Africa's Performance in Leaving No Child Behind in Poverty

Ingutia, Rose Anyiko

Nova Science Publishers
2021

Ingutia , R A , Rezitis , A & Sumelius , J 2021 , Africa's Performance in Leaving No Child Behind in Poverty . in P S Koku (ed.) , Sub-Saharan Africa : Culture. History and People . Nova Science Publishers , New York , pp. 297-334 .

acceptedVersion

Africa's performance in leaving no child behind in poverty.

Rose Ingutia (corresponding author)

Department of Economics and Management

Faculty of Agriculture and Forestry

P.O. Box 27, Latokartanonkaari 5

FI-00014 University of Helsinki Finland

Gsm +358 46 9588834

rose.ingutia@helsinki.fi

Anthony N. Rezitis

Agricultural University of Athens

 Department of Agricultural Economics and Rural Development

 Iera Odos 75, Athens 118 55

arezitis@aua.gr (University e-mail)
arezitis@gmail.com (personal)
 +302105294735

John Sumelius

Department of Economics and Management

Faculty of Agriculture and Forestry

P.O. Box 27, Latokcorreartanonkaari 5

FI-00014 University of Helsinki Finland

+ 358 2 941 58077. Gsm +358 40 5415153

John.sumelius@helsinki.fi

Abstract

How is Africa performing in leaving no child behind in poverty? Disparities exist in child poverty issues across countries, millions of children's lives are blighted for no other reason than the country, the community, the gender, or the circumstances into which they are born. Due to uneven progress, we compared under five mortality rates (U5MR), primary school enrolment (PSE), and child

underweight (CU) across country clusters of low and middle income; low U5MR and high U5MR in Africa. Endogeneity issues led to the use of Three Stages Least Squares simultaneous equations and we applied elasticity to allow direct comparisons between elasticities across country clusters. African countries in low income and high U5MR clusters are far from leaving no child behind. These clusters display common causes of child poverty including low gender parity index, low PSE, high CU, high out- of- schoolchildren and poor governance. The estimated elasticities indicate that ethnolinguistic fractionalisation (women's access to credit) and CU have the greatest effect on U5MR (child poverty), while crop production index (CPI), U5MR and CU have the greatest effect on PSE. Whereas CPI and female enrolment in secondary school vocational have the greatest effect on CU. These findings imply that economic and social policies should consider allocating more resources to low income and high U5MR countries. Furthermore, the results tend to point to agriculture as a solution to child poverty issues in Africa. This is through an enabling environment for women in agriculture to access productive resources.

Key words: Child poverty, sub Saharan Africa, women's access to resources, institutions, child underweight, primary school enrolment, under-five mortality rate.

1. Introduction

There is no uniform approach for defining, identifying or measuring child poverty. The notion of poverty to some implies lack of income, while to some in addition to lack of income, poverty means the lack of the basic needs of life. Sen (1999:87) sees poverty "*as the deprivation of basic capabilities rather than merely as lowness of income, which is the standard criterion of identification of poverty*". Our definition of child poverty echoes Sen's definition of poverty as a deprivation of capabilities, we have also considered child rights principles and the concepts of deprivation approach in identifying and measuring child poverty. We thus define children living in poverty as those children who are deprived of interrelated material and sociocultural resources which are economic, political, social, cultural, physical and environmental in nature and are generally known to be very vital for child development.

The history of Sub Saharan Africa's (Africa) children in poverty as told by numbers by the World Bank starts in the 1980s however generally there was scarcity of data which apparently has improved with time. We narrate the history from both monetary and multidimensional perspectives of poverty. Africa's GDP per capita growth between 1980 and 2000 was 0.22%, nonetheless the economy picked up and rose to 3% during the period of 2005-2010, after this period GDP per capita growth has been declining and was -0.18% during 2015-2019. Poverty headcount ratio reflects the

percentage of the population living below the national poverty lines, the use of household's income poverty measures to represent child well-being is inaccurate, given that children's needs differ from the needs of the other members of the household (Vijaya et al., 2014). Since this study has no access to child poverty lines, it reports household income poverty. Africa's poverty rates are on the decline for instance in 2000 poverty level was 59% and in 2005 it fell to 52% a 12percentage reduction. While in 2010, the rates were 48% and in 2015 they were 42%, 2010 and 2015 periods recorded a 12percentage decrease in poverty rates. 82% of people living in poverty in Africa live in rural areas and earn their income primarily from farming. Despite the declining poverty rates, the number of poor people in Africa is rising due to increasing population, about half of Africa's poor are younger than 15 years old (Beegle and Luc 2019). Between 2000 and 2019, children aged 0-14 years made up nearly 44% of Africa's population, UNICEF (2015) predicts that by 2026 Africa will be the single region with the greatest number of children under 18.

Africa has difficulty in keeping pace with the rest of the developing world in poverty reduction partly because of Africa's high population growth which has subsequently doubled Africa's share of global poverty. This trend is anticipated to continue with Africa's poverty expected to fall further to 24 % by 2030 representing 300million people, but its share of global poverty will be approximately 82 % (Chandy, L. et al 2013). Amadou Sy (2016); and World Bank (2016) compared the rates of economic growth and the rates of poverty reduction in Africa, their findings suggest that the overall economic growth is less poverty-reducing in Africa than elsewhere.

In the effort to measure the progress in meeting the targets of Millennium Development Goals (MDGs) through national averages, a majority of African nations focused on easiest-to-reach children and communities, at the expense of the hardest to reach children and communities who apparently have the greatest need. Consequently, the progress of some African countries does not represent the hardest to reach groups and generally, statistical averages do not reveal the degree to which the most disadvantaged children benefit from the development programs. Inequality in non-income dimensions of wellbeing contributes to income inequality because there is evidence that countries that have achieved higher growth rates are those that started off with initial higher levels of education, health and nutrition outcomes, implying that developed human capital contributes to higher incomes (UNDP 2013).

Lack of safe water and sanitation remains among the world's more urgent health issues. In 2000 rural Africa's population with access to basic sanitation and water services was 17% and 31%, in 2015 the numbers increased to 21% and 44% respectively. Whereas in 2000 urban Africa's population with access to basic sanitation and water services was 37% and 78%, in 2015 the numbers increased

to 44% and 83%. These periods indicate a wide disparity in accessing basic sanitation and water services between rural and urban Africa. Open defecation contributes substantially to the transmission of diarrheal disease known to be one of the major causes of under-five mortality rates (Galan et al. 2013). Ezeh et al. (2014) found that in Nigeria the risk of child mortality from lack of access to improved sanitation and water was 38%. The environment in which a child lives has a determinant role in a child's health. A majority of poor families' shelter can be characterized as being temporary structures, overcrowding, indoor air pollution caused by solid fuels (wood, animal dung, crop residues, coal). In 2000, 9% of African households used clean fuels for cooking, in 2015 the number rose to 14%, apparently a large percentage of African children are at a risk of pulmonary diseases.

