

ANALYSIS OF POVERTY DYNAMICS; EVIDENCE FROM MONETARY POVERTY IN GHANA

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ABSTRACT

There has been an increasing call for researchers and countries to move beyond the static measurement of poverty to its dynamic nature. Static poverty measurements have been criticised for their limited explanatory power and their inability to reveal the processes that are pivotal to the persistence of poverty. Using a panel of 4,366 households the paper measured changes in household consumption expenditures during a five-year period and the associated correlates. The study revealed that at every point in time, about two-thirds of Ghanaian household poverty was transient while a quarter was chronic. Within the period 17 percent non-poor households slipped into poverty while a half of the poor households escaped poverty. Applying a multinomial logit the results showed that household demographics had more influence on chronic than on transient poverty and the determinants of these poverty types were not exactly the same which called for varying antipoverty interventions. such as direct cash transfers that tackles transient poverty and policies that eradicate chronic monetary poor land reforms, targeted microfinance, targeted school feeding programme.

KEYWORDS: Poverty, dynamics, Ghana, static, monetary, welfare, household

1.0 INTRODUCTION

The canker of poverty, no matter the form it is viewed on the welfare of individuals is far from being eradicated from the continent of Africa (Anakudo & Ezenekwe, 2022; Omomowo, 2018). Poverty studies have been done conducted in terms of one's financial ability to acquire some basic necessities of life or in terms of capabilities (Kim, 2019; Konkel, 2016; Kumar, 2018; Lemanski, 2016). In studying the phenomenon in other parts of the world, especially in Sub-Saharan Africa many authors have resorted to static analysis of the problem due to the non-availability of panel data (Alkire & Housseini, 2014; Obayelu & Edewor, 2022; Olofin et al., 2015). However, there is an increasing call to move beyond the static measurement of poverty to its dynamic nature (Fujii, 2014, 2017; Wang et al., 2023) Click or tap here to enter text.. Static poverty measurements have been criticised for their limited explanatory power and their inability to reveal the processes that are pivotal to the persistence of poverty. Furthermore, it is criticised as having a shortcoming of not able to deal with the problem of poverty the poor groups are categorized as either poor or non-poor at every time without offering any insight into the nature of movement from one category to another within time (Cantó et al., 2006; Jeandidier & Kop, 2019). Since policy effectiveness will rely on such information, analysis of poverty dynamics is preferred over static analysis when data permits it (Barrett et al., 2016; Biewen, 2014; Magombeyi & Odhiambo, 2017). Literature from Ghana on poverty has mainly focused on cross-sectional analysis due to the lack of panel data (Adjasi & Osei, 2007; Coulombe & Wodon, 2007; Fuseini et al., 2019; Orkoh et al., 2020). Some studies such as Appiah-kubi et al., (2007), Agyire-Tettey et al., (2019) and GSS, (2013, 2020) however, went beyond the single indicator static poverty analysis to examine poverty in its multidimensional form using these cross-sectional data. These studies also fall short of providing a deep insight into the dynamic nature of the problem being studied over time.

Lawson et al. (2012) studied the poverty dynamics among 304 women living in the coastal zone of Ghana. The data used was limited to the section of household living along the coastal zone of the country and lacked the national dimension. Again, using a panel data of 464 households from eight

villages in the Eastern and Upper East administrative regions of Ghana, Dzanku (2015) examined the transitory (i.e., dynamic) nature of rural livelihood and how this relates with poverty. Although the study used a panel it was, first of all, not a nationally representative and, also provided no information secondly, said nothing at all about monetary poverty and its dynamics. Lumping up both one-time poor and persistent poor and applying one policy to it leads to inefficiencies in policy impact and underestimation of the number of poor in a country (Wang et al., 2023). This study is concerned with using the monetary measure to estimate the dynamics of poverty in Ghana using a two-wave panel, spanning 2009/2010 to 2013/2014. Specifically, the study investigates the trends and determinants of monetary poverty dynamics in Ghana. The study shows how poverty in Ghana has evolved with time for the household for the periods 2009 and 2014 using panel data. This study is significant in the sense that by employing the panel data to study the phenomenon of monetary poverty in a dynamic analysis, the study bridges the gap of the lack of dynamic analysis of poverty in Ghana. In addition, as a small middle-income economy, this study is intended to deepen the understanding of the dynamics of poverty in such economies.

