FOREIGN DIRECT INVESTMENT, PRIVATE DOMESTIC INVESTMENT AND ECONOMIC GROWTH IN AFRICA: THEORY AND EVIDENCE

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ABSTRACT

This paper assesses the impacts of foreign direct investment (FDI) and domestic private investment on economic growth in Sub Saharan African countries. This investigation arises from the preferential treatment accorded to foreign firms vis avis domestic firms in African countries with the assumption that foreign firms are more growth stimulating than their domestic counterparts. The empirical results are motivated by an endogenous growth model in which FDI is considered as one of the major determinants of growth. Domestic private investment is also introduced in the model in order to determine the form of investment that is more growth stimulating. Analytically, the paper adopts a dynamic panel model, hence uses the GMM estimator to obtain consistent and efficient estimates of the impact of FDI on economic growth. We find that FDI is negative and significantly influences economic growth in Sub-Sahara African countries. PDI has a positive relationship with economic growth thus PDI is more growth stimulating than FDI in SSA. The study recommends that SSA countries should strengthen regional integration in order to attract the desired FDI for desired economic outcomes. Other factors significantly influencing growth are government spending, initial GDP per capita, human capita development, financial development, trade openness.

Keywords: Foreign Direct Investment, Private Domestic Investment, Sub-Saharan Africa

JEL classification: E22, F21, P33

1. Introduction

The role of foreign direct investment (FDI) in economic growth has generated a lot of debate for the past three decades particularly for developing countries. Since most developing countries are entrapped in the vicious circle of poverty and lack capital resources, they face both the savings-investment gap and the trade gap (Ganioglu&Yalcin., 2015). These two gaps act as constraints to development in developing countries particularly those in sub-Saharan Africa (SSA) where in most cases, their trade balances are usually in deficit and their domestic savings are not sufficient enough to finance domestic investment hence requiring foreign capital inflows to fill both gaps (Adom and Elbahnasawy., 2014; Ganioglu and Yalcin., 2015; Dash, 2017; Gocer et al., 2016; Hasanah., 2020).

New growth theories have tended to emphasize the growth impact of FDI through its roles in the host economy. For instance, FDI is assumed to be the major source of technology and know-how to developing countries (Calabrese and Tang, 2020). In addition, its presumed ability to transfer both managerial skills and production skills to the local firms through externalities or spill-over effects, makes FDI preferable to other forms of external capital flows such as aid and portfolio investment. FDI is assumed to close the skills-gap through technological transfer that can be assimilated by local firms through say training of labor and management that may later form own firms or join domestic firms (Konstandina and Gachino., 2020; Karanikic, 2020; Lasbrey et al., 2018). Alternatively, through links with domestic suppliers or through, learningby seeing the productivity of domestic firms can be enhanced, hence increasing economic growth.

Another source of growth arises from competition between local and foreign firms: Large local firms may be forced to engage in training or invest in better technology so as to keep up with competition from the efficient foreign firms, or else risk being forced out of business (Azeroual, 2016).All these enhance the marginal productivity of resource inputs which in turn promotes growth (Asongu and Odhiambo, 2020; Sultana and Turkina., 2020). Other expectations from FDI by host countries include increased employment and tax revenue.

Many SSA countries therefore, turned to pursuing policies that encourage FDI such as trade and exchange rate liberalization, privatization, and a general improvement in the regulatory framework and investment climate(Gnangnon., 2018; Bbale and Nnyanzi., 2016).

As a result, FDI inflows to SSA jumped from $6.8 billion in 2000 and higher to $34 billion by 2008. Starting with the late 1990s, GDP per-capita growth rates remained low but positive in most SSA countries reaching an average of 5.0 percent in 2006, compared to only 1.5 percent in the early 1990's. The noticeable improvement was quite widespread across countries, with fewer

countries recording negative growth and an increasing number of countries recording GDP growth rates of above 2 percent in 2018 and 2019 (World Development Indicators, 2020).. One key question is, could the changes in FDI flows might have influenced the economic growth rates in SSA?

