

## *Original Paper*

# Does Foreign Aid Promote Financial Development in the Economic Community of West African States (ECOWAS)?

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### ***Abstract***

*This article analyzes relationship between foreign aid and financial development in ECOWAS countries. These countries receive aid flows from developed countries and from international financial institutions. The article's idea is to evaluate this aid effects on financial development and to assess role of governance on this relationship. The analysis uses panel data from ECOWAS countries over the period 1984-2016. The estimations' results, based on Dynamic ordinary least squares (DOLS) estimator, show that aid is negatively and significantly linked with financial development indicators used. These results suggest that aid is an obstacle to financial development. Governance role tests do not change the negative effect of aid on financial development. However, the magnitude of the negative effect of interactive variables (with governance variables) is less than aid direct effect on financial development. These results suggest that an additional effort to improve governance in these countries would reduce aid negative effect on financial development, or even reverse this effect.*

### ***Keywords***

*foreign aid, financial development, credit to private sector, credit to private sector by banks, governance*

## 1. Introduction

Foreign aid plays an important role in developing countries' economies. Indeed in these countries like those from South-Saharan Africa in general and those from West Africa in particular, the importance of aid is such that we could qualify these economies as being in dependence on aid. In ECOWAS countries, for example, according to World Bank statistics, aid has represented around 13.86% of GDP over the period 1994-2016. Foreign aid to support public budget has represented around 17.67% of WAEMU budget revenue over the same period. Similarly, it was estimated that 52.54% of public investments in WAEMU countries was financed by aid.

Despite the importance of aid in these economies, its impact in terms of contribution to economic growth and development remains mixed and strongly discussed in the literature. Better, with debt crisis experienced by many Sub-Saharan African economies in 1980's, many sectors have been affected by reforms whose implementation determined foreign aid received by these countries. Among these sectors, we can mention the financial system on which attention of structural adjustment programs was been focused. Several national strategies supported by donors aimed for financial liberalization that objective was to remove distortions for more performance of banks in mobilizing savings and financing the economy (Keho, 2012). In spite of these reforms, most of banking sector usual indicators in these countries are weak compared to other countries in the world. In fact, over the period 1990-2016, according to the World Bank statistics, domestic savings rate in Sub-Saharan Africa represented 18.04% of GDP, compared to 41.44% in East and Pacific Asian countries. Regarding domestic credit rate provided by financial sector, it represented 68.34% of GDP in Sub-Saharan Africa, versus 113.87% in East and Pacific Asian Countries.

In the light of all of the above, several reflections attempted to explain these mixed results by analysing determinants of financial development. While some authors explored colonizer role and initial endowments of colonized countries on financial institutions emergence (D. Acemoglu, Johnson, & Robinson, 2001; Beck & Levine, 2003), others developed a theory on political structures as factors explaining weak performance of financial institutions (Rajan & Zingales, 2003; Standley, 2010). Exploring political structures more fully, empirical studies have shown crucial role of trade and financial opening in financial development (B. H. Baltagi, Demetriades, & Law, 2009; Chinn & Ito, 2002; Rajan & Zingales, 2003).

The issue of influence of economic policies, especially financial openness, on financial development has an essential dimension, particularly for countries receiving aid. Does this openness to foreign aid not harm financial development in these economies?

This question derives its interest from analysis of Figure 3, in Appendix, that highlights aid's evolution compared with credit to private sector in ECOWAS countries. This comparative evolution reveals a general opposite trend between aid and credit to private sector, suggesting that aid could be a substitute to bank financing of private sector over 1984-2016 period. Such a result finds a favorable echo in theoretical and empirical studies on contrasted relationship between external capital and financial

development. On the one hand, some studies have indicated that financial openness was positively correlated with financial development (Chinn & Ito, 2006); and on the other hand studies whose results concluded that financial openness in general and aid's use in particular harmed financial development (Baltagi et al., 2009; Rajan & Zingales, 2003; Standley, 2010).

Given the fact of these results, we wonder about thesis that applies to ECOWAS countries. Can we defend the idea that aid contributes to financial deepening improvement in these economies? To what extent does institutions' quality affect relationship between aid and financial development? This is the main interest of this paper that tests the hypothesis according to that foreign aid slacks up financial development in ECOWAS economies; weak quality of institutions contributing to worsen this relationship.

