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THE KEY DRIVERS OF POVERTY IN SUB-SAHARAN AFRICA AND WHAT CAN BE DONE ABOUT IT TO ACHIEVE THE POVERTY SUSTAINABLE DEVELOPMENT GOAL

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ABSTRACT

The first Sustainable Development Goal targets ending poverty in all its forms everywhere by 2030. And one of the most remarkable achievements during the MDG era was the significant decline in the share of the extremely poor in the global population, leading to the global attainment of cutting the extreme poverty rate to half its 1990 level by 2015. However, Sub-Saharan Africa remained the only developing region where the MDG 1 target was not achieved. Based on the updated poverty line of $1.90 a day, poverty reduction in Sub-Saharan Africa significantly lags other developing regions. Understanding the key drivers and ways of tackling poverty in Sub-Saharan Africa becomes one of the pressing development challenges of our time. Our empirical estimates for the period, 1980 to 2013, show that the key factors significantly feeding poverty incidence and poverty depth in the region include high income inequality, oil-dependence, institutionalized democracy, high prevalence of HIV among the female youth, and increased civil war episodes. On the other hand, the key drivers significantly reducing poverty in the region are higher levels of economic development (income per capita), higher general government final consumption expenditure, higher official development assistance and aid received, urbanization, and access to improved water source. The policy implications are discussed.

Contribution/ Originality: This paper contributes uniquely to the existing literature on the drivers of poverty in SSA. Unlike previous studies, it uses the most recent data to present new, interesting stylized facts. It empirically assesses the impact of key drivers of poverty incidence and poverty gap, drawing key lessons for the sub-region.

1. INTRODUCTION

At the start of the new millennium, global leadership assembled at the Millennium Summit of the United Nations to undertake the momentous and daunting task of eradicating poverty in its various forms, the result of which were the Millennium Development Goals (MDGs), which largely set the development agenda through 2015. The Sustainable Development Goals (SDGs) have replaced the MDGs, maintaining many of the same priorities

along with new ones with the equivalent overarching aim of combatting poverty and achieving sustainable development.

The first Sustainable Development Goal targets ending poverty in all its forms everywhere by 2030. And one of the most remarkable achievements during the MDG era was the significant decline in the share of the extremely poor in the global population, leading to the global attainment of cutting the extreme poverty rate to half its 1990 level by 2015. However, Sub-Saharan Africa remained the only developing region where the MDG 1 target was not achieved. Based on the updated poverty line of $1.90 a day, poverty reduction in Sub-Saharan Africa significantly lags other developing regions. Understanding the key drivers and ways of tackling poverty in Sub-Saharan Africa becomes one of the pressing development challenges of our time. Indeed, tackling the problem of poverty is important because poverty will negatively affect progress toward the other SDGs generally, among other deleterious effects. The extent of poverty, its major drivers, and what to do about it to achieve the poverty SDG, have become some of the most hotly debated issues by policymakers and researchers alike.

Thus, the paper examines the drivers of poverty in Sub-Saharan Africa (SSA - headcount index and poverty gap of international poverty line at US$1.90 per day - with multivariate models using data on SSA for the period, 1980 to 2013. This paper extends and contributes to the literature on the drivers of poverty SSA in four ways. Firstly, unlike previous studies, the paper uses the most recent data set on poverty based on international poverty line at US$1.90 per day covering 44 SSA countries over the period, 1980 to 2013. Secondly, using this data set, the paper shows some new, interesting stylized facts on poverty in the sub-region. Thirdly, the paper empirically assesses the impact of key drivers of poverty incidence and poverty gap with a view to drawing key lessons for the sub-region. We incorporate some of the principal causes of poverty in SSA countries, including institutionalized democracy, HIV prevalence, access to clean water and sanitation, and civil wars, which are also the most overlooked in the empirical literature in Africa, especially in SSA. Fourthly, we offer policy suggestions in light of the evidence that would help SSA countries to effectively tackle the problem of high and persistent poverty in the region and achieve the poverty Sustainable Development Goal in the region.

The further contents of the paper can therefore be summarized as follows. Section II discusses key stylized facts on poverty, with focus on SSA countries, using latest data with poverty line set at US$1.90 per day. Section III presents the literature review. Section IV examines the model and data while Section V discusses the empirical estimates of the key drivers of poverty in SSA countries. Section VI concludes the paper with policy implications, focusing on what can be done to achieve the poverty Sustainable Development Goal in the region.

2. SOME STYLIZED FACTS ON SUB-SAHARAN AFRICA'S POVERTY PROFILE

While Sub-Saharan Africa's poverty incidence is declining, it has had the highest incidence at US$1.90 per day among the global regions from 1993 to 2013 (Figure 1). It is also the only region in which the number of people living under the poverty line has maintained a sustained increase since 1990 unlike South East Asia and the Pacific region where there had been a decrease in both the number and percentage of those under the poverty line (Figures 1 and 2).

The World Bank (2016) estimates indicate that the South East Asia and the Pacific had 71.0 million people or 3.5% of the population living on less than $1.90 a day in 2013, down from 965.9 million (or 60.2%) in 1990 (Figure 2). The data also indicate that though the percentage living below $1.90 a day in Sub-Saharan Africa (SSA) declined from 54.3% in 1990 to 41.0% in 2013, the number of people living below the international poverty line increased significantly from 276.1 million in 1990 to 388.7 million people in 2013 (Figure 3) – an increase of 41%.

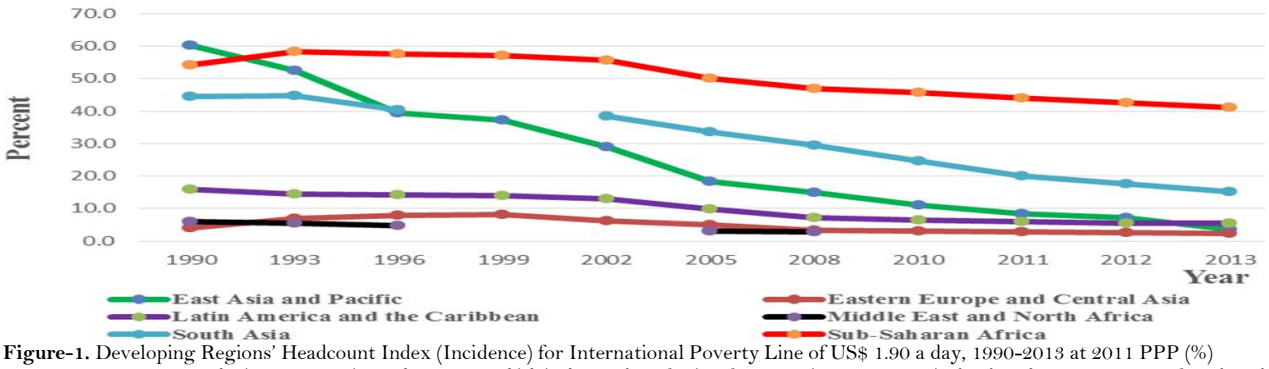

Figure-1. Developing Regions' Headcount Index (Incidence) for International Poverty Line of US$ 1.90 a day, 1990-2013 at 2011 PPP (%)
Note: 2011 PPP=2011 purchasing power parity exchange rate, which is the number of units of a country's currency required to buy the same amounts of goods and services in the domestic market as U.S. dollar would buy in the United States.
Source: Authors, using data from PovcalNet (online analysis tool), World Bank, Washington, DC, http://iresearch.worldbank.org/PovcalNet/

In 2013, the extreme poor in Sub-Saharan Africa represented more than half of the world's extreme poor of 766.6 million people. This contrasts SSA, which accounted for only 15 percent of the world's total in 1990. If current trend continues, the proportion of people living in extreme poverty in SSA as a whole would be far greater than the targeted 20 percent.

