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Impact of Fiscal Policy on Financial Development in Sub-Sahara Africa

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Abstract
Economic theory suggests that fiscal policies affect economic growth with extant studies proving this relationship in the context of countries in sub-Sahara Africa (Durusu-Ciftci et al., 2017). However, few studies have examined how fiscal policy impacts financial development leading to economic growth. The study, therefore, sought to examine how fiscal policies affect financial sector development in sub-Sahara Africa and to provide empirical support or otherwise to the conclusions of theory. Adopting the Fixed Effect (FE) estimator, the study on one hand revealed a positive significant relationship between fiscal policy and financial development and that Fiscal Policy influences financial development. Hence, the study showed that the implementation of fiscal policies by governments in SSA directly and positively leads to the financial sector development; thus leading to economic growth. However, the effect of fiscal policy on the financial development does not significantly affect economy growth compared as expected. On policy direction, government should focus on expanding the tax net as a way to increase its revenue and also to stimulate financial development. Again, policies towards financial inclusion should be aggressively pursued in SSA as these have practical implications for financial sector growth.
Keywords: Fiscal Policy, Financial Development, Sub-Saharan Africa, Fixed Effect Estimator.

Introduction
The discussions on financial development wade back into several decades across economies around the world; sub-Sahara Africa included. The impact of financial development on the world economy gives much insight into the importance of developing the financial sector. Extant empirical studies show relationships between financial development and economic growth; thus uni-directional, bi-directional etc. (Anwar and Cooray, 2012; Durusu-Ciftci et al., 2017; Munir et al., 2019). One of the government's policy tools to strengthening the financial sectors is Fiscal policy. Fiscal policy is viewed as a tool that governments use to regulate spending and taxation issues in order to influence the growth of an economy. Thus, fiscal policy is used to control aggregate demand levels in an economy so to help achieve the

desired economic objectives of total employment, stability of prices of goods and services as well as growth of the economy. Previous studies show the importance of fiscal policies in shaping and contributing to the growth of economies including sub-Sahara Africa (SSA). (Howitt and Weil, 2012; Rodriguez, 2014; Ofori-Abebrese et al., 2017; Symoom, 2018; Nabieu et al., 2021),

Economic theory explains that financial development can be broadly seen from two perspectives; the development of the banking sector and the development of the stock market. Earlier studies have suggested that the development of these two sectors of the financial system each has a statistically significant effect on economic growth in emerging and developing economies such as SSA. (Marcelin and Mathur, 2016; Sepehrdoust & Shabkhaneh, 2018; Dumičić, 2019; Marfatia et al., 2020). Consistent with these findings, developing countries have tended to focusing on modernizing and liberalizing their financial systems to allow for greater private sector participation (Fowowe, 2013; Shijaku and Kalluci, 2013; . thus, this explains financial development.

In sub-Sahara Africa for instance, most countries begun to implement policies that were aimed at financial liberalization at a time when many of them were experiencing negative economic growth in the 1980s (Mosley and Weeks, 1993; Otchere et al., 2017). These policies aimed at lowering the levels of financial repression by reducing the extent of governmental intervention in national financial sectors, via the privatization of banks (Otchere et al., 2017). The discussions on fiscal policy, is more skewed to growth in SSA than to financial development(Rodriguez, 2014; Jarrow, 2014; César & Ha, 2016; Siaw et al., 2017; Nabieu, et al, 2021). Little is known empirically about how one (fiscal policy) of two (fiscal and monetary) key government policies impacts the sector's development.

The gab identified therefore, which this paper seeks to address is the fact that, in the debate about financial sector development leading to economic growth, we do not know how fiscal policy tools matter. Once again, there are theoretical conjectures that suggest potential effects of fiscal policy tool on financial development but there is very little empirical evidence to support the theory especially within SSA (Olaniyi, 2020). It is therefore imperative to understand how fiscal policy impacts the financial sector because such is one of two policies of governments that affect aggregate demand which is a key determinant of activity within the financial sector.

The purpose of this paper, therefore, in adding to the body of literature is to first show how fiscal policies impact financial sector development in sub-Sahara Africa. Secondly, to contribute to literature by providing empirical support or otherwise to the conclusions of theoretical conjectures suggesting potential effects of fiscal policy on financial development. Thirdly to show empirically how fiscal policies mediate the impact of financial developments on economic growth in sub-Saharan Africa. Thus, the objectives of this paper are to:
  ➢ Examine how fiscal policy impact financial development in sub-Sahara Africa
  ➢ Examine how fiscal policy mediate the impact of financial development
     on Economic growth sub-Sahara Africa

Section two presents a review of the literature and section three discusses the methodology of the paper. Section four presents findings and discussion of findings. The paper concludes and makes recommendations in section five.