The essential contribution of this paper to economic literature is that it analyzes a particular aspect of financial openness, namely foreign aid. At this view, it aims to assess aid effect on financial development in ECOWAS countries and role of governance's quality in this relationship. The paper is structured in a literature review on this issue, a description of analysis model and a presentation of results.

## 2. Literature Review

Financial systems are dependent on factors that influence market friction: structural factors (per capita income, size, population density, economic concentration, for example) and factors affecting public authorities' actions and affecting institutions (basic macroeconomic data, efficiency of the structures governing the execution of contracts, for example), which facilitate deepening. This section focuses on literature on government action (through the use of aid) and institutions on financial development.

### 2.1 Relationship between Aid and Financial Development

To our knowledge, empirical studies on link between aid and financial development are scarce in the literature, despite the fact that several aid programs have been conditioned by reforms in the financial sector (financial liberalization). Investigations on this issue are to be sought, especially, in studies on determinants of financial development.

From this angle, some analyses have turned to economic policies as explanatory factors for financial institutions' development. Empirical investigations of this theory have pointed out the influence of policies such as financial openness on financial development. The idea behind these analyses are that opening borders to capital flows and financial services leads to an increase in supply and efficiency of capital investment, thereby contributing to financial deepening. Two main diverging results emerge from these studies.

The results of some of these studies are favorable to financial openness and concluded that it was beneficial to banking sector and played a determining role in financial development (Berger, DeYoung, Genay, & Udell, 2000; Dell'Ariccia & Marquez, 2004; Levine, 1996; Sengupta, 2007). However, the conclusions of Rajan and Zingales' (2003) study suggested that financial openness was only propitious

to financial development if it was combined with trade openness. This idea of simultaneous opening was not shared by Chinn and Ito (2006) who, on a panel of 108 countries covering the period 1980-2002, insisted that financial opening was positively correlated with financial development independently of opening commercial. Baltagi et al. (2007), on a panel of developing countries and using the generalized moments method on a dynamic panel, even warned that simultaneous opening could be harmful to financial development. A result they confirmed in 2009. As for Gazdar (2011), he found that financial openness was more propitious for banking development, while trade opening had a positive and significant effect only on development financial markets.

Other results from these studies highlight a negative effect of financial opening on the domestic financial system, which could even lead to its instability. Thus, Stiglitz (1993) and Peek and Rosengren (2000) showed that financial openness could destabilize domestic banking sector by causing disappearance of some banks and/or by facilitating importation of external shocks. As for Detragiache et al. (2008) and Gormley (2014), they concluded that financial openness, particularly that of the banking sector, led to a segmentation of domestic credit market, with possible negative effects on the level of credits granted. In the same sense, several other studies have focused on the relationship between international capital flows and financial crises. Reinhart and Rogoff (2010), by calculating the correlation between capital mobility and financial instability from 1800 to 2000, showed that periods of high capital mobility had repeatedly caused financial crises. This result was confirmed by Furceri et al. (2012) in their study on a sample of 112 countries (developed and emerging) from 1970 to 2007. They concluded that an episode of foreign capital flows significantly increased the probability of financial crises in the two following years. They pointed out that the probability of triggering crises was greater if capital inflows were mainly composed of short-term debt flows.

## *2.2 Role of Governance*

Contrary to relationship between aid and financial development that has raised up few interest in economic literature, research on institutions' role in financial development and in aid effectiveness has been considerable. According to North (1990), institutions are the set of societal rules and norms or, more formally, constraints established by men that frame and regulate behavior. Based on this definition, Acemoglu et al. (2005) distinguished economic and political institutions; the latter must ensure compliance with rules of law which allow proper functioning of production and trade.

Using certain indicators on institutions' quality, studies had led to conclusion that institutional quality was likely to affect financial development by improving the system's ability to channel financial resources to productive activities (François, 2016; Siegel & Roe, 2009). In this sense, Law and Azman-Saini (2008) examined a non-linear relationship between institutional quality and financial development on a sample of 63 developed and developing countries over the period 1996-2004. Using GMM dynamic panel estimator, results indicated that the quality of banking regulation was crucial for the banking sector expansion. In their study applied to sub-saharan African countries, Anayiotos and Toroyan (2009) and Ghura et al. (2009) highlighted the positive effect of institutional factors such as

the protection of property rights and political stability on financial sector development. For Demetriades and Fielding (2012), corruption and political instability was major challenges for financial development in West African countries. As for Keho (2012) (2012), he looked at institutions' role for six WAEMU countries. Using Pool Mean Group estimator in a non-linear panel data model over the period 1984-2005, results showed that certain institutions' quality conditioned the level of financial deepening and its ability to contribute significantly to growth. They also showed that institutional uncertainty was forcing banks to adopt unproductive financial practices.