2.0 LITERATURE REVIEW

A review of empirical works on dynamics of poverty by Baulch and Hoddinott (2000) and Yaqub (2000) provides a starting point in understanding the nature of the poverty over time using household longitudinal data. Baulch and Hoddinott (2000) identified three types of households when comparing thirteen different panel data in ten countries as follows: households that are always poor; are sometimes poor; or are never poor. One significant observation made was the fact that the percentage of households that fall in the sometimes poor category are much greater than those in the always poor category. Also using 19 datasets scattered among four continents- Africa, Asia, Latin America and Post-socialist country, Yaqub (2000b) suggested that the reason for the large size of the households falling into sometimes poor category may be explained by the short nature of the panel which may either two or three waves. Neilson, Contreras, Cooper and Hermann (2008), Narayan, Kotikula and Zaman (2010), Woolard and Klasen (2004), Jalan and Ravallion (1998), McCulloch and Calandrino (2003) provide various factors categorised under demographic, human capital, physical capital, geographical location, economic related and health variables that determine the dynamic nature of poverty. Both Fiess and Verner (2004) and Neilson et al.(2008) found that the probabilities of falling into poverty increases as one ages but very low for young ages. Jalan and Ravallion (1998) in a study in rural China also found that life-cycle hypothesis underpins their result. In the study they estimated that transient poverty falls for household members with ages up to about 45 years of age but rises afterwards. In Nepal, Dev Bhatta and Sharma (2011) found that with respect to household size the odds of being chronically or transiently poor increase with increase in the size of the household whereas Haddad and Ahmed (2003) in Egypt, and Jalan and Ravallion (2000) in China found that whereas chronic poverty is associated with increasing household size the same cannot be said of transient poverty. Eigbiremolen (2018) estimated that between 2010 and 2013 larger households living in Nigeria experienced a fall in their consumption giving credence to why these households were more likely to be chronically poor within that period. McCulloch and Calandrino (2003) also found in their study in rural Sichuan in China, that household size is strongly associated with being chronically poor.

Bigsten and Shimeles (2004) analyzed the dynamics of poverty using spells and component approach for ERHS 1994-1997 and found that households size in the rural areas were transiently poor, household size, while it reduces the probability of leaving poverty also reduces the probability of entering poverty. Contrarily, Adepoju (2012) found that majority of the rural residents of rural South Western Nigeria suffered from chronic poverty and household size increased the probability of the household staying chronically poor while household size decreased the odds of exiting transient poverty. Glewwe, Gagnolati, Zaman and Glewwe (2002) found that between the periods of 1993 to 1997 the female headed households experienced a greater reduction in the poverty rates than that of their male

counterparts in Vietnam. Muller (1997) in a study using Rwanda data found however, that female headed households (and perhaps elderly heads) were associated with higher chronic poverty index.

The utility model of poverty has been applied to the study of poverty dynamics and its correlates. For instance such studies identify households headed by married couples to have the potential of reducing poverty compared with heads that are single. Rodgers (1991) provided two reasons underlying this. Firstly, married couples can better take advantage of economies of scale than single heads especially in the purchase of housing and other goods. Secondly, there is a better economic support for the other partner in case one is laid off. Literature on relationship between employment and poverty dynamics shows that there exists a direct relationship between the percentage of agriculture labour in a state and the propensity for the state to remain in poverty for years (Adelman et al., 2018). Education has also been found in the literature of dynamics of poverty to contribute to the reduction of both transient and chronic poverty. Gonçalves and Machado (2015) in a study in Brazil found that a adults with secondary and college education or those with a higher proportion of average or highly-qualified skilled workers lessen the probability of the household being always, usually, churning or occasionally poor as compared with the probability of it being non-poor. In a study in Ghana by Lawson, Gordon and Schluchter (2012) the authors explored the perception of women in some coastal areas of Ghana and the linkages between poverty and the environment. The current study is made possible to the availability of a two-wave panel data which have been collected by Economic Growth Centre (EGC) at Yale University and the Institute of Statistical, Social, and Economic Research (ISSER) at the University of Ghana

