direction it remains thus far an uneasy marriage.

Source: Narayan and Petesch (2007).

B. CONTEMPORARY LIVELIHOODS IN NORTHERN GHANA[20]

3.5 **Participatory rural appraisal techniques reveal 3–7 differentiated categories of households according to their overall status**. Given the complexities of 'livelihoods' there are many parameters on which to construct a typology. By asking Northerners themselves how they differentiate households within their own communities, the PPVA identified the following typology which captures the salient features of each groups' livelihood: those who are flourishing (the *bun-dana*);[21] the near-poor and seasonal poor (*wala-dana*); the chronic poor (*fara-dana*)[22] – comprising both able and incapacitated poor; and the extreme poor (*nong-daan kuruug*)[23] – a subset of the *fara-dana*.

3.6 **The *bun-dana* (non-poor/ flourishing) group consists of self-sufficient households and is dominated by men.** They are more likely to be educated, though by no means have all *bun-dana* completed school. Some (particularly the educated and skilled) are returnee long-term migrants who have made their money by working in the South. Rural and peri-urban *bun-dana* households have a more diversified portfolio of livelihood activities and assets, with investments typically including a combination of cattle, sheep and goats, guinea fowls and chickens and cereal or other farms.[24] Their farms are much larger and houses more sturdily constructed. Their property rights are more secure. Their farm assets – donkey-carts and bullock-ploughs – are also hired out for additional income. In urban/peri-urban areas, *bun-dana* may engage in itinerant trading or own enterprises such as shops, grind-mills and filling stations. The *bun-dana* are also more likely to have migrant children abroad or settled in the vibrant cities of Kumasi and Accra. Given their superior asset holdings, *bun-dana* households do not lack food and parents are better able to provide for their children's basic needs.

3.7 **The *wahala-dana* constitute a fairly broad group comprising near-poor and fluctuating poor**. With limited non-labor assets and a disabling asset environment, their condition oscillates. *Wahala-dana* have difficulty building investments due to deficits in their capabilities (especially secondary education and skills), other capital assets (especially finance, but also land) and opportunities (e.g. value-added processing, equitable exchanges in the land, labor, financial and commodity marketplaces). *Wahala-dana* households lack the finance to cultivate large tracts of land. Importantly many migrants fall in this category, as do the untrained teachers who staff the classrooms of the rural North and those other formal sector workers with similar levels of education. *Wahala-dana* in the North easily slip into poverty and hunger during the long lean season. The main difference between the two sub-groups of *wahala-dana* – the near-poor and the fluctuating poor – is that the latter fall back into poverty on a cyclical basis during the annual lean season whereas the former drop into poverty only in the more extreme years of drought and flooding. By contrast with the *bun-dana*, livelihoods of the *wahala-dana* are much less diversified.

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[20] In the following, the authors are grateful to Afua. B. Banful and Shashi Kolavalli of IFPRI for the analysis of occupations based on the GLSS5.

[21] Also *bon-daan*, *bon-dana*, *bun-daan*.

[22] Also *nong-dan/ nang-dana*.

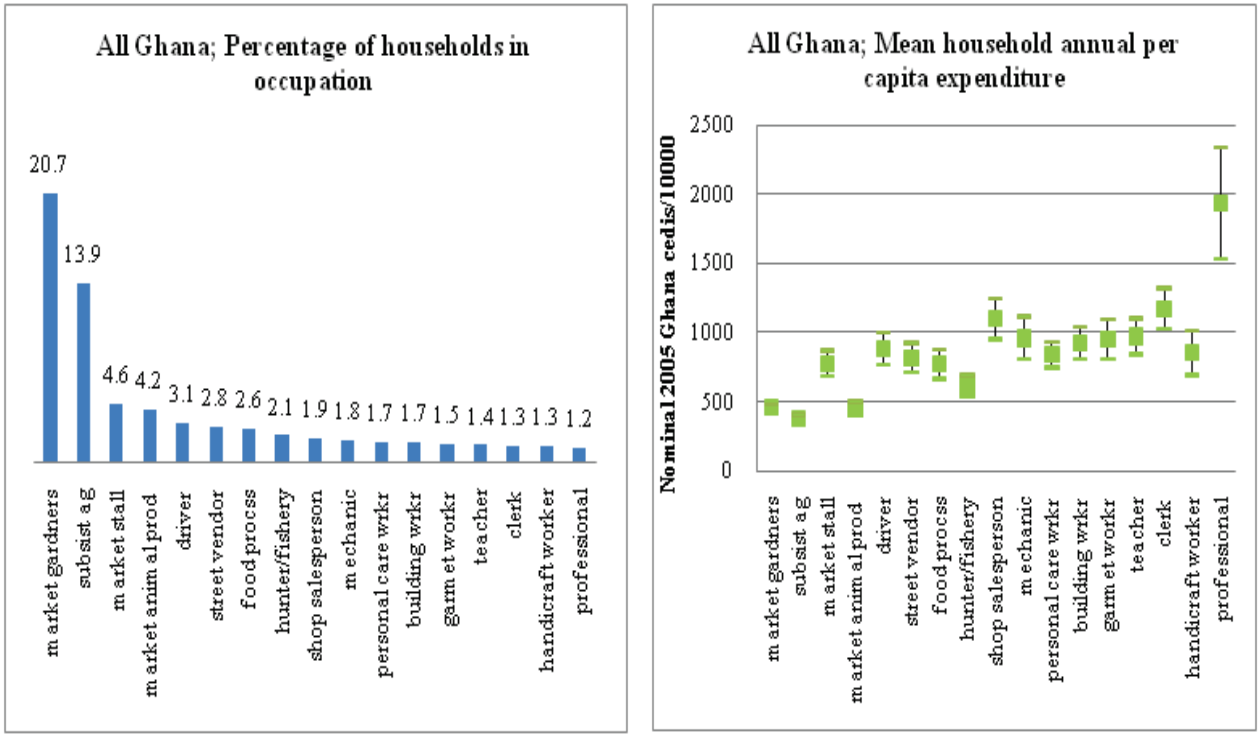
[23] Also *tarem/ ningkong*.

[24] Cattle have multiple uses and are the most highly prized in the list of livestock. They do not only serve as a source of meat for the market; cows also provide a source of daily income from milk, and bullocks enable farmers to plough larger areas of land.

3.8 **The *fara-dana* (survival-seeking chronic poor) experience hunger as the norm.** In relative terms, they are represented more strongly in the SADA region whereas *wahala-dana* are to be found in greater proportion in the economically more vibrant and productive South. Attendance in school is erratic because of difficulties meeting schooling costs such as footwear and school levies. Often, children of *fara-dana* are involved in some form of inappropriate child labor. *Fara-dana* are "needy all year round, depend on the goodwill of others and are patronized by the *bun-dana*." Chronic poverty is known as *nang sogla* (black poverty). Among these chronic poor, a distinction can be made between the able-bodied (the average *fara-dana*) on the one hand and widows and those who suffer various impairments on the other. The latter – the *nong-daan kuruug* or 'living dead' or 'God's poor' – often lack the ability to do physical work. These are the extreme poor with the most marginal livelihoods, and include those afflicted by so-called 'strange diseases' a euphemism for HIV/ AIDS and other diseases that defy treatment, as well as other chronic infirmities, abandoned widows and the severely or multiply disabled, the elderly and orphans. By contrast, the able-bodied chronic poor (i.e. the typical *fara-dana*) would be capable of doing physical work if their opportunities were not obstructed by huge constraints on other capital assets. By contrast with the *bun-dana*, the livelihoods of the working poor are much smaller and the *fara-dana* have the smallest and least diversified investments, constrained by shallow asset holdings.

3.9 **The majority of households – whether the *bun-dana*, *wala-dana*, *fara-dana* or *nong-daan kuruug* – are engaged in agriculture-based livelihoods.** In fact, occupation data from the GLSS5 reveals that the majority of Ghanaian household heads have occupations in agriculture despite this being associated with the lowest incomes. Most households are engaged as market-oriented farmers (21 percent) and in subsistence agriculture (14 percent). Market stall operators constitute a further 5 percent. Occupations that require higher levels of skills – teachers, other professional workers – are less prevalent. (See Annex 2 for a description of the methodology for classifying household heads by occupation.) The distribution of occupations across Ghanaian households is illustrated in Figure 3.1. The left-hand panel shows the distribution of households by occupations (ranked left-to-right in descending order of prevalence), whereas the right-hand panel reports these same occupations but this time ranked according to the mean per capita consumption of households within each category. The mean consumption can be read from the left hand-side axis; the bars in the figure represent the variance of each mean and illustrate the extent of variability in per capita consumption within each occupation type. Moreover, the variance allows a visual depiction of whether calculated means in any two categories are significantly different from each other (means are significantly different if their variances do not overlap).

Figure 3-1: Occupations of Heads of Households and Mean Incomes in Ghana, 2005/6



Source: World Bank staff calculations based on GLSS5.

3.10 **This lack of dynamism is reflected in the occupation data, which suggests little change in the share of the labor force over the last two decades.** As reported in Table 3-2, the proportion of the population residing in urban areas has increased by 4 percentage points over the period. However, the proportion of people employed in occupations concentrated in urban centers is largely unchanged. The (proportionate) fall in public sector employment of 7 percentage points was offset by the increase in private formal and informal employment of 3 and 4 percentage points, respectively. Comparative analysis cannot reveal the evolution of specific households – longitudinal data is required for this, and conclusions can be quite different (McCulloch *et al.* 2007).[25] However, the fact that even in aggregate terms changes in occupation profiles are so limited is suggestive of a lack of dynamism that one would expect to see with such strong aggregate performance.

[25] To illustrate the point, consider the following two extreme cases: it could be that all those existing from public sector occupations found new opportunities in private formal and informal employment. Alternatively, it could also be that these households reverted to food crop farming and the same number of households transitioned from food crop farming into private formal and informal employment.

Table 3-2: Labor Force Shares across Occupations, 1991 – 2005

	1991/2	1998/9	2005/6
Rural	66.8%	66.3%	62.4%
Urban	33.2%	33.7%	37.6%
Occupation			
public sector	14%	11%	7%
private formal employees	4%	5%	7%
private informal employees	3%	3%	7%
export farmers	6%	7%	7%
food crop farmers	44%	39%	43%
non-farm self employees	28%	34%	26%
non-working	2%	2%	3%
Working Population (millions)[(a)]	8.05	10.35	12.63

Source: Rural and Urban population from Employment shares from GLSS. Notes: (a) Population data obtained from WDI. Working population defined as those 15 – 65 years of age.

3.11 **As illustrated in Figure 3-1, there is clear relation between occupation and poverty.** The default occupation of rural households is subsistence farming. A combination of market opportunities and certain endowments allows households to produce more and/or diversify production and sell into local markets. Some households transition further into basic processing thereby adding value to their farm production, while others establish small trading enterprises. From there, households graduate into higher-productivity unskilled labor and, ultimately, skilled labor and professional occupations. Opportunities, agency and decision-making are complex and this is, of course, an over-simplification of the actual trajectories that households pursue. Progression may take generations and is often non-linear. Nevertheless, more recent complementary surveys provide supporting evidence (WFP, 2009).

3.12 **Despite the continued dependence on agriculture, household heads are diversifying into off-farm activities but it is not clear that this is having a positive impact on welfare.** This is consistent with evidence from elsewhere in Africa, where between 30 and 50 percent of household incomes are derived from non-farm sources (Haggblade *et al.,* 2005; Reardon *et al.*, 1998; Ellis, 2000). In general, income diversification is shown to be positively associated with improved wealth for rural households across Africa (Barrett *et al.*, 2001). However, households can equally be forced to find alternative income sources in response to negative economic (or other) shocks – as illustrated by the case of the *wahala-dana*. Diversified incomes *per se* cannot distinguish between opportunity-led and survival-led diversification. Recent empirical evidence suggests that while many households are successfully diversifying their income sources, the majority are doing so for the wrong reasons (Lay and Schüler 2008). The expanding role of women in the non-farm economy has been shown to be a household response to limited on-farm incomes of their husbands indicating that coping strategies are borne disproportionately by women (Abdulai and Delgado, 1999)

3.13 **The PPVA suggests that the driving motivations for diversification are often survival- led and based on the vulnerability of the poor in the North**. The range of vulnerabilities are summarized in terms of the dynamic dimensions (change over time in terms of shocks, trends and mobility), the institutional dimensions (where do people turn when they need

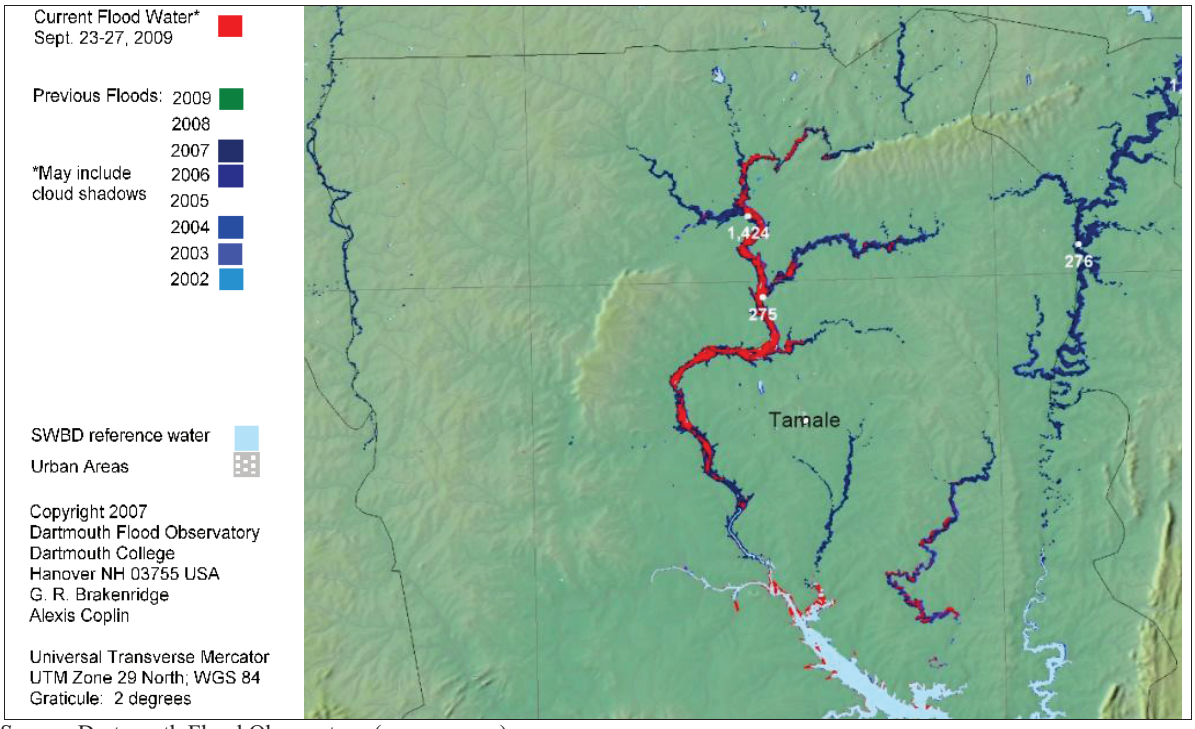
assistance, and what is their experience of different sources of support) and the social dimensions (which specific categories of the population experience particular vulnerabilities). This is corroborated by a recent vulnerability assessment which finds that four-fifths of households in the North reported experiencing a negative shock in the preceding year compared to only two-fifths of Sothern households (WFP, 2009).

3.14 **Survival-led diversification is likely to be non-trivial given the extent of risks facing households in SADA.** Poor and near-poor households across Ghana face uncertainty but risks are generally more significant in Northern Ghana. As reported in the Ghana's Hazard Mapping (NADMO 2007) households in Northern Ghana face a number of catastrophic risks including floods among the tributaries that feed into Lake Volta – recent floods have devastated affected communities with substantial crop losses and damage to community infrastructure including schools, roads, clinics and irrigation structures (Figure 3-5). Other environmental risks include pest infestations, such as locusts, armyworms as well as crop and animal diseases. Fires are also a major risk and are often started deliberately to clear bush during land preparation or by hunters to flush out their prey. Non-catastrophic risks associated with timely/adequate rainfall also affect annual production volumes and prices with obvious consequences for household incomes.

3.15 **The PPVA found that local populations perceive an increasing instability of climate that is exacerbating the phenomenon of seasonal deprivation.** The rhythm of the Northern Ghana's rainy season has become less predictable and the duration much shorter. "The rains come late but end early" is the well-rehearsed refrain. Particularly in the Upper East Region and in parts of the Northern Region, droughts and floods increasingly impact agrarian communities. The increasingly discordant climate patterns result in crop damage, low yields and acute food deficits. Shortfalls are most acute in the Upper East Region, where the rainy season is shortest, coupled with rocky and infertile soils and much higher population densities.[26]

[26] The rainy season can be up to two months shorter in Upper East than it is in the southerly parts of the Northern Region.

Figure 3-2: Major Flooding in Northern Ghana; 2002 – 2009



Source: Dartmouth Flood Observatory (pers. comm.)

3.16 **Other studies confirm that those who are dependent on agriculture in the North face a range of vulnerabilities and that diversification is survival based.** Table 3-5 reports the results of a qualitative survey undertaken by MoFA in 16, mainly Northern, districts[27] in 2007. In another survey, WFP (2009) report similar results. Poor and vulnerable households are deemed to pursue a 'survival' strategy rather than a 'development' strategy. When asked how they would spend a lump-sum transfer vulnerable households indicated they would invest in petty trading, confirming that such households see this occupation as one they can access relatively easily (MoFA, 2007).

[27] Twelve districts were in the three administrative regions in Northern Ghana with others in Brong Ahafo (three districts) and Ashanti region (one).

Table 3-3: Livelihood Strategies of Households in Northern Ghana

Group	Characteristics	Assets	Activities
Vulnerable (5%)	High numbers of orphans, school drop-outs, youth, economic migrants, widows with children, elderly, disabled, chronically sick	0 – 0.5 acres of land per active member; no livestock but 0 – 5 poultry; basic house with cooking equipment and clothes only	Sale of firewood, basket or rope making, collecting wild products, sheanut gathering, buying and reselling food stuffs
Poor (35%)	High proportion of widows with children, youth, semi-permanent migrants, migrants creating farms outside their tribal areas, small farmers with low labor capacity	0.3 – 2.5 acres per active member; 0 – 5 sheep/ goats, 0 – 3 cattle per household; bicycle; roof sheets	Food crop farming and livestock rearing; petty trade; collecting, processing and selling natural resource products; seasonal and semi-permanent migration
Medium (51%)	Large family, high labor capacity (i.e. low dependency ratio)	1.5 – 4 acres per active member; 10 – 40 sheep/ goats, 3 – 30 cattle; (semi-) permanent house; modest education and assets (sewing machine, shop, TV)	Farm and non-farm activities
Well-off (9%)	Large family and high labor capacity, higher proportion of skilled labor	1 – 25 acres per active member; 0 – 120 sheep/ goats, 0 – 1,000 cattle; large permanent house with water, electricity, kitchen, toilet, fridge; tractor, car/ truck; may have two houses – one in a town, more modest on farm	Agricultural: perennial (cocoa, rubber), non-traditional or food crops (on a commercial scale); livestock (including commercial poultry); Non-agricultural: tractor or transport services, medium-large scale trading, shop/ house rental, salaried job

Source: MoFA (2007) and Devereux *et al.* (2008).

3.17 **The most striking phenomenon of vulnerability in Northern Ghana, however, continues to be the existence of a pronounced 'lean' or 'hungry' season in some parts**. Among the poor communities in Northern Ghana, the most significant indicator of vulnerability is the "inability to withstand the hungry season without begging". The 'hungry season' in Northern Ghana is the period stretching from the late dry season through the early part of the farming season until the first harvest of the fast growing grain crops is in. It therefore overlaps with but is not coterminous with the 'dry season', which is usually understood to follow the main harvest of grains from rain-fed agriculture. The dry season extends from late November through to April whereas the 'hungry season' starts when the granaries run out, which varies by year, area and household, but is typically from about February to August.[28] It applies most strongly to the Eastern parts of the Upper East Region (around Bolgatanga, Bawku and Bongo). The hungry season coincides with a period of very heavy labor expenditures (the early part of the farming season) and a period that is very dangerous in terms of health risks (the early rains, with attendant malaria risks, and the late dry season when water sources often become risky). The weaning of young children is often attempted during this period, as mothers seek to free themselves of breast-feeding before the start of the intensive work of the farming season, thus

[28] This timing essentially is correct for the time known in the Eastern part of the Upper East Region as *Kun-Sane* (literally 'hungry season'). February is taken as the point when main family granaries run out, and August as the harvest of early millet (Francis Avonsige, pers. comm.).

causing added risk to the child (weaning, at whatever age it is carried out, is a period of critical danger for children due to increased exposure to diarrheal infections).[29]

3.18 **The vagaries of the agricultural cycle and the lean season coupled with increased climate change-related vulnerability result in extensive transient poverty and negatively impact the health and welfare of many families in the North.** There is little longitudinal data necessary for tracking individual transitions, although Whitehead's (2006) work in Bawku illustrates that in many parts of the rural North there is considerable upward and downward movement over time within communities (see Box 3-2).

Box 3-2: A Case Study in Poverty Dynamics in Northern Ghana

Whitehead's study of a cluster of communities at two points in time (1974-6 and 1989) provides a rich picture of the economic dynamism of one of the poorest areas of Ghana, and the multiple ways in which villagers in these communities coped with increasing land degradation due to growing population pressure and a resulting shortening of fallowing periods of bush farms. Some of the key elements brought to light by comparing the two time points are:

- Innovation is highly significant and ongoing – with market opportunities providing significant support to communities. The communities studied by Whitehead experienced a significant drop-off in the productivity of their rain-fed farming due to the land becoming exhausted from over-use. The development of small-scale onion farming in the period between the two fieldwork events had compensated to a great extent for this decline.
- Poverty dynamics are significant. Whitehead divided households into three categories – secure, vulnerable and destitute. The 1989 destitute comprised about one-third of the households who were destitute in 1975, the rest being households who have moved into destitution from the 'vulnerable' group. By contrast a majority of those that were destitute in 1975 had moved up into the 'vulnerable' category by 1989. But the greatest visible dynamic was at the other end of the scale, where it is evidently very difficult to remain .
- Poverty traps are significant for the poorest. Selling bags of water on market days was one example of this – working for very poor returns to labor in activities with no start-up costs. A common poverty trap occurred when men and women worked for others, leaving their own farms uncultivated, or poorly weeded. In poorer household labor migration could also contribute to a downward spiral in the main family farming enterprise, through losing young men at the wrong times of the year. In contrast, large well-resourced households could manage labor migration through the authority of the household head to give or deny permission to leave. This authority is fundamentally based on the resources that the household has at his disposal to provide incentives, or the promise of inheritance.
- Off-farm income of women is critical to the well being of children. Whitehead's findings support the earlier research by Gordon (1973), which established that income of the mother was a critical factor in determining child welfare and nutritional status. When the main family granary is exhausted the responsibility for the feeding of children falls entirely on the mother. Prior to that, the mother is often responsible for providing the ingredients for the 'soup' or accompaniment to the main staple.

Source: Whitehead (2006).

[29] Households which have more reliable dry season livelihoods and/or incomes were seen as being more resilient to cyclical adversities. In *Wuba* (Tolon District), for example, where villagers can mostly get access to land on the Bontanga irrigation scheme, a focus group of men were unanimous that a farmer with an average size plot (1.5 ha) would make more of a living from the income from dry season irrigated faming than from their 'main' rainfed farming activities. In contrast to many other communities this community had very little seasonal labor migration to the South of Ghana – supporting the general point that the impact of functional dry season irrigated farming opportunities on local livelihoods is significant (*source – interview conducted for identification of Ghana Social Opportunities Project, December 2009)*.

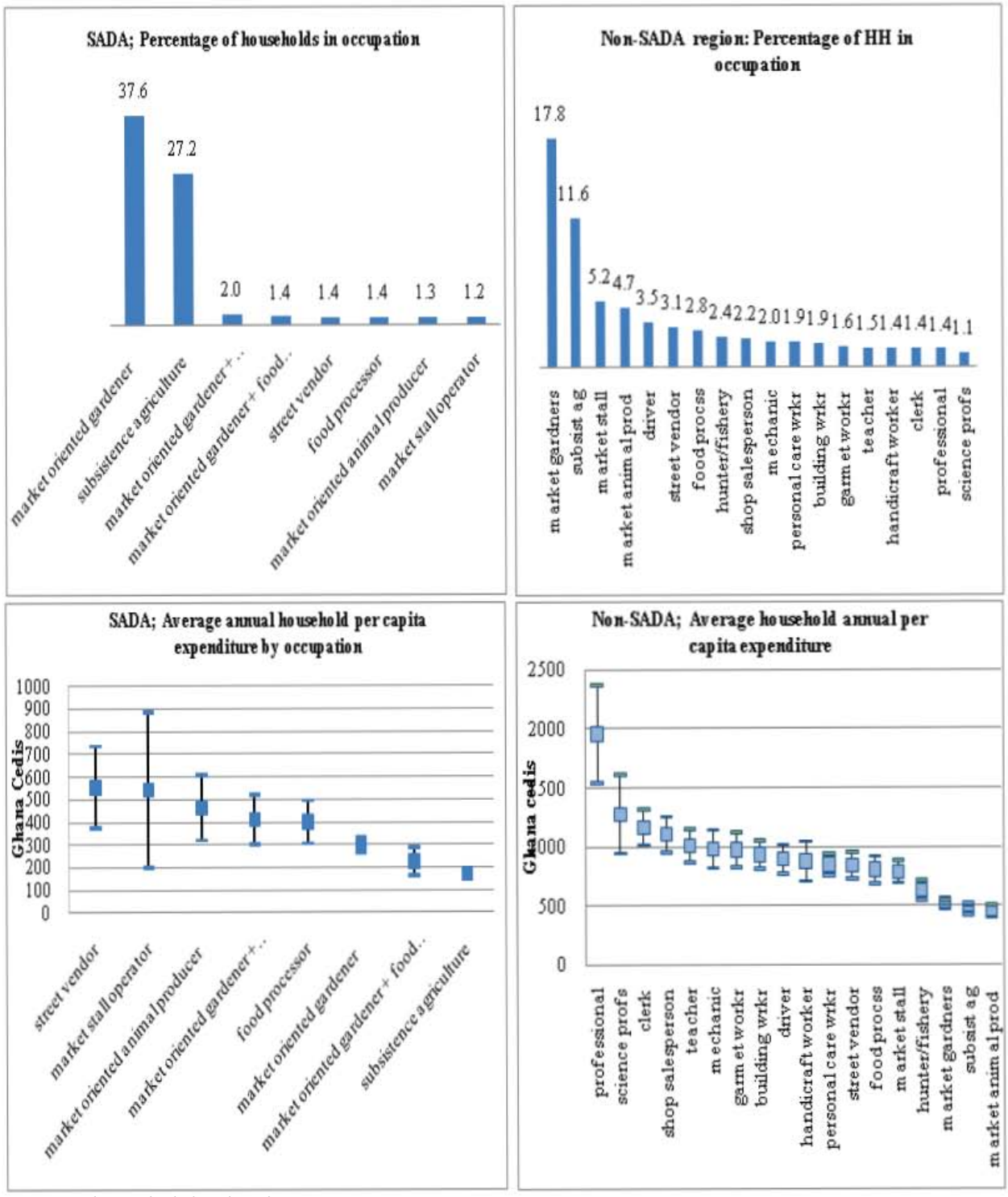
3.19 **The poor view assets such as remittances and land as key in finding ways out of poverty but self help groups are seen as the most important asset of all**. The PPVA confirmed a common finding from participatory research that health shocks are a significant cause of downward mobility. The PPVA also identified certain opportunities and assets that may be significant in helping Northern households transition up the wellbeing ladder. Among the key assets for upward mobility listed in wealth ranking exercises were: the availability within the household of migrant remittances or income; secondary education and skills; security of access to good quality land; financial capital; diversified livelihoods; and animal holdings. The role of social capital – collective assets in Box 3-1 – in promoting livelihood security is worth noting. For example, well-organized associations have helped some poor groups improve their situations. The ubiquitous extended family, faith-based networks (e.g. Catholic Action) and informal peer groupings (e.g. of local *kaya-yei* – see Box 4-5 for a full discussion) all provide vital social and psychological support in times of adversity. But it is the properly constituted self-help organizations that are most effectively enabling the poor to improve their condition (rather than just cope), though such organizations take time to mature.[30] Additionally, in some Upper East communities with functional dam facilities (e.g. Bongo Soe and Tempane), households have been able to improve their situations by cultivating vegetables beyond the traditional farming season. This has implications for Government, NGOs and development partners wanting to support interventions in the North and suggests that partnering and strengthening such groups would be beneficial.