This paper examines the impact of FDI and domestic private investment on economic growth in SSA countries. The comparative analysis is motivated by the fact that African countries have tended to offer preferential treatment to foreign investors compared to domestic firms, for instance: reduced tax rates, tax holidays, subsidies, exemption from import duties, loans and loan guarantees, modifying rules on workers' rights among others (Pradhan et al., 2019; Kumari and Sharma 2017,Tuomi, 2011; Kransdorff, 2010, Mwilima, 2003).

Previous studies on FDI and growth have found mixed results. A number of studies find a positive relationship particularly for middle income and developed countries, (Sohail and Mirza, 2020; Owusu-Nantwi and Erickson, 2019; Masipa, 2018; Sothan, 2017). But for low income countries, studies find no relationship between FDI and economic growth, probably because FDI may bring about crowding out effect on domestic investment, external vulnerability and dependence, destructive competition of foreign affiliates with domestic firms and "market-stealing effect" as a result of poor absorptive capacity (Apergis, et al., 2008; Xueli, 2010; Doucouliagos et al., 2010; Ray, 2012). Economic theory propounds that for FDI to stimulate growth, either it is more efficient than domestic firms or it complements them such that it enhances their productivity. But given that FDI flows to Africa are concentrated in the mining and oil sector, little in the manufacturing sector and least in the primary sector, yet the primary sector (agriculture, forestry and fishing) accommodates over 70 Percent of the population and contributes a greater proportion to GDP than any other sector. It is therefore doubtable whether FDI has any positive effects on economic growth in Africa. This study tests the hypothesis that FDI is more efficient than domestic private firms in stimulating economic growth.

The results of this study are motivated by an endogenous growth theory in which technological progress brought about by FDI is considered as one of the main determinants of growth rate of income. Technological progress is assumed to take place through improvements in the quality of products that may be brought about by competition among firms.

Studies that involve FDI and economic growth deserve special attention. This is so because on one hand economic growth is believed to be a strong determinant of FDI inflow and on the other hand increase in foreign investment leads to increase in capital stock (Greenfield investment) which in turn leads to economic growth. This therefore leads to the problem of endogeneity. This

is one major problem that several studies have not taken into consideration. For instance, Borenszetein et al. (1998), Assanie and Singleton (2001), Nonnemberg et al. (2002) and Lensink and Morrissey (2006) use instrumental variables and the 3SLS technique. The problem with this approach however, is identifying an instrument for FDI.To go over this problem, this study uses the Generalized Methods of Moments (GMM) panel estimator developed by Arellano and Bond (1991), to obtain consistent and efficient estimates of the impact of FDI inflow on economic growth. The advantage of the GMM panel estimator is that it exploits the time-series variation in the data, it accounts for the unobserved country specific effects, allows for the inclusion of lagged depended variables as regressors and most important of all is that it controls for the endogeneity of all the explanatory variables. Therefore the study advances the literature on growth and FDI by enhancing the quality and quantity of the data set and uses the econometric technique that solves for simultaneity biases.

The rest of the paper is organised as follows: Section two reviews the theoretical and empirical literature, followed by the analytical framework in section three. Section four describes the methodology and section five discusses the empirical results. The last section concludes.

2. Literature Review

2.1. Theoretical review

Traditional literature on growth theory can be divided into three groups: First the post-Keynesian models that emphasize the role of savings and investment in promoting growth; (Harod, 1939; Domar, 1946; Chenery and Strout, 1966). These models emphasize the two-gap model of growth: The savings-investment and exports- imports gaps which act as hindrances to growth. Second, the neoclassical models which emphasize technical progress; that economic growth is driven by changes in technology which is assumed to be exogenous (Solow, 1957). Third, the new growth models which emphasis the role of R&D, (Uzawa, 1965; Romer, 1990); human capital accumulation, (Lucas, 1988; Mankiw, Romer and Weil 1992); Learning by doing models, (Arrow, 1962; Grilinhes, 1979; Romer, 1986); and the role of externalities or knowledge spill-over, (Aghion and Howitt, 1992; Kremer, 1993).

In all the three theories, FDI plays some part. For instance, in the first theory, FDI helps in the closing of the two gaps which would have acted as hindrance to economic growth, by providing additional resources that complement the domestic savings and export revenue. In the second theory, FDI is seen as the major source of technical progress since multinational corporations are the major source of advanced technologies and they account for a substantial part of the world's research and development. Similarly, in the third theory, FDI indirectly impacts on growth

through increased competition and technological spill-over or externalities to local indigenous firms.

