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An Analysis of the Impact of Financial Inclusion on Poverty and Development: Case of SACU Countries

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ABSTRACT

Financial inclusion has been on the agenda as a vehicle of economic development in modern times. Studies base the contribution of financial inclusion on poverty and development on the theoretical and empirical evidence intensively expressed in literature. In some cases, the influence of financial inclusion on development has inconclusive effects on economic development and therefore, more and more research is underway to achieve an informed decision. This study attempted to relate financial inclusion to development and poverty in the SACU region. Financial inclusion is very vital for development and poverty reduction. The most financially excluded populations, the vulnerable, are found in developing countries and mainly women. The member states of the SACU region are also developing nations. The results of this study have indicated the importance of women's education on financial literacy to enhance financial inclusion. There is also a need in the region to create employment opportunities for women so that they will be able to get access to formal financial institutions, for savings, bank accounts, withdrawals and salaries, which will in turn have a significant impact on financial inclusion. Poverty eradication or reduction is very critical in SACU region to enhance financial inclusion. The governments of the SACU member states must enact policies that are targeted at poverty eradication, which is in line with sustainable development goals, not just enacting, but in conjunction with implementation and close monitoring to make the policies effective.

Keywords: Financial Inclusion, Financial Exclusion, Poverty, Development
JEL Classifications: E6, G1, O1, R5

1. INTRODUCTION

Financial inclusion has become the primary subject in the area of monetary policy over the past years. It seeks to ensure that households and firms have enough access to financial products and services for instance credit cards, transactions, savings, insurance and payments and making sure that these are sustainably delivered (Singh and Kondan, 2011). The adaptation of financial inclusion as a part of financial innovation has been prioritised during several international platfroms, including the United Nations in 2019. Mader (2018) posited that poverty rates and inequality are reduced by inclusive financial markets through enabling households and individuals to manage their payments and consumption, having insurance coverage and receiving bank loans. Financial inclusion enables the establishment of new and innovative firms as well as expansion of those already established thereby creating employment hence contribution to national saving (Ajide, 2020). Hendriks (2019) argued that financial inclusion has played its major role in promoting active participation of youths and other vulnerable groups of people in the financial system. In Africa, Agyemang-Badu et al. (2018) revealed that inequality and poverty are lowered by financial inclusion. In addition, Koomson et al. (2020) indicated that financial inclusion manages to fight household poverty in Ghana, mostly those that are women headed, therefore the need to come up with inclusive policies that will drive up the zeal of financial inclusion for the poor.

A large number of vulnerable groups in underdeveloped countries such as Africa, Asia, Latin America among others, are still struggling to earn minimum standards of living, despite some decades of rapid progressing in boosting prosperity and reducing poverty. There is seemingly uneven progress in extreme poverty reduction across these regions due to country specific effects and geographical factors. The World Bank (2016) has noted that, 50.7% of the world's most extreme poverty lives in the Sub-Saharan Africa, while 42.7% lives in Asia and 4.4% dwell in the Caribbean and Latin America. The slowing rate of poverty reduction in the developing regions is resulting from extreme inequalities in incomes, which as far as economic progress is concerned, is a real powerful threat (Ajide, 2020). In response to this, World Bank has set targets to eradicate extreme poverty 2030. Therefore, financial inclusion has gained its significance globally as a potential break through in breaking vicious cycles of poverty and to reduce income inequalities.

As a result, governments of African countries, including those of SACU bloc, and international bodies have promoted financial inclusion for their households. New mechanisms have been adopted, policies and strategies have been enacted that are aimed at achieving the goal of inclusive financial development and in a bid to improve access to financial products and services to the underprivileged and vulnerable populace as well as businesses (Loukoianova et al., 2018; Chinoda and Kwenda, 2019). The AfDB has launched an innovative financial inclusion facility which intends to speed up digital financial inclusion in Africa as well as giving access to the formal financial economy to African residents (ADFI, 219). To this end, India formed a biometric ID system known as Aadhaar, to increase access to financial products and services and reducing financial service costs. (Banerjee, 2016).

However, despite all the efforts made by governments in Africa, including those of SACU countries, to promote financial inclusion, it still continues to be a key challenge. The benefits of digital financial inclusion are not equally distributed amongst the urban and rural populations, the richer and poorer and women and men, gaps in access are still persisting (Demirgüç-Kunt et al., 2018). Financial exclusion is continuing to be a widespread challenge, as noted by Conroy (2005) as most people in the vulnerable communities have no access to financial services. With some people have been denied access to financial products and services as a result of ethnic and social discrimination, for instance, those who dwell in rural areas may consider financial institutions too costly. To increase financial inclusion, there is a need banking and financial systems innovation, so as to reduce poverty and foster prosperity.