As with financial development, the debate on aid effectiveness has led to conclusion that this effectiveness is conditioned by institutions' quality in countries receiving aid. This idea emanates from Burnside and Dollar' (2000) article which showed that aid would only be effective and positively impact economic growth in countries with good institutions and having applied sound economic policies. Several studies have undertaken, with varying degrees of success, to confirm these results (Collier & Dollar, 2002; Collier & Hoeffler, 2002; Kosack, 2003; Mosley, 2015).

The literature mentioned above has focused particularly on relationship between financial openness and financial deepening, between financial development and institutions' quality and between aid and institutional quality. As we can see, empirical studies on direct link between aid and financial development are almost nonexistent, to our knowledge. The few that address this issue are in terms of links between aid and domestic savings, which is sometimes seen as an indicator to appreciate financial deepening. In any case, literature review presented could well guide us in our analysis of relationship between aid and financial development and the role of institutional quality. It suggests an ambiguous link between financial openness (aid being a specific form of this openness) and financial development, with possibilities of positive correlation if institutions' quality is take into account. The assumption is that aid flows hamper financial deepening, especially since it operates in a weak institutional environment. A priori, we will tend to conclude that the weakness of financial development in recipient countries despite foreign aid is a consequence of the weakness of institutions' quality. It remains to be seen whether such result can be validated in ECOWAS countries.

### **3. Analysis Models and Method**

In this section, we analyze the correlation between aid and financial development, and the role of institutions' quality in this relationship. In this regard, we present the model, the estimation technique and the variables chosen.

#### *3.1 Analysis model*

For this study, we are inspired by Klein and Olivei's (2008) model which analyzed the effect of financial opening on financial development. The same model was used by Trabelsi and Cherif (2017) in their study on the same theme with an emphasis on consequences for the private sector. Starting from observation of absence of a theoretical model, Klein's model assesses financial development through the following equation:

$$F_{i,t} = \alpha_0 + \alpha_1 O_{i,t} + \alpha_2 X_{i,t} + \mu_i + \tau_t + \varepsilon_{i,t} \quad (1)$$

$F_{i,t}$  represents financial development in country  $i$  at period  $t$ ,  $O_{i,t}$  financial openness which essentially captures (in this study) foreign aid and  $X_{i,t}$  a matrix of variables likely to influence financial development.  $\mu_i$  captures specific effect of country  $i$ ,  $\tau_t$  time effect  $t$  and  $\varepsilon_{i,t}$  represents the error term.

One of limits of this model is its static approach to the phenomenon analyzed; and therefore, it does not take into account possibility of a dynamic dimension. This dynamic dimension is a significant possibility in this analysis which links aid to financial development. Indeed, aid considered as an explanatory variable is also likely to be explained by financial development insofar as certain donors condition their aid flows to development of the private sector. In order to overcome this shortcoming, this study analyzes aid effect on financial development through a dynamic model. Thus the analysis model which takes into account dynamic dimension and interaction between aid and institutional quality is presented as follows:

$$F_{i,t} = \beta_1 F_{i,t-1} + \beta_2 A_{i,t} + \beta_3 A_{i,t} * Inst_{i,t} + \beta_4 X_{i,t} + \mu_i + \tau_t + \varepsilon_{i,t} \quad (2)$$

$A_{i,t}$  represents foreign aid received by country  $i$  at period  $t$  and  $Inst_{i,t}$  institutional variables.