The inequality gaps between the rich and poor are getting wider under five morality rates (U5MR) estimates by wealth quintiles show that U5MR among children born in the poorest households is on average twice that of children born in the wealthiest households (WHO 2017). U5MR is highest in rural areas, the reasons being that an average child living in a rural area is isolated from basic health services and adequate sanitation (UNICEF 2009). Nevertheless, U5MR for Africa declined by 58% from 1990 to 2017, and as of 2019 child mortality rates were 76 per 1,000 live births. Pneumonia, malaria, diarrhoea, malnutrition and anemia account for a large portion of child deaths (WHO 2020). On current trends, 31 million under-five deaths will occur in Africa between 2018 and 2030, on the contrary if African countries achieved the Sustainable Development target, 8 million lives could be saved (UNICEF 2020). "*Immunization remains the single most feasible and cost effective way of ensuring that all children enjoy their rights to survival and good health*" (UNICEF 2000). Immunization coverage in Africa is progressing gradually, in 1985 only 30% of African children were vaccinated, in 1990 they were 57% and as of 2019 the percentage rose to 73. There has been impressive progress in Africa's maternal mortality rates, they fell from 870 per 100,000 live births in 2000 to 534 in 2017.

Child malnutrition is associated with household income, mother's education and geographical location. Children from the poorest households are twice as likely to be malnourished as those in the least poor households (McGregor et al.2007). Children whose mothers have no primary education are more likely to be malnourished than those whose mothers have primary education (Yakoob et al. 2011). Children from rural areas where social-cultural practices are deeply entrenched and have limited access capability building services are more likely to be malnourished than in urban areas (Ingutia 2017). The World Bank numbers indicate chronic child malnutrition remains widespread in Africa, in 1990 48% of African children were stunted, the rates fell to 33% in 2019, the absolute number of hungry children is rising. Anemia in children under 5 years of age is a major public health

burden in developing countries particularly in Africa (Muriuki et al. 2020). In 1990, 76% of African children suffered from the prevalence of anemia, in 2015 the rates fell to 60%.

Stunting causes physical and mental underdevelopment in children, "*A relation between poverty and suboptimal cognitive development and academic failure is well established, although the process and mechanism remain poorly understood*" (Campbell and Ramey 1994). The early years of life are crucial in the development of a person's mental and physical health which eventually enables a person to reach his/her full potential, effects of delayed development in early years mostly cause irreversible damage (Martinez et al.2012). Inadequate physical growth and cognitive development contribute to delayed school enrolment, poor school participation, low learning outcomes, high repetition and dropout rates (Vegas and Santibanez 2010). Nores and Barnett (2009) compared different types of early childhood intervention including cash transfers, educational, nutritional or mixed interventions. They found that interventions with an educational or stimulation component had the largest cognitive effect. Furthermore, Heckman (2006) noted that preschool curriculum substantially promotes social competency, planning and organisation, and has a beneficial impact on life outcomes. Africa's children are largely deprived of development in early years of life, in 1980 a mere 15% of the children were enrolled in preschool, it has taken three decades for the percentage to increase to 32% in 2019.

Millennium Development Goals' target of universal primary education for all and abolition of primary school fees across Africa increased primary school enrolment from 23 million in 1970 to 129 million in 2008. However, the growing enrolment rates do not correspond to the rates of primary completion, for example the average completion rate in 2008 was 65% (UNESCO 2011; UNDP 2013). About 42% of African children leave school early, due to issues including lack of foundation in preschool education, poverty, school inefficiencies leading to repetition and dropout (Hanushek and Wobmann 2007). The number of out of school children in 2000 was 43,100,000 and has declined to 33,800,000 in 2019. There remains a marked fall between primary completion rates and secondary enrolment rates, about a half of primary completion rate (31%) are enrolled in secondary (UNDP 2013). Furthermore, under 50% of those enrolled in secondary complete, for instance in 2000 the total completion rate was 27%, for female was 24% and for male was 30%, in 2019 the rates were 44%, 42% and 47% respectively. Progress towards gender equity in education is still low in Africa.

Abject poverty in Africa constrains children ages 7-14 to engage in economic activities for the sake of contributing to household livelihood security (Hope 2005). Children who are economically active without going to school, are a large part of children out of school (OOSC). Girls are normally involved in domestic duties such as cooking or fetching water while boys engage in herding livestock or farm-work (Edmonds 2007), in 2000 children ages 7-14 who worked only were 38%, in 2015 were 39%. Whereas children who study and work were 73% in 2000 and the percentage fell to 61 in 2015.

Most of the education and health services are provided by the public sector, the private sector cannot supply public goods and services because they cannot charge a price for their use. Higher government expenditure on education, health, housing, agriculture and amenities like water, sanitation and social security significantly reduce child poverty (Fan 2008). The average of African public expenditure on education was 2.8% of GDP in 2000 and in 2018 was 4.3%. Whereas government expenditure on health as a percent of GDP was 1.7 in 2000 and increased to a mere 1.9% in 2017. Public expenditure has been limited in most African countries because of poor budgetary procedures and corruption (Delavallade 2006); and due to the burden of external debt in the national budget (Clements et al.2005).

The global socioeconomic crisis caused by COVID-19, exacerbates the situation of African children living in poverty. Efforts to mitigate the transmission of COVID-19 are disrupting food systems, health and nutrition services, devastating livelihoods. Vulnerable children are becoming malnourished due to deteriorating quality of their diet and missing out on nutritious school meals. Exhausted health systems and disruptions to life saving services including immunization and antenatal care risks higher child mortality rates. Children's learning is in crisis, given that many schools lack resources to invest in digital learning, and many children from poor households do not have internet access. UNICEF (2020a) estimates that the percentage number of (pre-primary to upper secondary) potentially reached by digital and broadcast remote learning policies in Eastern and Southern Africa is 50% and in West and Central Africa is 52%. School closures have led to an increase in child marriage and child labor thereby shattering their education possibilities.

Disparities exist in child poverty issues across regions and countries, millions of children's lives are blighted for no other reason than the country, the community, the gender or the circumstances into which they are born. For instance, millions of children are denied access to education and health services simply because their parents are poor, or because they are growing up in poor countries. Therefore, our objective is to find out how Africa is performing in leaving no child behind. Due to uneven progress, we investigate the performance of African countries in child poverty issues by comparing (a) low income and middle-income countries, (b) high U5MR and low U5MR countries.