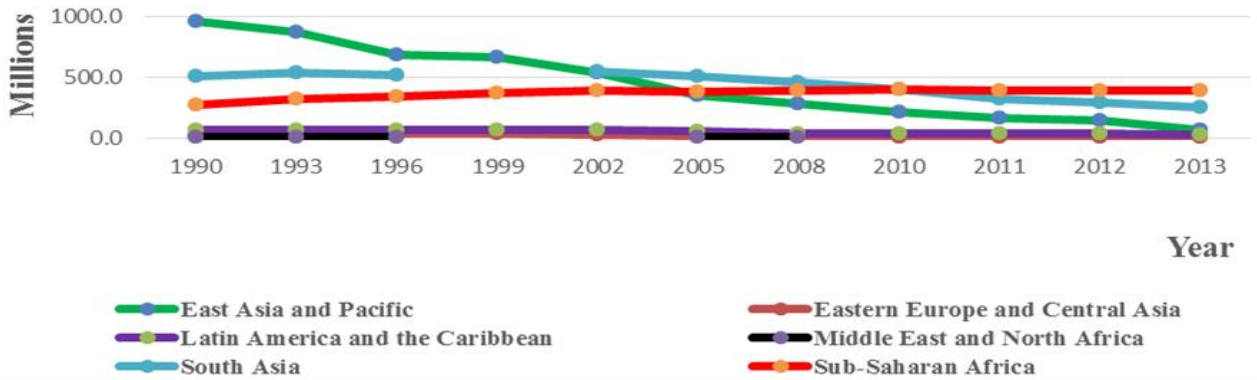

Figure-2. Developing Regions' Number of Extreme Poor (Millions) for International Poverty Line of US$ 1.90 a day, 1990-2013
Source: Authors, using data from PovcalNet (online analysis tool), World Bank, Washington, DC, http://iresearch.worldbank.org/PovcalNet/.

Another key feature is that Sub-Saharan Africa's poverty is very deep with the poverty gap (the depth or intensity of poverty – measuring how far, on the average, the poor are from the poverty line) as the highest among global regions since 1990. SSA's poverty gap reached a peak of over 27% in 1993 before declining to 16% in 2013 (Figure 3).

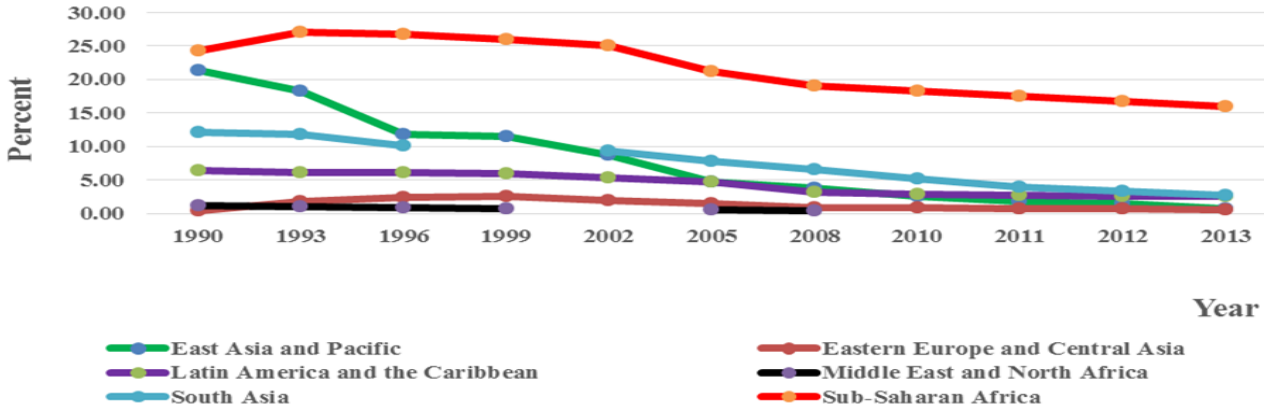

Figure-3. Poverty Gap (Depth) at US$ 1.90 Per Day in Developing Regions, 1990-2013 (%)
Source: Authors, using data from PovcalNet (online analysis tool), World Bank, Washington, DC, http://iresearch.worldbank.org/PovcalNet/.

In the same vein, SSA's poverty is the most severe (defined as how many families that are located far below the poverty line or the "poorest of the poor") of all the global regions, reaching a peak of 16% in 1993 before declining to 8.4% in 2013 (Figure 4).

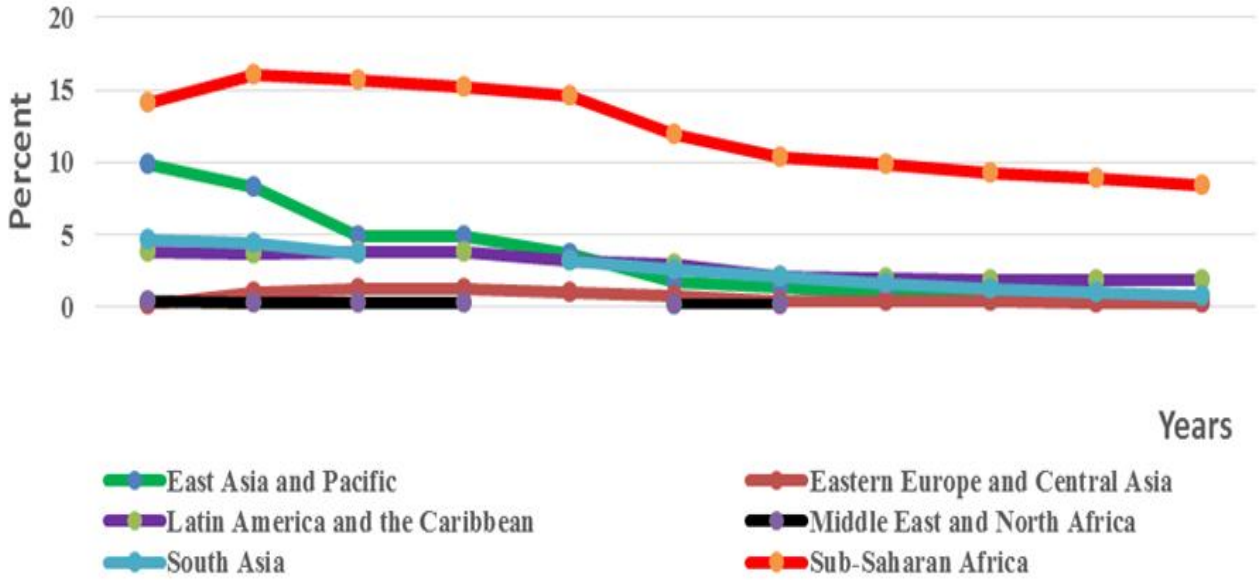

Figure-4. Poverty Severity at US$ 1.90 Per Day in Developing Regions, 1990-2013 (%)
Source: Authors, using data from Povcal Net (online analysis tool), World Bank, Washington, DC, http://iresearch.worldbank.org/PovcalNet/.

Figure 5 presents the trend of sub-regional averages of poverty headcount in Sub-Saharan Africa. The sub-regional averages are unweighted means of country averages during the years, 1980 to 2013. It shows that poverty headcount had been high and persistent in all the sub-regions. However, Central Africa has the unenviable position of leading the pack at an average of 54.32 percent, followed by the Southern Africa sub-region at about 50 percent. Another interesting feature is that no Sub-Saharan Africa sub-region had an average poverty incidence below 40 during the period.

