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Foreign Direct Investment and Financial Development in Economic Community of West African States

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Abstract: This paper examines the link between foreign direct investment (FDI) and financial development with a view to ascertaining whether FDI is a substitute or complement to financial development in a sample of fifteen countries in Economic Community of West African States (ECOWAS) from 1980-2014. The study employed the two-step system Generalized method of moment. The result of the study is mixed. Specifically, the findings reveal that the development of the financial sector in the West African sub-region is actually not aiding FDI inflows, as it is evident from our analysis that financial development does not exert a significant positive effect on FDI inflows into the region. However, FDI influences the domestic financial sector development positively and significantly in the ECOWAS sub-region. This indicates that FDI has been complementing financial sector development. Generally, the study submits that foreign direct investment and financial development can act as both substitute and complement in the ECOWAS region.

Keywords: Financial Development; Foreign direct investment; Economic growth; Generalized Method of Moments

JEL Classification: C23; C61; D53; F15; P45

1. Introduction

There is need for significant inflows of external resources that will bridge the savings and foreign exchange gaps in West African countries; this tends to promote their sustainable development and inclusive growth (Adams & Opoku, 2015). Most nations in this sub-region attract FDI into their economies as they expect long-term economic growth from additional stable resources in the host countries. However, some basic factors enhance inflow of FDI, such as advanced technology, skills, research and development (R&D) to host countries. The growth in the inflow of FDI into the ECOWAS sub-region is also due to the continent's abundant natural resources. Likewise, recent political stability has made the continent attractive in terms of trade and investment, therefore their attention has turned to relative importance of capital inflows in promoting financial development (FD) in the continent (Driffield & Jones, 2013). FDI appears to offer many benefits, ranging from a high degree of stability, financial resource augmentation, positive productivity effects and access to foreign financial market that will float funds in the domestic market. FDI affects both financial development and economic growth. It is important to reiterate that the association between FDI and financial development is dynamic. This dynamism may suggest the existence of both endogeneity and simultaneity, which studies have overlooked.

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Extensive studies exist on foreign direct investment (FDI) and economic growth. Similarly, the finance literature is awash with several studies on the role of financial development (FD) on economic growth. There is lack of consensus in the literature on the link between foreign direct investment, financial development and economic growth. Most past studies focused largely on the growth impact of financial development and foreign direct investment while ignoring the direct dynamic link between foreign direct investment and financial development**.** Available empirical studies suggest that there are scanty studies on Africa that systemically capture the link between financial development and foreign direct investment (Adam & Tweneboah, 2009; Adjasi et al., 2012; Agbloyor et al., 2013). These few studies focused on specific countries or group of countries in Africa but failed to examine whether FDI is a substitute or complement to financial development at the regional monetary and economic level. They equally failed to capture the link between financial development and foreign direct investment using both the bank based and the capital market based models of financial development jointly within the framework of dynamic panel data estimator. Very little is known about the causal relationship between financial development and foreign direct investment in an economic and monetary union like ECOWAS. It is crucial to examine whether FDI is a substitute or complement in ECOWAS considering the fact that majority of the member states of ECOWAS adopted the Structural Adjustment Programme (SAP) in the mid 1980s. One of the expected outcomes of the SAP policy is a well-developed functional financial sector. If developed and functional financial sector is achieved by ECOWAS countries as intended in the SAP policy prescription of the Bretton Woods institutions, member countries of ECOWAS are expected to have the financial architecture that can make FDI play the complementary role rather than acting as a substitute. This is because member countries are expected to have well developed banking and capital market that can provide the required finance for both domestic and foreign multinational firms. This paper therefore fills the gap in the finance literature by investigating the dynamic interactions between financial development and foreign direct investment at the regional economic and monetary grouping level with specific focus on ECOWAS.

2. Literature Review

Very few studies have examined the link between financial development and foreign direct investment.[1] These studies are either country-specific or are on panel of countries in developed and developing economies. Majority of these past studies overlooked Africa in their samples.