### 3.2 Method

Classical methods (fixed and random effects estimators or GMM) which impose homogeneity of coefficients are not suitable to estimate equation (2) because results can be affected by a serious heterogeneity bias (Pesaran & Smith, 1995). In addition, a problem of endogeneity of variables (possibility of double correlation between financial development and aid) must be adequately addressed to achieve robust results. The most used techniques which take into account these econometric problems are: Fully Modified OLS (FMOLS) and Dynamic OLS (DOLS) estimators developed by Kao and Chiang (2002; 2001), error correction estimators proposed by Pesaran and al. (1999), namely Pooled Mean Group (PMG) and Mean Group (MG). In this study, we will use DOLS estimator because of its superiority (best estimator) over FMOLS estimator. Indeed, Kao and Chiang (2001) showed that on small samples, the DOLS method could, under certain assumptions, provide a better correction of the long-term endogeneity bias than the FMOLS method.

DOLS estimator proposed by Kao and Chiang (2002; 2001) is an extension of Stock and Watson (1993) estimator and uses a parametric correction by integrating in regression advanced and delayed values of regressors in difference. In other words, the technique is to include advanced and delayed values of  $\Delta X_{i,t}$  in cointegration relationship in order to eliminate correlation between explanatory variables and error term.

Thus, considering the dynamic panel model (2) and assuming existence of non-stationary variables, DOLS estimator is provided by the following equation:

$$F_{i,t} = \delta_0 + \delta_1 F_{i,t} + \delta_2 Z_{i,t} + \sum_{k=-q_1}^{k=q_2} \lambda_{i,k} (\Delta F_{i,t-1+k} + \Delta Z_{i,t+k}) + \nu_{i,t} \quad (3)$$

In this equation (3),  $Z_{i,t}$  represents the set of explanatory variables other than  $F_{i,t-1}$ .  $\lambda_{i,k}$  is coefficient of anticipation or delay as first difference of explanatory variables.

### 3.3 Choice of Variables and Data Sources

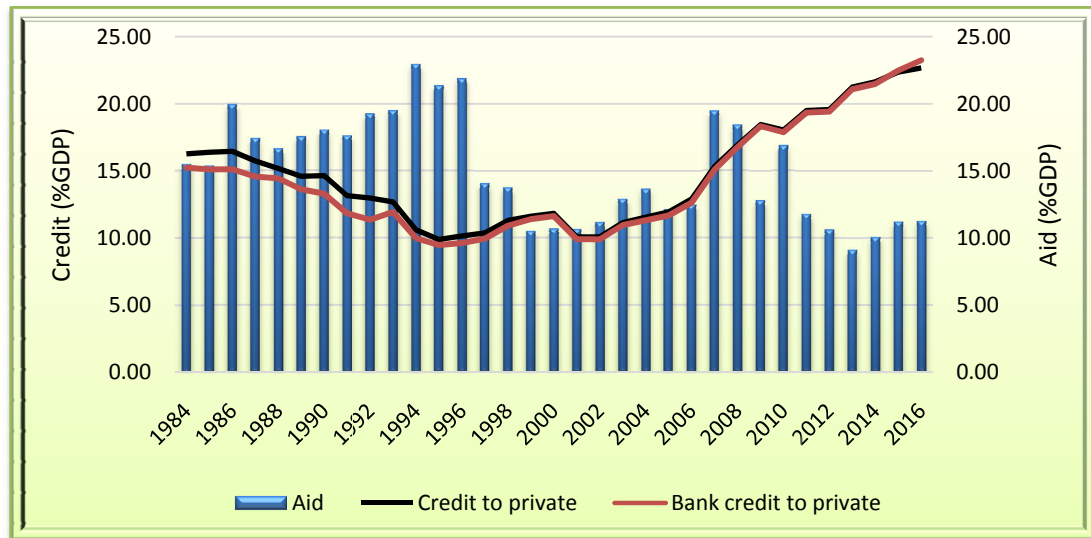
We distinguish, in this study, interest variables and control variables. Interest variables concern financial development indicators, aid and institutional indicators.

There is no single indicator in economic literature to assess financial development. Drawing on this literature, this study uses two indicators. The first commonly used indicator is *domestic credit to private sector (% of GDP)*. It indicates the degree of financial intermediation towards private sector (Levine, Loayza, & Beck, 2002). The main virtue of this indicator is its ability to isolate private sphere and its measure of credit constraint that private is facing on. The other indicator resulting directly from first is *bank credit to private sector (% of GDP)*. These are credits granted by banking system to private sector. The main quality of this indicator results from its ability to identify the source and destination of credit.