Literature Review

Theory suggests that there is a relationship between financial development and economic growth. Economic growth on the other hand is described as the increase in the level of economic activities within a country which is measured by the Gross Domestic Product (GDP) over a given period usually one year. Financial development in summary is all about the development of the banking sector and the stock markets. Thus, it's a concept that seeks to describe the level of financial development in an economy. Financial development is an indication of an increase in the provision of financial services (credits in particular) that brings satisfaction to the individual (Smith et al., 2015). This role is considered to be essential to the growth and development of a country. For instance, financial systems that generate more liquidity for the economy create greater opportunities for sustained growth. This is seen in two different areas; in the banking sector and secondly in the stock markets. The 2008/2009 financial crisis that hit the world brought about a series of fiscal interventions. These interventions saw some light in revamping the worse economic situations that hit countries across the globe. The results highlight to some extent the role of fiscal policies in shaping the macroeconomic issues of countries (Lawal et al., 2018). Extant literature shows a strong correlation between fiscal policy and economic growth in both developed and developing economies (Ouedraogo & Sourouema, 2018; Wang, 2018; Michau, 2019; Dweck et al., 2019). However, the number of empirical studies focusing on the role fiscal policy play in financial development leading to economic growth is limited particularly within sub-Saharan Africa.

Fiscal policy is primarily the way by which every government adjusts its levels of spending as against its revenue generations so as to help supervise and also influence positively the nation's economy. Economic literature explains that fiscal policy functions as a critical and important instrument to influence the aggregate demand of a country (The Strategist, 2013). It is crucial to understand that changes in the levels, changes in timing, and changes in the composition of government spending and taxation do have a significant impact on the well-being of the economy. Munir & Riaz (2019b), the brains behind the fiscal policy reaction function and transmission mechanism estimation argued that pro-cyclical fiscal policy is a more effective response to business cycle changes in thriving (boom)periods. On that basis, they concluded that fiscal policy transmission is not effective, however, fiscal policy contemporaneous response is functional but not progressive. The economic situation prevailing determines what fiscal policy technique to apply. Thus, depending upon the current circumstances or conditions of the economy, the ruling government can either apply expansionary or contractionary fiscal policy techniques. The expansionary fiscal policy focuses on increasing the aggregate demand of the economy or country and contractionary or deflationary fiscal policy focuses on reducing the aggregate demand of the country or economy.

According to the Keynesian perspective on fiscal policy, fiscal contraction employed by governments during recession periods will not assist in output recovery (Jawadi et al., 2011). Following this argument, the role fiscal policy plays become more important with interest rates hitting a zero bound. In such a situation, an expansionary fiscal policy is a way forward. Studies show that countries respond differently to fiscal policies and this depends on their abilities in terms of the size of the government, level of financial development, growth of the economy, etc (Easterly and Rebelo, 1993). In their study, Estmann et al (2021), explained that

governments through the central banks should examine the effect fiscal policies have on inflation as well as aggregate demand in the cause of setting the interest rate.

In the words of Anyanwu (1993), the main goal of fiscal policy is to support economic situations favorable to business growth while making sure that every such government measures are constant with economic stability. In effect, the most significant facet of a fiscal policy is its use as a tool in the administration of a country's economy (Omitogun and Ayinla, 2007). The implementation of fiscal policy is fundamentally channeled through budgets governments which serve as more than a plan for managing the government sector, i.e the economy. To this effect, Adelowokan, (2021) states and explains that financial instability is an indication of public policymakers' failure to ensure adequate availability of resources in the direction of government goals. Such situations lead to financial crises thereby hampering economic growth.

Alavia et al (2016) position the issues of fiscal policies and financial development on economic growth within the context of Asian countries using the framework of a new economic model, IS-MP-AS. They stressed on fiscal policies of Iran, and how these policy tools have led to improving the economic lots of Iran. The study concluded that GDP is negatively associated with the expected inflation rate and budget deficiency to GDP ratio. GDP was also found to be positively related to oil income and the exchange rate. In another study, Chadha, Küçük, and Pabst (2021)examined the correlation between budgetary variables and economic growth. i.e, how these variables impact economic growth. Their findings corroborated earlier studies; that fiscal policy is critical for long-term economic growth. The study further revealed that fiscal policy is more effective in the long run compared to the short-run effect. Evidence from Ouedraogo & Sourouema (2018) shows that focusing on export increases the degree of fiscal policy pro-cyclicality which is driven by the behavior of public investment in sub-Saharan African countries. Chien et al (2022) in another breath argue that fiscal policy has a crowding-out effect on private investment in developing nations by affecting interest rates; in that governments in developing countries must show more interest in fiscal policy in ensuring development in the financial sector.