There are two main theoretical views on the link between financial development and foreign direct investment. The first theoretical view predicts positive relationship between financial development and foreign direct investment. This positive theoretical position perceives FDI as being complementary to domestic financial development. Proponents of this view include Claessen et al. (2001); Agarwal and Mohtadi (2004) and Jeffus (2004). Specifically, Jeffus (2004) opined that FDI plays complementary role to financial development when foreign investors finance part of their investment with external capital or sell equity in capital market. There are high possibilities that the sale of equity may increase the liquidity of the stock market and stock market trading value and volumes. Contrarily, the second theoretical perspective suggests that the relationship between financial development and foreign direct investment is negative. This prediction emanates from the fact that FDI is a substitute rather than a complement to financial development. This is FDI aids in overcoming the challenges of investing through the capital market. This is common in countries with underdeveloped and institutionally weak financial system. FDI flow serves as an alternative when domestic equity and debt are difficult to raise through domestic banks and domestic capital market.

[1] See (Zakaria, 2007; Kholdy & Sohrabian, 2008; Adam & Tweneboah, 2009; Adjasi et al, 2012; Agbloyor, Abor, Adjasi & Yawson, 2013).

Empirical studies that examined the relationship between FDI and FD are quite ambiguous and inconclusive. There are two strands of studies linking foreign direct investment to financial development. The first strands of studies document positive relationship between FDI and FD.[1] They suggest positive spillover effect between financial development and economic growth thereby supporting the complementary role of FDI in relation to financial development. The second strand of empirical studies supports the substitute role of FDI that posits negative relationship between FDI and FD (see Dutta and Roy, 2011; Ang, 2009; Chun-Ping and Chien-Chang, 2009; Baker et al., 2008; Rhee and Wang, 2009)**.** Adams and Tweneboah (2009) examined the association between FDI and stock market development in Ghana from 1991-2006 using multivariate co-integration and error correction model. They found a statistically significant positive relationship between FDI and stock market development as well as a long run relationship between FDI and stock market development. The findings indicate a positive correlation between FDI and stock market, which can lead to 1.5% rise in capitalization in the long run. The major limitation of this study is that it is country-specific as it focused only on Ghana without reference to other Africa countries. Another weakness is that the study employed the stock market development measures without considering the bank-based measure of financial development. A more robust study in terms of sample size by Zakaria (2007) examines the causal relationship between FDI and financial development in 37 countries within 1970-1999. The findings from the study indicate that inflows of FDI contribute positively to the development of banking sectors in developing countries. Major weakness of this study is that it considered only the bank-based measure of financial development without consideration of the stock market measurement of financial development. Kholdy and Sohrabian (2008 & 2005) examine if FDI can stimulate financial market development in developing countries despite the resistance of entrenched elites using 22 developing countries for the period of 1976-2003. They found causality from FDI to financial market development in 10 out 22 countries and inferred that FDI can promote financial development in developing countries regardless of excessive patronage and the strong correlation between politics and business. Similarly, Dutta and Roy (2008) examined FDI, financial development and political risks using panel data of 97 countries for 20 years. The finding indicates a negative association between financial development and FDI inflows but they believed that with existence of viable financial market and a stable political environment, the countries in the sample have tendency to attract and benefit from FDI. Choong et al (2010) examined how FDI, portfolio investments and foreign debt flows promote economic growth through the channel of domestic stock markets. They considered 51 countries (19 developed and 32 developing countries). They found FDI contributing positively to both developed and developing countries but portfolio investment and foreign debt have a negative effect on economic development. The development of stock market tends to benefit the recipient country because it will transform the negativity of debt and portfolio flows into a positive one. The study focused only on stock market, which is just a component of financial development. Ang (2009) examined the relationship between FDI, growth, financial development and economic growth in Malaysia by considering the complementarities between FDI and financial development in the process of economic development. They found that financial development and FDI have positive relationship with real output, indicating that sophisticated financial system enhanced FDI in the Malaysian economy. Chun-Ping and Chien-Chang (2009) evaluated the dynamic interrelationship among FDI, financial development and real output for 37 countries, using panel co integration and error correction model. The study employed indicators of banking sector development to capture financial development. The conclusion of the study is that financial development indicator has larger effect on economic growth than FDI. The study did not consider indicator of stock market performance.