Why does child poverty matter? Because firstly, childhood poverty causes lifelong damage to children's minds and bodies, turning them into adulthood poverty and this perpetuates poverty cycles by transmitting it to their children. Based on this understanding childhood is a critical period for the development of human and social capital. The future of a nation in terms of prosperity, sustainable and inclusive development is largely determined by the kind of investment made in the lives of the children of today. Countries that have invested in their children and protected their rights in the recent past are the successful countries of today (The Lancet Commission 2020). Secondly,

children worldwide are more at risk of poverty and social exclusion than the rest of the population (Marguerit et al. 2018).

We contribute to the literature of leaving no child behind through the essential study of comparability between country clusters, based on income levels and U5MR. These comparisons give deep insights about children left behind and the barriers they face. The findings give policymakers a better understanding of child poverty and disparity in ensuring that the children are included in the development progress.

Section 2 of this paper is literature review on child poverty issues using multidimensional deprivation approaches. Women's status and the role of institutions in child poverty issues are examined and the conceptual framework. Section 3 discusses model and data; it presents the three equations of the econometric model. Section 4 presents result and discussions from the estimations of simultaneous equations using Three Stage Least Square (3SLS) and fixed effects methods. Section 5 is the conclusion on the major findings and their implications.

2   Literature review

Our definition of child poverty suggests child poverty means more than just income poverty, besides lack of money, child poverty involves all the complementary factors that are interrelated such as health, nutrition, water, sanitation, shelter, information, education, environment for play and leisure. These services do not have competitive markets, thus monetary measures alone may not fully capture what it means for a child to be poor (Chzhen and Ferrone 2017). Access to all these services does not necessarily depend on the family's income but on the capacity and willingness of the state to provide them in a manner that poor children are not sidestepped. The presence or absence of anyone of these factors can be effectively and efficiently gauged by measuring them the way they are. These arguments suggest that child poverty cannot be fully analysed and measured by monetary approach. A true picture of child poverty analysis and measurement can largely be ascertained by the deprivation approach. The arguments are based on the understanding that children's multifaceted needs which are complimentary are not easily identifiable by income poverty measures (single approach) but calls for a multidimensional approach such as the deprivation approach.

Deprivation is defined as a state of being disadvantaged of resources relative to the local community, or the wider society or nation to which an individual, family or group belong. A household or individual without access to a particular basic need are defined as deprived (Townsend 1987). Those who are deprived of two or more of basic needs are defined as being severely deprived (absolute poverty). Severe deprivation contributes to serious adverse consequences for health,

wellbeing and development of children. Deprivation indices are broader measures, for this reason they are more inclusive and reflect different aspects of living standards including personal, physical and mental conditions, local and environmental facilities, and social activities and customs (Gordon et al. 2003).

The Convention on the Rights of the Child, (hereafter referred to as CRC) ratified by most countries in the world contains 42 detailed provisions enshrining the rights of children in all areas of their lives. CRC is the first binding instrument in international law that covers the economic, social, cultural, civil and political rights, including special protection measures for all persons under 18 years of age (Lee 2009; United Nations 1989). Almost all the articles in the CRC address the issue of child poverty and its consequences, either directly or indirectly. CRC ensures that children are not deprived of access to clean water, sanitary facilities, shelter, healthcare services, education and information (Gordon et al. 2000). In estimating child poverty, constitutive rights widely used are health, education, information, nutrition, water, sanitation and housing. Each dimension is a right, all dimensions constitute equal weights thus cannot be traded off, being deprived of anyone of them amounts to poverty (Abdu and Delamonica 2018). We discuss a few studies that measure child poverty using these constitutive rights.

Gordon et al. (2003) was commissioned by UNICEF to apply child rights approach in estimating child poverty using comparable household surveys data from Demographic Health surveys and Multiple Indicators Cluster Surveys. This study was the first scientific measurement of the extent and depth of child poverty in all the developing countries of the world. The study's objective was to produce an operational measure of absolute poverty for children using internationally agreed definitions of child poverty based on human rights. Deprivation was conceptualized as a continuum ranging from no deprivation, through mild, moderate, severe to extreme deprivation (Gordon 2002).

A child is living in absolute poverty if she or he suffers from two or more severe deprivations of basic needs. The cause of severe deprivation could be due to lack of income, resources, discrimination (girls suffering education discrimination), disease (severe malnutrition). The report found the rates of absolute poverty were highest in Africa and South Asia, rural children experience higher levels of severe deprivation than urban children. Severe sanitation, water, shelter and information deprivation were the greatest problems affecting the highest proportion of children in developing countries.

The Alkire - Foster (AF) method measures multidimensional child poverty by counting the different types of deprivation that a child experiences at the same time. The deprivation indicators can be equally weighted or take different weights. These deprivations are analyzed to identify who is poor and then used to construct multidimensional index of poverty (MPI). Children are identified as

multidimensional poor if the weighted sum of deprivations is greater than or equal to poverty cut off. For example, a poverty cut off point for education can be a person with less than five years of schooling is considered deprived. Identification of poor children is followed by finding answers to questions like where to find poor children and how are children poor. This method does not only access the incidence of poverty but also takes into account the intensity of the deprivations that poor children are facing, and thereby analyses child poverty by grouping children depending on the intensity of deprivation of respective dimensions.

The method distinguishes a group of children who suffer for instance three deprivations on average from a group of children who suffer six deprivations on average at the same time. The breakdown by dimension or indicator points out the types of deprivations contributing to poverty within groups. AF method can be used to monitor changes in child poverty overtime by using data collected at different periods to reflect changes in dimensions and indicators (Alkire et al. 2015; Alkire and Santos 2014; Alkire and Roche 2011). The Young Lives project is another study that reports changes in children's wellbeing overtime. The project observes the chosen children and their families every three years for 15 years in Ethiopia, Peru and India. Their results are similar to those of Gordon et al. (2003) they found that deprivation is more prevalent among rural children, particularly girls (Camfield et al. 2008; UNICEF 2006).

De Milliano and Plavgo (2014) analyzed multidimensional child deprivation across 30 countries in Africa using Multiple Overlapping Deprivation Analysis (MODA) methodology to measure various aspects of child poverty. MODA is based on the Convention on the Rights of the Child and thus defines child poverty as non-fulfilment of children's rights to survival, development, protection and participation. MODA takes a child as unit of analysis and applies life cycle approach to capture different deprivations children experience at different stages of their life. MODA's findings indicate that 67% of all the children in the countries under observation suffered severe deprivation from two to five deprivations critical to their survival and development. In addition, the study found out that monetary poverty measures are weak predictors of multidimensional child poverty.

