GEG Working Paper 126
March 2017

Misalignment of exchange rates: What lessons for growth and policy mix in the WAEMU?

Kako Kossivi Nubukpo

Misalignment of exchange rates: what lessons for growth and policy mix in the WAEMU?

Kako Kossivi Nubukpo[1]

Abstract

The loss of export competitiveness recorded by the WAEMU zone in recent years has prompted studies on the quantification and implication of the degree of misalignment of the exchange rate on economic growth. Little research has, however, been interested by the impact of the degree of misalignment on economic growth and the role of the policy mix in the evolution of misalignment. In this article we use the techniques of cointegration and estimation of dynamic panel models to analyse the effect of misalignment on economic growth and the role of Policy mix in external stability. Our results suggest that the continual overvaluation of the real effective exchange rate of the zone over the period 1985-2014 resulted in a loss of economic growth of 0.32 percentage points and an increase in volatility leading to a reduction of Growth of 0.86 percentage points. Moreover, the main conclusion of the article is that the current configuration of the Policy mix does not seem to be able to control the misalignment leading to overvaluation, the latter seeming mainly to come from exogenous factors. The study advocates the promotion of instruments and / or institutional arrangements favouring greater effectiveness of the WAEMU policy mix in controlling the degree of misalignment of the CFA.

Keywords: Policy mix; External stability; Inflation; Growth; Misalignment; Monetary Policy; Political budget; WAEMU.

Résumé

La perte de compétitivité à l'export enregistrée par la zone UEMOA ces dernières années, a suscité des études quant à la quantification et l'implication du degré de mésalignement du taux de change sur la croissance économique. Peu de recherches se sont, cependant, intéressées à l'impact du degré de mésalignement sur la croissance économique et le rôle du Policy mix dans l'évolution du mésalignement. Dans cet article, nous mobilisons les techniques de cointégration et d'estimation des modèles de panel dynamiques pour analyser l'effet du mésalignement sur la croissance économique ainsi que le rôle du Policy mix dans la stabilité externe. Nos résultats suggèrent que la surévaluation continuelle du taux de change effectif réel de la zone sur la période 1985-2014, s'est traduite par une perte de croissance économique de 0,32 point et une augmentation du niveau de volatilité concourt à une réduction de la croissance de 0,86 point. Par ailleurs, la principale conclusion de l'article

[1] kako.nubukpo@francophonie.org

est que la configuration actuelle du Policy mix ne semble pas pouvoir contrôler le mésalignement menant à la surévaluation, cette dernière semblant surtout provenir de facteurs exogènes. L'étude plaide pour la promotion d'instruments et/ou de dispositifs institutionnels favorisant une efficacité accrue du Policy mix de la zone UEMOA dans le contrôle du degré de mésalignement du FCFA.

Mots clés: Policy mix ; Stabilité externe ; Inflation ; Croissance ; Mésalignement ; Politique monétaire; Politique budgétaire ; UEMOA.

The Global Economic Governance Programme is directed by Emily Jones and has been made possible through the generous support of Old Members of University College. Its research projects have been principally funded by the Ford Foundation (New York), the International Development Research Centre (Ottawa), and the MacArthur Foundation (Chicago).

Table of Contents

Introduction

Procrastinations of different economies recorded at the onset of early 2008 crisis signs have quickly plunged the financial world into a total review. This review makes finance actors look for the appropriate competitiveness lines of their economies. Among competitiveness indicators is included the equilibrium exchange rate which is a price indicator of competitiveness conditioning demand towards domestic or foreign production. This revival of the concept of the exchange rate shows the theoretical revival of the concept of the distortions created by the latter. The misalignment of the real exchange rate is increasing in the economic performance of developed and developing countries (Abdallah, 2006). Among the latter are countries of the franc zone including countries of the West African Economic and Monetary Union (WAEMU) and the Central African Economic and Monetary Community. The anchorage of the franc CFA to the euro put the franc zone countries in a position different from that of countries with flexible exchange rate regime like china, accused of supporting their economies with undervalued currencies.

Does a strategy of articulating a restrictive budget policy with a monetary policy cantered mainly on the research of price stability make it possible to maintain the competitiveness of the member States of an economic and monetary Union? The existing empirical and theoretical literature finds ambiguous results. Indeed, such a configuration of Policy mix (articulation of the budget policy and the monetary policy), even if it makes it possible to reduce macroeconomic vulnerabilities and helps to prevent financial crises, does not seem however to guarantee the long-term competitiveness of the concerned economies.

Indeed, an optimal Policy mix makes fiscal policy an instrument with the ability to stimulate and boost production, and monetary policy an instrument of price stability and balance of payments (Mundell, 1971). Sachs (1985) empirically tested this theory in the context of United States. He demonstrates that, over the period 1980 - 1984, the appreciation of the dollar has contributed substantially to disinflation. Moreover, that assessment has been largely driven by the configuration of the Policy mix. On the basis of South African experience over the period 1990 - 2010, Ivan and Kriljenko (2011) mobilize a variety of econometric techniques helping to monitor the external environment and find the same conclusion as Sachs.

As far as the West African Economic and Monetary Union (WAEMU) is concerned, the rate of real effective exchange increased by 4.8% over the period 2002-2010, hence an average deterioration in the competitive position by 0.5% annually. This loss of competitiveness is in connection with the appreciation of the euro (Gnimassoun, 2012). Its effect on economic performance was, however, mitigated by an inflation differential in favour of the WAEMU (BCEAO, 2012).

In this article, we analyse the impact of the misalignment of the exchange rate on inflation and economic growth of WAEMU countries and the role of coordinating policy in external stability. To do this end, we present stylized facts about the relationship between the exchange rate, inflation and growth, and the literature review (section 1). Section 2 presents the analysis methodology, the various tools used and the results. Finally, the last section concludes.

1. Exchange Rates, Inflation and Growth: stylized facts and literature overview

1.1 Determination of the real effective exchange rate and stylized facts

The real effective exchange rate (REER) is calculated using the following formula:

$$REER = \sum_{i=1}^{n} (\frac{e_i}{e}) w_i.$$

e_i= exchange rate of the currency i against the dollar (to uncertainty over currency i) ;

e= exchange rate of the franc CFA against the dollar (with an uncertain against the CFA); wi = weight of i partner in trade of the country, namely:

$$wi = \frac{Mi + Xi}{M + X}$$

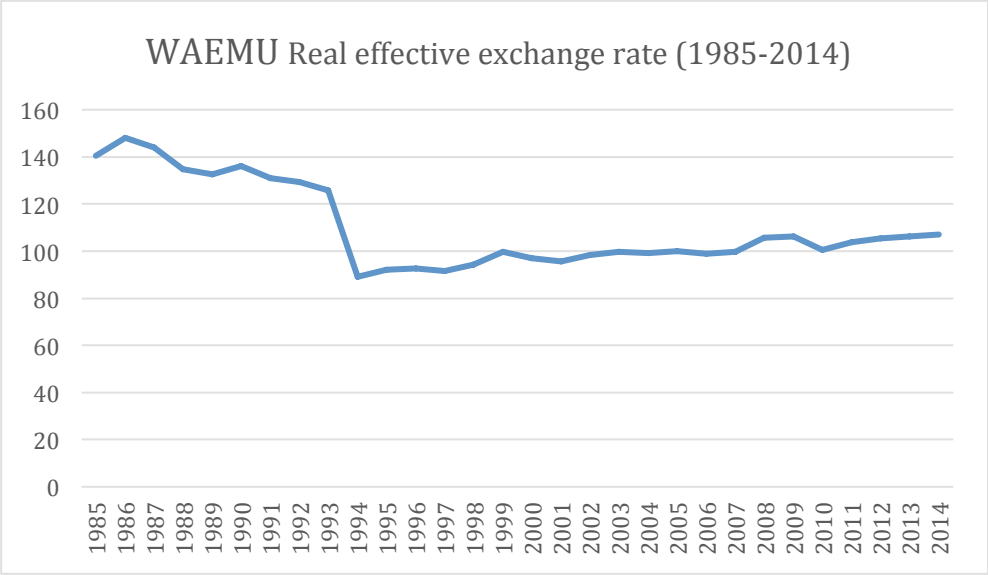
Mi, (Xi) represents imports (exports) from the business partner i. M (X) imports (exports) of country. Taking into account inflationary effects, the rate of real effective exchange rates (REER) is calculated as follows:

$$REER = \Pi_{i=1}^{n} \left[\left(\frac{e_i}{e} \right) \left(\frac{P}{P_i} \right) \right]^{wi}$$

P and Pi respectively the price indices for domestic consumption and trading partner.

The evolution of the real exchange rate of the WAEMU area shows two distinct periods. The first period covering 1985 to 1994 and the second period which is that of the post devaluation covering 1994-2014. The real exchange rate of the WAEMU zone has experienced a downward trend between 1985 and 1994 before undergoing an increase between 1994 and 2014. In the WAEMU zone, over the period 1994 to 2014, the real effective exchange rate increased by 20.27%. The nominal effective exchange rate (NEER) posted an upward trend of 10% between 1994-2014. This increase can let, all things being equal, claim a loss of competitiveness in this period. But the fundamentals of the economy of the area, the main determinants of the equilibrium exchange rate will experience inevitably similar trends.

FIGURE 1: WAEMU REAL EXCHANGE RATE (1985-2014)

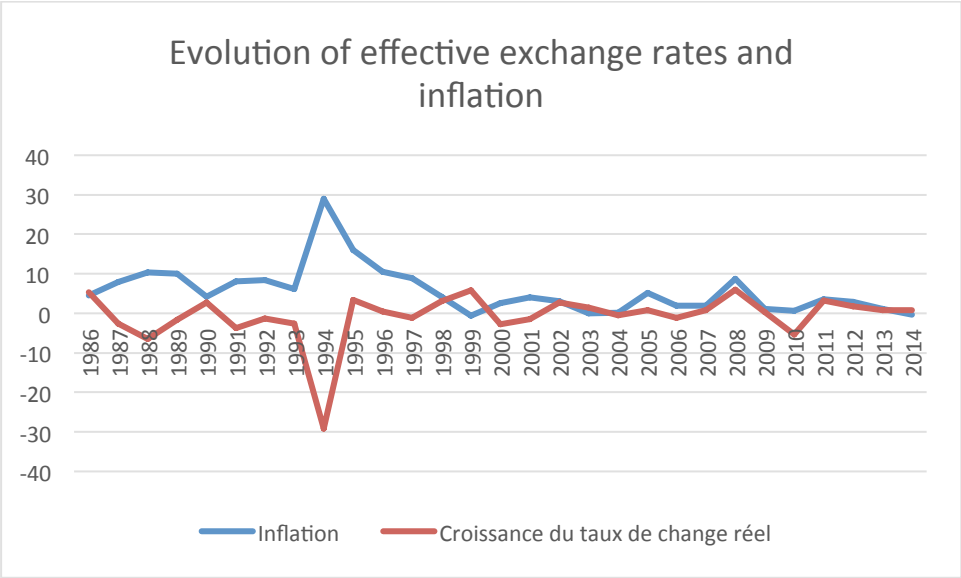


Source: Author by CERDI data and own calculation, 2016

Over the same period, WAEMU zone countries, compared to sub-Saharan Africa, have had great success in reducing inflation. However, only countries outside the franc area conducted a surprise in terms of economic growth. In the WAEMU countries, the reduction of inflation was accompanied by a sustained increase in unemployment. Therefore, a significant portion of disinflation in the area, on this period may explain the low level of growth and output volatility.