[1] See (Adam & Tweneboah, 2009; Zakaria, 2007; Kholdy & Sohrabian, 2008; Kholdy & Sohrabian, 2005; Choong et al., 2010; Elikplimi, 2013; Abdullahi & Kelesege, 2014; Gohou & Soumare, 2012; Abubakar et al., 2015; SasiIamsiraro, 2016; Frank et al., 2014; Lee & Chang, 2009).

Rhee and Wang (2009) examined the relationship between foreign investment and stock market liquidity in Indonesia. After controlling for stock characteristics, trading activities and persistence in liquidity and foreign ownership, foreign ownership/investment had a negative impact on stock market liquidity in Indonesia. Kolawole, Osemene and Olanpeleke (2017) investigated some macroeconomic determinants of FDI in Nigeria from 1984 to 2015 using co-integration test and vector error correction (ECM) model to time series data. FDI has negative relationship with economic growth, export, inflation and interest rate. On the other hand, it has positive relationship with exchange rate and import.

3. Methods

$$FDI_{i,t} = \alpha_0 + \beta_1 FDEV_{i,t} + \sum_{j=2}^{N} \beta_j CV_{i,t} + \mu_t \qquad (1)$$

$$FDEV_{i,t} = \alpha_0 + \beta_1 FDI_{i,t} + \sum_{j=2}^{N} \beta_j CV_{i,t} + \mu_t \qquad (2)$$

Where the dependent variable in (1) FDI is measured as net inflows of foreign direct investment (as percentage of GDP) while FDEV is the dependent variable in (2) and it is the proxy for financial development measured as domestic credit to private sector by banks (as percentage of GDP). *CV* is a vector of control variables. The aforementioned relationship is estimated using the Blundell and Bond (1998) system Generalized Method of Moment (GMM). This estimation method is appropriate due to its efficiency over the Arenallo-Bond's difference GMM. It uses both lagged level observations and lagged differenced observations as instruments while it builds system of two equations i.e. the original equation and the transformed equation.[1] Theoretically, the number of instruments must be less than or equal to the number of cross-sections. The two-step system GMM is thus preferred for this study. According to Windmeijer (2005), the two-step GMM performs better than the one-step GMM in estimating coefficient with lower bias and standard errors.

Measurement of Variables

The measurements of the variables used in this study are in Table 1.

Table 1

Measurement of Variables

Variable	Measurement
Foreign direct investment	Foreign direct investment, net inflows (% of GDP)
Financial development	Domestic credit to private sector by banks (% of GDP)
Trade openness	Trade (% of GDP)
Human capital development	Total school enrollment rate (%)
Infrastructure	Fixed telecommunication line (per 1,000)
Gross fixed capital formation	Gross fixed capital formation (% of GDP)
Government expenditure	Government expenditure (% of GDP)
Government effectiveness	
Gross domestic product	GDP per capita (constant 2005 US$)

[1] See (Roodman, 2009; Doytch & Uctum, 2011).

Data Collection

The secondary data for the study were extracted from the World Development Indicators of the World Bank. The study used a sample of fifteen member countries of the Economic Community of West African States (ECOWAS) from 1980-2014. These countries are Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

4. Data Analysis

4.1 Descriptive Statistics

The descriptive statistics of the variables used in the study are in Table 2.