C. A CLOSER LOOK AT LIVELIHOODS IN NORTHERN GHANA

3.20 **The range of occupations that people are engaged in SADA and non-SADA are quite different and people in the North have fewer opportunities to work outside agriculture.** Of the eight livelihoods observed in SADA region (compared to 18 in non-SADA), three-quarters are related to agricultural production. Two-thirds of households are engaged primarily in agricultural production (subsistence farming and market oriented farming) compared to less than one-third of households in the non-SADA region. Moreover, within the subset of agricultural producing households, a higher proportion in the South has graduated from subsistence agriculture to market oriented farming, as compared to the SADA region (Figure 3-4). There are many benefits of diversified livelihoods, including partial diversification. A broader range of income sources lowers covariate risk and also provides the necessary cash to fund investments that increase on-farm agricultural productivity. That so few opportunities exist for households to diversify income sources not only prevents them from transitioning out of agriculture, but also constrains the remaining agriculture-based activities to low-productivity endeavors.

[30] The PPVA provides the following examples: At Karne, disabled people have joined up under an association to shell groundnuts, with some success. Similarly, coming together has enabled a women's livelihood group at Tindonmoligo to access skills in alternative lean season livelihood activities such as basket weaving and *dawadawa* processing. And at Bongo Soe, women have been able to make significant savings in the time spent manufacturing shea butter through an association which has enabled them to acquire a processing mill. At Wungu too, the disabled are beginning to be heard for the first time through an association they have formed.

Figure 3-3: Occupations of Heads of Households in SADA and non-SADA



Source: Authors calculations based on GLSS 5.

3.21 **Gender dimensions of livelihoods and poverty emerge strongly from both the PPVA findings, as well as the occupation data, and suggest that women in the North work longer hours and have more responsibility yet have less access to resources and a weaker asset**

base. In both SADA and non-SADA areas, female heads are more likely to be street vendors and food processors, while male heads are more likely to be professionals, market-oriented livestock producers, and market-oriented agricultural producers. In non-SADA areas, females are more likely to be market stall operators and males are more likely to work in subsistence agriculture, but there is an equal likelihood in SADA to be in either profession across the sexes. The PPVA consultations in Northern Ghana illustrate the contrast between the heavy responsibility for household provisioning which falls on women, as against a fragile and small asset base. The income from sheanut gathering and processing – traditionally an important buffer in the lean season for rural women in much of Northern Ghana – has been hit by price falls on global markets. Studies of time allocation in rural Ghana demonstrate that women work harder than men if all their daily activities, including fetching water and fuel wood, cooking, food processing, childcare and cleaning are taken into account with their farming and income generating activities (Fogelberg, 1981). They also have less access to resources than men, although the actual pattern of resource ownership and control over labor varies between different areas. Very high fertility rates are found throughout Ghana (and particularly in the North) and the physical strain of frequent childbirths adds to that of their normal workload. Women in much of Northern Ghana spend a great deal of time fetching water and fuel wood, and have a much heavier workload in this respect than women in the South. In the North of Ghana women do not participate in the farming of yam where this is practiced. Their contribution to grain farming is mostly in sowing and harvesting. The system of patri-lineal descent offers women few property rights through traditional tenure systems and in most parts of Northern Ghana, women have minimal rights of independent access to farming land. Women's independent income in the rural North tends to come from vegetable farming or petty trade although they may also receive payment for the work they do on the main family grain farm. In addition, there are some clear instances of extreme vulnerability among girls and women migrants. There is a general perception that more women are engaging in labor migration to the South – and at a younger age than used to be the case.[31]

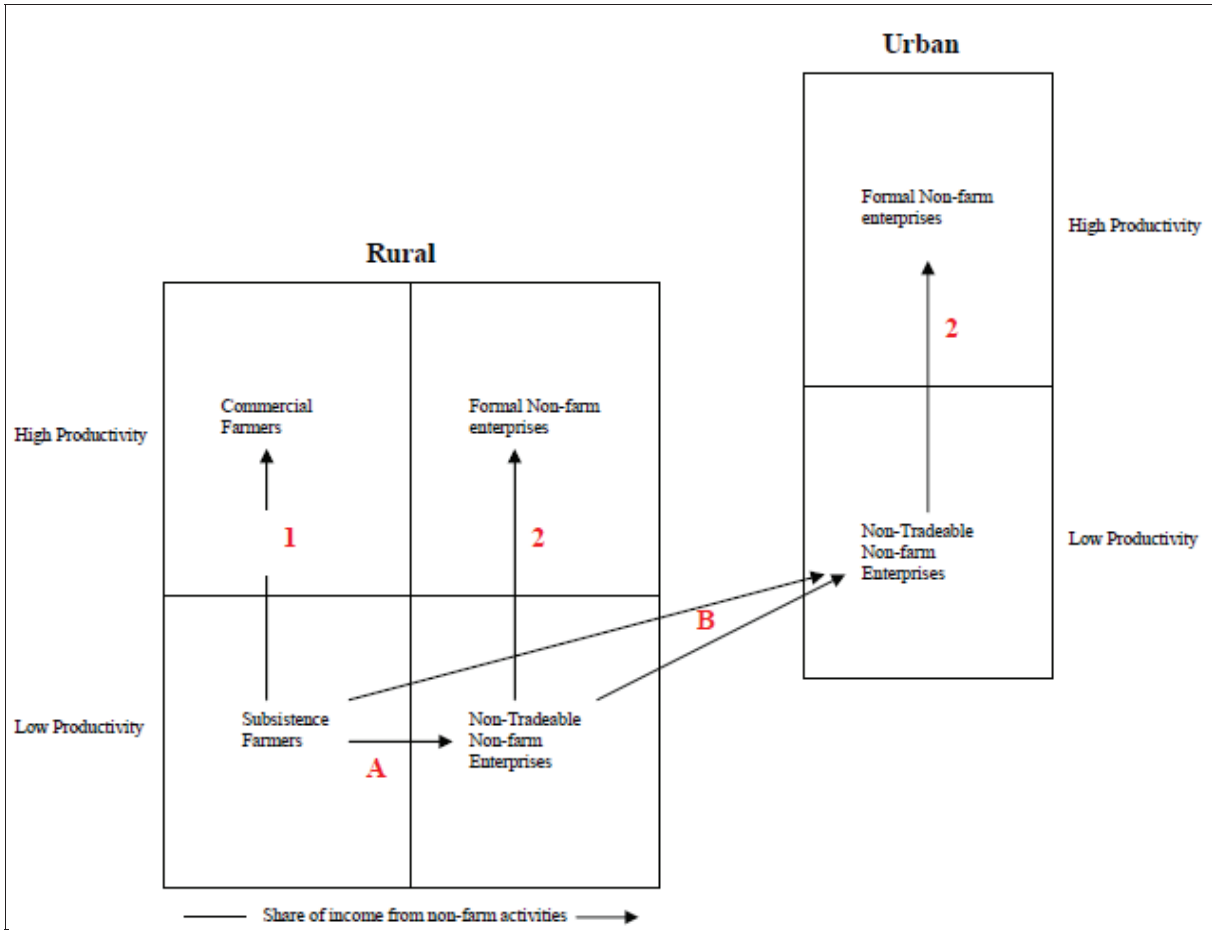
3.22 **Moving from agriculture to non-agriculture is rare and does not guarantee an improvement in welfare** as evidenced by the overlapping variance in mean consumption across categories. Moreover, the variance in some occupations is considerable and suggests that household avail of this opportunity with differing motivations and potential for income generation. On the one hand, successful farm households with excess labor and sufficient working capital engage in petty trade or, if able, more substantial medium-scale trading and perhaps shop-keeping. On the other hand, households with insufficient access to land to sustain minimal consumption and / or households affected by a negative economic shock pursue survival-led diversification and establish a small road-side stall to eke out a living reselling food stuffs. This requires limited working capital and few barriers to entry (although the locations are likely to be peripheral).

3.23 **Livelihoods differ as much within the North as they do between the North and South and there is more mobility in the North than in the Upper East and Upper West.** Annex 3 reports similar graphs to Figure 3-2 for all regions individually – including non-SADA. While the three regions are bound by similar agro-ecological conditions, there are nevertheless

[31] This is supported by Whitehead's research in the 70s and 80s in Bawku – at that time there was no female outmigration to the South.

important differences between them. In Upper East and Upper West about half of all households are engaged primarily in subsistence agriculture with substantially lower proportions engaged as market oriented farmers (20 and 15 percent, respectively). This is in contrast with the Northern Region where the ratio is reversed; market oriented farming dominates (over 50 percent of households) with subsistence farming pursued by only 12 percent of households. Consider the occupation of market stall operator. Data from the Upper West indicates that this provides a substantial increase in mean consumption compared to other livelihoods. In the Upper East region, households that combine market stalls with either market oriented farming or subsistence farming enjoy higher wellbeing than those that undertake either of the farm-based occupations only. However, the variance in expenditures of subsistence and market stall households is high – households at the lower end of consumption exhibit the lowest amongst all households in the region. This is clearly indicative of survival-led diversification (Lay and Schüler 2009), and shows the relative land scarcity (the Upper East is the fourth most densely populated region in Ghana with 104 people per km^2) and poor soil conditions.[32]

Figure 3-4: Changing Livelihoods in the North during Structural Transformation

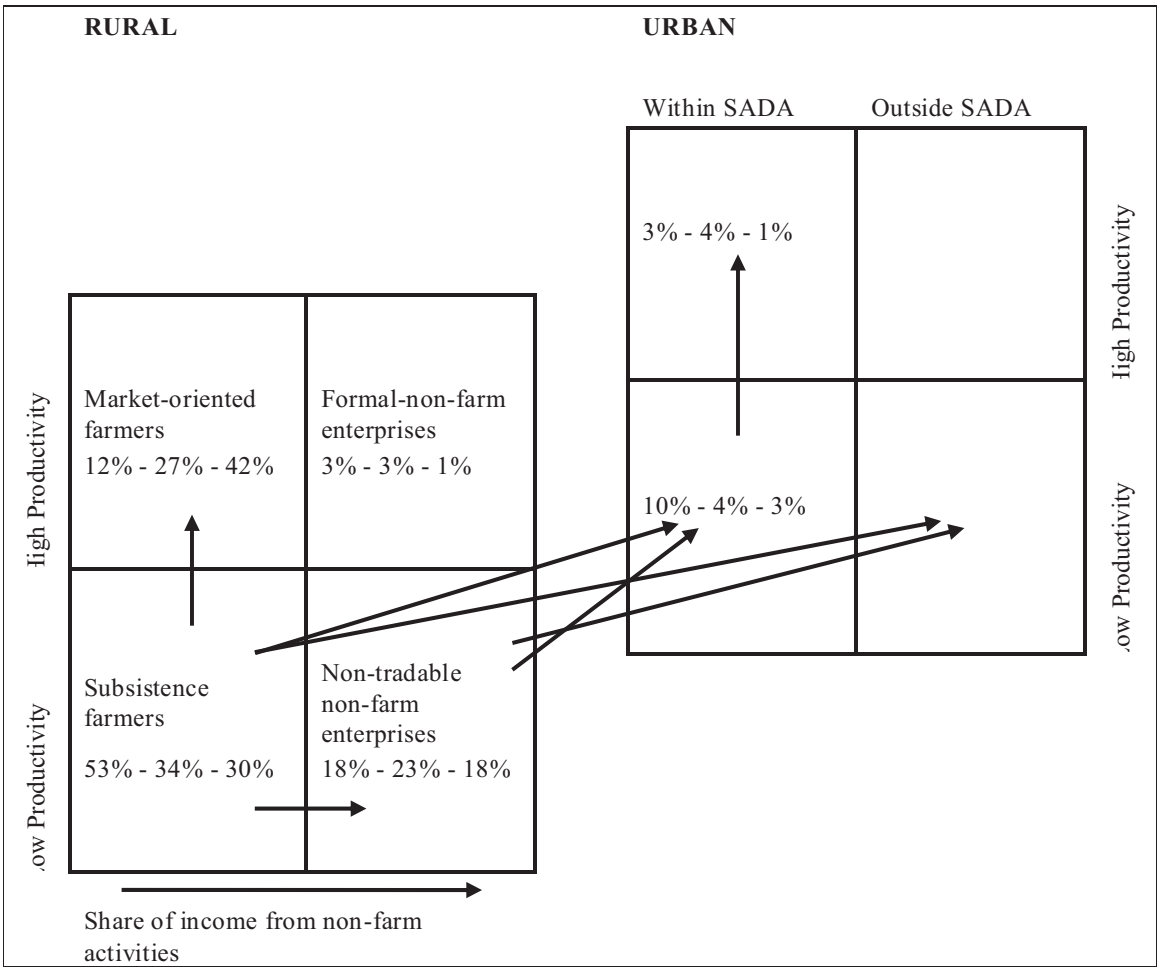


Source: McCulloch *et al.* (2007), Figure 1.

[32] Population densities in the Northern Region are only 26 people per km^2 and for the Upper West is 31 people per km^2 although these are concentrated along the western corridor where the density reached 97 people per km^2.

3.24 **The trend analysis, however, shows some transition from low to higher productivity agriculture in the North.** Indeed, this is the likely explanation for the substantial poverty reduction observed in the rural South described in Chapter 2 and attributed to the expansion of the cocoa sector in the forest zone as well as diversification into high-value horticulture in the coastal zone. While in the long-run structural transformation implies labor exiting agriculture for higher-productivity non-agricultural activities, (Lewis, 1954, Timmer, 2009) these transitions are often inter-generational. Higher levels of resolution indicate important livelihood transitions within sub-sectors. McCulloch *et al.* (2007) present this transition as illustrated in Figure 3-3 in which a number of transitions are possible. Rural households will transition out of low-productivity agriculture into higher-productivity (commercial) farming (pathway 1), greater dependence on rural non-farm employment, and/ or migration to urban areas in search of similarly higher-productivity informal employment (pathway A and B, respectively). Urban and rural households already engaged in off-farm activities will graduate from low-skilled low productivity jobs to higher-productivity formal sector professions (pathway 2).

Figure 3-5: Transition out of Poverty for SADA Households



Source: Authors calculations. Note: consecutive figures denote 1991/2, 1998/9 and 2005/6 respectively.

3.25 **The shares of Northern households in the different categories over the last two decades, however, reveal an important dynamic from subsistence to market-oriented agriculture, but very little transition to off-farm employment.** These results are illustrated in

Figure 3-4. In 1992, 53 percent of households were subsistence farmers whereas only 12 percent were engaged in farming for the market. However, the proportion in market-oriented farming increased rapidly to 27 percent in 1999 and further to 42 percent of households in 2006. The proportion of rural households in the non-farm occupations increased in the interim but has not changed over the period while the proportion of urban households actually fell.

3.26 **The absence of realized off-farm employment opportunities in sufficient scale can be attributed to location characteristics, particularly infrastructure and population density.** As reported previously, the convergence in endowments between the North and South suggests that progress has been made in improving the agency – especially in terms of the individual assets and capabilities (see Box 3-1). However, other factors have conspired to limit the deployment of these endowments to the same effect as in the South, as evidenced by the divergence in returns reported in Chapter 2. Location characteristics, particularly infrastructure and population density were found to have a significant and positive association with the earnings and time allocation of rural farm-based men and women in non-farm work in Northern Ghana. For instance, men and women working in localities with well-developed infrastructure earned 6 and 7 percent higher non-farm wages, respectively, than their counterparts in localities with poorly developed infrastructure (Abdulai and Delgado, 1999). Access to credit is also an important barrier to the realization of off-farm employment opportunities, particularly for women. Schindler (2009) shows that even when non-farm self-employed women have access to finance, they must maintain a complex network of links to credit providers with high transaction costs in order to build trust, which ultimately costs both time and money. Nevertheless, diversification from subsistence to market-oriented farming is important. Econometric techniques can suggest those factors that are associated with households' graduation from (low-productivity) subsistence to (high-productivity) market-oriented famers.

3.27 **Location and access to infrastructure is a critical determinant of the likelihood of a household to be engaged in market-oriented farming since it reduces the costs of trading goods with the South.** Table 3-3 reports results of a Probit analysis of farm households in the SADA region (with the dependent variable taking value 1 if the household head is occupied in the market-oriented farming, defined in accordance with Figure 3-4; 0 otherwise). Household heads that are male, older, more literate and with access to larger land holdings are all more likely to be market-oriented farmers. There are also important spatial effects. Households in the Northern region are more likely to be involved in high productivity activities than those in Upper East or Upper West. The striking observation from these regressions is that controlling for availability of land, agricultural households in communities with a motor-able road are more likely to be engaged in a high productivity activity than those without. Moreover, households in communities that have more frequent access to public transport are also more likely to be involved in a high productivity activity. Such results are typically interpreted as proxies for access to markets. However, it is important to differentiate between markets; the negative coefficients of the presence and frequency of markets suggests that it is not simply the opportunity to exchange with local consumers that matters. Rather, the destination of market-oriented farm output is likely to be further afield. That the Northern Region dummy is significant – combined with complementary knowledge on the supply chain of these agricultural commodities – is suggestive that what matters, in fact, is the ease by which agricultural produce can be transported from the Northern producing regions to the South. This reiterates the important complementarities between household assets and capabilities on the one hand and

community assets and capabilities – including essential public infrastructure – on the other, and helps explain why the returns to (rising) endowments have not materialized.

Table 3-4: Determinants of Northern Households Graduating to Market-based Farming

	Model 1	Model 2	Model 3	Model 4
Age of household head	-0.000	**0.003	0.001	0.001
Male household head	***0.304	**0.182	0.149	**0.191
Literate household head	0.044	**0.131	**0.142	**0.135
Household size	-0.008	*-0.010	-0.005	-0.006
Total Household land holdings acres	***0.006	***0.004	***0.004	**0.004
Community population			0.000	0.000
Market days per week			***-0.096	
Presence of a local market				***-0.398
Public transport per day			***0.016	***0.016
Motor-able road			**0.095	***0.177
Upper East region		***-0.531	***-0.481	***-0.485
Upper West region		***-0.565	***-0.514	***-0.525
No of observations	1,173	1,173	941	941
Pseudo R-squared	0.05	0.23	0.33	0.37

Source: Authors calculations. Notes: ***, ** and * denote significance at the 99%, 95% and 90% level respectively.

D. OPPORTUNITIES FOR IMPROVED LIVELIHOODS

3.28 A comparison of the differences *within* occupational groupings reveals that non-SADA households have up to twice the level of expenditures of SADA households in the same occupations, indicating that there is potential to do the same occupation better. **Given the importance of agriculture in Northern Ghana, the potential for improved livelihoods is primarily determined by basic agro-ecological conditions**. The Guinea-Savannah agro-ecology that characterizes the North presents a challenging environment for agriculture, with dependence on a uni-modal rainy season, lower and declining natural soil fertility, and greater climatic variability compared to the South. The pattern of crop production differs substantially between the two regions. The Southern belt has enjoyed substantial agricultural growth in recent years from increases in cocoa production in the forest zone as a steady increase in the proportion of (rising) world prices is passed on to producers. The cultivated area has expanded into former forested areas with naturally high soil fertility. Similarly, Ghana has also enjoyed substantial growth of high value horticulture exports – this has been mainly pineapples, but is increasingly based on banana exports, mango and other Asian vegetables (Jaeger 2010). Most production takes place in areas in the Coastal Savannah ecological zone, and market access and post-harvest handling requirements are dictated by proximity to air and seaports. See Annex 4 for additional data on agro-ecological patterns across Ghana.

3.29 **Burkina Faso, Ghana's neighbor with similar agro-ecological conditions – illustrates that agricultural productivity can be increased if public policy supports improved irrigation and technology.**[33] First, the largest drop in rural poverty over 1998 – 2003 occurred

[33] The following utilized data from World Bank (2005).

amongst agricultural households engaged in the production of non-tradable goods essentially cereals, whose production increased from about 2.2 million tons to 3.6 million tons in 2003. Although subject to annual climatic variations yields were fairly constant over the period. This contrasts with Ghana in which aggregate cereal production[34] increased by only 13 percent over the same period also with little yield changes; the North accounts for 40 percent of national production. The Burkinabe benefited from substantial increases in production – if not productivity – that did not occur in similar conditions in Ghana. Second, of course, is cotton: production increased from 340,000mt in 1997-1998 to 375,000mt in 2003 although it suffered a significant drop in the intervening period due to a white fly outbreak. Gains from increased production were augmented by increases in farm gate prices (although these were less than increases on world markets). Advocates of the current system argue that the reduced price risk from such arrangements – similar to the cocoa sector in Ghana – encourage productive investments among farmers. Additionally, the poverty rate among cotton farmers – already lower than cereal farmers – fell from 53 percent to 47 percent. A third difference is the availability of irrigation. Fresh water withdrawals in Burkina amount to $60m^3$ per year per capita of which 86 percent is for agricultural uses. This compares to comparable data for Ghana is $44m^3$ per year per capita and 66 percent respectively.

Table 3-5: Average Yields for Key Food Crops, 2007

	Maize	Rice	Millet	Sorghum	Yam	Groundnuts	Soybean
Upper East	0.33 – 0.64	0.71 – 1.90	0.25 – 0.62	0.33 – 0.75	0.94 – 7.90	0.37 – 0.67	0.33 – 0.90
	0.50	1.38	0.48	0.51	3.54	0.50	0.66
Upper West	0.43 – 1.50	0.84 – 1.86	0.36 – 1.04	0.62 – 1.12	8.67 – 19.04	0.86 – 1.23	0.77 – 1.00
	1.12	1.42	0.73	0.89	12.22	1.06	0.81
Northern	0.81 – 1.53	0.72 – 3.15	0.54 – 1.10	0.38 – 1.08	4.50 – 11.70	0.36 – 1.25	0.63 – 1.98
Region	1.22	2.07	0.96	0.75	10.11	0.80	1.22

Source: MoFA (pers. comm.). (Note: each cell reports the range in yields across Districts within each Region and the Regional (weighted) average yields.

3.30 **Raising agricultural productivity in the North could raise GDP to over 6 per cent above the target**. Existing yields are low and highly variable, primarily because of the dependence on rain-fed systems and the limited use of purchased inputs. For instance, as reported in Table 3-5, average rice yields across individual districts in the SADA region range from 0.33 ton/hectare to 1.53 ton/hectare – a factor of five. Economic modeling by IFPRI (2009) has shown that closing the yield gap can increase agricultural growth by as much as 2.2 percentage points. Under a 'business as usual' scenario, in which productivity increases continue on current trends, annual agricultural GDP growth is predicted to average 4 percent. With biotic constraints addressed and best practices applied, agricultural GDP has the potential to increase at over 6 percent, above the target under the Comprehensive African Agricultural Development Program (CAADP). Realizing existing yield potential can be achieved more quickly by better application of existing technology and through reductions in crop losses. On average, 18 percent of the maize crop is lost through inefficient harvesting operations (about one-third of losses) and primary processing (one-sixth). Losses during transport account for the remaining half of all losses. A similar pattern is observed in the case of rice, although the overall ratio of post-harvest losses is lower at around 6 percent and losses through poor storage are proportionately greater

[34] Comprised of maize, paddy, sorghum and millet.

(Egyir *et al.* 2008). These losses are in addition to inefficient milling ratios resulting from old and inefficient technology.

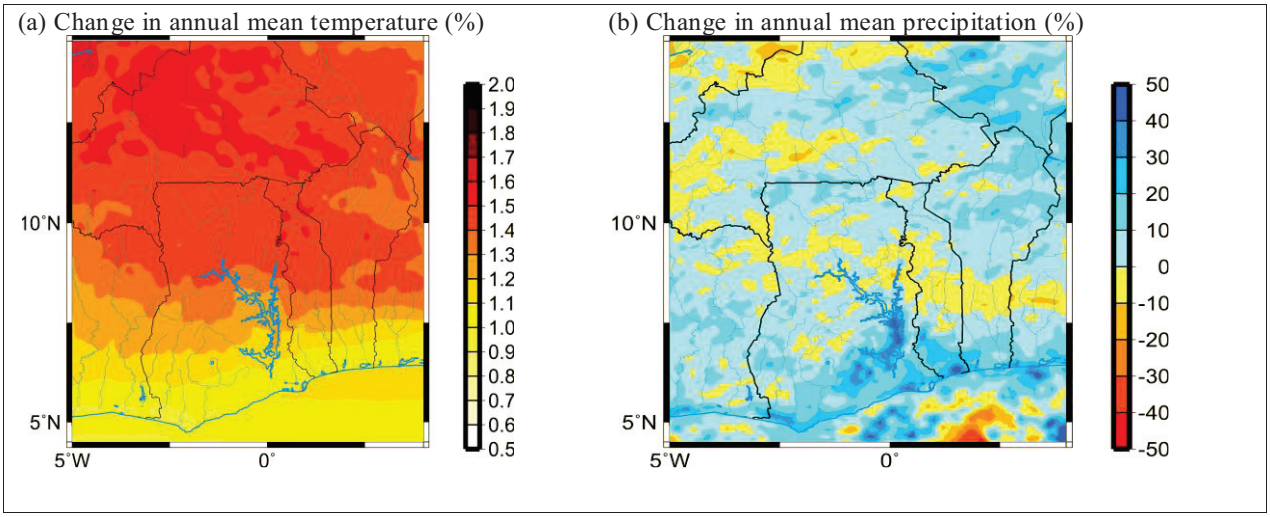
3.31 **Increasing the use of improved seeds and modern inputs such as fertilizer above their current low levels would also help improve productivity.** Current rates of fertilizer use are among the lowest in the world at around 8 kilograms per hectare compared to the average across SSA of 13 kilograms per hectare and the average in the developing world of 94 kilograms per hectare (Minot and Benson, 2009).[35] Nationally around 21 percent of farm households deploy inorganic fertilizer (a ratio unchanged since the late 1980s). Application rates are higher in the cocoa sector, where the para-statal marketing company has been providing subsidized fertilizer for many years. Usage rates in the SADA region are comparable to the national average although available data cannot confirm that appropriate quantities are being applied with concerns that input-constrained farmers spread applications too thinly. Similarly access to improved planting material is limited, with the majority of farmers retaining seed for subsequence use. Unlike many African countries, Ghana is endowed with extensive private sector input dealer networks with almost 3,000 registered dealers. Although these are concentrated in the cocoa growing regions, 20 percent are located in the SADA region. The proportion of agro-dealers selling fertilizer varies from 97 percent in the Upper East (the highest in the country) to 60 percent in Northern region (the lowest). Conversely, the proportion of retailers selling seeds is lowest in Upper East (29 percent) and in general seeds are less available compared to fertilizers and other chemicals. Nevertheless, in general, improved inputs are available indicating that the reason for low use is affordability and/or efficiency rather than physical access.