In the context of the WAEMU area countries, an analysis of the real exchange rate, coupled with the inflation level shows a change of phase between 1985 and 2002. With the devaluation of January 1994, there is a high inflation (28.94 %) following the uncertainty that accompanied the devaluation. The effect of this devaluation has narrowed in the years 1999. Between 2002 and 2014, the real exchange rate and inflation have similar trends (see chart below).

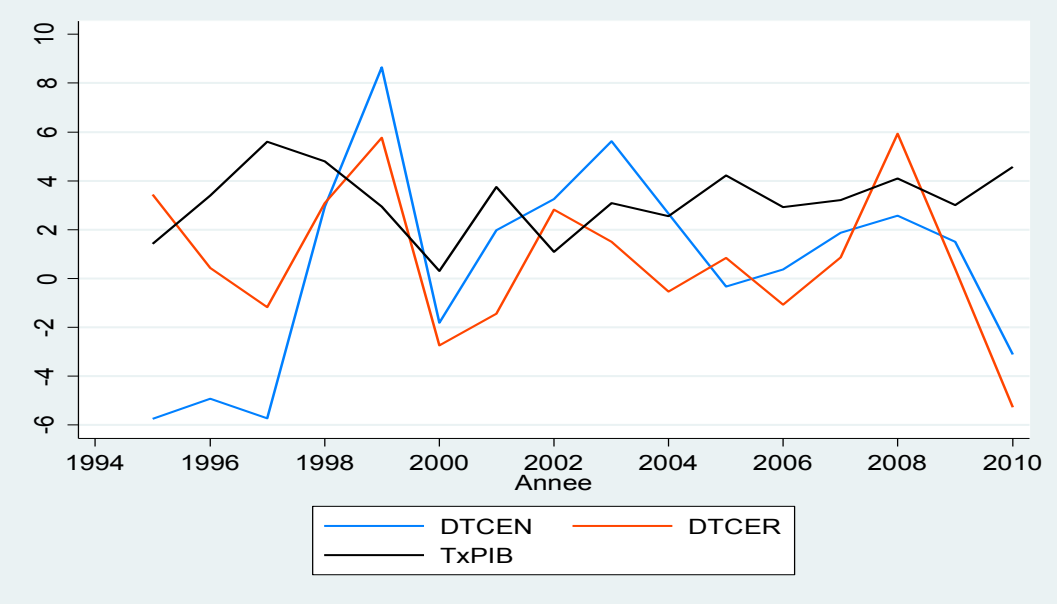
FIGURE 2: EVOLUTION OF CHANGES IN EFFECTIVE EXCHANGE RATES AND INFLATION (1985-2014)



Source: Author by CERDI, UNCTAD data et and own calculation, 2016

Moreover, the joint evolution of changes in effective exchange rate and the economic growth rate in the WAEMU zone seems to confirm the negative relationship between the real effective exchange rate and the WAEMU zone growth. The periods of negative changes in the equilibrium real exchange rate were followed by economic growth.

FIGURE 3: EVOLUTION OF CHANGES IN EFFECTIVE EXCHANGE RATES AND ECONOMIC GROWTH



Source: Author by CERDI, UNCTAD data et and own calculation, 2016

The literature has identified two (2) main channels through which the exchange rate may affect the domestic wage and price formation. First, a change in the evolution of the

exchange rate could have effects on domestic prices of imported goods. Similarly, a change in the prices of imported goods will affect directly consumer prices when these imports are comprised of consumer goods or indirectly when the imported products represent inputs for production.

A second possible effect is that domestic producers react to the decrease in import prices in order to enjoy their profitability. If this effect is significant, the size of exchange rate effect on consumer prices and not on tradable goods including imports and exports competitive products imported into the price index. This is the competitiveness effect.

The variation over time of the real effective exchange rate is largely attributable to factors qualified as economic fundamentals. The lessons learned from Frenkel and Mussa (1985) models, Chinn and Johnston (1996), and Alberola and al. (1999) suggest that the value of the effective exchange rate equilibrium be determined by the following factors: net foreign assets, productivity bias, total government spending, terms of trade, the degree of openness of the economy and the level of productive investment.

A second possible effect is that domestic producers react to the decrease in import prices in order to enjoy their profitability. If this effect is significant, the size of exchange rate effect on consumer prices and not on tradable goods including imports and exports competitive products imported into the price index. This is the competitiveness effect.

The variation over time of the real effective exchange rate is largely attributable to factors qualified as economic fundamentals. The lessons learned from Frenkel and Mussa (1985) models, Chinn and Johnston (1996), and Alberola and al. (1999) suggest that the value of the effective exchange rate equilibrium be determined by the following factors: net foreign assets, productivity bias, total government spending, terms of trade, the degree of openness of the economy and the level of productive investment.

1.2 Exchange Rates, Inflation and Growth: A Literature Review

The consideration of the real exchange rates in analyses allowed to have from the pioneer's work of the equilibrium exchange rate theory, Nurkes (1945) and Artus (1977), four (4) emerging theories from the literature of estimating the equilibrium exchange rate. The theory of parity purchasing power (PPP), called behavioural theory developed by Clark and MacDonald (1998) Behavioural Equilibrium Exchange Rate (BEER), the one called Fundamental Equilibrium Exchange Rate (FEER) developed by Williamson (1983, 1994) and The Fundamental Equilibrium Exchange Rate (FEER) and the Natural Real Exchange (NATREX) of J. Stein (1994).

From the Fundamental Equilibrium Exchange Rate (FEER) approach, Williamson (1994) has made a study on the G7 economies. It shows that the last quarter of 1989 was marked by an overvaluation of 14% against an undervaluation of the Japanese yen of 27%. By using the Computable General Equilibrium Model, Devarajan (1997) finds an overvaluation of the real exchange rate by 9% in Burkina Faso. Elbadawi, Baffes and O'Connell (1999) analysed the misalignment of the real exchange rate in Côte d'Ivoire and Burkina Faso. Contrary to the results obtained by Devarajan (1997), their study found no overvaluation in Burkina Faso. According to the authors, Burkina Faso has experienced an average annual undervaluation of 34% over the 1987-1993 period. Dufrenot and Yehoue (2005) analysed the relationship between real exchange rate and the economic aggregate of sixty-four (64) developing countries. The dynamics of the real exchange rate is explained by certain fundamentals: productivity, terms of trade, trade openness. The results of the study show the significance level of less fundamental for middle-income countries compared to those with low incomes.

Rodrick (2008) studied the misalignment of the real exchange rate and economic growth over the period 1950-2004. Using a methodological approach in time series over 184 countries, the author used an index to measure the degree of undervaluation of the real exchange rate, adjusted by the Balassa-Samuelson effect using the indicator of GDP per

head. The results of the study reveals that overvaluation of the real exchange rate harms economic growth, while the opposite effect occurs in case of undervaluation.

Several studies of the economic literature are devoted to the research of the equilibrium real exchange rate. These works are from Mac Donald (2000), Driver and Westaway (2004) Fic and al (2008). Fic and al study the macroeconomic consequences of fixing of the exchange rate irrevocably fixed in the euro area. They estimated the real exchange rate equilibrium of eight of the ten candidate countries of the European monetary zone after fulfilling the Maastricht criteria. Candelton and al (2013) using a cointegration approach panel did a study on the Baltic States using quarterly data over the period 1993-2001.

Gala and Lucinda (2006) developed a dynamic panel analysis by using the technique of the Generalized Method of Moments (GMM) system with 58 countries covering the period 1960-1999. By measuring the misalignment of the exchange rate by incorporating the Balassa Samuelson, the authors used control variables such as human capital, physical capital, inflation, the institutional environment, the output gap (output gap) and the terms of trade. The study showed that a depreciation (appreciation) of the exchange rate leads to increase (decrease) in economic growth.

Berg and Miao (2010) developed an empirical investigation of the misalignment of the exchange rate and growth. Eichengreen (2008) made a review of literature on the exchange rate and growth by structuring his analysis on the impact of the real exchange rate on long-term economic growth. He recommends that small fluctuations in the real exchange rate and its recognition as competitiveness indicator enable the country to make a qualitative leap in growth, evidenced by the strong example of growing economies East Asia.

Hooper and Lowrey (1979) demonstrated that the inflation rate is about 0.8 or 0.9 percentage point higher in each of the first two years after a 10% fall, and perhaps a little more high in the following years too. So a depreciation of the exchange rate could trigger inflationary pressures in the economy. The effects on aggregate demand can exacerbate the inflationary impact.

Dornbusch and Fischer (2003) analyse the role of the exchange rate appreciation of the dollar and find a direct effect of exchange rate movements on wage settlements, beyond the indirect effects via price or production and consumption. Regarding costs, Gordon and Le Roi (1982) show that the price of the exchange rate, the import prices of food and fuel are unchanged by the way of disinflation.

In a world of high capital mobility, the expansionary fiscal policy financed by the issuance of government bonds increases domestic interest rates and attracts more foreign capital in relation to the initial exchange rates (Mundell, 1962). The influx of foreign capital creates a capital account deficit. However, a direct comparison between interest rate differentials and exchange rates can be misleading. The simple observation of particular episodes can even lead to a perverse situation. Consequently, the effect of a change in fiscal policy on the exchange rate is indeterminate.

Indeed, in theory, fiscal policy affects the exchange rate through several channels and the direction of these effects may not be the same, depending on the relative size of the key parameters values. Empirical studies, however, have shown that an increase in the budget deficit leads to an increase in activity. This situation causes a demand for money increased and that of short-term interest rates. The increase in interest rates attracts, in turn, incipient capital inflows and put upward pressure on the exchange rate.

Similarly, a contraction in economic activity results in a deterioration of the current account and an increase in the level of inflation which affects the price competitiveness, i.e., the price performance relative to competitors. The different components of fiscal policy have different effects on economic efficiency based on the exchange rate regime through two main channels, namely changes in labour costs and movements in the nominal exchange rate when the rate of exchange is flexible.

Lane and Perotti (1996), using a panel of OECD countries over the period 1960-1994, showed that a higher salary expense of the state leads to increased labour costs and an appreciation of the nominal exchange rate, and consequently has a negative impact on economic efficiency under a flexible exchange rate regime. The opposite is true for increases in labour taxation. However, an increase in non-salary expenditures and government transfers have minor effects on the exchange rate and economic efficiency.

The theoretical and empirical literature has shown that in the context of monetary policy, a faster pace of monetary expansion in an area, in the context of stable demand, tends to depreciate the nominal exchange rate, and vice versa. In the short term, interest rate changes, consequences of a pulse of monetary policy, have an effect on the exchange rate. Monetary policy has a comparative advantage in controlling inflation and balance of payments therefore, it should be reserved for this purpose as a financial instrument for financial goals and fiscal policy would be a real instrument for real goals.

