Comparative Analysis of the Effect of Remittances and Foreign Aid Inflows on Economic Growth in ECOWAS Sub Region

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Abstract

The comparative effect of remittances and foreign aid inflows on economic growth in ECOWAS sub-region was examined for the period spanning 2005 and 2017. GMM estimation technique employed shows that the effect of remittances on economic growth outweighs foreign aid inflow in ECOWAS sub region for the period. This was evidenced in the magnitude of coefficient and the predictability of each of the variables. The periodic analysis shows that remittances and foreign aid inflow positively affects economic growth with the exception of years 2005 and 2006. Also, the probability value of j-statistics shows that the moment restriction is valid and that the model is well specified. However, wald test, variance decomposition test, movement graph and principal component analysis test revealed that foreign aid exerts more influence on economic growth compared to remittances inflows in ECOWAS sub region for the period. Recommendations such as ensuring that remittances and foreign aid inflows are continually channel into productive uses through policy and policy coordination in ECOWAS sub region were put forward.

JEL Classification: *F02, F24, F35, F43*

Keywords: *ECOWAS, Remittances, Foreign Aid, Economic Growth*

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Introduction

Financial External fund such as remittances and foreign aid inflows helps bridge savings-investment gap in the domestic economy and hence stimulate economic growth. They provide additional resources and foreign exchange for recipient country (Fosu and Magnus, 2006). This position is represented by Modernisation Theory. However, there exists opposing school of thoughts represented by Dependence Theory which holds that at best capital inflows such as remittances and foreign aid exhibit positive influence on economic growth in the short-run, in the long-run, their effect on growth is negative (Edo 2007; Lopez-Mejia 1999). World Bank (2016 and 2018) and International Migration Organisation (2018) reports show that Economic Community of West Africa States (ECOWAS) sub-region has been one of the sub-regions within sub-Saharan Africa (SSA) recording positive growth rates in number of migrant in recent times. This no doubt has positive implications for remittances inflow. Also since year 2000, sub Saharan Africa (SSA) and in particular ECOWAS sub region, account for increasing share in foreign aid inflows globally (Kurihara; 2014, Bruckner; 2013). This is believed to have been influenced by the decision of some donor countries/organisation (for example, G8 & OECD countries) to increase the amount of aid given to SSA and by extension ECOWAS sub region to assist in fast-tracking the attainment of MDGs/SDGs amongst others.

World Bank (2018) shows that the yearly growth rate of remittances and foreign aid inflow for the period 2000 to 2017 in ECOWAS sub-region was relatively positive. Total inflow of remittance and foreign aid for the period approximate $298.18billion and $174.46billion respectively (World Bank, 2018). World Bank (2018) also shows that between the period 2000 and 2017, ECOWAS sub-region experienced negative growth rates of -0.04 percent, -0.04 percent, -0.03 percent and -0.41 percent in 2001, 2009, 2013 and 2015 respectively with respect to remittances inflow. Similarly, negative growth rate of -0.483 percent, -0.038 percent, -0.008 percent, -0.005 percent and -0.222 percent were recorded for 2007, 2009, 2011, 2013 and 2015 respectively with respect to foreign aid inflows. This could be attributed to slump occasioned by economic and political/civil upheaval in some of the major recipient countries such as Nigeria, Senegal, Cote d' Ivoire. Also, studies such as McGillivray, Feeny, Hermes and Lensink (2005); Salisu and Ogwumike (2010) revealed that there has been a relatively sustained increase in the growth performance of virtually all the countries of ECOWAS sub-region particularly since the mid-1990s. This was attributed to a number of factors, such as the adoption of democratic government, outward trade policies, inflow of capital resources and so on. World Bank (2018) specifically shows that Nigeria, Ghana and Cote d'Ivoire occupies the first top three positions while Guinea Bussua, Cabo Verde and Sierra Leone occupies the least three positions in terms of volume of economic growth between 2000 and 2017 among ECOWAS countries.