With regards to the nexus of financial development and economic growth, Owusu and Odhiambob (2014) argued that the implementation of appropriate financial liberalization policies can spur economic growth in Nigeria both in the short-run and the long run. They examined the impact of financial liberalization policies on sustainable economic growth in Nigeria using Autoregressive Distributed Lag (ARDL)-Bounds testing approach, and the unrestricted error-correction model (UECM) to co-integration analysis. They found that the impact of financial liberalization policies on economic growth in Nigeria is positive and statistically significant both in the long run and in the short run. Using a policy-oriented multivariate VECM approach and monthly data over the period of unconventional monetary policy of the U. S. and Japan, Wang (2018) examined Monetary-fiscal policy interactions under asset purchase programs: Some comparative evidence. The study presents evidence of both long-run and short-run dynamic interactions between unconventional monetary policy and fiscal policy. The paper concludes that the results of long-run causality tests, short-run causality tests, and impulse response function analysis show clear differences in monetary-fiscal policy interactions between the two advanced countries.

Ma & Lin (2016) investigated the relationship between financial development and the effectiveness of monetary policy using panel data from 41 economies. They concluded that the effectiveness of monetary policy is negatively correlated with financial development in all

41 economies used and this is found to be robust across all the different specifications and estimation methods examined. They further concluded that the effect of monetary policy on output decreases more with financial development in developing economies while the effect of monetary policy on inflation is strengthened with financial development in advanced economies. Michau (2019), investigated monetary and fiscal policy in a liquidity trap with inflation persistence. Relying on the new Keynesian model with structural inflation persistence, the study concluded that about fiscal policy, inflation persistence gives some leading explanation of government expenditures. The paper further concludes that the magnitude of the optimal fiscal stimulus decreases in the degree of inflation persistence and that monetary policy is highly ineffective if adaptive expectations result in inflation persistence; that is, the optimal fiscal stimulus on an economy is large and heavily front-loaded.

Notwithstanding the significant amount of empirical literature on the nexus of financial development and economic growth, fiscal policy and economic growth, there is considerably less information on the effects in developing countries; particularly the role fiscal policy play in financial development which is the catalyst to economic growth in developing economies such SSA due to data shortages and constraints. This study, therefore, tries to investigate this relationship in developing countries, especially SSA countries.

Data, Model, and Methodology
Introduction
Literature has shown that fiscal and monetary policies are two main important government economic tools that governments use to manage the economy. Furthermore, a section of literature also shows that these two economic policies bring about growth in the economy. Quite a number of empirical studies have also concluded that growth of the economy is stimulated by the development of the financial sector. This is more particular with emerging economies like that of Africa. However, there is little or no evidence as to what stimulate development of the financial sector within the emerging economies. The aim of this study therefore is to contribute to literature by investigating the relationship between one of the main government policies (fiscal policies) and the development of the financial sector. Thus, what role fiscal policies of government play in financial development which further leads to the growth of the economy?

Research Paradigm
With regards to this study, the positivist paradigm is adopted for this study. The positivist paradigm was chosen for this study and very appropriate because the study is quantitative in nature and most studies in this area are quantitative, hence the positivist paradigm. The positivist paradigm views reality to be singular, that is, there is a single reality that exists in any case and this reality is objective and tangible. Reality is deemed to be independent of time and context. This paradigm thrives on deductive logic; thus, interpretation of findings is based objectively on the results obtained.

Data and Data Source
Panel data on 22 sub-Sahara Africa countries for the period 1960 -2016 was used for the study to to examine how fiscal and monetary policies affect financial sector development in sub-Sahara Africa. Economic Data was obtained from the World Bank's database on national

economies and was supplemented with financial sector data from the International Finance Corporation (IFC) database.

Empirical Model specification
i. Fiscal policy

$$FD_{it} = F(\text{ Fiscal Policy, Banking Sector Risk, Inflation, Financial Openness, lending Interest, Gross Savings, GDP Growth, Exchange Rate, Liquidity })$$

$$FD_{it} = \partial_0 + \alpha_1 Fiscal\ Policy_{it} + \partial_1 Bank - Zscore_{it} + \partial_2 Inflation_{it} + \partial_3 FinOpen_{it} + \partial_4 LendInt_{it} + \partial_5 GrossSavings + \partial_6 EconGrowth_{it} + \partial_7 ExchRate_{it} + \partial_8 Liquidity + \mu_i + \lambda_t + \varepsilon_{it}$$

Where i=1,2,3…, 22, t=1960, 2011, μ_i- country specific effect, λ_t- time specific effect, ε_{it}- error term

Methodology
Estimation Methods

Panel data methodology was adopted for the study. The Fixed Effects (FE) model is one of the Generalized Least Squares (GLS) estimator also known as the within estimator was used. It controls for time-invariant effects with the effects of time-invariant variables. FE explores the association between the independent and dependent variables within an entity such as a country, company or person. It captures the unique individual features which might influence the variables by controlling for the impact of such characteristics but are ignored by other methods. FE controls for all time-invariant discrepancies between each observation and also controls for unobserved heterogeneity when it is correlated with the independent variables and constant over time. This method is designed to study the causes of changes within a particular entity and it produces consistent results/ estimates. It considers both country and time specific effects.