Under a monetary policy focused on controlling inflation, changes in exchange rates are not expected to affect the trend inflation rate. However, in the short term, any depreciation of the dollar increases the price of imported goods and, consequently, higher production costs. The extent of rising costs and the rate at which it is transmitted to consumers depends on the share of imports into the basket type of the Consumer Price Index (CPI) and a number of other factors such as the demand conditions, the price adjustment costs and the perception of the term of depreciation (Lafleche, 1997).

Monetary policy is very important in the management of exchange rates. Wondering if the exchange rate is influenced by monetary policy and whether these effects are permanent or temporary, Simwaka (2004) estimates the misalignment of the real effective exchange rate, and performs causality tests between several measures of monetary shocks and the real misalignment of the effective exchange rate. The results show that excess money supply predicts the misalignment of the exchange rate without retroactive effect.

The formation of exchange rate expectations creates effects of monetary policy shocks in open economies. Pierdzioch (2002) using a dynamic general equilibrium model with two countries suggests that the effects of short-term production of permanent monetary policy shocks diminish if expectations of the exchange rate on the foreign exchange market are regressive.

On the other hand, if the influence of traders is strong enough, a permanent shock expansionary monetary policy may lead to a temporary fall in the production of the country in which it takes place. For Papell (1988), within the USA, monetary policy rule, which stabilizes the nominal GDP growth rate, receives a considerable empirical support. The rule provides a better fit with a number of alternatives, including strict inflation stability, strict stability of production, and stabilization of the real exchange rate.

2. Methodology, estimation techniques and data

2.1 Specifying equations

Three (3) equations were specified: the equation of equilibrium exchange rates; the equation of relationship between the degree of misalignment and the inflation and the equation of relationship between the degree of misalignment and economic growth.

❖ Equation of the equilibrium exchange rate and misalignment

In this study, we opted for the BEER approach linking the real exchange rate to its fundamental following equation:

$$q_{i,t} = \square_1 PROD_{i,t} + \square_2 GOUV_{i,t} + \square_3 TINV_{i,t} + \square_4 TE_{i,t} + \square_5 OUV_{i,t} + \mu_i + \vartheta_t + \varepsilon_{i,t} \qquad (1)$$

Where $q_{i,t}$ is the real effective exchange rate of country i at time t; $PROD_{i,t}$ relative productivity measured by the the GDP ratio of the country concerned with respect to key partners. The main partners considered in this study are the countries of G20. These G20 countries are considered in this article because the G20 countries are the main partners with which the WAEMU countries maintain their relations. This is also explained by the desire to have a homogenous group of countries with which WAEMU countries maintain trade relations.

DEPGOUV, represents the share of government consumption in GDP; $INV_{i,t}$, proportion of total investment in GDP; $OUV_{i,t}$, the degree of opening, proportion of foreign trade in GDP, i.e. the sum of exports and imports to GDP); μ_i, country-specific effect; v_t designates the time fixed effect common to all countries ;. $\varepsilon_{i,t}$, idiosyncratic and random deviation is assumed independently and identically distributed (iid). The terms of trade (TE) are associated with higher rates of export to import prices and all things being equal, with better trade performance and a real appreciation of the exchange rate over time.

This equation identifies the determinants and calculate the long-term equilibrium exchange rate to derive the degree of misalignment which is the difference between the observed value of the real effective exchange rate and its level of long-term equilibrium.

The level of the equilibrium exchange rate is determined from regression of long-term values of fundamental exchange rate determined assuming the parameters in equation (1) unchanged. The long term fundamental values being determined from the HP filter assuming a smoothing coefficient of annual values equal to 100.

The value of the degree of misalignment is obtained by:

$$MS_{i,t} = q_{i,t} - \hat{q}_{i,t} \qquad (2)$$

where $\hat{q}_{i,t}$, represents the estimated value from the equation of the equilibrium exchange rate.

❖ Equation of the relationship between misalignment and inflation

This equation is specified as follows:

$$\pi_{i,t} = \alpha\pi_{i,t-1} + \delta\sum_{j=1}^{N} w_{i,j}\pi_{j,t} + \theta MS_{i,t} + \beta' X_{i,t} + \mu_i + \vartheta_t + \varepsilon_{i,t} \quad (3)$$

$\pi_{i,t}$ represents the inflation rate of a country i at t; $\pi_{i,t-1}$, the expected inflation rate; and $IMS_{i,t}$, indicator of misalignment degree. $X_{i,t}$ represents all identified control variables: the share of government consumption in GDP; population growth, the degree of opening.

❖ Equation of relationship between misalignment and economic growth

To determine the impact of misalignment on economic growth, we specified our model around the equation:

$$y_{i,t} = \alpha y_{i,t-1} + \delta\sum_{j=1}^{N} w_{i,j}y_{j,t} + \varphi MS_{i,t} + volMS_{i,t} + \beta' X_{i,t} + \mu_i + \vartheta_t + \varepsilon_{i,t} \quad (4)$$

$y_{i,t}$, represents the logarithm GDP per capita; $MS_{i,t}$ misalignment of exchange rates; $volMS_{i,t}$ the volatility of the exchange rate misalignment; $X_{i,t}$, represents all identified control variables appropriately in the empirical literature as factors affecting economic growth. This is the relative productivity, the investment rate, the degree of openness, government expenditure inflation.

2.2 Data and estimation techniques

The data used within this section are mainly from the BCEAO database of African Economic Outlook and the Ushebrooke University database. They cover the eight UEMOA countries over the period 1985 to 2014. As has been the case of the analysis of panel data with high temporal dimension, unit root and cointegration tests were mobilized. Three (3) unit root tests in panel are used. This is Levin, Lin and Chu (2002) test; Im, Pesaran and Shin (2003) and the test Maddala and Wu (1999) and Choi, (2001)[2] test.

Indeed, the test of Levin, Lin and Chu made the assumption of homogeneity of the autoregressive root in H1. As against that of Im, Shin Pesaran and help answer this criticism that it is unlikely that in case of rejection of the unit root hypothesis we can accept the hypothesis of a common root to all autorégressive people. (Hurlin and Mignon (2005). For Maddala & Wu, the principle is simple and is based on a combination of the significance levels of N individual tests independent unit root. The test statistic may be selected as the t-statistic with an ADF test; or statistics of any other test of the null hypothesis of unit root.

The results for each of our different variables shows that our variables are either stationary in level or first difference.

In the literature, Westerlund (2007) proposed a panel co-integration test with multiple structural breaks. This is a more general test of co-integration test from Pedroni (1999) which

[2]The test Maddala and Wu and Choi respectively uses statistics from the p-value of the ADF tests and Phillip Perron.

offers the possibility to take into account the multiple structural breaks in both the level and trend of a panel regression with different cointegrate statistics construction methods to test the null hypothesis of no cointegration.

Indeed, Westerlund uses an error correction model to examine whether there is an error correction for the overall panel or groups of individuals.

$$\Delta y_{i,t} = c_i + a_{o,i}(y_{i,t-1} - b_i x_{i,t-1}) + \sum_{j=1}^{k_{1,i}} a_{1,ij}\Delta y_{i,t-j} + \sum_{j=-k_2{}^i}^{k_{3,i}} a_{2,ij}\Delta y_{i,t-j} + \mu_{i,t}$$

$a_{0,i}$ is correcting speed-term adjustment. Before the latter terms include delays and directions Δx to ensure the exogeneity x. For appropriate values of k_i, Estimates are doing separately $\forall i$. When $a_{0,i} = 0$, then there is no error correction, y and x therefore are not cointegrated.

TABLE 1: RESULTS OF COINTEGRATION TESTS

Variables	Tests	Statistiques	Cointegration [3]
PROD	Gt	-5,04	cointegrated
	Ga	-10,51	cointegrated
	Pt	-6,06	cointegrated
	Pa	-6,92	cointegrated
TE	Gt	-4,031	cointegrated
	Ga	-18,05	cointegrated
	Pt	-11,59	No cointegrated
	Pa	-17	cointegrated
INV	Gt	-4,36	cointegrated
	Ga	-15,23	cointegrated
	Pt	-7,25	cointegrated
	Pa	-12,56	cointegrated
OUV	Gt	-4,034	cointegrated
	Ga	-23,26	cointegrated
	Pt	-9,16	cointegrated
	Pa	-18,78	cointegrated
DEPGOUV	Gt	-4,96	cointegrated
	Ga	-11,71	Cointégrés
	Pt	-14,45	No cointegrated
	Pa	-9,54	cointegrated

Source: Author

If $a_{0,i} < 0$, then there exists an error correction therefore y et x are cointegrated. A total of four (4) tests based on the group average and pooled panel are used. The large negative values reject the hypothesis Ho of absence of cointegration. In case of no rejection, the bootstrap procedure is used to obtain robust critical values. The results are shown in the table above.

The results of cointegration tests suggest the existence of a cointegrating relationship between the real effective exchange rate equilibrium and the fundamentals of the economy

[3] Decisions are made at a of 5% threshold

of the area. As a result, three technical estimates of non-stationary data i.e. the Pooled Mean Group estimator (PMG), the Mean Group estimator (MG) and the estimator Fix Dynamics Effect (DFE) were mobilized. Then, the Hausman test was used to select the best technique. Indeed, the PMG estimation procedure is to estimate the model with the assumption that long-term effects are constrained to be equal in all individuals or special groups. By cons, short-term coefficients are allowed to differ. Regarding the MG technology, the model coefficients are calculated from the weighted average of the unconstrained model, entirely heterogeneous.

2.3 Results, analysis and discussion

2.3.1 Misalignment of the real effective exchange rate

An increase in productivity in the WAEMU zone of 1% with respect to its G20 partners would result from the estimate of PMG, a real appreciation of 0.61%, which shows the presence of Ballassa-Samuelson effect in accordance with the most studies. Our estimates show that the relative productivity is not a major fundamental of the real effective exchange rate.

In the short term, official development assistance (ODA) and the degree of openness seem to be the determining factor in the value of the equilibrium real effective exchange rate. However, in long term, the equilibrium real effective exchange rate is determined by government spending, terms of trade, the net external position, the trade balance, the degree of openness and public aid development (table 2). The coefficients of the latter variables are statistically significant.

From the PMG, government spending have a positive impact on the real exchange rate. An increase in government spending of 10 percent causes a decrease in the real exchange rate of 0.62 percent.

The impact of the balance of trade on the exchange rate is relatively low but significant. Indeed, any increase in the trade balance of the WAEMU countries of one percent generates real appreciation of 0.029%.

Any increase in investment of 10% causes a real appreciation of 0, 047% of the exchange rate of the WAEMU zone. This sign is different from those found by some empirical studies. Indeed, in a study by Baffes et al (1999) on developing countries over the period 1965-1993, the authors found coefficients between -0.43 and -0.27.

