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Financial Inclusion and Poverty Rate in Sub-Sahara Africa: Does Institutional Efficiency Matter?

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Abstract

One of the United Nation's Sustainable Development Goals (SDGs) is eradication. In line with this, governments of sub-Saharan African (SSA) countries and international agencies have taken various poverty-reducing initiatives like financial inclusion and institutional reforms, social reengineering and humanitarian interventions. This study examined the critical role of institutional efficiency in reducing poverty rate in sub-Saharan Africa through financial inclusion mechanisms. For our analysis, we deployed the system generalized Methods of Moments (system-GMM) in a panel data environment, with time scope of 18 years and cross-sectional scope of 29 SSA countries. We found significant positive self-replicating effect of poverty rate, heterogeneous effects of financial inclusion, and unimpressive role of the institutions for the linear system-GMM. However, the role of institutions enhances the effect of financial inclusion in the context of nonlinear system-GMM procedure. Consequently, we emphasized that, in the quest to reduce poverty rate in the SSA region, relevant authorities should evolve informed policy options anchored on real time tracking movements in poverty rates.

GEL Classifications: E 44, G21, I32

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1. Introduction

Although poverty is a global phenomenon, it is endemic in sub-Saharan Africa and other developing regions of the world. Because of the multidimensionality and adverse effects of poverty on lives and economies, the United Nations places poverty alleviation as the topmost priority in Sustainable Development Goals (SDGs), which thrust is to drastically reduce poverty by the year 2030. Therefore, reducing poverty and inequality gap among the people is a major challenge that faces countries and international organizations. In line with this, governments of SSA and international agencies have taken various poverty-targeting initiatives such as financial inclusion, institutional reforms, social reengineering and humanitarian interventions. Despite the initiatives, policy actions and interventions, the problem of poverty remains deep-rooted in the developing countries in general and sub-Saharan Africa (SSA) in particular. For instance, increasing number of poor people and slow progress in poverty reduction efforts in the SSA accounts for the slowdown in global extreme poverty reduction (Schoch & Lakner, 2020). Though SSA's poverty rate decreased from 56 percent in 1990 to 40 percent in 2018, the number of people living in extreme poverty increased from 284 million in 1990 to 433 million in 2018 (ibid). The implication of this is that poverty rate in SSA exceeds population growth rate. Similarly, World Bank (2022) reports that the increase in SSA's poverty rate from 38.9 percent or 420 million people in 2019 to 40.4 percent or 436 million people in 2021 shows that the efforts at reducing poverty level in the region has not yielded the desired outcomes (World Bank, 2022: see Appendix A). The Bank notes specifically that though poverty rate decreased at the US$1.90, US$3.20 and US$5.50 poverty lines, the number of people in extreme poverty increased.

Current data released by World Poverty Clock (2023) show that for the SDG target for poverty reduction, only 3 SSA countries are on track; 21 are off track; and poverty is rising in 14 of the countries (see Appendix B). Data are not available for the rest of the countries. This becomes more challenging and worrisome, given that the landscape of poverty seems to hold no promises for the SSA region because of the series of shocks to the global economy such as COVID-19 pandemic, climate change and the Russia-Ukraine war. For instance, the setback the COVID-19 pandemic unleashed to the global economy pushed 70 million people into extreme poverty in 2020 (World Bank, 2021), while Russia-Ukraine war has deepened the global economic slowdown with tendency that about 600 million of the world population will be trapped in extreme poverty by the year 2030 (Pangestu, 2022). Similarly, the climate change threatens the environment, global health and food supply chain.

In recent times, both developed and developing countries have pursued the goals of poverty and inequality reduction and accelerated economic growth and development through financial inclusion. Moreover, the literature documents it as a veritable tool for inclusive economic growth through employment, reduction in income and resource inequality and poverty (Jalilian & Kirkpatrick, 2005; Triki & Faye; 2013), Nanziri, 2016; Ibrahim & Olasunkanmi; 2019). Financial inclusion, as an essential component of a country's financial structure, connotes a deliberate policy thrust of relevant policy makers to drive the country's financial sector expanding the scope of financial services and products at affordable costs to hitherto excluded segments of the population. Therefore, Demirguc-Kunt, Klapper, and Singer (2017) note that financial inclusion begins when individuals opens either savings and/or deposit accounts with banks, insurance and other financial service providers. However, the problem of financial exclusion seems to be severe amongst underprivileged groups such as low-income earners, rural dwellers and petty businesses. By

implication, access to financial services tends to be skewed towards the more privileged population and, thus, improving access to the poor and disadvantaged social strata remains a global priority (Matsebula and Yu, 2020) as a means of fighting poverty.

