

## **DEVELOPMENT AID IMPACT ON ECONOMIC GROWTH THROUGH CROSS-BORDER TRADE: CASE OF WAEMU**

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**ABSTRACT:** *The effectiveness of development assistance in the economic growth of developing countries and especially in their trade is complex and often discussed. This article tries to have a look on the cross-border trade situation of WAEMU member states and the impact of development aid on their economic growth through cross-border trade, which is seen as a driver of the economic growth of countries. The results of the GMM and the individual specific effects on the panel data for the period 2005-2015 showed a low positive impact of aid on economic growth through cross-border trade. These results have, however, raised other problems.*

**KEYWORDS:** Development aid, Cross-border trade, Economic growth.

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### **INTRODUCTION**

The conditions of life in the world have changed considerably. This marks the history of mankind since the 1960s. International trade followed by economic development in some countries has seen enormous improvements. The development of living conditions depended on the progress of several sectors. The general level of living conditions has improved thanks to advances in medicine. These advances have been recorded at the technological level by spectacular machines and systems. At the educational, political and agricultural level, these developments have been manifested in the countries. Nevertheless, some countries still face major challenges. This is the case, for example, with African countries. According to all statistical measures, sub-Saharan Africa is one of the parts of the world with the lowest rates of development. Development, although it is declared global, has not benefited this part of the world. Indeed, in most countries of the region, the standard of living declined. In order to help least developed countries achieve a sustainable level of development, developed countries finance the development of sectors that they consider to be "the keys" in these developing countries.

Sustainable development cannot be achieved without sustained and effective economic growth. In order to promote economic growth, it is necessary to invest in the structuring of the production apparatus while promoting the creation of efficient infrastructures for cross-border trade because it affects the national income by offering remarkable opportunities through sale Or the marketing of surpluses, but also by its influence on the relative prices on the markets. This growth stems from appropriate policies and management for each company. Development therefore depends on the policy and trade managements of countries at the global level.

Development aid up to the 1990s was essentially linked and partly dependent on the trade desired by the donor country, according to some. The effect of aid on foreign trade differs from one country to another, or from one zone to another. The existence of a

direct link between aid and trade is unequivocal. A series of data on trade costs, produced in January 2013 by a collaboration between the World Bank and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), highlighted disproportionate costs on developing countries, which also have lower trade integration than high-income countries. Aid is expected to benefit beneficiaries more than donors. Its participation in development, as well as its role, have been the subject of much criticism. In fact, it is not understandable that those who give are those who develop days after days when those who receive are perpetually in the gulf of poverty.

The aim of this study is to investigate the impact of aid on development through the cross-border trade of UEMOA countries. In this regard, it illustrates a simple model of general analysis that will provide an assessment of the effectiveness or inadequacy of aid to these countries' economic growth through trade. In this study, cross-border trade is seen as the key to economic growth. The study is supported by an economic analysis of how aid affects the share of trade and thus influences the economic growth of the WAEMU zone. As such, it is assumed that the impact that aid will have on the share of the contribution of international trade to GDP will help to better judge its effectiveness on the economic growth of countries and at the same time on their cross-border trade.

## **LITERATURE REVIEW**

Since 1990, the world economy has been in a state of turmoil in the international flows of goods and services linked to the emergence of new powers that altered the previous hierarchy. These changes may have positive effects on some countries or more negative ones on others (Michel Raineli 2015).

Poverty reduction is conditional on economic growth. This fact is all the more important in low-income countries. In countries where the gross domestic product (GDP) per capita is high enough, poverty reduction will likely depend, in large measure, on income redistribution. In low-income developing countries, this redistribution of income is not enough. It ranks second, because in the situation of these states it can be counterproductive. The Committee on Trade and Development in their sixth session in Geneva in 2014 noted that poverty can not be reduced without economic growth resulting in an increase in the share of income perceived by each individual. While Africa's low economic growth can be attributed to a number of factors, the barriers to international trade and the lack of solid financial pillars can not be dissociated from the main factors that could have contributed to the poor economic performance of the continent (Beck et al., 2002 and Ndulu et al., 2007). Reducing trade costs has significant implications for the poor who consume imported products within a country. It should result in lower consumer prices. This relationship has always been raised. Several researchers have confirmed this dependence through the response to their work. Diop et al. (2005) examined the case of Rwanda. Their study found that trade costs related to various market access factors are important determinants of poverty rates. The results according to their simulations showed that a reduction in transport costs could result in a 20% increase in producer prices, which would lead to a 6% reduction in the incidence of poverty. In his study on the Republic of Moldova, Porto (2005) showed that reducing trade costs has a positive overall effect on poverty. These results showed that the poverty rate declined from 2.8% to 5.0%, depending on the degree of impact. Balat et al. (2009) have focused on villages in Uganda. They found that village dwellers with