Moreover, FE solves omitted variable problems. FE also caters for non-continuity and heterogeneity in data. An important assumption of the FE technique is that the time-invariant characteristics are unique to the individual and should not be correlated with other individual characteristics. It produces unbiased estimates and it is somehow straightforward to implement as it requires the inclusion on the right-hand side, of a set of dummy variables.

The Fixed Effect (FE) was adopted because of non-continuity and heterogeneity in the data used, and also because the Hausman test favours it. FE controls for unobserved heterogeneity when it is correlated with the independent variables and constant over time.

Definition and Measurement of Variables
i. Economic growth (DY)

Economic growth is measured by the annual percentage change in the real Gross Domestic Product in the economy. It captures GDP growth rate in any given year.

ii. Financial Development (FD)

In this study, FD is defined as the net domestic credit to the private sector. This is described below

- **Domestic credit to the private sector as a percentage of GDP (FDCredit)**

Domestic credit to financial sectors refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of non-equity securities, trade credits and other accounts receivables that establish a claim for repayment. The financial establishments include economic authorities and deposit money banks, along with other financial institutions such as leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies (World Bank, 2015). This proxy or indicator captures the essence of domestic asset distribution within an economy. Lynch (1996) argues that government credit from banks in countries with a highly regulated financial system is frequently captive and that banks have no control over their use. Consequently, the banks' critical role in allocating credit is best represented by their lending to the private sector. Thus, the share of credit given to the private sector in domestic credit reflects an essential aspect of the financial sector.

iii. Fiscal Policy

Fiscal policy is another policy (government tool) that has a direct impact on the financial system of an economy and is also an attempt by the central bank (or a similar body) to control aggregate demand levels in an economy (The Strategist, 2013). Fiscal policy is viewed as a tool by governments across the globe to help regulate spending and taxation issues in order to influence the growth of an economy. The policy is measured in different forms which include tax rates, deficits, government expenditure. While aggregate government expenditure as a measure of fiscal policy is considered as a single variable by some researchers, other scholars are of the opinion that the variable (aggregate government expenditure) has to be decomposed into several categories. (Rebelo, 1991; Stokely and Rebelo, 1995; Easterly and Sergio, 1993; Aushauer, 1989; Ugwuanyi and Ugwunta, 2017). This study uses Fiscal policy rate because it is easy to obtain.

Hausman specification test

The Hausman specification test was conducted in order to decide which of the two methods is appropriate for the data. This test helps determine the nature of the data by considering several factors such; the extent of variability within the subjects, the nature of the omitted variables and whether the study focuses on the effects of variables whose values do or do not change across time (Greene, 2008).

Ethical Considerations

All ethical procedures and values were followed with respect to this study. In addition, the nature of this study does not breach any right. The reason being that data needed is open and accessible from World Development Indicators (WDI) Online Database. However, all procedures were followed in retrieving the data and references given where suitable. In all, there wasn't any violation in the retrieval and usage of the data.

Results and Discussions
Data and Information Description

The first measure of financial development (FDI) for this study is the "net domestic credit to the private sector". The second measure of financial development (FD2) for the study is the "net domestic credit to the private sector as a percentage of the GDP". Four measures of fiscal policy are used. "FP1" is measured as the net domestic credit to government. "FP2" is

measured as the total direct taxes, "FP3" is taxes on goods and services and "FP4" is total government debt. These are reported in currency units and tend to vary by size of the domestic economy. To make these comparable and for the results to have a sensible interpretation, each of these measures were transformed by natural logs. Hence, the interpretation are done in terms of percentage changes. The first to look at is the results on the relationship between Fiscal Policy and first measure of Financial Development (FD1) in sub-Saharan Africa. Each of the results is discussed below.

Table 0.1
Results on How Fiscal Policy impact on Financial Development (FD1) in sub-Saharan Africa

Dependent variable is Financial Development, measured as stock of domestic credit to the private sector				
	(1)	(2)	(3)	(4)
FP1	-0.31132			
	(0.56497)			
FP2		2.44821**		
		(1.23759)		
FP3			3.79841**	
			(1.51003)	
FP4				4.24674***
				(1.12796)
Bank Z-score	-0.15081**	-0.26567***	-0.24302***	-0.22646***
	(0.06411)	(0.05464)	(0.05598)	(0.05816)
Inflation	-0.02123	0.00759**	0.01059***	0.04322
	(0.07636)	(0.00318)	(0.00388)	(0.04526)
Financial Openness	3.11333**	1.98207**	2.38008**	2.18073**
	(1.33579)	(0.78770)	(0.96006)	(0.91826)
LendingInt Rate	-0.12993	-0.09672*	-0.16466**	-0.10249
	(0.13030)	(0.05281)	(0.07353)	(0.07285)
Gross Savings	-0.20369**	-0.17077***	-0.14671**	-0.13808**
	(0.08838)	(0.05426)	(0.05990)	(0.06947)
GDP growth	-0.19408	-0.12607	-0.10182	-0.10807
	(0.14707)	(0.10192)	(0.11178)	(0.12230)
Exch	4.54893*	-1.39475	-2.67818	-2.01541
	(2.45115)	(1.44746)	(1.98388)	(2.00854)
Liquidity	4.92908***	3.04080*	1.62059	4.67144***
	(1.71010)	(1.66139)	(1.74269)	(1.21060)
Constant	-15.84084	-44.64531***	-59.08808***	-108.77113***
	(14.81136)	(16.95268)	(21.17033)	(26.21901)
Observations	121	256	242	216