Theoretically however, the effects of FDI on economic growth vary depending on (a) whether the host country is following export promotion (EP) or import substitution (IS) strategy, and (b) whether FDI has positive spill-over effects on domestic firms or negative externalities. According to Balasubramanyam et al. (1996), the magnitude of FDI on growth in IS countries is not as large as in EP countries because they are limited by character of the host country market. But in EP countries, FDI is likely to have a greater impact on growth because of the distortion-free environment.

Bagwati (1978) contends that EP countries tend to attract greater volumes of FDI and enjoy greater production efficiency than IS countries. An IS oriented economy imposes several inefficiencies on foreign firms such as tariffs and quotas on trade, distortions in the factor and product markets, and encourages the adoption of techniques of production that widely vary with resource endowment in the country. Bagwati (1978) adds that IS economies provide opportunity for rent-seeking and un-productive profit seeking activities that instead lead to un-equal income distribution. But EP economies apply a neutral policy between imports and exports and allocate resources according to market forces hence basing on comparative advantage. The competition between foreign firms and domestic firms arising from free trade encourages R&D, innovations and investment in human capital. These, combined with specialization and economies of scale that results from comparative advantage, enhance economic growth.

Proponents of the impact of FDI on growth via spill-over effects argue that for FDI to stimulate economic growth, it is necessary that either FDI has positive spill-over effects on domestic firms or it is more efficient than domestic firms or both. Domestic firms could benefit from entrance of FDI, because foreign firms are assumed to possess non-tangible productive assets such as technological know-how, marketing and managerial skills, and export contacts, coordinated relationship with suppliers and customers, and reputation (Kotey, 2019; Sari et al., 2016; Wiboonchutikula, et al., 2016; Lenaerts and Merlevede, 2015; Aitken and Harrison 1999). Such knowledge is easily transferred from parental firms abroad through their affiliates to domestic firms in the host country, and through competition, local firms are forced to adopt new technologies so as to stay in the market which leads to increase in total factor productivity (Azeroual, 2016; Buckley et al., 2010; Kokko, 1996 and Caves, 1996).

However, entrance of new foreign firms in the domestic market has two repercussions; either local firms are crowded out which might lead to a reduction in total factor productivity, or their

productivity is enhanced. For instance, on one hand, firms within the same industry could experience intra-industry or horizontal spill-over effects through the following channels; first, some of the technology brought in by the FDI could diffuse into the local indigenous firms through demonstration and imitation effect (Aitken et al. 1997). Second, interaction with foreign firms could provide learning opportunities for the domestic firms and therefore reduce their innovation costs thus improving total factor productivity (Azeroual, 2016; Buckley et al., 2010). The third mechanism is through a combination of human capital accumulation and labour turnover: Workers employed by foreign firms accumulate knowledge but as they leave for domestic firms or form their own firms; they take with them the accumulated human capital that raises the productivity of the domestic firms (Nguyen et al., 2020; Le et al., 2019; Gökmenoğlu et al.,2018).

Alternatively, positive externalities could also take place among industries through backward and forward linkages between suppliers (domestic firms) and buyers (foreign firms) of inputs (Girma et al., 2008; Liu, 2008).These inter-industry or vertical spillover effects could arise as a result of foreign firms establishing supportive linkages by providing technical assistance to local suppliers of inputs. Or, foreign firms could "force" domestic firms to become more efficient in order to become suppliers to foreign affiliates. Both of these mechanisms translate in efficiency improvements leading to increased productivity hence economic growth (Azeroual, 2016; Buckley et al., 2010).

On the other hand, since foreign firms are usually low-cost firms compared to their domestic counterparts, they may increase production and grab the market thus forcing domestic firms to reduce production. In addition, entry of foreign firms may crowd out local firms in the financial and labor markets (Farla et al, 2016; Resmini and Siedschlag, 2013). In the financial market because foreign firms have easier access to credit than local firms; and in the labor market, foreign firms usually pay higher wages than their local counterparts, so according to the "occupational choice" hypothesis, the prospective entrepreneur may choose to become a wage earner. This process of crowding out of domestic firms could ultimately slow economic growth (Barry and Strobl, 2005, Farla et al, 2016; Resmini and Siedschlag, 2013).