The motivation for this study takes its root from the extant literature, which suggests a strong connection between financial inclusion and reduction in poverty rate (Triki & Faye, 2013; Fadun, 2014; Nkwede, 2015; Park & Mercado, 2015; Boukhatem, 2016; Demirgüç-Kunt et al., 2017; Mohammed *et al*., 2017; Umaru & Chibuzor, 2018; Churchill & Vijaya, 2020; Omar & Inaba, 2020; Eze & Alugbuo, 2021).
However, despite the fact that, in recent times, financial inclusion has gained significant importance in the SSA as is manifest in the ever-growing number of banks' product lines, the region remains the epicenter of poverty and number of people living in extreme poverty. This is in part because previous studies ignored the critical role of some factors in the relationship between financial inclusion and poverty in SSA region and, thus, could not offer appropriate policy recommendations. In addition, each of the studies failed to compare at least two methodological procedures. In this paper, we argue that efficiency of institutions is the critical factor that enhances financial inclusion initiatives to contribute effectively in reducing poverty rate and the number of people living in extreme poverty. Therefore, our main contributions to empirical literature on SSA are: (i) we examine the catalytic role of institutional efficiency in the nexus between financial inclusion and poverty reduction in the SSA region; (ii) we compare estimates from linear and nonlinear estimation procedures for informed conclusion and recommendations.

2. Theoretical Framework and Literature Review

The analytical model in this study follows from the new-Keynesians-led neoliberal perspective to poverty, North's (1990) theory of institutional framework, and Ozili's (2020) financial inclusion beneficiary theory. The neoliberal view argues that, in addition to market inefficiencies, widespread underdevelopment also contributes to poverty. The theory explains that unemployment is the main source of poverty and, thus, advocates for redistribution of income through monetary and fiscal policies. In addition to unemployment, other key symptoms and causes of poverty include inefficient institutions, scarce business capital, and socio-economic infrastructure. On the other hand, the institutional framework emphasizes the ability of a nation to achieve a successful economic change by resolving social and economic challenges such as poverty through efficient and effective institutions. Similarly, financial inclusion theory advocates for an unrestricted financial inclusion spectrum for everyone in the society in such a way that there is no exclusivity. The crux of these theories is that poverty, unemployment, income inequality and other social and economic problems can be alleviated through financial inclusion, with efficient institutions playing some moderating roles.

Several previous works have studied the link between financial inclusion and poverty reduction, using different econometrics methodological procedures. For instance, within autoregressive distributed lag model (ARDL) framework, Chemli (2014) found reduced poverty among poor in Middle East and North Africa (MENA) through credit and increased access to financial services. Though different methodological procedures, Bakari et al. (2015) and Ayensu *et al*. (2017) found that credit to private-GDP ratio, and access to banking products such as ATMs, and access to information technology as well as government expenditure dampen poverty. In a related study, Hussaini and Chibuzor (2018) considered the moderating influence of microfinance banks in the

nexus between financial inclusion and poverty in Kebbi State, Nigeria. The finding shows strong evidence that microfinance stimulates the potential of financial inclusion in lowering poverty. A study by Calderon *et al*. (2018) for 57 countries from 2005 to 2008 produced similar findings. Findings of some other studies further corroborate these findings (see Muritala & Fasanya (2013) Boukhatem, 2016; Zahonogo; 2017; Fadun; 2014; Aribaba et al., 2020).

It is obvious from the review that there seems to be a consensus among the studies. It is also evidence that only few of the studies considered the role of microfinance, which is a minute component of financial sector of any country. The implication is that, hitherto, they neglected the mainstream financial architecture of the economies. Therefore, this paper argues that the studies underrepresented the critical role of financial inclusion in their analysis of poverty reduction.