3.0 METHODOLOGY

The study investigated the phenomenon using a quantitative method that enables generalization about the entire poverty state of Ghana (Creswell, 2014). Two waves of the Ghana Socioeconomic Panel Survey data by the Economic Growth Centre (EGC) at Yale University and the Institute of Statistical, Social, and Economic Research (ISSER) at the University of Ghana, Legon were used. The first wave was conducted in 2009/2010 while wave two was completed in 2013/2014. A two-stage stratified sample design was used for the survey. Stratification was based on the 10 old regions of Ghana. The first stage involved selecting geographical precincts, or clusters, from an updated master sampling frame constructed from the 2000 Ghana Population and Housing Census. A total of 334 clusters (census enumeration areas, or EAs) were selected from the master sampling frame. The clusters were randomly selected from the list of EAs in each region. The selection was based on a simple random technique. A complete household listing was conducted in 2009 in all the selected clusters to provide a sampling frame for the second stage selection of households. In the second wave, the selection of the clusters was based on the 2009 sampling frame. The second stage of selection involved a listing of all the households in the selected enumeration areas (clusters) and a simple random sampling of 15 of the listed households from each selected cluster. For wave two due to movements in and out of the household the study ended up with a panel consisting of a sample of 4366 households that contained 16,356 members.

In measuring poverty, the study applied the class of decomposable poverty measures by Foster, Greer and Thorbecke (FGT). This method shows the property of consistency and additive decomposability Foster et al. (1984). This is shown in equation 1;

$$P_{\alpha} = \frac{1}{n} \sum_{i=1}^q \left(\frac{z-y_i}{z} \right)^{\alpha} \quad (1)$$

Where z is the poverty line, y_i is the household's consumption expenditure per adult equivalent; i is the household; q is the number of poor people in the population of size n , and α is the poverty aversion parameter that takes values of zero when measuring incidence (P_0), one when measuring poverty gap

or depth (P_1) or two when it is measuring the severity of poverty (P_2). Two nutritionally based poverty lines were used and calculated by the Ghana Statistical Service (GSS). The first is the food poor or the extreme poverty line which was based on per adult equivalent expenditure per year of GH¢ 792.05. Any individual whose total expenditure fell below the amount was referred to as severely poor. The second line which the study called normal poor is GH¢1,314 per adult equivalent expenditure per year. The "spells" approach in which a household that is poor in only one period is considered transient poor, while a household that is poor in both periods is classified as chronically poor was adopted following Alisjahbana and Yusuf (2003), Brück and Workneh Kebede (2013), and Dartanto & Nurkholis, (2013)

3.1 Estimating the Determinants of Poverty Dynamics

The study applied the multinomial logit regression model in identifying the correlates of poverty dynamics. This model has been used by a variety of authors including Gaiha et al. (2011), Adepoju (2012) as well as (Bhatta & Sharma, 2006). The probability(P_{ij}) that a household i belongs to a particular poverty status j was modelled as a function of the explanatory variables X_i as seen in equation 2.

$$P_{ij} = Prob(Poverty = j) = \frac{e^{X_i^1 \beta_j}}{1 + \sum_{k=1}^2 e^{X_i^1 \beta_k}} \text{ for } j = 0, 1, 2 \quad (2)$$

Where β_j is a vector of coefficients, and X_i is the vector of the independent variables. P_{ij} is the probability of a household (i) in the panel having the status of (j) which can take 0 as Poor and 1 as non-poor in a static regression and a dynamic model takes on values of 0 as non-poor, 1 as transient poor and 2 as chronic poor. The base category was chosen in each category of regression. The independent variables (X_i) included in the study consisted of demographic, human capital variables, employment regional and rural-urban location variables. Household Head saving, renting status, ownership of tools, dwelling type and the household head receiving transfer are all variables included in the model as control variables.