their own markets tend to have higher incomes than village dwellers without market infrastructure. Bringing markets near localities reduces the costs of trade, ie local distribution costs. At the international level, there are a number of restrictions in the export sector, including transport, customs fees, political influences, etc. Development aid is affecting a number of sectors, and in recent years this aid has been particularly interested to trade.

If policies are important to the costs of trade, international support would greatly influence the cross-border trade as fuel for development machine in developing countries. Analyzes of the effectiveness of aid are numerous and often decried. Analytical methods are numerous, ranging from econometric analyzes to surveys of economic agents. Some authors have been bent on the issue long before the systematic discussion of the impact of aid on countries' external trade. Previous authors such as Wagner (2003), Lloyd, McGillivray and Morrissey (2000) and Morrissey (2006) have focused on examining that relationship by taking into account foreign aid at the global and trade level. Researches on this subject present various results. Wagner (2003) tested the link between aid and export expansion, and found that "aid is associated with an increase in exports of goods amounting to 133 percent of aid". Analytical methods are numerous, ranging from econometric analyzes to surveys of economic agents. His study showed that donor exports are increasing at the expense of the primary objective of aid, which is to contribute to the development of the receiving countries because of the disbursement of foreign aid toward developing countries. These results were supported by the research carried out by Pettersson and Johansson (2011) who focused on a comprehensive bilateral trade relationship between donor and recipient countries in order to gain a clearer picture of the different aspects of foreign aid. Indeed, like Wagner, their results led them to the conclusion that general foreign aid had a positive influence on exports. At the general level, this impact was higher for donor countries than for recipient countries. Several other authors have found the same answers to the more pronounced benefit that donor countries derive from their exports through Aid for Trade, which is less significant for exports from recipient countries. Keshab Bhattarai (2016) conducted a study on the impact of foreign aid on growth and trade in 48 countries. He used a UK business model that produced results showing that aid has been more effective in promoting exports from advanced economies than in promoting economic growth in developing economies.

However, some research contradicts this effect demonstrated by these authors. Lloyd et al (2000) found in their study a positive effect of aid at the recipient country level rather than at the level of donor countries. The results are generally dependent on the location and method of analysis. Ghimire, Mukherjee and Alvi (2013) considered aid for trade and not global aid to develop their analyzes of the impact of aid on exports at the sectoral level. Cali, Razzaque & Velde (2011) carried out their study at a more regional level, concentrating their studies on the small island countries of the Caribbean to show the positive effect of the aid at the level of the beneficiary countries. Shankar Ghimire, Debasri Mukherjee and Eskander ALVI in their investigation on the impact of total (bilateral and multilateral) aid on developing countries' exports to the rest of the world by analyzing a longitudinal year data set of 121 aid recipient countries classified as low- and middle-income countries by the World Bank, found a positive and significant effect of AFT (Aid For Trade) on the multiple measures of export performance. However,

targeted aid showed decreasing returns, reinforcing the idea of the important but limited role of aid in promoting aid recipient exporters.