3. Methodology

We deployed the Generalize Method of Moments (GMM) within panel data environment. The methodological procedure is suitable because our dataset has both time and cross-sectional dimensions. In addition, The GMM estimator is appropriate when cross-sectional scope is greater than the time scope (N > T). The estimator mitigates the problem of potential endogeneity bias and cross-sectional dependence (Roodman, 2009). The GMM procedures are the differenced-GMM (Holtz-Eakin, Newey & Rosen, 1988; Arellano & Bond, 1991; Blundell & Bond, 1998) and system-GMM (Arellano & Bover, 1995). In this paper, we deploy the linear and nonlinear system-GMM procedures, using the *xtabond2* and *xtdpdgmm* Stata commands. The steps are predicated on two peculiar strengths; first, to provide robust outcome irrespective of the deviation from normal distributions of the enlisted panel series; second, to provide distinctive insights lacking in prior studies thereby extending the trajectory of knowledge. Some previous studies have deployed the technique because of its efficiency (Boukhatem, 2016; Bolarinwa *et al*., 2021). In this study, our cross-sectional scope is 29 SSA countries, while the time scope is 18 years (2004 – 2021). This scope is informed by the post-takeoff of Millennium Development Goals (MDGs) and data availability.

In line with the foregoing, we construct predictive models that quantify the response of poverty rate (PV) to financial inclusion (FI) before and after interactions with the proxies of institutional efficiency (IE). For FI, we identify these indicators: (i) deposits with commercial banks (DCB), (ii) loans from commercial banks (LCB), and (iii) number of commercial banks (NCBB). DCP measures the deposit capacity of banked population, while LCB proxies the strengths of banks at supplying credit facilities to the desiring population for various purposes. NCBB is a measure of the spread of financial services outlets of the banks to the population. On the other hand, we calculated the mean value of the metrics of the six indicators of IE. This enables us to overcome the complexity in working with the multi-dimensions of institutional efficiency without appreciable loss of information. The model takes the form (see Acheampong *et al*., 2021; Kouadio & Gakpa, 2022).

$$\ln PV_{i,t} = \beta_0 + \beta_1 \ln DCB_{i,t} + \beta_2 \ln LCB_{i,t} + \beta_3 \ln NCBB_{i,t} + \mu_t \quad \text{..... Model 1}$$

$$\ln PV_{i,t} = \theta_0 + \theta_1 \ln(IE * DCB)_{i,t} + \theta_2 \ln(IE * LCB)_{i,t} + \theta_3 \ln(IE * NCBB)_{i,t} + \varepsilon_t \quad \text{..... Model 2}$$

where PV, *DCB*, *LCB* and *NCBB* are as defined earlier. IE*DCB, IE*LCB and IE*NCBB are the

interactions of institutional efficiency with the respective financial inclusion indicators. β_0 and θ_0 are the intercept of the models and each denotes poverty rate in the absence of financial inclusion. β_k *(k = 1, 2, 3)* is the vector coefficients of the predictor series, with each capturing the nature and magnitude of effect of a given change in the associated predictor series on the predicted series, *i* and *t* are the cross-sectional and regular time frequency identifiers respectively, while μ is the zero mean idiosyncratic error term.

The variables on the right hand side of the equations are transformed to their natural logarithms (ln) to hedge against differences in the units of measurements. We estimated and evaluated the parameters of models 1 and 2, Next, we compared the coefficients of the models on the bases of the nature, magnitudes and statistical significance of their effects on poverty rate in the SSA region. In addition, we establish the robustness of the estimates of the coefficients through post-estimation tests.

4. Results and Discussion

We present, interpret and discuss the results of the analyses in this sub-section.

Descriptive Statistics
The descriptive statistics are presented in Table 1.
Table 1: Descriptive statistics

Series	*ln*PV	*ln*DCB	*ln*LCB	*ln*NCBB	IE
Mean	3.301	12.755	11.973	1.403	-0.495
Median	3.689	13.315	12.685	1.398	-0.574
Maximum	4.556	28.842	21.421	4.008	0.875
Minimum	-2.076	3.281	-0.798	-1.028	-1.724
Std. Dev.	1.234	2.564	3.391	1.032	0.624
Skewness	-2.301	0.050	-1.424	0.213	0.405
Kurtosis	8.027	5.105	6.408	3.087	2.367
JB	1010.7	96.627	429.23	4.127	22.975
JB Prob.	0.000	0.000	0.000	0.126	0.000
Obs.	522	522	522	522	522

Note: Std. Dev., JB and Obs denote standard deviation, Jarque-Bera statistic and number of observations, respectively.
Source: Authors' computations.

