SPATIAL ANALYSIS OF STRUCTURAL DETERMINANTS OF CHILD POVERTY INCIDENCE IN NIGERIA.

OLAGUNJU KEHINDE OLUSEYI
Szent Istvan University, Godollo, Hungary.

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Brief Introduction   (1/2)

❑ The welfare of the children in the society is a measure of economic and social development of that society
  ▪ Children of age 0 to 16 years constituted about 43.6% of the total Nigerian population.
  ▪ Among the most vulnerable and poverty stricken in the society are the children.

❑ Despite the growing concern of various international organizations and the nations of the world evident in policy and programmes formulation and implementation.
  ▪ Many countries are still affected by the incidence of child poverty especially the developing countries.

❑ 1/3rd of children in the developing countries lack access to basic sanitation while 1/5th of children lack access to clean and potable water(UNICEF, 2009).

Introduction

- ❑ No less than 600 million children worldwide are growing in absolute poverty(Insight Development Research analysis, 2009).

- ❑ 93% percent of all under-five deaths currently occur in Africa and Asia combined and 40% occur in just three countries: India, Nigeria and the Democratic Republic of Congo. (UNICEF, 2008).

- ❑ In Nigeria Poverty rate is on an increasing trend since the 1980s from an average of 27% to 70% in 2003(African Economic Outlook, 2005).
  - ❖ Poverty rate may continue increases due to current economic crises.
- ❑ Adults tends to have masterminded coping strategies leaving children who are more vulnerable to suffer more for associated economic problems

Justification of the study

❑ Despites a 1001 number of poverty surveys ranging from monetary approach to non monetary approach.

❖ Only few have considered examination of child poverty using national data.

❖ None considered the spatial differences in the studies despite the assertion by Odusola, 1997 and Okunmadewa et al., 2005; NBS that poverty levels varies across regions in Nigeria.

❖ Whereas considering the choice of a specific poverty measure and heterogeneity nature of poverty incidence , may have major policy contribution to alleviate the lingering child poverty in Nigeria.

Justification of the study

❑ All of these researches neglected the spatial patterning of child poverty in Nigeria and the role of place in aggravating and reproducing poverty.

❑ Spatial heterogeneity between areas can be introduced in a model for a variety of reasons, including:
  ❖ Differences in agro climatic conditions, geographic conditions, the presence of natural resources, other non-physical conditions (especially, historical and ethnic) and facets of public policy (Jalan, J. and Ravallion, 1998).

❑ This study was therefore motivated to bridge this gap in literature and proffer recommendations to this vacuum in policy process related to child poverty.

Justification of the study

❑ A number of development plans, policies, programmes and policy documents have been put together in order to address child poverty by past governments.

❑ Child development most of them developed with immense financial and technical assistance from development partners and foreign governments but yet to transform to the much expected child poverty reduction in Nigeria.

❑ This can be attributed to the non-consideration of the heterogeneous nature of child poverty and spatial contiguity of geographical units in their designs.

❑ This study therefore examined the structural determinants of child poverty using spatial analysis

Research Questions

❑ Is the child poverty incidence of a GPZ significantly influenced by poverty incidence of GPZ(s)?

❑ Are there GPZs with similar patterns of poverty incidence in Nigeria?

❑ What are the factors influencing child poverty levels in senatorial GPZ with similar spatial patterns of poverty?

❑ Do the political factors in the senatorial GPZs affect the level of poverty?

❑ Do the agro-climatic factors in the GPZs affect the level of child poverty?

❑ What is the probability that a household will be poor in each of the senatorial districts?

❑ **<u>Scope of Study</u>**

❖ The study covered the 6 GPZs in Nigeria

❑ The study used georeferenced secondary data comprising –
  ❖ the 2013 Demographic and Health Survey (DHS) data
  ❖ the National Living Standard Survey in

❑ Other source was Food and Agricultural Organisation for the fertility soil map of Nigeria and agro-climatic and environmental data.

❑ Data collected used:
  ❖ Sociopolitical and economic ; Agro-ecological climatic; Infrastructure data; Demographic data

❑ ***Adult Equivalence Scale (AES approach) –*** used in estimation of child poverty.

❑ **Moran I** test was used to determine the level of spatial dependency among the GPZs.

❑ **Spatial Error Model and Spatial -Lag Regression Techniques** – used to estimate the spatial determinants of child poverty in Nigeria.