Gordon et al. (2003), De Milliano and Plavgo (2014) and The Alkire – Foster study among others analyze child poverty with focus on multidimensional child deprivation indicators. However, there is need to incorporate the status of rural women and the role of institutions as key factors in the facilitation of children's and women's access to basic needs and productive services. Why rural women's status? Because most of Africa's population is rural, thus there is a high concentration of poverty in rural Africa. The wellbeing of children cannot be divorced from that of their mother. A mother suffers the consequences of her children's poverty while at the same time she transmits her

poverty to them, thus mothers' and children's poverty are intertwined (Alkire et al. 2014; Mellor 2014).

Smith et al. (2003) defines women's status as "*women's power relative to men*". Social cultural norms that discriminate against women in accessing productive resources including education, land and input and output markets not only exacerbates their low status but also affects the wellbeing of their children. For example (i) Malnourished women tend to give birth to malnourished children (underweight, stunted, sickly children thereby contributes low school attendance and poor performance) that suffer from delayed development of cognitive abilities and productivity in adulthood with substantial economic costs (Bell et al. 2005; Victoria et al. 2008). (ii) Schooling largely improves mother's knowledge and use of health practices, each additional year of schooling contributes to a decrease in the under-five mortality rate (Monden and Smits 2013). (iii) A woman with low status may lack access to prenatal and postnatal care services, thus putting at risk both maternal and infant health.

The ability of children to be healthy, to be educated among other capabilities is determined by economic, social, political and cultural institutions whose individual actions should not act in isolation, but should synchronise to enable the achievement of the multifaceted needs of children. Mo Ibrahim Foundation (2016) defines governance as the provision of the political, social and economic goods that any citizen has the right to expect from his or her state and that any state has the responsibility to deliver to its citizens. The definition of governance in terms of child poverty can be interpreted to imply that respective institutions' fulfilment of their commitment to child rights enables children the freedom to access basic needs and thereby develop their capabilities.

Is higher average economic growth correlated with lower child deprivation levels in Africa? Countries with remarkably similar per capita GDP do not have similar levels of multidimensional child deprivations. Also, some countries with extremely high GDP per capita have the same percentages of child deprivation rates as those countries with exceptionally low levels of GDP per capita (de Milliano and Plavgo 2014). Higher economic growth per se does not automatically translate into child poverty reduction (Akobeng, 2016; Foster and Szekely, 2008), other factors that matter include pro-poor growth policies, resource distribution and use, availability and affordability of public and private goods and services, legislation and legislative accountability, budgetary procedures, societal behaviours, beliefs and traditions (Diao et al. (2010); Delavallade, 2006; de Milliano and Plavgo (2014). Economic growth has a greater and more significant impact on income poverty than on multidimensional deprivation poverty. The type of growth (is it inclusive) and the policies behind it matter a lot (Maria et al 2019).The poor can benefit from economic growth if

policies deliberately invest in areas that benefit the poor most such as primary education instead of tertiary, primary healthcare instead of tertiary.

2.1 Conceptual framework

We have created a conceptual framework by incorporating deprivation indicators from the studies on multidimensional deprivation indicators. We have extended these studies by including low status of women and institutional quality. Figure 1 on conceptual framework for analysing factors determining the progress of child poverty issues shows the interactions across these factors in either reducing or increasing child poverty.

Figure 1 on conceptual framework here

The key variables are (1) U5MR (child poverty) which stands for the quality of children's lives understood in relation to child wellbeing measures, (2) primary school enrolment and (3) child health status – child underweight (Sen 1999). A child's poor education status is observable through low school attendance and the out-of-school children in cluster 5. Reasons for poor education could be high disease burden, inadequate care and food intake in cluster 5, or lack of access to school, healthcare services and adequate food; and women's low status in cluster 4. Reasons contributing to children's lack of access to the basic services in the fourth cluster are largely indirect as it comes about because of women's lack of access to and use of resources in the third cluster and limited availability of and accessibility to adequate quantities of good-quality resources in the second cluster. The direct effect is determined by the availability of and accessibility to human, physical, natural, financial, and social assets (2) which affect a child's education directly as indicated by the arrows from cluster 2 to cluster 4. The factors in cluster 2 are determined by the actions and policies of political, economic, social-cultural institutions in cluster1.

A child's poor health status is visible through other causes of poor health such as high disease burden, inadequate care of women and children; and inadequate food intake in cluster 5. These causes of poor health are an outcome of lack of access to healthcare services, the low status of women and the lack of access to adequate food in cluster 4. The factors in the fourth cluster are partly an outcome of women's lack of access to and use of resources in the third cluster. Poor institutional quality leads to low institutional capacity and capability which manifests itself through limited availability of and accessibility to resources in subset 2, which indirectly affect a child's health status through women's lack of access to and use of resources (3) and directly through the effect of cluster 2 on cluster 4.

Women's low status (4) and inadequate caregiving practices for both mother and child (5) affect both child's health and education status. The former is mostly dependant on women's decision-

making power, because mothers are the main caregivers of children and it is important for them to participate in decisions concerning household purchases, healthcare services and in children's education. Their power to make decisions usually depends on their economic power in terms of income and asset ownership (3) and this is determined by institutional policies and actions (1) and (2). Institutions are supposed to supply schools, healthcare, and infrastructure such as roads, failure to provide these services can lead to lack of access to resources which depend on their allocation. Allocation of resources depends on institutional policies at the economic, political, and social-cultural levels.

3 Model and data

3.1 Model

We used Agglomerative hierarchical clustering (AHC) to cluster countries into clusters of income and U5MR. Table 1 presents a list of countries in each cluster. Cluster analysis belongs to a group of multivariate statistical methods which generally group objects based on the characteristics they possess. It classifies a large quantity of information into meaningful smaller subgroups called clusters which are more manageable and easier to interpret than individual data. Clusters are characterized by high internal homogeneity and high external heterogeneity (Hair et al. 2009), and therefore this enables the minimization of variability within a cluster and maximization of variability between clusters. Observations (objects) within the clusters will be close together (similarity) while the distance between clusters will be further apart. The process of clustering is termed a hierarchical procedure because it moves in a stepwise fashion to form an entire range of cluster solutions. It is also an agglomerative method because clusters are formed by combining the existing clusters.