It is important at the trade level to improve global partnerships associated with national measures. Aid for Trade is part of a combination of measures that donors believe are more effective in reducing these costs. This assistance to exporting firms may take the form of export credit guarantees or technical assistance for obtaining product certifications or for the production of goods in compliance with international food safety standards, for example (Cadot et al. Al., 2014). Authors such as Francois and Manchin (2013) argue that a country's participation in international trade and its export performance depend on the quality of its institutions and transport and communication infrastructures. Empirical studies to assess the impact of aid to improve the productive capacities of exporting firms are few and inconclusive. Aid is more effective at this level through the improvement and / or transfer of technology, which could lead to growth at the productive level of firms in these countries, which would have a favorable impact on trade. Delgado et al. (2013) used the double data differences method from 1993 to 2009 to highlight the role of intellectual property enforcement through the Agreements on Trade-Related Aspects of Intellectual Property Rights (TRIPS) in the generation of an increase in trade in knowledge-intensive goods, whether in the communication or information technology sectors. The results showed that the establishment of intellectual property rights favored mainly exports from developed countries to developing countries rather than vice versa. These results confirmed Ivus' previous research (2010). Calì and Velde (2011) estimate empirically the impact of aid for infrastructure improvements on trade and also the impact of aid dedicated to improving productive capacities of firms on the total amount of exports Beneficiary countries and study. They find that the aid dedicated to improving productive capacities does not seem to have a significant effect on exports. They also find that aid reduces trade costs, thus promoting trade.

Francois and Manchin (2013) highlight that poor infrastructure and institutions have a negative impact on both exports and imports from developing countries. Vijil and Wagner (2012) find that aid to infrastructure has a positive impact on the exports of the recipient countries. They confirm the idea of Francois and Manchin (2013). Their study showed that a 10% increase in aid commitments for infrastructure leads to an increase in the export-to-GDP ratio of 2.34%.

## **WAEMU CROSS-BORDER TRADE**

International trade is old as the civilizations. Formerly known as the "Silk Road", it comes from the concept that a country does not hold all the raw materials and all the factors of production on its territory. Cross-border trade has been established for a very long time. Partnerships between countries have been established and have made this activity more intense. The aim being to generate profit from the differences in production costs between countries, trade has been boosted by economic globalization. In recent years, international trade has been declining. Indeed, costs remain more bearable and less cumbersome for some countries than others. The overall marketing conditions depend in principle on each country. Indeed, costs remain more bearable and less cumbersome for some countries than others. This phenomenon is interpreted most often as an adverse effect of trade. This is mainly due to the level of infrastructures

development. Low-income countries do not have sufficient financial and/or institutional capacity to promote their cross-border trade and introduce complementary measures that would facilitate the transfer of gains from trade to the poor.

The African economic situation has been very unstable over the last six years. In 2015, sub-Saharan Africa has experienced its weakest growth in 15 years. This was not the case for the WAEMU, which, despite the fragile security situation in some member countries and a less favorable external environment in 2015, showed economic growth of more than 6% for the third consecutive year. This is attributed to vigorous private consumption, investment in infrastructure and favorable agricultural crops in the area. All of WAEMU's international trade in goods and services has improved over the last three years. The WAEMU commission has reported a surplus of the trade balance in 2016 started in 2014. International trade reached -8.7% of GDP in 2015 against -9.9% in 2014. The balance of goods and services in the Union thus improved by 1.2 percentage points in 2015. In 2016, the balance of payments surplus totaled 68.3 billion, due to a contrasting trend in the main accounts. This trade surplus improved because of lower imports and was reinforced by an increase in exports.

Cross-border trade requires certain costs, deadlines and formalities that are difficult for some African countries, specifically for WAEMU. Africa's share of international trade is about 4% of world trade. The goods of the Union are exported mainly to Europe, Africa, Asia and America. Switzerland, Germany and France remain respectively the main destinations for the external sales of goods of the Union. Cross-border trade is associated with three categories of procedures associated with export and/or import. This concerns compliance with cross-border and documentation requirements and transport procedures. Table 1 and Table 2 below summarize the timing and costs of cross-border trade logistics (excluding tariffs) for the regions and the Member States of the union in relation to the process categories of the process Of exports and imports for the year 2016. The tables include data from "Doing business", which measures the overall process of moving goods from a warehouse of the home economy to a warehouse at a trading partner abroad through Land or sea transport. The ranking of the economies of Doing business is done in relation to the cross-border trade facility which is obtained by sorting the distance scores of the border for the cross-border trade indicator. These scores are the simple average of all border distance scores calculated for delays and costs of delivering required documentation and compliance with cross-border export and import trade procedures.