3.32 **The introduction of a voucher-based subsidy to increase the affordability of inorganic fertilizers is an important step that needs further refinement if it is to be sustained.** Introduced in 2008 as an emergency response to the food and fuel price rises (that also affected fertilizer prices) there is emerging evidence that the current approach has maintained affordability in the face of rapidly escalating costs although discerning any impact on production and productivity require deeper study (ibid). By partnering with the private sector, the scheme ostensibly depends upon (and supports) the private sector retail network. However, an evaluation of the economic merits is yet to be undertaken and the program constitutes a large share of the sector's budget allocation (costs in 2009 amounted to an estimated $30 million). The opportunity costs from foregone public investments to support the sector are likely to be high (Morris *et al.* 2007). Moreover, there is some evidence of distortions in the input markets given apparent oligopolistic behavior by the few fertilizer importers. Moreover, by concentrating only on fertilizer productivity gains, the complementary application of improved seeds is missed. Moving forward, the continued application of a targeted voucher scheme as a form of market-smart subsidy has the potential to improve productivity and therefore farm incomes but should be seen as one element of a broader effort of complementary measures. Implementation should reflect the lessons gained from the extensive application of fertilizer subsidies elsewhere in the world and summarized in the ten guiding principles in Morris *et al.* (2007).

[35] Rates in the end of the 1970s reached as high as 17kg/ ha reflecting large-scale subsidies that ultimately proved fiscally unsustainable and contributed to the economic crisis of the early 1980s and the for the structural adjustment of the Economic Recovery Program (ERP) launched in 1983. This phenomenon was not unique to Ghana (Morris *et al*, 2007).

3.33 **Expanding the cultivated area under irrigation would also increase productivity and entails addressing the weaknesses in the existing irrigation asset management as well as new construction.** Of an estimated 14 million hectares of cultivable land, 500,000 hectares are considered irrigable and additional 120,000 hectares are amenable to water harvesting. Yet current coverage is low, with a combination of 22 large formal schemes and around 8,000 small informal schemes. Of the 10,000ha of informal irrigation schemes that exist, less than one-quarter are located in Northern Ghana. At the same time, Northern Ghana is susceptible to major flooding along key rivers in the Volta basin, in particular the Black and White Voltas (Figure 3-6). Irrigation and water harvesting and flood prevention are two sides of the same coin. In addition to the need to increase the aggregate coverage in the North, major problems with the existing management of formal and informal schemes mean that their effective use is limited. Formal schemes are run-down and require substantial investments in rehabilitation but will continue to be unsustainable unless satisfactory cost recovery mechanisms can be constituted to cover operations and maintenance. On small, informal schemes, the direct beneficiaries have a stronger incentive to manage their schemes but limited technical knowledge to do so. Land intensity rates are currently less than one – implying that even overall less than one crop per year is grown on command areas – whereas the figure should be approaching two.

Figure 3-6: Climate Change Observations (1991-00) and Projections (2030-39)



Source: IWMI GLOWA Project.

3.34 **The need for both measures identified above – improved technologies and year-round irrigated cultivation – is made more urgent by the likely impact of climate change.** Moreover, previous intensification of agriculture has led to severe environmental degradation in Northern Ghana, including nutrient mining and desertification (EPA 2009). Climate change modeling based on internationally recognized scenarios predicts both global wet and global dry consequences, reflecting the uncertainty in likely changes in weather patterns. In World Bank (2010c) these global scenarios are complemented with Ghana-specific outcomes in order to gauge the likely costs of climate change adaptation. Predictions across the four scenarios are for an increase in mean temperatures in Northern Ghana of between 1 – 2 degrees Celsius. Mean rainfall is predicted to fall from 40mm under the base case to 38 – 39mm under the Ghana/global dry scenario or to increase to 43mm under the Ghana/global wet case. Crucially, the variance between maximum and minimum projected rainfall is expected to increase in all scenarios.

Similar analysis by the International Water Management Institute (IWMI) based on their detailed modeling of the Volta basin suggests results as illustrated in Figure 3-6. Their models also predict delayed onset and higher variability than currently observed. Together the consensus from these models is that the risk profile facing small farmers dependent on rain-fed agriculture will surely increase in the future. The World Bank study estimates that agricultural output will fall by between 0.8 percent and 6.4 percent depending on the scenario, making a strong *prima facie* case for substantial investments to be made in adaptation measures. Moreover, while in the short term yield gaps can indeed be closed by measures other than new science (such as reducing post-harvest losses, discussed above), it is clear that in the long term new crop varieties that can cope with changing climate will be required.

3.35 **Ghana's experience with irrigation has been extremely disappointing for a number of reasons.** Existing state institutions have been focused on the large schemes with insufficient attention paid to the many informal schemes that potentially have a larger impact on a greater number. The Ghana Irrigation Development Authority (GIDA) is expanding the adoption of joint irrigation scheme management to the informal sector – in which users and GIDA jointly agree on roles and responsibilities for the operation, maintenance and overall management of the schemes. However, their limited capacity will constrain the roll-out of this approach in practice. Many informal schemes were constructed through public works programs and fail to meet construction standards leading to premature degradation of physical structures. This limits their economic life, in part because of the low technical capability of contractors. One option available to the Government is to mandate SADA to play a more direct role in supporting irrigation within its domain. SADA would draw on the expertise of GIDA staff but would be better resourced and better able – by virtue of proximity and more direct accountability – to provide greater managerial oversight so that schemes are better built and maintained than has hitherto been possible with GIDA.

3.36 **Productivity gains can be achieved within a smallholder system and it is a fallacy to presume that large-scale mechanized farming is a necessary condition for continued agricultural growth.** There is an extensive literature regarding smallholder efficiency and their continued viability in contemporary international markets. So-called agro-pessimists point to a decade of stagnant growth in Africa as evidence of technological stagnation and sunk costs of urban bias (Lipton 1977). However, Byerlee, Diao and Jackson (2005) point out the important contribution of small-scale farming to renewed growth in the post-reform period. (See also Binswanger-Mkhize, McCall and Patel, 2009.) World Bank (2009e) reports results from a comprehensive empirical analysis of competitiveness of agriculture in the Guinea Savannah conditions and compares two proven instances of successful development in North-East Thailand and the Cerrados region of Brazil with current cost structures in Zambia, Nigeria and Mozambique. This is highly relevant given that the same agro-ecological conditions exist across the SADA region. Farm level production costs in Africa are shown to be competitive even though yields are significantly lower than in Thailand and Brazil. Second, Africa's producers are generally competitive in domestic markets but less so in international markets. Third, regional markets offer the most opportunity for African small holders. However, the lack of competitiveness is due to domestic logistics and there was little evidence of economies of scale in immediate production. Microeconomic analysis of farm budgets regularly concludes that production technologies deployed by small holders provides substantial returns while transport costs are substantial. For instance, it costs half as much to transport fertilizer from Tema to

Tamale as it does to import to Ghana, such that fully 20 percent of the final retail price in Tamale is made of transport costs (IFDC, 2007).

3.37 **New institutional arrangements that better link smallholders to larger enterprises have proven to be mutually beneficial by addressing a number of the market failures that disadvantage smallholder farming.** Out-grower and contract farming arrangements can be particularly beneficial in those cases described above where economies of scale exist in down-stream marketing and/or where larger nucleus farms can overcome existing market failures on behalf of participating smallholders. Such schemes are more prominent in South-East Asia with tree crop farming (Hayami, 2009) but are being applied in new and innovative arrangements. Applications in Ghana are ad hoc with some early successes, such as in the maize and sorghum sectors within the SADA zone and with horticulture in the South. However, there are also instances in which results have failed to materialize. The critical factors for success are that both nucleus and out-growers respect the rights and obligations enshrined within the arrangement for the mutual advantage. In economic terms, many of the arrangements resemble 'prisoners dilemma' situations where trust and coordination are key – failures to date have been attributed to high discount rates among small-holders (who discount future benefits so heavily that they renege on agreements for an immediate advantage that collapses the scheme) or similar behavior predicated on a lack of trust in the other party. Enforcement of the rules of the game combined with better information to build credibility can help encourage further application of these arrangements.

3.38 **Building household asset bases can also encourage more risky – but more rewarding – behavior among farm households.** Credible and effective national safety net programs are an important element in this regard – as discussed in Chapter 5. As well as providing household assets through additional income generation, public works and similar safety net programs can employ beneficiaries in activities which produce community assets that directly reduce household risk. Examples are tree-planting that increases water retention and reduces water run-off thereby mitigating flood risk. Other mechanisms that augment household assets including the accumulation of livestock can also play an important role. Other contextual factors that encourage risky but productive investments include secure land rights especially for women (Goldstein and Udry, 2005).

3.39 **Increased productivity and the resulting increased farm incomes provide a stimulus to local economies but a better business climate is needed in the North to reduce the costs of doing business and to ensure that backwards and forwards linkages between agriculture and the economy.** Maximizing these linkages depends on a supportive environment for private sector investment in small-scale informal enterprises. As reported in Chapter 2, the overall business climate in the SADA region remains challenging. Even where informal enterprises are successfully established, they frequently fail to reach scale (World Bank, 2009b). This is particularly important in more densely populated regions of Northern Ghana, where land constraints prohibit the deployment of labor freed up from productivity gains onto new lands. Given the natural disadvantage of Northern locations, an effective regional policy can offset these cost disadvantages and thereby level the playing field with locations elsewhere in Ghana. Ghana currently provides fiscal incentives that ostensibly favor Northern Ghana in the context of its investment promotion measures. For instance, under existing arrangements tax holidays are greater for investments in rural areas outside of the regional centers. However, in reality these

are of limited value. First, where incentives apply to profits that accrue in the future but the cost disadvantages are incurred at start-up, the net present value can be small. In any case, such incentives do not overcome cash flow constraints of new investors. Second, given overlapping measures the marginal attraction of measures to encourage investments in Northern Ghana may be close to zero. For instance, investors qualifying for incentives under the free zone arrangements benefit from incentives that are at least as attractive with no constraints on their location.

3.40 **There is clearly a role for an organization like SADA to identify growth potential and the infrastructure gaps identified here and in other studies, and attract more investment to the North.** For example, the Ghana country case study for the Africa Infrastructure Country Diagnostic (World Bank, 2010d) documents the current state of Ghana's infrastructure against regional comparators. Most striking is that while Ghana performs well against many sub-Saharan African countries, it remains some way from the average for middle-income countries – a status which Ghana aspires to achieve in the next five years. GIS mapping of key infrastructure illustrates the concentration in the South where population densities are greater. The study also identifies broad economic returns from increasing availability of and access to critical infrastructure.

4. INTERNAL MIGRATION AND POVERTY

A. INTRODUCTION

4.1 **Internal migration is increasingly prevalent in Ghana and has emerged as a key policy issue for Ghanaian authorities, particularly with the emergence of spatial development strategies.** Popular opinion has often been dominated by concerns about the negative implications of internal migration on the destination communities, while the academic literature has generally focused on the positive effects of migration on migrants and sending households and communities. Since recent robust growth performance has been accompanied by a widening of spatial inequalities, migration has become an even greater priority for Ghanaian policymakers.

4.2 **Measuring migration, its rationale and the profile of migrants is particularly challenging and this chapter draws on both quantitative and qualitative analysis to provide a more complete overview of migration in Ghana.** While quantitative analysis is important to understand the magnitude of migration, as well as the profile of migrants, there is a risk that those being interviewed do not view people who have left for a few weeks to work as migrants. In addition, household heads may not be forthcoming about minors who have migrated since this implies that they were unable to support their own dependents. Finally, capturing migrants as respondents to quantitative survey also poses an obvious problem, since many of them are transient and not resident in a house. Qualitative data has limitations too, in that it is not representative and therefore cannot be generalized. However, taken together the quantitative and qualitative work done in preparation of this Report provide a more in depth insight into who and how many migrants there are in Ghana, why they migrate and what impact this has on them and their families. This chapter offers a novel empirical analysis of the characteristics, determinants and impact of Ghanaian internal migration, based on a special migration module of the GLSS5 (see Box 4-1), as well as on evidence gathered through the PPVA.

4.3 **Findings suggest that North-South migration plays little role in terms of poverty alleviation.** North-South migration is far less important than South-South migration Ghana's internal migration is a localized phenomenon, reflecting large migration costs (risks, networks, information) and currently low opportunities for poor Northern households, consistent with the observation of divergent returns and market segmentation made in Chapter 2. Migration can be welfare improving (at source and destination), but only when geared towards Southern cities and for educated migrants. To date, most of the migration from the North is incremental and pushed by extreme poverty and vulnerability; thus, it is not poverty alleviating. With better basic service delivery in the North and greater absorptive capacity in the South, there is thus large scope to make North-South migration much more instrumental to poverty alleviation in the North.

Box 4-1: Migration and Remittances Survey Module

The analysis of internal migration is based on a specific migration and remittances module in GLSS5 that included a sub-sample of 3,987 Ghanaian households and contained 36 questions about the identity and characteristics of migrants, as well as the amount, frequency, and use of remittances sent back by these migrants.

The GLSS5 survey data allows the identification of three types of individuals in the data:

Non-migrants: individuals who were present at the time of the survey and who, if ever away from the household, came back more than five years ago and have not left the household since that time. For non-migrants, information is available only from the general part of the survey.

Return migrants: individuals who were away from the household for some time in the last five years but have since returned to the household. For return migrants, information is available both from the migration and remittance module (e.g., duration of migration, amount of remittances sent, education and occupation before migration, etc.) as well as from the general part of the survey (because they were interviewed for the general survey as any other household member). However, it is not guaranteed that the return migrant him/herself answered the questions in the migration and remittances module.

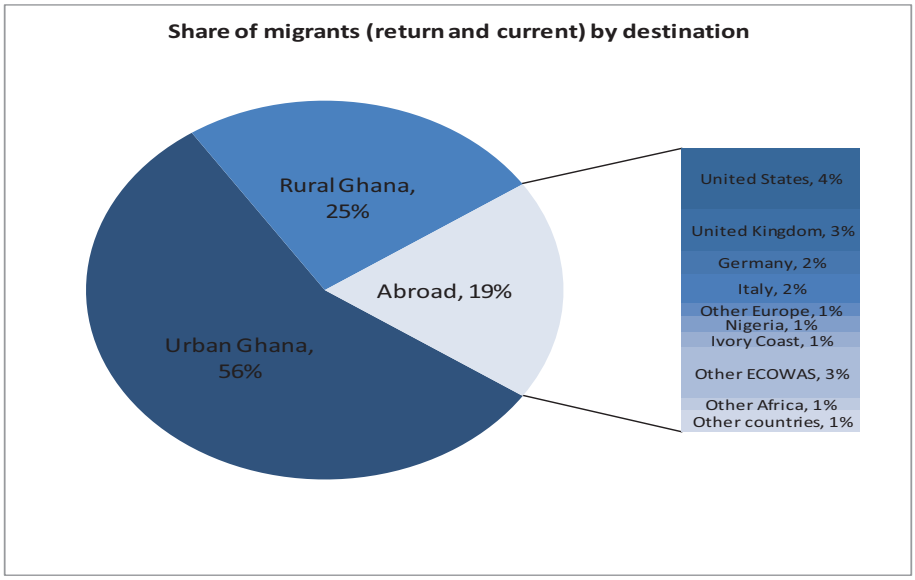
Current migrants: individuals who were away from the household at the time of the survey. For current migrants, the only information available is that recalled by the interviewed remaining household members because the current migrants themselves were never interviewed. It is possible that these current migrants were interviewed by GLSS staff while in their destination communities. However, they would not have been captured as migrants in this dataset. This represents a major qualification to the findings of this chapter, as the second-hand information relayed by remaining household members may be incomplete, inaccurate, or out-of-date. The reliance on remaining household members for information on migrants also implies that migration of entire households is not captured in the data, although qualitative studies indicate that such migration patterns are very rare (PDA, 2009).

B. THE PROFILE OF GHANAIAN MIGRANTS

4.4 **Migration is very common in Ghana, with at least one migrant in 46 percent of all households**. The majority of these households (29 percent of the population) have one or more migrant who are currently away from home, with a smaller share having return migrants (10 percent) and 7 percent having both current and return migrants.

4.5 **Most of Ghanaian migrants stay in Ghana, move to urban areas and stay away for at least 5 years.** It is, perhaps, surprising that of its migrant, Ghana produces relatively few international ones with only 19 percent of all migrants going to international destinations, primarily, Western OECD countries (Figure 4-2). Seventy percent of all internal migrants go to urban centers, suggesting that these are increasingly attractive as migrant destinations over time (Ghana Statistical Service, 2000; Batse, 1995). Among all migrants in Ghana in 2005-06, fewer than 24 percent returned to their families after being away in the past 5 years, while more than 76 percent were away from their households at the time of the survey. These numbers vary by type of migrant but, surprisingly, not by gender.

Figure 4.1: Four-fifths of Ghana's Migrants are Internal Migrants



Source: World Bank staff calculations based on GLSS5

4.6 **More than two-thirds of internal migrants come from the relatively better off regions of Ashanti, Central, Eastern, and greater Accra, and not from the North, as is commonly assumed**. Although one might expect that a large number of migrants come from Northern Ghana, its three administrative regions account for only 10 percent of all internal migrants. This suggests that the costs of moving—both direct travel costs and the costs of locating and joining a migrant network—represent important barriers to labor mobility in Ghana.[36] This is also consistent with previous evidence which points to distance as a strong deterrent to internal migration in Ghana (Beals, Levy and Moses 1967, Caldwell 1968). Even after taking population size into account, the North produces migrants at a much lower rate than the South. Migrants in the Upper East and Northern regions make up just 3 percent of their populations, while Upper West has a somewhat higher migration rate of 8 percent (Figure 4-3, bottom right). However, this is much lower than the double-digit migration rates of the Volta, Central, and Ashanti regions. This confirms that internal migration in Ghana, whether in relative or absolute terms, primarily occurs in Southern Ghana.[37]

4.7 **Even though migrants tend to come from more urbanized regions, most of them originate from rural areas within these regions.** While 64 percent of the Ghanaian population is rural, 75 percent of migrants come from rural areas. Coming from a rural area also increases the chances that the migrant will go to a rural area, although urban destinations always dominates

[36] Migration networks in Ghana have been found to be a significant determinant of the likelihood of receiving remittances (Adams, Cuecuecha and Page 2008), which is one way of measuring success of migration.

[37] For rural households in the sample, it is possible to contrast the community-level migration rates calculated in the survey with responses to a special community questionnaire administered to opinion leaders. In 57 out of 333 rural communities in the sample, the community-level migration rate is zero even though the community's opinion leader indicated that there are some members of the community who "leave temporarily during certain times of the year for work." There is substantial regional variation within this number, with the Upper East, Northern, and Volta regions accounting for half of the discrepancies. Some under-reporting of migration in the migration and remittance module is of course expected due to random sampling of households within communities, but the significant regional variation indicates that some caution should be used when interpreting the regional migration rates in Figure 4-3.

in absolute terms. Among migrants from rural areas, 33 percent go to another rural location, while less than 17 percent of migrants from urban areas to go to a rural area.[38] This pattern is similar for both men and women, with no substantial differences.

4.8 **The greater Accra and Ashanti regions attract more than half of all internal migrants and migrants make up a substantial share of the population in these regions.**[39] Figure 4.3 shows that, in contrast to popular opinion perhaps, Northern Ghana only accounts for 5 percent of total internal migrants. This is consistent with the existing literature, which found greater Accra, Ashanti, and Western regions to be the main migrant destinations, with the Upper East region being the least popular destination (Tutu 1995). In Ashanti and Western regions, migrants account for more than 10 percent of the region's population, while more than 18 percent of the population in Accra is made up of migrants (Figure 4-3, bottom left).[40]

Table 4-1: Regions of Origin and Destination for Internal Migrants in Ghana

(percent of total)

Origin \ Destination	1	2	3	4	5	6	7	8	9	10	Total	Destination known, %
1-Western	**3.7**	0.3	1.0		0.1	0.8	0.4		0.2		6.6	39.1
2-Central	2.2	**6.0**	4.3	0.2	0.6	1.9	0.1				15.3	67.3
3- Greater Accra	0.1	0.2	**1.7**	0.3	0.5	0.1			0.0		3.0	65.6
4- Volta	0.3	0.1	3.2	**4.4**	0.8	0.5	0.1				9.4	61.6
5-Eastern	1.2	0.8	7.6	0.2	**2.7**	0.6	0.4				13.5	53.6
6-Ashanti	2.9	0.6	8.1	0.1	0.5	**19.5**	1.8	0.4	0.2		34.0	83.3
7-Brong Ahafo	2.2	0.1	1.3			1.2	**3.6**	0.2		0.0	8.6	65.6
8-Northern	0.1		0.4	0.5		1.3	0.4	**2.1**			4.8	55.2
9-Upper East	0.1		0.1		0.0	**0.9**			0.3		1.5	69.8
10-Upper West	0.5		0.1		0.1	0.7	**1.1**	0.0		0.7	3.3	78.2
Total	13.3	8.0	27.8	5.8	5.4	27.6	7.9	2.7	0.7	0.7	100.0	

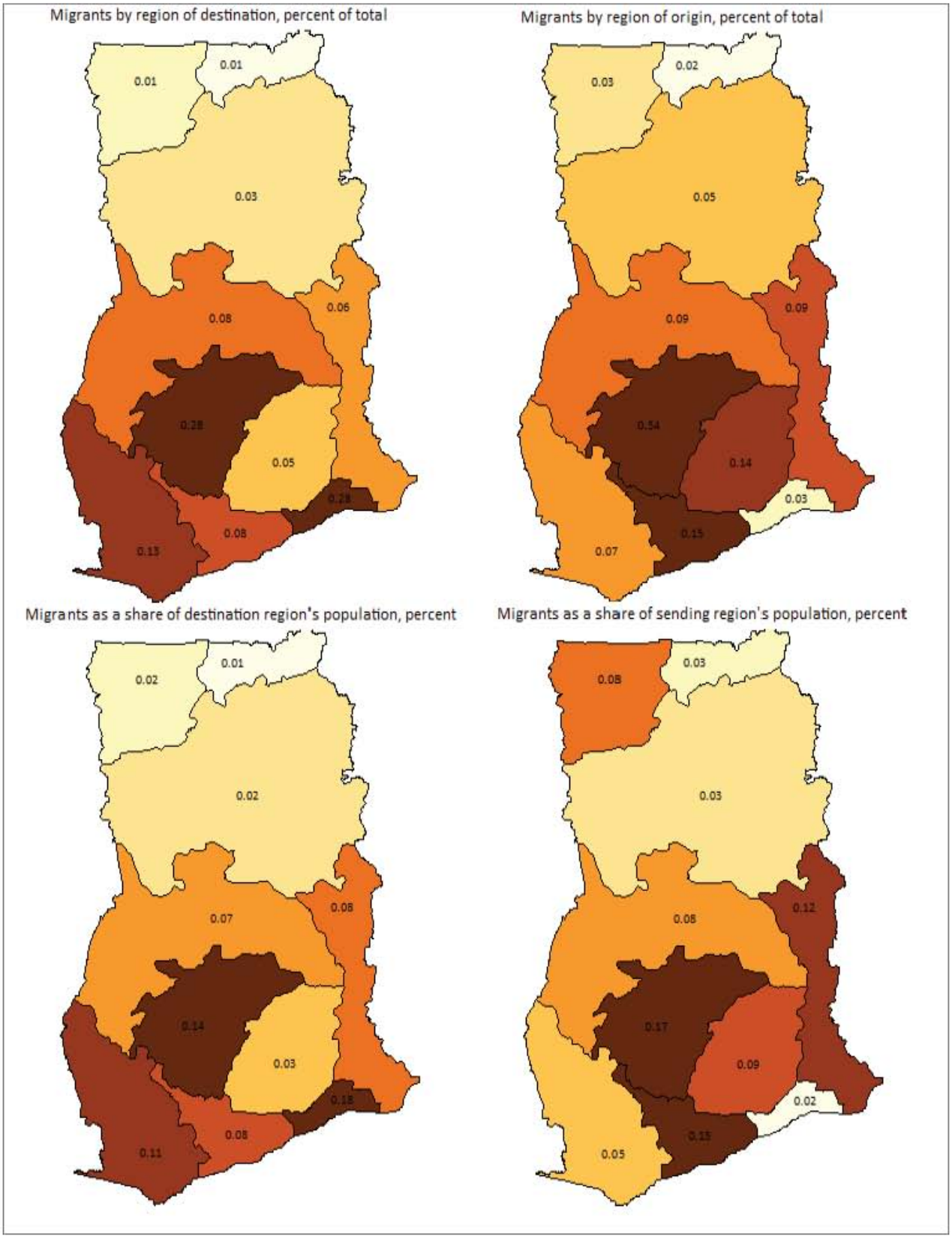
Source: World Bank staff calculations based on GLSS5

[38] Just under 4 percent of Ghanaian internal migrants are urban-to-rural migrants. Although this share may seem high, it is actually below those reported in earlier studies of internal migration in Ghana (Batse 1995).

[39] The discussion in this and the following paragraphs on migrant destinations must be heavily qualified due to data limitations. The interviewed families knew the location of the migrant only in 61 percent of all cases, and there is a substantial regional variation underlying that average (see the last column of Table 4-1). However, there is no clear regional pattern in the knowledge of the migrant's location. Across the three agro-ecological zones, the location of the migrant was known 60 percent of the time in the coastal zone, 63 percent of the time in the forest zone, and 56 percent of the time in the Savannah. The likelihood of knowing a migrant's location also does not appear to be correlated with welfare: there is no clear pattern in knowing the location across welfare deciles, although households in the two bottom deciles are the most likely to know the location of their migrant members.

[40] If the sample is restricted to individuals 15 years of age or older, these shares rise even more, with 26 percent of the population in Accra and 24 percent of the population in the Ashanti region accounted for by migrants.

Figure 4-2: Origin and Destination of Internal Migrants



Source: World Bank staff calculations based on GLSS5

4.9 **An (adult) individual's likelihood to migrate is determined by a combination of his personal characteristics and the characteristics of his household, community, and region.** Various regressions were run to identify correlates of the decision to migrate.[41] The estimation sample is restricted to Ghanaians 15 years of age or older who are not international migrants -– hence child migration decision is not analyzed here. Regressions include community-level explanatory variables, which can be interpreted as 'push' factors of migration, as common to migrants and non-migrants alike.[42] Results suggest the following:

- The probability of migrating rises until a person turns 36 years old, and decreases thereafter; Gender and marital status[43] does not appear to be a significant predictor of the probability to migrate once other factors are taken into account. Even though migrants are less educated on average, higher educational attainment is correlated with increased probability to migrate once other factors are taken into account.[44] Individuals are more likely to migrate if the head of the household is female and younger. However, the direction of causality is not clear here: both the age and the gender finding could be explained by the 'real' head leaving to become a migrant and the younger spouse becoming the new household head.
- Migrants are less likely to come from households with a more educated head, which may serve as a proxy for opportunities available to the migrant at home; Migrants are less likely to come from households who own their homes. The household's male to female ratio and size (including the migrant) are positively correlated with the likelihood of migration: both are likely an indicator of household-level labor abundance. The under-15 dependency ratio is negatively correlated with the probability to migrate, which reflects the need of adults to help with raising the children. On the other hand, the over-65 dependency ratio is positively correlated with the likelihood to migrate. In contrast to the needs of young children, the needs of the elderly are more likely to be financial.
- Communities with higher levels of literacy, higher rates of subsidized medical care, and better access to water and sanitation are less likely to produce migrants. In contrast, distance to nearest market was not found to be significant in any of the specifications.
- Regional-level variables also matter for determining the likelihood to migrate and reinforce the finding that push factors are particularly significant in determining migration in Ghana. Because the distribution of ethnic groups in Ghana closely follows the regional borders, the regional effects can also be interpreted to a large extent as the migration impact of membership in an ethnic group.

