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WEST AFRICAN REGIONAL ECONOMIC INTEGRATION AND COLONIAL TIES

ABSTRACT

We investigated the impact inherited colonial ties exert on the regional economic integration of the ECOWAS. For, we substituted in a SVAR framework, regional members' domestic structural shocks with supply price shocks from former colonial countries (France, Portugal, and the UK), the region, and the global economy to assess their effects on their real sector convergence variables. Findings reveal that regional supply price shocks contributed the most to changes in output, supply price shocks from the former colonial country contributed the most to changes in regional trade, and regional supply price shocks contributed the most to changes in investments. The predominance of pairs of countries of different colonial heritages sharing symmetric responses to the external supply price shocks is due in part to the proximity effect. Comparatively, member countries exhibited more synchronous output, regional trade, and investments responses to the supply price shocks than they did with monetary variables. They also exhibit more real variables convergence.

Keywords: Colonial; Economic Ties; Monetary Ties; Real Convergence; Monetary Convergence; Monetary Union; ECOWAS; WAEMU; WAMZ
JEL Classification: E31; E52; H30; F45; O42

RIASSUNTO

Integrazione economica della regione dell'Africa orientale e legami coloniali

In questo articolo si esamina l'impatto che i legami con i paesi ex-colonizzatori esercitano sull'integrazione economica dell'area ECOWAS. È stato adottato un modello SVAR nel quale gli shock strutturali interni dei membri di quest'area sono stati sostituiti con shock dei prezzi delle forniture provenienti da paesi ex-colonizzatori (Francia, Portogallo e Regno Unito), da paesi membri dell'area e dall'economia globale al fine di valutare gli effetti sull'economia reale. I

risultati evidenziano che gli shock dei prezzi delle forniture interne hanno avuto effetti maggiori sulla produzione, gli shock dei prezzi delle forniture dai paesi ex-colonizzatori sul commercio interno all'area e gli shock dei prezzi di forniture interne all'area stessa sugli investimenti. La predominanza di coppie di paesi con eredità coloniale diversa che hanno risposto in maniera simmetrica agli shock dei prezzi delle forniture esterne all'area è in parte dovuto all'effetto di prossimità. Analogamente, vi sono stati paesi membri dell'area che, a seguito di shock dei prezzi, hanno avuto risposte più sincrone sulla produzione, sul commercio regionale e sugli investimenti di quanto non fosse accaduto con le variabili monetarie. Si è riscontrata anche una convergenza maggiore delle variabili reali.

1. Introduction

This paper examines the impact inherited economic and monetary colonial ties exert on the regional economic integration of the Community of West African States (ECOWAS). While such process requires a highly integrated policy framework for proposals to receive sufficient political support from member countries (Acocella, 2022), it has been rather plagued by weak political resolves. Along, low intra-regional trade, low output convergence [Saka *et al.*, (2015); Anoruo (2019)], political instability (Chukwu and Onyekpe, 2014), and the inherited post-colonial ties are other hurdles. Colonial ties are even the main root cause of the ongoing political crises across the region. Out of the 15 member countries, 8 belong to the West African Economic and Monetary Union (WAEMU) and use the CFA franc, a currency pegged to the French franc until 1994 and now to the Euro. As a result, the shadow of France, the former colonial country and guarantor of the currency, floats over their economies, and indirectly on the economic integration process. The other regional countries, members of the West African Monetary Zone (WAMZ), except Liberia, also inherited colonial economic ties that affect their economies and indirectly their participation in the regional integration process. Thus, with time, investigating the extent to which such ties influence, directly or indirectly, the regional integration process became crucial. In response, we first investigated the impact the supply price shocks from the former colonial country's (France, Portugal, and the United Kingdom) economy, the region's economy, and the global economy exert on member countries' inflations, fiscal policies, and monetary policies (Lare-Lantone and Anoruo, 2022.) The underlying interest is that member countries' abilities to satisfy the macroeconomic convergence criteria for a monetary union depend also on the influence these external supply prices exert on their domestic variables. Results from the related empirical

analysis suggest that the countries share more symmetric inflation, fiscal policy, and monetary policy responses to price shocks from the former colonial country and the global economy than from regional supply price shocks. While changes in monetary policies are attributable mostly to global supply price shocks, changes in fiscal policies are mainly due to global supply price shocks and supply price shocks from the former colonial country. The preponderance of symmetric responses among pairs of former French colonies is attributed to their common use of the CFA franc while their pairing with former British and Portuguese colonies is attributed to the proximity effect.

In this paper, we extended the analysis to member countries' real convergence variables using the same Structural Vector Auto Regression (SVAR) framework to test the effect of the external supply price shocks on output, regional trade, and investments. For convenience we refer to supply price shock or price shock interchangeably. Empirical results suggest that, globally, they exhibit symmetric real variables responses to price shocks from all the sources. Predominantly, pairs of countries with different colonial heritages share symmetric responses to the price shocks than pairs of any specific inherited colonial group. Within the ECOWAS, regional supply price shocks contributed the most to changes in output and global price shocks the least. Supply price shocks from the former colonial country contributed the most to changes in regional trade and regional supply price shocks the least. Regional supply price shocks contributed the most to changes in investments and global supply price shocks the least. Proximity effect is also found to be a determinant of the symmetries of member countries' real variables' responses. The predominance of symmetric investments responses among pairs of former French colonies to supply price shocks from France is attributable to their common currency, the CFA franc formerly pegged to the French franc. The impulse responses of real convergence variables to an innovation in regional supply price reveal stronger similarities of member countries' response paths, clustering them in the same subgroups. As a result, while there emerged some level of real sector variables' convergence among countries of different colonial heritage, only former French colonies, members of the WAEMU, exhibit monetary convergence.