Over 1984-2016 period, the indicators used to assess financial development experienced increasing dynamics. Thus, credit to private sector represented on average 14.8% of GDP, going from 16.28% in 1984 to 22.68% in 2016. We note that almost all credit to private sector is granted by banking system whose average ratio over the period was 14.3% of GDP.

As for aid, it assesses the amount of external resources received as official development assistance (% of GDP). Over 1984-2016 period, aid to ECOWAS countries represented on average 15.06% of GDP per year. It experienced a decreasing dynamic over the period, going from 15.53% in 1984 to 11.28% in 2014, a decrease of 4.25 percentage points.

Figure 1 shows comparative evolution of financial development indicators and aid. Over the period, the general trend points out the opposite dynamic of aid comparatively with financial development indicators. This dynamic is a signal about substitutability relationship that could exist between aid and variables assessing financial development. This signal is more emphasized over 1984-2000 period during which financial sector was dominated by external aid flows with a ratio of 17.19% of GDP against 13.18% for credit to private sector and 12.33% for bank credit to private sector. It was not until 2002 that financial indicators began to grow, with a clear supremacy on aid from 2010.

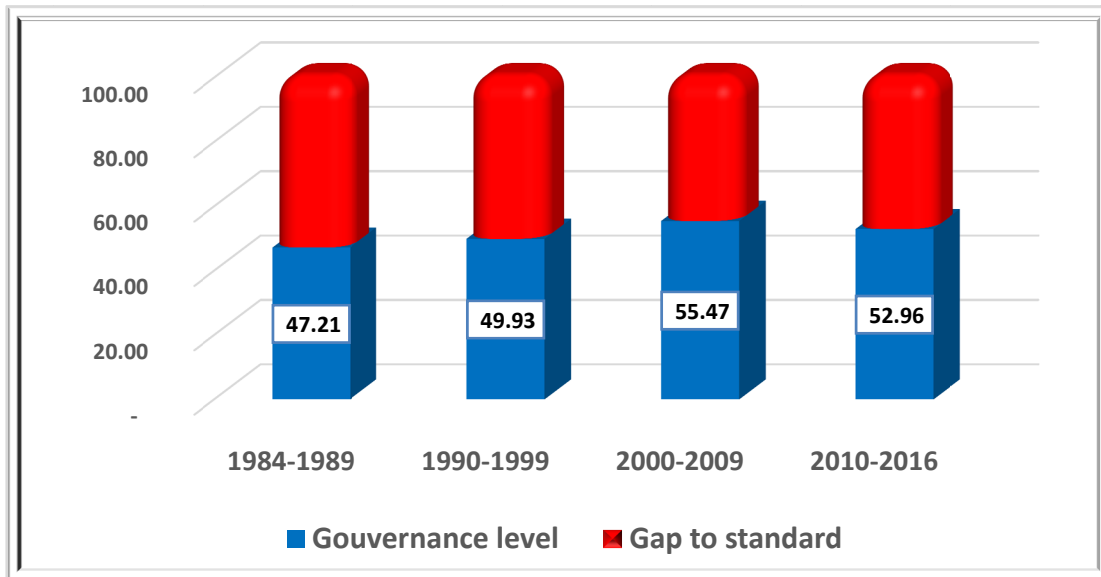


**Figure 1. Comparative Evolution of Aid Flows with Financial Indicators in ECOWAS Countries**

Regarding institutions' quality, several sources have attempted to develop indicators to assess governance in countries. Among these, we can mention the World Bank indicators with the Country Policy and Institutional Assessment Index (CPIA) developed since 1996 and the series of the International Country Risk Guide (ICRG) whose publication began in 1984. The indicators from ICRG's database have been used in this study. These indicators are based on expert surveys of economic and political conditions in around 140 countries. The choice for ICRG indicators results from the fact that series are sufficiently long and there are enough temporal variations within countries. For analysis, the series on governance by country have been gotten by summing scores of the 12 indicators whose maximum score for a country is 100.

Figure 2 shows overall level of institutions' quality in ECOWAS countries. We note that, over the period 1984-2016, these countries are characterized by a medium governance with a score of 51.76. Nevertheless, governance was gradually improved, especially during the period 1984-2009.