4.10 **Compared to Ghanaians who have never migrated, internal migrants are substantially younger, more likely to be male, and less educated.** Consistent with existing evidence (Caldwell, 1968, Tutu, 1995), migrants are much more likely to be male: the male-to-female ratio for non-migrants 15 years of age or older of is 0.88 vs. 1.20 for migrants. On

[41] See Ackah and Medvedev (2010), as a background paper to this report, for a detailed discussion of econometric techniques and results.

[42] Another way to see these variables as push factors is to note that they, unlike individual characteristics such as age, education, and experience, are unlikely to influence migrant earnings in the destination region and therefore cannot provide the "pull" of an expectation of higher wages.

[43] This contrasts with previous findings in the literature (Tutu, 1995).

[44] These results are in line with existing studies of the relationship between education and migration in Ghana, which found a positive but non-linear association between the two (Caldwell, 1968, Gbortsu, 1995).

average, migrants are five years younger than non-migrants and are significantly more likely to stop their education after completing primary school, rather than continuing on to secondary and tertiary degrees (Table 4-2). Of course, this does not establish a causal link between lower education levels and the likelihood to migrate: migrants could be coming from communities with reduced access to education services, from social groups which are traditionally less likely to send children to school, or the less-educated may be self-selecting into the migrant pool. However, to the extent that higher educational attainment is correlated with increased earnings, Ghanaian migrants appear to be at a disadvantage relative to non-migrants.

4.11 **Compared to the average migrant, migrants from Northern Ghana are more likely to be male, younger, and have a lower educational attainment.** The distribution of these three variables across regions is shown in the top right and the two bottom panels of Figure 4-4. Even after controlling for the fact that people in the North of Ghana are likely to be less educated than those in the South, migrants from Northern Ghana are still significantly less educated than migrants from other regions.

4.12 **The qualitative assessment provides important information against which survey-based conclusions can be validated.** As noted in the introduction to Chapter 3, PPVA provides for a complementary methodology which allows a qualitative appreciation of socio-economic phenomenon. Perceptions are also important and may differ from the statistical data. For instance, the PPVA suggests that an increasing number of girls are migrating to Accra with some districts reporting that 'nearly all' girls go to Accra to work, during the year. (This is discussed further below, and in particular Box 4-4).

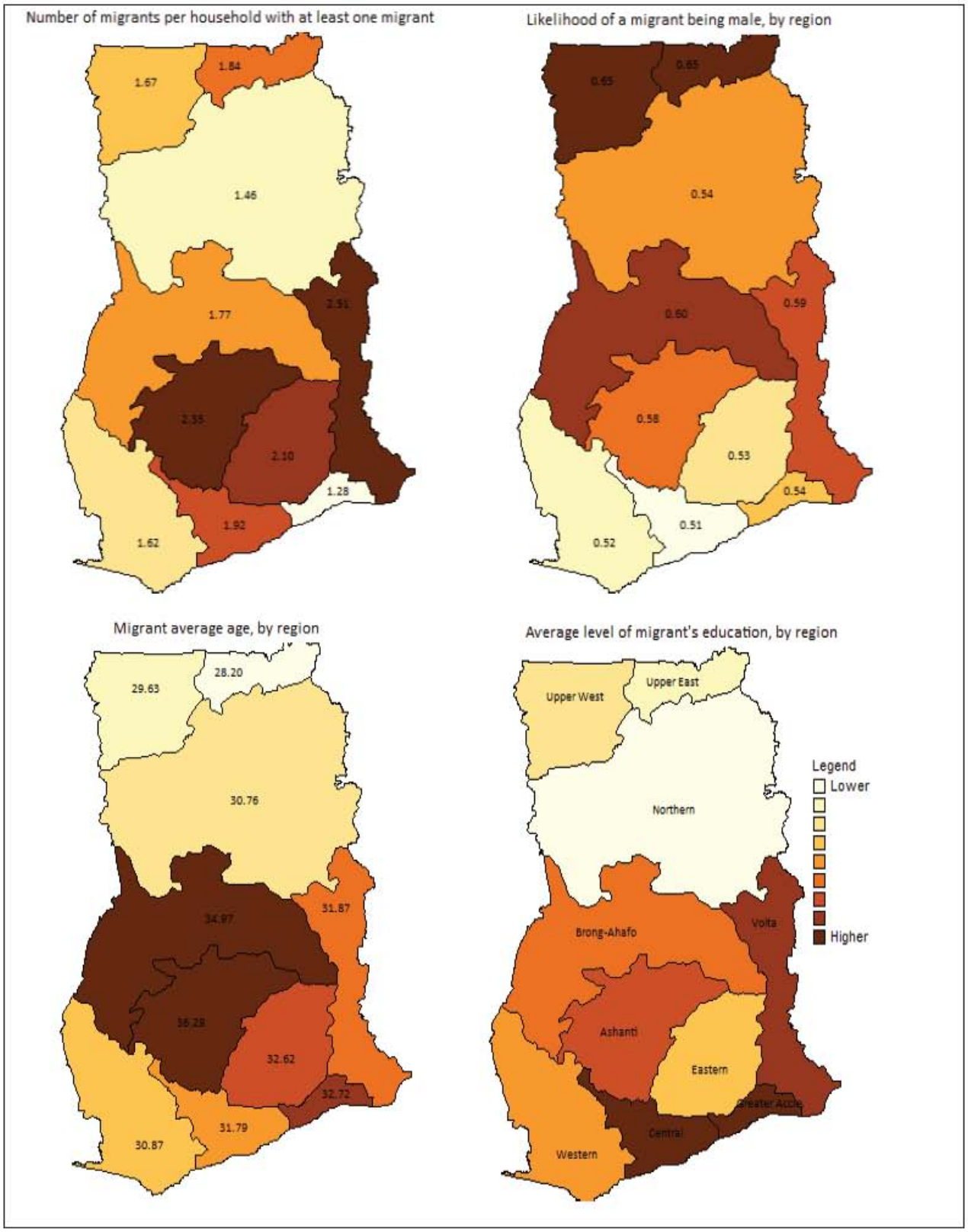
Table 4-2: Gender, Age, and Educational Attainment of Migrants vs. Non-Migrants

	Non-migrants (average)	Migrants (average)	t-statistic
Gender	1.53	1.46	5.77
Age	36.02	30.94	10.73
Complete primary	0.02	0.13	-7.86
Incomplete secondary	0.50	0.48	0.42
Complete secondary	0.34	0.08	6.36
Complete tertiary	0.07	0.02	2.43

Source: World Bank staff calculations based on GLSS5

4.13 **Econometric results suggests that migrants currently away from their households have been gone for an average of 8 years, but the qualitative analysis suggests that migration can also be used as a more transient coping strategy with migrants going and coming multiple times in a year.** The quantitative analysis suggests that the average time away is 5 years, while the longest reported absence in the sample is 50 years. On average, women tend to be away for slightly longer than men – 8.5 years vs. 7.8 years – but the difference is not statistically significant. Duration of migration also varies substantially by region of origin and destination, with migrants in – and from – the Southern regions staying away somewhat longer than others. But there also exist more transient poverty, as suggested by the PPVA which, unlike GLSS5, captures child migration. It suggests that girls from the North travel to and from Accra multiple times a year – indeed a bus company has dedicated buses for this – and that their work is seasonal. The seasonality of their migration is likely based on the hunger season at origin, in the North, as well as the demand for their labor during heavy shopping seasons in markets in Accra.

Figure 4-3: Number of Migrants, Gender, Age, and Education by Region



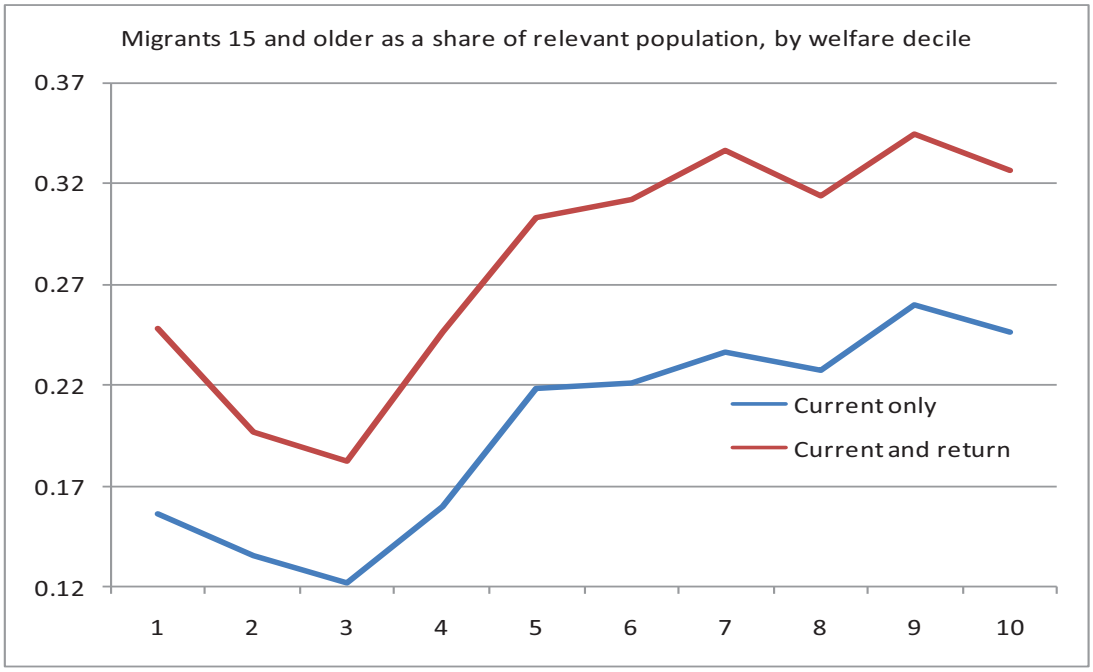
Source: World Bank staff calculations based on GLSS5

4.14 **Migrant networks seem to play an important role in fostering further migration and improving its quality.** On average, households with migrants have 2 members currently away. Compared to the average migration duration of 8 years for the entire sample, migrants from households with more than two migrants tend to be away for 9 years, and migrants from household with five or more migrants stay away an average of 10 years. Similarly, the likelihood that a migrant ends up in an urban area increases from 67 percent for households with one or two migrants to 71 percent for households with three or four migrants to 79 percent when five or more household members are away. This finding is supported by the qualitative work. Box 4-3 shows the importance of kin and family networks in the lives of migrants from the North who move South to work on Mango plantations. These networks support them to migrate to more decent work than many of their counterparts who work in mines and their children may thus be provided with access to private education, while supporting the family network by helping on the plantation during the holiday period.

C. MIGRATION, REMITTANCES AND POVERTY

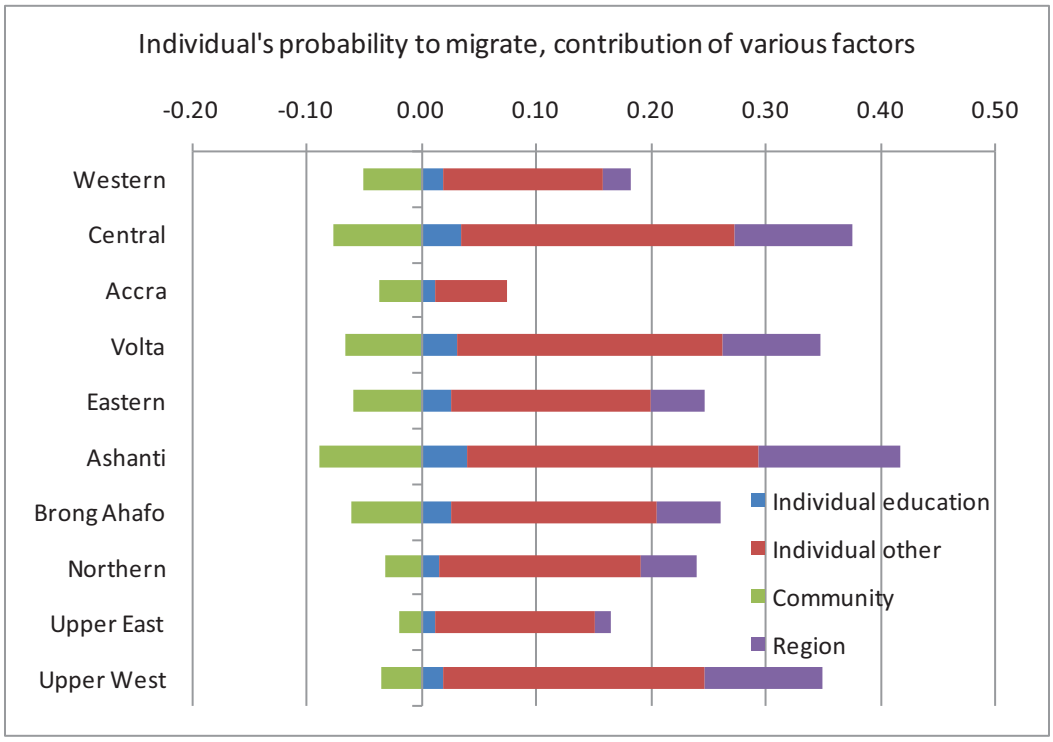
4.15 **Migrants originate from extreme poor households and better-off ones.** The number of migrants 15 years of age and older in each welfare decile relative to that decile's population is plotted in Figure 4-5. The figure shows that both the extreme poor (first decile) and households just out of poverty (fourth decile) have similar rates of migration, while households in the second and third deciles – those just below the poverty line – send migrants at a much lower rate. Migrants from the North are more likely to come from poor families than migrants from the Southern region. This difference holds even after controlling for much higher poverty rates in Northern Ghana.

Figure 4-4: Migrants Come from Extreme Poor and Non-Poor Households



Source: World Bank staff calculations based on GLSS5

Figure 4-5: Migrants from the North are 'Pushed' Stronger and 'Pulled' Weaker



Source: World Bank Staff calculations based on GLSS5. Note: *, ** and *** denotes statistical significance at the 90, 95 and 99 percent levels respectively.

4.16 **Push and pull factors vary significantly by region and migrants from the North are more likely to migrate for 'push' reasons – poor conditions and opportunities – than the 'pull' factors and, as a result, migration is likely to be a more negative experience.** The relative importance of push and pull factors at the regional level is shown in Figure 4-6, which decomposes the estimated probability to migrate into contributions from individual pull factors from education and other individual determinants (age, gender, and marital status) and into community and regional push factors (access to community services and regional dummies). It suggests that, for migrants from Northern Ghana, the educational pull factors are less important than for migrants from other regions. At the same time, the community push factors contribute more to an individual's probability to migrate if that person is from Northern Ghana.[45] Migrants who are primarily motivated by 'push' factors may be poorly equipped to take advantage of opportunities in the destination regions. They are therefore more likely to experience the negative aspects of migration such as urban congestion and stress on families back home, than they are to experience the positive ones such as higher household welfare through remittances and acquisition of new skills. This suggests opportunities for policy action to mitigate the push

[45] Because the estimated coefficients on the community push factors are negative, the contribution of these factors to an individual's likelihood to migrate will be higher in absolute terms for individuals from communities with better service delivery. Therefore, longer bars indicate that push factors are less important, while shorter bars indicate that these factors are more important.

factors and reduce the inequalities in initial conditions by investing in the human capital of origin communities, particularly in Northern Ghana.[46]

4.17 **The qualitative analysis illustrates this finding on the determinants for migration in the North being more linked to push factors, than pull factors**. Poorer migrants from the North often migrate out of desperation and likely more during lean season, when the push factor is accentuated, and when more work is available on plantations or in urban markets, for example**.** The qualitative work, captured in Box 4-2, provides an insight into the desperation that causes some migrants to move. The Galamsey workers, who do high risk, low pay work in artisanal mining, refer to the decision as one of 'last resort', a decision that puts them into a poverty trap that becomes increasingly difficult to get out of, and which has potential negative social consequences for surrounding communities. (Since the PPVA disproportionally targets the poor, these results are not representative and cannot confirm that push factors are quantitatively stronger in the North.)

Box 4-2: Young Migrants in Artisanal Mining (Galamsey)

Large numbers of Northern male youth are involved in illegal pay-dirt work (known as "*galamsey,*" a.k.a. "*gala*") around Kenyasi in Brong-Ahafo. In an interview with four such operators, they spoke of the desperation that had driven them from the rural North and the extreme risks associated with their current livelihood activities. They described *galamsey* as a last resort adopted when the doors on other safe and decent livelihood options are closed. It is "*work into which we are trapped by desperation, not one entered into by choice*." Thus, Northern migrants are far more likely than local people to opt for livelihoods in the illegal pits (known in the industry as "*ghettos*"). Informants opined that the ratio of migrants to local people in *galamsey* work at Kenyasi is around 7 to 3. *Galamsey* is widely perceived as operating at cross purposes to established norms of decent work. To many, *gala* workers are merely selfish miscreants, hell bent on making a fortune at everyone else's expense. Less evident, however, is just how hazardous it is and its potential feedback effect on poverty:

- *Gala* operators burn the candle at both ends in their bid to get all they can before they are evicted or before the *ghettos* eventually become unproductive. Often, they get to work at the crack of dawn and do not leave till well after dark. Striving to maximize their returns, they cannot afford the luxury of rest so breaks are brief, just long enough for a quick meal.
- Because it is illegal work, labor arrangements are entirely unregulated and *ghetto* workers are totally dependent on patrons (known as *ghetto* sponsors) and can be fired without notice.
- *Gala* operators use mercury in the extraction process, a chemical known to pollute ground water supplies, with possible adverse impacts on the wider community. People in the area suspect that this may be responsible for the increasing incidence of buruli ulcer, though this cannot be confirmed.
- The lack of protective clothing (e.g. gloves, masks, boots, overalls and helmets) increases the risk of disabling injuries, with the threat of death constantly looming from inexpertly-activated dynamite explosions and loose rocks crashing down to the pit floors.

[46] A key concern with the results presented so far is the potential endogeneity of the explanatory variables. Many of these concerns have already been evoked, such as the endogeneity of the age, gender, and education of the head. Similar reasoning can be applied to the male-female ratio, household size, and the number of dependents; in fact, any household-level variable measured after the migrant has been away for some time is likely to be affected by the migrant's absence. Given the methodological difficulty to address this endogeneity problem (in the absence of suitable instruments), additional regressions were run only using exogenous variables, such as the characteristics of the migrant him/herself, community-level and regional variables, which cannot be influenced by the decision to migrate. Results suggest that all variables common across specifications retain their significance and sign, and the estimated coefficients are reasonably close in value, see Ackah and Medvedev (2010). Results are also very comparable to those obtained using panel data in a small number of Northern communities (Wouterse, 2009).

- There is a constant fear of harassment by law enforcement agencies and when they are not being harassed by self-seeking authorities, they are simply treated as invisible, neglected by the state.
- They reportedly suffer frequent ill-health. This is likely due to a combination of the long working hours, the frequent contact with mercury, the suffocating conditions in deep, poorly-ventilated pits, the abuse of alcohol and the sheer anxiety associated with their risky livelihoods.
- Some exhausted pits are simply left uncovered, posing a threat to unsuspecting children and offering breeding grounds to anopheles mosquitoes.
- However, the regularization of local *galamsey* operations could facilitate improvements in labor and environmental standards by ensuring that investors and employers take steps to better safeguard the health of pay-dirt laborers, protect communal water resources and contribute to restoring the environment despoiled by their operations. Regularization could also foster mutual respect between state and operators and facilitate a more harmonious co-existence of competing land uses by improving the enforcement of surface mining controls.

4.18 **The qualitative assessment also emphasizes the role that education plays in minimizing the push factors and improving the quality of migration from the North.** The qualitative assessment confirms that those migrants who move with higher education levels seem to find better work and use migration to create new opportunities for their whole family, see Box 4-3. A group of twelve migrant males, working on mango plantations, were interviewed in the Somanya in the Eastern region. Each had completed a secondary or technical education in Northern Ghana before migrating South. Most were employed in full-time work as tractor operators or supervisors and were able to negotiate fair terms of employment and decent daily wages. In addition, most of them had their children in private school and were saw their migration experience as paying off in terms of welfare impact on their family.

Box 4-3: Workers in the Export Horticulture Industry at Somanya

A group of twelve male migrants were interviewed at Somanya in the Eastern Region. Each had completed a secondary or technical education in Northern Ghana before migrating South. Most were employed full-time on mango plantations as tractor operators or supervisors. The others too were engaged in providing some form of service to the same industry (e.g. as repairers of traction or spraying equipment). Though there is a large enclave of other North-South migrants in the Somanya area, the credentials these twelve possessed had been highly facilitative in their search for employment. Despite the fact that most could not speak the native language, Krobo, local plantation owners compete for their services in their bid to meet the stringent farm management and sanitation standards required by European supermarkets. These twelve migrants all arrived separately, the first in 2002 when the cultivation of exotic Keitt and Kent mangoes started in the area. All said they came deliberately to settle as long-stay migrants and had, thus, brought their families down as soon as they found jobs, mostly within days or weeks of arriving. Though from different ethnic groups, they have formed strong bonds and have a common informal leader. Occasionally, some of their younger kith and kin come over during school holidays to work on the farms, returning when schools reopen.

Most of those in full-time employment are paid daily wages, but because of their superior credentials, are better able to negotiate fair terms of employment. Some receive bonus payments based on outputs. The high harvest volumes and rigorous standards required for plantations to retain their Global GAP certification – including intensive annual farm audits by local and international auditors – also means that there is often extra money to be made by working overtime. Apart from their wages and bonuses, some are even entitled to the fruit 'tailings' (i.e. mangoes which, towards the end of the harvest season, do not meet the high standard required on the export market). Some have even been enticed with free accommodations by employers eager to keep them happy. Taking advantage of their expertise, some of the full-time employees undertake occasional petty contracts for other farms. Others have been able to negotiate concessional access to their employers' tractors, thereby establishing their own food crop farms on the side, which provides food and additional income for their families. Some also said they invest in small farms back home and these help maintain their parents.

They acknowledged that these diversified sources of income assist them to withstand potentially tough times such as during equipment breakdowns or seasons when the trees fail to fruit because of irregularities in the delicate balance between wet and dry weather or when harvests are rendered unsuitable for export through fruit fly invasions, as happened in 2007. Even in difficult times, they noted that they do not have to cut down on the food they eat as they did back home. The remittances they send home are mainly for feeding and to support with schooling costs.

Most of them have their children in private schools and at least one tractor operator has his toddler at the imposing Carol Gray International School on the outskirts of Somanya. They are not perturbed by the fact that they have to pay higher costs for their children's education. Another has graduated to the position of Farm Manager in the relatively short time since arriving in Somanya. This he sees as a sign of how highly his services are valued.

4.19 **The primary motivation of Ghanaian migrants is to find work, with education and marriage (moving to the spouse location) a distant second and third.** Taking both return and current migrants into account, working or looking for work is the main reason for migration for more than 47 percent of all migrants. When only migrants 15 years of age or older are taken into account, this share rises to 49 percent. Education as the primary motivation for migration accounts for another 16.5 percent of all migrants, while migrating in order to/as a result of getting married counts for an additional 12 percent (18 percent when only those 15 and older are considered).

Table 4-3: Main Reason for Migration by Age and Gender

	Male						Female					
	0-15	16-25	26-35	36-65	66-99	Total	0-15	16-25	26-35	36-65	66-99	Total
Marriage		0.4	2.4	1.3		**4.1**	0.7	5.3	10.9	10.0	0.5	**27.3**
Education	3.8	6.1	2.6	0.7		**13.2**	4.6	7.1	0.5	0.2		**12.4**
Work	0.9	11.4	22.1	25.8	0.9	**61.1**	0.2	8.0	8.8	11.7	0.5	**29.2**
Join parents	1.9	2.2	1.1	0.9		**6.1**	2.0	4.6	1.4	0.3	0.2	**8.5**
Join other relatives	2.0	3.0	0.8	1.5	0.3	**7.5**	4.8	4.6	1.4	2.0	1.0	**13.8**
Other	0.9	5.0	1.3	0.5	0.1	**7.9**	1.4	3.4	2.9	1.0	0.2	**8.8**
Total	**9.5**	**28.2**	**30.3**	**30.7**	**1.3**	**100**	**13.6**	**32.9**	**25.8**	**25.3**	**2.4**	**100**

Source: World Bank staff calculations based on GLSS5

4.20 **There are important gender differences, however, in the profile of migrants, with women migrating more often to follow their husbands and at a younger age.** Table 4-3 lists the primary reason for migration by gender and age group of a migrant (as a share of total for each gender). It reveals that the main motivation to migrate differs substantially by gender: for men, education and joining relatives are a very distant second and third to finding work, but for women, marriage is a very close second to working. The share of men and women migrating for educational reasons are similar, but male migrants who seek to improve their education tend to be somewhat older than female ones. Women migrants are often younger than their male counterparts, with women/girls under 26 years of age making up 47 percent of all female migrants, while the corresponding figure for men is 38 percent. This bias of female migration towards the younger cohorts is corroborated by findings of qualitative studies of migration in Ghana, which document perceptions that more and more females migrate, at younger and younger ages, to big cities. It is important to note, however, that many of these young women and girls end up with work that puts them at risk, as porters in markets sleeping in the open air,

or leaves them in dependent and sometimes abusive relationships that are not necessarily welfare enhancing, as domestic servants to family members (see Box 4-4).

4.21 **Women also migrate to do different things than men and many young women from the North accept positions that are both risky and have little positive impact on overall welfare.** Although women are in any case more likely to hold jobs in sales relative to men –who, in turn, are more likely than women to work in manufacturing and manual labor –these differences are exacerbated for migrants. However, when considering the jobs that return migrants held while away and the jobs they are currently holding, the data suggest that both men and women come back to occupational types similar to those they held before migrating. There are also important gender differences for migrants with unreported occupations: consistent with the qualitative evidence that a number of female migrants tend to engage in 'non-decent' work, the incidence of unreported occupations is significantly higher for women than for men. In the age group of 10 years old and above, 37 percent of female and 27 percent of male migrants show up with unreported occupations.[47]

Box 4-4: Vulnerable Girls in the Labor Market

Fostering

Orphaned and neglected girls tend to be given out for 'fostering' as housemaids in the homes of better-off relatives or the urban middle classes. This may involve migration to the South or to urban centers within the North. In the case of kin fostering, foster parents focus their attention mainly on their own offspring. In the other type of fostering, hardly any checks are performed on the potential foster parents before the child is given away. In the worst cases, the rights of neglected children may be further violated by selling them out in trafficking arrangements or by abandoning them to their fate. At Atta-ne-Atta, the PPVA team was offered children to take away, with absolutely no previous knowledge of or background checks on the team. And at Wungu, accounts were shared of agents regularly calling at the community to scout for children to take away. Some return, others are never seen or heard of again.

'Kaya-yei' head porters

Mallam Atta (a.k.a. Malatta) Market is a cacophonous open-air market on the Southern fringes of Accra New Town. The market and surrounding streets offer an array of foodstuffs and household goods at competitive prices, making Malatta popular with Accra's growing population of working class and middle-class households. The combination of brisk business and crowded snaky alleys presents *kaya-yei* with an opportunity to eke out a living by providing head portage services in exchange for small tips. With its negligible start-up costs, the head portage business is one of very few livelihood strategies open to poor migrant girls seeking self-employment. More decent work remains out of their reach as they lack the skill, deportment and bridging networks with which to compete favorably in the labor market. The girls are to be found carrying bulk goods from delivery vans and trucks to the shops and wooden stalls or, even more likely, relieving weary shoppers of the weight of their shopping while navigating the maze of stalls selling just about anything -- from pungent salted fish, palm oil and intense local spices to delicately arranged stacks of imported infant formula, toiletries and enamel bowls decorated in flaming colors.