Though, there exist mixed findings on the effect remittances and foreign aid inflows has on economic growth (see Ocharo (2015), Jouini (2015), Bitew (2014) and Kolawole (2013)), a cursory look at the literature shows that scanty studies examined the comparative effect of remittances and foreign aid inflows in relation to growth in ECOWAS sub region. This is relevant for policy direction and thus forms the motivation for this study spanning 2005 to 2017.

2. Literature Review

2.1 Theories

Pluralist Theory traced to 1980s and 1990s pushed that capital inflow (for example, remittances inflow) serve as a bridge between developmental and structural theory. The theory is of the view that remittances could impact positively or negatively on economic growth. Migration and remittance inflow is seen as household response to income risk and a sort of insurance for remittance recipient households (Lucas and Stark, 1985; see De Haas, 2007). Thus, remittances exhibit both positive and negative influence on growth of recipient economy depending on how remittances inflows are put into use. The various costs and benefits associated with remittances are summarized by Russell (1986).

Poverty Trap Model is one of the major models used to analyse the impact foreign aid inflows have on growth. This model earlier explained by Nelson (1956) hold that growth in an economy is hindered by factors such as low production capacity, high population rate, low savings and investment. Nelson (1956) sums it, that the continuous inflow of fund from external sources can help liberate recipient domestic economy from low-level equilibrium trap and place it on the path of sustainable growth.

Growth Models such as Solow Growth Model and Harrod-Domar Growth Model have also served as a theoretical foundation for evaluating the effectiveness of capital in relation to growth in an economy. This is because, capital, in this case remittances and foreign aid inflow are expected to complement domestic resources and accelerate economic growth over time. With technical progress, there is the tendency for capital-labor ratio to converge towards equilibrium ratio over time (Solow, 1956). This means that the long-run per capita growth rate depends entirely on the exogenous rate of technical progress.

2.2 Empirics

Aboulezz (2015) examined the effect remittances have on economic growth in Kenya from 1993 to 2014. ARDL and granger causality test were employed and the result showed that there was a significant bi-directional causal relationship between remittances and economic growth. Similarly, Ocharo (2015) examined the effect of remittances on growth in Kenya between 1970 and 2010 using OLS method. The result revealed a positive and significant link between remittances and growth. In the same vein, Imai, Gaiha, Ali and Kaicker (2014) investigated the effects remittances inflow has on economic growth and poverty in 24 Asian and pacific countries between

1980 and 2009 in a panel data analysis. Their result showed that remittances affect economic growth and poverty positively in all the countries investigated. Towards establishing the effects of remittances on economic growth in Bangladesh, India, Pakistan and the Philippines, Salahuddin and Gow (2015) employed a panel co-integration tests and PMG regression for the period 1977 to 2012. Their findings revealed that there is a long-run positive effect between remittances and growth in all the countries though with a statistically insignificant effect in the short-run. Olubiyi (2014) examined trade, remittances and economic growth in Nigeria. VECM and granger causality technique was employed in the analysis. The result revealed that remittances positively affect economic growth.

On the other hand, investigating the effects remittances has on growth in Tunisia, between 1970 and 2010; Jouini (2015) employed ARDL co-integration approach and found that there was a negative effect between remittances and growth in the long-run. The study further revealed the existence of bidirectional causality between remittances and growth in the short-run. A similar position was held by Lim and Simmons (2015) in the investigation of the effects remittances has on growth in the Caribbean Common Market in a panel co-integration analysis. Their investigation specifically revealed that there was no long-run significant relationship between remittances and growth. Also, the result of the investigation of Koyameh-Marsh (2012) on the effect worker's remittances has on growth in ten ECOWAS countries revealed that remittances inflows does not exert positive effect on growth in all the countries investigated. Nyeadi, Yidana and Imoro (2014) investigated the causal relationships between remittances and economic growth in three West Africa countries namely Nigeria, Senegal and Togo with time series annual data from 1980-2012. Their result revealed a unidirectional causal link between remittances and growth in Nigeria and Senegal. With respect to Togo, investigation revealed that there was no causal link between remittances and economic growth.