**Figure 2. Situation of Governance Indicators in ECOWAS Countries**

Control variables concern the *Gross domestic product per capita*, the opening rate measured by the *ratio of total trade volume to GDP*, the *debt service*, the human capital approximated by the *gross primary school enrollment rate*, the *inflation* and the *foreign direct investment*. Data used are quantitative and proceed from three sources. Those relating to aid flows are taken from the Organization for Economic Cooperation and Development (OECD) database. Data on governance proceed from ICRG database. Other data come from the World Bank database (DataBank: World Development Indicators).

## 4. Results

### 4.1 Unit Root and Cointegration Tests

The first step of our empirical approach consists in applying the unit root and cointegration tests to determine the order of integration of variables and to examine existence or not of a long-term relationship between them. In this regard, two tests on unit roots developed by Levin et al. (2002) and by Im et al. (2003) are used to assess non-stationarity of variables.

The first test, imposing hypothesis of homogeneity of the self-regressive root, poses as null hypothesis the existence of a unit root for whole individuals in the panel versus hypothesis of absence of unit root for the whole individuals. Under these conditions, it is unlikely that if the null hypothesis is rejected, we can accept the hypothesis of an autoregressive root common to all individuals.

The second test solves this issue by considering a model with individual effects and without a deterministic tendency. It postulates unit root versus possibility of cohabitation of two categories of individuals in the panel. Individuals for whom variable is stationary and those for which it is not. The results associated with these two tests are presented in Table 1 below.

**Table 1. Unit Root Test Results**

Variables	LL		IPS	
	Coefficient	P-value	Coefficient	P-value
credit_priv**	-0,239	0,162	-2,049	0,710
bank_credi**	-0,225	0,232	-1,975	0,811
education**	-0,127	0,992	-1,366	1,000
open**	-0,295	0,017	-2,346	0,220
inflation*	-0,736	0,000	-4,065	0,000
GDP_capita**	-0,162	0,355	-1,688	0,985
FDI*	-0,811	0,000	-4,319	0,000
debt_serv*	-0,756	0,000	-4,152	0,000
aid*	-0,493	0,000	-3,175	0,000
invest_icrg**	-0,261	0,007	-2,336	0,234
corrup_icrg**	-0,216	0,257	-1,952	0,838
demo_icrg**	-0,182	0,461	-1,804	0,950
gouvernance_icrg**	-0,214	0,103	-2,137	0,563

Notes:

IPS = Im-Pesaran-Shin Test

LL = Levin-Lin-Chu Test

Stationary at Level (\*), in first difference (\*\*).

Test results show that the variables defining financial development and those of governance are stationary in first difference, aid is stationary at level. Regarding control variables, trade openness, education and per capita GDP are stationary in first difference while inflation, FDI and debt service are stationary at level.

In order to highlight long-term relationship between variables, we use Westerlund's (2007) cointegration tests in panel. These tests apply to variables which are integrated of order 1. The underlying idea is to test absence of cointegration while determining whether each of individuals in the panel can adopt an error correction model. For this, he considers an error correction model in which the parameter  $ai$  represents the adjustment speed towards long-term equilibrium. These tests results are shown in Table 2 below.

**Table 2. Cointegration Test Results**

Statistic	Value and Probability	
	Credit to private	Bank credit to private
Gt	-1,940** (0,027)	-1,853** (0,026)
Ga	-5,134 (0,675)	-4,645 (0,781)
Pt	-7,072*** (0,003)	-7,001*** (0,003)
Pa	-4,307* (0,092)	-4,203* (0,10)

Notes:

(\*\*\*); (\*\*) and (\*) significant respectively at 1%, 5% and 10%.

Westerlund test actually consists of four tests: Gr, Ga, Pr and Pa. The first two tests are called group means tests and the alternative hypothesis is that at least one observation has cointegrated variables. The two others are called panel tests and the alternative hypothesis is that the panel, considered as a whole, is cointegrated. The results in the table show that the hypothesis of non-cointegration is rejected for all statistics except for that of Ga. Regarding these results, we can reasonably conclude that for part of the sample, variables are cointegrated.

#### 4.2 Estimates' Results

The second step in our empirical analysis is to estimate model's coefficients using the DOLS estimator. Estimates were made on the two indicators used to assess financial development. The results reported in Tables 3 and 4 are generally satisfactory. Indeed, the Chi tests are significant and the gradual introduction of variables highlights a stability of the model, thus confirming robustness of estimates.