❑ The independent variables in the model involved   a complexity of structural characteristics of the GPZs which include :

   ❖ Sociopolitical and economic ; Agro-ecological climatic; Infrastructure data; Demographic data

OUR FINDINGS

Distribution of Child Poverty Status in Nigeria

Child Poverty Status	Frequency	Percentage (%)
Poor children	2938	54.1
Non poor children	2493	45.9
Total	5432	100.0

❑ The AES put child poverty line to be N10,588.12

❑ About 54.1% of the children understudy were poor while 45.9% were above the poverty line

❑ This reflect the level of child poverty in Nigeria and need to address it as nation.

Spatial Analysis of Incidence of Child Poverty (Headcount) in Nigeria

Geopolitical Zones(GPZ)	Estimates	Proportion	Absolute contribution	Relative contribution
North Central(NC)	0.559	0.189	0.106	0.210
North East(NE)	0.606	0.188	0.114	0.221
North West(NW)	0.692	0.215	0.149	0.295
South West(SW)	0.269	0.082	0.022	0.044
South East(SE)	0.280	0.162	0.045	0.089
South South(SS)	0.419	0.162	0.068	0.135

- ❑ North West(NW) region has the highest incidence of poverty in term of head count.
- ❑ NW contributed highest to the overall poverty incidence (about 29%)
- ❑ Proportion of the poor in North West is about thrice that of South West.
- ❑ Poverty is more prominent to regions that are prone to drought and extreme dryness

Spatial Analysis of Incidence of Child Poverty Depth in Nigeria

Geopolitical Zones(GPZ)	Estimates	Proportion	Absolute contribution	Relative contribution
North Central	0.278	0.215	0.059	0.303
North East	0.241	0.188	0.045	0.229
North West	0.249	0.189	0.047	0.239
South West	0.084	0.082	0.007	0.034
South East	0.086	0.162	0.014	0.071
South South	0.150	0.162	0.024	0.123

❑ The Northern GPZs also had the highest child poverty gap as expected
❑ NW had poverty gap index of 0.2781 while the Poor child in NW will need about three time resources of the poor child in the South West to be able live above the poverty line.
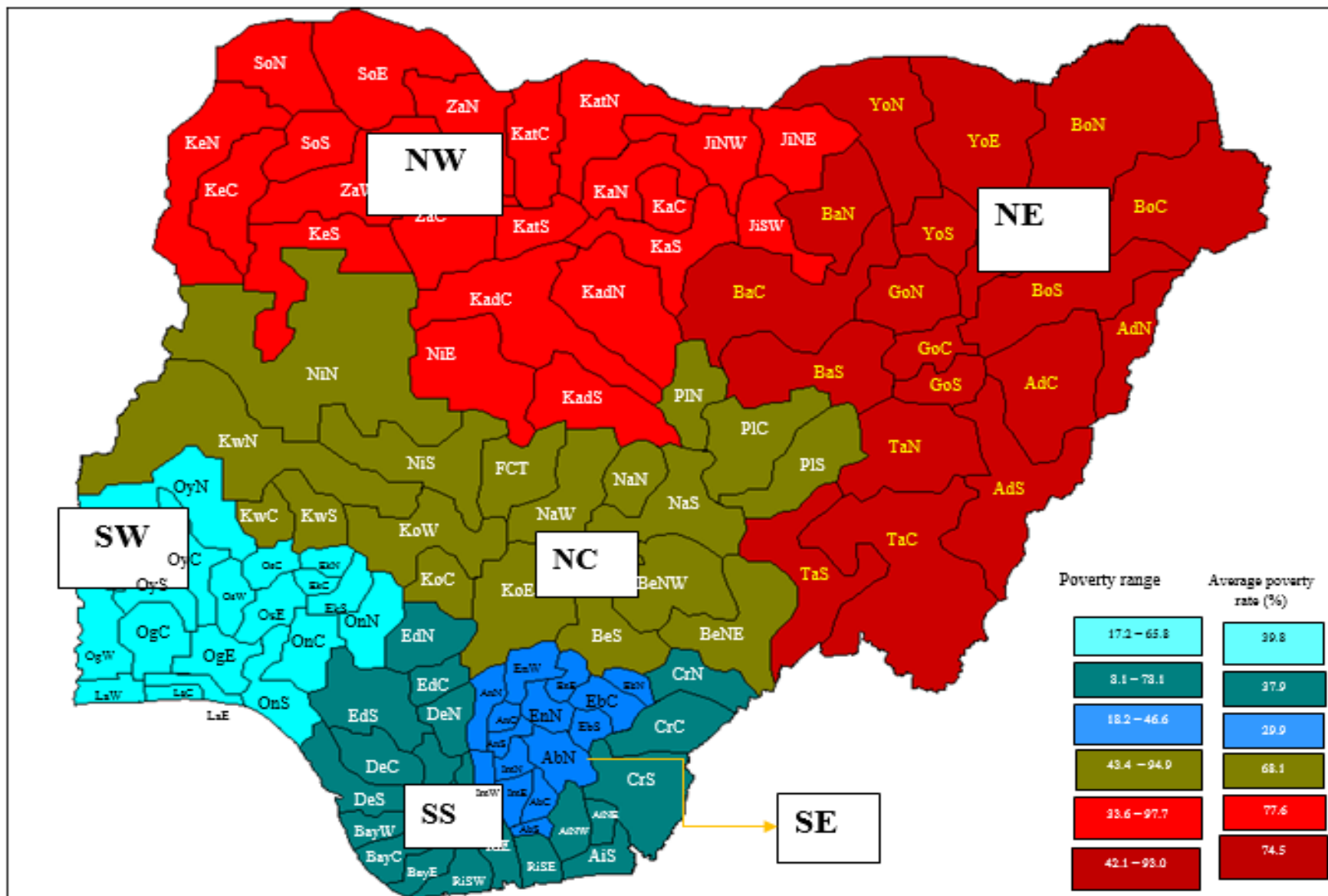❑ South West having the lowest proportion signifies that the zone is more economically and socially viable.