Table 1 Countries under respective clusters here

The empirical regressions on child poverty equations have been estimated with a sample of 30 countries (between1990-2010), out of the 48 sub Saharan African countries. The criteria of the choice of countries has been based entirely on the availability of data related to our interest. A sample of 30 countries, which although constrained by the availability of data, is broadly representative. The abbreviations of the variable names, units of measurement and descriptive statistics are presented in table 2. **Table 2 here**

For each cluster we estimate the following simultaneous system of three equations 1-3 which is given below.

$$(a)\ U5MR_t = \alpha_0 + \alpha_1 * PSE_t + \alpha_2 * CU_{t-1} + \alpha_3 * GPI_t + \alpha_4 * FAG_t + \alpha_5 * AGV_t + \alpha_6 * HE_t + \alpha_7 * RS_t + \alpha_8 * ELF_t + \alpha_9 * GOS_t + \alpha_{10} * WA_t + \varepsilon_{1_t} \tag{1}$$

(b) $PSE_t = \beta_0 + \beta_1 * U5MR_t + \beta_2 * CU_t + \beta_3 * GPI_t + \beta_4 * CPI_t + \beta_5 * PRD_t + \beta_6 * PLG_t + \beta_7 * CL_t + \beta_8 * GOS_t + \beta_9 * IIAG_t + \beta_{10} * ORP_t + \beta_{11} * FPST_t + \beta_{12} * MPH_t + \beta_{13} * SA_t + \beta_{14} * WA_t + \varepsilon_{2_t}$ (2)

(c) $CU_t = \gamma_0 + \gamma_1 * CU_{t-1} + \gamma_2 * U5MR_t + \gamma_3 * PSE_t + \gamma_4 * GPI_t + \gamma_5 * CPI_t + \gamma_6 * CPI_{t-1} + \gamma_7 * FSV_t + \gamma_8 * WF_t + \gamma_9 * MA_t + \gamma_{10} * OOSC_t + \gamma_{11} * MWBA_t + \gamma_{12} * IIAG_t + ELF_t \ \gamma_{13} * + MPH_t + \gamma_{14} * SA_t + \gamma_{15} * WA_t + \varepsilon_{3_t}$ (3)

Note that α_0 to α_{10}, β_0 to β_{14}, and γ_0 to γ_{15} are estimated coefficients while, ε_{1_t}, ε_{2_t} and ε_{3_t} are the error terms corresponding to each one of the equations.

We use U5MR as a dependent variable to measure child poverty. U5MR is the probability expressed as a rate per 1,000 live births, a new-born baby will die before reaching age five, if subject to current age specific mortality rates. U5MR is chosen by UNICEF as its single most important indicator of the state of a nation's children and human development. U5MR as an accurate measure of children's wellbeing is used by UNICEF to rank the nations of the world not in ascending order of their per capita GNP, but in descending order of their U5MR (UNICEF 2002 and 2008). Andrews et al. (2010) proposes the use of U5MR as an indicator of good governance that countries should be ranked based on U5MR. We follow UNICEF (2008) and Andrews (2010) and therefore cluster countries based on the average rates of child mortality between1990-2010.

3.2 Data

Equation system (1) - (3) is estimated using Three Stages Least Squares (3SLS) estimation techniques. The reason for using 3SLS estimation is because of the interdependence and reverse causality among the dependent and independent variables which raises the issue of endogeneity. Reverse causality creates endogeneity in the measurement of child poverty using U5MR as a dependent variable in equation (1) and as an independent variable in equations (2) and (3). Similar problems are created by using variables PSE and CU as endogenous variables in equations (2) and (3) and as exogenous in equations in equations (1) and (2), respectively.

Simultaneous causality bias takes place when causality runs from both X (PSE) and Y (U5MR). Benefits of education (PSE) are assumed to reduce child poverty (U5MR), conversely children from poor families are largely out of school due to lack of funds to meet schooling costs. Consequently, they miss-out on benefits of education thereby exacerbating poverty levels. Child poverty contributes to child underweight (CU), through poor families' lack of access to nutritious food. Reverse causality is through the effects of the poor health of malnourished children which affects school attendance

leading to poor performance and in the long-run affects earning potential in adult life. The coefficients of primary school enrolment and child underweight are the endogenous variables suspected to be correlated to the error term.

We resolve endogeneity issue is by running simultaneous equation model consisting of three equations: U5MR, PSE and CU with the help of 3SLS that combines multivariate regression known as Seemingly Unrelated regression with the 2SLS system and estimates all the coefficients simultaneously.

4. Results and discussion.

Table 3. Estimates of factors determining the progress of child poverty issues across country clusters here

In Table 3 (columns 2-5), equation 1, the empirical results of the coefficients corresponding to low income and middle income countries show that the estimated coefficients of primary school enrolment, gender parity index and ethnolinguistic fractionalization are statistically significant and have the expected signs in explaining child poverty. The performance based on elasticities shows that nearly all the variables except for girls out of school and health expenditure per capita have more potency on child poverty in the low GNI per capita cluster than in the middle-income cluster. For instance, the estimated elasticity shows that a 1% increase in primary school enrolment will decrease child poverty by 0.61% in the low-income group while only by 0.05% in the middle-income group. Furthermore, a 1% increase in women's membership in groups formed on the basis of ethnicity (ELF) with the object of facilitating credit to rural women will decrease child poverty by 1.88% in low income countries and by 0.05% in middle income countries.

The empirical results of the coefficients corresponding to U5MR above 10% and U5MR below 10% country clusters (Table 3, columns 6-9) in equation 1 indicate that the coefficients of primary school enrolment, child underweight, agriculture value added, rural sanitation, girls out of primary school and ethnolinguistic fractionalization (ELF) are statistically significant with the expected signs. The elasticities show that the estimates of child underweight and ethnolinguistic fractionalization have more potency on child poverty in U5MR above 10% cluster. In other words, a 1% increase in child underweight will increase child poverty by 1.35%, while a 1% increase in ELF will decrease child poverty by 2.21%. Conversely, the estimated elasticities in the country cluster of U5MR below 10% are much lower than those of U5MR above 10% cluster.

In Table 3 (columns 2-5), equation 2, the empirical results of the coefficients corresponding to low income and middle income countries show that the estimated coefficients of U5MR, crop production index_1, paved roads, persistence to last grade primary school and children in employment

are statistically significant and have the expected signs in explaining primary school enrolment (PSE). Furthermore, the elasticities indicate that the estimate U5MR in the middle income cluster has the greatest effect on primary school enrolment, a 1% increase in U5MR will decrease primary school enrolment by 8.02% in middle income and by 0.45% in low income. Whereas the estimated coefficients with elasticities of more than 1% influence on primary school enrolment in low income cluster are crop production index (2.00%) and Ibrahim index African governance (1.11%).