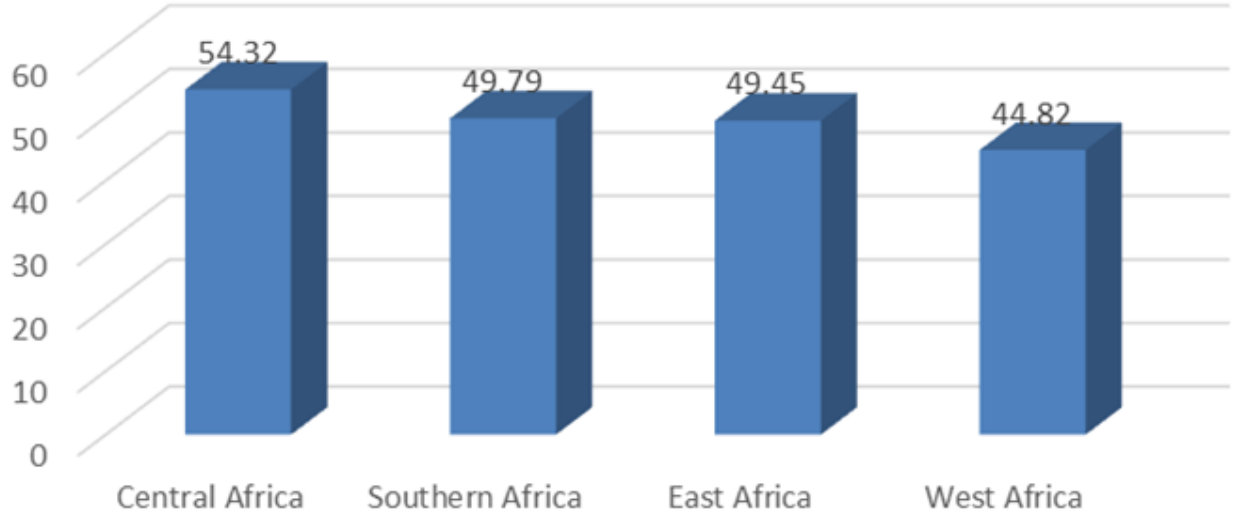

Figure-5. Trend in Poverty Headcount at US$ 1.90 Per Day in Sub-Saharan Africa, By Sub-Region, 1980-2013
Source: Authors, using data from PovcalNet (online analysis tool), World Bank, Washington, DC, http://iresearch.worldbank.org/PovcalNet/.

However, the above regional and sub-regional averages mask country differences. For example, the Democratic Republic of Congo (DRC) tops the list of the poorest countries in Sub-Saharan Africa (Figure 6). This is followed by Burundi, Mozambique, Central African Republic, and Niger in that order.

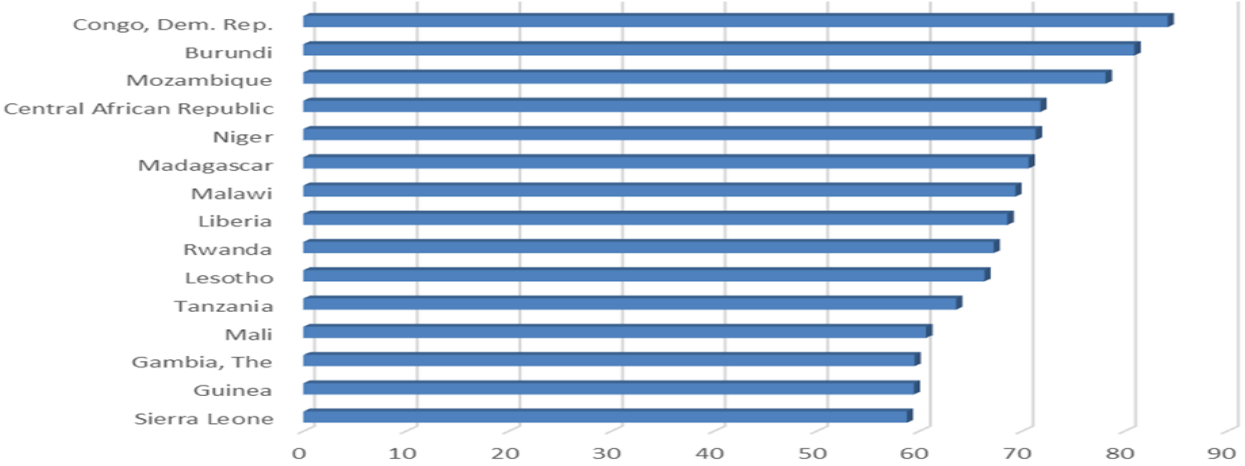

Figure-6. Top 15: Average Poverty Headcount at US$ 1.90 Per Day in SSA Countries, 1980-2013
Source: Authors, using data from the World Bank (2016).

Figure 7 shows a scatterplot of Sub-Saharan countries on log of average real GDP per capita and average poverty headcount. It shows clear and unambiguous negative correlation between real per capita GDP and poverty headcount in Sub-Saharan Africa. Countries that are in the southeast quadrant indicate those that they have experienced high real per capita GDP and relatively very low levels of income poverty, demonstrating relatively more inclusive economic development. They include Mauritius, Seychelles, Gabon, and South Africa, among others. Sub-Saharan African countries in the northeast quadrant have had high real GDP per capita but relatively high income poverty, indicating the non-inclusive nature of the relatively high level of economic development in those countries. This is particularly so for Swaziland, Nigeria, and Zambia. Countries in the north-west quadrant experienced low level of real per capita GDP but relatively high income poverty. It is not surprising to find countries like Burundi, Mozambique, Central African Republic, for example, in this quadrant. The only country in the southwest quadrant – Comoros – had had low economic development and low income poverty.

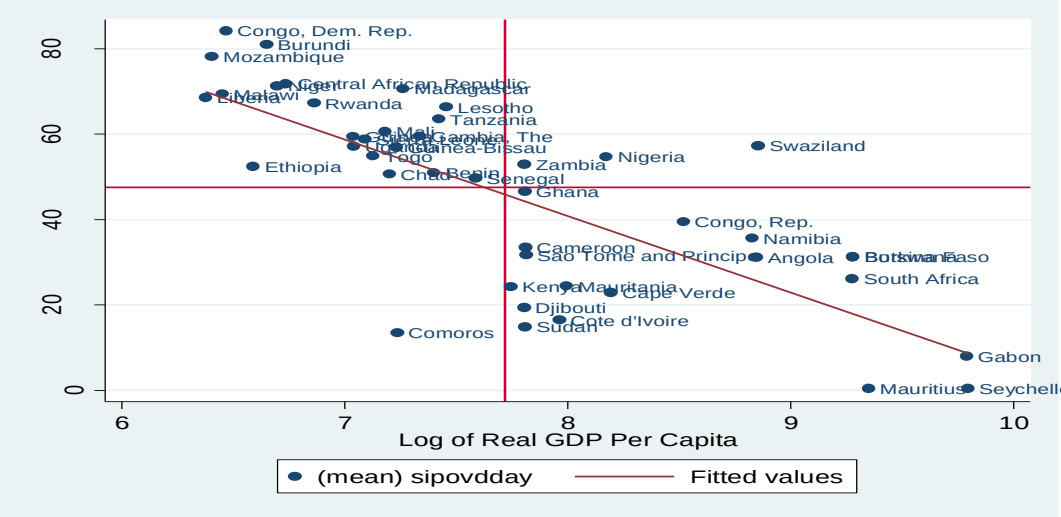

Figure-7. Sub-Saharan Africa - Mean Poverty Headcount and Mean Real Per Capita GDP, 1980-2013
Source: Authors, using data from the World Bank (2016).

3. THE LITERATURE REVIEW

Scholars, policymakers, and other stakeholders have long debated the determinants or drivers of poverty and in recent years, there has been some empirical data to support some of the broadly supported hypotheses about the drivers of poverty. Haughton and Khandker (2009) offer a theoretical overview of the determinants of poverty. According to them, poverty can be the result of individual, household, community, subnational, sector-specific, or

national attributes. Key household and individual-level components encompass household composition—size, age, and labor force participation of household members as well as gender of household head—household employment, and household property ownership and assets. Community-level elements consist of infrastructure, land distribution, average human resource development, access to employment, social mobility and representation, and social institutions and networks.

According to Haughton and Khandker (2009) at the subnational level, poverty is said to be high in areas characterized by geographical isolation, a low resource base, low rainfall, and other inhospitable climatic conditions. At the regional and national level, key drivers of poverty postulated include good governance; a sound environmental policy; economic, political and market stability; mass participation; global and regional security; intellectual expression; and a fair, functional, and effective judiciary. They identify various forms of inequality—race, gender, ethnic, class etc—as both dimensions of—and causes of—poverty.

Tsai (2006) uses cross-national data of 97 developing countries to test competing hypotheses of poverty, namely, (a) economic development and openness, (b) geographical and demographical disadvantages, (c) regime characteristics and war, and (d) social policy and human capital enhancement. His results reveal that besides a country's income level, tropics, landlockedness, population growth, and secondary schooling opportunity are significant predictors of poverty reduction, whereas political factors (democracy, military spending, and war) and government social spending are only weak predictors. There was no evidence in support of economic openness.