Similarly, Adamu (2013) examined the impact foreign aid has on growth in ECOWAS using a panel data and simultaneous-equation model covering the period 1990 to 2009. The result revealed that foreign aid positively affects growth in member countries of ECOWAS. As such, it was recommended that member countries should seek for more foreign aid to provide the needed fund to boost economic growth. Bitew (2014) examined the relationships and effects foreign aid inflow has on economic growth in Ethiopia by employing co-integration and granger causality technique. The findings revealed that foreign aid has a negative effect on economic growth in the short-run but becomes positive in the long-run. Granger causality revealed also that there exists a unidirectional causality between foreign aid and growth in Ethiopia. Also, Adamu and Ighodaro (2011) examined the impact foreign aid has on growth in Nigeria. They employed ECM technique in a time series analysis for the period 1980 to 2009. They found that foreign aid and exports significantly and positively impact on growth in Nigeria.

However, Veledinah (2014) investigated the relationship between foreign aid and growth between 1970 and 2012. Time series data and VECM estimation technique were employed for the study. The findings showed that a long-run causality flows from foreign aid, private external resource flows, gross domestic capital formation, final government consumption expenditure, trade openness, broad money, and inflation to GDP growth per capita. While foreign aid seems to contribute to economic growth in the short-run, its effect was not statistically significant. Examining the impact of foreign aid on economic growth in Egypt using Johansen Cointegration test and VECM, Ali (2013) revealed that the impact foreign aid has on growth is significant and negative in both the short and long-run. It was then suggested that Egyptian authorities should rely more on indigenous resources to promote growth with less emphasis on foreign sources. Kolawole (2013) investigated the relationship amongst foreign aid, FDI and real growth in Nigeria between 1980 and 2011. His analysis was based on the two-gap theory while ADF test and ECM estimation technique were employed. The result from the investigation revealed that the effect of foreign aid on growth were not significant while that of FDI was negative. Eregha (2013) revealed that foreign aid has positive and significant impacts on investment on one hand; however, on the other hand, a negative impact between foreign aid and economic growth was established. It was also found that the uncertainty variable has a negative and significant impact on both investment and economic growth. This was held after investigating the impact stability of aids flows has on investment and growth in ECOWAS countries with a pooled panel regression analysis between 1970 and 2008.

3. Theoretical Framework, Model Specification and Methodology

3.1 Theoretical Framework and Model Specification

Solow Growth Model of 1956 provides the basic theoretical foundation for this study. The Solow model alongside its subsequent extensions has been employed in analyzing capital inflow-economic growth nexus in the literature. The model explains that capital (in this case, remittances and foreign aid inflows) are vital and that steady state growth rate is attained at a higher level of GDP per capita. It also explains that the long-term economic growth rate is attained through accumulation of factor inputs such as physical capital (K) and labor (L) with a provision for technical progress (A) which drives capital-labor ratio to converge over time in the direction of equilibrium ratio (Solow,1956).

Consider the basic neoclassical growth function given as;

$$Y = AK^{\alpha}L^{\beta} \qquad (1)$$

Where; Y, K, L and A represent output, capital, labor and total factor productivity respectively while α and β represent elasticity of output with respect to capital and labour respectively.

Assuming asymmetry and dividing through by labor (L), equation (1) result in growth function in per capita terms as shown in equation (2).

$$y = Ak^{\alpha} \qquad (2)$$

Worthy to emphasis that the modifications of Solow growth model results in its augmented form wherein the rate of growth depends not only on capital and labor but also on other variables (see Orji, Uche and Ilori, 2014; Barro, 1991; Iyoha, Ighodaro and Adamu 2012; and Mankiw, Romer and Weil 1992). The interest variables are usually brought in through total factor productivity (A). This therefore implies that total factor productivity is incorporated as a means explaining the growth process (Udah, 2010). In addition, capital (K) can be decomposed in line with its dynamics (Ogbeide and Igbinedion 2016) while labor can be represented by stock of human capital (school-enrollment rates). School-enrollment rates are likely to be more accurate and more consistent cross-sectionally (Barro, 1991).