TABLE 2: RESULTS OF THE ESTIMATION OF THE FUNDAMENTAL EXCHANGE RATE ON AVERAGE OF SIX YEARS (1985-2014)*)*

	Pooled Mean Group	***Mean Group***	***DFE***
	(1)	(2)	(3)
	ltcr	*ltcr*	*ltcr*
Relative productivity	0.609	-30.65	-3.086**
	(1.814)	(40.47)	(1.387)
Government spending	-0.0617*	-0.49:7**	0.0458
	(0.0318)	(0.237)	(0.0458)
Terms of trade	-0.0307*	-0.532	-0.0620*
	(0.0163)	(0.480)	(0.0353)
Net foreign asset	0.294***	0.785	0.108
	(0.0753)	(0.787)	(0.107)
Trade balance	0.00290**	0.0292*	0.000466
	(0.00132)	(0.0159)	(0.00119)
APD	-0.0200*	-0.0406	0.00542
	(0.0111)	(0.0576)	(0.0178)
Investment	0.00466	0.288	0.0247
	(0.0234)	(0.254)	(0.0156)
degree of openness	-0.0816***	0.353	-0.0172
	(0.0239)	(0.288)	(0.0323)
SR			
Relative productivity	-27.84	-24.42	-5.211**
	(23.28)	(28.70)	(2.649)
Government spending	0.0617	0.0216	0.123***
	(0.0400)	(0.0520)	(0.0294)
Terms of trade	-0.0526	-0.0830	-0.0204
	(0.0353)	(0.0706)	(0.0205)
Net foreign asset	-0.00604	0.124	-0.0719
	(0.134)	(0.210)	(0.0944)
Trade balance	-0.00128	0.00195	0.000400
	(0.00184)	(0.00234)	(0.00166)
APD	0.0298*	0.0293	0.0254**
	(0.0164)	(0.0195)	(0.00972)
Investment	-0.00408	0.0229	0.0131
	(0.0220)	(0.0278)	(0.0172)
degree of openness	-0.0710**	0.0512	-0.112***
	(0.0245)	(0.109)	(0.0274)
Dummy 94	-0.285***	-0.228***	-0.289***
	(0.0381)	(0.0342)	(0.0378)
_cons	0.690**	1.813***	0.854**
	(0.276)	(0.502)	(0.410)
N	232	232	232
Hausman Test			

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$
Source: Author by estimation

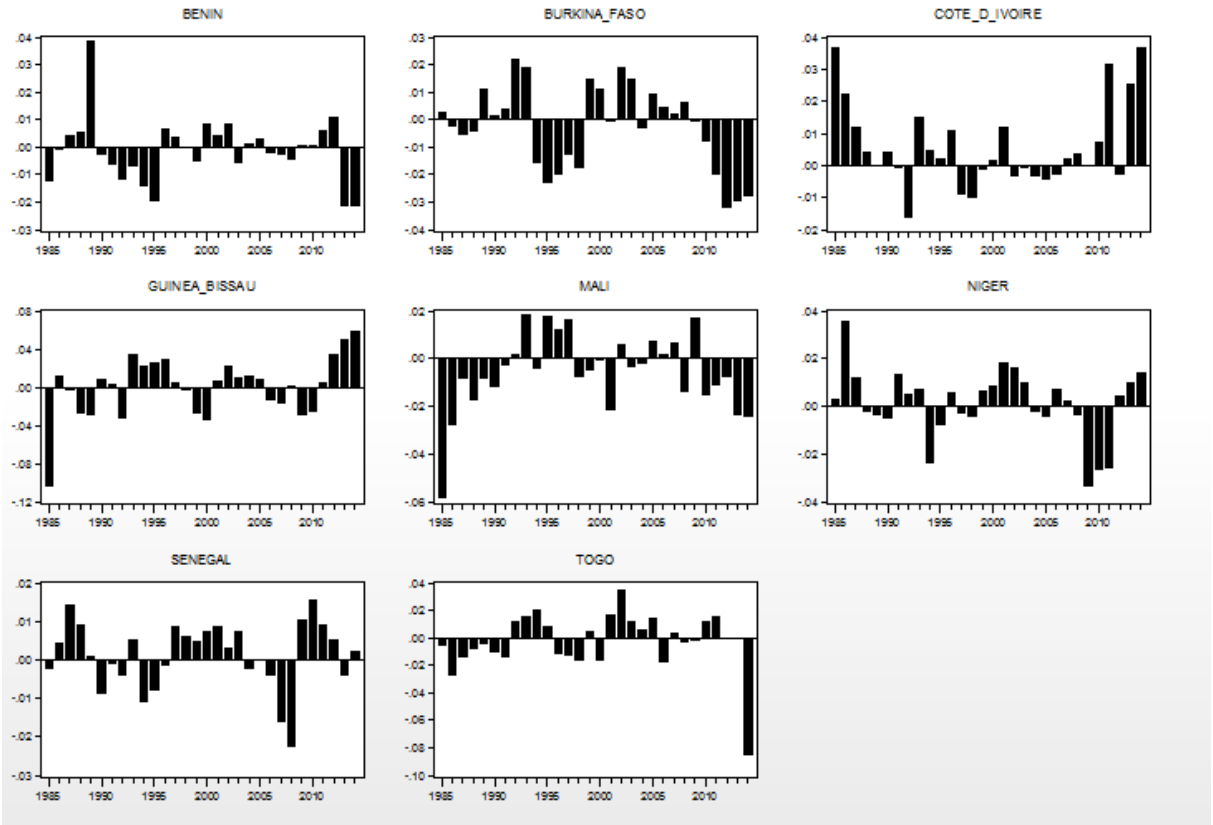
The figure below (Figure 4) shows the evolution of the misalignment of the exchange rate of the countries of the UEMOA zone. These graphs are from the estimation results of the specification summarized in Table 2 (estimated using the Pooled Mean Group technique on

non-stationary panel data) in which we have approximated the relative productivity by GDP ratio of the different countries by one of the main partner countries[4].

The analysis of the graph shows that all the countries of the WAEMU zone experienced an overvaluation of the real exchange rate in 1993. This has contributed to the devaluation of the CFA franc in January 1994. These countries have experienced an undervaluation of their rates exchange in 1994. This undervaluation of exchange rates with the objective of economic competitiveness in the WAEMU zone has not had a big impact. These effects have worn off two to three years later depending on the different economies (Figure 4 and 6).

Overvaluation of the CFA franc in the WAEMU zone is observed over the period 2002 to 2004 for most economies of the West African sub-region and an undervaluation of 2011-2014. Over the study period (1985-2014), the level of misalignment of the exchange rate of the countries of the WAEMU zone varies between 0.56 and 0.12. The highest rate of overvaluation over the 1985-2014 period is achieved by Guinée Bisseau which has recorded a recent overvaluation of 5.79 the years 2013 and 2014. The average level of volatility of the misalignment of the WAEMU real exchange rate varies from one economy to another with a higher variability for Guinea Bisseau (3.12) and a lower level of variability achieved by Senegal (0.86) over the study period. The evolution of misaligned exchange rate is compiled into the graph in Figure 4.

FIGURE 4: MISALIGNMENT OF EXCHANGE RATES OF WAEMU COUNTRIES (1985-2014)



Source: Author by estimation data

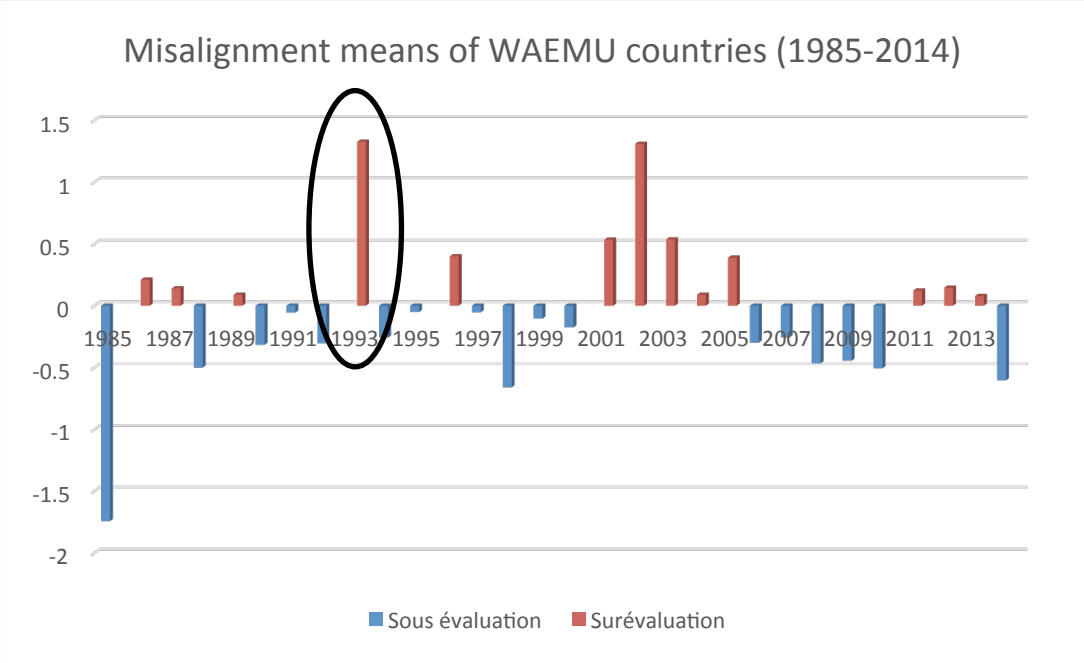
[4] The main partner countries considered in the context of this article is the G20.

FIGURE 5: DESCRIPTIVE STATISTICS OF THE MESALIGNEMENT OF WAEMU COUNTRIES

	BENIN	BURKINA FASO	COTE D'IVOIRE	GUINEE BISSAU	MALI	NIGER	SENEGAL	TOGO
Mean	-0.121	-0.2672	0.5856	-0.00763	-0.5616	0.1037	0.1198	-0.2351
Median	-0.0634	-0.0266	0.1912	0.4279	-0.4502	0.352	0.2661	-0.0895
Maximum	3.8276	2.1698	3.6807	5.7949	1.8137	3.5643	1.5533	3.4779
Minimum	-2.1478	-3.2014	-1.6057	-10.4068	-5.8116	-3.3051	-2.2667	-8.5412
Std. Dev.	1.1415	1.5084	1.3107	3.1228	1.6112	1.4361	0.8591	2.0871
Skewness	93.2363	-33.3246	100.2404	-96.3695	-96.1496	-48.5363	-79.7548	-194.7639
Kurtosis	623.2533	216.4559	339.8495	540.4327	498.4185	378.8659	359.1522	955.4602
Jarque-Bera	1740.809	142.7718	522.2567	1186.953	954.3613	195.5362	361.779	7266.999
Probability	0.0166	48.9751	7.344	0.2646	0.8465	37.6182	16.3835	0
Sum	-3.6313	-8.0146	17.5695	-0.2289	-16.8492	3.1099	3.5932	-7.0517
Sum Sq. Dev.	0.3779	0.6598	0.4982	2.828	0.7528	0.5981	0.214	1.2633
Observations	30	30	30	30	30	30	30	30

Source: Author by estimation data

FIGURE 6: MISALIGNMENT MEANS OF WAEMU COUNTRIES



Source: Author by estimation data

The analysis of the impact of misalignment on inflation and economic growth is made with the estimator of GMM to avoid potential endogeneity bias resulting from the presence of lagged variables in the different models.

2.3.2 Misalignment and inflation

The figure below and Table 3 presents the empirical results of the analysis of the misalignment of the exchange rate on the inflation rate.