There is an ongoing debate pertaining the linkage that exists between financial inclusion, development and poverty in developing countries. However, this has been neglected in SACU countries where there is no or little evidence regarding the relationship. To that end, this research adds to empirical literature as well as to understanding the determinants of financial inclusion in SACU countries and its impact on development of the countries, with variations between man and women being explored. Given that there are many researches that were done on the relationship between financial inclusion and poverty and economic growth, most of these have dwelled on African countries, Asian countries and other developed nations, hence a gap exists in literature on SACU countries. For this study, panel data regression analysis technique was employed to examine the correlation between financial inclusion, poverty and development for SACU countries.

This study was ignited by the significance and need for financial inclusion in SACU countries. Time series annual data (panel) spanning from 2000 to 2021 for 5 countries which are members of SACU trade bloc (Botswana, Lesotho, Namibia, South Africa and Swaziland), was used to estimate whether development and poverty determines financial inclusion. Identification of country specific factors was of paramount significance in this study. The study used financial accessibility (financial inclusion proxy), with GDP, literacy rate for man and for women, unemployment rate for women and men, population growth, poverty head count ratio and Gini coefficient being the explanatory variables.

The study is structured in the following array; Literature review section which focuses on the review of all the literature which is related to financial inclusion. The Methodology section outline the methodology data and models that were employed for this study. Discussion of the findings of this study are in the Results and Discussion section. The study is concluded by the Conclusions section.

2. LITERATURE REVIEW

2.1. Financial Inclusion and Development

For economic growth and reduction in poverty, an appropriate and well-developed financial system is very vital as it can attract investment which is a necessary and suffiecient condition for development. Development is a pre-requisite for improvement in the financial system. Due to the ongoing innovations in the financial system, policy makers need to adapt to changes quickly for appropriate policing. Beck and De La Torre (2006) postulated that an underdeveloped financial system is detriment to financial inclusion, as it leads to the exclusion of other societal groups and reduced economic growth.

An underdeveloped financial systems provides poor quality services to customers, inhibiting people from investing into new business avenues, leads to deprivation of vulnerable groups of economic benefits, for example those who earn low incomes (Servon and Kaestner, 2008; Edwards, 2007). Studies on financial inclusion have outlined its importance in fighting poverty across the world. Despite that, there is a necessity for experts in the field of financial inclusion to reach a consensus on how to measure it, various models have been employed to study the relationships, but there is still a debate on which standard measurement of the financial inclusion in which policy makers and scientists adopts to master the rate of inclusion.

In the introductory part, we gave a hypothetical analysis of financial inclusion and exclusion. Marshall (2004) and Wilson (2012) defined financial exclusion as lack of access to financial products and services. It takes different kinds and mostly depend on cost of services, inadequate education and information. According to Sinclair (2001), financial exclusion erupts from within the formal finance services for household or community groups, for segregation reasons.

Different econometric techniques were employed by different researchers in a bid to measure financial inclusion, using different databases. For instance, Wang and Guan (2017) and Grohmann et al. (2018) used data for different nations and they found that families that are headed by man were accessing more financial services. Different techniques were tried in measuring financial inclusion index by different researchers, so as to do comparison amongst countries.

For all developing nations, they enacting policies that create job opportunities that are appropriate, increase literacy as well as reducing gender discrimination. The methods and policies that are enacted for fiscal strategy can also lead to reduction in the discrimination in financial inclusion (Atkinson and Messy, 2013). Vulnerable groups are better helped by anti-discrimination policies since they promote development.

Kim (2016) estimated the impact of financial inclusion on economic growth by reducing inequalities in income. He found out that there is an inverse relationship between income inequality and growth of GDP and this inverse relationship is very strong especially for developing countries. He also revealed that for highly fragile countries, economic growth is strongly affected by income inequalities. To a larger extend, Kim alluded that the relationship between economic growth and income inequalities is improved by financial inclusion. Financial inclusion changes the relationship from negative to positive.

Sarma and Pais (2011) estimated the index of financial inclusion using econometric approach. The data for this study was collected from the World Bank. Wang and Guan (2017) adopted the method used by Sarma and Pais (2011) to calculate the financial inclusion index for more than eighty countries, and he allowed for comparing of the results between developing and developed nations. In another study, Sarma (2012) using the Global Financial Index (Global Findex) from the World Bank database, demonstrated that there is a significant relationship between financial inclusion and development. He found out that there is a close correlation between the financial inclusion and human development.