Hence, from the growth model in equation (2), the functional form of the model to be estimated is stated as;

$$lnRGDPPC_{it} = \beta_{21i} lnRGDPPC_{it-1} + \beta_{22i} lnX_{it} + \beta_{23i} lnZ_{it} + \varepsilon_{1it} \qquad (3)$$

Where;

Real GDP Per Capita (RGDPPC) is measured in billions of US Dollars. It is used as a proxy for economic growth. This is because the growth of RGDPPC is considered to have a high indicative power of the proportion of economic growth. X represents the vector of variables of interest (remittances inflows and foreign aid inflows).

Remittance is measured in billions of US Dollars. It is cross-border, private, voluntary monetary transfers made by migrants and diaspora, individually or collectively, inclusive of those on paid and self-employment/jobs. Foreign aid is measured in billions of US Dollars. It includes; grants, value of technical and humanitarian assistance as well as concessional loans that emanates from foreign to recipient country. Z represents vector of controlled variables (FDI, trade, inflation and human capital). Foreign direct investment is regarded as holdings of a nation's private or government bank deposits, bonds, stocks and other assets by foreign investors (Blanchard, 2009). It is measured in billions of US Dollars. Trade is measured as a ratio of total trade to GDP. The share of international trade in ECOWAS sub-region is used as a measure of trade while inflation is measured as annual percentage change in consumer price index. Lastly, Human capital is measured by secondary school enrolment rate which is derived as a ratio of enrolled student to total population.

$\beta_{21i}, \beta_{22i}, \beta_{23i}$ = *coefficients*,

i = each country,

ε_{it} = *error term which consist of unobserved individual specific effects and observed specific errors*,

ln = logarithm

The '*a priori*' signs for each of the variables employed are as represent by their coefficients stated below; $\beta_{21i}, \beta_{22i}, \beta_{23i} > < o$.

3.2 Methodology

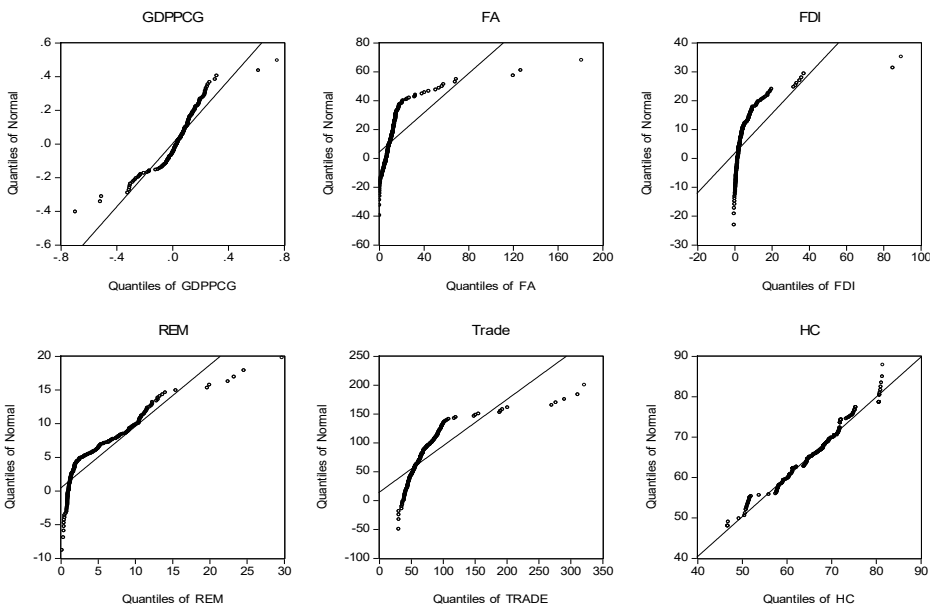
The Generalized Method of Moment (GMM) estimation technique associated with Blundell and Bond (1998) is employed. The choice of this technique stem from the fact that it helps to correct for endogeneity and heterogeneous concerns in cross sectional studies. Also, GMM estimator correct for country-specific effects as well as the bias caused by the inclusion of lagged dependent variable. In addition, the necessary restrictions on the initial conditions in GMM estimator are potentially consistent with standard growth frameworks and are both valid and relevant in most empirical studies. Other analysis such as wald test, variance decomposition test, t-test of differences in mean/variance, principal component analysis and movement graph will be employed to bring to fore the effects of the key variables in relation to growth on a comparative basis.