Table 2

Descriptive statistics

Variable	Obs.	Mean	Standard Deviation	Minimum	Maximum
Foreign direct investment	525	3.4924	10.6606	-82.8921	91.0073
Financial development	525	14.8777	10.6025	0.8023	65.2779
Trade openness	525	65.0675	24.3240	6.3203	179.1209
Human capital development	525	64.2538	56.3548	0	301.61
Infrastructure	525	1.1685	2.4950	0.0545	15.3588
Gross fixed capital formation	525	18.2422	9.3262	-2.4244	48.3967
Government expenditure	525	13.4351	6.1193	3.5879	86.9056
Government effectiveness	525	2.0054	0.9743	0.0125	5.2885
Gross domestic product	525	546.2943	395.3422	50.0422	2797.679

Sources: Authors' computation using World Development Indicators

4.2. Correlation Matrix

Next, we examine the degree of association among the variables. This is shown in Table 3.

Table 3

Correlation Matrix

	Gdppc	fdi	fdev	open	hcap	infr	gfcf	gexp	gov
Gdppc	1.0000								
fdi	-0.0262	1.0000							
fdev	0.7186	0.0015	1.0000						
open	0.2506	0.3089	0.2859	1.0000					
hcap	0.2854	0.0529	0.2051	0.2664	1.0000				
infr	0.8030	0.0434	0.5561	0.2605	0.4066	1.0000			
gfcf	0.4263	0.0518	0.3881	0.2676	0.3076	0.5354	1.0000		
gexp	0.0994	-0.0138	0.2464	0.1735	-0.1125	0.0292	0.0902	1.0000	
gov	0.0883	0.0609	0.0772	0.1040	0.0846	0.0819	0.1298	-0.0357	1.000

Source: Authors' computations

4.3. Effects of Financial Development on Foreign Direct Investment

Here, we present and discuss the results from our regression estimations on the effects of financial development on foreign direct investment. The results are in **Table 4.**

Table 4

	Fixed Effects (1)	Fixed Effects (2)	Sys-GMM (Two-step) (3)	Sys-GMM (Two-step) (4)
FDI_{t-1}			0.30541* (0.03890)	0.30488* (0.03374)
$FDEV_t$	-0.09112 (0.06156)	-0.34711** (0.17108)	-1.39576*** (0.74145)	-1.60170** (0.69516)
$FDEV_{t-1}$			1.68050*** (0.86353)	1.82056*** (0.94531)
$lnGDPPC_t$	5.88857* (1.92304)		-4.95571 (3.63449)	
$OPEN_t$	0.04835*** (0.02835)		0.07733 (0.09106)	
$HCAP_t$	0.01440 (0.01250)		0.00325 (0.00663)	
$lnINFR_t$	0.02014** (0.75658)		0.62425 (1.42827)	
$GFCF_t$	0.17980* (0.06670)		0.01101 (0.08939)	
$GEXP_t$	-0.16053** (0.08179)		-0.04435 (0.07972)	
GOV_t	0.29807 (0.50179)		0.15836 (0.25985)	
FDEV_GDPPC		-0.00009 (0.00009)		-0.00022** (0.00010)
FDEV_OPEN		0.00170 (0.00180)		0.00194 (0.00425)
FDEV_HCAP		0.00107 (0.00081)		0.00084 (0.00078)
FDEV_INFR		-0.01760 (0.01517)		0.01510 (0.01239)
FDEV_GFCF		0.01538* (0.00457)		0.00091 (0.00435)
FDEV_GEXP		-0.00472 (0.00532)		-0.00220 (0.00408)
FDEV_GOV		0. 00747 (0.02274)		-0.00078 (0.00902)
Observations	525	525	510	510
Hansen test			0.534	0.424
Instruments			15	15
AR(2)			0.316	0.344

Source: Authors' computations

Notes: Standard errors are in parentheses. $^{*}p< 0.01$; $^{**}p< 0.05$ and $^{***}p< 0.1$. The values for Hansen test and Arellano-Bond test for second order serial correlation AR (2) are probability values.

4.4. Effects of Foreign Direct Investment on Financial Development

Here, we present and discuss the results from our regression estimations on the effects of foreign direct investment on financial development. The results are in Table 5.