One of the most fundamental drivers of poverty is inequality. At the country level, a number of studies have found positive effects of inequality and income on poverty (e.g., Datt and Ravaillon (1992)) for Brazil and India; Kakwani (1993) for Cote d'Ivoire). These results are consistent with that of Richard (2002). Based on African data, Ali and Thorbecke (2000) find that poverty is more sensitive to income inequality than it is to income. Adams (2004) provides elasticity estimates showing that the growth elasticity of poverty is larger for the group with the smaller Gini coefficient (less inequality). Using survey data between 1980 and 1998, Naschold (2005) shows that for a given level of consumption, increases in inequality lead to higher levels of poverty. Anyanwu and Erhijakpor (2010) show that the finding of a positive and significant coefficients for the Gini index for poverty headcount, depth and severity measures indicate that greater inequality is associated with higher poverty.

Fosu (2008;2009;2010a;2010b) make similar observations for the Africa region. For example, Fosu (2010b) finds that the responsiveness of poverty to income growth is a decreasing function of inequality, and that the income elasticity of poverty is actually smaller than the inequality elasticity. Also, Cheema and Sial (2012) in the case of Pakistan for the period between 1992/3 and 2007/8, show that inequality plays significant roles in affecting poverty. More recently, similar results for the Middle East and North Africa have been shown by Ncube *et al.* (2014) and Anyanwu (2014) for the whole of Africa.

Both theoretical and empirical literature posits that a higher level of economic development —as measured by real GDP per capita — reduces poverty. As Shorrocks and Van Der Hoevon (2004) have noted, increased economic welfare in a country on average makes everyone better-off hence Sachs (2005) had observed that the main pro-poor growth strategy is to ensure that countries "climb the ladder" of economic development. Ulriksen (2012) finds that higher levels of economic wealth, measured as GDP per capita, the lower the rate of poverty in selected developing countries, a result consistent with Anyanwu and Erhijakpor (2009;2010); Anyanwu (2014) and Ncube *et al.* (2014).

The literature indicates that government expenditure plays an important role in poverty reduction. The idea is that government spending tends to increase income of all sections of the society especially the poorer sections. According to Keynesian perspective for example, public spending increases aggregate demand which further stimulates economic growth and employment hence through the multiplier process reduce poverty. Nazar and Tabar (2013) study the relationship between government spending and poverty rate in Sistan and Baluchestan Province of Iran for the period 1978 to 2008. Their results show that constructive expenditures have positive effect on poverty reduction while current expenditure of government have negative effect on poverty reduction.

Mehmood and Sadiq (2010) examine the relationship between government expenditure and poverty rate in Pakistan for the 1976 to 2010 period and find that government expenditure has a significant reducing effect on poverty. Fan *et al.* (2000) show that government spending on productivity enhancing investments, such as agricultural R&D and irrigation, rural infrastructure (including roads and electricity), and rural development targeted directly on the rural poor, have all contributed to reductions in rural poverty in rural India. These results agree with those of Birowo (2011) and Hidalgo-Hidalgo and Iturbe-Ormaetxe (2014).

The empirical findings with respect to the effects of ODA and aid received on poverty have been mixed. For example, Calderón *et al.* (2006) find that aid by itself does not appear to have a statistically significant effect on poverty reduction. This result agrees with their later finding (Chong *et al.*, 2009). Connors (2012) also finds that foreign aid does not exert a significant impact on reductions in poverty rates, suggesting that foreign aid, as currently practiced, is ineffective at reducing poverty. On the other hand, Bahmani-Oskooee and Oyolola (2009) using pooled time-series and cross sectional data from 49 developing countries, find that foreign aid is effective in reducing poverty.

Using data from 69 districts in Kenya, Oduor and Khainga (2009) show that net ODA from 69 districts in Kenya has significantly reduced poverty in the country, emphasizing that net ODA disbursements have had stronger impacts on the poorest of the poor more than those who are less poor. Also, the results of Alvi and Senbeta (2012) suggest that aid has a significant poverty-reducing effect even after controlling for average income. Specifically, foreign aid is associated with a decline in poverty as measured by the poverty rate, poverty gap index and squared poverty gap index. They also find that the composition of aid matters—multilateral aid and grants do better in reducing poverty than bilateral aid and loans.

The literature shows that education increases the stock of human capital, which in turn increases skills, labor productivity and wages. Since labor is by far the most important asset of the poor, increasing the education of the poor will tend to reduce poverty. Also, investment in human capital is important, not only for economic growth but also, more directly, for poverty reduction (Hughes and Irfan, 2007). Palmer-Jones and Sen (2003) and Anyanwu (2005;2010;2012) have found rural households in India and Nigeria, respectively, whose main earning member does not have formal education or has attended only up to primary school are more likely to be poor than households whose earning members have attended secondary school and beyond.

Sadeghi (2001) has noted higher levels of education were not seriously needed in rural areas where only a few well-educated people live. But not all levels of education are "created equal" for poverty reduction. According to Anyanwu (2014) primary education is positively and significantly related to poverty headcount. It is only when people have at least secondary education that the relationship between education and poverty becomes negative and important. According to Tilak (2007) literacy (mere literacy) and primary education are positively related to poverty ratio. The results of Botha (2010) indicate a clear negative relationship between education and poverty in South Africa. According to the author, households in which the head has a low level of education are more likely to be poor compared to a household where the head has a higher level of education.

The resource curse argument indicates that natural resources dependence increases the possibility of rent capture and the creation of a rentier state which exacerbates poverty and inequality not only because of the rent extraction by the ruling elite but also because of limited redistribution towards the lower socioeconomics segments of the population. Thus, it is postulated that natural resource abundance: (a) creates rents that are easily captured by the ruling elite hence exacerbating the income gap between the higher and the lower classes; (b) is associated with retardation of the emergence of manufacturing and industrialization; and (c) impedes creation of effective and efficient institutions that would put more stringent constraints on the possibilities of rents expropriation. Some studies, such as Davis (1995) suggest that resource wealth – particularly mineral wealth – enhances the welfare of the poor.

However, Ross (2003) finds that, after controlling for initial income, a state's dependence on mineral exports in 1970 is robustly associated with worsened conditions for the poor in the late 1990s. Other types of primary commodities are not linked to poverty. While both oil and nonfuel minerals are associated with poverty, the causal mechanisms are different, according to Ross (2003): in states dependent on nonfuel minerals, the problem has been slow growth; in oil-dependent states, it has been the crowding-out of growth in the manufacturing sector, and a lack of democracy.

Empirical results by Ormonde (2011) indicate that Chile and Botswana have managed to utilize mineral rents to propel strong economic growth and reduce poverty but inequality levels remain high in both countries. Levels of poverty are noticeably the lowest in Chile while Nigeria and Zambia, which have been unable to capitalize on their extensive mineral bases to lower poverty rates, have the highest poverty rates among the countries. On the other hand, Venezuela and Bolivia have experienced both volatile economic growth and varied levels of poverty. Ulriksen (2012) using natural resource dependence, measured as natural resource exports as percentage of GDP, find that natural resource dependence has a significant positive effect on poverty in selected developing countries, including Botswana. Recently, Ncube *et al.* (2014) find that oil rent as a percentage of GDP has a negative and significant effect on poverty headcount in the Middle East and North African (MENA) countries. This result shows that the huge oil exports and derived revenues by the MENA countries have been beneficial to the poor in that region.

With respect to democracy, Ross (2006) provides an in-depth review of studies showing that democracies do a better job than non-democracies of improving the welfare of the poor. But he opines that these studies tend to exclude from their samples nondemocratic states that have performed well hence leading to the mistaken inference that non-democracies have worse records than democracies. In his study he shows that once these and other flaws are corrected, democracy has little or no effect on infant and child mortality rates. According to him, democracies spend more money on education and health than non-democracies, but these benefits seem to accrue to middle- and upper-income groups. In addition, findings by Fabella and Oyales (2008) suggest that democracy in general has negative influence on poverty for developing counties. However, when complemented with trade openness, primary education, regulatory quality, effective governance, and voice and accountability, the outcome becomes positive.