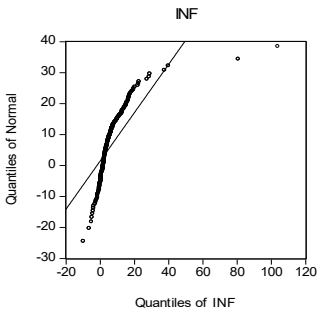
4. Empirical Analysis

4.1 Distribution Patterns of Density Functions for Residual

A test of distribution patterns of density functions of residual was conducted by plotting the Quartile-Quartile (Q-Q) plot. Figure 1 shows the quartile plots for each of the variables. If the residuals are normally distributed, the points in the Q-Q plots lie alongside a straight line. The quartile plots indicate that both negative and positive shocks drive the departure from normality in each of the variables. However, only the human capital series seems to lie on the straight line (except for the extreme on the positive dimension that appears to vie off the line). Therefore, there may be some non-normal form of distribution that may occur at very high levels of human capital accumulation. As with real per capital GDP growth, all the other exogenous variables are non-normally distributed.

Figure 1: Quantile Plots for Variables





Source: Author's compilation

4.2 Test of Stationarity

The stationarity properties of the panel data was determine by means of homogenous panel unit root tests, heterogenous panel unit root tests and Augumented-dickey fuller Fisher test.

Table 1: Panel Unit Root Test Result

	Homogeneous Unit Root Process				Heterogeneous Unit Root Process			
	Level		1st Diff		Level		1st Diff	
Variables	**LLC**	**Breitung**	**LLC**	**Breitung**	**IPS**	**ADF-Fisher**	**IPS**	**ADF-Fisher**
GDPPC	11.11	5.32	18.19	-3.00**	4.32	74.56	-16.07**	400.09**
FA	18.49	14.56	-4.49**	1.74	14.73	30.86	-9.73**	289.41**
REM	-3.01	-1.19	-9.69**	-11.85**	-2.45	101.8	-20.18**	475.40**
FDI	-2.37	-2.30	-20.32**	-17.40**	-1.64	93.50**	-24.51**	602.00**
TRADE	-3.42	-3.99	-23.53**	-20.00**	-3.80	127.82	-27.82**	890.95**
INF	0.63	2.58	-21.05**	-12.16**	0.76	64.37	-19.41**	454.07**
HC	-8.60	-7.33	-22.59**	-15.81**	-7.56	185.47	-27.11**	654.89**
POL_STAB	-7.11	-5.45	-18.22**	-13.12**	6.41	168.18	-21.01**	623.11**

Source: Author's computation

Note: ****** indicates significant at 5%; IPS=Im, Pesaran & Shin; LLC=Levin, Lin & Chu

The results as shown in Table 1 indicate that all the variables employed are non-stationary at level rather attain stationarity at their first differences. This is as revealed by homogenous, heterogenous and ADF unit root tests.

