URBAN POVERTY ANALYSIS IN TAMALE

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Abstract
Traditionally, much of the analysis of poverty has been on rural areas, but little attention is paid to urban poverty. Poverty is a huge concern among urban dwellers due to an average monthly income of GHS150 with an exorbitant basket of expenditure. Urban poverty is exacerbated by the lack of social capital coupled with increasing utility tariffs with a translated cost in production and processing activities. Urban poverty has a gender dimension due to the male - dominated household roles coupled with low or lack of assets' control by women. This has worsened the poverty situation among households as expenses are borne by males as head of the household. Poverty in urban Sagnarigu and Tamale is based on a lack of money or inability to meet basic household needs. Urban dwellers consider unemployment as poverty but still consider living in urban areas better compared to rural areas due to the availability of basic amenities such as toilets, access to portable drinking water and electricity. Safety net programmes and interventions are the remedies of urban poverty, which are largely concentrated in the rural areas. Emphasis on education is required especially among females since there is a cultural shift of emphasis to petty trading as a quick source of money. This has caused a further gap in girl-child education and by extension, adult literacy improvement.

Keywords: Urban Migration Poverty, Multidimensional Poverty Index, Tamale Metropolis, Sagnarigu District

Introduction
Poverty in Ghana is assessed as a rural phenomenon (Grant, 2010) probably because it has for a long time been viewed as a rural phenomenon. However, attention is currently shifting to urban poverty analysis, due to population explosions, rural-urban migration, and rising cost of utilities in urban areas. Relative to rural dwellers, the urban poor are marginalized with lack of schools, clinics and inadequate jobs coupled with high cost of living and live in slums which are 'invisible' to governments (Zezza and Tasciotti, 2010). In urban settlements, increasing numbers of the poor lack access to basic social infrastructure, goods and services, as well as the resources to become economically productive.

According to Satterthwaite and Mitlin, (2013), the growing recognition of deep - rooted urban poverty has been overlooked as it is increasing in numbers as well as taking a large share of the world's poor population in urban areas. Satterthwaite (2012) has also noted that one in seven of the world's population lives in poverty in overcrowded informal urban settlements, with inadequate basic facilities. This is not so different of settlements in Ghana and specifically the Tamale Metropolis and the Sagnarigu District in the Northern Region of Ghana, where the upsurge in migrants and porters have kept pressure on basic amenities such as toilets, poor sanitation and increase in rent.

Despite the considerable efforts to alleviate poverty in Ghana, insufficient attention is paid to the urban areas hence they are falling deeper into poverty despite overall positive, national growth trends. Social capital activities such as backyard gardening and livestock rearing which cushioned families in the advent of poverty and hunger are not common these

days due to urban infrastructure growth hence there is over reliance on salaries for food expenditures.

Urban poverty is on the rise in Central and Northern Regions of Ghana and in a number of intra-urban locations (Tacoli et al., 2015). The poverty depth in the Northern Region is 15.5 percent with that of Tamale Metropolis and Sagnarigu District being 6.8 and 8.2 percent respectively (Obeng-Odoom, 2010).

Northern Region, since the 1990s, has witnessed little progress in poverty reduction, which is a concern for Ghana given that the region hosts the largest number of poor people within rural and urban areas in the country (1.3 million). Although according to Cooke et al. (2016), urban households continue to have lower average poverty rates compared to their rural counterparts (10.6% versus 37.9%), the long term outcomes are severe on urban households. This is due in part to the continuous dependence of rural dwellers on urban dwellers, coupled with pressures of rural-urban migration.

The continuous dependence of the rural dwellers is compounded by the fact that since the discovery of oil, Ghana's focus on the agricultural sector is declining (ISSER, 2013). The Northern Region is largely agrarian, hence reduced investments on agriculture makes the sector less attractive and less rewarding for smallholders and rural farmers. The result is an increasing dependence on social capital, implying an increase in reliance on urban families to remit to rural dwellers, who hitherto were largely sustained by farming.

In the Tamale Metropolis and the Sagnarigu District, signs of urbanization can be seen in the growing need for extensions in existing traditional compound houses due to increases in household family sizes. Changes in food consumption patterns from the usual grains and cereals to meat and dairy products which are generally imported into Ghana and existing incomes are not enough to meet prices of these products. This leaves families with no option than to ration daily food intake and hence affecting the nutrients' requirements of household members. Currently there is an influx of migrants who are almost squatters since a large number of persons are in single occupancy accommodation facilities and hence put a strain on existing amenities in the Metropolis.

Research Questions

This study seeks to address the question of how severe poverty is in the Northern Region using the Tamale Metropolis and Sagnarigu District as a case study. Specifically, the study will address the following questions:

1. What is the poverty level of household heads in the Tamale Metropolis and Sagnarigu District?
2. What is the extent and severity of poverty disaggregated by gender in Tamale Metropolis and Sagnarigu District?
3. What is the risk exposure of households to poverty over time in Tamale Metropolis and Sagnarigu District?