**Table 1 : Regions' Cross-border trade in 2016**

Countries	Cross-border trade	Compliance with cross-border trade procedures				Compliance with documentation requirements			
		Time		Cost		Time		Cost	
		Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.
Sub-Saharan Africa	51.1	103	583.4	675.9	92.6	107.4	229.6	320.1	143.9
Latin America and the Caribbean	68.26	63.5	526.6	684.7	55.7	83.4	110.5	119.6	65.5
East Asia and the Pacific	68.08	57	401.7	435.9	73.3	70.9	131.8	127.8	71
South Asia	57.89	59.4	376.1	644.5	78	106.4	182.6	348	116.1
Europe and Central Asia	84.04	28	195	202.3	26.9	26.4	110.7	90.9	25.8
Middle East and North Africa	55.98	64.4	459.6	554.5	77.4	101.2	261.3	305.1	120.6

**Source: Author's computation using Doing Business data**

In Table 1, sub-Saharan Africa is the lowest regional group in terms of international trade, with 51.1. It has higher export costs than imports. By comparing the cost of Africa's cross-border trade with other regional groups, it is found that the costs facing the continent are very high, limiting export activity by favoring imports.

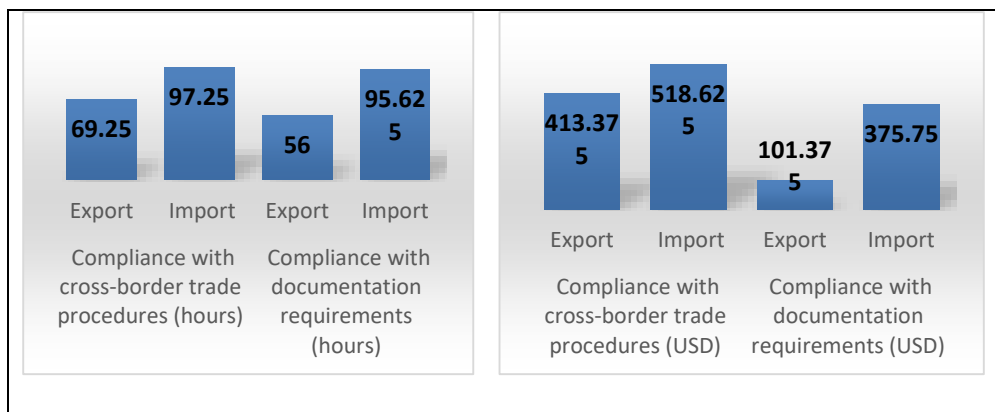
**Table 2. WAEMU member states Cross-border trade in 2016**

Countries	Cross-border trade	Cross-Border Trade: Ranking	Compliance with cross-border trade procedures				Compliance with documentation requirements			
			Time		Cost		Time		Cost	
			Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.
Mali	70.79	89	48	98	242	298	48	77	33	375
Togo	63.66	117	67	168	163	612	11	180	25	252
Senegal	60.85	130	61	53	547	702	26	72	96	545
Niger	60.48	132	48	78	543	462	51	156	39	457
Guinea-Bissau	52.86	153	67	72	677	755	60	36	316	384
Ivory Coast	54.15	150	110	125	387	456	120	89	136	267
Benin	59.89	133	78	82	487	599	48	59	80	529
Burkina Faso	66.58	104	75	102	261	265	84	96	86	197

Source: Author’s computation using Doing Business data

Among the WAEMU member countries, Mali ranks 89th in the world and ranks first in cross-border trade in the region. However, in these countries, the import cost is higher than the export cost, which is triple the cost in the case of Togo. These costs weaken the trade balance that remains low in the area. The graphs below illustrate the time and costs of businesses on the WAEMU side.

**Figure. WAEMU cross-border trade**



Source: Author’s computation using Doing Business data

Trade costs are of great importance for the structure of trade and production, as well as for national incomes and rates and distribution of poverty at the level of Africa and

more specifically in the Union. The average import hours for cross-border shopping and document procedures are almost the same, but their costs remain significant. Import costs for cross-border and inland trade procedures are 1.38 times higher than for documentation. This proves the weakness of trade infrastructures and policies at the level of the Member States of the Union. As these countries do not often have the means, the adequate controls or political clout needed for the challenges of globalization and economic dominance, they need to take a wide range of measures to broaden horizons and invest in commercial infrastructure. In this context, development assistance is welcome provided it meets the real needs of countries and is allocated in an optimal and beneficial manner.