The empirical results of the coefficients corresponding to U5MR above 10% and U5MR below 10% country clusters (Table 3, columns 6-9) in equation 2 indicate that the coefficients of U5MR, crop production index with one year lag, paved roads, persistence to the last grade primary school, children in employment and ratio of female labor force participation rate are statistically significant with the expected signs. The elasticity shows that the estimate U5MR a proxy for child poverty in U5MR below 10% cluster has the strongest impact on PSE, a 1% increase in U5MR will reduce PSE by 11.43%. While the estimates of the ratio of female to male labor force participation rate and crop production index with one-year lag have more than 1% effect on PSE in U5MR above 10% cluster.

The estimate of crop production index_1 is outstanding in its strong effects on primary school enrolment across all the clusters. Elasticity estimates indicate that a 1% increase in crop production will increase primary school enrolment by 2% in low income countries, 0.93% in middle income countries, 2.32% in U5MR above 10% countries and 0.62% in U5MR below 10% countries. The ratio of female to male labour force participation rate is also more potent on primary school enrolment in the low income and U5MR above 10% countries. The effect of good governance (IIAG) on education shows that although IIAG is statistically insignificant in all the country clusters, the estimated elasticity indicates that 1% increase in IIAG will increase PSE by 0.68% in U5MR below 10% cluster.

In Table 3 (columns 2-5), equation 3, the empirical results of the coefficients corresponding to low income and middle income countries show that the estimated coefficients of child underweight _1, U5MR, crop production index and crop production index _1 are statistically significant and they have the expected signs in explaining child underweight. The estimated elasticity of child poverty (U5MR) is positive (0.07) and statistically significant at 0.01 in the low-income countries; and while in the middle-income countries it is also positive (1.27) and statistically significant at 0.01. The estimated elasticity indicates that a 1% increase in child poverty will increase child underweight by 0.04% in low income countries and by 0.72% in middle income countries. The estimate crop production index_1 is negative (-0.66) and statistically significant at 0.01 in low income countries; and in middle income countries it is (-0.34) and statistically significant at 0.01. The estimated elasticity indicates that a 1% increase in crop production index_1 will decrease child underweight by 2.44% in low income countries and by 1.26% in middle income countries.

The empirical results of the coefficients corresponding to U5MR above 10% and U5MR below 10% country clusters (Table 3, columns 6-9) in equation 3, reveals that the estimates of child underweight with a one year lag, U5MR, crop production index and crop production index with one year lag are statistically significant with the expected signs. The elasticities show that only the estimates of crop production index and crop production index with one year lag have the greatest potency on child underweight of more than 1%. In other words, a 1% increase in crop production index with one-year lag will reduce child underweight by 2.52% in U5MR above 10% and by 0.41% in U5MR below 10%.

The estimated coefficients of out of school children, married women can open a bank account, IIAG and mobile phone subscribers are statistically significant with the expected signs only in the U5MR below 10% cluster. Conversely, U5MR above 10% cluster has several statistically insignificant estimated coefficients in explaining child underweight. Nearly all the variables representing education such as primary school enrolment, gender parity index, female enrolment in secondary vocational education have low statistical significance in equation 3. For instance, the estimate primary school enrolment is negative (-0.06), the estimated elasticity shows that a 1% increase in primary school enrolment will reduce child underweight in both clusters with U5MR above 10% and U5MR below 10% by 0.17%.

Overall performance based on elasticities shows that most of the estimated coefficients have more potency on child poverty, primary school enrolment and child underweight in low income countries and U5MR above 10% countries. For instance in equation 1, women's membership in groups formed on the basis of ethnicity (ELF) with the object of facilitating credit to rural women will decrease child poverty by 1.88% in low income countries and 2.21% in U5MR above 10% countries. In equation 2, elasticity estimates indicate that a 1% increase in crop production will increase primary school enrolment by 2% in low income countries, 0.93% in middle income countries, 2.32% in U5MR above 10% countries and 0.62% in U5MR below 10% countries. The estimated elasticity of the ratio of female to male labour force participation rate indicates that a 1% increase in gender inequality in the labour market will decrease primary school enrolment by 0.86% in low income countries, by 0.10% in middle income countries, by 1.07 in U5MR above 10% countries and by 0.28% in U5MR below 10% countries. In equation 3, the estimated elasticity indicates that a 1% increase in crop production index_1 decreases child underweight by 2.44% in low income countries, 1.26% in middle income countries, 2.52% in countries with U5MR above 10% and 0.41% in countries with U5MR below 10%.

The effects of low-income countries and U5MR above 10% countries are very strong on child poverty, primary school enrolment and child underweight in comparison to the effects of middle

income countries and U5MR below 10% countries. Low income countries and countries with U5MR above 10 % have fewer total numbers of estimated coefficients with statistical insignificance and wrong expected signs as compared to middle income countries and countries with U5MR below 10%.

5. Conclusion.

This study attempted to find out how Africa is performing in leaving no child behind. Given the uneven progress in child poverty issues the investigation of the performance of African countries in child poverty issues was done through the comparison of income and U5MR countries' clusters. Due to endogeneity issues, we applied 3SLS methods to resolve endogeneity and used elasticity to allow direct comparisons between elasticities across country clusters. The results of the differences between low income and middle income countries, and U5MR above 10% and U5MR below 10% in terms of performance in child poverty suggest that strategies to reduce child poverty (U5MR) should give due importance to women's access to credit channelled through women's groups (ELF), children's nutritional status (CU) and women's status (GPI). These findings apply more to low income countries and U5MR above 10% countries where the aforementioned estimated coefficients have shown higher elasticities.

Results on primary school enrolment show that efforts to increase primary school enrolment in Africa should give due importance to issues of child poverty (U5MR) and child underweight, particularly in middle- income countries and U5MR below 10% countries. It is normally assumed that the consequences of child mortality and child underweight are mostly associated with poor income countries. However, child mortality and child underweight can be experienced alongside economic growth due to poor redistribution of the benefits of economic growth.

U5MR elasticity of primary school enrolment is moderate in the low-income cluster and U5MR above 10% cluster. The Ibrahim Index African Governance elasticity of primary school enrolment is relatively average across the clusters except for the cluster of U5MR above 10%. Crop production index elasticity of PSE is remarkably high in the low GNI cluster and U5MR above 10% cluster but has moderate effect in the middle income and U5MR below 10% cluster.

Crop production index elasticity of child underweight across all the country clusters, female enrolment in secondary school elasticity of child underweight in low income and U5MR above 10% clusters suggests that strategies to reduce child underweight should focus on crop production and female enrolment in secondary school, particularly vocational schools. Vocational secondary schools produce graduates with skills that make them ready to join the labour market. In sum, the regression results of U5MR, primary school enrolment and child underweight tend to point to agriculture as a

solution to child poverty issues in Africa. This is through an enabling environment for women in agriculture to access productive resources such as credit and education which would contribute to better crop production.