Objectives of the Study
Based on these questions, the study seeks to:

1. Examine household poverty levels in Tamale Metropolis and Sagnarigu District
2. Examine the gender segregated and severity of poverty in Tamale Metropolis and Sagnarigu District.
3. Assess the risk exposure levels of households to poverty in Tamale Metropolis and Sagnarigu District.

Literature Review

As population increases, with the limited resources available to the society, the level of poverty tends to increase. The increasing rate of rural-urban migration increases the level of dependency on the limited resources available in the urban areas. Gentilini (2015) confirms that as urban population increases, it becomes important to appreciate how safety nets work in urban areas. According to Engstrom et al. (2017), slum populations are growing at 4.5 percent each year in Sub-Saharan Africa. However, living in slums has a strong correlation with higher monetary poverty, higher fertility among women and lower school attendance among children. It also revealed that new migrants and ethnic minorities are disadvantaged in the job market, as they do not have access to social networks, which can be a medium to gain employment.

Owusu and Yankson (2007) have questioned whether urban poverty was being underestimated or rural poverty is still on the ascendency. This question

was based on biases of the consumption-based approach used in poverty analysis. Owusu and Yankson (2007) concluded that methodological biases are a bane to urban poverty analysis in a logical extension of the 'anti-urban' development where dependency ratio is on the ascendency. Nkum and Ghartey (2000) characteristically defined poverty as the "inability to afford basic needs, an absence of economic indicators, jobs, crop farms coupled with inability to meet basic social requirement". This contextually explains poverty in Tamale Metropolis and Sagnarigu District where households depend on a single income source for welfare analysis. Nkum and Ghartey (2000) and Narayan et al. (2000) applied the multidimensional clarification of poverty to assess poverty across several countries and identified poverty as complex and interwoven. This is attributed to the lack of shelter, assets, money, social exclusion, vulnerability, powerlessness and low self-esteem. Zuckerman (2002) also asserted that although women and men share the effects of poverty, these effects are at different levels since both sexes have varied coping strategies to poverty and are affected differently by intervention strategies. This can be related to constraints to access and ownership of assets in Sub-Saharan Africa. Current poverty reduction strategies do not adequately address the gender differences and hence are not gender - responsive to poverty reduction interventions (Bamberger et al., 2001).

BRIDGE (2001) earlier criticized poverty analysis using aggregation (whether on income or food availability type indicators) since it assumes that household resources are equally shared. This is not representative of the facts due to varied socio-economic factors. Consideration of poverty often neglects differentials between men and women in terms of their access to income, resources and services.

Extent and Severity of Poverty Disaggregated by Gender

According to Cook et al. (2016) between 1992 and 2013, Ghana's national level of poverty fell by more than half (from 56.5% to 24.2%). In spite of this trend, the three northern regions of Ghana continue to have the highest levels of poverty depth. In Ghana, gender is an important dimension of urban employment and poverty (Yeboah, 2010). Cooke et al. (2016) after examining the decomposition of poverty by the gender of the household heads found that female-headed households continue to have lower poverty rates (19.1% in 2013) than male-headed households (25.9%) and that extreme poverty presented a similar pattern. This may be attributed to the fact that policy interventions aimed at reducing poverty focused more on women. This confirms a new dimension in poverty analysis in Sub-Saharan African countries where poverty interventions focus on women leaving their male counterparts. To address the gender-biases in poverty analyses, Kiriti and Tisdell (2003) advocated for household level gender disaggregated data due to evidence of gender inequality among households where culture plays an important role in resource allocation. Access to and ownership of assets lie in the hands of males especially in developing countries. But current human development indicators' aggregations are in averages and hence inappropriate for poverty evaluation.

Household Risk Exposure to Poverty

The concept of risk refers to uncertain events that can cause damage to people's wellbeing such as falling ill (Christiaensen and Subbarao, 2001). According to Haq (2014), households face various risks and do not know whether any possible shock will hit them in future. Generally, a static approach is employed which does not consider possible future changes. The state of poverty of a household at a given point is not sufficient for assessing household poverty and for drawing results to design poverty reduction programs. Time-based poverty analysis presents pictorial view of the well-being of a household or an individual based on a short, medium and long term basis. This defines the resilience and vulnerability based on an exposure level.

Vulnerability is defined as the likelihood that at a given time in the future, an individual will have a level of welfare below some norm or benchmark (Quisumbing, 2002). Assessing vulnerability refers to the dynamic perspective, is explicitly forward looking and tries to include the risks that may push people into poverty in future. It is a function of the risk characterization of a person's environment -the nature, frequency and severity of the shock she is exposed to, his exposure to these risks as well as his

ability to cope with it when the shock materializes which is determined by his asset endowments and his ability to insure himself (formally or informally) (Alayande, 2002). Vulnerability of households results from exposure to risk, and also the households' conditions and actions.