The descriptive statistics of the data on the indicators of financial inclusion and institutional efficiency are summarized in Table 1. From the results, the mean of logged poverty rate is 3.301, while the standard deviation is 1.234. This shows poverty rate did not exhibit volatile fluctuations during the period under investigation. The values of the standard deviation of the financial inclusion metrics reveal that loans from commercial banks were more dispersed (std. = 3.391) than the deposit with commercial banks (std. = 2.564). Number of commercial banks' branches (NCBB) was the least dispersed (Std. = 1.032). The mean 1.403, with the standard deviation 1.032, shows that number of banks' branches exhibited no dispersion during the period. The mean value -0.495 and standard deviation 0.624 indicate that institutional efficiency of the SSA region was widely dispersed. The result also shows that the mean of all the series lie between their maximum and

minimum values, implying that the series converged to the cross-sectional average (Opuala, Omoke & Uche, 2022).

In addition, PV and LCB exhibited negative skews, while DCB, NCBB and IE exhibited positive skews. Furthermore, the Jarque-Bera statistics suggests that all the series, except NCBB, deviate from normal distribution. Instructively, the application of a dynamic model like the systemGMM procedures are formidable to circumvent the potential challenges of such deviations from normality (Devangi & Lee, 2013).

4.1 Partial Correlation Coefficients

The partial correlation coefficients are presented in Table 3.

Table 3a: Pairwise Correlation Estimates – Model 1

Series	*ln*PV	*lnDCB*	*ln*LCB	*ln*NB
*ln*PV	1.000			
*ln*DCB	0.255***	1.000		
*ln*LCB	0.110**	0.641***	1.000	
*ln*NCBB	-0.696***	-0.245***	0.021	1.000

*Note: ***, ** and * denote significant at 1%, 5% and 10% significance levels, respectively.*
Source: Authors' computations.

Table 3b: Pairwise Correlation Estimates – Model 2

Series	*ln*PV	*ln*IE*DCB	*ln*IE*LCB	*In*IE*NCCB
*ln*PV	1.000			
*ln*IE*DCB	-0.631***	1.000		
*ln*IE*LCB	-0.574***	0.675***	1.000	
*ln*IE*NCBB	-0.649***	0.661***	0.762	1.000

*Note: ***, ** and * denote significant at 1%, 5% and 10% significance levels, respectively.*
Source: Authors' computations.

The coefficients indicate that *DCB* and *LCB* are potential significant positive predictors of poverty rate, while *NCCB* and *lE* are potential significant negative predictors of poverty. It is evident from the results that with the moderating influence of institutional efficiency, all financial inclusion series were likely negative predictors of poverty in SSA. In addition, despite that multicollinearity does not sufficiently influence the accuracy of regression models, the coefficients in Table 3a and Table 3b, possible challenge of multicollinearity among the predictor series in this study is ruled out in both, given the values of the correlation coefficients are below the eighty percent tolerable limit.

4.2 Regression Analysis Results

We present the results of the regression analysis in Table 4 and Table 5.

Table 4: Estimates of two-step SystemGMM (*xtabond2* linear process)

$Model1: \ln PV_{i,t} = \beta_0 + \beta_1 \ln DCB_{i,t} + \beta_2 \ln LCB_{i,t} + \beta_3 \ln NB_{i,t} + \mu_t$			
Series	*Coeff.*	*z-stat*	*Prob.*
lnPV(L1)	0.015***	6.13	0.000
lnDCB	-0.001	-0.25	0.802
lnLCB	-0.001**	-2.49	0.013
lnNCBB	0.028	5.06	0.000
Constant	-0.256***	-9.84	0.000
$Model2: \ln PV_{i,t} = \theta_0 + \theta_1 \ln(IE*DCB)_{i,t} + \theta_2 \ln(IE*LCB)_{i,t} + \theta_3 \ln(IE*NB)_{i,t} + \varepsilon_t$			
PV(L1)	0.039***	31.64	0.000
*IE*DCB*	0.001***	4.60	0.000
*IE*LCB*	-0.002***	-6.61	0.000
*IE*NCBB*	0.011***	6.99	0.000
Constant	-0.161***	-22.20	0.000

*Note: *** and ** denote significant at 1% and 5% levels of significance, respectively.*
Source: Authors' computations (2023).