The majority of the *kaya-yei* at Malatta are school-age girls from the Mamprugu area of the Northern Region. Over time, they have completely supplanted the male *kaya* who were more visible before the nineties. Many of the first-timers would have financed the southward journey through a season's pickings of sheanuts gathered from the fields. Others are cyclic migrants who return to the North after the peak shopping seasons. At the time of the assessment -- in early July -- the *kaya-yoo* population at Malatta (and its surrounding commercial streets) was estimated to be around 100. During the peak shopping seasons, the numbers are considerably higher.

[47] Migrating for educational purposes or migrants who are looking for work are not counted as missing occupations.

With no access to housing at night, the overwhelming majority sleep rough -- converting vacated market stalls and shop fronts into sleeping places. Some of the most established (older and settled) women have been able to acquire plywood kiosks as housing. These kiosks are located in illegal, often unsafe locations -- like along the banks of the city's major drains -- exposing the occupants and their belongings to huge risks whenever Accra floods and leaving the owners at the mercy of AMA's urban control enforcement teams. For the younger and more recent entrant, having no home (or even a day shelter) can be a huge challenge, particularly when she is ill or convalescing.

The open sleeping places also expose *kaya-yei* to undue threats from male predators looking for sex, leading to many teen pregnancies.

In spite of the challenges they endure both in the day and at night, they remain focused on their agenda of saving money and are quite happy with their daily earnings of around GH¢3 (a little over US$2). These earnings are much better than what their counterparts doing housemaid jobs get. The girls' savings (of GH¢200-300 per visit) enable them to acquire the pots and pans they will need for marriage and/or to help their families make it through the next hungry season and/or to accumulate a little capital to invest in a micro enterprise (in petty trading or something similar) back home. The remittances they make from their earnings from the Easter shopping season are particularly helpful for averting starvation as this coincides with the peak of the hungry season.

4.22 **Compared to non-migrants, migrants are less likely to be employed in agriculture and more likely to work in manufacturing jobs.** There do not appear to be substantial differences in the job profile of migrants and non-migrants for occupations such as managerial, professional, and clerical jobs that demand relatively high skill levels (Table 4-4). However, for low skill categories such as agricultural producers, workers in manufacturing, and laborers, the differences are much more pronounced: migrants are much less likely to work in agriculture and more likely to work in manufacturing (or as laborers) than non-migrants. This is consistent with the earlier finding that most migrants gravitate towards urban areas, but the comparison must be heavily qualified by a large percentage of migrants for whom no occupational data is available.

4.23 **Even though migrants tend to exit agriculture for manufacturing and sales jobs, there is a fair amount of migration to agriculture which suggests that rural to rural migrations is used as a risk diversification strategy.** Twenty-five percent of male migrants and 23 percent of female migrants (adding up to the global average of 24 percent) are employed in agriculture. This migration pattern underpins the substantial share of rural-to-rural migration in Ghana and is consistent with a view of rural-to-rural migration as a risk diversification strategy, with family members farming plots in different areas as a hedge against volatile weather and yields (PDA, 2009).

Table 4-4: Occupational Categories for Migrants vs. non-Migrants

	Workers who never migrated	Return migrants		Current migrants
		After return	While away	
Managerial	0.4	0.2	0.7	0.7
Professional	5.0	5.5	3.7	6.3
Clerical	1.2	1.2	1.7	1.6
Sales	14.0	9.7	13.1	15.4
Agricultural producers	54.3	53.9	30.7	20.3
Manufacturing	15.8	18.6	22.3	21.7
Laborers	8.5	9.4	15.3	13.1
Other / unknown	0.8	1.6	12.4	20.9

Source: World Bank staff calculations based on GLSS5. *Note*: All averages are weighted by survey weights.

4.24 **Returning migrants often go back to similar work when they return – reflecting lack of better opportunities at home and/or lack of acquisition of new skills.** One of the positive aspects of migration noted in the literature is the opportunity for migrants to accumulate relevant skills while away and take advantage of that human capital upon their return. However, the statistics in Table 4-4 show that there are no appreciable differences between the occupations held by migrants who returned to their home regions and the occupations of workers who never migrated. This could be indicative of a lack of new opportunities in the home regions, few opportunities for human capital accumulation in the destination regions (for example, due to low skill requirements of jobs performed), or could be a reflection of the preferences and abilities of an average migrant.

4.25 **Migrants to the South are much more likely to remit and remit much more on per capita terms than migrants to the North.** The geographic pattern of remittances per capita, adjusted by the regional cost of living indices, is shown in the top left panel of Figure 4-7. Migrants in the main destination regions – Ashanti, Central, and greater Accra – remit five to ten times the remittances sent back by migrants to the Upper East and Upper West regions. A very similar pattern is borne out by the likelihood that a migrant sends remittances back home, with migrants in the Central and Greater Accra regions more likely to remit than migrants in the Upper East or West by more than one-third (Figure 4-7, top right). Therefore, it appears that the Southern regions are much more effective at attracting migrants who are relatively more successful at remitting, be it due to the qualities of the migrants themselves and/or to the larger set of opportunities offered by these regions.

4.26 **The frequency of sending remittances does not vary much by region, but migrants in the South remit somewhat less frequently than migrants in the North.** The regional distribution of remittances' frequency is shown in the bottom left panel of Figure 4-7; although there is no clear geographical pattern on this map, the frequency of remittances is higher in the Upper East and Upper West regions than in Accra, Central, or Ashanti regions –despite these regions having a much higher likelihood of remitting. Thus, it may be that migrants in the North of Ghana try to compensate for sending a smaller amount per year by increasing the frequency (and therefore stability and predictability) of remittances. High fixed costs of sending money back home through formal channels can be another explanation.[48]

4.27 **Remittances sent back home, within Ghana, are low and only accounts for about 11 percent of total family income for households (poor or non-poor) that receive them.** This suggests that migrants from poor households send lower remittances. Besides, only 36 percent of current internal migrants send remittances. This low 'remittance success' suggests that most households probably overestimate the likelihood that a migrant will remit and thus overestimate the potential gain to household welfare from migration. It could be that some of the non-remitting migrants simply have not had an opportunity to find employment that allows them to earn enough to be able to remit or must first pay back some of the fixed costs of migration

[48] In more than 93 percent of all cases, internal migrants either bring remittances home themselves (51 percent) or send them with a friend or relative (42 percent). Only 7 percent of remittances (by count, not by value) go through formal channels such as a bank account, money transfer, or money order. However, for larger transactions, migrants are much more likely to use a bank, post office, or a money transfer agent. This suggests that either lower-earning migrants are less familiar/less comfortable with the formal channels of sending remittances, or that the costs of remitting through formal channels make only larger transactions worthwhile.

(loans, transport costs, etc) and installation at destination. However, reducing the sample to migrants who have been away for at least two years does not significantly affect this conclusion.

4.28 **Econometric analysis suggest that households with at least one urban migrant have higher per capita welfare and thus migration at an aggregate level can be seen to be welfare enhancing.** Results reported in Table 4-5 suggest that households with at least one migrant have an average per capita welfare, which is 103 percent above the per capita welfare of households with no migrants. Because the estimates are not obtained with panel data, these results do not prove that sending migrants increases household welfare, as pre-migration welfare is not observed. Yet to the extent that the set of right-hand side variables provides a fairly exhaustive list of other welfare determinants – and the selection bias is taken into account via a treatment effects estimator – the estimates make a strong case for a positive relationship between migration and welfare. However, the welfare impact of migration is entirely due to urban migration. Regression analysis of the probability to receive remittances suggests that households with migrants are likely to receive larger remittances than other households, but that this effect is due entirely to households with at least one urban migrant. Controlling for the potential selection bias does not qualitatively affect these findings.

Table 4-5: Estimated Impact of Migration on Sending Household's Welfare

	(1)	(2)	(3)
Migration	***0.708		
Urban migration		***0.622	
Rural migration			0.252
Observations	3,700	3,700	3,700

Source: World Bank Staff calculations based on GLSS5. Note: *, ** and *** denotes statistical significance at the 90, 95 and 99 percent levels respectively. See Ackah and Medvedev (2010) for detailed discussion on the methodology and results.

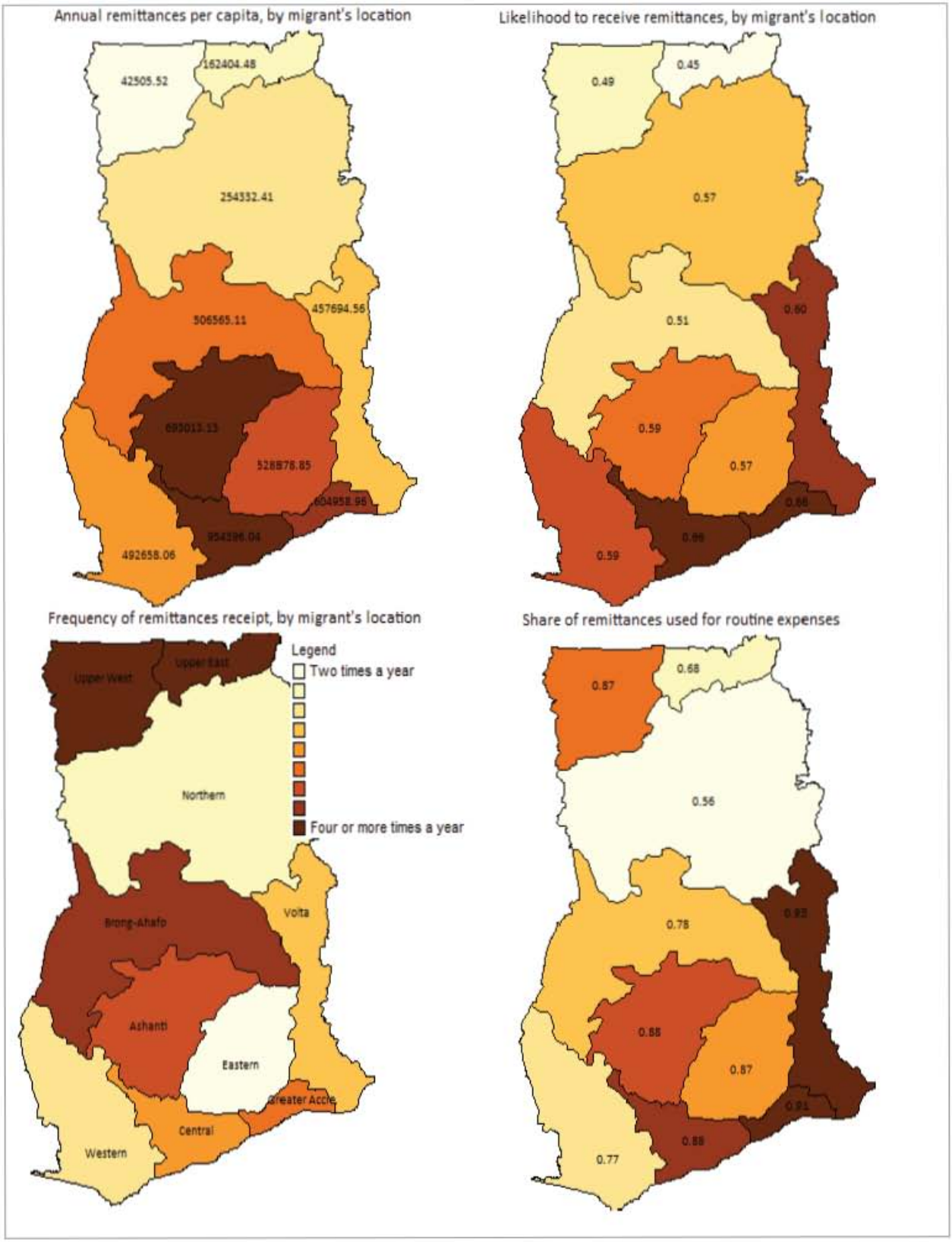
4.29 **Migration from the North contributes less to poverty reduction than migration from the South**. Simulations using results from Table 4-5 suggest a higher contribution of internal migration to poverty reduction in Southern Ghana than in Northern Ghana, see Table 4-6. Interestingly, at about 12 percentage points, the difference is similar between the North and the South. However, given the very different initial conditions between the North and the South, it also means that the contribution of migration to poverty reduction is much less pronounced in the North than in the South. While above 40 percent of the poor in the South might have benefited from migration to escape poverty, less than 15 percent of the poor in the North might have done the same. Although not the result of a panel analysis, these results are consistent with the observation that the quantity and quality (in terms of migrants' human capital destination) of migration is lower from the North than from the South.

Table 4-6: Simulated Impact of Migration on Poverty Headcount

	Full sample	South	North
Observed	29.09	19.86	62.95
Predicted	27.63	15.91	70.59
Predicted, no migration	39.12	27.27	82.57

Source: World Bank Staff calculations.

Figure 4-6: Amounts, Likelihood, and Frequency of Remittances by Region



Source: World Bank staff calculations based on GLSS5.

4.30 **This section's findings suggest that migration is only beneficial for a subset of Ghanaian households, i.e. those who send migrants to urban areas. This increases the probability and amount of remittances received.** Although households who send migrants to rural areas also receive remittances, it appears that in this case the remittance income is insufficient to compensate for the lost earnings of a migrant and household welfare therefore decreases. Part of the reason for this finding is that migration to urban and rural areas appears to be qualitatively different. Although two-thirds of all migrants move to urban areas, only 45 percent of all households with migrants have at least one urban migrant. This implies that when migrating to urban areas, a larger number of family members move together (or follow each other) as opposed to migrants destined for rural areas.[49] Therefore, households with urban migrants are more likely to receive remittances because the combined earning ability of their migrants is greater. Furthermore, migrants destined for urban areas may have higher earning potential due to better initial conditions (at individual, household, and community levels), which further cements the inequality of outcomes with regards to the welfare impact of migration.

4.31 **In addition, to limiting the push factors that motivate migrants from the North to enter into poor migration through a mix of human development and social protection policies targeted in the North (see Chapter 5), improving the absorptive capacity of labor markets in cities could also have a positive impact on the migration experience.** Improving cites' absorptive capacities warrants paying particular attention to informal labor markets – which absorb most of new internal migrants -– and urban planning, as the latter determines to a large extent new migrants' housing and transport conditions (see Box 4-5).

Box 4-5: Improving Cities' Absorptive Capacity of Migrants.

To date, 46 percent of Ghana's households make some of their living from nonfarm informal enterprises. The latter also contribute directly to financing cities' development. For instance, the Kumasi Metropolitan Assembly, which runs Ghana's second largest city, is estimated to generate half of its revenue from informal traders and enterprises, through various taxes, tolls and fees. Yet District and Municipal authorities tend to view informal enterprises as a nuisance – related largely to their tendency to locate close to customers (on the streets or stuck in traffic) and the absence of suitable sites and infrastructure for them. In the absence of any national policy for supporting informal enterprise, the result is continual harassment and periodic (and largely ineffective) 'decongestion' exercises that destroy the capital of these nascent entrepreneurs. While informality in the past was often viewed from a dualistic perspective, focusing attention on formalization, the persistence and growth of the informal economy now demands more attention to *inclusion.* A first step was taken in terms of social protection, as Ghana already moved to include informal workers in the National Health Insurance and Pension schemes. But efforts on skills development and urban planning could be strengthened.

Skills development for the informal sector. While most informal work has hitherto been unskilled or semi-skilled, recently, more skilled labor appears to be engaged in informal enterprises. Skills acquisition is mainly through apprenticeship[50], the duration of which appears to be longer for certain trades (mechanical, building and automotive) and (hence) for males than females. This requires innovative and low-cost ways to build on and modernize the traditional apprenticeship system, the principal source of training for informal workers. One approach being piloted by the Rural Enterprise Development component of the Community-Based Rural Development Project (CBRDP) is to assist existing successful small and medium enterprises to scale up and become a 'Learning Centre' to train youth and the unemployed in their communities in income-generating skills.

[49] This finding is consistent with evidence on migration networks in Ghana.

[50] Public initiatives to provide skills training reach less than 50,000 young people, against more than 200,000 apprentices in the informal sector (World Bank 2009d). World Bank (2009) suggests that apprenticeship strongly increase labor remuneration for unskilled workers, as well as the likelihood of being employed in the informal sector.

A grant for 60 percent of the cost enables the Learning Centre to leverage additional loan funds through Rural Banks. Similarly, successful trainees are also given a partial grant toward setting up an enterprise, if they can also convince a financial institution that it is sufficiently viable to warrant a commercial loan for part of the cost.

More generally, efforts could be pursued to improve the quality and strengthen the capacity of traditional apprenticeships, by improving master craftsmen literacy, access to new technologies and pedagogical skills, and provide certification for apprenticeship skills (World Bank 2009d).

Need for better urban planning and consultation at local level. While there is no easy solution to conflicting demands on limited space, a concerted effort to improve town planning and regulations through consultative processes with informal trade associations and other stakeholders is an essential first step toward achieving mutually better outcomes and reducing insecurity for the poor. While some authorities have taken steps to provide market areas for hawkers and industrial zones for small enterprises, these have generally been poorly executed without adequate consultation or preparation of sites before forcing enterprises to relocate. Better consultation with those affected would also reduce conflict resulting from arbitrary changes in taxes and license fees affecting informal businesses.

In the longer term, improved land management will certainly constitute one of the most important ingredients to improve cities' labor market absorptive capacities.[51] In Accra observers describe 'persistent anarchy in the land market'. A 'lack of systematic planning' has enabled traditional concepts of landownership and rights to exist in parallel to formal laws; the city is rife with 'grey areas' where two or more stools (chieftaincies) contest ownership. With dispute resolution taking up to a decade, land acquisition through formal means is perceived as a daunting task. Large public land holdings and 'huge deficits in the policing, regulation, acquisition and use' of such lands act as further deterrents on construction in Accra. Thus, in spite of high demand on housing in the city core, private investors are reluctant to invest and the existing housing stock is rarely recycled into taller buildings. The recent Investment Climate Assessment (World Bank, 2009b) ranks access to land in Accra as one of the main deterrent to investment. As a result, Accra exhibits the characteristics of a superstar city', in which a highly inelastic housing supply is pricing lower groups out of the market, or obliging them to live far away from their jobs. Between 1985 and 2000, Accra's built-up area grew by 160 percent (that is, beyond its administrative boundaries) – while its population only grew by 50 percent (from 1.9 to 2.8 million).

D. MIGRATION AND ROAD NETWORKS

4.32 **Migration may represent a response to the difficulty of bringing goods to markets.** High transport and transaction costs lower the value of the marginal product of each member of the household enterprise and may therefore motivate additional migration to leading regions, as a substitute to exporting goods from lagging to leading regions. Evidence from a recent IFPRI study of rural communities in the Northern region of Ghana, which found a negative relationship between an individual's likelihood to migrate and the distance between the migrant's community and the nearest market could support this hypothesis (Wouterse 2009). From Northern Ghana (e.g. Paga, located at the border with Burkina Faso, or Bawku, in the Upper East), it takes about 4 days to bring goods to the South (e.g. Tema, the main commercial seaport in Ghana).

Table 4-7: Goods' Travel Time from North to South
(Number of days)

	Tamale	Paga	Bawku
Kumasi	2.5	3	3.5
Tema	3.5	4	4.5

Source: World Bank Staff calculations.

[51] This paragraph draws heavily on World Bank (2010a).

4.33 **Econometric evidence suggests that regional markets for staple foods in Ghana are segmented, although price transmission varies by type of crop.** A recent paper using co-integration techniques found that price transmission for grain products like rice and maize is high while there is no regional price transmission at all for root crops such as cassava and yam (Codjoe, Breisinger and Diao, 2008). Even for grains with a high degree of price transmission, seasonal volatility is high and unequal across regions, with volatility substantially higher in 'producer' regions than in 'consumer' regions. These findings suggest that markets for many agricultural goods in Ghana are localized, hereby supporting the finding of a North-South market segmentation.

4.34 **At the same time, there are no large differences in the trade and transport margins between goods produced in the Northern and Southern parts of Ghana.** A comparison of these margins using a 2004 highly-detailed (176 commodities) social accounting matrix for Ghana (Jensen, Andel and Duncan, 2009) reveals that the average margin on the ten commodities with the highest labor content from rural Northern Ghana is very similar to the average margins on products with high labor content from rural parts of forest and coastal zones.[52] Even though all margins on rural products are high at close to 10 percent of total sales (at consumer prices), this evidence suggests that the margins are not biased against more remote regions.

4.35 **Furthermore, infrastructure analysis (World Bank 2010d) suggests that the length of the main (primary and secondary) network is more than adequate to achieve regional and national connectivity**. The record on road network quality is particularly strong with 95 percent of the paved network in good or fair condition and (perhaps even more impressive) 81 percent of the unpaved network in good or fair condition.

4.36 **In contrast though, the physical extension of the rural network appears inadequate in the North, and could be a candidate to explain North-South market segmentation.** According to GIS analysis, only 24 percent of Ghana's rural population lives within two kilometers of an all-season road. This is well below the 60 percent found in Africa's middle-income countries. Combined with low farm productivity (see Chapter 3) poor local transport networks results in the atomization of Northern markets which can in tern explain North-South market segmentation, the South being much more integrated. This view is also supported by research showing that Ghana ranks highly (in the top five) in Sub-Saharan Africa in terms of road density (Raballand, et al., 2009) and that in other countries with comparable densities, such as Uganda, price transmission works well down through the lowest levels of middlemen, with only the farmers left disconnected from markets (Fafchamps and Hill, 2008).

[52] Comparisons with urban zones are difficult because the urban zones have a much higher content of services which also have zero margins.

Figure 4-7: Roads Networks are Adequate to Achieve National Connectivity

Source: World Bank 2010d.

4.37 **However, due to the spatial distribution of Ghana's rural population, there are economic limits to the extension of rural roads networks, in the North in particular.** Raising the proportion of the population living within two kilometers of an all-season road to 100 percent would require a costly 200 percent increase in the length of the country's classified road network. Nevertheless, if instead the objective is modified to ensure that there is good road accessibility to the land that produces 80 percent of Ghana's agricultural production by value, the requirements shrink substantially. Beyond the issue of rural network extension, there is the question of the appropriate standards for rural roads. Spatial analysis of the network suggests that

about 30 percent of the rural network may be under-engineered, meaning that it consists of earth roads with traffic levels typically considered high enough to justify gravelling (above 30 vehicles per day). By contrast, some 20 percent of the main road network appears to be over-engineered, meaning that it consists of paved roads with traffic levels not typically considered adequate to justify paving (below 300 vehicles per day).

4.38 **Furthermore, the poverty impact of rural network extension might be limited given the low levels of farm productivity in the North.** A recent study argues that the average farmer does not require massive investments in rural infrastructure from primary markets to the village, homestead or farm gate because they can neither afford hiring a truck nor load it sufficiently to break even if they could (Raballand, et al., 2009). In Uganda, most smallholder farmers could not approach the production threshold they would need to reach to justify hiring a truck. Similar results were reported in a different study for Burkina Faso, which found that the effects of a major reduction in transport costs would remain small unless Burkinabe farmers succeed in escaping from their subsistence situation (Ruijs, Schweigman and Lutz, 2004). Furthermore, for many products with high value to weight ratio, the gains from reducing transport costs would be limited in any case: a study of maize in Ghana found that improving a 5 km earth road to gravel standard would only increase farm gate prices by 0.1 percent (Hine, Riverson and Kwakye, 1983). Finally, evidence also shows that road investments which improve the delivery to a small village or urban market may reduce commodity prices at the market substantially while only increasing farm gate prices to a limited extent (Raballand, et al. 2009).

4.39 **Investing in roads to improve the mobility of goods is also likely to facilitate the movement of people and the latter may respond more strongly than the former.** Reduced transport costs will often lead to an increased frequency and availability of transport services; because passenger mobility – unlike freight transport – is not a derived demand, it often responds quickly with a high degree of price elasticity (Raballand, et al., 2009). A recent study on the determinants of migration in Northern Ghana found that, controlling for distance to market, migrants are more likely to originate from communities accessible by feeder roads (Wouterse, 2009). Thus, a costly policy response of investing in roads, which may have been intended to limit migration, may in fact stimulate additional migration flows before any increase in goods volume occurs. This does not suggest that roads investment should not be a policy goal, but rather that transport costs are unlikely to be a major determinant of migration in Ghana and active efforts to reduce them without addressing the root causes of migration are unlikely to stem the flows of migrants.

5. IMPROVING SOCIAL PROTECTION INTERVENTIONS IN NORTHERN GHANA

A. INTRODUCTION

5.1 **Ghana's potential for further poverty reduction will greatly depend upon its ability to increase the poor's human capital in Northern Ghana and reduce collective risks to which they are exposed.** Better access to health, education and social protection will help the poor become more economically and geographically mobile, and will reduce their vulnerability to negative shocks which keep them in poverty traps, and foster the type of 'push' migration which only displaces poverty. As discussed in Chapter 3, virtually all Northern households – especially the poorest – depend on variable and unreliable livelihoods with the constant threat of poor households falling into extreme poverty, or of households who have managed to elevate their living standards falling back into poverty. The cycles observed by Whitehead (2006) are likely to remain and the PPVA provides *prima facie* evidence that these vulnerabilities – especially climatic – are worsening. Therefore, there is a compelling case for improving social protection interventions to bolster existing livelihood activities and augment existing coping mechanisms.

5.2 **Evidence from the PPVA indicates that in times of hardship poor people depend primarily on networks of kin and family for their support structures.** However, these reciprocal arrangements are perceived as weakening due to generalized poverty and lack of capability. In most communities, faith-based organizations (especially the mainstream churches) and Assembly persons are more highly regarded than traditional authorities or public institutions. NGOs are generally perceived as being supportive. There is broad support for safety nets and the immunizations, mobile health services and mass cocoa spraying (in the South) are particularly appreciated. However, the communities also reported incidents of benefit leakage in LEAP and other social protection programs (see below). In general, there are questions around the consistency of selection and the effectiveness of implementation procedures and in some cases, access is perceived to be mediated by patronage politics.

5.3 **In addition to these informal support networks, Ghana has a fairly well developed social protection system**. Beyond the general provision of health and education services which already benefit quite fairly the poor, it includes a program to exclude the extreme poor and vulnerable from National Health Insurance Scheme (NHIS) fees, grants for deprived districts from an education perspective, a cash transfer program (Livelihood Empowerment Against Poverty, LEAP), a school feeding program and a National Youth Employment Program aimed at fighting youth unemployment. It also includes a number of consumer subsidies for products consumed by poor and near poor (e.g. kerosene, rice, electricity), as well as fertilizer subsidies for farmers.

5.4 **As such, further improvement in Ghana's social protection system mostly lies in its ability to (i) improve targeting efficiency[53] and (ii) reduce implementation costs for greater coverage, rather than through the design of new programs.** In some cases, greater targeting

[53] This chapter draws heavily on a companion report (World Bank, 2010b) on the targeting efficiency of Ghana's social programs.

efficiency could be sought through better geographical targeting, given the high concentration of poor in Northern Ghana, as discussed in Chapter 2. In other cases, when programs are not aimed at only reaching the poor, geographical targeting might be more difficult to justify. Efforts can nonetheless be made to insure that the poor – and thus the poor in Northern Ghana -– are not discriminated against. In the current difficult fiscal situation,[54] efforts should be put initially on reducing leakage and implementation costs, to provide the scope for expansion and increased coverage when the fiscal situation improves from 2011 onwards. In some specific cases though, the need for designing new programs arises to complete safety nets and address vulnerability risks for all groups. This is notably the case for workers in Northern Ghana, who suffer from chronic lack of employment opportunities during the dry season, as discussed in Chapter 3.