Research Methodology

Types and Sources of Data
Primary and secondary data were used for this study. Primary data were collected using a semi-structured questionnaire on household income, access to basic services, income diversification, and respondent perceptions on poverty, priority needs and concerns, and effectiveness of programmes and policies on poverty reduction from beneficiary perspective. Key informant interviews were also conducted. Secondary data on the income and expenditure of residents in the Sagnarigu District and the Tamale Metropolis were collected from the District and Metropolitan Assemblies. Focus group discussions were also conducted to ascertain the validity of the individual responses.

Sampling Procedure
Tamale consists of two administrative assemblies; Tamale Metropolis and Sagnarigu District and presents all the indicators for assessing welfare and poverty. To achieve representation in this study, Tamale was categorized into four geographical zones ie. North, East, West and South. Two communities (urban and peri-urban) were selected from each zone and a random sample of 25 households taken from each community for an in-depth household survey. A total of 200 respondents were interviewed.

Data Analysis
This study acknowledges that poverty is multidimensional, manifesting as deprivation in income, malnutrition, illiteracy, morbidity, mortality, access to basic amenities, and vulnerability to economic shocks. Poverty analysis has mostly focused on income deprivation, which in many cases is linked to other forms of deprivations, even though they do not always move together.

Examining Household Poverty Levels in Tamale
a. *Income and Expenditure Approach*
The study employed the income and expenditure approach as used in ELL (2003) and GSS (2015). But

while the Ghana Poverty Mapping undertaken by the Ghana Statistical Service (GSS) in 2015 aggregated expenditure and poverty estimates into regional and district levels, this study focused on households.

This was used to indicate household economic welfare. Since the income approach only or the expenditure approach only does not adequately measure the poverty status of households, both measures were employed, data included both food and non-food goods produced by households, all household income sources, including income in-kind. Data on expenditure on goods and services consumed including the estimated value of consumption from income in kind were used. Using the expenditure function below,

$$Y_i = p \cdot q = e(p, x, u) \qquad (1)$$

where Y_i is the welfare of a household i measured as the minimum expense required to meet a given level of utility u, derived from a vector of goods x, at prices p. e is the expenditure function.

b. *Multi-Dimensional Poverty Index (MPI)*
The Multi-Dimensional Poverty Index (MPI) of the respondents was used to assess the overlapping deprivations in health, education, and standard of living suffered by individuals at the same time and the extent of the deprivations. This complemented the income and expenditure measures of poverty by showing the people who are multidimensionally poor.

Examining Severity of Poverty Disaggregated by Gender in Tamale
This objective employed descriptive statistics, charts as well as a cross-tabulation of gender disaggregated poverty estimates within Tamale.

Determine the Risk Exposure Levels of Households to Poverty in Tamale
This study applied a vulnerability analysis approach to assess the risk exposure level of households in the Sagnarigu District and the Tamale Metropolis. The vulnerability analysis assesses the risk threshold beyond which a specific household becomes vulnerable to extreme forms of poverty.

Vulnerability Analysis

Relative wealth or poverty can change rapidly as a result of external shocks (Dollar and Kraay, 2002). Since poverty analysis measures the current welfare status of households, vulnerability analysis focused on the *ex-ante* measure of household well-being and/or security in the face of shocks. Chaudhuri et al. (2003) defined household vulnerability to poverty as a probability condition representing 'a household's inability to attain a certain minimum level of consumption in the future'. Thus the estimate for the future consumption (C) of a household (*h*) at a time (*t*) is specified as;

$$C_{h,t} = C(X_h, \beta_t, \alpha_h, e_{h,t}) \qquad (2)$$

where X_h is a bundle of observable household characteristics, β_t is a vector of parameters describing the state of the economy at time t, and α_h and $e_{h,t}$ represent an unobserved time-invariant household-level effect, and other factors (shocks) that contribute to differential welfare outcomes for households respectively (Chaudhuri 2003). Thus the vulnerability to consumption poverty at a time *t+j* is specified as:

$$V_h = P_r(\ln C_h < \ln Z / X_h) \qquad (3)$$

where lnC_h measures the logarithm of household's real per capita consumption expenditure at time *t+j* and *Z* is an appropriate consumption benchmark (poverty line).

Results and Discussion

Socio-demographic Characters of Respondents

Results of the study showed that most of the respondents (52%) were female while the rest were male. Also, 86.2% of the respondents are headed by males which is expected of households in the Northern Region, 40% of the respondents were household heads themselves while 20% were wives of the household heads and 29.3% were sons or daughters of household heads.

In terms of age, mean age of respondents was 39 years and constitute the productive age group among urban dwellers. Majority (35%) of the respondents were aged within 26-35 while 26% were within the ages of 36-45. About 5% were within 56-65 years. Majority of the respondents (74%), for this study, were married while 1% were separated. The remaining were either widowed, divorced, or single.