Summaries of the estimates presented in Table 4. Essentially, the results show significant positive self-reinforcing attribute of poverty in SSA. Interestingly, the self-reinforcing attribute is consistent when one-period lagged poverty rate is considered (Model 1). Specifically, poverty rate increases significantly by approximately 1.5% given a one percent change in poverty rate in the previous year. In addition, poverty rate continued its autoregressive effects even when the moderating influence of institutional efficiency (IE) is factored into the relationship (Model 2). Specifically, it is realized that the self-reinforcing effects of poverty rate stood at 3.9% when the moderating effect of IE was considered alongside the financial inclusion series. This implies that IE enhanced the autoregressive effect of poverty rate by 2.4%. These findings are consistent with Churchill and Marisetty (2020), and implies that poverty is naturally persistent in SSA.

In line with theoretical postulations, negative effects of DCB and LCB vary in statistical significance *(β_1 = 0.001, p-value = 0.802)* and (β_2 = 0.001, p-value = 0.013). While the negative effect of LCB on poverty rate is significant, that of DCM is not. On the other hand, PV increases by 0.003 percent in response to 1 percent increase in NCBB per 100, 000 adults. By implication, the effect of NCBB per 100, 000 adults is significant and negates theoretical postulations. Thus, the NCBB per 100, 000 adults in SSA is disconnected with poverty reduction drive of the region. Overall, the estimates suggest lackluster and unimpressive positive influence of financial inclusions series in the quest for poverty reduction in the SSA region.

Remarkably, coefficients of the interactions provided evidence that institutional efficiency boosted only the effect of loans from commercial banks (LCB) to reduce poverty rate by 0.2 percent from 0.1 percent in the SSA region during the period under consideration. Institutional efficiency worsened the poverty rate in the region. The estimates show that for 1 percent increase in the interactions IE*DCB and IE*NCBB, poverty rate increased by 0.1 percent and 1.1 percent, respectively. The implication is that, largely, the institutions are not effectively consistent with the drive initiatives to reduce poverty rate in the SSA region. This finding is consistent with some previous studies (Cepparulo *et al*., 2019; Aracil et al., 2022).

Table 5: Estimates of two-step SystemGMM (*xtdpdgmm* nonlinear process)

$Model1: \ln PV_{i,t} = \beta_0 + \beta_1 \ln DCB_{i,t} + \beta_2 \ln LCB_{i,t} + \beta_3 \ln NB_{i,t} + \mu_t$			
lnPV = f(lnOD, lnOL, lnNB)			
Series	*Coeff.*	*z-stat*	*Prob.*
lnPV(L1)	0.018***	8.45	0.000
lnDCB	0.021	1.13	0.260
lnLCB	0.004	0.34	0.732
lnNCBB	-0.103**	-2.05	0.040
Constant	-0.273	-1.54	0.124
$Model2: \ln PV_{i,t} = \theta_0 + \theta_1 \ln(IE * DCB)_{i,t} + \theta_2 \ln(IE * LCB)_{i,t} + \theta_3 \ln(IE * NB)_{i,t} + \varepsilon_t$			
lnPV(L1)	0.025***	34.33	0.000
*DCB*INST*	-0.006**	-3.34	0.011
*LCB*INST*	-0.005**	-2.05	0.022
*NCBB*INST*	-0.016***	-4.87	0.002
Constant	-0.103	-1.38	0.168

*Note: *** and ** denote significant at 1% and 5% levels of significance, respectively*
Source: Authors' computations (2023)

The results of the alternative estimation procedure presented in Table 5 confirm the self-reinforcing significant positive effect of poverty rate in SSA. It is imperative that the significant positive self-reinforcing effects of poverty rate is notable in all the models, even when the institutional efficiency series are interacted with the financial inclusion series. In addition, the estimates provide evidence that while only NCB was significant in reducing poverty without efficiency of the institutions *(β_3 = -0.103; p-value = 0.040)*, interactions of institutional efficiency with the financial inclusion series were significant in reducing poverty in the SSA region (θ_1 = -0.006; p-value = 0.011; θ_2 = -0.005; p-value = 0.022; θ_3 = -0.016; p-value = 0.02). These suggest that poverty rate in SSA declined by approximately 10 percent for 1 percent increase in NCB. This shows that the coefficients of the interacted series in the model conformed to theoretical prescriptions. Therefore, efficient institutions are critical in initiatives aimed at reducing poverty rate through financial inclusion.