4.0 RESULTS AND DISCUSSIONS

4.1 Descriptive Statistics

Table I provides the summary statistics for the ratio variables of the independent variables while Table II provides the descriptive statistics for the categorical variables. In all, the sample used for the analysis in the two surveys was 4,366 households in a balanced panel.

Table I. Descriptive statistics of ratio variables

Year	Variable	Mean	SD	Min	Max	N
2009	Age of Head	47.74	14.91	15.00	109.00	4,366.00
	Household Size	4.96	2.64	1.00	20.00	4,366.00
2013	Age of Head	50.53	15.00	12.00	114.00	4,366.00
	Household Size	4.00	2.51	1.00	17.00	4,366.00

Source: Author's computations from ISSER-YALE socio-economic data (2009 and 2013)

In 2009 average household size was about 5 with a maximum of 20 members and a minimum of 1 member. In 2013 however, the average household size had reduced marginally to about 4 members per household with the maximum also reducing to 17. The distribution of household size was also higher in rural areas for both waves, averaging almost 6 in 2009 and 5 in 2013 than for urban households. Female heads had higher ages than their male counterparts. Table 4.2 shows a greater percentage (31%) of the household heads did not have any form of qualification in 2009/2010 similar to what pertained in 2013/2014 when they also formed 31 per cent. However, in both periods Junior High certificate

holders formed the greater percentage of the sampled household head with some form of educational attainment, being 27 per cent in 2009 and 38 per cent in 2013. The majority of the sample, forming about 19 per cent were from the Ashanti region in both 2009/2010 and 2013/2014 followed by the Greater Accra region which forms about 16 per cent of the sample. The majority of the sample forming about 55 per cent was from the rural sector in 2009 while the urban sample was about 45 per cent. In 2013 rural sample was formed 51 per cent while the urban was 49 per cent.

Table II: Descriptive Statistics of Demographic and Socio-economic Variables

Variable	2009/2010		2013/2014	
	Percentage	Observation	Percentage	Observation
Gender of heads				
Female	29.3	1277	35.4	1546
Male	70.7	3089	64.6	2820
Household Size				
Below 2	7.7	335	14	611
Between_2_and_3	22.6	988	28.4	1238
Between_4_and_6	45.7	1994	41.8	1827
Above_6	24	1050	15.8	691
Head Education				
None	30.5	1252	30.5	1333
Preschool	9.1	372	1.4	63
Primary	21.7	893	13.8	601
JHS	26.5	1088	37.8	1649
SHS	7	289	6.1	267
Tertiary	5.2	213	10.4	453
Region(Admin)				
Western	9.2	401	9.2	401
Central	9.2	401	9.2	401
Greater Accra	16	699	16	699
Volta	7.6	330	7.6	330
Eastern	9.6	418	9.6	418
Ashanti	18.9	825	18.7	816
Brong Ahafo	10	435	10	435
Northern	11.6	506	11.8	514
Upper East	4.8	211	4.8	211
Upper West	3.2	140	3.2	140
Location				
Rural	54.8	2391	50.7	2213
Urban	45.2	1975	49.3	2153

Source: Author's computations from ISSER-YALE socio-economic data (2009 and 2013)

4.2 Monetary poverty profile

Table III shows that 29.5 per cent of the population in 2009 was poor. In 2013/2014 the rate dropped to 21.5 per cent. About 11.9 per cent of households had mean expenditure below the poverty line in 2009/2010 and dropped further to 8.7 per cent in 2013/2014. The severe poverty measure was 7.8 per cent in 2009/2010 but in 2013/2014 dropped to 5.6 per cent. These figures conformed to the falling trend of the national poverty incidence reported by the Ghana Statistical Service using the Ghana Living Standard Survey (GLSS) data. In 2005/2006 the GLSS reported a national absolute poverty

incidence of 31.9 per cent with a poverty gap of 11.0 per cent. These figures dropped to 24.2 per cent and 7.8 per cent in 2012/2013 in the GLSS.