Findings from the study revealed that about 78% of the households had 5 persons engaged in a livelihood activity. Majority of the respondents were aged 18 and above representing 65% of the respondents. This indicates that household members below 18 years are actively engaged in income generating activities. Also, average household size was six (6) with most of the members dominated by men. Most of the respondents attained primary education.

Table 1: Socio-Demographic Characteristics of Respondents

Descriptive Statistics	Age	Level of Education	Native	Sex	Sex of HHH	HH Size
Mean	39	3	1	1	1	6
Median	35	1	1	1	1	5
Maximum	78	6	1	1	1	13
Minimum	17	1	0	0	0	1
Std. Dev.	14.62	1.91	0.38	0.50	0.38	2.49
Skewness	0.95	0.55	-1.73	-0.24	-1.73	0.61
Kurtosis	3.30	1.59	3.98	1.06	3.98	3.12
Jarque-Bera	11.52	10.03	40.23	12.51	40.23	4.76
Probability	0.00	0.01	0.00	0.00	0.00	0.09

Source: Field Survey, (2018).

Note: Gender (1=Male, 0=Female), Gender of HH (1=Male, 0=Female), Native (1=Indigene, 0=Otherwise), Level of Education (1=None, 2=Non-Formal, 3=Primary, 4=JHS, 5=SHS/Vocational, 6=Tertiary)

Examining Household Poverty Levels in Tamale

Income and Expenditure Approach

Results of the study, as presented, are based on an assessment of household poverty levels in Tamale using an income-expenditure approach. This approach is complemented by the Multi-dimensional Poverty Index (MPI) to assess deprivation in terms of basic amenities and utilities. The MPI for this study was constructed based on the global and national measure of acute poverty. An MPI construct identifies deprivations based on education, health and living standards with the number of people who are multidimensionally poor and the deprivations they face at the household level.

Findings from the study revealed the various sources of household income. These ranges from income as result of migration, casual works, salary works, agricultural outputs, property rental, handicrafts, street vending, hawking as well as other sources of income. Out of the various sources of income, earnings from men's wages provided the highest

sources of income at an average of GHC639 per month followed by earnings from casual works for men. Alcohol brewing and resale were the least source of income and this is expected as the Tamale Metropolis and Sagnarigu are Moslem - dominated communities with strong traditional system of governance capable of controlling sale of alcoholic beverages. This further showed that earnings from agriculture was not significant and this is expected since the average age of the respondents was 39 and the sampled communities were the urban-peri-urban communities. Findings on the various sources of household income including earnings from each of the sources are shown in Figure 1 below.

As shown in Figure 1 below, previous week household expenditure was the highest at GHc459.00 per month followed by expenditure on food beverages. None of the respondents spent their earnings on recreation and this was to be expected as people from these areas do not attach significance to recreation. Also, recreation centers are not

earmarked adding to the low interest in recreation among residents of the Tamale Metropolis and the Sagnarigu District. Findings from this study further confirm the role of food in household food expenditure and how food prices constitute a major part of earnings of households in Ghana. The amount spent on rent was also very low with only one respondent paying rent. This can be attributed to the effectiveness of the extended family systems and how family and tribal ties are prioritized and as such, landlords and family heads would give out rooms for free to relations rather than to rent out to non-family members. Rent rates were expected to be high especially in the Zongo areas (Hausa and Moshie areas) due to the prevalence of immigrants from Niger and Mali but instead these immigrants were crowded in single rooms and contribute to settle rent and other utility bills.
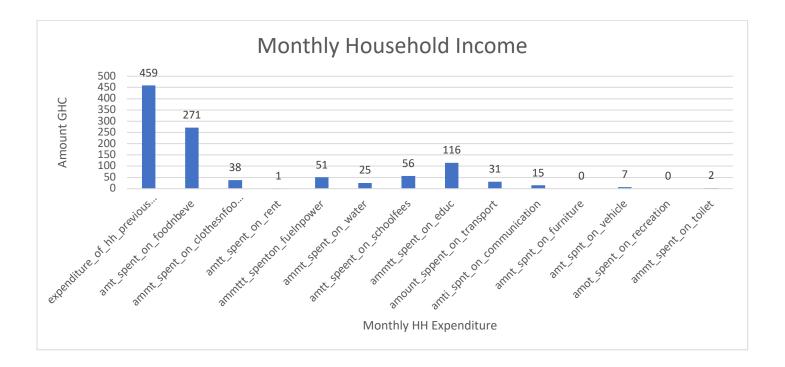

Figure 1: Monthly Household Expenditure in the Tamale Metropolis and Sagnarigu District of the Northern Region

Source: Field Survey Data, (2018).