Comparatively, these results show that the comforting effects of institutional efficiency are stronger and more acceptable within the nonlinear systemGMM procedure. The critical role of the efficiency of institutions are within the nonlinear systemGMM procedure compared to linear systemGMM procedure. These comparable findings are among the critical contributions of the study. Obviously, such revelations are lacking in prior studies. Therefore, they are eminently critical for policy moderations that seeks to eradicate poverty menace in the sub-region.

4.3 Post-Estimation Test Results

Results of the post-estimation tests are presented in tables 6 to 8.

4.3.1 Serial Correlation Test

Table 6: Summary of serial correlation tests

lnPV = f(lnDCM, lnOL, lnNB)		
Series	*z-stat*	*Prob.*
	(*xtabond2* linear process)	
AR1	-1.55**	0.021
AR2	1.36	0.175
lnPV = f(lnOD IE, lnOL* IE, lnNB* IE)*		
AR1	-2.55**	0.021
AR2	1.35	0.177
	(*xtdpdgmm* nonlinear process)	
lnPV = f(lnOD, lnOL, lnNB)		
Series	*z-stat*	*Prob.*
AR1	-2.547**	0.021
AR2	1.337	0.181
lnPV = f(lnOD IE, lnOL* IE, lnNB* IE)*		
AR1	-3.591***	0.001
AR2	1.396	0.162

*Note: ** denotes significant at 5% level.*
Source: Author's computations

The results in the above table show that the probability values of all the lower-order (AR1) Arrelano-Bond serial correlation tests are less-than five percent (prob. < 5%), while that of all the higher-order serial (AR2) are higher-than five percent (prob. > 5%). Since these are consistent with the linear and nonlinear GMM procedures in this study, there is no evidence of serial correlation problem in the models.

4.3.2 Instruments Validity Test

Table 4.6.2 Summary of instruments validity tests

(*xtabond2* linear process)		
LNPV = f(lnOD, lnOL, lnNB)		
Series	Chi^2	Prob.
Sargan test	10.53	0.100
Hansen test	25.21	0.995
*lnPV = f(OD*IE, OL*IE, NB*IE,)*		
Sargan test	11.86	0.610
Hansen test	28.21	0.982
(*xtdpdgmm* nonlinear process)		
Sargan-Hansen test	Chi^2	Prob.

lnPV = f(lnOD, lnOL, lnNB)		
2-step moment functions, 2-step weighting matrix	18.920	0.461
*LNPV = f(OD*IE, OL*IE, NB*IE,)*		
2-step moment functions, 2-step weighting matrix	22.839	0.975

Source: Authors' computations (2023)

It is evident from the results presented in table 7 that the effects of instruments over-identification are ruled out. This is because the probability values of both the Sargan and Hansen test statistics, for the linear systemGMM and the Sargen-Hansen statistics for the nonlinear systemGMM procedures are eloquent justification of the validity of the instruments.

5. Conclusion and Policy Recommendations

Because of the basis of the significant and positive effect of the one-period lagged value of poverty rate, we conclude that poverty has the tendency to replicate its effects in the current year from its effect in the previous year. In addition, the indicators of financial inclusion provided varying degrees of effects on poverty rate. However, it is noteworthy to state that though their effects were predominantly unimpressive, the critical role of strong and efficient institutions is germane given the fact that, within the nonlinear systemGMM procedure, they enhanced the effect of financial inclusion series in reducing poverty in the sub-Saharan African region.

The findings of this study necessitate an urgent need for informed policy options to curtail the menace of poverty rate in the SSA region. Therefore, we recommended that, given the natural tendency of poverty to replicate itself, governments within the SSA region should keep track of poverty at all times, identify when it rises, and activate mechanisms to mitigate its self-reinforcing effect on the population of the poor. Essentially, the availability of such records will enable the various governments within the region to craft more responsive policy guidelines towards poverty abatement. Considering the varying and unimpressive effects of financial inclusion indicators on poverty rate reduction, more specific policies targeted towards the peculiarities of each indicator are required. The effects of these indicators could be more appealing through policies that remove credit and information constraints via broad-based financial inclusion. The design and implementation of more efficient pro-poor financial products that are targeted towards the less privileged in the society could be of immense benefit towards the realization of the objective of ending poverty by 2030. Furthermore, broadening the social networks and the spread of commercial bank branches could also lead to the realization of significant reduction in poverty rate in the sub-Saharan African region. The objective of curbing poverty to its minimum will remain elusive if not supported with strong and efficient institutions. On this score, policies that could further strengthen the available institutions are of essence if the objective of poverty eradication must be achieved in line with the top priority Sustainable Development Goal (SDG 1).