4.3 Panel Cointegration Test

Table 2: Panel Cointegration Test Results

Within Dimension			**Between dimension**		**Kao (ADF)**
	Statistic	**Weighted Statistic**		**Statistic**	
Panel v	-3.42**	-2.02**	Group rho	15.87**	-2.78***
Panel	2.92**	4.32***	Group PP	-1.89*	---
Panel PP	-2.82***	-3.68**	Group ADF	7.36**	---
Panel ADF	2.88	1.61			---

Note: ***, **, * indicates significant at 1%, 5% & 10%

Source: Author's computation

From Table 2, except for the panel ADF statistic, the results of the within-group tests and the between-group tests showed that the null hypothesis of no cointegration should be rejected. Also, the residual based

(Kao) panel cointegration test shown in Table 2 indicates that the null hypothesis of no cointegration of the series should be rejected.

4.4: Effects of Remittances and Foreign Aid on Growth: GMM Estimate

Table 3: Effects of Remittances and Foreign Aid on Growth

Variable	*Coefficient*	*t-Statistic*	*Prob.*
LGDPPC(-1)	0.530	21.48	0
FA	0.001	3.12	0
FDI	0.002	3.09	0
REM	0.011	13.22	0
TRADE	0.002	8.11	0
INF	-0.003	-7.52	0
HC	0.005	1.79	0.08
Time-period Effects			
2005	-0.004	-0.15	0.88
2006	0.058	1.44	0.15
2007	0.173	6.47	0
2008	0.232	8.18	0
2009	0.102	5.02	0
2010	0.185	3.71	0
2011	0.249	4.40	0
2012	0.275	4.95	0
2013	0.323	5.97	0
2014	0.291	6.39	0
2015	-0.065	-1.95	0.05
2016	0.16	4.03	0.09
2017	0.16	4.04	0.1
J-stat	85.767		
Prob(J-stat)	0.208		

Source: Author's computation

Table 3 shows the effects of remittances and foreign aid inflow on economic growth in ECOWAS sub-region. In general, the table shows that all the variables are highly significant and that they are all in tune with '*a priori*' expectations. Worthy to emphasize that in Table 3, inflation which measures the level of macroeconomic stability was negative and highly significant. This means that inflation rate for the sub-region is above a reasonable threshold, thus, negatively affects growth. With the exception of year 2005 and 2006, all the other years ranging from 2007-2017 recorded positive and significant effects of remittances and foreign aid inflows in relation to economic growth in ECOWAS sub-region. This further point to the fact that year-in- year-out, the inflow of remittances and foreign aid to ECOWAS sub-region affects growth. In addition, a cursory look at Table 3 shows that the statistical significance in most of the years was at one percent and this is indeed a good fit. Comparatively, the effect remittances have on economic growth outweighs the effect of foreign aid on economic growth as shown in Table 3. This is evidence in the magnitude of coefficients and the predictive power (level of significant) shown by remittance compared to foreign aid inflows.

The probability values of J-statistics as reported in Table 3 is approximately 0.2. This is quite impressive and show that the moment restrictions are valid and that the model is well specified.

Table 4: Variance Decomposition Test

Period	RGDPPCG	FA	REM
2	92.16	4.02	3.82
3	85.38	8.20	6.42
4	79.51	11.40	9.08
5	76.38	13.23	10.39
6	74.58	14.44	10.98
7	73.57	15.19	11.24
8	72.97	15.69	11.33
9	72.61	16.03	11.36
10	72.37	16.27	11.36

Source: Author's computation

The error variances in growth for the panel in this study were decomposed into the contribution of foreign aid and remittances inflows. From Table 4, it can be observed that the contribution of foreign aid was higher than that of remittances for each of the period analyzed. While the contribution of foreign aid started from about 4.02 in the second period and attain its peaked at about 16.27 in the tenth period, that of remittances started with 3.82 and climax at about 11.36 for the corresponding periods.

T-test of mean and variances between the variables reveals the pattern of trend movements in the variables. It tests the level of significance in the differences between the means and variances of variables. This is reported in Table 5.