Notwithstanding the mechanism through which FDI impacts local firms, the "absorptive capacity" of local firms act as a barrier, limiting positive spillover effects. Kokko (1994) defines it as the difference in technological complexity between the local and foreign firms. Kokko et al. (1996) hypothesize that domestic firms can only benefit if the technology gap between the multinational and the domestic firm is not too wide so that domestic firms can absorb the knowledge available from the multinational; otherwise domestic firms using very backward

production technology and low skilled workers may be unable to learn from high technological level multinationals.

2.2. Empirical review

Like the theoretical literature, empirical studies on the impact of FDI on growth are mixed. Some studies report a positive impact while others find that FDI has a negative impact on growth. For instance, Sultanuzzaman et al., 2018 examined the impact of FDI inflows on economic growth in Bangladesh. The study used annual secondary data over the period 1990-2015. Using Vector Error Correction metrics (VECM), the study findings show that there is a positive relationship between FDI inflows and GDP in both the short run and the long run. Thus, FDI inflows are a vital weapon of GDP growth for Bangladesh. Therefore, the study suggests that Bangladesh government needs to create foreign investment friendly policies, transfer of knowledge and trade promotion in order to promote more FDI inflows.

Korhan et al, (2018) investigated the impact of FDI on human development index in Nigeria. According to literature, human skills are necessary for economic growth in any given country. The study adopts a Johansen cointegration test to determine a long-term relation between FDI and human capital indices (e.g., school enrolment, life expectancy at birth) and gross national income. The findings of the study are rather mixed for instance; on one hand there is a positive effect of FDI on income and educational development, which means to attract foreign investors should be a priority for the Nigerian policy-makers. On the other hand, thefindings reveal a negative effect of FDI on life expectancy in Nigeria as a result of FDI-induced competitiveness and insecurity. This study recommends that policymakers should implement remedies to protect public health while trying to attract foreign investors to the country. For example, government spending on social insurance that compensates workers could be increased to reduce economic insecurity to reasonable levels.

Lensink and Morrissey (2006), using an endogenous growth model that is closely related to that of Borensztein et al. (1998) and, panel data and instrumental variable technique find that FDI has a positive impact on growth, whereas volatility of FDI has a negative impact on growth. But unlike other earlier studies, their evidence for positive effect of FDI on growth is not conditional on any other explanatory variable such as level of human capital. However, they emphasize the importance of the volatility of FDI. They suggest that the volatility of FDI may reflect the underlying political and economic uncertainty in a country which is indeed an important determinant of both growth and the productivity of investment. Some country-specific studies also document positive impact of FDI on growth. For instance, Kerr et al. (1995), find positive

relationship for China, just as Kokko et al. (1996) for Uruguayan manufacturing industries and Obwona (1999) for Uganda.

Generally however, empirical studies show that the contribution of FDI to economic growth strongly depends on the prevailing circumstances in the host country. That is, whether the country is pursuing EP or IP policies (Iamsiraroj, 2016;Makiela and Ouattara, 2018; Adams, 2009; Globerman and Shapiro,2002), or whether the country' stock of education is above the threshold (Francois et al., 2020).

3.0. Theoretical Framework

The endogenous growth literature distinguishes between two types of technological change models: Models with an improvement in the quality of products and models with an expanding variety of products. The former assumes that the number of types of products is constant and that technological progress comes from quality improvements of the products, often referred to as "quality ladders" that may be brought about by competition among firms, Assanie and Singleton (2001). The latter models assume that technological progress is brought about by an increase in the number of types of intermediate products, or capital goods. These models assume that the quality of each type of good is assumed to be constant (Borensztein et al., 1998; Lensink and Morrissey, 2006). In this study, we use a model developed by Assanie and Singleton (2001), that assumes improvement in the quality of the products because, one key expectation from FDI is technological advancement to the host country which, increases productivity of both the foreign and domestic firms through spillover effects.