Local economic activities are active in the two areas, that is Tamale Metropolis and Sagnarigu District and this is evident in the high income earned relative to the household expenditure. But the significant part of this study is the role of gender in local economic activities. Among all the categories of earnings, earnings from men are higher compared to women.
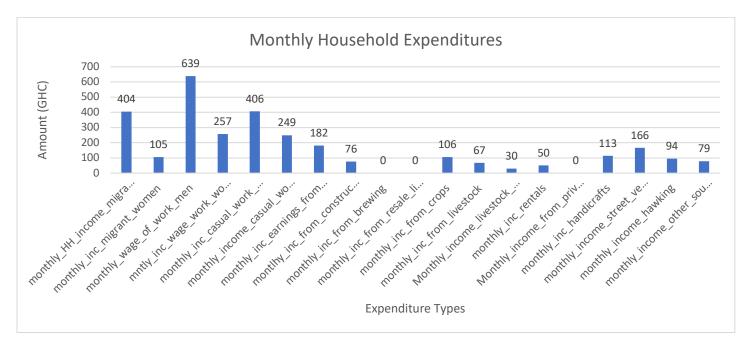
Figure 2: Sources and Amount of HH Incomes in the Tamale

Source: Field Survey Data, 2018.

Expenditure Priorities of Urban Dwellers in Tamale

Urban household expenditure is concentrated on food and beverages, clothing, rent and accommodation, fuel and power, water, school fees, education, transportation, communication, furniture and household appliances, vehicle and vehicle maintenance, recreation as well as toilet amenities. This was identified when respondents ranked, in order of relevance, the various household expenditures in the Sagnarigu District and Tamale Metropolis. Expenditure on food and beverages was ranked high while recreation was the lowest in terms of a household's expenditure. The high rank on food and beverages was attributed to high cost of food prices in Tamale and respondents desire to meet the daily food intake requirement. Household food expenditure still constitutes the highest components in household overall expenditure and household heads always give priority among the list of expenditures. Household expenditure on food is the main driver of expenditure in the study areas and this is confirmed by an average household size of six which requires giving priority to food. Increased mobile penetration in urban areas has enhanced expenditure on mobile communication for reasons such as connecting to distant relations, business and trade deals as well as social networking. Means of transport especially with motorbike and motor tricycle are owned by most low income earners and hence urban dwellers relied on motorbikes as a means of transport.

Table 2 presents the rankings of the expenditure patterns faced by respondents in Tamale. These rankings are confirmed by the Kendell's coefficient of Concordance (W) of 0.313 with a Chi-square of 278.230 and asymptotically significant at 1%. Since the computed chi-square is greater than the chi-square critical, the null hypothesis was rejected in favor of the alternate hypothesis that there is agreement among rankings on the expenditure patterns of urban dwellers in Tamale. This is confirmed by the 31.3% agreement among rankings on the expenditure patterns in Tamale.

Table 2: Expenditure Patterns of Urban Dwellers

Sources of Expenditure	Mean	Rank
Food and Beverages	1.15	1
Communication	1.73	2
Transport	2.66	3
Water	4.05	4
Fuel and power	5.43	5
Education	6.28	6
Clothes and Footwear	6.93	7
Toilet	8.05	8
School fees	9.28	9
Vehicle	9.79	10
Furniture and Appliances	11.06	11
Rent	11.59	12
Recreation	13.01	13

Source: Field Survey, (2018).

Household Assets Control and Ownership

The gender dimensions in assets' ownership and control were assessed and findings revealed that, assets were under the control of males. This was not surprising as the customs and traditions give control and power to men. Findings further revealed that, in all categories of assets, control rests on the males. Assets of relevance to urban dwellers included land, vehicle, living room furniture, livestock as well as donkey carts. All these assets were owned and controlled by males either as members of a household or as household heads. For land, males who are not heads of households own and control lands more than females who are not household heads. This was attributed to the desire of every member of a household to own land and also put up a building. Also, males who are household heads owned more lands compared to female-headed households. Table 3 presents a sex-based cross tabulation of assets ownership, control and usage of assets among urban dwellers in Tamale.

Table 3: Household Assets Control

| Household Asset Control | Position in HH | Sex | | Total |
		Female	Male	
Land	Member	32	124	156
	Head	16	28	44
Total		**48**	**152**	**200**
Vehicle	Member	25	150	175
	Head	5	20	25
Total		**30**	**170**	**200**
Living Room Furniture	Member	45	100	145
	Head	15	40	55
Total		**60**	**140**	**200**
Livestock	Member	30	38	68
	Head	3	129	132
Total		**33**	**167**	**200**

Source: Field Survey, (2018).

Also, members of household who are not heads owned and controlled more vehicles among males than females while male-headed households owned and controlled more vehicles than females who are household heads. The same was recorded for living room furniture, livestock and donkey carts. This confirms the traditional and cultural beliefs of men owning and controlling assets among Northern tribes.

Non-income indicators

Housing

One indicator of wellbeing of urban populations, beyond the income and expenditure measures, is the qualitative dimension which considers comfort, health, personal safety, and social inclusion as felt by urban dwellers. Lack of and low quality employment, low levels of education, large household sizes and poor conditions of housing are characteristic of the urban poor (Zainal, Kaur, Ahmad, & Khalili, 2012).