Huang et al. (2016) estimated the effect that financial development has on economic growth, paying more attention the western region of China, where there is large scale development. Their regression models were based on endogenous growth theory. From their study, they revealed that financial development is of paramount importance in promoting growth in GDP as compared to human capital and does so mainly through improving total factor productivity and they found this to be of more significance in western China.

Education and income are two variables which are very crucial for accessing financial services, according to Demirgüç-Kunt and Klapper (2013). This was further confirmed by Kairiza et al. (2017), who indicated a significant positive relationship between population, income, literacy and financial inclusion. Changes in the rules and regulations in financial sector result in a decrease in inequalities, thereby promoting financial and banking stability (Park and Mecardo, 2015). According to Kumar (2012), for Indian cities, poverty had fallen sharply as a result of improved accessibility of financial products and banking services. In sub-Saharan African countries, poverty amongst low-income families has dramatically went down due to financial inclusion, through provision of social benefits and net wealth (Jabir et al., 2017).

Omar and Inaba (2020) studied on the association between financial inclusion, poverty reduction and income inequality for 116 developing nations. Using annual but unbalance panel data spanning from 2004 to 2016, they constructed a novel financial inclusion index. They revealed that the ratio of internet users, per capita income, income inequality, inflation and dependency ratio have a significant relationship with financial inclusion for developing countries. To a larger extend, for developing countries, they indicated that financial inclusion plays a vital role in poverty rates reduction and in reduction of income inequalities.

Chauvet and Jacolin (2017) analysed the impact that bank competition and financial inclusion has on firm performance for developing countries, using firm level data for seventy-nine countries. They found a positive relationship between financial inclusion and growth of firms, mostly in cases where there is less concentration of bank markets. They also revealed that where there is high levels of financial inclusion, growth is favoured by more competitive banks.

For OIC countries, their economic growth is positively impacted by financial inclusion (Kim et al., 2018). In Nigeria, Adeola and Evans (2017) proved that financial inclusion, financial usage and access in this regard, played a greater role in driving economic diversification. They revealed that for Nigeria to move out of extreme poverty and to build shared prosperity, financial inclusion is to play a vital role. For thirty-one Asian countries, Le et al., (2019) investigated the effect that financial inclusion has on financial sustainability and eficiency. They found positive and statistical significance between inclusion and financial sustainability.

Ajide (2020) found financial inclusion to have a positive relationship with entrepreneurship in Africa Rizwan and Bruneau (2019) found financial inclusion to accelerate economic growth and reduction in inequalities and poverty. Ouechtati (2020) concluded that financial inclusion leads to reduced income inequality and poverty, through increasing access to deposit accounts and availability of credit at commercial banks. Similar findings were experienced for 116 developing nations in Africa, Asia, Caribbean regions and Latin America. For developing countries, Abubakar et al. (2020) identified that financial inclusion enhances growth in Nigeria.

Cicchiello et al. (2021) investigated the relationship that exists between financial inclusion index and development in Africa and Asia and they used panel annual data for forty-two nations from 2000 to 2019. Using panel data analysis techniques, they revealed that growth of an economy leads to financial inclusion, literacy and unemployment were found also to be having a significant positive relationship with financial inclusion. For developing countries, most people dwell in rural areas and they are heavily reliant on agriculture for survival, hence they lag behind when it comes to issues of financial inclusion. This in turn leads to low economic development.

Evans and Adeoye (2016) used a dynamic panel data estimation technique to determine the factors that determine financial inclusion in Africa, using data spanning from 2005 to 2014 for 15 countries. They found that factors such as per capita GDP, lagged financial inclusion, literacy rate, money supply, and internet access are very significant or vital in determining financial inclusion for African countries. In sub-Saharan Africa, Allen et al. (2014) revealed that per capita GDP and population density have a strong positive relationship with financial inclusion and financial development whilst natural resources are negatively linked.

Honohan (2008) investigated the amount of adult population for 162 countries sub-Saharan Africa who are using financial products and services and the relationship between financial inclusion and poverty and inequality. He found out that to enhance reduction in poverty, financial accessibility plays a pivotal significant role, but only when the following variables are dropped down from the regression equation: population size, institutions, inflation, private credit as a percentage of GDP, and income pe capita. He also indicated that financial accessibility lead to reduced inequalities in incomes.

In India, Burgess and Pande (2005) found out that expansions of state led bank branches into unbanked rural locations led to a significant reduction in rural poverty as a result of access to formal sector credit provision and opportunities of saving. For the same country, it was found out that poor and vulnerable women's participation in programs to deal with financial inclusion is strongly linked improvement in family well-being and household incomes as well (Swamy, 2014). In Malawi, Brune et al (2011) alluded that increased financial accessibility to poor smallholder farmers who grow cash crops had a substantial effect on the farmers' wellbeing, and this is due to enhanced accessibility of agricultural inputs since finance is now accessible.