Briefly[1], the model assumes an economy where a single consumption good is produced using a Cobb-Douglas type of production function with two key variables; the stock of location-specific assets and the stock of owner-specific assets in each countryat a given time-period. It is further assumed that multinational firms rank countries according to the level of location-specific advantages, before investing in that country in such a way that the ranking attached to each country by each foreign firm is the relative weight attached by the firm to alllocation-specific advantages[2] in any given country and the goods produced in the country that embodies these location-specific advantages. These advantages are an incentive to investment and hence

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[1] For a detailed exposition of the model, see Assanie and Singleton (2001)

[2] Location specific advantages include; political stability, human capital, existence of property rights, Physical and financial infrastructure and macroeconomic stability.

economic growth. The multinational may however, rank the owner-specific assets[3] according to the "amount" of technology embodied in them.

The model further assumes that through the accumulation of location-specific capital, externalities are created which in turn reduce the costs of adopting owner-specific capital.

This implies that foreign firms bring along with them advanced technology that makes it easier for local firms to adopt the necessary technology to produce better quality goods at reduced costs. Grossman et al. (1991), refer to this as "quality ladder". The cost of adopting which is also known as the setup cost is inversely related to the number of foreign firms operating in the economy. In other words, the greater the number of foreign firms (more FDI), the lower the cost of adoption by domestic firms hence the higher the rate of economic growth.

4. Methodology

4.1. Econometric Equation, Variable Definition and Measurement

New growth theorists assert that the success of FDI in promoting growth partly depends on the investment climate in the host country, which includes political stability, rule of law and protection of property rights. Also macroeconomic stability and trade openness are considered key factors of economic growth. In addition to FDI inflows, a well-developed domestic private sector can be key in the development of a country. We specify the equation for estimation that includes FDI, domestic private investment and a number of other explanatory variables as:

$$g_{it} = \beta_0 + \beta_1 fdi_{it} + \beta_2 Y_{i0} + \beta_3 PRIV_{it} + \beta_4 K_{it} + v_{it} \, ,$$

Where; the dependent variable is the real per capita growth of GDP. *Fdi* is the ratio of net inflow of foreign direct investment to GDP and is expected to be positively related to growth; *PRIV* is the ratio of domestic private investment to GDP, and is expected to positively influence growth; Y_{i0} is level of initial GDP per capita and it captures the role of the "catch up" effect of country *i* in other words it controls for pre-existing economic and institutional conditions in each host country. We expect this variable to be negatively related to GDP growth. *K* is a vector of location specific and ownership specific factors such as; capital accumulation (human and physical), government spending, the macroeconomic environment, degree of openness, political stability and financial development.

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[3] Firm ownership specific advantages include; types of investment, size of the firm, type of market structure and technology involved.

Regarding measurement of variables, following Borensztein et al. (1998); Lensink and Morrissey, (2006); we use school enrollment to proxy human capital accumulation. Also as is standard in the literature; (Morisset, 2000; Asiedu, 2001; Assanie and Singleton, 2001), we use the number of telephone lines per 1000 people to proxy physical infrastructure development. The proxy for government spending is the ratio of government consumption to GDP, while for the macroeconomic environment; we use the rate of inflation. The proxy for openness to trade is the ratio of trade to GDP, while that of financial development is the ratio of liquid assets- M2 to GDP. The Freedom House's indices of political rights and civil liberties (POR) is used to proxy the extent to which political rights and civil liberties are granted to citizens and foreigners. This index is ranked from 1- most free to 7- least free. Apart from inflation and the political variable, the rest of the variables are expected to be positively related to GDP growth. However, the sign for government spending cannot be determined *a priori,* because if increase in government spending is on productive sectors such as education, health or physical infrastructure, then it will be complementary in nature in which case the sign would be positive. But if increased government spending is on non- productive sector such as military spending, then this would tantamount to increase in the amount of distortionary taxation which instead reduces growth.

4.2. Data

Apart from the dependent variable, the key explanatory variables are ratio of FDI to GDP and ratio of domestic private investment to GDP. Therefore, the data set to be used was be based on countries that had time-series data on these variables. Data was obtained from 32 SSA countries[4] over the period 1990 to 2019. Most of the data were obtained from the World Bank's *World Development Indicators*. Data on political rights and civil liberties were obtained from Freedom House's annual survey of political rights and civil liberties[5]. Data on the ratio of domestic private investment to GDP were obtained from the African Development indicators.