The results suggest that low income countries and countries with U5MR above 10% explain better factors determining the performance of Africa in child poverty than middle income countries and countries with U5MR below 10%. These findings suggest that economic and social policies should consider allocating more resources to low income and high U5MR countries to facilitate access to resources. The similarity between the low GNI cluster and U5MR above 10% cluster is because all the 15 countries in the low GNI cluster form part of the 23 countries in the U5MR above 10% cluster. There is a common pattern that from the 15 countries with U5MR above the total average, 11 of them have GPI below the total average, 14 have above the total average of OOSC and below the average of primary school enrolment, 11 have CU above and IIAG below the total averages. Furthermore, child mortality and child underweight mostly associated with low income countries can be experienced alongside economic growth due to unequal redistribution of the benefits of economic growth.

NOTE:

(1) FUNDING- this study did not receive any form of grants.

(2) CONFLICT OF INTEREST- We as the authors of this paper declare that we have no conflicts of interest.

(3) This manuscript is based on an academic dissertation

6. References

Abdu, M., and E. Delamonica. 2018. Multidimensional Child Poverty: From Complex Weighting to Simple Representation. Social Indicators Research. Vol. 136. pp. 881-905.

Amadou Sy. 2016, Foresight Africa: Top Priorities for the Continent in 2016. *Africa Growth Initiative at Brookings*.

Akobeng, A. 2016. Growth and Institutions: A Potential Medicine for the Poor in SSA. *African Development Review* Vol.28. No.1 pp 1-17.

Alkire, S., J.E. Foster, S. Seth, M.E. Santos, J.M. Roche, and P. Ballon. 2015. Multidimensional Poverty Measurement and Analysis: Chapter 5- The Alkire-Foster Counting Methodology. OPHI Working Paper No. 86.

Alkire, S. and M.E. Santos. 2014. Measuring Acute Poverty in the Developing World: Robustness and Scope of the Multidimensional Poverty Index. World Development 59, 251-274.

Alkire, S., M. Chatterjee, A. Conconi, S., and Seth, A. Vaz 2014. Poverty in Rural and Urban Areas. Direct Comparisons using Global MPI. University of Oxford.

Alkire, S. and J.M. Roche. 2011. Beyond Headcount: Measures that Reflect the Breath and Components of Child Poverty. OPHI Working Paper No. 45.

Andrews, M., R. Hay and J. Myers 2010. Governance Indicators Can Make Sense: Under-five

Mortality Rates are an Example. *Faculty Research Working Paper Series. RWP 10-015.*

Bardales, D. and P. Arenas. 2014. The World We Want: A Future for All. A Publication of *the Global Movement for Children of Latin America and Caribbean-MMI-LAC.*

Batana, Y., M. Bussolo and J. Cockburn 2013, Global Extreme Poverty Rates for Children, Adults and the Elderly. *Economic Letters* Vol. 120, Issues 3, pp. 405-407.

Beegle, K. and C. Luc. 2019. Accelerating Poverty Reduction in Africa. Washington, DC. World Bank. https://openknowledge.worldbank.org/handle/10986/32354

Belli, P.C., F. Bustreo and A. Preker. 2005, "Economic Benefits of Investing in Child Health". *Bulletin of WHO, 83 (10)*

Biggeri, M., Libanora, R., Mariani, S., and Meschini, L. 2005, "Children Conceptualizing their Capabilities: Results of a Survey Conducted Durino the First Children's World Congress on Child Labor", *Journal of Human Development* 7 (1):59-83.

Campbell, F. And C. T. Ramey. 1994. Effects of Early Intervention on Intellectual and Academic Achievement: A Follow up Study of Children from Low Income Families. *Child Development* 65 (2 Spec No): 684-698.

Camfield, L., N. Streuli and M. Woodhead. 2008, "Child Wellbeing in Contexts of Poverty: Approaches to Research, Monitoring and Participation*", Young Lives-Technical Note* No.12.

Clements, B., R. Bhattacharya, and T. Q. Nguyen.2005, Can Debt Relief Boost Growth in Poor Countries? *IMF Country Reports Economic Issues No. 34.*

Chzhen, Y. and l. Ferrone. 2017. Multidimensional Child Deprivation and Poverty Measurement: Case Study of Bosnia and Herzegovina. Social Indicators Research, 131 (3). Pp. 999-1014.

Delavallade, C. 2006, "Corruption and Distribution of Public Spending in Dev. Countries". *Journal of Eco. and Finance*; 30,2 pg.222.

Edmonds, E. V. 2007, Child Labor. *IZA Discussion Paper* No. 2606.

Fan, S. 2008, *Public Expenditure, Growth and Poverty. Lessons from Dev. Countries*. Baltimore: John Hopkins University Press

de Milliano, M. and I. Plavgo. 2014. CC- MODA-Cross Country Multiple Overlapping Deprivation Analysis: Analysing Child Poverty and Deprivation in Sub Saharan Africa. Innocenti Working Paper No.2014-19, UNICEF Office of Research, Florence.

Delavallade, C. 2006, "Corruption and Distribution of Public Spending in Developing Countries". *Journal of Economics and Finance*; Vol.30 No.2 pp. 222.

Diao, X., P. Hazzell and J. Thurlow. 2010. The Role of Agriculture in African Development. *World Development* Vol.38, No.10. pp 1375-83.

Dzator, J. and R. Chen. 2015. Sustaining Development and Poverty Reduction: Promoting Growth Where it Counts. *Journal of Developing Areas 2015 Special Issue* Vol. 49. Issue 6. pp 1-14.

Easterlin, R.A. and L. Angelescu 2007, "Modern Economic Growth and Quality of Life: Cross Sectional and Time Series Evidence", *IZA Discussion Paper* No. 2755

Ezeh, O.K., K.E. Agho, M.J. Dibley, J. Hall and A. N. Page. 2014. The Impact of Water and Sanitation on Childhood Mortality in Nigeria: Evidence from Demographic Health Surveys 2003-2013. *Int. J. Envviron Res Public Health* 11(9): 9256-72.

Foster, J. E. and M. Szekely. 2008, Is Economic Growth Good for the Poor? Tracking Low Incomes Using General Means. *International Economic Review* Vol. 49 Issue 4 pp. 1143-1172.

Galan, D., K. Seung-Sup and J.P. Graham. 2013. Exploring Changes in Open Defecation Prevalence in Sub Sahara Africa based on National Level Indices. *BMC Public Health* Vol.13 Issue 1. pp 1-12.