Spatial Analysis of Incidence of Child Poverty Severity in Nigeria

Geopolitical Zones(GPZ)	Estimates	Proportion	Absolute contribution	Relative contribution
North Central	0.145	0.215	0.031	0.302
North East	0.123	0.188	0.023	0.224
North West	0.145	0.189	0.028	0.268
South West	0.038	0.082	0.003	0.030
South East	0.039	0.162	0.006	0.061
South South	0.073	0.163	0.012	0.115

❑ North Central was ranked highest in the level of severity of child poverty while the least contribution was from South West

❑ The severity and intensity of poverty, which explains the damage in terms of health, self-esteem, enlightenment among others, of children in the North Central zone

❑ This can be to attributed to reoccurrence of social unrest.

Map of Child poverty rates based on geopolitical zones

Highlight of Spatial Regression Results

Test	Value	P-value (probability)
Breusch – Pagan	34.65	0.0737^{ns}
Likelihood Ratio	14.49	0.00014***

❑ Diagnostics for heteroskedasticity and spatial dependence tests revealed that -

❖ heteroskedasticity is not a problem in the model;

❖ there is spatial dependency in the model

Spatial Determinants of Child Poverty in Nigeria

Significant factors are:

❑ *Literate household head – Negatively signed.*
  ❖ Education increases the stock of human capital, increases productivity, in turn effect enable them to be able to cater for all needs of their children

❑ **Household size - Positively signed**

❑ *Access to health facilities, sanitation and safe water sources* – Negatively signed

❑ *Households' access to credit and membership of association -* Negatively signed

❑ *Self & wage employed in agriculture –* Negatively signed

❑ *Good soil dummy* - Negatively signed.

❑ *Average annual rainfall* - Negatively signed.

Spatial Determinants of Child Poverty by Geopolitical Zones (GPZS)

North Central –
- ❖ Literate household head; access to safe water source, membership of association of household heads had negative relationship with child poverty in this GPZ while household size and average annual rainfall had positive relationship
- ❖ Geometric increase in household size without appropriate financial capacity

North East –
- ❖ Male household heads and household size increases child poverty rate.
- ❖ Same pattern of determinants were found in North West but at different level of significant.
- ❖ This can be attributed to similarity in culture and tradition.

Spatial Determinants of Child Poverty by Geopolitical Zones (GPZS)

South West –

- ❖ Literate household head, access to credit facilities, all infrastructural factors, self & wage employed in agriculture, average annual rainfall and good soil reduced PR.
- ❖ Infrastructural development coupled with improvement of agricultural production are key to enhancing child poverty reduction in the GPZ

South East –

- ❖ Female headed households and household size increase child poverty rate.
- ❖ Households that headed by female in most cases do not have the financial capability to take care of their children and to afford basic needs of life.

South South –

- ❖ Household size among other significant factors in SE that may lead to increase in child poverty.
- ❖ Need for child planning policy in this GPZ.

Conclusion

❑ Geographic units that constitute a country were not independents of one another and not isolated
  ❖ but these geographic units interacted significantly with one another

❑ The study confirmed a spillover of child poverty from one GPZ to another in momentous proportion

❑ The geographic dimension of child poverty across all GPZs was affirmed in this study, therefore, policy measures that region-specific should be recommended in any anticipated social protection programmes in Nigeria.

❑ Finally, the GPZs with highest proportion of child poverty incidence should not only focus on the formation of economic/capital assets but on an expanded set of strategies targeted at human, social and physical assets coupled with agro ecological and political factors.

THANK YOU