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[4] Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central Africa Rep, Comoros, Congo Rep, Eritrea, Ghana, Guinea Bissau, Kenya, Lesotho, Liberia, Madagascar, Mali, Mauritania, Mauritius, Mozambique, Namibia, Rwanda, Senegal, Sierra Leon, Sudan, Eswatini, Tanzania, Togo, Uganda, Zambia and Zimbabwe.

[5] Obtainable at the following url addresshttps://freedomhouse.org/sites/default/files/Feb2019_FH_FITW_2019_Report_ForWeb-compressed.pdf

4.3. Econometric Estimations

Due to data gaps (unbalanced data) we were unable to obtain average values of all the variables say for a five year average in order to smooth the data. Some of the variables were normalized by taking natural logarithms guided by the "gladder" facility in STATA software. We employed the GMM dynamic panel estimation developed by Arellano and Bond (1991) and introduced into the growth literature by Caselli, Esquivel and Lefort (1996). In economic growth studies, Dynamic GMM is more superior to other estimators because it disregards biases emanating from omitted variables, endogenous right-hand- side variables, and presence of measurement error. According Arellano and Bond (1991), consistency of the GMM estimator mainly depends on the assumptions that the error term do not reveal second order serial correlation and that the instruments are valid. The validity of the instrument is established using the serial correlation test and a Sargan test of over-identifying restrictions. Failure to reject the null hypothesis of the two tests implies that the assumptions of the instruments are valid.

4.4. Results

4.4.1. Descriptive Results

Table 1 shows the summary statistics of the variables used in the study for the 32 Sub-Sahara African countries for the period 1990-2019.

Variable		Description	Mean	Std.Dev.	Min	Max
Real GDP		Growth rates of GDP	2.01	8.51	-47.50	140.37
Foreign	Direct	Net inflows (% of GDP)	3.69	9.85	-28.80	161.82
Investment						
Private	Domestic	Gross Fixed Capital Formation, (% of GDP)	21.59	24.52	-178.54	234.11
Investment						

Initial GDP per capita	US$, 2000 constant prices	2,086.42	2,976.73	200.63	20,532.98
Human Capital Development	School enrolment, Secondary gross (%)	37.86	23.13	-9.77	115.96
Physical Infrastructure	Telephone lines per 100 people	2.26	4.89	0.00	34.27
Government Spending	(annual % growth rate)	14.97	11.15	-65.31	91.42
Inflation	GDP Deflator: linked series	123.19	296.06	-39.58	6,026.33
Trade Openness	(% of GDP)	72.75	43.29	-34.99	318.40
Financial Development	Broad money (% GDP)	30.00	24.25	-9.72	164.07
Civil liberties	Scale 1-7; 1=Maximum rights, & 1=Fewest rights	4.37	1.71	1.00	7.00

From Table 1, we note that there is no single variable with a standard deviation of zero; therefore all the variables qualify to be included in the regression. Furthermore, we can observe that the maximum and minimum values of the variables are centered around the mean implying that there are no outliers.

4.4.2. Quantitative Results

Table 2 reports results obtained from the GMM regression. When fitting a model using the GMM estimator, it is important to establish whether the instruments satisfy the orthogonality condition, that is, whether they are uncorrelated with the errors. For us to address this problem, we employed the Sargan test of over-identification of restrictions. The test statistics has a χ^2 distribution under the null hypothesis that the instruments are valid. We find an insignificant statistic that indicates that the Sargan test cannot reject the null hypothesis that all our instruments are valid.

In Table 2, we investigate a case in which Real GDP is the main explanatory variable, in order to gain an insight on whether foreign direct investment (FDI) and private domestic investment (PDI) influence economic growth. The results show that FDI negatively and significantly affects the economic growth in Sub-Sahara Africa. The results indicate that a unit percentage increase in FDI net inflows is associated with a reduction in Real GDP growth of about 0.12 percent at 1 percent level of statistical significance.