From estimating the GMM, the autocorrelation test of second order Arellano and Bond help to accept the hypothesis of no autocorrelation of second order. The over-identification test and Sargan Hansen obtained from Table 2 with p-value = 1 shows that the null hypothesis Ho of validity of the over-identifying restrictions cannot be rejected. Instruments used for the estimate are valid inducing the validity of the results.

Three estimates were made. The estimate (2) and (3) have taken into account the impact of the relative productivity of WAEMU countries in comparison with these partners on inflation the particularity of estimate (3) is that the latter did not take into account the 1994 devaluation.

Indeed, the delayed inflation has a negative and statically significant effect of the order of 0.55 to 0.58. Following low price level in the WAEMU zone during a year, the economic agents expect a price increase for the coming years. Suppose the European Central Bank cut its key interest rates to boost the economies of the euro area. In view of the productivity differential between the euro area and the WAEMU zone on the one hand and the existence of the fixed parity between the CFA and the euro, the BCEAO is also expected to lower its key rate to reduce the rate differential interest leaving the flight of capital to maintain investment in the WAEMU zone. The price level having experienced a decline, economic agents will anticipate future price increases. As a result, the price level is adaptive in the area.

The results of the empirical analysis of the impact on inflation by a policy change that alters the exchange rate, but not the production seems suggested that the strength of the CFA franc has played a major role in the disinflation process of the area. Periods during which the CFA franc zone has appreciated were accompanied by lower inflation. Indeed, the impact of the misalignment of the exchange rate and its volatility in inflation is negative. A level of undervaluation of exchange rates in the WAEMU zone is synonymous to high inflation with a coefficient of -1. Whatever the estimate (1), (2) or (3), the results indicate that the misalignment of the exchange rate exerts an opposite effect on the inflation rate. The order of magnitude is between 0.375 and 1. However, the coefficient is not statistically significant.

The higher the level of the real exchange rate from its equilibrium level is high in the WAEMU zone, the more we see a level of disinflation. The countries of the WAEMU zone being fixed exchange rate with the euro zone, the zone does not have the leeway necessary for automatic stabilization of the exchange rate except to opt for a devaluation. This is consistent with economic reality because the main objective of the BCEAO, is controlling inflation. Although the incidence of misalignment on inflation is not significant, volatility plays an important role in the evolution of the price level in the zone.

The impact of the volatility of the real exchange rate on economic growth is more stressed with a significant negative coefficient. Facing volatile real exchange rate of 10 points, the general price level declined by 12.39 points. The higher the volatility misaligned real exchange rate increase, the more the level of inflation decreases. Thus, high volatility of the equilibrium exchange rate is synonymous with low inflation in the WAEMU zone. The figure below shows the relationship between the level of misalignment and inflation in the WAEMU zone.

An increase by 10 points output gap leads to increase in the inflation level by 0.01 points. My estimates show that economic growth is positively correlated with inflation. An increase in the economic growth of a point is followed by inflation of 0.28 points. Thus, a gain of economic growth is a source of inflation in the zone. The similar effect is also analysed in Table 4 or study to determine the impact of inflation on economic growth.

The devaluation of the CFA franc in January 1994 had a high positive impact (6.84 in (1)) on the level of inflation in the WAEMU zone. This devaluation has allowed an increase in the general price level of 28.89% in 1994.

Moreover, since the countries of the WAEMU exchange a lot with the euro zone of which certain economies belong to the G20 and since the CFA franc is pegged to the euro the price of the European market will have a significant effect on domestic prices of manufactured food and products. An increase of productivity in these economies with comparison to the economies of WAEMU synonymous with a decrease in the relative productivity could appear on the prices for domestic consumption, with a much greater impact than the share of direct import of food is higher. Therefore, a decrease in the relative productivity leads to higher prices therefore an inflationary situation.

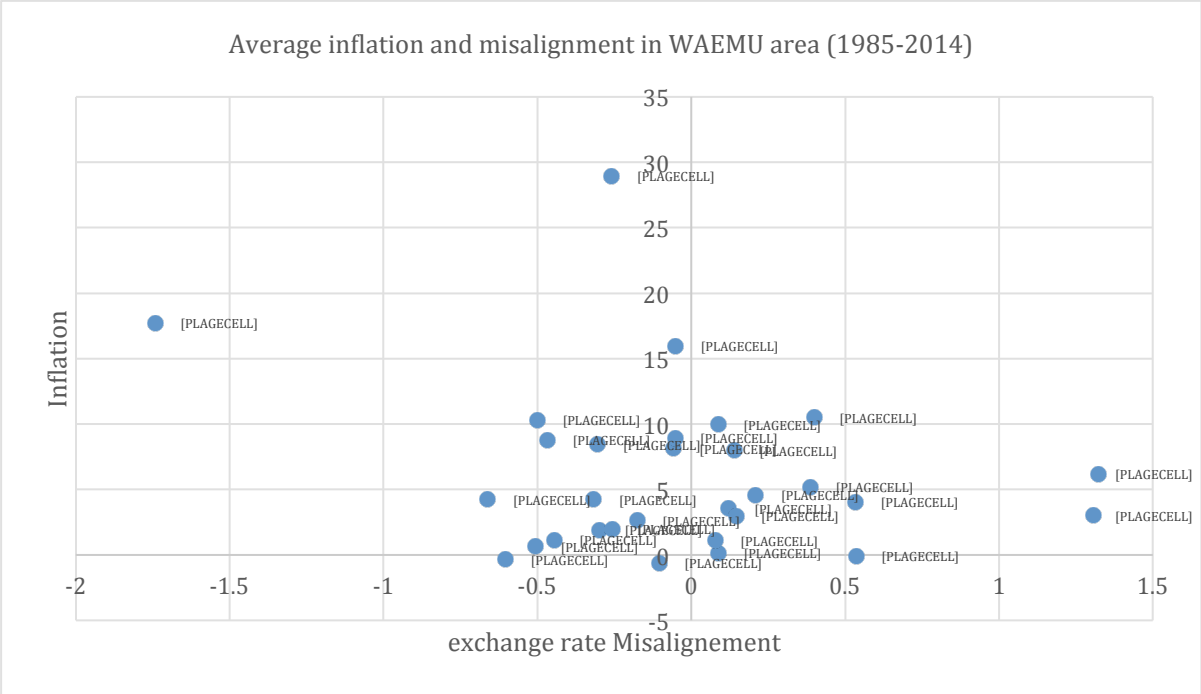
An increase in total government spending by one seems to have negative and statistically significant effects (estimate 3) on the inflation rate of around 13.86.

TABLE 3: MISALIGNMENT AND INFLATION FROM 1985 TO 2014 (AVERAGE OF SIX YEARS)

	(1) Inflation rate	(2) Inflation rate	(3) Inflation rate
Lagged Inflation	**-0.550*****	**-0.586*****	**-0.584*****
	(0.0259)	(0.0332)	(0.0862)
Misalignment	-1.066	-0.527	-0.375
	(0.917)	(0.910)	(1.146)
misalignment of volatility	**-1.239*****	**-1.050****	-1.107
	(0.213)	(0.368)	(1.138)
GDP growth	0.288	0.00554	-0.222
	(0.242)	(0.282)	(0.442)
Output gap	0.00101	0.00104	
	(0.000670)	(0.000716)	
Investment	1.420	0.930	-2.243
	(1.353)	(1.632)	(3.677)
degree of openness	-5.216	-2.445	-9.027
	(5.398)	(5.384)	(9.560)
Government spending	-10.14	-6.512	-13.86**
	(7.452)	(6.949)	(6.093)
Population growth	1.315		
	(0.714)		
dum94	**6.848*****	**7.730*****	
	(1.213)	(1.152)	
Relative productivity		-25.38	-21.88
		(18.29)	(62.39)
_cons	-0.0336	0.341	3.240*
	(0.463)	(0.386)	(1.591)
N	32	32	32
F	394.9	44.44	10.24

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$
Source: Author

FIGURE 7: EVOLUTION INFLATION MISALIGNMENT IN WAEMU AREA (1985-2014)



Source: Author by estimation data

2.3.3 Misalignment and economic growth

The estimation results (from three (3) estimates) of the misalignment effect on growth are shown in Table 4. From the estimate with the GMM, the autocorrelation test of second order Arellano and Bond materialized by 0.26 scalars; 0.22 and 0.39 according to estimates (1), (2) and (3) do not reject the hypothesis of no autocorrelation of second order. The Sargan over-identification test and Hansen obtained from Table 4 with p-value = 1 shows that the null hypothesis Ho of validity of the over-identifying restrictions cannot be rejected. The result is that the instruments used for estimation are validated inducing the validity of the results.

These results indicate that the estimated coefficients are negative, statistically significant and robust for variables delayed GDP volatility in the output gap, inflation, population growth.

In general, the results suggest that an appreciation of 10 degree point misalignment results in a decrease in the GDP growth rate by 0.36 points. In the event of volatility rate misalignment of the real exchange rate, the impact on growth is stronger. Following a volatile misalignment of 1 point misalignment rate, economic growth decreases by 0.86 points. These results show the negative impact that the deteriorating competitiveness of the region on the economic growth of various eight (8) countries of the WAEMU zone. A Gain of competitiveness has a positive impact on economic growth. Rodrik (2008) found in the case of China that undervaluation of their currency is accompanied by a revival of economic growth of around 1.35% over the period of five years.

As in most studies, the impact of inflation on economic growth in WAEMU countries over the period of study is negative and significant. Any increase in inflation of 1% leads to a reduction in economic growth by 0.72%.

TABLE 4: MISALIGNMENT AND ECONOMIC GROWTH 1985-2014 (AVERAGE OF SIX YEARS)

	(1)	(2)	(3)
Dependent variable	Real GDP growth	Real GDP growth	Real GDP growth
retarded Real GDP growth	-0.933**	-1.041**	-0.866**
	(0.245)	(0.209)	(0.195)
Misalignment	-0.360	-0.144	0.0638
	(0.328)	(0.245)	(0.473)
misalignment of volatility	-0.860*	-0.861	-0.898
	(0.404)	(0.466)	(0.510)
Relative productivity	-83.96**	-76.11***	-60.18
	(27.66)	(13.53)	(33.18)
exchange rates	2.092*	2.263**	1.842
	(1.049)	(0.883)	(1.184)
Government spending	-5.502*	-2.984	-1.930
	(2.412)	(2.796)	(4.004)
Inflation	-0.728**	-0.597**	-0.671**
	(0.229)	(0.238)	(0.278)
Square inflation	0.00967*	0.00740	0.00882*
	(0.00435)	(0.00487)	(0.00418)
Dummy 94	3.480**	2.966**	3.236**
	(1.070)	(1.108)	(1.080)
degree of openness			3.269
			(3.868)
degree of openness	-0.550		
	(3.036)		
Net Foreign asset			0.0569
			(0.128)
Const	18.63	9.189	6.582
	(15.44)	(7.156)	(9.823)
N	*32*	*32*	*32*
l.meanpibcr-1	*-1.93****	*-2.00****	*-1.86****
AR(2)	*0.268*	*0.22*	*0.39*
Hansen Test	*1.00*	*1.00*	*1.00*

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$
Source: Author

2.3.4 Misalignment and policy mix

WAEMU being fixed peg to the French franc and after the euro, the result is that the degree of misalignment of the CFA is largely explained by securing the CFA to the Euro (which generally experienced real instability in recent years) and the inability of the central bank to ease monetary and financial conditions under the trilemma it is facing.