In addition, according to Varshney (1999) no democracy in the developing world has successfully eliminated poverty because (a) direct methods of poverty-alleviation have greater political salience in democracies, and (b) because the poor are typically not from the same ethnic group. However, the former hurts the poor because the indirect, market-based methods of poverty-alleviation are both more sustainable and more effective; and the latter goes against them because a split between ethnicity and class militates against the mobilization (and voting) of the poor as a class and dilutes the exertion of a pro-poor political pressure on governments.

In essence, Varshney (1999) posits that there are three theoretical possibilities on why democracies have not reduced poverty: (a) the poor either do not vote, or local coercion makes it difficult for them to vote according to their true interests; (b) organizing the poor is difficult because of collective action problems; or (c) if they do vote, they vote on non-economic grounds. With reference to third reason, he proffers two reasons that ensure that voting and mobilization possibilities for the poor do not lead to a removal of poverty, and do not become spurs for effective and sustained pro-poor governmental action. Firstly, for the poor, poverty-alleviation measures that are direct and short-run carry a great deal more weight than measures that are indirect and have a long-run impact. Secondly, the poor have multiple selves - they are not only members of a class of poor, but also of linguistic, religious, tribal and caste communities. Unfortunately, often, their voting is identity-based, not class-based and so is their mobilization. The result is that multiple selves drive a wedge between the poor as a class and the poor as a political collectivity, significantly reducing, if not eliminating, pressure on the government to act on behalf of the poor.

A conceptual framework decomposing the links between trade policy and poverty has been developed by Winters (2000;2002) while exploring policy responses to the possibility that liberalization causes poverty (Winters *et al.*, 2004). On the other hand, a number of empirical studies using panel and cross-section data (e.g. (Edwards,

1997; Ghura *et al.*, 2002; Dollar and Kraay, 2004)) find no link between openness and the well-being of the poor beyond those associated with higher average per capita income growth. Some recent results indicate that trade openness has significant positive effect on poverty in Africa (see, for example, (Anyanwu and Erhijakpor, 2010)).

Fosu and Mold (2008) reassess the gains from trade for sub-Saharan Africa, and draw their implications for labor market adjustment and poverty reduction. Their findings support the hypothesis that African countries cannot expect substantial gains from further multilateral liberalization. In addition, given the sharp contraction of import-competing sectors in response to trade liberalization in many African economies, coupled with insufficient compensation through labor market adjustments in other sectors, the study suggests that the ultimate impact on poverty reduction is likely to be small or even negative. The results by Ncube *et al.* (2014) for the MENA region show that trade openness significantly reduces poverty in that region.

Living in an urban area is associated with an increase in access to labor markets and formal employment opportunities (see Anyanwu and Augustine (2013)). This is because urban labor markets offer a wide variety of occupations, from manufacturing and services to clerical activities. Thus, increased urbanization rate is expected to lead to lower poverty rates due to the resulting higher incomes from higher labor participation. That is, urbanization contributes to poverty reduction but at much higher levels. Cali and Menon (2009) argue that there are at least six main indirect channels through which urban population growth may affect rural poverty in surrounding areas: backward linkages, rural non-farm employment, remittances, agricultural productivity, rural land prices and consumer prices.

Using a sample of Indian districts in the period 1981-1999, they find that urbanization has a substantial and systematic poverty reducing effect in surrounding rural areas. This effect is largely attributable to positive spillovers from urbanization rather than to the movement of the rural poor to urban areas *per se*. But, Martinez-Vazquez *et al.* (2009) show theoretically and empirically that there is a U-shaped relationship between the level of urbanization and poverty. Recently, Zhang (2016) find as follows: (a) urbanization has a significant effect on reducing both poverty of rural residents and poverty of migrating peasants, and, consequently, has a positive effect on narrowing the rural–urban income or consumption gap. Urban labor markets play an important role in this effect; (b) urbanization is positively correlated with urban poverty. This is attributed to the competition between migrating peasants and urban workers in the labor market, and the failure of the government's anti-poverty policies in urban areas.

The HIV/AIDS epidemic, a major development threat, is responsible for slowing the rate of growth of the gross national product of many heavily affected countries and increases overall health expenditures for both medical care and social support. Salinas and Haacker (2006) argue that one of the channels through which HIV/AIDS can affect overall poverty levels is its effect on economic growth. Because the disease claims lives primarily from the working age segments of the population, the affected countries experience major reductions in their workforces, unambiguously lowering GDP growth rates. Empirical results by Booysen (2003) shows that in South Africa, the incidence, depth, and severity of poverty are higher among households affected by HIV/AIDS, and their members are more likely to experience chronic poverty and income variation. Also, Salinas and Haacker (2006) find that the HIV epidemic lowers average income and increases poverty, and that the jump in poverty is larger than expected from the fall in average income.

The cliché that "water is life" may well be true for one cannot grow food, one cannot manufacture products or provide services, one cannot build houses, one cannot stay healthy, one cannot stay in school and one cannot keep working. And indeed without clean water, the possibility of breaking out of the cycle of poverty is incredibly slim. Schuster-Wallace (2008) opine that "The provision of safe water and sanitation is a key mechanism required to break the cycle of poverty, particularly for women and girls" (p.6). They went further to assert that "No other single intervention is more likely to have a significant impact on global poverty than the provision" (p.8).

Hagos (2008) argue that inadequate water and sanitation services to the poor increase their living costs, lower their income earning potential, damage their well-being and make life riskier. Using a framework that assumes that with improved access to water, health outcomes will also improve as well as economic opportunities owing to increased free and productive time and income opportunities, Sullivan and Meigh (2003) see access to water as a prerequisite for poverty reduction. Also, the results of Mkondiwa *et al.* (2013) for Malawi indicate that poverty in the context of low income and expenditure is positively correlated with lack of access to safe and adequate water.

Civil wars and conflicts increase poverty because they lead to the destruction of productive forces (especially human and physical capital) of the economy, increase transaction costs, reduce social spending, and disrupt economic activity due to an unsafe business environment (Bircan *et al.* (2010)). Consequently, the scarcity of physical and human capital results in rising relative prices of capital intensive goods, while, at the same time, owners of unskilled labor face risks of falling wages and unemployment. These result in poverty and widening of the income gap, especially with the rise of a small percentage of war profiteers.

Indeed, it has been argued that violent conflict contributes to poverty by causing (a) damage to infrastructure, institutions and production; (b) the destruction of assets; the breakup of communities and social networks; (c) forced displacement; (d) increased unemployment and inflation; (e) changes in access to and relationship with local exchange, employment, credit and insurance markets; (f) falls in spending on social services; and (g) death and injury to people (Collier, 2007; Addison *et al.*, 2010; Justino, 2010; Baddeley, 2011; Justino and Verwimp, 2013; USAID, 2014).

4. THE MODEL AND DATA

4.1 The Empirical Model

Using the basic growth–poverty model suggested by Ravallion (1997;2008) and Ravallion and Chen (1997) as well as the frameworks posited by Dollar and Kraay (2002); Ghura *et al.* (2002); Berg and Krueger (2003) and empirical works of Agénor (2004;2005); Islam (2004); Anyanwu and Erhijakpor (2010; 2012); Ncube *et al.* (2014); and Anyanwu (2013;2014) the relationship that we want to estimate can be written as:

$$\log P_{it} = \alpha_i + \beta_1 \log(g_{it}) + \beta_2 \log(y_{it}) + \beta_3 \log(X_{it}) + \varepsilon_{it}$$
$$(i = 1,...., N; t = 1,....., T),.....(1)$$

where P is the measure of poverty in country i at time t; α_i is a fixed effect reflecting time differences between countries; β_1 is the elasticity of poverty with respect to income inequality given by the Gini coefficient, g; β_2 is the "growth elasticity of poverty" with respect to real per capita GDP given by y; X is the control variables, including net ODA and official aid received, general government final consumption expenditure as percentage of GDP, trade openness (measured as the ratio between exports + imports as percentage of GDP), primary school gross enrolment ratio, oil rents as percentage of GDP, mineral rents as percentage of GDP, urban share of the population, prevalence of HIV among females aged 15-24 years, improved water source as a percentage of the population with access, improved sanitation facilities as a percentage of the population with access, institutionalized democracy, civil war incidence, and sub-regional dummies used as fixed effects; and ε is an error term that includes errors in the poverty measure.