Table III. Poverty status for 2009 and 2013

	2009/10		2013/14	
	Percentage of HH	Percentage change	Percentage of household	Percentage change
<i>Upper Poverty Line (=GH¢1314/year=\$1.83/day)</i>				
Headcount	29.5	-	21.5	-27.1
Poverty gap	11.9	-	8.7	-26.9
Squared Poverty Gap	7.8	-	5.6	-27.3
<i>Lower Poverty Line (=Gh¢792.05/year=\$1.10/day)</i>				
Headcount	11.7	-	8.5	-27.4
Poverty gap	6.3	-	4.7	-25.4
Squared Poverty Gap	5.4	-	3.7	-31.5

Source: Author's computations from ISSER-YALE socio-economic data (2009 and 2013)

The extreme poverty rate showed a downward trend from 11.7 in 2009/2010 to 8.5 per cent in 2013/2014.

4.3 Trends in poverty transitions

Table IV shows that more than half of the poor households (68%) in 2009/2010 escaped poverty in 2013/2014 while at the same time, about 17 per cent of the non-poor households from 2009/2010 slipped into poverty in 2013/2014. Compared with the total poor of 2013/2014, those who slipped into poverty formed about 57 per cent. Between 2009/2010 and 2013/2014 about 33 per cent of the population was transiently poor while 9.3 per cent of the population was chronically poor (see Table V). Overall, the mobility rate of households based on consumption expenditure and the poverty line was low. In fact, between the two periods, about 68 per cent of the household did not move at all. This gives a mobility rate of about 32 per cent.

Table IV. Poverty transition matrix for 2009/2010 and 2013/2014

		2013/2014		
		Poor	Not Poor	Total Row
2009/2010	Poor	407(31.6)	883(68.4)	1,290(29.5)
	Not Poor	534(17.4)	2, 542(82.6)	3,076(70.5)
	Total Column	941(21.5)	3,425(78.5)	4,366(100)

Note: Percentages are in the brackets

Source: Author's computations from ISSER-YALE socio-economic data (2009 and 2013)

From Table IV and Table V, it can be inferred that taking the poor population at every point in time more than half (78%) of the poor population were transiently poor while more than 22 per cent of the poor at any point were always having their welfare below the poverty line thereby constituting the chronic poor.

Table V. Poverty decomposition by spell approach

POVERTY STATUS	NUMBER OF HOUSEHOLDS	PERCENTAGE
Always Poor (Chronic)	407	9.3
Sometimes Poor (Transient)	1,417	32.5
Non-Poor	2,542	58.2

TOTAL	4366	100
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Source: Author's computations from ISSER-YALE socio-economic data (2009 and 2013)

When decomposed between the rural and urban locations in Ghana, it can be seen that, of the 9.3 per cent national chronic poverty rate, the share of the contribution by the rural dwellers was the highest being 87 per cent compared with the urban centre which contributed 13 per cent. Similarly, the rural transient poverty rate is higher (68 %) in terms of contribution to the 32.5% national figure compared with the contribution from the urban which was 32 per cent. This means the rural transient drove up the national transient poverty rate (See Table VI).

Table VI. Poverty Decomposition by spell approach by location

POVERTY STATUS	RURAL	URBAN	TOTAL
Always Poor (Chronic)	353(86.7)	54(13.3)	407(9.3)
Sometimes Poor (Transient)	959(67.67)	458(32.33)	1,417(32.5)
Non- Poor	1080(42.5)	1462(57.5)	2,542(58.2)
TOTAL	2391(54.8)	1974(45.2)	4366(100)

Source: Author's calculations

Table VII compares the computed national poverty dynamics with some results from the rest of Africa. Relatively Ghana has the lowest chronic poor as well as the percentage change from chronic to transient poverty which is 28 per cent as compared with the average of 68 per cent recorded in the selected studies shown in the table. This comparison is not without difficulty of doing such comparisons due to measurement disparities, sample differences, method differentiation, differences in the poverty lines used across the countries and also the different durations used in the spell analysis.