R-squared	0.41727	0.41470	0.38807	0.43996
Number of PanelID	21	22	22	20

Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
(Source: Authors computation)

Using the four measures of fiscal policy, "FP1= measured as the net domestic credit to government.", "FP2= is measured as the total direct taxes", "FP3= measured as taxes on goods and services" and "FP4= measured as total government debt" and the first measure of financial development (FDI) = measured as net domestic credit to the private sector", the discussions are presented below:

Net domestic credit to government (FP1) and credit to the private sector (FDI)in sub-Saharan Africa

Column 1 of table 4.1 shows the relationship between the net domestic credit to the private sector and the net domestic credit to the government. The result shows that there is a negative relationship between domestic credit to government and domestic credit to the private sector. That is, for every one percent increase in the amount of credit advanced to government by the domestic financial market, private sector credit is decreased by 0.31 percent. This is intuitive as government competes with private borrowers for the same funds. It is not immediately clear why it is not one for one in terms of the decrease but possible interpretations could be that the total amounts of credit available within the economy increases but only that, lenders prefer government to the private sector. One possible reason for this is the poor nature of risk identification in many of the sub-Saharan African countries. For instance, there is no established system of credit ratings for individuals and businesses in most African countries. This means that lenders have little information to determine good borrowers from bad ones and hence increases the risks inherent in credit extended to the private sector.

On the other hand, governments are rated by renowned global rating agencies such as Moody's and S&P and the IMF and other global organizations perform independent assessments of governments and the economy and this presents lenders with much information to draw upon hence reducing the risk. Moreover, governments are considered to be generally safe to lend to because there is reasonable assurance of continuity and less likely to default on debt. It is however unclear why the coefficient of FP1 is not statistically significant. While this can be dismissed as being due to chance, it is important to take into perspective a peculiar characteristic of the African financial market. First, a large part of the sub-Saharan African financial market is informal. That is, a majority of financial transactions do not pass through the formal system. Secondly, private individuals and firms who lend to government tend to lend directly to government, for instance, by purchases bonds and treasury bills.

This means that the money being lent to government would otherwise not be available to the private sector. This is evident in the fact the average private lender holds more government securities; this includes banks who prefer to lend to the government and its agencies than to lend to private companies. It is thus not a simple either-or dichotomy, hence the non-significant coefficient when we use domestic credit to the government as a measure of fiscal policy in sub-Saharan Africa.

That is, the individuals who lend to government by purchasing treasury bills and bonds would otherwise hold their funds as savings rather than lend to other private sector borrows. By keeping these as savings rather than fixed deposits or long-term investments, banks are constraints in their ability to make these available as loans. Thus, it is not necessarily the case that if the money is not lent to government it would go to the private sector. This irregularity in the variation could be accounting for the statistical insignificance.

Notwithstanding the statistical insignificance, the result has important practical significance. First, it reveals that while domestic savings may be growing, lending to the private sector in sub-Saharan Africa is not growing commensurately. Private sector growth has been widely considered to be the engine that powers economic growth in sub-Saharan Africa. If the productive sectors of the economies do not receive adequate financing to spur their growth, long-term economic growth could be at risk. However, the problem could also be a reflection of gross social inequality and poor social security. For instance, people are less likely to choose 180 days fixed deposits if they can reasonably expect to use up their savings every three month; this is a likely scenario for many of the sub-Saharan African countries.

Direct taxes (FP2) and credit to private sector (FDI) in sub-Saharan Africa
Direct taxes tend to reduce the returns to entrepreneurs and investors and may serve as a disincentive for further investments, hence lower demand for credit by the private sector. Column two of table 4.1 presents results for the relationship between government direct tax revenue (fiscal Policy) and credit to private sector (financial development). The hypothesis for that column is that government taxes should not have any effect on the amount of tax revenue that accrues to the government as credit to the private sector; mainly because these two are not directly related. However, the result shows a statistically significant and positive relationship between total taxes accruing to the government and the total domestic credit to the private sector within the sub-Saharan African countries used for the study.