Table 5

Variable	Fixed Effects (1)	Fixed Effects (2)	Sys-GMM (Two-step) (3)	Sys-GMM (Two-step) (4)
$FDEV_{t-1}$			1.05706* (0.04751)	1.00697* (0.05496)
FDI_t	-0.04769 (0.03222)	-0.3524** (0.16385)	0.00741 (0.00750)	-0.17429* (0.03606)
FDI_{t-1}			-0.00897 (0.00698)	-0.01140 (0.01053)
$lnGDPPC_t$	11.85174* (1.30077)		-1.05398 (0.84363)	
$OPEN_t$	-0.05038** (0.02045)		0.00092 (0.00660)	
$HCAP_t$	0.03785* (0.00889)		0.00148 (0.00132)	
$lnINFR_t$	-0.91362*** (0.54585)		0.52461* (0.17427)	
$GFCF_t$	0.25029* (0.04730)		0.00159 (0.02264)	
$GEXP_t$	0.18673* (0.05882)		0.02075 (0.02672)	
GOV_t	0.27444 (0.36296)		0.20862** (0.09334)	
FDI_GDPPC		0.00069** (0.00028)		0.00008 (0.00010)
FDI_OPEN		0.00007*** (0.00112)		0.00064** (0.00031)
FDI_HCAP		0.00181** (0.00090)		0.00034 (0.00024)
FDI_INFR		0.15816* (0.04495)		0.016733 (0.01459)
FDI_GFCF		0.00332 (0.00334)		-0.00025 (0.00093)
FDI_GEXP		0.00152 (0.00886)		0.00553*** (0.00300)
FDI_GOV		0.00881 (0.05779)		0.01247 (0.01728)
Observations	525	525	510	510
Hansen test			0.810	0.737
Instruments			15	15
AR(2)			0.434	0.473

Source: Authors' computations

Notes: Standard errors are in parentheses. $^{*}p< 0.01$; $^{**}p< 0.05$ and $^{***}p< 0.1$. The values for Hansen test and Arellano-Bond test for second order serial correlation AR (2) are probability values.

Results and Discussion

Descriptive Statistics

The descriptive statistics indicate that the mean per capita gross domestic product was 546.29 US dollars from 1980-2014 for the West African sub-region. When compared to those of the European, North Africa and other high-income regions of the world, it is undoubtedly low. The mean FDI/GDP ratio for the region was 3.49% during the period 1980-2014. This clearly indicates that the inflow of

FDI into West African countries for the period was still reasonable (the minimum FDI was -82.89). In the same vein, the mean bank credit was 14.9% for the period under review. This implies low level of financial development in the sub-region, while the maximum and minimum bank credits were 65.28% and 0.8% respectively.

The mean degree of openness for the West African sub-region was 65.07%. With this figure, it implies that economy of the West African sub-region is quite open to international trade. In the same vein, human capital development (proxy by total school enrolment rate) was 64.25% for the period 1980-2014. This clearly indicates that enrolment in school is on the increase and it is influencing human capital development.

Telephone lines per 1000 of the population are the measure for level of infrastructure. The mean number of telephone lines per 1000 of the population is 1.17%, indicating a poor state of infrastructure. The gross fixed formation has a mean value of 18.24%. This implies a generally low level of investment. Similarly, the lowest gross capital formation is -2.42 while the highest is 48.40. In terms of government expenditure, the mean expenditure for the sub-region is 13.44%, which is quite miniscule. This seems to indicate that the private sector plays a relatively larger role in the economy of West Africa.

Correlation Matrix

Many of the signs tend to conform to theoretical expectation. Financial development, trade openness, human capital development, infrastructural development, gross fixed capital formation and government effectiveness have direct relationship with foreign direct investment. On the contrary, government expenditure has an inverse relationship with foreign direct investment. This does not conform to theoretical expectation. Meanwhile, trade openness, human capital development, infrastructural development, gross fixed capital formation, government effectiveness, foreign direct investment and government expenditure have positive association with financial development.