5.5 **This chapter reviews the existing safety net program** from the perspective of regional targeting efficiency and geographical distribution of beneficiaries and programs, and examines the administrative data to assess the efficacy of design of various programs and implications for cost effectiveness and ease of administration and implementation, against global good practices in safety nets. To do so, it relies on administrative data as well as on survey data for the various programs reviewed. It is important to note that the monitoring of social protection programs in Ghana remains weak and that impact evaluation of such programs is simply absent. Efforts to improve monitoring and evaluation of social protection programs are still embryonic and should be scaled up.

B. THE SOCIAL PROTECTION ARCHITECTURE IN GHANA

5.6 **During the past ten years, Ghana has implemented a variety of targeted programs.** The main programs are the National Health Insurance Scheme (with special provision for the poor), the Livelihood Empowerment Against Poverty (LEAP), the school feeding program, and the National Youth Employment Program.

5.7 **National Health Insurance Scheme (NHIS).** The scheme was enacted into law in 2003 and has grown rapidly, as it now covers 60 percent of the population (13.8 million by June 2009). The scheme is financed largely from value added and import taxes, which account for 85 percent of total NHIS revenues. As such, contributions from premiums are small relative to budget funding. Most of the contributions from premiums come from payroll taxes. Since a very small proportion of Ghana's labor force is in the formal sector, premiums from payroll taxes are small. Under the scheme, five categories are exempt from paying premiums: the indigent, the elderly, children, pregnant women and social security pensioners. In addition a number of persons in the informal sector are also exempt. The NHIS (2008) Report notes that nearly 54 percent of registered members are exempt from paying premiums. The NHIS has undoubtedly increased health care utilization. Between 2006 and 2007, outpatient utilization increased by as much as 28 percent and as of 2009 NHIS was providing 41 percent of the total funding for curative care. In comparison with most other countries where health insurance was launched, Ghana's NHIS undoubtedly made much rapid progress and covers a substantial segment of the population. In particular, exemptions granted to children, and delinking their enrollment to their

[54] Following the built up of large fiscal slippages up to 2008, Ghana has been embarking on a multi-year macroeconomic stabilization plan with the assistance of the IMF, with the objective to reduce its fiscal deficit by 10 percentage points of GDP over the period 2009-11. If aimed at protecting pro-poor expenditures, the plan does not foresee large increases in funding for social protection programs.

parents' registration status, is a notable advance in protecting children against catastrophic health shocks.

5.8 **However, the scheme is not equitable in providing access to the poor, even if exemptions are relatively well targeted**. Using GLSS5 data, one can estimate that only 12.4 percent of NHIS subsidies accrue to the poor (see Table 5-2). This is consistent with a recent in-depth study in two Southern districts which suggests that the proportion of adults who have ever registered with NHIS was lowest in the poorest quintile, and increased with socio-economic status (Asante and Aikins, 2007). The study noted that the most important reason for not registering with NHIS is that the premium is too expensive. A participatory monitoring and evaluation report of NHIS in 2008 substantiated the above finding that affordability was the main barrier to registration. To some extent, the NHIS provision to exempt the indigent from NHIS fees attenuates this negative conclusion. However, only 2 percent of those registered belong to the 'indigent' category, whereas 29 percent of the population lived below the poverty line.[55] Besides, individuals registered as indigent are not all necessarily poor (see Table 5-2), as suggested by calculations made using district level data.[56] At the same time, there is evidence that the fee exemptions extension (introduced in 2008 for children and to all pregnant women) have improved access for poor women. Previous research has demonstrated that exempting pregnant women from paying for delivery care in public, mission, and private health facilities in Ghana reached the poor despite being universal in application and was cost-effective (Witter *et al*., 2009). Given Ghana's continued high maternal mortality rate, this evidence is encouraging.[57]

5.9 **Although improving, the proportion of registered indigents in the Northern Region is still far below the proportion of the poor in these three regions**. In June 2009, 36 percent of registered indigents were from Northern Ghana, up from 33 percent in 2008. While improving, these figures still need to be put in perspective with the proportion of poor and extreme poor in Northern Ghana, above 50 percent. In other words, the poor from Northern Ghana benefit less from the program than poor from other regions.

5.10 **Livelihood Empowerment Against Poverty (LEAP).** In 2007, the Government launched the LEAP cash transfer program aimed at reaching the bottom 20 percent of the poor. The program is the first response to the recommendations of the Social Protection Strategy, which identified the lack of a cash transfer program for extremely poor households as a gap. By end-2009, the number of regular LEAP beneficiaries reached 16,366 households in 50 districts.

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[55] Defining the extreme poverty line (and thus extreme poverty) by the amount needed to satisfy caloric intake only (that is excluding non food essential items from the poverty line, see Box 1.1) brings the proportion of extreme poor in the population to 18 percent in 2008, i.e. almost 10 times the number of indigents exempted from NHIS, under perfect targeting.

[56] Individual data on registered indigents do not exist. Using district level data and assuming that beneficiaries within a district have a profile similar to the district as a whole, we obtain a share of benefits accruing to the poor equal to 38.5 percent, which can be considered a lower bound estimate given the relatively strict targeting within district.

[57] Future benefit incidence analyses needs to focus not only on the numbers of beneficiaries, but also the burden of disease attributed to those beneficiaries that have been reached. In other words, not only is the number of beneficiaries reached important, but so is the health burden that the type of beneficiary faces. If women or any other group represent a major share of the morbidity and mortality experienced in Ghana, then reaching that group not only represents reaching the current poor but also potentially represents averting future poverty, given the very high correlation between poor health and poverty, which exist in a bidirectional relationship.

5.11 **LEAP is still in the pilot stage, and is being rolled out slowly.** This provides a unique opportunity to learn, improve its design, targeting and cost efficiency as the program is expanded. By end-2012, the program aims at reaching 165,000 households in 138 districts (that is, covering all country's districts).

5.12 **LEAP targets orphans and vulnerable children through their caregivers, the aged (above 65 years and without subsistence or support), pregnant and lactating women, fishermen and subsistence farmers, and persons with severe disabilities without productive capacities**. LEAP provides conditional and unconditional subsistence grants on a graduated payment scale of GH¢8-15 per month to beneficiaries (depending on the number of dependents).

5.13 **The Selection of beneficiaries under LEAP follows a 3-step process.** The first step entails the selection of the poorest 50 districts, as ranked by the National Development Planning Commission (NDPC). In 2009, the program is planned to expand from 50 districts to 80 districts. The second step is for the District LEAP Implementation Committees to then identify the poorest communities within these districts. Third, the extreme poor are identified through Community-based targeting (by the Community LEAP Implementation Committees): the Ministry of Employment and Social Welfare (MESW) District Social Welfare personnel are assigned by community members to identify extremely poor households through key informants (mostly village chiefs or elders) among the five categories mentioned above. The fourth step consists in administering a questionnaire of basic socioeconomic indicators to households proposed at the previous step to finally select the beneficiary households.[58] See Ayala (2010) for a review.

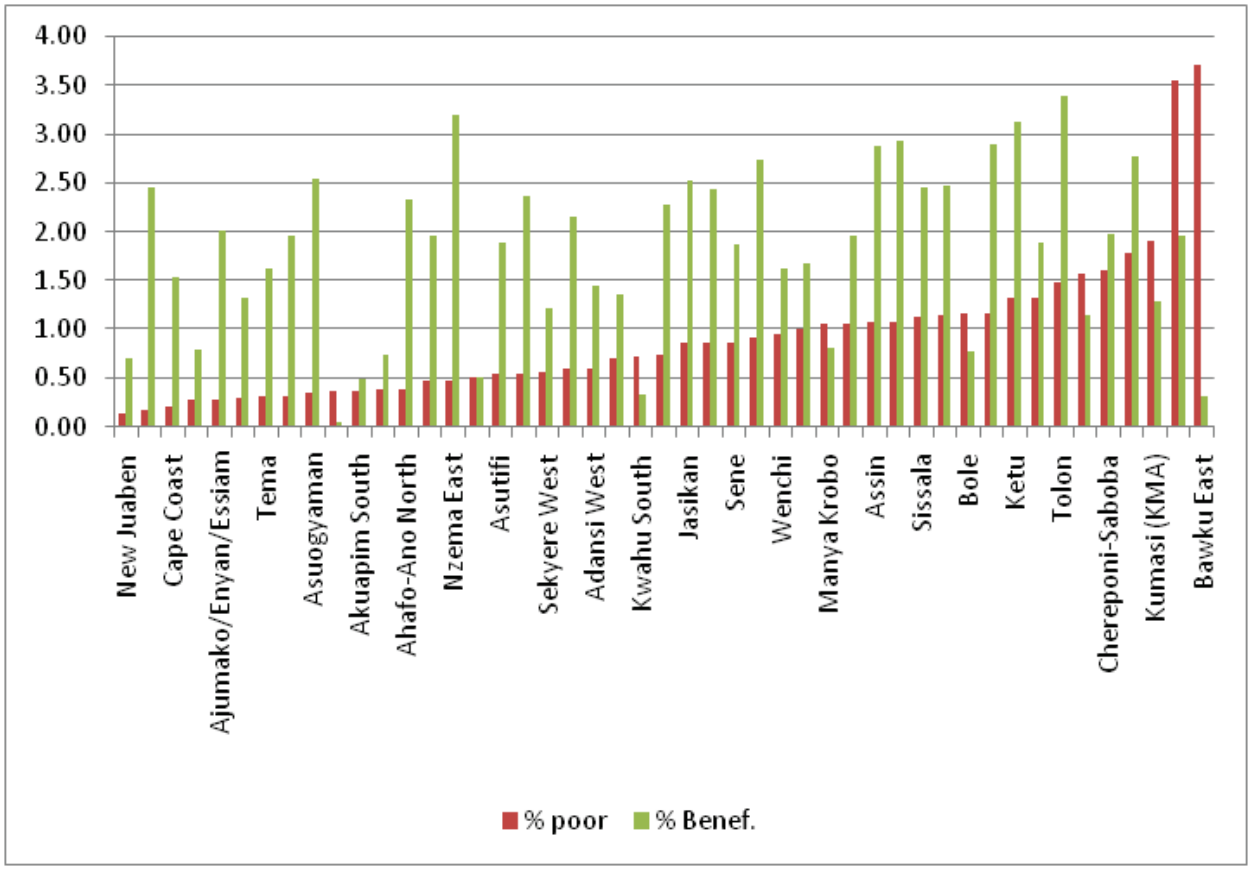
5.14 **While well targeted, LEAP coverage remains minimal.** The LEAP program is vertically well targeted (it reaches poor households in districts considered poor by the NDPC), with an estimated 57 percent share of outlays reaching the poor (see Table 5-2), yet not necessarily the bottom one-fifth of the poor. However, the coverage remains low, around 1 percent of the poor, against 10 percent envisaged in the long run.[59] This echoes the perception of many poor who remain excluded from LEAP, and finds part of its explanation in the large implementation costs of the program. Indeed, out of the GH¢ 7.5 million (less than 0.1 percent of total public expenditures) budgeted for LEAP in 2009, GH¢ 5.2 million was to be transferred to beneficiary households, while the remaining GH¢ 2.3 million was to cover implementation costs. In other words, LEAP is incurring a cost of 1 GH¢ to provide 2 GH¢ of cash transfer. And while some of these costs are fixed costs (which will thus not need to be incurred again as the program expands), it is unclear what would drive overall unit costs of implementation to decline sharply as the program expands, more so as staff costs are not included in the GH¢ 2.3 million figure

[58] LEAP now operates with a Single Register data base management system that stores data on household members of beneficiaries. The register depends on information collected from households using a two-part questionnaire. Part I of the questionnaire collects information on household members and the on living conditions. Data on beneficiaries and non-beneficiaries are kept in the register. After the data are entered into the system, the system generates the initial list after ranking the scores of respondents. The list is then sent to the district and the community for verifications. Photographs of selected beneficiaries are then taken and photo ID cards are issued.

[59] This figure is obtained by multiplying the number of households benefiting from LEAP (16,366) by the average household size in Ghana (3.7, Source: DHS 2008), multiplied by the share of outlays benefiting the poor (0.57), divided by the total number of poor in Ghana (about 6 million people). By 2012, the program is expected to reach 165,000 households, or about 10 percent of the poor.

stated above.[60] Moreover, while LEAP seems to be well targeted to those demographic groups identified above, more analysis is warranted on the relationship between these groups and current and future poverty. Targeting orphans and vulnerable children and pregnant and lactating women may have a strong impact in reducing the intergenerational transmission of poverty, but a weaker immediate impact on poverty levels of those groups compared to, say, persons with disabilities. As LEAP scales up and the targeting mechanisms are refined and improved, it will become important to differentiate its impact on current and future poverty.

Figure 5-1: Proportion of Poor and LEAP Beneficiaries in Selected Districts



Source: World Bank Staff calculations based on administrative data, CWIQ 2003 and GLSS5.

5.15 **LEAP is de facto poorly targeted geographically.** As already mentioned, among the criteria of eligibility for LEAP is the residence in one of the 50 districts classified by the NDPC as poor. But the very low coverage and the fact that 300 households are selected in each of the 50

[60] A disaggregated analysis of total cost of delivery provides some interesting details. Of the total cost of delivery, administrative expenses (exclusive of salary of staff, which is not provided in the LEAP budget estimates), comprising things like stationery, vehicles, fuel, of both regional and headquarters levels amounts to 25% of total cost of delivery; another 25% comprise of "transportation of motor bikes to districts" (24,000), sensitization and training, workshops and quarterly meetings. Noteworthy is the cost of maintenance of vehicles and fuel itself emerges as a big item. The "logistics needed to facilitate mobility and the inter-sectoral implementation of LEAP" costs about Gh¢870,000 of which station wagons and pick-ups alone cost Gh¢600,000. Clearly LEAP appears to be heavy on vehicles, fuel, staff trips and per diems, which are unlikely to decline rapidly. All of the above costs are exclusive of staff salaries. If these are also added to total costs, the cost is likely to be much higher than 50 percent of overall program costs.

districts make the distribution of beneficiaries across districts poorly correlated with the incidence of poverty in each district. This is illustrated in Figure 5-1, which reports the proportion of beneficiaries against the proportion of poor from each district. For instance, the district of Nzema East is home to more than 3 percent of Ghana's LEAP beneficiaries, but less than 0.5 percent of Ghana's poor. In contrast, Bawku East is home to 3.5 percent of Ghana's poor, but less than 0.5 percent of LEAP beneficiaries. The PPVA indicates that beneficiaries are not aware of program rules pointing to the need to publicize the criteria for selection and the amounts of payments due to different types of households. Delays in payments to selected households also appeared to create hardships. There was also some concern with the membership of the community level implementation committees (CLICS) which some felt were dominated by local elites and did not work impartially. Nevertheless, the overall finding from PPVA shows that LEAP provides significant benefits for selected households primarily through increasing food consumption but also allowing households to cover the costs of keeping children in school.

5.16 **Ghana School Feeding Program (GFSP)**. With the assistance of the New Partnerships for Africa's Development (NEPAD), a school feeding program was introduced in 2004. The program provides one meal a day to children attending the school in 'deprived' districts, with the expectation that it will increase school enrollment and retention rates. 'Deprived' districts are defined as those lacking in minimum educational infrastructure. Costs of the program are shared between the Local Government and donors (the Netherlands in particular). The Netherlands Government has committed $25 million annually for the program for ten years. Other donors (Catholic Relief Services and the World Food Program) have also contributed to school feeding in different locations. Since 2004-05 the program has been extended, and it now covers over 990 schools (or over 500,000 school children) throughout the country, and 17 percent of children in primary schools. Various studies suggest that this program has a positive and significant impact on enrollment and retention rates. Overall though, the program is not well targeted towards the poor, as it is estimated that only 21 percent of benefits accrue to the poor (Table 5-2).

5.17 **The program has been subjected to much harsh criticism in the recent past for its high implementation costs.** In the initial years, heavy investments were made on very large administrative and logistical structures including construction of kitchens, store rooms, dining halls and platforms for poly tanks, gas stoves, pots, bowls and cutlery for pupils, etc., and personnel including a head cook, helper cooks, serving staff, etc.[61] In some locations caterers were hired for preparing school lunches. Such a highly capital-intensive, personnel-intensive, and contractor-driven school feeding program is rare in other developing countries. For example, in countries that adopted a community-driven approach (as in South Asian economies), school feeding was not only effective, but also cost-effective. In India's Tamil Nadu state, noon meals in every village are cooked by unemployed, poor and destitute women, who incidentally improved their own livelihoods as wage earners by cooking meals for children. Also, wages paid were less than market wages for unskilled labor. Because it is inexpensive, it has been sustained for over 25 years without any problem, and has been extended to all the schools in the state without donor support. By contrast the implementation and logistical route adopted by Ghana, not surprisingly, proved to be a highly expensive way to provide school meals. To reduce costs

[61] One press report noted that a head cook in the school feeding program received higher wages than a school teacher.

(of importing, and delivering food), grain imports for school feeding have nearly ended. Food is now being locally procured. The program authorities claim that local purchases have given a boost to the rural agricultural economy, a positive externality worth noting when one refers to the high cost of the program.[62]

5.18 **The allocation of covered schools is skewed in favor of better-endowed regions, and the poorest North is still under-covered by the program**. This is reflected in Table 5-1. In 2008, 20 percent of children attending primary school in the South could receive a free lunch, against 6 percent in Northern Ghana. Moreover, the North -– South divide was growing as the number of beneficiaries had increased by 42 percent in the South since 2006, against 22 percent in the North. The PPVA also noted, based on visits to deprived villages, that the "program is not particularly effective in targeting the poorest schools or the most food-insecure areas".[63] GSFP uses a range of variables to target beneficiary schools, including road access, availability of electricity, access to potable water, telecommunication non-coverage, unavailability of health facilities within a 15 km radius, low enrollment rates, conflict or flood prone areas, and poor school infrastructure. But lower school density and enrollment rates in Northern Ghana disfavor children from this region. In contrast, a program more strategically targeted to poor areas (geographical targeting at the district level using poverty or food security maps – such as those presented in Chapter 2) could more than double the share of benefits that would accrue to the poor and strongly reduce North-South disparities.

5.19 **Moreover, the skew of program allocation towards the South and away from the poorer North could be a missed opportunity towards achieving gender parity in education**. As discussed in Chapter 2, gender disparity in education is more severe in the North than in the South. By impacting enrollment and retention rates, GSFP could contribute to progress towards achieving gender parity in education if the program has a stronger impact on the education outcomes of girls than boys in Northern Ghana, which would be consistent with the impact found from school feeding programs in other countries.

[62] However, establishing a strong link between local farmers and school feeding may not be an unmixed blessing in of itself, since it is hard to assess its impact on prices of food staples and consequential welfare impacts on net buyers of food. Other issues also need to be addressed: e.g., while poly tanks are set up, water is unavailable in some communities to fill the tanks (some tanks are actually missing), very few cooks have actually received training in hygiene; food provided by caterers is often of very low quality and quantity. Provision of timely and adequate funds for the preparation of daily meals has also proven to be a major problem in several locations. These deficiencies need to be removed, costs reduced, and communities (rather than contractors) involved before the program is extended throughout the country.

[63] Responding to the under-coverage of the program in the North, WFP is providing noon meals to 100,000 school children in under-served Northern Ghana (as a contribution to the Government's School Feeding Program, and as such included in the Table 5-1). In other words, without WFP's contribution, the geographical distribution of beneficiaries would have been even worse than it is at present. WFP program also provides specific incentives for girls' education.

Table 5-1: Ghana School Feeding Program Beneficiaries 2008

Region	Total Enrollment in public primary schools	Pupils covered by school lunch in 2008	Proportion of children covered (%)	Annual budget transferred per covered pupil (GH¢)
South	2,202,458	450,833	20.5	54.8
North	621,949	37,678	6.1	41.6
Total	2,824,407	488,511	17.3	53.8

Source: World Bank Staff calculations based on administrative data, CWIQ 2003 and GLSS5.

5.20 **Capitation Grants to Primary schools.** Considering the low enrollment especially among girl children in Ghana, a program of cash grants to cover tuition and other school-related expenditure was introduced in 2005. Although not strictly a social protection measure, the program is analogous to a fee waiver, though aimed at compensating households for incurring expenditures on children's schooling. The cash grant was fixed at US $2.70 for boys and US $3.80 for girls in order to provide greater incentive for parents to send their girl children to school. The cash grant difference between boys and girls was later removed, so that now both boys and girls receive the same level of cash grant. The program was originally targeted to the country's poorest and weakest 40 districts. Now the program has been extended to cover the entire country. This program is assessed as highly successful, inasmuch as it significantly increased enrollment of both boys and girls. The value of the cash grant was increased by 50 percent in the budget of 2009. In addition to the cash grant, a new program of free text books was also announced that benefited 1.6 million children throughout the country. Theoretically the program is supposed to cover the entire country. However, as with all other programs, regional inequity persists with the capitation grant program as well. Enrollment rates in Northern Ghana are still among the lowest, which means that large numbers of children are out of school and hence receive no benefits from the cash grant program. The Participatory Poverty Assessment noted that parents finance a range of schooling expenditures including lunch, uniforms, examination fees and transportation, which sum to a much larger amount than the capitation grant.

5.21 **National Youth Employment Program (NYEP).** The NYEP was launched in October 2006. Its main objective is to provide employment to various categories of youth in the age group 18-35. Eight employment modules are conceptualized: health extension workers, youth in agribusiness, community education, teaching assistants, waste and sanitation, paid internship, vocation job and community protection units. In 2008, the program was employing 110,000 people, and the budget for 2009 amounted to Gh¢273 million (1.3 percent of GDP) but the program is projected to transfer allowances amounting to Gh¢77 million (or an average of Gh¢700 per employee per year, equivalent to the minimum wage).[64] In order words, NYEP incurs a total cost on logistics, training, administration, vehicles, etc. amounting to Gh¢197 million, or about Gh¢3 for Gh¢1 of allowance transferred. In terms of international comparison, NYEP is the second most expensive program in the world in terms of high cost of delivery (after the food transfer programs in India and the Philippines, which incur on average $5 for transferring $1 to targeting groups).

[64] The average allowance nevertheless masks large variations. Under some modules, monthly allowance is very high at about US$800 (NYEP review, 2009).

5.22 **The NYEP does not target the poor**. NYEP's focus on the youth is justified, given that the youth unemployment rate is twice as high as the national unemployment rate. But its design, as already noted, renders the program extremely expensive. The program's focus on the educated youth ('junior secondary education completed') excludes many uneducated youth belonging to poor families. In turn, the proportion of NYEP benefits accruing to the poor is low, at 12.7 percent (Table 5-2). However, unlike in other programs, the geographical distribution of beneficiaries of the program does not discriminate against Northern Ghana. The program design discriminates against the poor generally, and not against poorer Regions. Indeed, at 34 percent, the proportion of registered young actually employed is higher in the North than in the South, 32 percent.

Table 5-2: Share of the Benefits from Various Programs Accruing to the Poor

Institution	Share of outlays benefiting the poor	Principal targeting mechanism	Benefits for Households	Conditions Attached
LEAP	57.5	Community based, and PMT	GH¢8.00 -12.00, per household	School enrolment, health visits
NHIS Indigents	>38.5	District-level identification	Free coverage under NHIS	None
MoE Primary Education	32.2	Children in public primary schools	Subsidized education	School enrolment and attendance
CHAG service delivery	30.8	Individuals ill or injured	Subsidized health care	Use of CHAG health centers
MoH antenatal and child care	29.1	Antenatal and post natal care, maternal and child health	Impregnated bed nets	Pregnant women and children aged below 5 years
MoE Kinderg. Education	27.2	Children in public kindergarten schools	Subsidized education	School enrolment and attendance
MoE Junior High. Education	24.0	Children in public JHS schools	Subsidized education	School enrolment and attendance
MoH funding for health care	22.4	Individuals ill or injured	Subsidized health care	Visit to publicly funded center
GSFP school lunches	21.3	Public Primary schools	One hot meal per child- school day	Attendance in pub. primary school
Kerosene Subsidies	20.7	Self-targeting through use of good	Lower cost of kerosene	Purchase of kerosene
MoE Vocational Education	19.0	Children in public SHS schools	Subsidized education	School enrolment and attendance
MoFA Fertilizer Subsidies	15.8	Vouchers for fertilizers	Lower cost of fertilizer	Use of fertilizers for food crops

MoE Senior High Education	15.1	Children in public SHS schools	Subsidized education	School enrolment and attendance
PURC access to potable water	13.1	Indirect access to potable water	Supply of water in tankers in Accra	Areas w/o access to piped water
NYEP	12.7	Unemployed youths (18-35 year old)	Training and monthly allowances	Participation in training program
NHIS General Subsidies	12.4	Social security and district schemes	Coverage of most health care costs	Registration and premiums
PURC Electricity Subsidies	8.0	Inverted block tariff and lifeline	Cheaper electricity for low consumers	Residential elec. consumers
Tax Cut on Imported Rice	8.3	Self-targeting through use of good	Lower cost of rice (imported/domestic)	Purchase of rice (imported/domestic)
MOE Tertiary Education	6.9	Youth in higher degree institutions	Subsidized education	School enrolment and attendance
Petrol and Diesel Subsidies	>2.3	Self-targeting through use of good	Lower cost of fuel (imported/domestic)	Purchase of fuel (imported/domestic)

Source: World Bank Staff calculations based on administrative data, CWIQ 2003 and GLSS5.

5.23 **Consumer and farmer subsidies**. Several consumer and producer subsidies have been introduced in the past, most of which benefit primarily the non-poor. The first program is the electricity lifeline embedded in the inverted (or increasing) block tariff structure for residential electricity consumption. It is estimated that only 8 percent of the subsidies, which involve reducing the unit price of electricity for those who consume lower amounts of electricity, reaches the poor. This assessment is based on the tariff structure that prevailed in 2005/06 and on the data from the GLSS5. Changes in tariff structure since 2005/06 may have increased the share of benefits accruing to the poor, but targeting performance is likely to remain limited because many residential electricity customers who benefit from the lifeline are non-poor. Household survey data suggest that providing connection instead of consumption subsidies could substantially improve targeting, but providing such connection subsidies supposes also that cost recovery is adequate in order not to increase sector deficits further. The second program is the tax cut that was implemented temporarily on imported rice at the peak of the food price crisis in 2008. Because most of the imported and domestic rice consumed in the country is consumed by the non-poor, only 8 percent of the tax cut is likely to have benefited the poor. In addition, by reducing the after tax price of imported food, the tax cut may also have reduced the price of locally produced rice, which would then have reduced the incomes of rice producers, some of whom are poor. Next is the Ministry of Agriculture's fertilizer voucher program, with an estimated benefit incidence for the poor of 16 percent. This estimate is based on the share of fertilizer purchases accounted for by the poor in the GLSS5, but it could be that the program reached the poor more than indicated in the data due in part to some level of geographic targeting (Northern districts benefited from a larger share of the vouchers). The advantage of fertilizers is that beyond the cash transfer provided through vouchers, they also have a positive impact on

future earnings for farmers by increasing quantities produced.[65] Thus if mechanisms can be designed to ensure good targeting, lower costs for fertilizers could have a large impact on poverty. The share of subsidies for oil-related products (apart from kerosene, at 20.7 percent) that accrues to the poor is even lower, at 2.9 percent, on the basis of the observed patterns of consumption of oil-related products by households. Because oil products are used as intermediary inputs for a wide range of activities, including transportation for example, the share of the subsidies that indirectly reach the poor is likely to be higher, but it will also probably remain relatively small.