Table VII. A comparison of Ghana's results with study from Africa

Source	Study Location	# of Panel	Date of Study	Poverty Type			Percentage
				Chronic	Transient	None	Chronic To Transient
Carter and May (1999)	South Africa	2	1993-98	22.7	31.5	45.8	72.1
Dercon and Krishnan, (1998)	Ethiopia	2	1994-98	24.8	30.1	45.1	82.4
Grootaert and Kanbur (1995)	Cote d'Ivoire	2	1985-86	14.5	20.2	65.3	71.8
(Grootaert & Kanbur, 1995)	Cote d'Ivoire	2	1986-87	13.0	22.9	64.1	56.8
Grootaert and Kanbur (1995)	Cote d'Ivoire	2	1987-88	25.0	22.0	53.0	113.6
Hoddinott, Owens and Kinsey (1998)	Zimbabwe	4	1992/93-1995/96	10.6	59.6	29.8	17.8
Haddad and Ahmed (2003)	Egypt	2	1997-99	19.0	20.4	60.8	93.1
Arthur (Current Study)	Ghana	2	2009/10-2013/14	9.3	32.5	58.2	28.6

Source: Adapted from (Baulch & Hoddinott, 2000) and (Haddad & Ahmed, 2003)

4.5 Determinants of Monetary Poverty Dynamics

The multinomial logit regression analysis used for the study begins with discussions on the model's predictive power poor. Following Haddad and Ahmed (2003), Neilson et al. (2008) as well as Kedir and McKay (2002) the values of the variables in the initial period, 2009/2010, were used in the regression. This was done to minimize the effects of measurement errors on the model. The dependent variable- poor, takes the values of 0 for *Non-Poor*, 1 for *Transient Poor* (poor in any of the periods) and 2 for *Chronic Poor* (Poor in both periods) in the regression. In Table VIII the study shows the model's ability to predict the various categories of poverty into their right groups. Overall, the model predicts more than half (about 64 %) of household heads into their right poverty groups. This model was predicted better than models used by Kedir and McKay (2002) and also Alisjahbana and Yusuf (2003).

Table VIII. Predicted poverty status based on the multinomial logit model

	PREDICTED			Total
	Non-Poor	Transient Poor	Chronic Poor	
ACTUAL				
Non-Poor	2,258	274	14	2,546
Transient Poor	899	497	37	1,433
Chronic Poor	129	216	42	387
Total	3,286	987	93	4,366

Source: Author's computations from ISSER-YALE socio-economic data (2009 and 2013)

4.6 Marginal Effects

Table IX shows that household demographics have more influence on chronic poverty than on transient poverty as observed by Jalan and Ravallion (2000). Again, the determinants of chronic poverty and transient poverty are not the same. Finally, the determinants of poverty were more significant for chronic poverty than for transient poverty. The coefficient of gender with a male as the reference category is significant at 5 per cent for both chronic and non-poor categories with a negative sign for chronic poverty. This means that being a female head of a household reduces the probability of being chronically poor by about 2 per cent. This is in contrast with the human capital theory and other studies elsewhere such as Muller (1997) and McKernan and Ratcliffe (2013). The results also contrast with the feminization of poverty concept just as other studies contrast with the theory (Klasen et al., 2010; Rajaram, 2009).

Table IX. Marginal effects multinomial logit estimate: Determinants of poverty dynamics