Up to 79% of respondents live in compound houses of between three rooms (small compounds) and 10 rooms (large compounds). Three quarters of houses of respondents in Tamale are built with cement blocks while 23% of homes are exclusively built with sand/mud. However, all houses have their flooring made of cement. Corrugated iron roofing sheets are the main roofing materials in about 88% of homes in the study area.

These indicators point to a general improvement in wellbeing and living conditions in the study area compared to the situation in 2010 (GSS, 2014). However, the number of people living in uncompleted houses in the city appears to have doubled, reaching 6% in this study.

Table 4: House Type and Materials Used for Building

Type of House	Materials used for building walls		
	Cement Blocks	Thatch	Sand/Mud
Semi-detached	8.6	0.7	2.0
Flats/Apartment	1.3	0	0
Compound house (rooms)	62.5	0.7	14.5
Huts/buildings (same and different compounds)	0	0	1.5
Uncompleted buildings	1.3	0	1.3

Source: Field Survey (2018).

Overcrowding, which has been defined as more than three persons per room (GSS 2013) is a significant indicator of the condition of housing among the urban poor. In the three regions of the North, overcrowding is generally reported to be lower than the rest of Ghana (GSS, 2013). From this study, the average household size is found to be 6 persons, with an average of 5 sleeping rooms per household. This translates to an occupancy rate average of 1.2 persons per room. This is a significant find, considering that this condition means the people in the city are not faced with space related issues of discomfort and lack of privacy in their living conditions.

Housing costs are argued to constitute an important and most direct impact of housing on poverty and material deprivation (Tunstall et al., 2013). For many households, cost of housing (rent) is only second to the cost of food on monthly household expenditure. As such the less the household spends on rent, the more household income is available for other household expenditures.

It emerged that up to three-quarters (76%) of households live in houses that they owned, with 10.7% living in rented accommodation. Up to 13.3% of responding households are living in unrented houses, being caretakers of the houses in which they lived.

Table 5: Land Ownership and Occupancy Status of Respondents

Occupancy Status	Ownership of Land				Total
	Yes	No	Don't Know	N/A	
Own	70.6	2	0.7	2.7	76.0
Rented	0	4.7	0.7	5.3	10.7
Unrented (Caretaker)	2.7	5.3	0.6	4.7	13.3
Total	73.3	12	2	12.7	100.0

Source: Field Survey, (2018).

The study revealed that households renting accommodation pay between Gh¢60.00 and Gh¢400 a month, excluding utility charges, with the majority of households in this study owning the house and land on which they have their houses as shown in Table 5. It implies that cost of accommodation is relatively cheaper for many households in Tamale.

Water

With increasing urban populations, and urban infrastructure investments not keeping pace with the speed of urbanization in developing countries like Ghana, which is mostly unplanned, the stresses on water, sanitation, and hygiene infrastructure of many cities are beyond existing capacity. The statistics show that 40% of Ghanaians access safe drinking water, and in places like Tamale, issues of insufficient water supply and institutional constraints present barriers to the access and use of water (UNICEF, 2018; J-PAL, 2012). Studies in 2013

indicated that up to 50% of residents of northern Ghana do not have access to safe drinking water, and as such depend on unimproved water sources. Further, residents of Tamale do not get the minimum daily 20 liters of water per capita needed for healthy living, attributed mainly to poor access to water sources (Cheng et al., 2013; Awepuga, 2013).

However, from this study, it was revealed that most households (90.8%) have access to water from improved sources (piped public water into homes, public standpipe, and protected mechanized boreholes), while the remaining 9.2% access water from unimproved sources (unprotected wells, unprotected boreholes, dams and streams, and also from water tankers). This is a significant improvement because just 22.7% of households in Tamale were accessing water from improved sources in 2010 (GSS, 2014). Table 6 shows the main sources of water to households in this study.

Table 6 Main Water Sources

Water Source	Frequency	Percent
Potable water piped water directly to house	24	15.8
Potable water piped to an outside tap (within yard, but outside house)	70	46.1
Potable water piped to (public) collection point	32	21.1
Well	13	8.6
Bore hole	12	7.9
Water tanker supply	1	.7
Total	**152**	**100**

Source: Field Survey (2018).

For households getting water from a public collection point, the task of collecting water is mostly the responsibility of elderly women and older children. It takes between 10 to 15 minutes to make a return journey when going for water, but this can take up to 40 minutes for some households. It takes an average of 10 minutes of queuing at the taps before it is one's turn to get water. Thus, for many households in this study, it generally takes up to 25 minutes to get water. Though the time spent in water collection does not differ from studies conducted in other jurisdictions (Graham, Hirai & Kim, 2016),

respondents expressed a desire for a reduction in time for water collection by placing improved water sources closer to their households.