5.24 **Other programs.** A number of other social programs were assessed from a targeting efficiency perspective. In general, these programs tend not to benefit particularly the poor because it is not their primary purpose. This includes public funding for vocational training, senior high school, tertiary high school, with respective shares of benefits accruing to the poor at 19, 15, and 7 percent. On the other hand, general funding for primary education, health, and junior high school fairly benefit the poor, consistent with the benefit incidence analysis discussed in Chapter 2.

C. OPTIONS FOR BETTER SOCIAL PROTECTION IN NORTHERN GHANA

5.25 **Given existing architecture, there are many venues to improve social protection in Northern Ghana.** This includes the possibility of improving geographical targeting and/or changing the design of existing programs for better targeting and cost effectiveness, introducing new programs to address holes in safety nets, and reducing or eliminating some of the non-performing programs to free financial resources.

5.26 **In some instances, the design of the program is detrimental to Northern Ghana.** This is the case for instance for the school feeding program and capitation grants which rely on the existing quality of educational infrastructure (schools) and willingness of communities to improve it, rather than demand side factors. Because enrollment rates and school density are lower in Northern Ghana, children in this region benefit less from these programs.[66] This is also the case of the NYEP, which targets educated young workers, most of which are non-poor. The geographical targeting of the NHIS fee exemption for indigents probably suffers from both supply side constraints (lower density of primary health care facilities in Northern Ghana) and demand side constraints, as some cultural norms could mitigate it. While NYEP might not be a vehicle for better social protection given its design and cost, the other programs could benefit for instance from using alternative means of geographical targeting, poverty or food deprivation

[65] In this respect Ghana could benefit from the experience of other countries. For example, evidence from India suggests that targeted fertilizer subsidies, combined with new technology, can significantly improve farm productivity and farmers' incomes. A cash transfer program strictly targeted to small holders (known as a pro-compo program) in Mexico, judiciously timed and delivered just prior to the planting season, has had dramatic impacts in encouraging farmers to invest the transfer on fertilizer and other farm-related inputs, thus resulting in a return of $1.6 to every $1 invested in the cash transfer. See World Bank 2008 for a detailed discussion on fertilizers subsidies.

[66] The envisaged free school uniforms program would face the same type of issues.

maps instead of education deprivation maps.[67] Raising the demand for NHIS exemption fees could also be reached by extending it to LEAP beneficiaries.

5.27 **Understanding the sociology of poverty in Northern Ghana would also help to structure social protection programs in these areas more effectively.** As described in the introduction to Chapter 3, Northerners themselves identify broadly with the a typology those who are flourishing (the *bun-dana*), the near-poor and seasonal poor (*wala-dana*), the chronic poor (*fara-dana*) – comprising both able and incapacitated poor, and the extreme poor (*nong-daan kuruug*) – a subset of the *fara-dana*. The *fara dana* would benefit from programs such as LEAP provided the distribution of beneficiaries followed to some extent the national poverty map. The second group (*wala-dana*) could be helped by seasonal programs such as public works employment in the agriculture off-season provided the programs accommodated for the gender dimensions of work. The *wala-dana* includes return migrants who remain poor even after migration are effectively unsuccessful (or partially successful) migrants who probably would benefit from programs to reduce the push factors that drive migration. Possible ways to do so could includes incentives (particularly for girls) to stay in school longer or reducing the direct out-of-pocket costs of attending secondary school in their home areas. This is important because during their migratory period, many of the migrants (especially girls) are highly vulnerable and many are subject to abuse.

5.28 **In some other cases, intended geographical targeting could be pursued more forcefully**. Because of its low coverage, but also for implementation capacity considerations, the LEAP program is less geographically targeted than it could be. When the program's outreach is small, and is being piloted with a categorical approach to targeting, it is perhaps not unreasonable to select districts with a capacity to implement the program; so districts with weaker capacity to implement may not be well covered in the LEAP program, even if such districts are characterized by higher headcount poverty ratios. Ideally, as the program expands, greater reliance on poverty maps should be used to determine resource allocations, rather than expanding first the number of eligible districts. This would make administration of the program easier than having many participating communities geographically scattered, and would obviously benefit from the fact that potential leakage is much lower in poorest districts. Additionally, LEAP's other targeting mechanisms -– the discretion left to communities to identify potential candidates among a few categories, and the quality of the questionnaire administered to selected candidates[68] -– should be reviewed to assess if they could be improved in terms of both its proxy means-testing and community-based components. PPVA finds that the trust in the local LEAP committees was not uniform. These committees (CLICs) are composed of local elites who are sometimes trusted and sometimes not trusted and this need to be remedied.

[67] On the other hand, the educational deprived district formula should continue to be used for the targeting of supply-side investments with transfers provided to districts and thereafter to schools. However the formula to identify the deprived districts should be revised from a rank-based to a level-based indicator. There should also be a process of reassessment, say every two years, to reorient on a dynamic basis the funds to districts in need given that some of the variables used in the formula change substantially over time.

[68] An analysis should be conducted to assess whether the variables used for proxy means-testing are the best possible variables (given the need to have also comparability with the GLSS data in order to measure targeting performance), whether the statistical or econometric model used for predicting poverty is the best model that can be fitted with the available data, and finally whether the thresholds used for determining eligibility are appropriate.

5.29 **Eventually, Ghana will need to move to some form of common household targeting mechanism for all programs to complement geographic targeting.** While geographic targeting of resources will help the Northern regions where most of the poor live, there is also a need for targeting the appropriate households in a consistent and effective manner across all programs. There is now a move to common targeting system for major several poverty targeted initiatives and the common targeting variables could be used to identify individual households with community group ratification. Of course for the Northern regions, it is important to start by assuring horizontal equity through geographic targeting and complement that with the common targeting mechanisms to assure vertical equity. But for the North to benefit, geographical targeting of programs is the first step before household targeting.

5.30 **Targeting and beneficiary selection will need to be sensitive to the ongoing conflict.** As noted previously, the localized conflicts in Northern Ghana have their roots in land and chieftancy issues and do not fit the typical 'greed or grievance' typology. However, there is the possibility that existing tensions could be inflamed if the selection of beneficiaries for safety net interventions is perceived to favor one particular group. A robust conflict sensitivity analysis should be undertaken in these areas and the need for transparency in targeting even more important.

5.31 **Cost effectiveness should be improved.** As mentioned before, most of the important programs such as LEAP, GFSP and NYEP suffer from unacceptably high costs of delivery. Programs are capital intensive, and personnel-intensive, with little attention paid to cost-efficiency. As a result, the cost of delivering one unit of cash assistance is very high, often as high as 50 percent of the transfer itself. Low cost effectiveness obviously reduces the scope for expanding the programs, the more so if they are to be targeted geographically, as the absence of sufficient results in the beneficiary areas might create opposition from funding areas. Efforts must be undertaken to review the cost effectiveness of these programs and challenges associated to their expansion from a fiscal perspective, through proper expenditure reviews. LEAP has just undergone an operational review and with the increasing numbers of households being brought in under the program, overhead costs are coming down.

5.32 **Impact needs to be assessed.** Cost effectiveness is only one aspect of program effectiveness, it is important to assess program impact. LEAP has now started the baseline for its impact assessment with technical support from Universities in the US and Ghana and the assessment should also provide guidance whether LEAP is an appropriate approach for Northern Ghana.

5.33 **A complementary program for the working poor in Northern Ghana is needed.** While most vulnerabilities and risks are covered, though imperfectly, by the existing social protection system in Ghana, one is not. This is the unemployment risk for working poor. This is particularly the case in Northern Ghana where many feel deprived of any economic opportunity during the lean season. In this regard, public works program can play an important role, provided that they are well targeted geographically and implemented smartly in terms of wage to be paid, and seasonality and complementarity with existing economic activities. A well functioning public works program, capable of being extended in times of a crisis (natural or global economic), can serve as a surrogate for unemployment insurance, thus considerably easing pressures from repeated covariate shocks. Ghana has already gained some experience in this

area.[69] However most of the projects executed under the labor-based method remained pilot projects. No nation-wide program was attempted. The government has now designed and is implementing a labor-based public workfare program to addresses the risks of seasonal unemployment and under-employment, geographically targeted first to the poorest districts most of which are in Northern regions, to be extended later to the whole country. In this regard, as with other programs, Ghana has benefited in the design from extensive global experience, paying particular attention to several design aspects such as the level of the wage rate, use of piece rates to achieve better gender targeting, timing and seasonality of operation, selection of projects, community involvement, etc.[70]

5.34 **Estimates suggest that public works programs implemented in poor areas could be effective in this respect,** with a share of benefits accruing to the poor greater than 43 percent.[71] In contrast, self-targeting through low wages may not be enough to ensure good targeting performance in a context where a large number of workers work for no or limited pay. Proxy means-testing would not be needed for determining eligibility of public works participants if the program is geographically targeted, but a LEAP-inspired questionnaire could be used ex post on a sample of participants to monitor targeting performance and implement corrective measures as needed.

5.35 **Although a secondary consideration, such public works program could aim at reducing some of the sources of collective vulnerability in Northern Ghana. This particularly includes works to reduce the impact of extreme** climatic events (e.g., floods and droughts) on communities, for which some climate change adaptation funds could be mobilized. It also concerns initiatives to reduce the risk of localized conflicts through youth employment programs for instance.

5.36 **Consumer subsidies need to be reformed.** Large subsidies that are not well targeted to the poor for food (rice), energy, and electricity, should be reduced. This does not mean that all subsidies should be eliminated. Kerosene is for example a good that can be subsidized to protect the poor from fluctuations in world oil prices. Some subsidies for electricity or piped water can also be considered, but they need to be limited, and in general connection subsidies would tend to be better targeted than consumption subsidies.

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[69] Ghana in the past has implemented labor-based public workfare programs. The Pilot Labor-based Contractor Roads Project (partly funded by the World Bank and the UNDP) was implemented in the Western Region of Ghana in 1986. Both USAID and DANIDA supported this program during 1992-94. The Program of Action to Mitigate the Social Cost of Adjustment, which ran between 1988 and 1995, did support a labor based public works program. A labor-based Land Conservation and Small Holder Rehabilitation Project was implemented in the Upper East Region under the Ministry of Food and Agriculture. More recently, a five year, US $ 60 million project, viz., Village Infrastructure Project was implemented over the period 2000-2005, partly funded by the World Bank.

[70] For an overview of this global experience, see del Ninno *et al.* (2009).

[71] The estimate of targeting performance is based on assumptions for wage levels provided to program participants which would insure a good degree of self-targeting. Leakage from the program from the point of view of poverty reduction takes into account the share of the wage benefits that do not reach the poor due to mis-targeting, as well as the substitution effects whereby part of the wages paid are not net additional wages for households because individuals participating in the program might have done some other work without the program's existence. It is also assumed that only 70 percent of the program costs are used for wages due to the need to pay for materials. If the program were not targeted to poor areas, targeting performance would be much lower, with nationally an estimated 26.8 percent of the benefits likely to accrue to the poor.

5.37 **Monitoring and evaluation**. As already mentioned, and common to all programs, monitoring and evaluation is systematically weak, so it is hard to precisely assess inputs, outputs and outcomes of interventions. Efforts need to be scaled up overall in this area, to improve the design of the various programs as they expand. For instance, a LEAP-inspired household questionnaire could be used to assess eligibility for other programs (possibly on a pilot basis) and for assessing ex post the targeting performance of programs such as public works. There is thus scope for building on LEAP's experience to progressively design targeting mechanisms that could be used for multiple programs, or at least for those programs that are not geographically targeted.

Annex 1: Estimated Districts Poverty Rates

	Poverty Rate		Poverty Gap	
District	Central estimate	Standard error	Central estimate	Standard error
Jomoro	0.155	0.035	0.040	0.011
Nzema East	0.175	0.042	0.046	0.014
Ahanta West	0.153	0.032	0.038	0.010
Sekondi/Shama/Takoradi	0.046	0.013	0.010	0.003
Mpohor-Wassa East	0.261	0.042	0.068	0.015
Wassa West	0.142	0.032	0.036	0.011
Wassa Amenfi	0.293	0.049	0.081	0.020
Aowin	0.256	0.040	0.066	0.015
Juabeso-Bia	0.254	0.043	0.066	0.015
Sefwi Wiawso	0.249	0.044	0.066	0.016
Bibiani/Anhwiaso	0.178	0.042	0.044	0.014
Keea	0.146	0.032	0.040	0.010
Cape Coast	0.080	0.021	0.019	0.007
Abura/Asebu/Kwamankese	0.175	0.044	0.045	0.014
Mfantsiman	0.162	0.030	0.042	0.010
Gomoa	0.158	0.034	0.039	0.012
Efutu/Ewutu/Senya	0.097	0.025	0.023	0.009
Agona	0.094	0.028	0.023	0.007
Asikuma/Odoben/Brakwa	0.131	0.029	0.033	0.010
Ajumako/Enyan/Essiam	0.160	0.032	0.040	0.010
Assin	0.284	0.046	0.078	0.017
Twifo/Heman/Lower Denkyira	0.262	0.044	0.069	0.015
Upper Denkyira	0.206	0.039	0.051	0.013
Accra (Ama)	0.130	0.018	0.031	0.005
Ga	0.076	0.023	0.018	0.007
Tema	0.035	0.011	0.008	0.003
Dangbe West	0.154	0.040	0.040	0.013
Dangbe East	0.159	0.038	0.041	0.013
South Tongu	0.327	0.052	0.102	0.022
Keta	0.232	0.052	0.065	0.019
Ketu	0.274	0.052	0.081	0.021
Akatsi	0.306	0.061	0.091	0.023
Northtongu	0.363	0.053	0.117	0.023
Ho	0.245	0.037	0.068	0.015
Hohoe	0.212	0.037	0.057	0.014
Kpando	0.223	0.049	0.059	0.019
Jasikan	0.356	0.048	0.113	0.024
Kadjebi	0.336	0.092	0.097	0.038

Nkwanta	0.455	0.101	0.147	0.049
Krachi	0.396	0.099	0.127	0.044
Birim North	0.254	0.040	0.065	0.015
Birim South	0.175	0.044	0.045	0.015
West Akim	0.234	0.046	0.062	0.018
Kwaebibirem	0.219	0.038	0.058	0.015
Suhum/Kraboa/Coaltar	0.228	0.044	0.058	0.015
East Akim	0.179	0.039	0.045	0.013
Fanteakwa	0.250	0.039	0.066	0.014
New Juaben	0.051	0.018	0.012	0.006
Akuapim South	0.146	0.034	0.039	0.012
Akuapim North	0.158	0.038	0.041	0.012
Yilo Krobo	0.181	0.037	0.048	0.013
Manya Krobo	0.283	0.074	0.087	0.030
Asuogyaman	0.201	0.059	0.059	0.022
Afram Plains	0.343	0.084	0.108	0.037
Kwahu South	0.180	0.034	0.045	0.012
Atwima	0.291	0.042	0.083	0.017
Amansie West	0.303	0.049	0.079	0.019
Amansie East	0.269	0.047	0.071	0.017
Adansi West	0.123	0.028	0.031	0.010
Adansi East	0.263	0.039	0.069	0.016
Ashanti Akim South	0.295	0.040	0.080	0.015
Ashanti Akim North	0.199	0.040	0.052	0.014
Ejusu/Juaben	0.258	0.043	0.069	0.016
Bosomtwe/Atwima/Kwawoma	0.242	0.042	0.066	0.015
Kma	0.082	0.015	0.020	0.004
Afigya/Kwabere	0.164	0.036	0.042	0.012
Afigya Sekyere	0.219	0.033	0.058	0.012
Sekyere East	0.204	0.041	0.052	0.014
Sekyere West	0.209	0.039	0.055	0.015
Ejura/Sekyeredumase	0.313	0.043	0.093	0.017
Offinso	0.276	0.045	0.076	0.017
Ahafo-Ano South	0.311	0.052	0.085	0.019
Ahafo-Ano North	0.312	0.039	0.088	0.015
Asunafo	0.299	0.046	0.081	0.018
Asutifi	0.303	0.047	0.083	0.019
Tanoso	0.249	0.040	0.067	0.015
Sunyani	0.154	0.032	0.040	0.011
Dormaa	0.194	0.040	0.049	0.014
Jaman	0.388	0.067	0.127	0.028
Berekum	0.161	0.036	0.040	0.013
Wenchi	0.354	0.062	0.120	0.029

Techiman	0.142	0.036	0.036	0.013
Nkoranza	0.332	0.052	0.106	0.021
Kintampo	0.450	0.055	0.156	0.027
Atebubu	0.476	0.068	0.170	0.035
Sene	0.535	0.061	0.196	0.031
Bole	0.539	0.066	0.202	0.038
West Gonja	0.546	0.070	0.199	0.039
East Gonja	0.546	0.065	0.201	0.034
Nanumba	0.573	0.061	0.220	0.037
Zabzugu-Tatale	0.611	0.065	0.242	0.041
Chereponi-Saboba	0.637	0.060	0.260	0.037
East Dagomba	0.518	0.064	0.195	0.039
Gushiegu-Karaga	0.686	0.058	0.285	0.038
Savelugu-Nanton	0.562	0.055	0.212	0.034
Tamale	0.292	0.060	0.099	0.029
Tolon	0.485	0.057	0.170	0.031
West Mamprusi	0.566	0.068	0.216	0.039
East Mamprusi	0.584	0.055	0.219	0.033
Builsa	0.767	0.054	0.356	0.043
Kassena-Nankani	0.688	0.064	0.303	0.046
Bongo	0.783	0.056	0.366	0.045
Bolgatanga	0.673	0.051	0.298	0.035
Bawku West	0.796	0.050	0.385	0.046
Bawku East	0.743	0.046	0.340	0.039
Wa	0.790	0.035	0.413	0.037
Nadowli	0.851	0.042	0.439	0.044
Sissala	0.818	0.045	0.416	0.046
Jirapa-Lambussie	0.824	0.045	0.419	0.048
Lawra	0.817	0.046	0.408	0.046

Source: World Bank Staff calculations based on CWIQ 2003 and GLSS5.

Annex 2: Occupation Definitions

The methodology for constructing occupation categories discussed in Chapter 3 is as follows. The GLSS 5 survey instrument included responses on primary and secondary occupations of the household head and spouse. Responses were classified according to the ISIC criterion. These produced 138 different occupations. In order to make the analysis tractable and avoid too many similar categories each with a small population, some of these occupations were clustered. In Table 3-6, the left-hand column reports the composite occupation typology generated for this study and the right-hand column reports the original ISIC-consistent occupation data from the GLSS5.

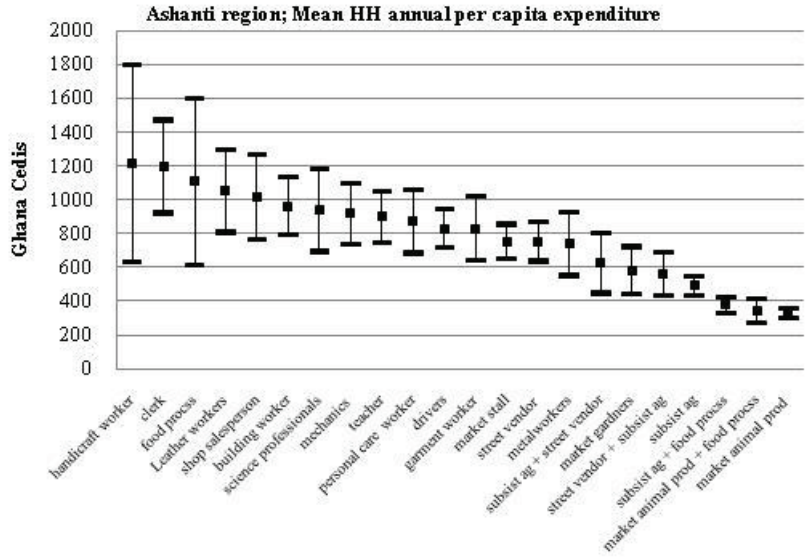
Groupings of Occupations

Aggregated occupation	Self-reported description (number of observations)
market stall operator	1. stall and market salespersons (1036)
street vendor	2. street vendors and related workers (670)
shop salesperson	3. shop salespersons and demonstrators (281)
police	4. police inspectors and detectives (3); police (50); army
private security	5. private security personnel (67); protective services workers (33)
personal care worker	6. personal care and related workers (189); other personal service workers (146)
market gardener	7. market gardeners and crop growers (5084)
teacher	8. pre-primary education teaching associate professionals (15); primary and pre-primary education teaching professional (197); primary education teaching associate professionals (58)
food processor	9. food and related products machine operators (16) ; food processing and related trades workers (896) ; agricultural and other mobile plant operators (10)
hunting/fishery	10. fishery workers, hunters and trappers (208); agricultural, fishery and related labourers (274)
subsist agriculture	11. subsistence agricultural and fishery workers (4778)
market animal products	12. market-oriented animal producers and related workers (78); market-oriented crop and animal producers (699)
professional	13. directors and chief executives (10) ; business professionals (14) ; general managers (14); legal professionals (1) ; legislators (7); other departmental managers (14) ; production and operations department managers (4); finance and sales associate professionals (38); business services agents and trade brokers (20)
clerk	14. cashiers, tellers and related clerks (39); client information clerks (17); library, mail and related clerks (3) ; material-recording and transport clerks (16) ; numerical clerks (10) ; other office clerks (41); secretaries and keyboard -operating clerks (57); administrative associate professionals (25); archivists, librarians and related information professionals (2)
driver	17. motor vehicle drivers (311)
religion worker	18. religious associate professionals (15) ; religious professionals (25); traditional medicine practitioners and faith-healers
garmet worker	19. textile,garment and related trades workers (299)
science professional	20. life science professionals (3); life science technicians and related associate professionals (8) ; mathematicians,statisticians and related professionals (7); physicists, chemist and related professionals (2); social sciences and related professionals; computer associate professionals (9) ; computing professionals (4); architects,engineers and related professionals (30); physical and engineering science technicians (18); optical

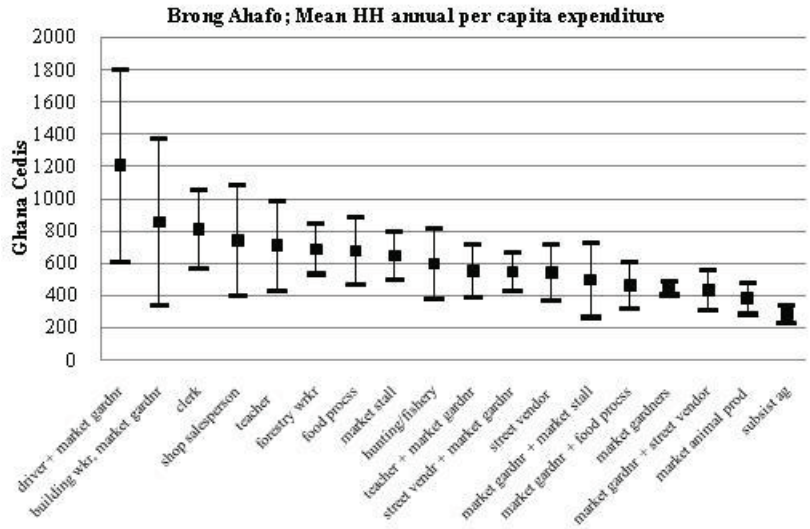
	and electronic equipment operators (13); chemical processing plant operators (3); chemical products machine operators (5); locomotive engine-drivers and related workers (12); ship and aircraft controllers and technicians
handicraft worker	21. handicraft workers in wood, textile, leather and related workers (90) ; miners, shot-firers, stonecutters and carvers (18); potters,glass-makers and related traders (23); printing and related trades workers (7); wood treaters, cabinet-makers and related workers (66)
housekeeping/restaurant worker	22. housekeeping and restaurant service workers (162)
messenger/ domestic help	23. building caretakers, window and related workers (4); messengers, potters doorkeepers and related workers (37); shoe cleaning and other street services (8); domestic and related helpers, cleaners and related workers (39); astrologers, fortune-tellers and related workers
metal worker	24. blacksmiths, toolmakers and related traders (12) ; precision workers in metal and related materials (2); metal moulders, welders, sheet-metalworkers (55) ; metal and mineral products machine operators (8); metal-processing plant operators (3); mining and mineral-processing plant operators (11)
building worker	29. painters, building structure cleaners and related traders (29) ;building finishers and related trades workers (90) ;building frame and related trades workers (79)
mechanic	33. electrical and electronic equipment mechanics and fitters (92); machinery mechanics and fitters (122)
machine operators	37. printing, binding and paper products machine operators (8); rubber and plastic products machine operators (12); other machine operators and assemblers (17); power production and related plant operators (1); assemblers (1); automated assembly-line and industrial operators (2)
health professional	38. health professionals(except)nursing ; nursing and midwifery professionals ;modern health associate professionals(except nursing); nursing and midwifery associate professionals

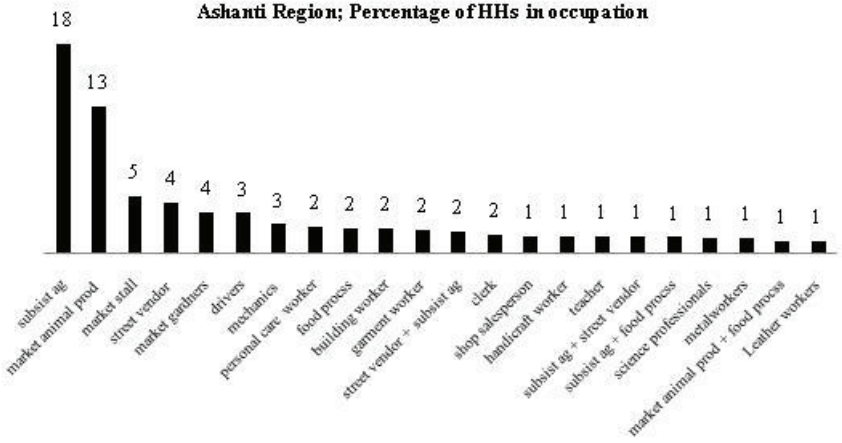
Annex 3: Occupation and Per Capita Consumption per Region, 2004/5