What this means is that for every 1 percent increase in the total taxes accruing to the government, the domestic credit available to the private sector within the sample countries increases by 2.4 percent. This result implies that, in sub-Saharan Africa, government economic policy (fiscal policy) directly impacts on financial sector development. This is counter intuitive given that taxes have been argued to reduce the incentive to invest. However, this could be attributed to a number of factors.

First, this could be due to bank lending practices and business accounting. For instance, banks normally require borrowers to present formal financial records as part of loan applications. This requirement would compel businesses and individuals to keep better records hence making them pay the "correct" taxes. Moreover, if banks require business registration as part of loan applications, then SMEs that are usually in the informal sector in most African countries would register with the government and this would mean that they would be captured in the tax net or they would tend to formalize in order to qualify for bank credit. Hence, the fact that demand for domestic credit has increased would result in government taxes increasing.

Secondly, it could be due to the fact that government is also a lender. Government lends to SMEs who usually do not meet the requirements for loans from other financial institutions through its agencies. For instance, one of the sub-Saharan African countries called Ghana has such government agencies such as MASLOC and SDF. Thus, higher tax revenues to government would mean more money available to these agencies, hence increasing the credit they can extend to private sector borrowers. Notwithstanding this interpretation, it is possible

that there could be reverse causality. That is, as credit to the private sector is expanded, government revenue increases as a result of growth in private sector profits. This is a question future researches should explore.

Taxes on goods and services (FP3) and credit to private sector (FDI)in sub-Saharan Africa

This section discusses indirect taxes as it impacts businesses in a unique way. For instance, indirect taxes can lead to increases in the prices of goods and services and depending on the price elasticity of demand, business revenues could be reduced. A slow growth of, or decrease in, demand will serve as a disincentive for business growth hence less demand for credit. Government can thus stimulate growth in the financial sector by stimulating aggregate demand, especially private sector led demand. This has been examined in table 4.1.

The result is presented in column 3, and it shows that taxes on goods and services have an even greater impact on domestic credit to the private sector than total taxes in the sample countries used and for the period under study. For instance, the result in column 3 of table 4.1 shows that a percent increase in revenues from indirect taxes is associated with 3.8 percent increase in the amount of credit that is advanced to the private sector. The interpretation of this finding is similar to the previous section. This provides additional support to the interpretation given in the previous section for total taxes because businesses deal directly with goods and services.

Hence because their demand for credit requires them to keep records, the taxes paid on the goods and services they sell is less likely to be understated, hence higher taxes. For instance, many countries have VAT or some form of sales taxes that businesses need to register with the government before being allowed to include these taxes on their goods and services. As auditing standards improve, large corporations that transact business with the government are required to comply with tax laws and to ensure that their suppliers comply as well. This means that previously informal sector firms have had to register with the tax authorities to obtain VAT certificates and VAT invoices, for instance, to demonstrate compliance and attract business from larger corporations.

On the other hand, this finding is contrary to expectation and could be bi-directional. For instance, if the direction is from indirect taxes to financial development, then higher indirect taxes should lead to a decline in financial development, other things being equal. However, the results in column three (3) implies otherwise. Thus, from the perspective of economic theory, this could be interpreted to be indicative of a possible reverse causality. Reverse causality is not addressed in this study; it is a subject for future research. In addition, future research can test the indirect tax elasticity for each country. The result from that study would inform government whether lowering indirect tax rates would serve to both increase government revenue and financial development. This is crucial given the practical significance of the results.

Total government debt (FP4) and credit to private sector (FDI)in sub-Saharan Africa

Finally, in column (4) of table 4.1, the results show the strongest level of statistical significance between fiscal policy and financial development in this specification. The result shows that for every 1 percent increase in the debt of government, domestic credit to the private sector in each of the country making the sample used for this study increases by 4.2 percent. This can be explained to be because first, external debt accounts for most of government debts. By borrowing more from abroad, private sector businesses have more loanable funds

available to them. Secondly, these debts are usually used to fund infrastructure. On the other hand, contractors who undertake these infrastructure projects are required to pre-finance the projects, which they do using loans from banks and other financial institutions. This should ordinarily have led to a lower coefficient for the relationship but the magnitude of impact is likely as a result of the fact that government often delays in the payment of these contractors which makes them borrow more than proportionately to pre-finance new contracts due to accumulated interest. Moreover, increased government spending as a result of increased government borrowing has a multiplier effect on aggregate demand. The coefficient could thus be representative of the government spending multiplier effects.