Certainly over post devaluation period, the inflation rate has been mastered and there is a consensus among economists that there is no way to reduce the long-term inflation rate without eventually reduce the growth rate of the money supply.

However, the optimal strategy would consist in having flexibility in the conduct of monetary policy in order to maintain an external stability which will help reduce the sacrifice ratio in order to achieve the desirable level of unemployment and adequate welfare. Indeed, the most important post devaluation misalignments of real exchange rate were achieved between 2001 - 2005 and in 2011. That of 2011 having followed the subprime crisis has

caused speculation risk of further devaluation of the FCFA. They are largely due to the rise of the euro against the dollar, the euro dollar exchange rate has reached the level of 1.60 in 2008. In addition the marginal efficiency of capital is lower in WAEMU than in the majority of emerging countries and industrialized countries.

Also, the relative investment ratio must exceed 100 on average to significantly improve competitiveness.

Unquestionably the policy mix in the WAEMU zone has focused on the prudent orientation of monetary and fiscal policies of controlling public spending that the area has practiced on post devaluation period to display favourable inflation differentials in Union, which in 2011 reached 3.3% compared to South Africa, 9.4% in Nigeria and 11.9% in Ghana. But it could not stabilize the external balance to maintain the competitiveness of the area. If we assume that the reduction in inflation will result in the short term in an upward effect on the sacrifice ratio and the long term effect will be beneficial to production one would hope that in the future the area will prosper. But when looking at the performance of West African counties non member of WAEMU particularly Ghana and Nigeria and especially how these countries use the political and budgetary serving their economies, the issue of securing the CFA franc and the role of the policy mix remains relevant. For example in Ghana over the same period, the depreciation of the cedi against the CFA franc is explained by the importance of the overall budget deficit (about 8.0% of GDP), financed by advances from the Ghanaian banking system more generally by the expansive monetary policy, resulting in an increase in the money supply over 30% per year over the period.

In Nigeria, the poor performance of the course of the naira in the foreign exchange market is due to the alignment policy on the rate of the parallel market and the decline in reserves related to the contraction of revenues from oil exports. Moreover, the worsening budget deficit due to the contraction in tax revenues, combined with a high level of public expenditure and the conduct of accommodative monetary policy contributed to the depreciation of the naira.

Conclusion

The work conducted in this article confirm that over the period 1985-2014, the WAEMU zone has generally been an overvalued real exchange rate and thus a loss of competitiveness with sequential levels per period. Indeed, the results suggest that the continued overvaluation of the real effective exchange rate has led to a loss of economic growth in the area.

The main conclusion is that such misalignment leading to overvaluation was not generated by the current configuration of policy mix. However, non-accommodative monetary and financial conditions coupled with inappropriate exchange rate policy with regard to the structural evolution of the euro area appear to be responsible for this misalignment. This Conclusion challenges the Central Bank to think about either finding an optimal system of monetary management so that the disadvantages of a strong franc CFA does not outweigh the benefits or finding the exchange rate regime adapted to economic conditions, monetary and financial zone.

In any case for the WAEMU zone, the trend of the appreciation of the CFA franc and misalignment of the real exchange rate in the short term calls for a reorientation of the policy mix configuration in order to stimulate a real continuous depreciation after this long period of appreciation. Therefore, one might consider a policy mix of the WAEMU zone characterized by a restrictive fiscal policy but focused on the financing of important reforms coupled with flexible monetary policy designed to make monetary and financial conditions more accommodative.

References

« *CEMAC 2025: Vers une économie régionale intégrée et émergente* » ; Programme économique régional 2009-2015. Volume 2: Document de référence ; Janvier 2009.

Aflouk Jeong, Mazier et Saadaoui (2010) «exchange rate misalignments and world imbalances: A FEER Approach for emerging countries » International Economics, 124 pge 31-74.

Agnès BENASSY QUERE, Sophie BEREAU et Valérie MIGNON (2009) « Taux de change d'équilibre. Une question d'horizon ». *Revue économique*, Presses de Sciences Po, Volume 60, 2009/3.

Alain SERRES et Florian de PELGRIN (2003) « La baisse des taux d'épargne privée durant les années 90 dans les pays de l'OCDE: la contribution des déterminants autres que la richesse ». *Revue économique de l'OCDE n°36, 2003/1*.

Ali ABBDALLAH (2006) « Taux de Change d'Equilibre pour les PED, Application aux pays du Maghreb»

Arellano et Bond (1991) « some tests of specification for panel data: Monte Carlo Evidence and application to employment evidence, Review of economic studies, 55, page 277-297 »

ARNOLD, J. ET B. JAVORCIK (2009), « Gifted Kids or Pushy Parents? Foreign Acquisitions and Plant Productivity in Indonesia », Journal of International Economics, Vol. 79, pp. 42-53

Baffes Elbadawi et O'connel (1999) « Single equation estimation of the Equilibrium Real Exchange Rate in Exchange Rate Misalignment » in Hinkle and Montiel (Eds), *Concepts and Measurement for developing countries,* World Bank: Policy Research Department Washington, DC.

Barro (1991) « Economic growth in a cross section of countries*». The quarterly journal of economics.*

Benahji (2008) «Choix des politiques de change dans les pays en développements: Etude de la compétitivité de la Tunisie» Original Scientific Paper.

Benassy-Quéré et al (2008) « *Politique de change de l'euro* »

Béreau, Villavicencio and Mignon (2009) «currency misalignments and growth: a new looks using nonlinear panel data methods» *Working papers.*

Berg et Miao (2006) «The real Exchange rate: The Washington Consensus Strikes Back? »; *IMF Working Paper* No 10/58, March.

Bresser –Pereira (2004) « la politique macroéconomique brésilienne (1994-2003) et le second consensus de Washington» *Problème d'Amérique Latine*, pge 81-104.

Calvo, G. & Reinhart, C. M. (2002). Fear of floating. Quarterly Journal of Economics, 107(2):379–408

Choi, I. (2001), ìUnit Root Tests for Panel Dataî, Journal of International Money and Finance, 20, 249-272

Clark et MacDonald (1998) « Exchange rate and economics fundamentals–A methodological comparison of BEERs and FEERs » *International Monetary Fund*.

Combes, J-L et P. Plane (2007) « Zone franc et compétitivité », Rapport thématique Jumbo, Octobre 2007/22.

Coudert, V.; Couharde, C. Currency Misalignments and Exchange Rate Regimes in Emerging and Developing Countries. CEPII Working Papers, No. 7, 2008

Couharde et al. « *Taux de change d'équilibre et processus d'ajustement du franc CFA* »

Couharde, C., I. Coulibaly et O. Damette (2011) “Misalignments and Dynamics of Real Exchange Rates in the CFA Franc Zone”, EconomiX Working Papers, 2011-28

Devarajan (1997) « Real Exchange Rate Misalignment in CFA Zone », *Journal of African Economies*, Oxford ,Vol.6 No1.

Devarajan (1997) « Real exchange Rate Mesalignement in the CFA zone» *Journal of African Economics*, 6(1) pge 35-53.

Diamond (1989) «Government Expenditure and Economic Growth: An empirical Investigation», *Fiscal Affairs Department Working Paper*, n°45, International Monetary Fund.

Dickey, D.A. et Fuller, W.A. (1979), ìDistribution of the Estimators for Autoregres-sive Time Series with a Unit Rootî, Journal of the American Statistical Association, 74, 417-31.

Dooley, Folkerts-Landau et Garber (2005) «*interest rates, exchange rates and international adjustment»* » National Bureau of Economic Research Cambridge, Mass., USA.

Dufrenot et Yehoue (2005*)* «Real Exchange Rate Misalignment: A panel Co-integration and Common Factor Analysis», *IMF Working Paper 05/164*, Washington.

Duttagupta, R., and G. Tolosa, 2006, “Fiscal Policy in a Regional Currency Union,” in Eastern Caribbean Currency Union: Selected Issues, IMF Country Report No. 05/305 (Washington: International Monetary Fund), pp. 51–72

Easterly (2001) «The middle class consensus and economic development» *journal of economic growth* 6(4), pge 317-335.

Easterly et Rebelo (1993) « Fiscal Policy and Economic Growth: An Empirical Investigation », Journal of Monetary Economics, (32), Décembre 1993, PP.417-458.

Edwards(1989) « *Real Exchange rate, devaluation and adjustment exchange rate policy in Developing countries*», The MIT Press

Edwards, S. (1989) Real Exchange Rates, Devaluation and Adjustment: Exchange Rate Policy in Developing Countries, Cambridge: MIT Press

Eichengreen (2008) «The Real Exchange Rate and Economic Growth» *Commission on Growth and Development Working Paper*, No 4; The Word Bank.

Eichengreen, Barry and Poonam Gupta (2012), “Exports of Services: Indian Experience in Perspective,” National Institute of Public Finance and Policy (NIPFP) Working Paper No. 102, forthcoming, India Growth and Development Review

Elbadawi (1994) « Estimating Long Run Real Exchange Rates » in *Estimating Equilibrium Exchange Rates*, ed by J. Williamson (Washington: Institute for International Economics)

Elbadawi et Soto (1997) «Real Exchange Rate and Macroeconomic Adjustment in sub-saharian Africa and Other Developing Countries» *Foreign Exchange market and Exchange Rate Policies in sub-saharian Africa*, Supplementary Edition of the *Journal of African Economies.*

Fisher, R.A. (1932), Statistical Methods for Research Workers, Oliver and Boyd, Edin-burgh.

Frenkel (2004) « Real exchange rate and employment in Argentina, Brasil, Chile, and Mexico»

Frenkel,J.A. and M.Mussa,"Asset Markets, Exchange Ratesand the Balance Of Payments,"inHandbook of InternationalEconomics.Vol.2,R.W.JonesandP .B.Keneneds.,(Amsterdam:North-Holland),(1985).

Gala et Lucinda (2006) «Exchange Rate Misalignment and growth: Old and New Econometric Evidence» *Revista Economia*, 165-87, December.

Gnansounou, Sosthène Ulrich ; Verdier-Chouchane, Audrey (2012), Mésalignement du taux de change effectif réel: Quand faudra-t-il de nouveau dévaluer le franc CFA ?, Working Papers Series N° 166, African Development Bank, Tunis, Tunisia

Harrison (1996) «Openness and growth, a time series, cross-country analysis for developing countries» *Journal of development economics*, Vol 48n°2 419-447.

Hooper, Peter, and Barbara R. Lowrey. 1979. "Impact of the Dollar Depre- ciation on the U.S. Price Level: An Analytical Survey of Empirical Estimates." Staff Study 103. Washington: Board of Governors of the Federal Reserve System (March).

Hurlin, C. & Mignon, V., 2005. “Une Synthèse des Tests de Racine Unitaire sur Données de Panel”, Economie et Prévision, 2005-3/4, n°169-170

Im, K.S. et Pesaran, M.H. (2003), ìOn the Panel Unit Root Tests Using Nonlinear Instrumental Variablesî, Manuscript, University of Southern California.