Other authors such as García-Herrero and Turégano (2015) investigated the impact of financial inclusion and that of the size of the financial sector in reduction of inequalities in incomes. They found out that financial inclusion is only significant in reducing income inequalities when control variables such as fiscal policy and economic development are part of explanatory variables. They also revealed that size of the financial system, financial deepening, does not contribute to a more equitable income distribution. In Mexico, Salazar-Cantu and Arenas Dreger (2015) examined the impact of financial inclusion on income inequality and distribution basing on regional information and the results revealed that increased financial inclusion initially will lead to greater inequality in incomes, but will later lead to significant reduction in inequality as a result of continued growth in financial inclusion amongst municipalities in Mexico. For Latin America and the Caribbean, Dabla-Norris et al. (2015) indicated that a reduction in monitoring costs, relaxing collateral constraints and reducing financial participation helped to lower inequality and encouraged growth.

For 151 countries, Park and Mercado (2018) examined the cross-country impacts of financial inclusion on poverty and income inequality through inclusion of a new financial inclusion index, which they built using principal component analysis taking a cross sectional approach. They found out that a higher financial inclusion has a significant correlation with higher growth of the economy and it leads to reduction in poverty, but this is not possible for low income and middle-low countries, but only for middle-high and high-income economies. In any income group, they found no significant relationship between financial inclusion and income inequalities.

There are a very few empirical evidences on the relationship between financial inclusion, poverty and development, but from the above researches, there is a broader view of methodologies used and the findings that were revealed. This paper seeks to unearth the relationship between financial inclusion and poverty and development related factors or variables. To that end, following the discussed literature review and findings, this paper investigated the relationship between financial inclusion, poverty and development in the SACU region, hence the following research questions will be addressed: (1) What is the impact of financial inclusion on poverty and development in SACU member states? (2) Does financial inclusion affect literacy and unemployment in SACU countries? (3) Does financial inclusion lead to growth in GDP of SACU countries? (4) Does financial inclusion lead to reduction in poverty in SACU member states?

3. METHODOLOGY AND DATA

In this study, we adopted the model which was used by Sarma and Pais (2011) to determine the relationship between financial inclusion and poverty and development for SACU region. We modified the model by adding poverty head count ratio as one of the explanatory variables, and instead of calculating a financial inclusion index, we used financial accessibility as a proxy variable for financial inclusion. The model is as follows:

$$FA_{it} = \alpha + \beta_1 GDPG_{it} + \beta_2 LITM_{it} + \beta_3 LITF_{it} + \beta_4 UNM_{it} \\ + \beta_5 UNF_{it} + \beta_6 POV_{it} + \beta_7 GIN_{it} + \beta_8 RUPG_{it} + \varepsilon_{it}$$

FA represents financial accessibility, GDPG is the gross domestic product growth, which also measures growth of a country, LITM and LITF is the literacy rate for males and females respectively, UNM and UNF is the unemployment rate for males and females respectively, POV represents the poverty head count ratio which a variable for poverty, GIN is for Gini coefficients and RUPG is total rural population growth. ε_{it} is the error term, which was included so as to cater for other factors not included in the model.

Panel data regression techniques were employed for this study. To choose between Fixed Effects and Random Effects regressions, a Hausman Test was used. Panel data gives insights across time and countries on individual behavior. This makes it possible for one to capture the behavior of certain variables in both cross section dimensions and time series. Given repeated observations of enough cross sections, panel data analysis permits a researcher to examine dynamics of change with short time series. Panel data is more informative and more variability. Panel data also gives power to control other variables that we cannot measure or observe meaning variables that change over time but not across groups and it accounts for individual heterogeneity.

Besides all the indicated advantages, panel data analysis also allows identification and measurement of the effects that are simply undetectable in pure time series, pure cross sectional and hence allows researchers to take into account some factors that cannot measured which are potentially important. In a pure cross-country instrumental variable regression, any unobservable country specific effects become part of the error term, which may bias the coefficient estimates. Panel data has increased in becoming popular since it helps reducing the problem which is faced by most researchers that is the lack of adequate list of independent variables to explain the dependent variable (Johnson and Dinardo, 1996). The major advantage of panel data is increased precision in estimation which is experienced due to the number of observations owing to combining several time periods of data for each individual (Cameron and Trivedi, 2005).