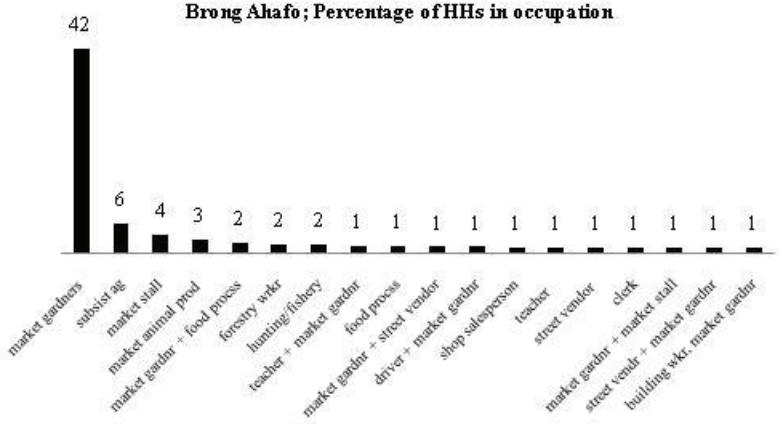
(a) Ashanti Region



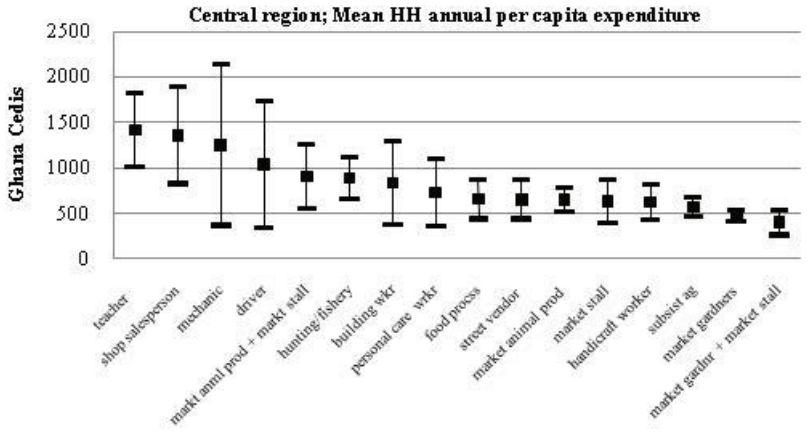
(b) Brong Ahafo Region



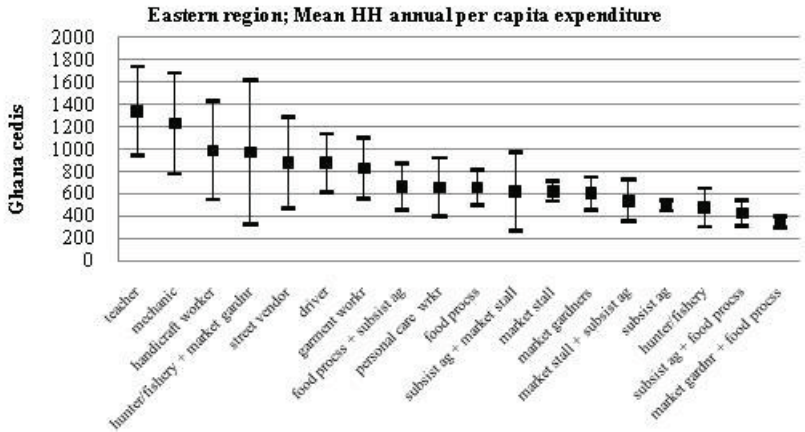


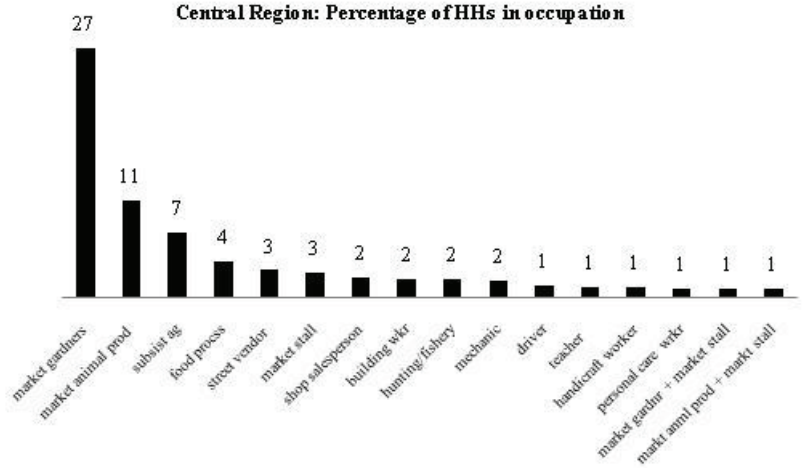


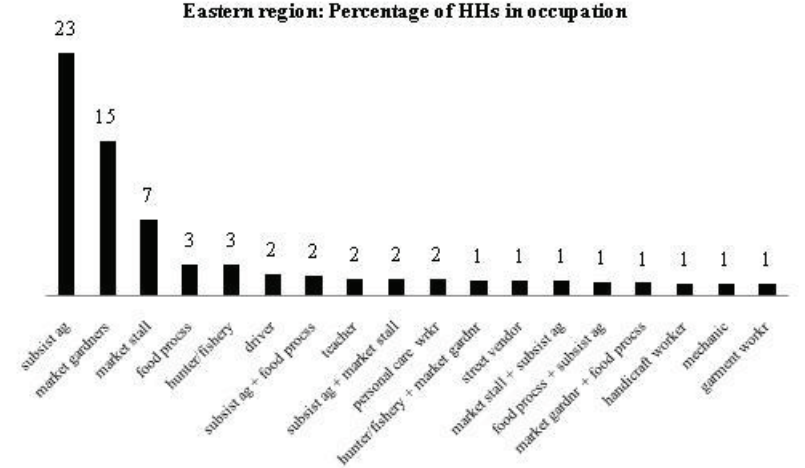
(c) Central Region



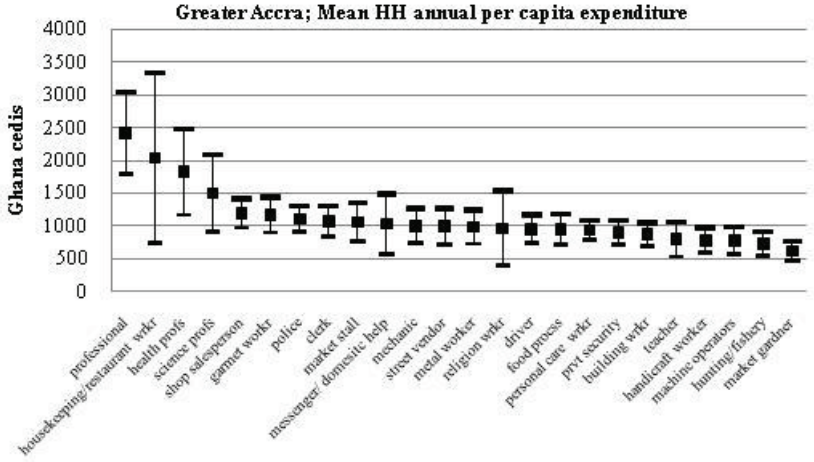
(b) Eastern Region



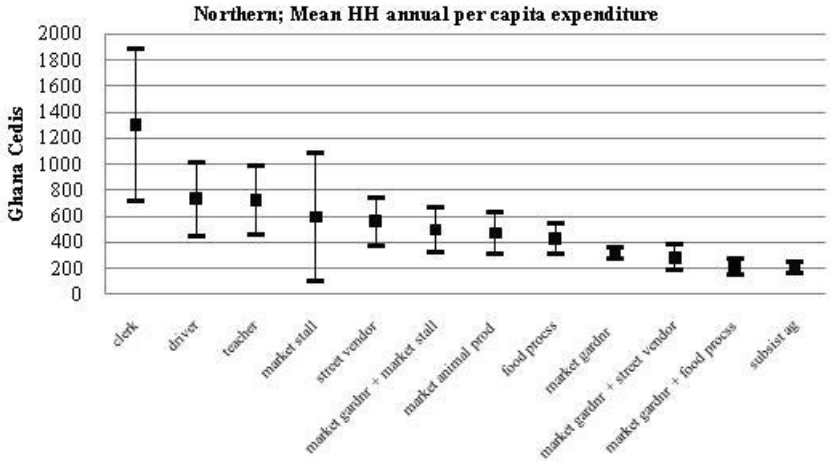


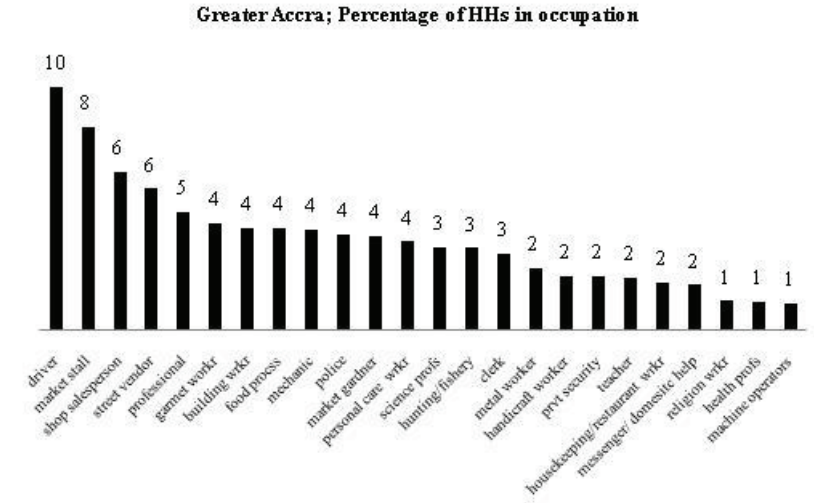


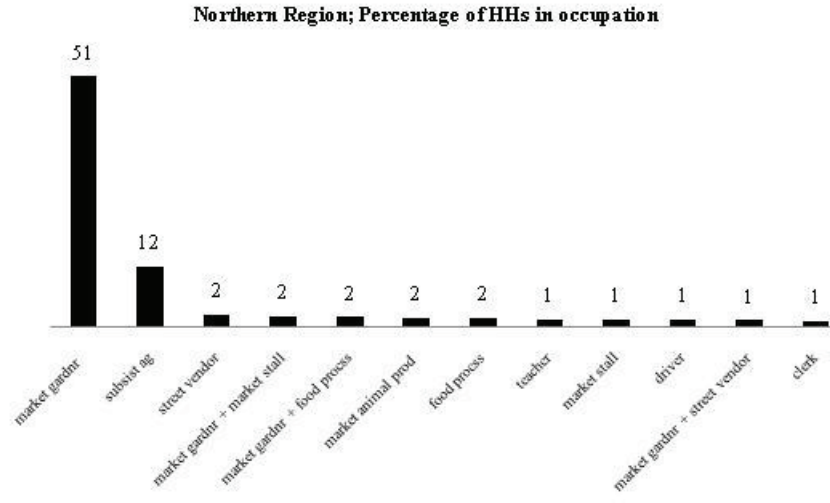
(e) Greater Accra



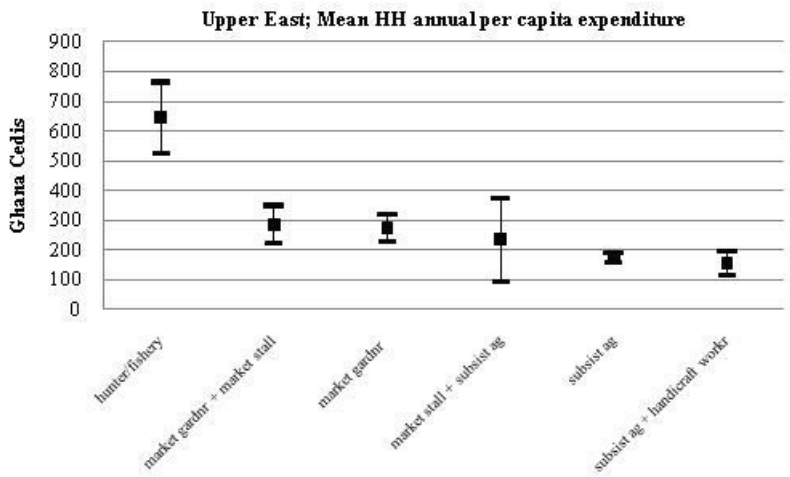
(f) Northern Region

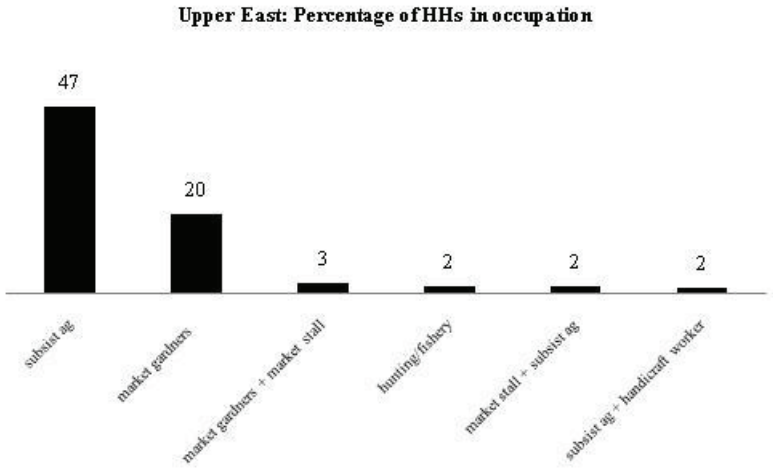




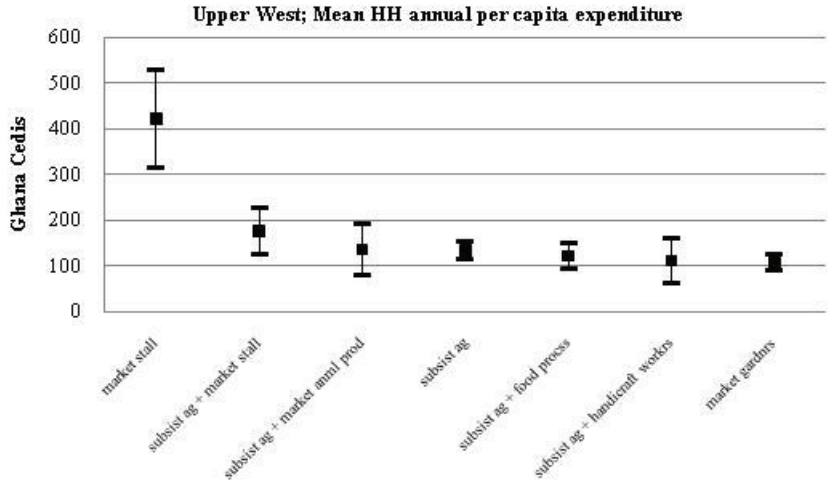


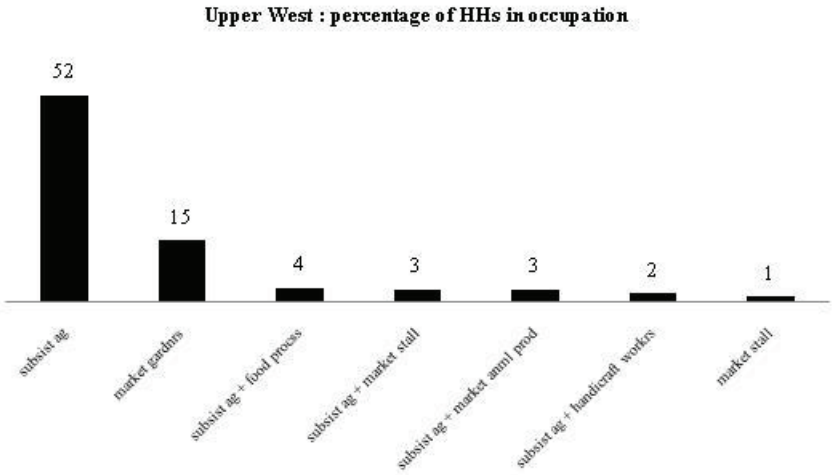
(g) Upper East Region



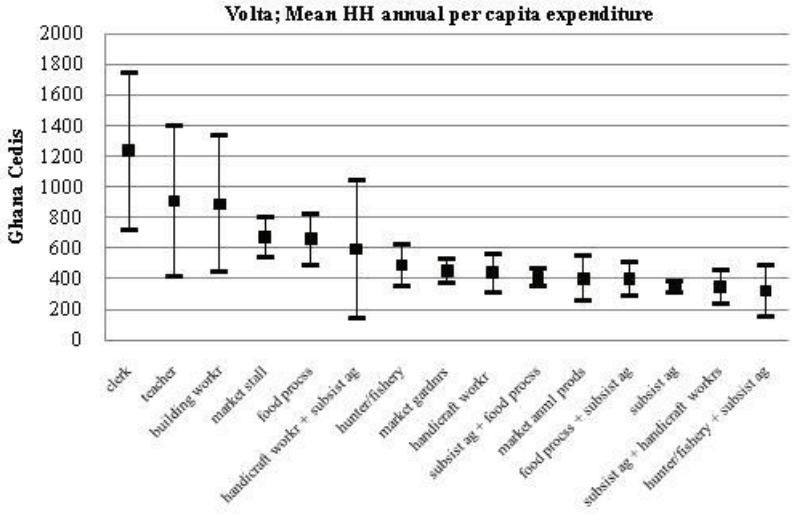


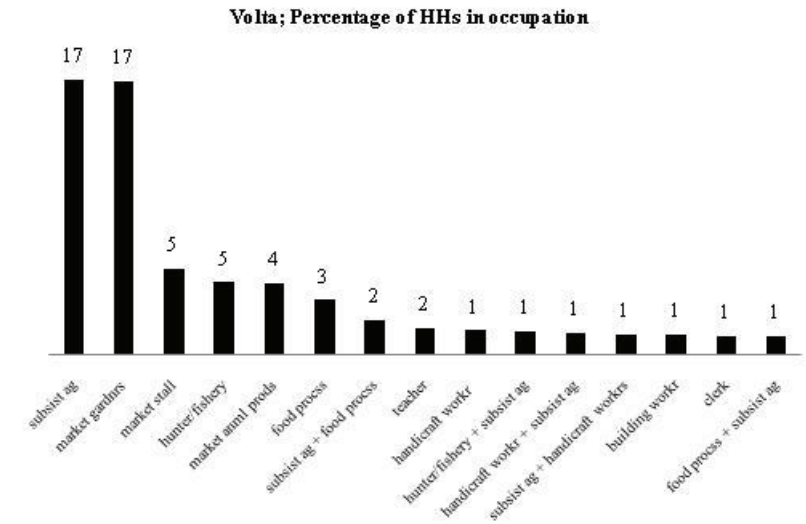
(h) Upper West Region



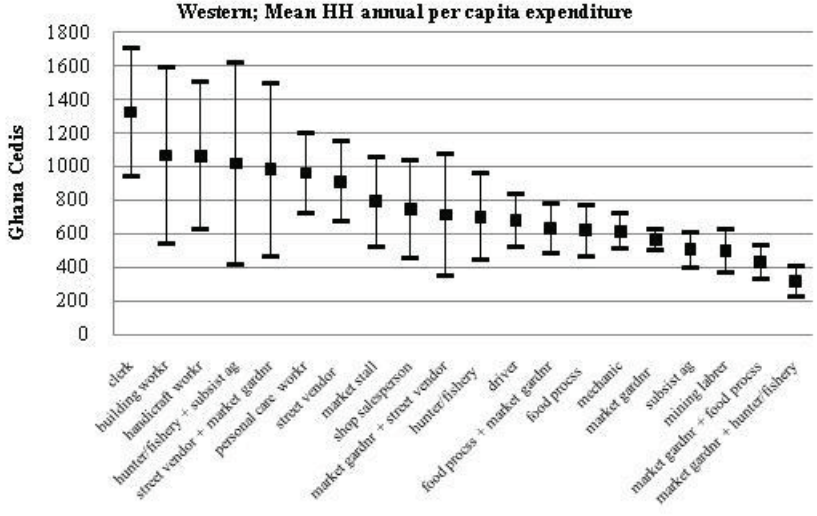


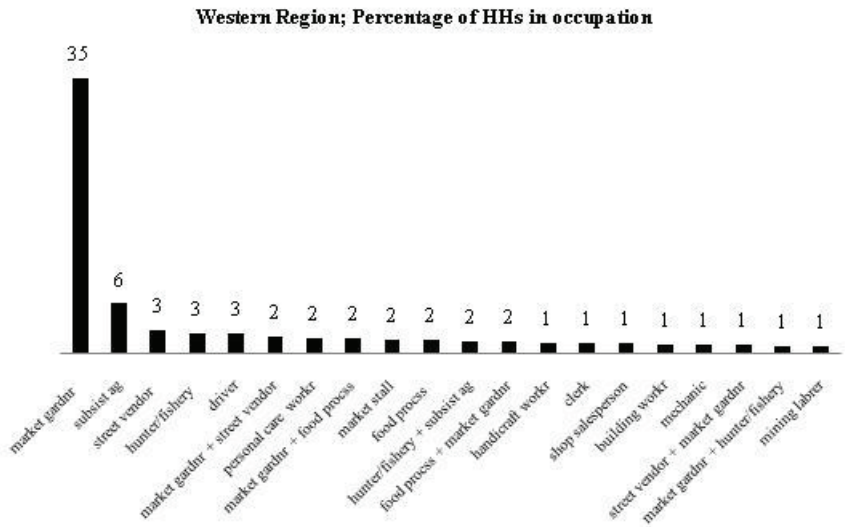
(i) Volta Region





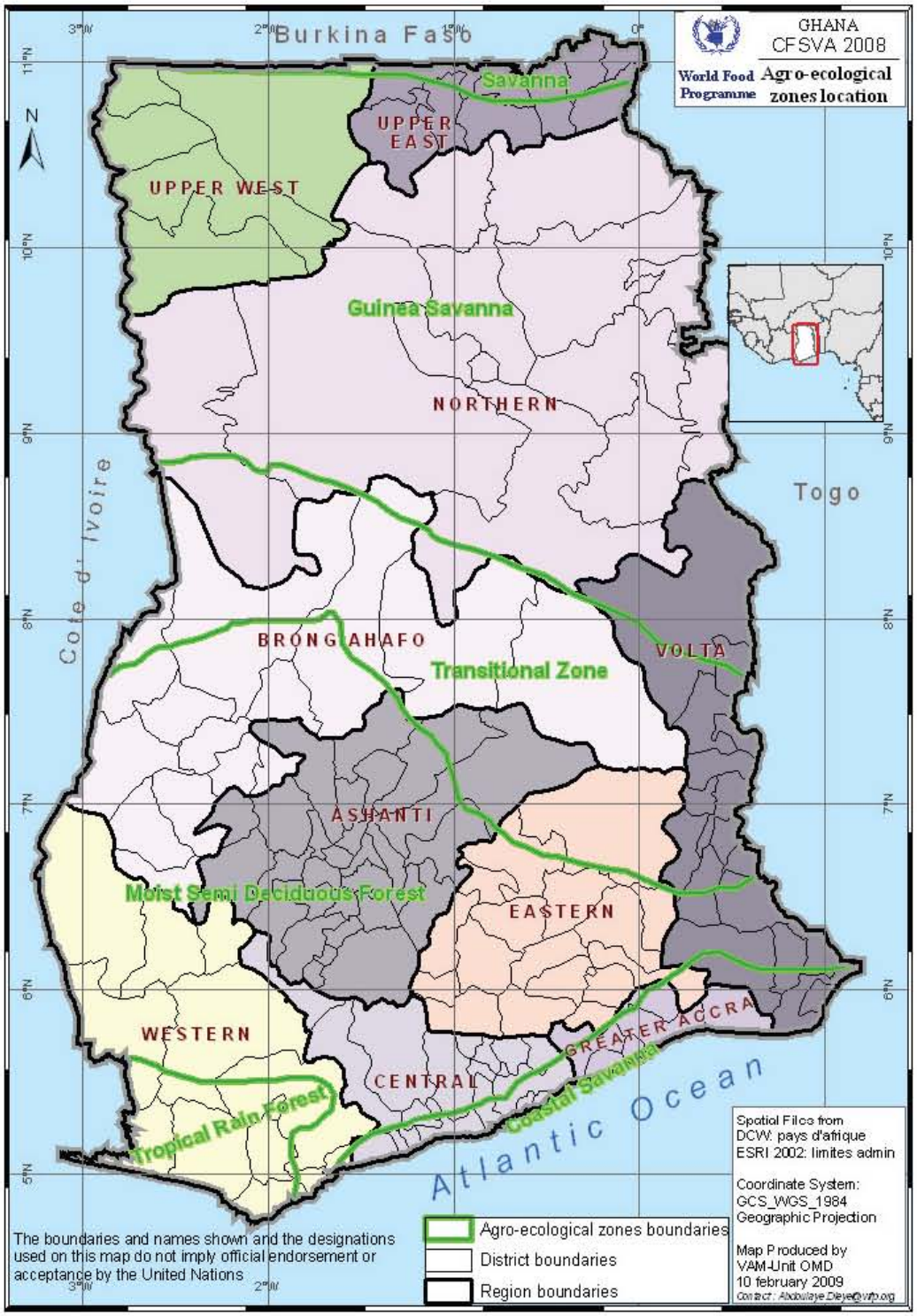
(j) Western Region





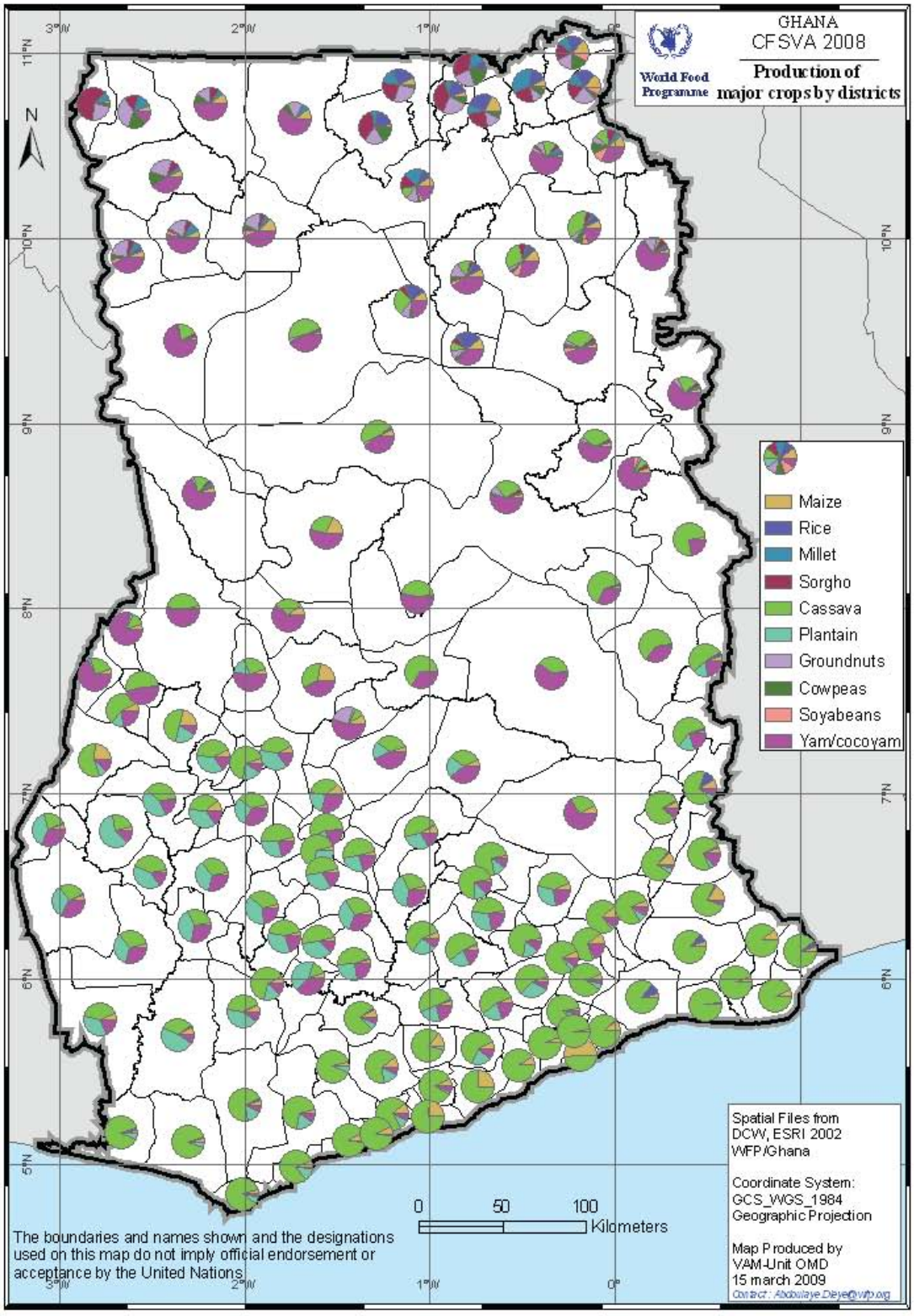
Annex 4: Regional Agro-ecological Patterns in Ghana

Agro-ecological Zone



Source: WFP (2009)

Major Crop Productions



Source: WFP (2009)

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