Kaminsky (1988) « the Real Exchange Rate Since Floating: Market Fundamentals or Bubles» University of California, San Diego.

KELLER, W. ET S. YEAPLE (2009), « Multinational Enterprise, International Trade and Productivity Growth: Firm-Level Evidence from the United States », The Review of Economics and Statistics, Vol. 91, No. 4, pp. 821-831.

Kiema C., Nubukpo K., Sanou G. (2011) « Impact d’une dévaluation du franc CFA sur la balance commerciale et la production dans les pays de l’UEMOA », Communication au Colloque sur les « Chocs dans les pays en développement », DIAL / Université Paris - Dauphine, Paris, les 30 juin-1er juillet 2011.

Landeau (1986) «Government expenditure and Economic growth in less developed countries: an empirical Study for 1960-80» Economic Development and Cultural Change. Vol 35.

Levin, A., Lin, C.F., et Chu., C.S.J. (2002), ìUnit Root Test in Panel Data: Asymp-totic and Finite Sample Propertiesî, Journal of Econometrics, 108, 1-24.

Loayza, Fajnzylber et calderon (2004) «Economic growth in Latin America and Caribbean: stylized facts, explanations, and forecasts» *Documento de Trabajo.*

Maddala, G.S. et Wu, S. (1999), ìA Comparative Study of Unit Root Tests with Panel Data and a New Simple Testî, Oxford Bulletin of Economics and Statistics, special issue, 631-652.

Magyari (2008) « Exploring the correlation between real exchange rate misalignment and Economic Growth in the CEE Countries» *Advances in Economic and Financial Research-DOFIN Working Paper Series.*

MUNDELL R.A. (1961), « A Theory of Optimum Currency Areas », American Economic Review, n°4, Vol. 51, September 1961.

MUNDELL R.A. (1962),, "The Appropriate Use of Monetary and Fiscal Policy for Internal and External Stability," IMF Staff Papers, vol. 9 (March 1962), pp. 70-79.

MUNDELL R.A. (1971),, The Dollar and the Policy Mix: 1971, Essays in International Finance, 85 (Princeton University, International Finance Section, May 1971)

Nubukpo (2003) « dépense publiques et croissance des économies de l’UEMOA»

Nubukpo et al (2011) « Impact d’une dévaluation du Franc CFA sur la balance commerciale et la production dans les pays de l’Union Economique et Monétaire Ouest Africaine (UEMOA)», *Université Paris Dauphine (UPD) and the French Institute of Research for Development (IRD).*

Pedroni (1997) « Panel Cointegration, Asymptotic and finite Sample Properties of Pooled Times SeriesTest with an application to the PPP Hypothesis: New results » Working paper in Economic,Indiana University.

Pedroni (1999) *«* Critical Values for Cointegration Tests in Heterogenous Panels with Multiple Regressors*»* Oxford Bulletin of Economics and Statistics, PP 653-670.

Pedroni (2001b) «Purchasing Power Parity in Cointegrated panels*» The reviews of Economics and Statistics, PP727-731.*

Pedroni, P. (1999). Critical values for cointegration tests in heterogeneous panels with multiple regressors. Oxford Bulletin of Economics & Statistics, 61, 653{670.

Pesaran et al (1999) « Pooled Mean Group estimation of dynamic heterogeneous panels » *journal of American statistical association.*

Peter Hooper and Barbara Lowrey, "Impact of the Dollar Depreciation on the U.S. Price Level: An Analytical Survey of Empirical Estimates," Staff Study 103 (Board of Governors of the Federal Reserve System, April 1979.

Razins et Collins (1997) «*real exchange rate misalignments and growth*» National Bureau of Economic Research Cambridge, Mass., USA.

Rodrik (2008) «The Real Exchange Rate and Economic Growth»; *Brookings Papers on Economic Activity,* 365-412.

Rodrik, Dani, 2008, “The Real Exchange Rate and Economic Growth,” Brookings Papers on Economic Activity, 2, pp. 365–412

Sachs, Jeffrey (1985), ‘The Dollar and the Policy mix: 1985’ Brookings Papers on Economic Activity I, 117-98.

Sachs, Jeffrey D. "The Dollar And The Policy Mix: 1985," Brookings Papers, 1985, v16(1), 117-185. , Phelps, Edmund (ed.) Recent Developments in Macroeconomics. Glasgow: Edward Elgar Publishing, 1991

Salkkonen (1991) « Asymptotically efficient estimation of cointegration regression» Econometric theory 7(1), 1-21.

Sallenave (2010) « real exchange rate misalignment and economic performance for the G20 countries» *Economie internationale*, (1) pge 59-80.

Scully (1989) «The size of state, economic growth and the efficient utilization national resources» *Publics Choice.*

Stein (1994) « The Natural real exchange rate of the US dollar and determinants of capital flow» *Institute international Economics*.

Virginie Coudert, Cécile Couharde, Valérie Mignon Exchange Rate Volatility across Financial Crises Journal of Banking and Finance, vol. 35, p.3010-3018, 2011

Westerlund, J. (2007). Testing for Error Correction in Panel Data. Oxford Bulletin of Economics and Statistics, 69(6), 709-748

Williamson (1994) «Estimate of FEER’s», in J. *Williamson; Estimating Equilibrium Exchange Rates, Washington, D.C* pg 177-244

Working Papers

Download GEG Working Papers can be downloaded: www.globaleconomicgovernance.org/working-papers

Kako Kossivi Nubukpo	WP 2017/126 Misalignment of exchange rates: what lessons for growth and policy mix in the WAEMU?
Peter Knaack	WP 2017/125 An unlikely champion of global finance: Why is China exceeding international banking standards?
Nghia Trong Pham	WP 2017/124 Trade and Labour Rights: The Case of the TPP
Ali Hasanain, Yasir Khan, and Arman Rezaee	WP 2016/123 Crowdsourcing government accountability: Experimental evidence from Pakistan
Emma Aisbett and Lauge Poulsen	WP 2016/122 Relative Treatment of Aliens: Firm-level Evidence from Developing Countries
Katharina Obermeier	WP 2016/121 “Countries Don’t Go Bankrupt”: Sovereign Debt Crises and Perceptions of Sovereignty in an Era of Globalisation
Adam Ng	WP 2016/120 The Tangibility of the Intangibles: What Drives Banks’ Sustainability Disclosure in the Emerging Economies?
Geoffrey Gertz	WP 2016/119 Commercial Diplomacy and American Foreign Policy
Jolyon Ford	WP 2016/118 The risk of regulatory ritualism: proposals for a treaty on business and human rights
Nematullah Bizhan	WP 2016/117 Improving the Fragile States’ Budget Transparency: Lessons from Afghanistan
Taylor St John and Noel Johnston	WP 2016/116 Who Needs Rules? Explaining Participation in the Investment Regime
Zainab Usman	WP 2016/115 The Successes and Failures of Economic Reform in Nigeria’s Post-Military Political Settlement
Ivaylo Iaydjiev	WP 2016/114 Host’s Dilemma in International Political Economy: The Regulation of Cross-Border Banking in Emerging Europe, 2004-2010
Carolyn Deere Birkbeck	WP 2016/113 From ‘Trade and Environment’ to the Green Economy: The WTO’s Environmental Record and Discourse on Sustainable Development at 20
Lauge Poulsen and Emma Aisbett	WP 2015/112 Diplomats Want Treaties: Diplomatic Agendas and Perks in the Investment Regime
Carolyn Deere Birkbeck and Kimberley Botwright	WP 2015/111 Changing Demands on the Global Trade and Investment Architecture: Mapping an Evolving Ecosystem
Pichamon Yeophantong	WP 2015/110 Civil Regulation and Chinese Resource Investment in Myanmar and Vietnam
Nematullah Bizhan	WP 2015/109 Continuity, Aid and Revival: State Building in South Korea, Taiwan, Iraq and Afghanistan
Camila Villard Duran	WP 2015/108 The International Lender of Last Resort for Emerging Countries: A Bilateral Currency Swap?
Tu Anh Vu Thanh	WP 2015/107 The Political Economy of Industrial Development in Vietnam: Impact of State-Business Relationship on Industrial Performance 1986-2012 (forthcoming)
Nilima Gulrajani	WP 2015/106 Bilateral donors in the ‘Beyond Aid’ Agenda: The Importance of Institutional Autonomy for Donor Effectiveness (forthcoming)
Carolyn Deere Birkbeck	WP 2015/105 WIPO’s Development Agenda and the Push for Development-oriented Capacity building on Intellectual Property: How Poor Governance, Weak Management, and Inconsistent Demand Hindered Progress
Alexandra Olivia Zeitz	WP 2015/104 A New Politics of Aid? The Changing International Political Economy of Development Assistance: The Ghanaian Case
Akachi Odoemene	WP 2015/103 Socio-Political Economy and Dynamics of Government-Driven Land Grabbing in Nigeria since 2000
David Ramos, Javier Solana, Ross P. Buckley and Jonathan Greenacre	WP 2015/102 Protecting the Funds of Mobile Money Customers in Civil Law Jurisdictions
Lise Johnson	WP 2015/101 Ripe for Refinement: The State's Role in Interpretation of FET, MFN, and Shareholder Rights
Mthuli Ncube	WP 2015/100 Can dreams come true? Eliminating extreme poverty in Africa by 2030
Jure Jeric	WP 2015/99 Managing risks, preventing crises - a political economy account of Basel III financial regulations