Findings show that, FDI is negative and significantly associated with economic growth (Model 2). Specifically, a unit percentage increase in FDI leads to a reduction in economic growth by 0.12 percent at 1 percent significant level. This finding is consistent with Carkovic and Levine's (2002) who discovered that after controlling for country specific factors, FDI has a negative association with economic growth. According to Adam (2009), a negative effect of FDI to economic growth may be due to the under developed financial markets in SSA. In addition, there is possibility that most SSA countries have not built strong absorptive capacity needed to make use of the knowledge, technology and other skills associated with FDI that would subsequently have spillover effects on growth hence a negative finding. Further studies indicate that the negative relationship between FDI and economic growth is associated with the fact that FDI may bring about crowding out effect on domestic investment, external vulnerability and dependence, destructive competition of foreign affiliates with domestic firms and "market-stealing effect" as a result of poor absorptive capacity (Apergis, et al., 2008; Xueli, 2010; Doucouliagos et al., 2010; Ray, 2012).

Table 2: Regression results from GMM Estimation: Foreign Direct Investment, Private Domestic Investment and Economic Growth in Sub-Saharan Africa 1990-2019:

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Lagged Real GDP growth	0.573***	0.603***	0.563***	0.501***	0.562***
	(0.173)	(0.166)	(0.172)	(0.092)	(0.184)
Foreign Direct Investment	-0.106**	-0.116***		-1.684*	
	(0.040)	(0.037)		(0.899)	
Private Domestic Investment	0.057***		0.053**	0.051**	0.050**
	(0.019)		(0.026)	(0.022)	(0.020)
Initial GDP per capita	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Human capital accumulation	0.014**	0.016**	0.015**	-0.033	0.017**
	(0.012)	(0.017)	(0.016)	(0.022)	(0.012)
Physical infrastructure	-0.044	-0.052	-0.017	-0.045	-0.047
	(0.094)	(0.093)	(0.071)	(0.094)	(0.083)
Government spending	-0.120***	-0.130***	-0.096***	-0.116***	-0.106***
	(0.042)	(0.047)	(0.031)	(0.036)	(0.030)
Inflation rate	0.001	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Foreign direct investment*HDI				0.015*	
				(0.008)	
Trade openness	0.029***	0.029***	0.024***	0.036***	0.023***
	(0.010)	(0.010)	(0.008)	(0.012)	(0.007)
Financial development	0.017***	0.006***	0.017***	0.002***	0.001***

	(0.030)	(0.032)	(0.025)	(0.032)	(0.028)
Civil liberties	-0.226	-0.154	-0.205	-0.184	-0.302
	(0.285)	(0.261)	(0.246)	(0.210)	(0.221)
Year dummies	0.000	0.000	0.000	0.002**	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Foreign direct investment*PDI					0.004**
					(0.009)
Observations	959	959	959	959	959
Number of cid	32	32	32	32	32
No. of instruments	20	20	20	20	20
AR1 P-value	0.0561	0.0475	0.0487	0.0339	0.0366
AR2 P-value	0.456	0.429	0.276	0.143	0.283
Sargan p-value	0.0874	0.0533	0.0624	0.0534	0.0686
Hansen p-value	0.167	0.167	0.177	0.171	0.170

Standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Private domestic investment however, is positive and significantly associated with economic growth (Model 3). A unit percentage increase in domestic investment increases economic growth by 0.053 percent. The effect of this result is significant at the 5 percent and 1 percent in our model 2 and model 3. This therefore, emphasizes that there is a strong statistical evidence that the growth in domestic investment drives economic growth for the case of countries in our sample. This finding is consistent with previous studies that found a positive relationship between domestic investment and economic growth Bakari, (2017), Ullah et al., (2014).

Our finding also clearly show that government spending negatively and significantly affect economic growth. Specifically findings show that, a unit percentage increase in government expenditure reduces economic growth 0.057%. Basing on the result, it is highly likely that the increase on government expenditure in SSA countries is on non-essential expenses such as

purchase of fire arms to facilitate wars, debt servicing, financing the huge cabinet budgets etc. Otherwise if the spending was on essential expenditure like education, health and infrastructure, there would be a positive association with growth. Therefore, sub-Sahara African countries should strive to reduce non-essential government expenditure, and redirect such resources to priority social sectors such as health, education and infrastructure.