VARIABLES	Transient Poor		Chronic Poor		Non-Poor	
	ME	SE	ME	SE	ME	SE
Female-headed household						
Female	-0.0303	(0.0236)	-0.0176**	(0.00756)	0.0479**	(0.0244)
Age of Head	0.00363***	(0.000608)	0.000964***	(0.000174)	-0.00460***	(0.000638)
Household Size(<2=0)						
Between 2 and 3	-0.0198	(0.0252)	0.0205*	(0.0123)	-0.000749	(0.0268)
Between 4 and 6	0.0594**	(0.0274)	0.0517***	(0.0149)	-0.111***	(0.0289)
Above 6	0.139***	(0.0372)	0.128***	(0.0334)	-0.267***	(0.0367)
Marital Status of Head(Never= 0)						
Married	-0.0582	(0.0391)	-0.0435**	(0.0184)	0.102**	(0.0405)
Consensual	-0.0167	(0.0437)	-0.0230**	(0.00911)	0.0398	(0.0443)
Separated	0.00241	(0.0631)	-0.0260**	(0.0102)	0.0236	(0.0638)
Divorced	-0.0601	(0.0408)	-0.0316***	(0.00759)	0.0916**	(0.0415)
Widowed	-0.0244	(0.0447)	-0.0198*	(0.0105)	0.0441	(0.0457)
Ethnic (Non-Akan=0)						
Akan	0.0105	(0.0228)	-0.0258***	(0.00723)	0.0153	(0.0236)
Head Education(None=0)						
Preschool	-0.0806***	(0.0302)	-0.00454	(0.00757)	0.0852***	(0.0319)
Primary	-0.0508**	(0.0221)	-0.00458	(0.00566)	0.0554**	(0.0232)
JHS	-0.0692***	(0.0212)	-0.0163***	(0.00611)	0.0855***	(0.0221)
SHS	-0.127***	(0.0320)	-0.0288***	(0.00729)	0.156***	(0.0328)
Tertiary	-0.0902**	(0.0385)	-0.00287	(0.0162)	0.0931**	(0.0408)
Employment(Unemployed=0)						
Employee	-0.0505	(0.0328)	-0.00304	(0.00798)	0.0535	(0.0347)
Self-employed/family	-0.0363	(0.0327)	-0.00600	(0.00794)	0.0423	(0.0345)
Other contributing family	-0.00992	(0.0476)	0.0183	(0.0194)	-0.00833	(0.0510)
Region(Admin)(Western=0)						
Central	0.100**	(0.0455)	0.0617*	(0.0367)	-0.162***	(0.0456)
Greater Accra	0.0920*	(0.0480)	-0.0176	(0.0156)	-0.0744	(0.0484)
Volta	0.111**	(0.0481)	0.0270	(0.0247)	-0.138***	(0.0484)

VARIABLES	Transient Poor		Chronic Poor		Non-Poor	
	ME	SE	ME	SE	ME	SE
Eastern	0.139***	(0.0427)	0.0312	(0.0248)	-0.170***	(0.0423)
Ashanti	0.0558	(0.0376)	0.0455*	(0.0251)	-0.101***	(0.0390)
Brong Ahafo	0.125***	(0.0437)	0.0772**	(0.0364)	-0.202***	(0.0428)
Northern	0.109**	(0.0465)	0.0439	(0.0270)	-0.153***	(0.0471)
Upper East	0.125**	(0.0580)	0.111**	(0.0504)	-0.236***	(0.0564)
Upper West	0.197***	(0.0614)	0.0754*	(0.0414)	-0.272***	(0.0590)
Location (Rural=0)						
Urban	-0.106***	(0.0196)	-0.0307***	(0.00674)	0.137***	(0.0201)
Saving Status(No Saving)						
Home Saving	-0.0747***	(0.0187)	-0.00754	(0.00512)	0.0822***	(0.0196)
Institution	-0.0897***	(0.0273)	-0.0294***	(0.00608)	0.119***	(0.0280)
Multiple	-0.106***	(0.0249)	-0.0305***	(0.00633)	0.137***	(0.0256)
Renting Status(Dummy)						
Rents	-0.0718***	(0.0238)	-0.0133	(0.00850)	0.0851***	(0.0246)
In-Transfer(Dummy)						
Receives Transfer	-0.00804	(0.0192)	0.00683	(0.00603)	0.00121	(0.0201)
Asset(Dummy)						
Own Tool	0.0611	(0.117)	0.00497	(0.0289)	-0.0660	(0.124)
Dwelling(Bungalow=0)						
Semi-detached	-0.0367	(0.0558)	-0.0125	(0.0132)	0.0491	(0.0578)
Flat/Apartment	-0.116**	(0.0583)	-0.0194	(0.0162)	0.135**	(0.0600)
Room in a compound house	0.00397	(0.0343)	-0.00392	(0.0121)	-5.18e-05	(0.0356)
Room(s) (Other type)	0.0593	(0.0375)	0.0168	(0.0149)	-0.0760**	(0.0388)
Several buildings same comp	0.118**	(0.0491)	0.0403*	(0.0241)	-0.158***	(0.0504)
Several buildings in diff. com	0.161**	(0.0789)	0.0229	(0.0258)	-0.183**	(0.0808)
Observations	4,002		4,002		4,002	