Table 5: T-test of Mean/Variance Differences

Method	Df	Value	Probability
Equality of Means Between Series			
t-test	418	5.45	0
Satterthwaite-Welch t-test*	321.5	5.45	0
Anova F-test	(1, 418)	29.72	0
Welch F-test*	(1, 321.536)	29.72	0
Equality of Variances Between Series			
F-test	(209, 209)	3.42	0
Siegel-Tukey		1.04	0.30
Bartlett	1	74.37	0
Levene	(1, 418)	6.37	0
Brown-Forsythe	(1, 418)	6.28	0

Source: Author's computation

From the results in Table 5, it can be observed that the tests for equality of means and variances have high significant except for the Siegel-Tukey Statistic. These results therefore show that in terms of trends, both the mean and variances of foreign aid and remittances are statistically different.

Wald-test was also conducted and the result is as presented in Table 6. It should be noted that the Wald-test statistic is an approximation of chi-

square, f-statistics, and t-statistics. Therefore, the tests are based on the inferential analysis from these tests.

Table 6: Wald-Test of Coefficient Equality

Null Hypothesis: C(2) = C(3)			
Test Statistic	**Value**	**Df**	**Probability**
t-statistic	-1.191	137	0.24
F-statistic	1.419	(1, 137)	0.24
Chi-square	1.419	1	0.23
Normalized Restriction (= 0)		Value	Std. Err.
C(2) - C(3)		-0.69	0.58

Note: C (2) = Foreign aid, C (3) = Remittances

Source: Author's computation

The test as reported in table 6 shows that the restriction on the coefficient with the null hypothesis that no significant difference exists between the effects of foreign aid and remittances on growth fails the significance test at the 5 percent level for each of the tests. This indicates that a significant difference actually exists in terms of how the two variables affect economic growth.

Table 7: Strength of Movements Test

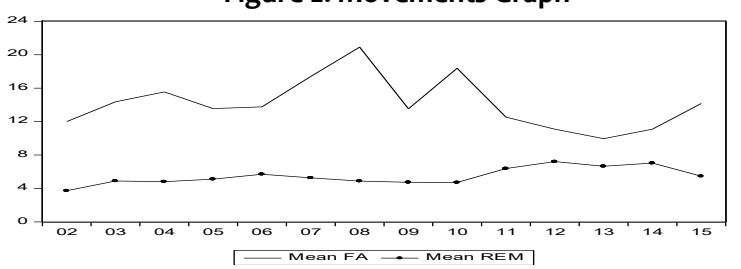
Statistic	**Within-Dimension**				**Between-Dimension**	
	Val.	*Prob.*	*Weighted Statistic*	*Prob.*	*Statistic*	*Prob.*
Panel v-Statistic	0.73	0.23	-1.28	0.9		
Panel rho-Statistic	-3.34	0	-3.61	0.0	-1.56	0.04
Panel PP-Statistic	-5.67	0	-6.36	0	-6.32	0
Panel ADF-Statistic	-1.75	0.04	-4.70	0	-4.07	0

Source: Author's computation

Since the Wald test only shows coefficient equality and not the size or direction of the differences between variables of interest with respect to their effects, it is thus expedient to carry out further tests. This resulted in the conduct of strength of movement test presented in Table 7. This is established based on cointegration analysis of the two variables. From the result, all the test statistic values are significant at 5 percent level except the panel v-statistic which is significant at 10 percent. This therefore implies that both variables (remittances and foreign aid) move together over time.

However, to explicitly show the pattern of co-movements of these variables, a movement graph is conducted as shown in Figure 2.