Sanitation

According to the Ghana Statistical Service, "a household is considered to have access to improved sanitation if it has some type of flush toilet (WC) or pit latrine, or ventilated improved pit (KVIP) or provided that they are not shared. Otherwise it is considered as deprived in sanitation" (GSS, 2013). In the same report, the three regions of the North are

reported to fall behind in the use of all types of toilet facilities, with the rate of open defecation being as high as 72.6%.

From Figure 4.1, however, up to 93% of the households in this study have some form of toilet facility in their homes, thus indicating improved sanitation. The commonest toilet facility is the KVIP latrine. Only about 7.3% of households have their members practicing open defecation.
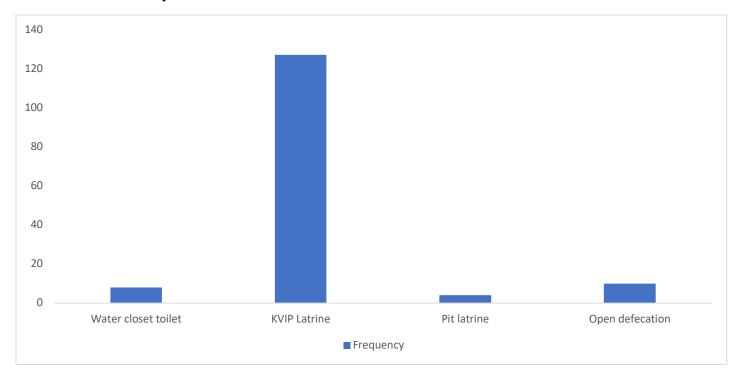

Fig. 4.1: Type of Toilet Facility Used by Households

From the study, 84% of responding households have access to a shared toilet facility, whereas 13.4% have toilet facilities exclusive to their households. It costs households between GHS0.50 and GHS1.00 each time a household member accesses a public toilet facility in the study area. This paints a positive picture of the sanitation situation in Tamale which could be due to the renewed efforts at improving sanitation in the city through the provision of household toilets by local government authorities as well as NGOs/CSOs.

Hygiene

In half of the instances, it was observed that households had some sort of sanitary pollution affecting them and their immediate neighborhoods. The amount of litter observed in and around households was observed to be low and medium, 55% and 39% respectively in most instances. This could be due to the fact that the observations were made during the dry season, when generally there is little litter around.

Food Consumption and Nutritional Wellbeing

Even though the determinants of food and nutrition security are the same for both rural and urban settings, there is a greater dependence on food purchase in urban dwellings. As such, the more sufficient a household's purchasing power is, the more varied its diet and the more the reliance on "ready-to-eat" and fast foods, compared to rural households. In consequence, food availability and food access are impacted more by such factors as changes in fuel prices, food prices, utility prices, and even the socio-political environment in urban settings than in rural areas (FANTA-2, 2008; Mohiddin et al., 2012). From this study, about a quarter of households (26%) run out of food sometimes within the last 12 months under review (April, 2017 to April, 2018). In many of the instances, these households ran out of food because they did not have enough financial resources to make food available for household consumption (82%). A second reason was poor harvest (18%) from the previous farming season (particularly for farming

households), which resulted in low household food stocks to last the year.

Food shortages typically occurred in the months of May, June, July, and August of 2017, as well as in March of 2018. Twenty-nine responding households (19.5%) expect to run out of food before the next harvest season in 2018. The principal reasons for this expectation included low household food stock levels currently and inadequate household income to sustain current household consumption. In analyzing the household hunger situation in the Metropolis, it became evident that many households are able to meet the food consumption needs of household members. However, there are still households that are unable to meet their food needs. This is seen in Table 7.

Table 7: Household Hunger in a 30 Day (4-Week Period) Period.

Measure	Frequency	Percent
No food of any kind to eat due to lack of resources to get food	26	17.3
Household member(s) going to sleep at night hungry because there was not enough food	11	7.3
Household member(s) going a whole day and night without eating anything because there was not enough food	4	2.6

Source: Field Survey (2018).

With very few social protection and safety nets, it has been argued that the urban poor tend to depend on informal sector jobs which offer incomes that barely meet their consumption needs, as such they resort to borrowing money, and many other risky coping mechanisms to meet current consumption needs, thus driving them into high levels of debt (Mohiddin et al., 2012). As seen in Table 8 below, the majority (89.6%) of responding households which run out of food within the last 12 months under review indicated that they borrow or purchase food on credit so as to meet current consumption needs.

Table 8: Actions Taken When Household Runs Out of Food.

Action	Frequency	Percentage
Purchase from the market	47	40.5
Borrow/credit food stuff	57	49.1
Sell off some household assets to purchase food	1	0.9
Rely on relatives and neighbours for support	10	8.7
Go hungry	1	0.9

Source: Field Survey (2018).

House food sufficiency was assessed and findings revealed that males were more food sufficient compared to females but more females experienced food insufficiency than males among urban dwellers in Tamale. Respondents attributed the male-dominated food sufficiency to the control they have over household food as well as the females' lack of a livelihood activity. Also, food insufficiency among urban dwellers was also attributed to income inadequacy, low yields as well as delay in salary and wage payments. Inadequate income, according to the respondents, was due to lack of regular source of income.