The dependent variable in Equation (1), which is poverty, is the headcount index of international poverty line at US$1.90 per day. The headcount measure is considerably the most commonly calculated and used poverty measure. We also estimate the key drivers of the depth of poverty (poverty gap) at the same US$1.90 per day.

The measure of income inequality is the Gini coefficient. The Gini coefficient is the ratio of the area between the Lorenz curve and the diagonal (the line of perfect equality) to the area below the diagonal. As a measure of income inequality, the Gini coefficient ranges from 0 to 1. The larger the coefficient is, the greater the degree of inequality. Thus, the Gini coefficient limits 0 for perfect equality and 1 for perfect inequality. The model assumes

that the level of income inequality affects poverty reduction. Since past work has shown that a given rate of economic growth reduces poverty more in low-inequality countries, as opposed to high-inequality countries, the income inequality variable is expected to be positive and significant. Therefore, the worse the income distribution and an increase in inflation tend to have a negative impact on poverty reduction so that their coefficients are expected to be positive. The model also assumes that economic development —as measured by real GDP per capita— will reduce poverty. The relationship between poverty and the income variable is therefore expected to be negative and significant. Thus, the negative coefficient of β_2 is expected.

The coefficient associated with trade openness to poverty reduction is ambiguous (Berg and Krueger, 2003). On the one hand, trade liberalization might worsen the income distribution, particularly by encouraging the adoption of skill-biased technical change in response to increased foreign competition. Thus, if trade liberalization worsens the income distribution enough, particularly by making the poor poorer, then it is possible that it is not after all good for poverty reduction, despite its positive overall growth effects. On the other hand, trade liberalization could benefit the poor at least as much as the average person (Jongwanich, 2007). Trade liberalization could increase the relative wage of low-skilled workers and reduce monopoly rents and the value of connections to bureaucratic and political power.

While an increase in primary school enrolment increases the opportunity of the poor to generate income in a low education continent, the coefficient associated with primary school enrolment is expected to be negative. Oil rents and mineral rents as percentage of GDP are expected to worsen poverty in accordance with the resource curse hypothesis. Urban share of the population, institutionalized democracy, improved water access and sanitation facilities are expected to be significant in reducing poverty. But HIV prevalence and civil war episodes are expected to do the reverse. Sub-regional dummies (West Africa, East Africa, Central Africa, North Africa and Southern Africa – as defined by the African Development Bank) were introduced to control for fixed effects. Time (year) fixed effects were also used.

For robustness, our estimations are done with OLS and IV-2SLS. One possible problem with Equation (1) is that it assumes that all of the right-hand side variables in the model—including net official development assistance and official aid received — are exogenous to poverty. However, it is possible that net official development assistance and official aid received may be endogenous to poverty. Reverse causality may be taking place: net official development assistance and official aid received may be reducing poverty, but poverty may also be affecting the level of Net official development assistance and official aid being received. Without accounting for this reverse causality, all of the estimated coefficients in Table 2 may be biased. One way of accounting for possible endogenous regressors is to pursue an instrumental variables approach. Therefore, to deal with this problem, we estimate the equation, instrumentalizing the net official development assistance and official aid received variable with its first two lagged levels (since these show up as appropriate instruments), using a two-step instrumental variable (IV-2SLS) estimation method.

4.2. The Data

Making use of national representative poverty surveys from 1980 to 2013, the dataset consists of 44 SSA countries. The poverty and inequality measures used here are from the World Bank's 2016 World Development Indicators (WDI). The poverty measures are the headcount index and poverty gap of international poverty line at US$1.90 per day. The rest of the data series are also from the World Bank World Development Indicators Online database, except institutionalized democracy from the Polity IV Project Online dataset, and civil war episodes taken from Major Episodes of Political Violence Online dataset. Table 1 provides detailed descriptions of the raw dataset.

Table-1. Descriptive Statistics of Regression Variables

Variable	Observations	Mean	Median	Standard Deviation
Poverty Headcount	158	47.51	49.8	22.71
Poverty Gap	158	20.48	17.80	13.71
Gini Index	155	45.16	43.00	8.75
Log of Real Per Capita GDP	1097	7.72	7.49	0.98
General Government Final Consumption Expenditure (% of GDP)	1417	16.49	14.90	8.37
Log of Net ODA and Official Aid Received	16a3	19.13	19.17	1.29
Primary Education Enrolment (Gross)	1319	87.49	92.70	30.57
Oil Rents (% of GDP)	1464	4.91	0.00	13.48
Mineral Rents (% of GDP)	1554	1.50	0.00	4.39
Institutionalized Democracy (Polity2)	1542	-1.01	-2	5.94
Trade Openness	1482	76.58	62.95	50.24
Urban Population Share	1666	33.31	32.35	15.89
Prevalence of HIV, Female (ages 15-24)	1080	3.15	1.30	4.47
Improved Water Source (% of Population with Access)	1125	64.73	63.4	18.88
Improved Sanitation Facilities (% of Population with Access)	1115	31.84	25.7	21.83
Civil War Episodes	1541	3.18	1.30	4.47

Note: These are raw data before the log transformation

Source: Authors' calculations, using estimation data.

5. EMPIRICAL RESULTS

Table 2 shows the results when Equation (1) is estimated using Ordinary Least Squares (OLS) and the two-stage Least Squares Instrumental Variables (2SLS). The estimates from our sample conform to the predictions of the model. The results are robust to changes in estimation methods. Our discussion is based on the IV-2SLS.

Highly positive and significant Gini index coefficients for poverty headcount and poverty gap indicate that greater inequality is associated with higher poverty incidence and poverty depth in SSA countries. Our estimates suggest that, on average, a one percentage increase in income inequality is associated with a 0.73 percentage increase in the share of people living in poverty and a 0.83 percentage points increase in poverty depth. Thus, income inequality is very bad for the poor in SSA countries. This is in conformity with the results of Cheema and Sial (2012); Ncube *et al.* (2014) and Anyanwu (2014).

Economic development is good for poverty reduction in SSA countries. Real Per capita income has high negative and significant coefficients for both poverty headcount and poverty gap estimates. This indicates that any strategy to attain the poverty SDG in the region has to be one that ensures that countries "climb the ladder" of economic development. This result confirms recent findings by Ulriksen (2012); Ncube *et al.* (2014) and Anyanwu (2014).

General government final consumption expenditure does have a systematic negative effect on poverty headcount and poverty gap in SSA countries. Our estimates suggest that, on average, a one percentage increase in general government final consumption expenditure is associated with a 0.64 percentage increase in the share of people living in poverty and a 0.37 percentage points increase in poverty depth. Findings by Mehmood and Sadiq (2010); Fan *et al.* (2000); Birowo (2011) and Hidalgo-Hidalgo and Iturbe-Ormaetxe (2014) are in accord with our results.

Net ODA and foreign aid received also matters for poverty reduction in SSA countries. Net ODA and foreign aid received has a highly negative and statistically significant impact on poverty incidence and poverty gap in the region. Our estimates suggest that, on average, a one percentage increase in net ODA and foreign aid received as a percentage of GDP is associated with a 4.25 percentage points decline in the share of people living in poverty and a 2.65 percentage point reduction in poverty depth. These results agree with those of Bahmani-Oskooee and Oyolola

(2009) and Alvi and Senbeta (2012) but not with those of Calderón *et al.* (2006); Chong *et al.* (2009) and Connors (2012).