Note: *ME.* = Marginal Effect. *S.E.* =Standard Error. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Base category=Non-poor

Indeed Klasen et al. (2010) in their study found that female-headed households are better off than their male counterpart. Finally from our results, the probability of being non-poor increases by about 5 per cent if a household is headed by a female rather than a male. An increase in the age of the head of the household is found in the literature to lead to increased poverty. Both Fiess and Verner (2004), Neilson et al. (2008) found that the probability of falling into poverty increases as age increases. The results from the regression showed a strong relationship between poverty levels and household age as found in Woolard and Klasen (2004), Baulch and McCulloch (2002) and Swanepoel (2005). All levels of heads' educational qualifications significantly and inversely affect transient poverty status. Similar studies that found this relationship include Alisjahbana and Yusuf (2003), Gonçalves and Machado (2015) and Haddad and Ahmed (2003). On the regional variables, the study showed that living in the Brong Ahafo region or the Upper East region increases households' probability of becoming chronically poor compared with staying in the Western region. Except for the heads in Greater Accra, all heads living in any of the regions reduce their chances of not being poor similar to Adjasi and Osei (2007). Staying in an urban location reduces the household's probability of becoming either transient or chronically poor. As a risk absorbing variable, savings is expected to provide a means to lift household from falling into poverty. All forms of savings increase the probability of being non-poor and, without any exception reduce the probability of becoming chronic poor and transient poor. At 1 percent level of significance, heads with no savings increase their probability of becoming transient poor compared with heads that saved at either home (reducing their probability by 7 %) or with an institution (reducing their probability by 9 %) or multiple saving which reduced the probability of being transient poor by almost 11 percent. Home savings increase household head's probability of becoming non-poor by at least 8 percent. In a panel study, (Teguh & Nurkholis, 2013) found the effect of savings similar to our result in Indonesia. In all three models they used in their estimations, the models confirmed that non-poor households experiencing either economic or health shocks with sufficient savings should maintain their poverty status unchanged.

5.0 SUMMARY AND CONCLUSION

This study was devoted to the analysis of poverty dynamics in Ghana using the monetary approach. The national trend analysis showed that monetary poverty in general in the country saw a decline. From 29.5 in wave one, the poverty rate dropped to 21.5 in wave two consistent with the national trend measured using the GLSS. Analysis of the trend and profile of poverty showed that, generally, poverty in Ghana is much endemic among male-headed households. Again, the notion of poverty in Ghana as being a rural phenomenon was confirmed. In terms of the regional distribution, it was revealed that the three regions in the North have been much affected by poverty in the country between the periods considered. However, the data revealed that the southern Ghana, Central and Volta regions have been very volatile regions and have been hit by some high numbers of poverty. The study revealed that more than half of the poor households (68%) in 2009/2010 escaped poverty in 2013/2014 while 17 per cent of non-poor households slipped into poverty in 2013/2014. Compared with the total poor of 2013/2014, those who slipped into poverty formed about 57 per cent. The chapter further examined the dynamic nature of the poverty profile in Ghana and found that there is, generally a low mobility rate of households between various poverty states. It was realised that within the poor population, at every point in time, more than half of the poor are transiently poor while more than 20 per cent of the poor at any point in time will have their welfare below the poverty line. What determines a household's dynamic poverty state is not the same for the transient and chronic poor. What became clear, however, was the strong determinants of household demographic characteristics in explaining chronic poverty and the non-identical nature of the determinants of chronic and transient poverty.

Governments, therefore, need to carefully design poverty alleviation policies with a two-prong approach – policies that directly target the transient monetary poor such as direct cash transfers such as LEAP and policies that directly tackle the chronic monetary poor such as cargo nets like land

reforms, targeted microfinance, targeted school feeding programme. This study makes a significant contribution to knowledge by employing panel data to study the phenomenon of poverty in a dynamic analysis in Ghana, something which is a novelty. There is however a shortcoming to this study because of the shortness of the panel in capturing the chronic and transient nature of poverty. Again, the study will be much enriched if qualitative interviews were added to give a better understanding of the issues that the quantitative data revealed

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