COMPETING INTERESTS

The authors have no compting interest to declare.

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Appendix A
Poverty Rates and Number of People in Extreme Poverty in SSA

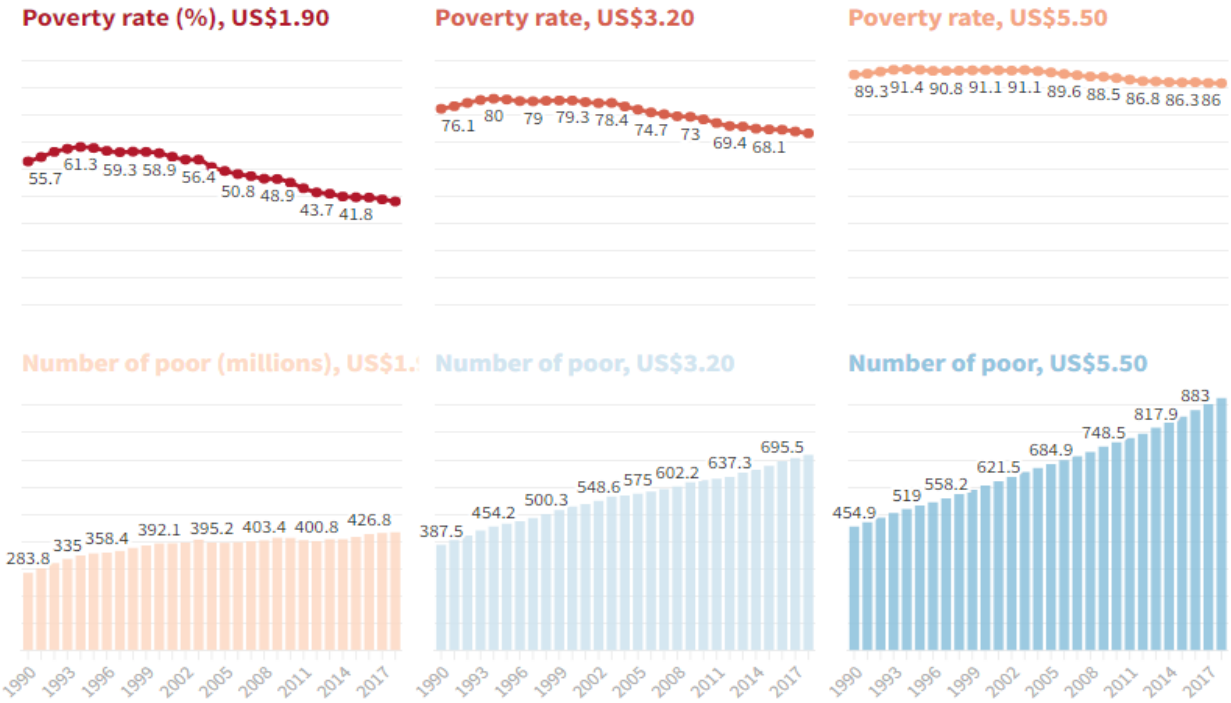


Figure 1: Poverty rates and number of poor at the three lines, Sub-Saharan Africa (1990 – 2018. Source: Workd Bank Group. https://blogs.worldbank.org/opendata/number-poor-people-continues-rise-sub-saharan-africa-despite-slow-decline-poverty-rate.