**Table 3. Results of Estimates from "Credit to Private Sector" Model**

Variable	I	II	III	IV	V
Aid	-0,105*** (-2,56)				
Governance	0,065 (0,95)				
Aid_govern		-0,002*** (-2,60)			
Aid_corrup			-0,032* (-1,81)		

Aid_democ				-0,028*** (-3,24)	
Aid_invest					-0,013* (-1,72)
GDP_capita	0,006*** (3,13)	0,006*** (3,32)	0,007*** (3,68)	0,006*** (3,44)	0,006*** (3,56)
Open	0,027 (1,35)	0,014 (0,72)	0,002 (0,14)	0,019 (0,92)	0,001 (0,09)
FDI	-0,073* (-1,70)	-0,059 (-1,40)	-0,057 (-1,39)	-0,045 (-1,08)	-0,059 (-1,41)
Debt_serv	0,296*** (3,08)	0,371*** (3,67)	0,301*** (3,08)	0,445*** (4,24)	0,294*** (3,05)
Education	0,023 (0,58)	0,039 (1,00)	0,043 (1,13)	0,042 (1,09)	0,048 (1,24)
Inflation	-0,1263*** (-3,86)	-0,144*** (-4,36)	-0,145*** (-4,41)	-0,159*** (-4,78)	-0,145*** (-4,38)
Wald Chi2	49,67***	56,90***	54,35***	66,98***	53,19***
Number of Countries	13	13	13	13	13
Number of observations	351	351	351	351	351

Notes:

(I) provides results of the basic model estimate giving direct effect of aid on credit to private sector;

(II), (III), (IV) and (V) show results of estimates using Aid crossed with governance variables;

\*\*\*, \*\*, \* indicate that the variable is significant at 1%, 5% or 10% respectively.

**Table 4. Results of Estimates of “Bank Credit to Private Sector” Model**

Variable	I	II	III	IV	V
Aid	-0,103*** (-2,55)				
Governance	0,065 (0,97)				
Aid_govern		-0,002*** (-2,60)			
Aid_corrup			-0,032* (-1,87)		
Aid_democ				-0,028*** (-3,32)	

Aid_invest					-0,013* (-1,69)
GDP_capita	0,005*** (3,15)	0,006*** (3,36)	0,007*** (3,70)	0,006*** (3,46)	0,006*** (3,61)
Open	0,026 (1,30)	0,013 (0,67)	0,002 (0,11)	0,018 (0,91)	0,0002 (0,01)
FDI	-0,071* (-1,66)	-0,055 (-1,34)	-0,054 (-1,32)	-0,041 (-1,00)	-0,055 (-1,35)
Debt_serv	0,288*** (3,04)	0,361*** (3,62)	0,294*** (3,05)	0,441*** (4,27)	0,284*** (3,00)
Education	0,024 (0,63)	0,041 (1,06)	0,044 (1,17)	0,043 (1,14)	0,050 (1,30)
Inflation	-0,128*** (-3,98)	-0,147*** (-4,49)	-0,147*** (-4,53)	-0,162*** (-4,92)	-0,148*** (-4,51)
Wald Chi2	50,62***	58,21***	55,85***	69,10***	54,65***
Number of Countries	13	13	13	13	13
Number of Observations	351	351	351	351	351

*Notes:*

(I) provides results of the basic model estimate giving direct effect of Aid on bank credit to private sector; (II), (III), (IV) and (V) show results of estimates using Aid crossed with governance variables; \*\*\*, \*\*, \* indicate that the variable is significant at 1%, 5% or 10% respectively.

As a reminder, estimates were made on two financial development indicators, namely credit to private sector and bank credit to private sector. Column (I) of Tables 3 and 4 provide the results of aid direct effect on financial development and the other columns assess aid non-linear effect on financial development by introducing, in the models, interactive variables between aid and governance (including certain governance indicators).

The results show that aid has a negative effect on financial development indicators. Indeed, its coefficient is negative and significant at 1% on credit to private sector and bank credit to private sector (see column I of the tables). These results suggest that aid behaves as a substitute for financing private sector; thus corroborating conclusions of authors who found that financial opening is an obstacle to financial development (Baltagi et al., 2009; Standley, 2010). This situation could be explained, in part, by the heavy dependence of private sector on public investments in ECOWAS countries. Aid granted to these countries essentially finances public investment expenditure, most of which is carried out through contracts with private sector. The role of the financial system in these conditions consists in supporting private sector by mobilizing guarantees for its benefit. Moreover, this negative relationship between aid

and financial development is confirmed by the variable of financial openness approximated by foreign direct investment which also negatively linked to financial development.