4.3. Effects of Financial Development on Foreign Direct Investment

The results of the FE model excluding the interaction variables are in column 1 of Table 4 while the regression results on the effects of the interaction variables are in column 2. The regression results from the two-steps system GMM are contained in columns 3 and 4 of Table 4.

The fixed effect model (including the interaction variables) was to capture the differences or variations in social, political and economic structures across the countries. The fixed effect estimator takes into consideration the individual specific effect of each cross section (or country) as it allows the intercept to vary for each cross-section.

Our results in column 1 suggest that financial development has an insignificant negative effect on foreign direct investment inflow into West Africa. This implies that bank credits to the private sector do not facilitate FDI inflow into the sub-region. This hinges on the underdevelopment still characterizing the financial sector of many of the West African countries. This finding is contrary to that of Agbloyor *et al*. (2013) for Africa but support negative findings reported in the studies by Dutta and Roy (2008); Ang (2009); Chun-Ping and Chien-Chang (2009); Baker et al (2008); Rhee and Wang (2009). But our results indicate that economic growth, gross fixed capital formation and trade openness significantly aid FDI inflow into the ECOWAS region when the differences in the features of the sampled countries is taken into cognizance through the fixed affect estimators. This conforms to a priori expectation and inferences drawn from earlier studies as we anticipate that growth in the economy, degree of openness and investment rate should drive FDI inflow into an economy positively.

Column (2) of the results in Table 4 revealed how interaction between our control variables influences FDI inflow into the ECOWAS region. The result suggests that bank credits drive FDI positively and significantly only through capital formation in the domestic economy (at 1% level), while the impact of

financial development on FDI inflow via openness, human capital investment and government effectiveness is positive but insignificant.

Meanwhile, the interaction between the financial sector and infrastructural development, government expenditure as well as the real sector of the economy is obviously not driving the growth in FDI inflow. This indicates that economic growth, infrastructure and government expenditure are not FDI enhancing.

For robustness check, the study employed the system GMM (two-step) to confirm further the effect of financial development on FDI in West Africa. Our results in column 3 of Table 4 suggest that contemporaneous bank credits are negatively and significantly associated with FDI flow at 10% level. On the other hand, we found that the initially prevailing level of financial development influenced positively on FDI inflows into the region. The results also show that a highly significant positive relationship exists between contemporaneous and the one-year lagged FDI. This implies that the success of existing FDI is a catalyst towards attraction of more foreign investment into the domestic economy. Thus, human capital investment (measured as total enrolment in school), government expenditure, economic growth and trade openness are not core drivers of FDI flows during the period 1980-2014 in the West African sub-region.

To confirm further the effects of financial development on FDI flow, we examined how the interaction between the financial sector and other sectors of the economy influence FDI using the system GMM (column 4). We established that the financial sector influences FDI in West Africa positively (though insignificantly) via trade openness, human capital development, infrastructural development and gross capital formation. However, economic growth (proxy as gross domestic product per capita) has a significant negative relationship with FDI flows. This suggests that FDI is not growth-driven in the sub-region during the period under review. It is noteworthy to state that a number of countries in the West African region were under autocratic rule during the substantial part of 1980-2014 and they still have challenges of massive corruption, poor infrastructure, surging income inequality, soaring unemployment, high inflation and attendant poor economic performance.

Our findings generally reveal that the performance of the financial sector in the West African sub-region is actually not aiding FDI inflows, as it is evident from our analysis that financial development has no positive association with FDI inflows into the sub-region. Inefficient and underdeveloped banking system, poor governance, poor infrastructure and low saving could be culpable factors.