Anar Ahmadov	WP 2014/98 Blocking the Pathway Out of the Resource Curse: What Hinders Diversification in Resource-Rich Developing Countries?
Mohammad Mossallam	WP 2015/97 Process matters: South Africa's Experience Exiting its BITs
Geoffrey Gertz	WP 2015/96 Understanding the Interplay of Diplomatic, Insurance and Legal Approaches for Protecting FDI
Emily Jones	WP 2014/95 When Do 'Weak' States Win? A History of African, Caribbean and Pacific Countries Manoeuvring in Trade Negotiations with Europe
Taylor St John	WP 2014/94 The Origins of Advance Consent
Carolyn Deere Birkbeck	WP 2014/93 The Governance of the World Intellectual Property Organization: A Reference Guide
Tu Anh Vu Thanh	WP 2014/92 WTO Accession and the Political Economy of State-Owned Enterprise Reform in Vietnam
Emily Jones	WP 2014/91 Global Banking Standards and Low Income Countries: Helping or Hindering Effective Regulation?
Ranjit Lall	WP 2014/90 The Distributional Consequences of International Finance: An Analysis of Regulatory Influence
Ngaire Woods	WP 2014/89 Global Economic Governance after the 2008 Crisis
Folashadé Soule-Kohndou	WP 2013/88 The India-Brazil-South Africa Forum - A Decade On: Mismatched Partners or the Rise of the South?
Nilima Gulrajani	WP 2013/87 An Analytical Framework for Improving Aid Effectiveness Policies
Rahul Prabhakar	WP 2013/86 Varieties of Regulation: How States Pursue and Set International Financial Standards
Alexander Kupatadze	WP 2013/85 Moving away from corrupt equilibrium: 'big bang' push factors and progress maintenance
George Gray Molina	WP 2013/84 Global Governance Exit: A Bolivian Case Study
Steven L. Schwarcz	WP 2013/83 Shadow Banking, Financial Risk, and Regulation in China and Other Developing Countries
Pichamon Yeophantong	WP 2013/82 China, Corporate Responsibility and the Contentious Politics of Hydropower Development: transnational activism in the Mekong region?
Pichamon Yeophantong	WP 2013/81 China and the Politics of Hydropower Development: governing water and contesting responsibilities in the Mekong River Basin
Rachael Burke and Devi Sridhar	WP 2013/80 Health financing in Ghana, South Africa and Nigeria: Are they meeting the Abuja target?
Dima Noggo Sarbo	WP 2013/79 The Ethiopia-Eritrea Conflict: Domestic and Regional Ramifications and the Role of the International Community
Dima Noggo Sarbo	WP 2013/78 Reconceptualizing Regional Integration in Africa: The European Model and Africa's Priorities
Abdourahmane Idrissa	WP 2013/77 Divided Commitment: UEMOA, the Franc Zone, and ECOWAS
Abdourahmane Idrissa	WP 2013/76 Out of the Penkelemes: The ECOWAS Project as Transformation
Pooja Sharma	WP 2013/75 Role of Rules and Relations in Global Trade Governance
Le Thanh Forsberg	WP 2013/74 The Political Economy of Health Care Commercialization in Vietnam
Hongsheng Ren	WP 2013/73 Enterprise Hegemony and Embedded Hierarchy Network: The Political Economy and Process of Global Compact Governance in China
Devi Sridhar and Ngaire Woods	WP2013/72 'Trojan Multilateralism: Global Cooperation in Health'
Valéria Guimarães de Lima e Silva	WP2012/71 'International Regime Complexity and Enhanced Enforcement of Intellectual Property Rights: The Use of Networks at the Multilateral Level'
Ousseni Illy	WP2012/70 'Trade Remedies in Africa: Experience, Challenges and Prospects'
Carolyn Deere Birckbeck and Emily Jones	WP2012/69 'Beyond the Eighth Ministerial Conference of the WTO: A Forward Looking Agenda for Development'
Devi Sridhar and Kate Smolina	WP2012/68' Motives behind national and regional approaches to health and foreign policy'
Omobolaji Olarinmoye	WP2011/67 'Accountability in Faith-Based Organizations in Nigeria: Preliminary Explorations'
Ngaire Woods	WP2011/66 'Rethinking Aid Coordination'
Paolo de Renzio	WP2011/65 'Buying Better Governance: The Political Economy of Budget Reforms in Aid-Dependent Countries'

Carolyn Deere Birckbeck	WP2011/64 ‘Development-oriented Perspectives on Global Trade Governance: A Summary of Proposals for Making Global Trade Governance Work for Development’
Carolyn Deere Birckbeck and Meg Harbourd	WP2011/63 ‘Developing Country Coalitions in the WTO: Strategies for Improving the Influence of the WTO’s Weakest and Poorest Members’
Leany Lemos	WP 2011/62 ‘Determinants of Oversight in a Reactive Legislature: The Case of Brazil, 1988 – 2005’
Valéria Guimarães de Lima e Silva	WP 2011/61 ‘Sham Litigation in the Pharmaceutical Sector’.
Michele de Nevers	WP 2011/60 'Climate Finance - Mobilizing Private Investment to Transform Development.'
Ngaire Woods	WP 2010/59 ‘ The G20 Leaders and Global Governance’
Leany Lemos	WP 2010/58 ‘Brazilian Congress and Foreign Affairs: Abdication or Delegation?’
Leany Lemos & Rosara Jospeh	WP 2010/57 ‘Parliamentarians’ Expenses Recent Reforms: a briefing on Australia, Canada, United Kingdom and Brazil’
Nilima Gulrajani	WP 2010/56 ‘Challenging Global Accountability: The Intersection of Contracts and Culture in the World Bank’
Devi Sridhar & Eduardo Gómez	WP 2009/55 ‘Comparative Assessment of Health Financing in Brazil, Russia and India: Unpacking Budgetary Allocations in Health’
Ngaire Woods	WP 2009/54 ‘Global Governance after the Financial Crisis: A new multilateralism or the last gasp of the great powers?
Arunabha Ghosh and Kevin Watkins	WP 2009/53 ‘Avoiding dangerous climate change – why financing for technology transfer matters’
Ranjit Lall	WP 2009/52 ‘Why Basel II Failed and Why Any Basel III is Doomed’
Arunabha Ghosh and Ngaire Woods	WP 2009/51 ‘Governing Climate Change: Lessons from other Governance Regimes’
Carolyn Deere - Birkbeck	WP 2009/50 ‘Reinvigorating Debate on WTO Reform: The Contours of a Functional and Normative Approach to Analyzing the WTO System’
Matthew Stilwell	WP 2009/49 ‘Improving Institutional Coherence: Managing Interplay Between Trade and Climate Change’
Carolyn Deere	WP 2009/48 ‘La mise en application de l’Accord sur les ADPIC en Afrique francophone’
Hunter Nottage	WP 2009/47 ‘Developing Countries in the WTO Dispute Settlement System’
Ngaire Woods	WP 2008/46 ‘Governing the Global Economy: Strengthening Multilateral Institutions’ (Chinese version)
Nilima Gulrajani	WP 2008/45 ‘Making Global Accountability Street-Smart: Re-conceptualizing Dilemmas and Explaining Dynamics’
Alexander Betts	WP 2008/44 ‘International Cooperation in the Global Refugee Regime’
Alexander Betts	WP 2008/43 ‘Global Migration Governance’
Alastair Fraser and Lindsay Whitfield	WP 2008/42 ‘The Politics of Aid: African Strategies for Dealing with Donors’
Isaline Bergamaschi	WP 2008/41 ‘Mali: Patterns and Limits of Donor-Driven Ownership’
Arunabha Ghosh	WP 2008/40 ‘Information Gaps, Information Systems, and the WTO’s Trade Policy Review Mechanism’
Devi Sridhar and Rajaie Batniji	WP 2008/39 ‘Misfinancing Global Health: The Case for Transparency in Disbursements and Decision-Making’
W. Max Corden, Brett House and David Vines	WP 2008/38 ‘The International Monetary Fund: Retrospect and Prospect in a Time of Reform’
Domenico Lombardi	WP 2008/37 ‘The Corporate Governance of the World Bank Group’
Ngaire Woods	WP 2007/36 ‘The Shifting Politics of Foreign Aid’
Devi Sridhar and Rajaie Batniji	WP 2007/35 ‘Misfinancing Global Health: The Case for Transparency in Disbursements and Decision-Making’
Louis W. Pauly	WP 2007/34 ‘Political Authority and Global Finance: Crisis Prevention in Europe and Beyond’
Mayur Patel	WP 2007/33 ‘New Faces in the Green Room: Developing Country Coalitions and Decision Making in the WTO’
Lindsay Whitfield and Emily Jones	WP 2007/32 ‘Ghana: Economic Policymaking and the Politics of Aid Dependence’ (revised October 2007)
Isaline Bergamaschi	WP 2007/31 ‘Mali: Patterns and Limits of Donor-driven Ownership’

Alastair Fraser	WP 2007/30 ‘Zambia: Back to the Future?’
Graham Harrison and Sarah Mulley	WP 2007/29 ‘Tanzania: A Genuine Case of Recipient Leadership in the Aid System?’
Xavier Furtado and W. James Smith	WP 2007/28 ‘Ethiopia: Aid, Ownership, and Sovereignty’
Clare Lockhart	WP 2007/27 ‘The Aid Relationship in Afghanistan: Struggling for Government Leadership’
Rachel Hayman	WP 2007/26 ‘“Milking the Cow”: Negotiating Ownership of Aid and Policy in Rwanda’
Paolo de Renzio and Joseph Hanlon	WP 2007/25 ‘Contested Sovereignty in Mozambique: The Dilemmas of Aid Dependence’
Lindsay Whitfield	WP 2006/24 ‘Aid’s Political Consequences: the Embedded Aid System in Ghana’
Alastair Fraser	WP 2006/23 ‘Aid-Recipient Sovereignty in Global Governance’
David Williams	WP 2006/22 ‘“Ownership,” Sovereignty and Global Governance’
Paolo de Renzio and Sarah Mulley	WP 2006/21 ‘Donor Coordination and Good Governance: Donor-led and Recipient-led Approaches’
Andrew Eggers, Ann Florini, and Ngaire Woods	WP 2005/20 ‘Democratizing the IMF’
Ngaire Woods and Research Team	WP 2005/19 ‘Reconciling Effective Aid and Global Security: Implications for the Emerging International Development Architecture’
Sue Unsworth	WP 2005/18 ‘Focusing Aid on Good Governance’
Ngaire Woods and Domenico Lombardi	WP 2005/17 ‘Effective Representation and the Role of Coalitions Within the IMF’
Dara O’Rourke	WP 2005/16 ‘Locally Accountable Good Governance: Strengthening Non-Governmental Systems of Labour Regulation’.
John Braithwaite	WP 2005/15 ‘Responsive Regulation and Developing Economics’.
David Graham and Ngaire Woods	WP 2005/14 ‘Making Corporate Self-Regulation Effective in Developing Countries’.
Sandra Polaski	WP 2004/13 ‘Combining Global and Local Force: The Case of Labour Rights in Cambodia’
Michael Lenox	WP 2004/12 ‘The Prospects for Industry Self-Regulation of Environmental Externalities’
Robert Repetto	WP 2004/11 ‘Protecting Investors and the Environment through Financial Disclosure’
Bronwen Morgan	WP 2004/10 ‘Global Business, Local Constraints: The Case of Water in South Africa’
Andrew Walker	WP 2004/09 ‘When do Governments Implement Voluntary Codes and Standards? The Experience of Financial Standards and Codes in East Asia’
Jomo K.S.	WP 2004/08 ‘Malaysia’s Pathway through Financial Crisis’
Cyrus Rustomjee	WP 2004/07 ‘South Africa’s Pathway through Financial Crisis’
Arunabha Ghosh	WP 2004/06 ‘India’s Pathway through Financial Crisis’
Calum Miller	WP 2004/05 ‘Turkey’s Pathway through Financial Crisis’
Alexander Zaslavsky and Ngaire Woods	WP 2004/04 ‘Russia’s Pathway through Financial Crisis’
Leonardo Martinez-Diaz	WP 2004/03 ‘Indonesia’s Pathway through Financial Crisis’
Brad Setser and Anna Gelpern	WP 2004/02 ‘Argentina’s Pathway through Financial Crisis’
Ngaire Woods	WP 2004/01 ‘Pathways through Financial Crises: Overview’

The Global Economic Governance Programme was established in 2003 to foster research and debate into how global markets and institutions can better serve the needs of people in developing countries. The program is co-hosted by University College and the Blavatnik School of Government.

The three core objectives of the Programme are:

- to conduct and foster research into international organizations and markets as well as new public-private governance regimes
- to create and develop a network of scholars and policy-makers working on these issues
- to influence debate and policy in both the public and the private sector in developed and developing countries

BLAVATNIK SCHOOL OF GOVERNMENT

UNIVERSITY OF OXFORD

UNIV
UNIVERSITY COLLEGE OXFORD

www.globaleconomicgovernance.org