Gordon, D., S. Nandy, C. Pantazis, S. Pemberton and P. Townsend. 2003, Child Poverty in Developing Countries*, UNICEF*

Gordon, D. 2002. "The International Measurement of Poverty and Anti-poverty Policies" In P. Townsend and D. Gordon (eds) World Poverty: New Policies to Defeat an Old Enemy, Bristol: The Policy Press, pp 53-80.

Gordon, D., C. Pantazis and P. Townsend. 2000, *Child Right and Child Poverty in Developing Countries*- Summary Report to UNICEF.

Gupta, J. and C. Vegelin. 2016. Sustainable Development Goals and inclusive Development. *International Environmental Agreements: Politics, Law and Economics Vol.16 Issue 3 pp 433-448.*

Hair, J.F., Black, W.C et al. 2009. *Multivariate Data Analysis. A Global Perspective*. 7th Edition Prentice Hall

Hanushek, E. A. And L. Wobmann. 2007, "The role of educ. for eco. growth". *Policy Research Working Paper* No. 4122. World Bank.

Hope, K. R. 2005. Child Survival, Poverty, and Labor in Africa. Journal of Children and Poverty. 11 (1): 19-42.

Ingutia, A. R. 2017. Factors Affecting Child Poverty in Sub Saharan Africa Revisited with Special Reference to Education and Rural Women 1990-2010. University of Helsinki. Faculty of Agriculture and Forestry, Department of Economics and Management.

Kraay, A. 2004. "When is Growth Pro-poor? Evidence from a Panel of Countries. *The World Bank Policy Research Working Paper* No. 3225.

Lee, Y. 2009, Child Rights, Child Wellbeing and Child Poverty. *OECD World Forum on Statistics, Knowledge and Policy. Charting Progress, Building Visions, Improving Life. Busan Korea.*

Lister, R. 2005, Women's and Children's Poverty: Making the Links. *Women's Budget Group. Oxfam*

Lopez, H. 2004, "Pro-poor-Pro-growth: Is There a Trade off?" *The World Bank Policy Research Working Paper No. 3378.*

Marguerit, D., G. Cohen, and C. Exton. 2018. Child Well-being and the Sustainable Development Goals. How Far are the OECD Countries from Reaching the Targets for Children and Young People? Working Paper No. 92. OECD Statistics and Data Directorate.

Martinez, S., S. Naudeal and V.Pereira. 2012, The Promise of Preschool in Africa: A Randomised Impact Evaluation of Early Childhood Development. in Mozambique. *Save the Children and World Bank.*

Maria, E.S., C. Dabus and F. Delbianco. 2019. Growth and Poverty Revisited from a Multidimensional Perspective. The Journal of Development Studies. 55:2. pp. 260-277.

McGregor, S.G., Y.B. Cheng, C. Santiago, P.Glewwe, L. Richter, B. Strupp and the International Child Dev. Steering Group. 2007, Dev. Potential in the First 5 Years for Children in Developing Countries. Lancet Vol.369. Issue 9555. Pp 60-70.

Mo Ibrahim Foundation 2016. Ibrahim Index African Governance. www.Mo.Ibrahim.Foundation/iiag 17th August 2016.

Monden,W.S.C and J. Smits. 2013. Maternal Education is Associated with Reduced Female Disadvantage in Under-five Mortality in Sub Sahara Africa and Southern Asia. *International Journal of Epidemiology*. 42: 211-18.

Muriuki, J.M., A.J. Mentzer, E.L., Webb et al. 2020. Estimating the Burden of Iron Deficiency Among African Children. BMC Med 18, 13.

Nores, M. and W.S. Barnett. 2009, Benefits of Early Childhood Interventions Across the World:(Under) Investing in the Very Young. *Economics of Education Review Vol.* 29 Issue 2 Pp271-282.

Sen, A. 1999, *Development as Freedom*, Oxford press.

Smith, L.C., U. RamaKrishnan, A. Ndiaye, L. Haddad, and R. Martorell. 2003, *Importance of Women's Status for Child Nutrition in Developing Countries.* IFPRI Research Report 131.

The Lancet Commission 2020. A Future for the World's Children's? A WHO- UNICEF- Lancet

Commission.

Townsend, P. 1987. `Deprivation`, *Journal of Social Policy*, Vol. 16, No.2 PP125-46.

UNDP. 2013. Humanity Divided: Confronting Inequality in Developing Countries.

UN World Population Prospects 2015, the 2015 Revision.

United Nations. 1989. Convention on the Rights of the Child, the General Assembly Resolution 44/25

UNICEF Data. 2020. Children in Africa: Key statistics on child survival and population. UNICEF Data Monitoring the Situation of Every Child and Woman. Data.unicef.org>resources>children-in-Africa-child-survival.

UNICEF. 2020a. COVID-19 and Children. UNICEF Data Hub October 2020.

UNICEF. 2002, 2006, 2008, 2009 and 2016. The State of the World's Children.

UNICEF. 2015. Progress of Children Report June 2015.

UNICEFa. 2015. Children in Africa. Key Statistics on Child Survival, Protection and Development. UNICEF Data and Analytics Division of Data, Research and Policy November 2015.

UNICEF. 2000. The State of the World's Children.

UNESCO. 2011, Financing Educ. in SSA. Meeting the Challenges of Expansion, Equity and Quality. *UNESCO Institute for Statistics*

Vegas, E. And L. 2010, Santibanez. *The Promise of Early Childhood Development in L. America and the Caribbean,* World Bank

Vijaya, R.M., R. Lahoti and H. Swaminathan. 2014. 'Moving from the Household to the Individual: Multidimensional Poverty Analysis.' World Development 59: 70-81.

Witter, S., and J. Bukokhe. 2004. Children's Perceptions of Poverty Participation and Local Governance in Uganda. *Development in Practice* Vol.14 Issue 5. pp 645-59. World Bank 2016, Overview. Website http://worldbank.org/en/region/afr/overview 12th August 2016.

World Bank Group and UNICEF Study. 2016, Nearly 385 Million Children Living in Extreme Poverty.

WHO. 2020. Fact sheet- Children: Improving Survival and Well-being. www.who.int> fact sheets> newsroom> detail

WHO. 2017. "Children: Reducing Mortality". *Fact Sheet, Media Centre.*

WHO. 2014. The Health of the People-What Works. *The African Regional Health Report*

Yakoob, I. A., M. Yawar, Z.A. Bhutta. 2011, Impact of Maternal Education About Complementary Feeding and Provision of Complentary Foods on Child Growth in Developing Countries. *BMC Public Health Supplement 3.11, Issue Supp.*3, pg.1-14.