There are thus two main channels through which untied aid could affect the size of trade flows: on the one hand by improving the productive capacity of exporting firms and, on the other, by reducing the costs associated with the trade. The poverty indices in the area have improved, but remain slow and still far from the reference countries in Africa and Asia. The inequalities remain high whether in the genre or in the holding of wealth. 20% of the population holds almost 50% of the wealth. Development is gradual but slow in the area. The main purpose of aid is to alleviate poverty and help to create a more favorable climate for these countries by providing them with the means to meet their needs. The issue of its effectiveness in the area is discussed, given the high levels of aid received by member countries and their progress on the development plan.

## **METHODOLOGY**

To analyze the impact of development aid on trade as well as economic growth, research is based on data on selected sub-Saharan African countries, namely Mali, Togo, Ivory Coast, Senegal, Benin, Niger, Burkina Faso and Guinea-Bissau. These countries were selected on the basis of the common realities and characteristics of a single geographical, economic, political and social region specific to the WAEMU. Important information is incorporated into similarities between countries.

The investigation covers the period from 2005 to 2015 with data coming from Aid data, World Bank, OECD and WTO. They will be arranged in panel, thus allowing the follow-up of the given sample of individuals over time and thus providing multiple observations on each individual in the sample. This choice is also fueled by the desire to identify and estimate effects that are simply not detectable in pure time series and pure cross-sectional data. All the analysis will focus on the individual dimension and the temporal dimension.

The regressions analyze a single model for the total sample, consistent with data availability. This study is dependent on the ratio of "Trade to GDP". This variable expresses the share of trade performance and contribution to a country's economic growth. It is chosen as a dependent variable to have a perception of the possible impact of development assistance on economic growth through cross-border trade. In other words, the impact of development aid on the external trade of the selected countries is presented as a regression with the aid flows as explanatory variable (X) and the trade to GDP as a variable Explained (Y). The analysis integrating only these two variables is very likely to be misleading because it can not be correctly measured due to the absence of other variables in the model that could explain the economic situation



affecting trade of the countries. Consequently, the study takes into consideration parameters linking the two variables. Specification or control by other variables will thus avoid a bias in the estimation of the interest parameter, which relates performance to exchange rate. The control variables in the model are: inflation, population growth rate, public spending, exchange rate and financial services (M2/GDP). These variables are added to the regression model to give more relevance to the results. Inflation is an important economic indicator that is directly related to a country's cost of living and economic growth. When the population grows faster than production, economic growth becomes regressive, hence the importance of taking into account the rate of population growth. Public spending expresses all payments, investments and consumption of government transfers. This variable contributes to aggregate demand. These variables avoid a bias in the estimation of the interest parameter, which is growth by the trade. The econometric model used in this study can be written as follows:

$$TOGDP_{it} = \beta_0 + \beta_1 Aid_{it} + \beta_2 M2/GDP_{it} + \beta_3 Inf_{it} + \beta_4 PGR_{it} + \beta_5 Gov\_exp_{it} + \varepsilon_{it}$$

## ANALYSIS AND FINDINGS

This study analyzed the panel data with the specific individual effects and a dynamic panel regression. To be more relevant in the analysis, first, was to analyze the level of correlation between the variables with the VIF test. The study takes into account the time differences in the relationship between aid and growth from trade, as the effect of aid on growth or trade is generally not immediate. Many authors have put aside the hypothesis that aid is an exogenous variable and therefore a possibility of inverse causality. The analyzes in this study take this possibility into account. As a result, the analyzes first concern the application of the generalized moments method which solves the problem of endogeneity in the study. This method makes it possible to regulate the endogeneity not only at the level of the aid, but also at the level of the other explanatory variables by the use of a series of instrumented variables generated by the delays of the variables. It also resolves the issue of reserve causation that can be solved by GMM test. The analyzes continued with the individual specific effect tests, the hausman test, the heteroskedasticity test. The choice between the fixed effect and the random effect was determined with the hausman test. The heteroskedasticite was tested using Breusch-Pagan test. The results of the analyzes are as follows:

**Table 3. Regressions results**

Dependent Variable: TOGDP	Dynamic panel-data estimation	Individual specific Effects	
	Generalized Method of Moments (GMM)	Fixed Effects	Random Effects
_cons		-0.1173 [0.2612]	-0.0580 [0.2486]
TOGDP L1	0.2493 [0.2493]		
Aid	0.0896 [0.0401]**	0.0674 [0.2322]***	0.0631 [0.0223]***
Excrate	-0.0024 [0.0012]*	-0.0029 [0.0017]*	-0.0028 [0.0017]*
Popgrowth	-0.4036 [0.2056]*	-0.0339 [0.0349]	-0.0371 [0.0284]
M2/GDP	0.0039 [0.0002]*	0.0009 [0.0088]	0.0001 [0.0079]*
Gov_exp	0.0080 [0.0034]**	0.0096 [0.0035]***	0.0077 [0.0032]**
Inf	-0.0001 [0.0010]	-0.0007 [0.0012]	-0.0007 [0.0012]
Arellano-Bond test for AR(1) = 0.495		Prob>F= 0.0000	Prob>Chi2= 0.0000
Arellano-Bond test for AR(2) = 0.741		Hausman test: Chi2=4.52	
Sargan test: Prob>Chi2= 0.494		Prob>Chi2= 0.4681	

Note: \* means statistically significant at the 1% level

\*\* means statistically significant at the 5% level

\*\*\* means statistically significant at the 10% level

Absence of stars means statistically not significant

**Source: Stata 12 output**

The result of VIF test is  $1.1 > 5$  which is acceptable and means there is no multicollinearity in the model. From the GMM results, it can be seen that aid is significant at 5% level, but with a low impact, an 8% increase in aid will increase the share of trade at the economic growth of a unit. The Sargan test does not reject the assumption of validity of the instruments used in the regression. The use of t-2 delay differences in the aid variable as instruments has been done because of its endogeneity, the other explanatory variables are instrumented by their delays t-1 in difference and are considered as exogenous variables. The existence of autocorrelation is refuted as either first-order or second-order (AR (1) and AR (2)) because Arellano and Bond's autocorrelation test rejects the hypothesis of Lack of autocorrelation. All other explanatory variables are significant in the GMM test other than inflation. Unlike other variables that all have a positive relationship with the dependent variable, population growth and the exchange rate negatively impact it.

According to the results of estimation of the specific effects, there is a positive relationship between aid and the share of trade contribution to development. According to the Hausman test, the random effect is the appropriate effect on the data. Looking more closely, it can be seen that a 6% increase in aid would allow a contribution from trade to the economic growth of a unit. Control variables are almost all statistically significant except for inflation and population growth, which have a non-significant negative relationship, unlike GMM (significant negative impact of population growth).

Looking more closely at the impact of population growth on our explained variable, we can say that the external trade of these countries is not able to support a share of the needs of a growing population financially. This may be due to a number of factors, both at the level of infrastructure and at the systematic and even political level. Although deferred, its negative impact is part of one of the major development problems in these countries. It was also noted that government spending was successful in promoting trade as an engine of development, but still remained insufficient.

## CONCLUSION

This study investigates the impact of development aid on economic growth through cross-border trade of WAEMU countries adopting the methodology of "GMM" dynamic panel and individual specific effects for the period 2005 to 2015. The empirical analysis yielded unambiguously positive impact on economic growth. Thus in consistence with initial hypothesis and research questions, the study shows that development aid bares positive impact on general economic growth in the sampled countries of interest. Development aid is a complex phenomenon whereby in spite of the positive significance of the research findings, there still exist some limitations. Since development is the benchmark of every country, it is expected that the positive impact of aid on trade should enhance growth. Yet why are these countries and its metropolis still standing deficient in its consumer surplus? Are aids really channelled into right investments in a bid to assisting these countries?

The findings of the study brings to light insightful realities on the phenomenon raising delicate questions such as these which will further propel acutely curious academic researchers into delving deeper on the subject matter.

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