Table-2. Estimates of the Key Drivers of Poverty in Sub-Saharan Africa

Variable	Poverty Headcount		Poverty Gap	
	Pooled OLS	**IV-2SLS**	**Pooled OLS**	**IV-2SLS**
Gini Index	0.803 (3.85***)	0.728 (4.25***)	0.830 (4.58***)	0.793 (5.41***)
Log of Real Per Capita GDP	-20.853 (-6.49***)	-20.227 (-7.28***)	-11.189 (-4.75***)	-10.880 (-5.70***)
General Government Final Consumption Expenditure (% of GDP)	-0.680 (-2.55**)	-0.637 (-3.00***)	-0.389 (-2.02**)	-0.367 (-2.42**)
Log of Net ODA and Official Aid Received	-2.731 (-1.77*)	-4.249 (-2.81***)	-1.892 (-1.92*)	-2.645 (-2.96***)
Primary Education Enrolment (Gross)	0.029 (0.38)	0.036 (0.60)	-0.032 (-0.57)	-0.029 (-0.65)
Oil Rents (% of GDP)	0.362 (2.74***)	0.373 (3.41***)	0.163 (2.21**)	0.169 (2.87***)
Mineral Rents (% of GDP)	-0.125 (-0.63)	-0.121 (-0.78)	0.051 (0.30)	0.053 (0.39)
Institutionalized Democracy (Polity2)	0.944 (2.96***)	0.901 (3.56***)	0.572 (2.53**)	0.550 (3.06***)
Trade Openness	0.014 (0.23)	-0.020 (-0.36)	0.066 (1.45)	0.049 (1.32)
Urban Population Share	-0.158 (-1.50)	-0.159 (-1.82*)	-0.118 (-1.65*)	-0.118 (-2.04**)
Prevalence of HIV, Female (ages 15-24)	1.321 (2.09**)	1.171 (2.27**)	0.281 (0.58)	0.207 (0.52)
Improved Water Source (% of Population with Access)	-0.261 (-1.86*)	-0.243 (-2.21**)	-0.126 (-1.20)	-0.117 (-1.43)
Improved Sanitation Facilities (% of Population with Access)	0.015 (0.15)	-0.024 (-0.28)	0.010 (0.13)	-.010 (-0.16)
Civil War Episodes	4.264 (2.05**)	5.023 (2.95***)	2.843 (2.22**)	3.219 (3.12***)
Time Dummies	Yes	Yes	Yes	Yes
Sub-Regional Dummies	Yes	Yes	Yes	Yes
Constant	222.720 (6.88***)	253.126 (7.99***)	112.975 (5.65***)	124.988 (6.71***)
R-Squared	0.8697	0.8682	0.8306	0.8296
F-Statistic	40.81		28.52	
Wald chi2		2925.21		1741.36
Prob>F/chi2	0.0000	0.0000	0.0000	0.0000
Durbin (score) chi2(1)		2.17327 (p=0.1404)		2.42646 (p=0.1193)
Sargan (score) chi2(1)		0.210098 (p=0.6467)		0.007469 (0.9311)
N	101	101	101	101

Source: Authors" calculations. Note: *** 1% significant level; ** 5% significant level; * 10% significant level.

Our results also show that a country's dependence on oil rents is robustly associated with worsened conditions for the poor in SSA countries. In other words, a higher share of oil rents in GDP leads to significantly higher levels and depth of poverty in the region. Our estimates show that a one percentage point increase in oil rents as a percentage of GDP is associated with an increase of poverty level by at least 0.37 percentage point as well as a 0.17 percentage points increase in poverty depth. These results are in tune with those of Ross (2003) and Ulriksen (2012). Institutional democracy is bad for poverty reduction in SSA countries and for the attainment of the poverty SDG, if the current state of democratic practice continues. Institutional democracy has positive and highly significant coefficients for poverty incidence and poverty depth in the region in accordance with the findings of Fabella and Oyales (2008). We expected to see democratization having a significant negative association with poverty indices; what we find instead are mostly less than honest governments, sometimes voted in through dubiously "free and fair" elections, who use the trappings and rhetoric of democracy as a façade while behind the scenes they engage in rent-seeking practices that can lead to a systemic entrenchment of corruption. In such 'democratic' system, political power is used for personal economic gain, which is used for buying political influence

and perpetuating themselves in power. Under such a climate, few or no dividends go to the general populace, resulting in persistent poverty incidence and poverty depth among a large percentage of the population. This result should not be a surprise because most SSA countries are "anocracies" (neither fully democratic nor fully autocratic but, rather, combine an often incoherent mix of democratic and autocratic traits and practices), characterized by institutions and political elites that are far less capable of performing fundamental but very often reflect inherent qualities of instability or ineffectiveness.

Our results indicate weak negative association between urban population share and poverty incidence and poverty depth in SSA countries. For example, a one percentage point increase in urbanization is associated with a 0.16 percentage point reduction on poverty incidence and a 0.12 percentage point reduction in poverty depth in the region. This weak poverty-reducing effect could be linked to what the Lall *et al.* (2017) call the "three features" that constrain urban development and create daily challenges for residents: African cities are crowded and not economically dense; they are disconnected, being collections of small and fragmented neighborhoods, lacking reliable transportation and limiting workers' job opportunities while preventing firms from reaping scale and agglomeration benefits; and they are costly for households and firms.

Another important dimension of our results relates to the large positive and significant association between the prevalence of HIV among the female youth and poverty incidence in SSA countries. Our estimates show that a one percentage point increase in HIV infection rate among this group is associated with an increase of poverty level by at least 1.17 percentage points. The findings of Booysen (2003) and Salinas and Haacker (2006) support our findings. Yet another critical finding is that access to improved water source is significantly associated with poverty reduction in Sub-Saharan Africa. Our results indicate that a one percentage increase in access to improved water source is associated with 0.24 percent point reduction in poverty incidence in the region.

Civil war incidence has positive and significant association with both poverty incidence and poverty depth in SSA countries. Thus, our evidence shows that SSA countries that have a history of civil wars and conflicts will be less likely to see significant reduction in poverty incidence and poverty depth. This is consistent with the stylized facts presented in Figure 6 where DRC, Burundi, Mozambique and Central African Republic as the "bad" poverty "players".

6. CONCLUSIONS AND POLICY IMPLICATIONS FOR ACHIEVING THE POVERTY SDG IN SSA COUNTRIES

Our empirical estimates, using available cross-sectional data over the period, 1980 and 2013 suggest that, high income inequality, oil-dependence, institutionalized democracy, high prevalence of HIV among the female youth, and increased civil war episodes tend to increase poverty incidence and poverty depth in SSA countries and therefore bad for poverty reduction and achieving the poverty SDG in the region. On the other hand, higher levels of economic development (income per capita), higher general government final consumption expenditure, higher official development assistance and aid received, urbanization, and access to improved water source have significant negative effect on poverty in SSA countries and thus good for poverty reduction and the attainment of the poverty SDG in the region. Our findings point to some key policy recommendations for poverty reduction and hence for achieving the poverty SDG in SSA. First, given the finding that inequality fuels poverty in SSA countries, policy makers need to tackle this challenge head-on. The literature has identified a number of possible policy instruments to deal with inequality, including, conditional cash transfers, guaranteed employment schemes, labour market training, greater access to health, nutrition and education through increased social investments, affirmative action, and land and property rights reforms, especially to benefit rural dwellers (particularly women). Evidence has shown that conditional cash transfers and expenditures are effective safety nets and levers of poverty reduction and redistribution (see (Levy, 2006; Kanbur, 2008; Anyanwu and Erhijakpor, 2010; Anyanwu, 2014)).

A recent successful example has come from Africa: Miller (2011) has shown that cash transfers in Malawi benefited both the recipients, non-recipients and local businesses given that the transfers strengthened local markets by providing a steady source of customers and cash. Also, using community-based approaches, some important development successes have been achieved under conditional cash transfers, including those that dealt with nutrition in Tamil Nadu, total sanitation in parts of Bangladesh and Indonesia, oral re-hydration in Bangladesh and Egypt, and the reduction of the burden of several neglected tropical diseases in sub-Saharan Africa. Successes occur when conditional cash transfers achieve the best outcome, at the lowest cost and in a sustainable manner (Skolnik, 2011). Rosenberg (2011a;2011b) had extensively discussed success stories in in using cash transfers to reduce poverty in Brazil and Mexico. Improving access to education will reduce poverty both by increasing individual productivity and by facilitating the movement of poor people from low-paying jobs in agriculture to higher-paying jobs in industry and services.