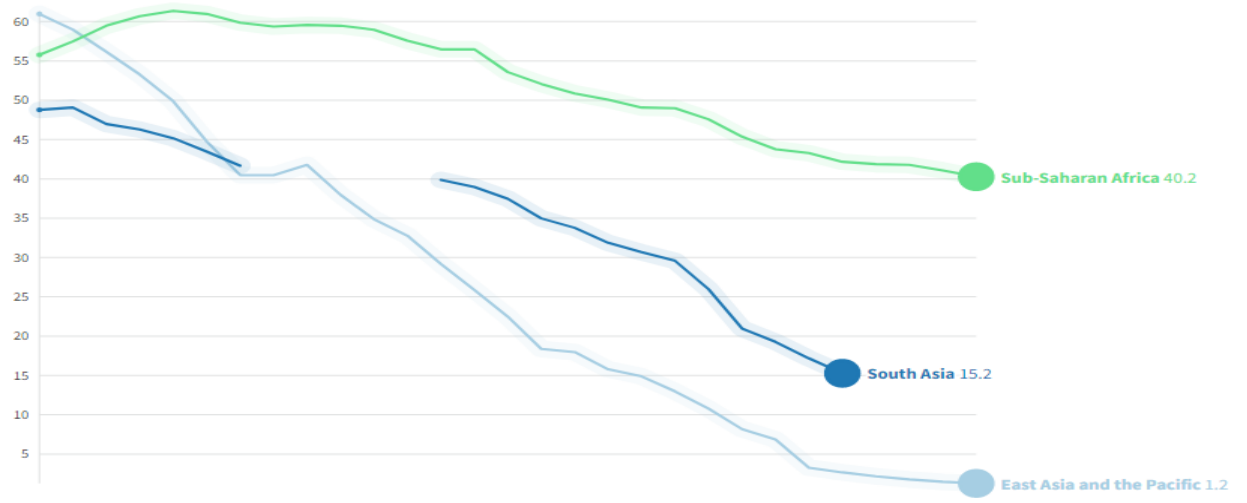
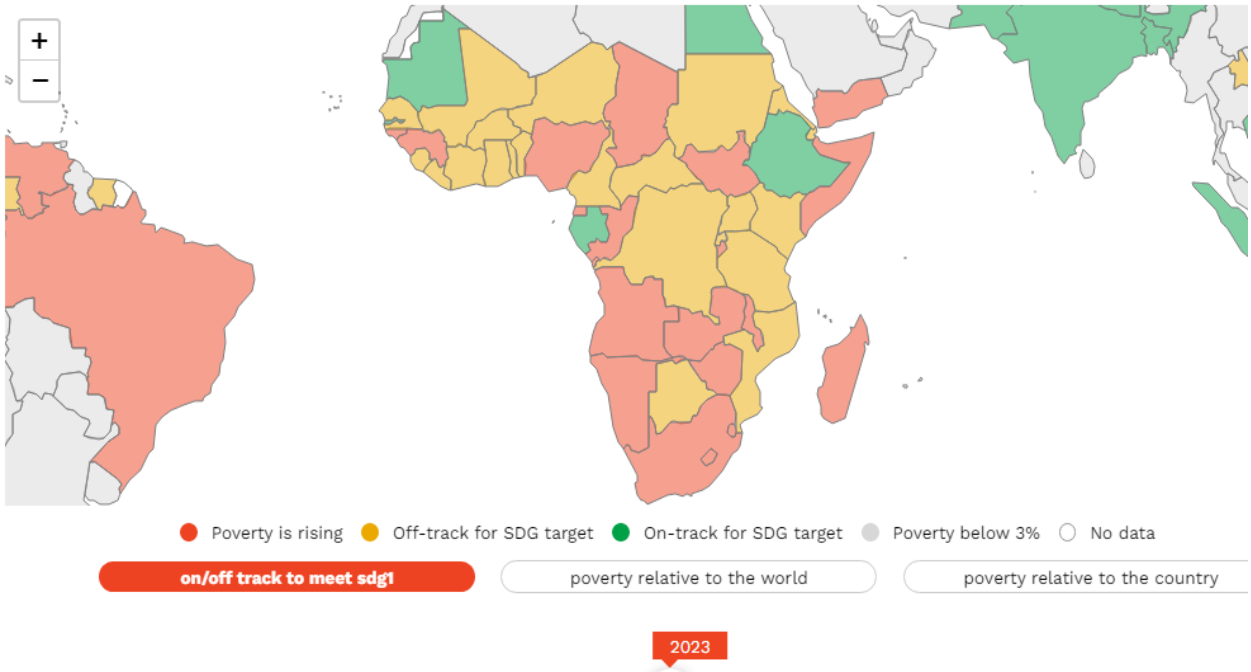


Figure 2: Poverty rates and number of poor at the three lines, Sub-Saharan Africa (1990 – 2018. Source: Workd Bank Group. https://blogs.worldbank.org/opendata/number-poor-people-continues-rise-sub-saharan-africa-despite-slow-decline-poverty-rate.

Appendix B
Poverty in Sub-Saharan Africa



Source: World Poverty Clock (2023). https://worldpoverty.io/map.