Results of the urban poverty situation in Tamale revealed a number of factors militating against household poverty status. This was observed from the six significant variables influencing net household income as a proxy of the poverty status. Age of respondent, educational status of respondent, previous week expenditure, marital status of respondent, occupation of household head as well as the sex were statistically significant.

Age was negative and statistically significant at 10%. This indicates that, an increase in age of a household member will lead to a decrease in aggregate household income. This confirms the observation on the field that average age was 39.

Level of education of respondents was positive and statistically significant at 10%. This indicates that the higher the level of education of a household member, the higher the income and hence shift above the poverty line. This was attributed to the employment options available to household members with higher education. A household's previous week expenditure positively influences income of a house in Tamale and statistically significant at 10%.

Marital status of respondents in Sagnarigu and Tamale was statistically significant at 10%. Comparing married household members to widows and singles, married couples have additional labour which increases the likelihood of an added income. Occupation of household head negatively influenced aggregate household income and highly significant at 1%. This indicates a household income declines if more members of a household are gainfully employed.

Table 9: Generalized Linear Model Results on Drivers of Household Poverty in Tamale

Independent Variable	Coefficient	Std. Error	z-Statistic	Prob.
Age	-0.2392*	0.1133	-2.1107	0.0348
HHM Income	0.4150	0.3757	1.1046	0.2693
Education	0.5768*	0.3403	1.6946	0.0901
Previous HH Expenditure	0.0054*	0.0022	2.4995	0.0124
Literacy	-0.1316	0.6197	-0.2123	0.8318
Marital Status	1.4433*	0.8323	1.7341	0.0829
Native Status	4.7084	3.9479	1.1926	0.233
HHM Occupation	-0.1595***	0.0401	-3.9790	0.0001
Relationship to HH	-0.9123	0.6842	-1.3335	0.1824
Sex	-2.1061**	0.7303	-2.8840	0.0039
HHH Sex	2.4694	3.9998	0.6174	0.537
HH Size	-0.0846	0.2031	-0.4167	0.6769
C	2.9713	5.7381	0.5178	0.6046

Note: ***, ** and * are statistically significant at 1%, 5% and 10% respectively.

Finally, sex of a respondent was negative but statistically significant at 5%. This is an indication that the probability of a household income reducing and hence moving the poverty bracket increases if the household head is a female. This is confirmed by the lack of an alternative livelihood activity to support the overall income of a household. Table 9 below presents results of the generalized linear regression results on the determinants of household income in Tamale.

Conclusions and Policy Recommendations

Conclusions

Poverty is a huge concern among urban dwellers due to an average monthly income of GHS150 with an exorbitant basket of expenditure. This is based on the expenditure of urban dwellers which is far more than the average income earned. This is a concern even among household heads as remittances and other sources of income are not forthcoming. Urban poverty is enhanced by the lack of social capital coupled with increasing utility tariffs with a translated cost in production and processing activities. The result is an increase in food prices and cost of utility tariffs. Tamale which is noted for male-dominated household roles coupled with low or lack of assets control by women further worsen the poverty situation among households as household expenses are borne by the man who is the head of the household. Urban dwellers consider themselves as either poor or rich and perceive poverty as either a lack of money or their inability to meet basic household needs. Urban dwellers consider unemployment as poverty but still consider living in urban areas better compared to rural areas due to the availability of basic amenities such as toilets, access to portable drinking water and electricity.

Poverty and low income are associated with the sex of household heads and an indication that the lack of gainful economic activity worsens the plight of women in the urban areas. Control and access to resources are associated with males. This therefore calls for livelihood intervention programmes to address unemployment situations of women.

Policy Recommendations

- Based on women's lack of and control of assets in both Sagnarigu and Tamale, poverty in urban areas are gender-based and requires critical attention. This therefore calls for an effective and redesigning of the Livelihood Empowerment Against Poverty (LEAP) programme to include persons living in the urban areas.
- Another area requiring critical attention is the land tenure system where lands are vested in the hands of traditional leaders who then transfer ownership to men with little priority given to women. This leaves women with no or minimal access to lands. A land tenure policy review in urban Tamale and Sagnarigu is required to ensure women have equal and adequate access to lands.
- More emphasis on education is required especially among females since there is a cultural shift of emphasis to petty trading as a quick source of money. This has caused a further gap in girl-child education and by extension, adult literacy improvement.
- Also, skills training and tailoring are common among young male and females in the Tamale but these category of people lack the start-up capital to set up their own businesses hence rending them inactive after graduation. The Ministry of Business Development should give attention to skills training graduates towards employment and engaging the youth in productive ventures.
- Education plays a leading role in the safety net of poverty and access to quality education should be given priority by stakeholders.

Neither UDS/UNICEF nor the GIDRN are accountable for the content of this paper.

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