From the above, it can be inferred that with the exception of domestic credit to government, all proxies used to represent fiscal policy has a direct positively significant impact on financial development in sub-Saharan Africa. In that, a change in fiscal policy results in a significant positive change in the financial systems of sub-Saharan Africa which are not due to chances. Therefore, there exist a positive relationship between fiscal policy and financial development in sub-Saharan Africa and the impact of this relationship is significant

Table 0.2

Results on how Fiscal Policy impact on Financial Development (FD2) in sub-Saharan Africa

	(1)	(2)	(3)	(4)
Dependent variable is Financial Development, measured net domestic credit to the private sector as a percentage of GDP				
FP1	-0.00184			
	(0.02468)			
FP2		0.26912***		
		(0.05542)		
FP3			0.21797***	
			(0.06677)	
FP4				0.08910*
				(0.04812)
LendingInt Rate	-0.01328**	-0.01094***	-0.01212***	-0.00865***
	(0.00569)	(0.00219)	(0.00315)	(0.00313)
Gross Savings	-0.00489	0.00014	0.00276	0.00199
	(0.00390)	(0.00225)	(0.00253)	(0.00300)
GDP growth	-0.00602	-0.00688	-0.00613	-0.00626
	(0.00647)	(0.00423)	(0.00475)	(0.00528)
Exch	1.40329***	0.92899***	0.96867***	1.21701***
	(0.10723)	(0.06290)	(0.08834)	(0.08492)
Liquidity	1.05903***	0.73666***	0.84224***	1.02596***
	(0.07320)	(0.07642)	(0.07541)	(0.05296)
Constant	11.39976***	9.12650***	9.43263***	10.07529***
	(0.63838)	(0.71888)	(0.93051)	(1.13919)

Observations	123	245	232	206
R-squared	0.92605	0.97192	0.95375	0.93544
Number of countries	21	22	22	20

Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
(Source: Authors computation)

Table 4.2 repeats the analysis in table 4.1 using an alternative measure of financial development (FD2); measured as a percentage rather than the log transformed currency units. The results are qualitatively identical to that discussed in sections 4.2.1.1 to 4.2.1.5. However, the interpretation of the coefficients of fiscal policy will be slightly modified. For instance, a one percent change in the FP2 is associated with a 0.26 percentage points increase in FD2. In other words-using the meaning of FP2 and FD2- when total direct taxes increase by one percent, the amount of credit to the private sector relative to the national GDP increases by 0.26 percentage points. These results are presented as robustness check for the main results presented in table 4.1.

Table 0.3
Results on how fiscal policies mediate the impact of financial development (FD1) on economic growth

	(1)	(2)	(3)	(4)
Dependent variable: GDP growth				
FD1	-0.15418	-0.05547	-0.33279	-0.60044
	(0.27481)	(0.35078)	(0.36146)	(0.41338)
FP1	-0.51857			
	(0.51656)			
FD1*FP1	0.00252			
	(0.01161)			
FP2		1.34124		
		(0.87012)		
FD1*FP2		0.00007		
		(0.01319)		
FP3			-0.00565	
			(0.95526)	
FD1*FP3			0.01096	
			(0.01337)	
FP4				0.02094
				(0.71228)
FD1*FP4				0.01970
				(0.01441)
Bank Z-score	-0.01946	-0.02104	-0.00521	-0.02056
	(0.04704)	(0.03881)	(0.03649)	(0.03653)
Inflation	0.00358	0.00107	0.00293	-0.00843
	(0.05431)	(0.00210)	(0.00242)	(0.02716)
Financial Openness	0.15135	0.10428	-0.74630	0.35899

	(0.97740)	(0.53113)	(0.60780)	(0.58706)
LendingInt Rate	-0.06651	-0.04745	-0.07229	-0.02979
	(0.09285)	(0.03463)	(0.04550)	(0.04363)
Gross Savings	-0.01089	0.11084***	0.06180*	0.13628***
	(0.06552)	(0.03546)	(0.03719)	(0.04075)
Exch	-0.86497	-0.84749	0.70104	-0.58270
	(1.95472)	(0.98131)	(1.22859)	(1.19859)
Liquidity	2.47706*	-1.27656	0.80276	-0.03941
	(1.27705)	(1.09922)	(1.07281)	(0.75362)
Constant	5.76224	-13.75214	-2.05385	8.09980
	(12.39723)	(12.68850)	(13.87963)	(17.19400)
Observations	121	256	242	216
R-squared	0.09942	0.11701	0.10208	0.12910
Number of PanelID	21	22	22	20

Standard errors in parentheses   *** p<0.01, ** p<0.05, * p<0.1
(Source: Authors computation)

Table 0.4
Results on how fiscal policies mediate the impact of financial development (FD2) on economic growth

	(1)	(2)	(3)	(4)
Dependent variable: GDP growth				
FD2	-3.01858	0.86221	0.93503	0.14728
	(2.73483)	(2.02353)	(2.10222)	(2.95252)
FP1	-1.93563			
	(2.30541)			
FD2*FP1	0.06029			
	(0.08856)			
FP2		3.98906**		
		(1.99930)		
FD2*FP2		-0.09644		
		(0.06227)		
FP3			2.12145	
			(1.80560)	
FD2*FP3			-0.08067	
			(0.06476)	
FP4				1.30741
				(2.60330)
FD2*FP4				-0.04963
				(0.09736)
Bank Z-score	-0.01331	-0.01024	-0.00367	-0.02197
	(0.04584)	(0.03797)	(0.03636)	(0.03663)
Inflation	0.00700	0.00205	0.00432*	-0.00718
	(0.05393)	(0.00217)	(0.00256)	(0.02767)
Financial Openness	-0.20981	0.50393	-0.18128	0.70137