The data sequence for this study spans from 2000 to 2021 for five countries which are member states of SACU region. The data used was collected from World bank database, International Monetary Fund, United Nations, International Labor Organization and Statistics Offices of the respective countries. Key variables of focus are unemployment rates, literacy rates, GDP and Gini coefficients. In performing the analysis, STATA 14.0 software was used and the relationship between financial inclusion and poverty and development was determined through panel analysis.

4. RESULTS AND DISCUSSION

Table 1 below depicts the summary statistics for the variables that were used in this study. The mean for rural population growth shows that the population in rural areas of SACU have been declining over the years. On average, about 46% of the population were living in poverty each year for the years under study (poverty head count ration $1,90).

Table 1: Descriptive statistics

Variable	Obs	Mean	SD	Min	Max
FA	55	44.1052	20.4273	15.05	84.11
GDPG	110	2.9170	3.6210	-8.7264	12.2695
LITF	110	85.8613	4.4238	78.3509	94.5331
LITM	110	83.2142	7.8244	65.5219	95.5453
UNF	110	25.6975	7.2781	17.25	41.32
UNM	110	21.0262	4.8444	13	32.54
RUPG	110	-0.0309	0.6749	-2.5280	1.3026
POV	110	45.9	17.7452	17.4	69
GIN	110	57.1309	5.5197	44.9	64.8

Source: Authors calculations

Table 2 below shows the results of panel regression, showing both the results of Fixed Effects and Random Effects. To determine the best suitable model, Hausman test was performed and its results are depicted in Table 3. A Chi-square value of 92.68 and a P-value of 0.000 which is <0.05 indicates the necessity of using Fixed Effects regression in analysis therefore FE results were the ones which we discussed in this section. The results show that there is a significant relationship between financial inclusion and literacy, unemployment, poverty and income inequalities. Rural population growth, GDP growth and unemployment for males was found to be in significant in determining financial inclusion in the SACU region.

Table 2: Panel regression results

Variable	FE Results		RE Results	
	P-value	Coefficient	P-value	Coefficient
GDPG	0.212	−0.3087	0.010**	−0.8842
LITF	0.005***	4.3340	0.000***	3.1145
LITM	0.052**	−3.1999	0.611	−0.2063
UNF	0.065*	0.8591	0.430	−0.4429
UNM	0.127	−0.7135	0.547	0.3588
RUPG	0.568	−2.0739	0.493	2.6632
POV	0.006*	−0.9239	0.000***	−0.3973
GIN	0.007*	−1.60	0.011**	1.3689
Constant	0.251	58.8166	0.000***	−265.81

Level of significance: *** is 1%; ** is 5%; * is 10%, F statistic - 0.000; rho-0.9823; R-square within-0.6051

Table 3: Hausman test

Chi-square	92.68
Prob>Chi-square	0.0000

The results show that increase in literacy rate for female have a strong positive significant effect on financial inclusion in SACU region. An increase in financial literacy for women by 1% will result in financial inclusion rising by 0.5%. This was found to be different with literacy for males. An inverse relationship was found to be in existence between financial inclusion and literacy for males. Unemployment rate for females was found to be significant in improving financial inclusion. A decrease in unemployment of females by 1% will result in financial inclusion rising by 0.85%. Poverty has a negative impact on financial inclusion in SACU region. An increase in poverty by 1% result in financial inclusion declining by 0.92%. That's the same result with income inequalities (GINI), where the results reveal a negative significant relationship between inequalities and financial inclusion. Our findings supports that women are the most vulnerable to financial exclusion, hence there is a need to education them on financial inclusion and to come up with strategies for women employment in different sectors of the economy for SACU countries. The results for SACU countries differ from other the researches in terms of rural population growth in the case that rural population growth was found to be insignificant in determining financial inclusion.

5. CONCLUSIONS

Financial inclusion is very vital for development and poverty reduction. The most financially excluded populations, the vulnerable, are found in developing countries and mainly women. The member states of the SACU region are also developing nations. The results of this study have indicated the importance of women education on financial literacy to enhance financial inclusion. There is also a need in the region to create employment opportunities for women so that they will be able to get access to formal financial institutions, for savings, bank accounts, withdrawals and salaries, which will in turn have a significant impact on financial inclusion. Poverty eradication or reduction is very critical in SACU region to enhance financial inclusion. The governments of the SACU member states must enact policies that are targeted at poverty eradication, which is in line with sustainable development goals, not just enacting, but in conjunction with implementation and close monitoring to make the policies effective. Creation of employment and eradication of poverty will go a long way in enhancing financial inclusion. These results support the fact that there is a significant relationship between financial inclusion and poverty and development.

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