4.4. Effects of Foreign Direct Investment on Financial Development

The results from the estimation of FE model (excluding the interaction variables) are presented in column 1 of Table 5 while the regression results on the effects of the interaction variables are in column 2. The regression results from the two-step system GMM are contained in columns 3 and 4 of the table. Our results in column 1 suggest that FDI flows have an insignificant negative effect on financial development in West Africa, when the differences in the features of the sampled countries is taken into cognizance through the fixed affect estimators. This reveals that FDI does not spur the development of the domestic financial sector. This is contrary to the inference drawn by Agbloyor *et al*. (2013) in their study on Africa but support the negative findings documented in the studies of Dutta and Roy (2008); Ang (2009); Chun-Ping and Chien-Chang (2009); Baker et al (2008); Rhee and Wang (2009)**.** We can deduce from these findings that the relationship between the foreign investors and the domestic financial sector is not favorable to the development of the financial sector in the host economy. In the same vein, trade openness and infrastructure are not enhancing the performance of the financial sector as anticipated. Ordinarily, as an economy becomes more open for trade investment, with necessary improvement in socio-economic infrastructure, there should be commensurate development in the financial sector.

On the contrary, we found evidence for human capital investment, gross capital formation, government expenditure and economic growth exerting positive and highly significant influence on financial development at 1% level. This conforms to a priori expectation and corroborates findings from Agbloyor et al (2013), in relation to the effect of GDP on financial development in Africa. Therefore, growth in the economy significantly aids activities in the financial system.

Our results from model 2 indicate that FDI has a significant negative association with the development of the financial sector. This is akin to the result from the estimation of model 1 which showed that FDI inflow is not really stimulating the activities in the financial sector in the host countries. It is quite apt to note that the nature and extent of FDI inflow into the West African sub-region may not be sufficient in promoting development of the financial sector. Meanwhile, we found foreign direct investment exerted a significant positive effect on financial sector via trade openness, human capital investment, infrastructure development and growth in the output economy output. This is theoretically plausible as FDI has tendency of promoting human capital investment, aiding provision of quality infrastructure, increasing growth in the economy quantitatively and eventually contributes to the development of the financial sector through the involvement of the foreign enterprises in financial intermediation. The positive effect of financial development on foreign direct investment documented in this study conforms to similar positive findings reported in previous studies such as Adam and Tweneboah (2009); Zakaria (2007); Kholdy and Sohrabian (2008); Kholdy and Sohrabian (2005); Choong et al (2010).

Our results from the estimation of model 3 (in Table 5) further establish the effect of FDI on financial development in West Africa using a dynamic and robust approach. While the contemporaneous FDI exerts positively on the financial sector, the effect of one-year lagged FDI on the financial sector is negative and not significant. Furthermore, government effectiveness and infrastructure have positive and highly significant in relation to financial development. Going through the estimation results of model 4, we could establish that contemporaneous foreign direct investment is negative and significant at 1% level. The one-year lagged FDI has a negative but insignificant effect on contemporaneous financial sector development. However, we find that FDI influences the domestic financial sector positively and significantly via trade openness while effective public expenditure could promote FDI inflow and in turn influence positively on the financial sector. This finding emanates from the measure of the interaction of the financial sector with infrastructural facilities.

The probability values of the second order serial correlation, AR (2) for our estimated GMM models is not significant. Hence, our models are well-specified and there is no problem of second order auto-correlation. In addition, the number of instruments used is equal to the number of cross-sections, which is in line with the theoretical postulation. The p-values of the Hansen test also indicate that our instruments are valid and no problem of over-identification. Generally, our results do not suggest any positive link, complementarities and feedback between the financial sector and FDI in the West African sub-region.

5. Conclusion and Recommendation

This paper presents an analysis of the impact of foreign direct investment on financial development based on the data of fifteen countries in ECOWAS for the period 1980-2014 in a dynamic panel framework. The results are mixed. The study revealed negative relationship between financial development and foreign direct investment. Further, findings from the estimated results indicate that a reverse relationship exists between foreign direct investment and financial development. The study therefore concludes that foreign direct investment is complementary to financial development in West Africa and its effectiveness could be condition on government effectiveness and infrastructural development. It is against this backdrop that this study suggests that further studies that would capture

the role of institutional quality and other non-economic factors as variables moderating the effect of foreign direct investment on financial development in ECOWAS stand very crucial.

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