As for the estimates appreciating the non-linear relationship of aid, the results show that the coefficients of the interactive variables are negative and significant at the 1% (columns II of tables). The governance's quality in these countries does not allow to reverse the negative effect of aid on financial development. These results are confirmed with the coefficients of the interactive variables between aid and governance's indicators such as corruption, democracy and investment's profile. The coefficient of interaction variable with democracy is more significant because it is at 1% while the coefficients of others are at 10%. However, even if the nonlinear relationship does not change the negative effect of aid on financial development indicators, it is important to note the fact that results indicate a reduction in the magnitude of the negative effect of interactive variables. This suggests that a substantial improvement in governance in these countries would reverse the sign of the relationship between aid and financial development. Governance's quality would therefore condition the positive contribution of aid to financial development in ECOWAS countries.

The results of estimates corroborate, in part, the intuitive assumption in this article that foreign aid is an obstacle to financial development in ECOWAS countries. However, even if governance's quality does not reverse this negative effect, it helps to mitigate it.

## 5. Conclusion

This article assessed aid effect on financial development in ECOWAS countries and governance's role in this effect. Empirical results based on a dynamic panel data approach indicate that aid has a negative effect on financial development indicators used: credit to private sector and bank credit to private sector. These results are a signature that foreign aid constitutes an obstacle to financial development in these countries. Moreover, introduction of cross variables between aid and governance indicators provides coefficients negatively and significantly linked to financial development. However, main information resulting from these interactive variables is the mitigation of the negative effect of aid on financial development in these countries. These results suggest that an additional effort in improving governance would help reduce the negative effect of aid on financial development, or even reverse this effect.

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Appendix

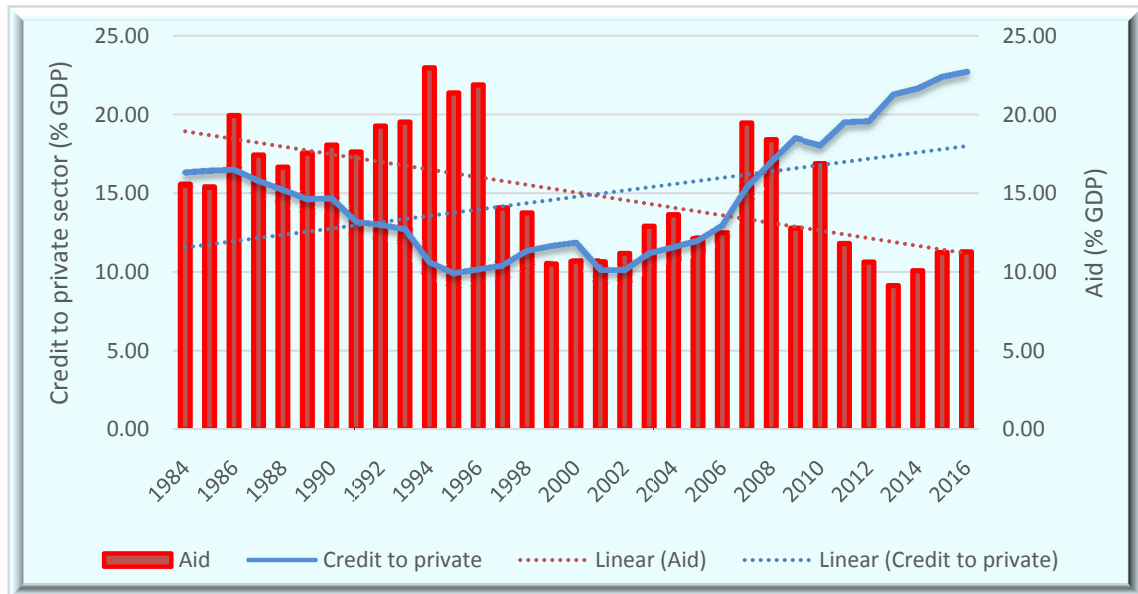


Figure 3. Comparative Evolution of Aid and Credit to Private Sector in ECOWAS Countries