Second, SSA countries must increase their national incomes. To increase per capita income, these countries must deepen macroeconomic and structural reforms to increase their competitiveness, create increasing and more quality jobs and hence increase participation in economic activity, dismantle existing structural bottlenecks to private and public investment, scale-up investments in hard and soft infrastructure, check rapid population growth, and increase productivity, especially in agriculture, through creating incentives and opportunities for the private sector and increasing government support to small farm holders in terms of finance, formalization of land ownership, and technical advice.

Third, the solution to poverty in SSA is not less government but more. Government expenditure should be carried in ways which reduce poverty by productive and equitable spending on public services, conditional cash transfer programs, safety nets, targeted subsidies, public works or other instruments for transferring incomes, goods or services, particularly to vulnerable citizens in SSA countries. This will also require not only the political will for the government to execute its own policies but also to empower the poor themselves to initiate, design, execute and manage their own priorities. This multi-dimensional empowerment involves political empowerment (through public administration institutions, village and neighborhood councils, participation in democratic processes, and hence with a voice and right to vote), economic empowerment (through easy access to economic resources and institutions: provision of basic assets-equity-enhancing land reform measures, micro-credit, physical infrastructure, extension services, etc.), and social empowerment (e.g. provision of secondary basic needs, especially education and health; and involvement of the poor in non-governmental organizations (NGOs), private voluntary organizations (PVOs), and other community-based and grassroots institutions).

Fourth, the significant positive effect of net ODA and foreign aid received on poverty in SSA demonstrates a positive "infrastructure effect" by which ODA and foreign aid received improves the recipient country's economic and social infrastructure (such as physical/economic infrastructure, including transport, telecommunications, and power/energy (electricity) as well as social infrastructure, including education, health or a reliable and well-functioning bureaucracy) (Harms and Lutz, 2006; Kimura and Todo, 2010; Anyanwu, 2012) and hence raises the marginal product of capital in the country. Thus, apart from promoting the "infrastructure effect" of ODA, African countries need to re-examine their economic and social conditions, and modality and volatility of ODA. It is important that SSA country-recipients of ODA formulate policies that improve their economic relationships with the donor countries in order to attract higher ODA inflows, especially the grant element from the donors, bilateral, multilateral and philanthropic. In addition, in a context of growing shortage of ODA aid given the aid-fatigue in the West, a detailed analysis of the ODA-poverty reduction nexus in the development cooperation relationship will be a useful and enriching exercise.

Fifth, following our finding that oil rents exacerbate poverty in SSA, international financial institutions like the African Development Bank have a critical role to play in helping these countries acquire the much-needed capacity not only to negotiate beneficial contracts and earn higher rents but also for effective management of oil rents and

other related revenues. In particular, a new natural resources management framework is needed for better governance, sectoral linkages, economic growth and human, capacity and infrastructure development – with strong parliamentary legislation, oversight, and representation throughout the mineral resources value chain. Key effective oil resource management practices will require the following enhanced good governance; integration of the oil sector into national development frameworks; reinforcement of institutional capacity and building strong and capable institutions; sound fiscal policy and diversification of the economy; full disclosure of terms of oil resources contracts and activating third-party brokers such as development partners (e.g. AfDB) and NGOs to ease information availability and reduce information asymmetry; and reforming countries' company and financial laws to require all oil companies to use the EITI template in their annual financial reports by law.

The promotion of diversification away from oil and other natural resources dependence is imperative. Indeed, developing a successful modern economy based on natural resource exports is, in principle, feasible, given the right institutions and policies, as demonstrated by OECD countries such as Canada, Australia, or the Scandinavian countries like Norway. However, it is critical to use oil and other natural resources to develop a more diversified economic structure. Some policies are helpful in fostering diversification. These include establishing a conducive business environment and providing sufficient incentives to invest in non-natural resources sectors. A conventional measure is to use the tax system to assist the development of non-natural resource sectors. In addition to tax policy, there is also need for structural reforms, including financial sector and administrative reforms, to facilitate the diversification of economic activity. In many natural resource-dependent SSA economies, there is a large scope to reduce the burdens imposed by heavy regulation and an often corrupt bureaucracy, which, in addition to strengthening the financial system, would help create a more level playing field and decrease barriers to entry.

Sixth, critical measures have to be taken to alter "democracy" in SSA countries to improve the life of the poor in the region. Strengthening of democratic governance must be seen as an essential component of the efforts to reduce poverty and achieve the poverty SDG in SSA. And rooting out corruption that "corrodes democracy" must be an essential element of the effort. This will involve transition to effective participatory democracy, which will facilitate active political involvement of the citizenry; forge political consensus through dialogue; devise and implement public policies that ground a productive economy and healthy society; assure that all citizens benefit from the nation's wealth (Fung and Wright, 2001). SSA countries need to intensify efforts to strengthen governance through the development of participatory decision-making processes that are inclusive of civil society and the private sector as well as local communities. SSA governments need to introduce decentralized governance structures as part of the efforts to broaden public participation and involvement in policy processes and implementation. They also need to improve public service delivery, strengthening capacities, and ensuring greater accountability and transparency in public administration. To help reduce poverty, countries in the region must elevate their democracy from a mere electoral level to a more liberal one. What is needed, therefore, is deep introspection and political reform of the various institutions and political parties seeking to govern so as to promote a sustained commitment to democracy that will ensure the embrace and guarantee of equal citizenship, political pluralism, freedom, rule of law, political rights, general respect for others, and socio-political cum economic inclusion that ensures economic dividend for all the citizenry. Seventh, one element of structural transformation, urbanization, is found to contribute significantly (though weakly) to poverty reduction in the region. Thus, SSA countries need to engage in structural transformation of their urban sector. In particular, SSA countries need to scale up urban investments to complement rural ones in their poverty reduction strategies. As Lall *et al.* (2017) advocate, to spring SSA from its low urban development trap, governments in the region need to formalize land markets, clarify property rights and strengthen urban planning while scaling up and coordinating investments in physical structures and infrastructure in urban areas. These will help to build dense, connected, and efficient cities, and needless to say, help further reduce both urban, sub-urban and rural poverty. Eight, against the background of the findings in this paper that high HIV prevalence increases poverty, more serious efforts must be made to curb this scourge. As Anyanwu *et al.* (2013) have

shown, optimal government fiscal policy interventions lead to early sharp reductions in the HIV prevalence rate. There is urgent need therefore for increasing expenditures on the expensive but cost-effective antiretroviral therapy (ART) programs. Traditional fight against AIDS includes mother to child transmission prevention, condom distribution, information campaigns and counselling. But implementing these 'cheap' interventions without the ART interventions is fiscally worse than the no-intervention case and less macroeconomically efficient than the full ART intervention case.

Ninth, improved and clean water access can be increased in individual countries through partnerships among countries, local communities, local and international NGOs/donors, bilateral agencies, and multilateral agencies like the African Development Bank. Indeed, a good model is being pursued by the African Development in implementation of its High Five priorities (Power and Light Up Africa, Feed Africa, Industrialize Africa, Integrate Africa, and Improve the Quality of Life for the People of Africa – a key component of which is improving access to water and sanitation), whereby partnership initiatives (such as the New Deal on Energy for Africa and the Transformative Partnership on Energy). In urban and rural communities local governments can partner up with private operators to build and/or rehabilitate water distribution systems through the public-private partnership (PPP) approach, with the government providing effective regulation. However, rain collection, water recycling, well construction, and pump construction can be undertaken in rural communities where it is too costly to construct water infrastructure with private involvement. In this case local community funding pooling could be used for funding the projects. Lastly, SSA countries must implement policies to reduce the incidence of civil wars in the region as well as promote effective peace and stability. They must prevent and properly manage key scenarios fueling civil wars due to natural resources wealth (especially rentier, repression and corruption effects) and societal fractionalization and polarization. Actions will include institutionalization of inter-ethnic elite accommodation, in which elites from rival ethnic groups are co-opted into the political system (ethnic power sharing) as a means by which to reduce exclusion perception that precedes wars as well as federate the different ethnic groups via a coalition of their elites.

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