Figure 2: Movements Graph

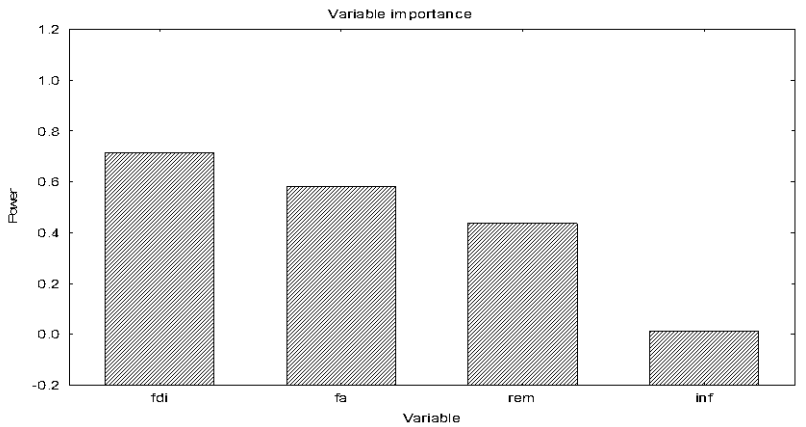


Source: Graphed by Author

The movement graph shows that both variables move together over time in a different pattern and magnitude. The Figure reveals that the trend movement of foreign aid exhibited higher magnitude and oscillations compared to remittances as observed in their mean values. The implication of this is that foreign aid exert more effect to economic growth compared to remittance inflow.

Also, we test the size of the contribution of both variables to economic growth in the sub-region. This resulted in principal component analysis reported in Figure 3. From the Figure, it can be observed that FDI is the most important variable in the index followed by foreign aid and then remittances and inflation.

Figure 3: Variable Importance based on Principal Component Analysis



Source: Author's computation

4.5 Policy Implications

The analysis indicates that foreign aid is positively and significantly affects economic growth in ECOWAS sub-region. This is in line with studies such as Bitew (2014), Adamu and Ighodaro (2011). Also, remittances significantly and positively affect economic growth in ECOWAS sub-region. This is similar to findings from studies such as Ocharo (2015) Olubiyi (2014). This therefore implies that the increasing remittances inflow to ECOWAS sub-region affects economic growth positively.

In terms of magnitude, remittances exert more effects on economic growth compared to foreign aid in ECOWAS sub-region as revealed by GMM estimate. However, wald-test, strength of movements' test/movement graph, t-test of mean and variances between variables, variable importance test and variance decomposition analysis revealed that foreign aid exerts more effects on economic growth in ECOWAS sub region.

5. Conclusion and Recommendations

The effects remittances and foreign aid inflows have on economic growth in ECOWAS sub-region was examined for the period 2005 to 2017. The estimates from GMM estimation technique shows that remittances and foreign aid inflow significantly and positively affected economic growth in the sub region with remittances exerting more effects on growth as

evidenced in the magnitude of its coefficient and its predictability. Also, the periodic effects of remittances and foreign aid inflow on growth in the ECOWAS sub-region were determined. The result revealed positive and significant effects of all variables employed for the various years with the exception of 2005 and 2006. The J-statistics revealed that the instrument of measurements used in the model is valid and that the model is well specified. Other analysis such as variance decomposition test, movement graph and principal component analysis carried out shows that foreign aid exerts more influence on economic growth compared to remittances inflow in ECOWAS sub region.

In the light of the empirical findings, the followings are recommended;

1. Foreign aid and remittances inflows should be seen as a viable source of capital inflow to ECOWAS sub-region that can aid economic growth. This is as a result of their observed increasing inflows and positive effects on growth.
2. Though it is argued that over reliance on foreign aid makes a country dependent on external sources for survival along with its detrimental effects on the economy. Foreign aid inflows should be channel into productive purposes so as to induce growth that can be sustained over time.
3. Policies and programmes that encourages and attract migrant and Diasporas fund to the domestic economy of ECOWAS sub-region should be implemented.

4. Relevant policy makers within ECOWAS sub-region should synergize and indulge in necessary policy coordination in other to effectively harness remittances and foreign aid inflows to the sub-region.

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