	(0.95377)	(0.67993)	(0.71996)	(0.72575)
LendingInt Rate	-0.06822	-0.07213*	-0.09888**	-0.03286
	(0.09521)	(0.03711)	(0.04872)	(0.04536)
Gross Savings	-0.01178	0.12902***	0.07948**	0.14454***
	(0.06702)	(0.03678)	(0.03884)	(0.04273)
Exch	0.92051	0.29829	1.44804	0.91301
	(2.95868)	(1.58949)	(1.72324)	(1.81715)
Liquidity	3.50337*	-0.07453	1.91778	1.28663
	(2.08141)	(1.48137)	(1.41245)	(1.32823)
Constant	60.72927	-55.32183	-40.19319	-14.48088
	(56.77479)	(45.38263)	(43.20918)	(72.16188)
Observations	123	245	232	206
R-squared	0.09159	0.12014	0.10014	0.11714
Number of PanelID	21	22	22	20

Standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$
(Source: Authors computation)

Fiscal Policy, Financial Development and Economic Growth in sub-Saharan Africa
The final question that this section of the study seeks to answer is whether fiscal policy affects economic growth through financial development in sub-Saharan Africa. To answer this question, fiscal policy is interacted with financial development and GDP growth as outcome variable. It is expected that as fiscal policy has been shown to impact financial sector development, the impact will amplify economic growth. The results are presented in table 4.3 and 4.4

Contrary to expectation, the effect of fiscal policy on the financial development does not significantly affect economy growthsub-Saharan Africa. That is, the effect of fiscal policy on financial development as revealed in the first section of analysis does not generate additional growth effect in the sample countries used for the study. This is shown in tables 4.3 and 4.4

The study therefore concludes that impact fiscal policy on financial development though positive and significant, does not generally bring additional growth effect in sub-Saharan Africa. That is, fiscal policies affect economic growth through financial development in sub-Saharan Africa; but, the impact is not significant as suggested in literature.

Conclusions and Policy Implications/recommendations
Conclusions
The current study looked at level of interaction that exist between fiscal policy tools (net domestic credit to government, total direct taxes, taxes on goods and services and total government debt) and financial development (measured as "net domestic credit to the private sector" and "net domestic credit to the private sector as a percentage of the GDP") in the SSA region from 1960 to 2016. Panel data methodology was adopted for the study and the generalized least square (GLS) estimator; the fixed effect model was used. It is also worthy to know that from the results, government competing with the private sector for domestic credit in SSA economies is detrimental to financial sector development. The study concludes that in SSA countries, governments should gradually reduce the desire of competing with the private sector for domestic credit.

From the study, the findings concludes that in SSA, a percentage change in fiscal policy leads to a significant and positive changes in developing the financial sector defined as "domestic credit to the private sector". From a section of literature, it has been established that in the developing economies such as SSA, the direction of causality between financial development and economic growth is from the former to the latter and that efforts should be directed in increasing the development of the financial sector. It is therefore refreshing to empirically conclude from the study that there is a significant and positive relationship between fiscal policy and financial sector development; in that these policies leads to developing the financial sector of SSA countries. On the question of whether fiscal policy affect economic growth through financial development in sub-Saharan Africa, the study empirically concludes that the impact of fiscal policy on financial development though positive and significant does not necessarily bring additional growth effect in sub-Saharan Africa.

Policy Implications/Recommendations
The practical significance of this result is substantial. It can be inferred that widening the tax net to capture the now informal sector will not only increase government revenue but also lead to financial sector development (growth). This will also increase financial inclusion generally. Moreover, increased government revenue will potentially spur government spending, which due to the nature (for instance, infrastructure) of such spending will increase private sector activity and aggregate supply. The take home for government fiscal policy from this finding is that government should focus on expanding the tax net as a way to increase its revenue and also to stimulate financial development.

Similarly, policies towards financial inclusion should be aggressively pursued in SSA as these have practical implications for financial sector growth. Governments can achieve greater financial inclusion by coordinating efforts by private sector financial firms, strengthening their citizens' databases and by tying government support and subsidies to registration with these databases. Financial institutions will then have a credible source of verifying information provided during credit application. While these may already exist in some forms across the various countries in SSA, they have achieved limited success; they require renewed attention. Adding to the knowledge of literature, this study empirically contributes the mediating effect of fiscal policy on finance growth nexus is not significant though positive. Implying government of SSA, policy think tanks and researchers could look further into why this outcome. As a result of some constraints, further research topic areas are possible; monetary policies, financial development and economic growth

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