The coefficient of financial development has a positive sign and is statistically significant at 1 percent level. Our finding is consistent withHermes and Lensink (2017) who found a positive association between stock market capitalization as a measure of financial development and economic growth in Africa. Additionally, Hermes and Lensink (2017) emphasize that the development of financial system is an important precondition for positive relationship between foreign capital (FDI) and economic growth. Therefore, the financial system is very key in promoting the efficiency of economic activities and economic growth in SSA.

Additionally, the study finds human capital development as an important variable influencing economic growth in SSA. The coefficient of human capital development has an expected positive sign and significant at 5 percent statistical level. This implies that an increase in human capital development increases the level of economic growth (Anaduaka. 2014). Therefore, SSA should allocate massive investment in building capacity necessary for the attraction of FDI and consequently boost economic growth.

Further, our findings reveal the role played by trade openness on economic growth. A unit percentage increase in trade openness increases economic growth by 0.024 percentage. Therefore, sub-Saharan countries should target reduced imports against increased exports for favorable growth outcomes.

Finally, the interaction terms are significantly positive, which means that there are contingencies for positive effects of FDI on economic growth in sub-Sahara Africa. For example, FDI will only be able to positively affect economic growth if SSA countries have higher levels of human capital development and private domestic investment.

5. Conclusions and Policy Implications

Our study is consistent with various studies showing that FDI flows increased in the sub-Saharan countries especially in the 1990s. However, this increase did not match up with positive effects on economic growth. Nonetheless, private domestic investment, human capital development, trade openness, and financial development are positive and significantly associated with economic growth. The results of this study have policy implications.

Based on our findings, the study reveals a negative relationship between FDI and economic growth, it is evident that some types of FDI activities are more growth enhancing than others and therefore there is need to shift focus towards economic activities that target favorable types of FDI projects (Adam, 2009, Alfaro and Charlton, 2007). Studies by Agosin and Mayer (2000) and Mwalima (2003) indicate that FDI has contributed positively to the economic growth of the Asian countries especially China, Taiwan and South Korea because of the targeted approach to FDI unlike developing countries that are open to attracting generic FDI projects. On the same note also, UNCTAD report (2007), Ndikumana and Verick (2008), note that African countries attract FDI in primary sectors that produce raw materials for export hence fetching less foreign exchange unlike the Asian countries that focus into the secondary sector hence broadening their exports.

In addition, FDI's negative effect on growth could be related to the low absorptive capacity of host country's citizens in SSA. This refers to the ability to acquire new technology, assimilate it and apply it to enhance the productive capacity of the economy (Adam, 2009, Marcin.,(2007), Cohen and Levinthal., (1990). Studies by Adam.,(2009);Lumbila., (2005) emphasize the need for Africa to strengthen the absorptive capacity in terms of training workforce, infrastructure network and developed financial system if countries are to stand a chance in maximizing FDI like China and other Asian countries where FDI is more effective to growth.

Furthermore, our findings are a proof that FDI to host countries has both pros and cons as various studies assert that FDI can trigger both positive and negative growth depending on the type of investment attracted and what the returns from investments are used for. Therefore, SSA should attract investments that are development oriented in order to increase employment for their citizens. This would create a win-win situation for both the host country and the investor due to the contemporary assumption that in the long run, a development oriented FDI would enhance growth of economies, increase incomes, increased purchasing power of the citizens and market expansion for the investor. The way forward is regional integration to attract quality FDI. And also, SSA countries should beware of the kind of FDI they attract like Asian countries than having open door policy of attracting FDI that does not yield required benefits. For example efficiency and market seeking kinds of FDI would affect African growth given their immense spillover effect (Adam, 2009).

And finally, the study recommends that sub-Sahara African countries should increase the efficiency of government spending or reduce non-developmental government expenditure and redirecting resources to priority sectors such as health, education, infrastructure etc.

Our findings thus have some implication for future research. First, future research could disaggregate the different kinds of FDI (resource seeking, efficiency seeking and market seeking) to determine how each of them affects growth in SSA. This would consequently enable SSA countries to focus their target towards the type that is growth-enhancing.

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