The rest of the paper is organized in five sections. Section 2 reviews the literature, Section 3 expands the theoretical framework, Section 4 presents empirical estimations, Section 5 discusses findings, and Section 6 concludes.

2. Literature review

According to the theory of optimum currency area (OCA), a monetary unification requires the effects of diverging inflation and unemployment cycles be dampened (Mundell, 1961), exchange rate uncertainty be reduced through a high degree of openness (McKinnon, 1963), and the degree of products diversification be increased (Kenen, 1969.) Thus, researchers test for business cycle synchronicity or symmetry of macroeconomic shocks among potential members due to the fact that idiosyncratic shocks constitute a cost for a monetary union [De Grauwe (2000); Regmi *et al.,* (2015); Chow and Kim (2003).] Members only benefit from a common policy to address shocks if the shocks they receive are similar (Mati *et al.,* 2019.) Exchanges of goods and services among members depend on their individual productions, thus they do transmit real sector and monetary shocks along. Besides, regional agreements tend to intensify the impact of such shocks (Acocella, 2020.) As a result, assessing the synchronicity of monetary and real sectors shocks to evaluate the feasibility of a monetary union is necessary and reflected in the statement by Kaboro *et al.,* (2018) that:

"Major macroeconomic variables need to be harmonized before establishing a monetary union such as real GDP, budget deficit/GDP, national savings, and inflation rate".

An integrated financial intermediary market within a monetary zone improves cross-border flow of funds, stimulates trading volume which in-turn improves liquidity (Chen *et al.,* 2002). But in the process, financial sector development alters the relationship between monetary policy and real sector variables [Brada and Kutan (2001); Asongu (2014)], triggering the need to also test financial convergence among members. Thus, the suitability of potential members to form a monetary union pre-requires monetary convergence, real sector convergence, and financial convergence among them.

On that basis, economists have tested empirically the real convergence among countries involved in regional integration schemes. Brada *et al.* (2005), for example, examined the extent to which the monetary and real sectors variables of the recent European Union (EU) members and transition economy candidates for EU membership were cointegrated with those of the EU and of the Euro zone. The test of monetary policy convergences was to determine the feasibility of a peg of the currencies of the new members to the Euro. The test of the real convergence using industrial output, a measure of real sector activity, was to determine whether the countries were subject to

similar supply-side shocks to be suitable members of an OCA that includes the core countries of the EU. They used rolling cointegration tests to investigate the degree of convergence during different sub periods based on a vector autoregressive (VAR) system. Because France and Germany had cointegration of base money and M2 but much less or virtually no cointegration for CPI and industrial output, they used both as a proxy for the EU core economy. It emerged a clear evidence of considerable monetary policy coordination between Germany and France and between the two and the recent members of the EU. The similarity in the cointegration of prices and money supplies of the recent EU members and of the transition economies with the core countries of the EU led to the suggestion that relatively stable exchange rate arrangements between the transition-economies and the Euro were possible. The industrial productions as well as the monetary outcomes in recent EU members and in the transition economies were more closely related to EU developments than monetary policy was. Like Bayoumi and Eichengreen (1993) and Fidrmuc and Korhonen (2003), they attributed the strong cointegration of Sweden's M2 series with that of Germany on one side and of Portugal and Spain with that of France on the other to the proximity effect on monetary aggregates. It is a tendency for countries with close proximity to be affected by similar shocks, especially with respect to GDP. They also linked the stronger cointegration of transition economies' M2 with EU to their extensive money-market links which create a capital market-driven convergence of M2. Their findings also reveal the important role that trade between the transition economies and the EU plays in mirroring price movements in Germany in the latter countries. In the African context, Mafusire and Brixiova (2012) empirically evaluated the extent to which the East African Community (EAC) countries are exposed to similar shocks and exhibit structural similarity in forming a monetary union. They measured similarity in terms of intra-industry trade and production using similarity indices including the Bray-Curtis index and examined the symmetry of shocks with structural VAR. Kenya, the largest and most developed economy in the region is set as the reference country for the others (EAC-4): Burundi, Rwanda, Uganda, and Tanzania. Findings show that, despite increasing intra-regional trade, the EAC countries exhibit export dissimilarities. Their sharing of similarly low value production inhibits regional trade and integration. The impulse response functions revealed that demand shocks had no effect on the long-run output in Burundi, Rwanda and Uganda. In turn, positive income/output shocks had long-run effects on inflation in all EAC countries. Variance decomposition of the structural VAR indicate that supply shocks accounted for most output variability in all countries and tended to last longer. On the other hand, demand

shocks had large effects on the variability in prices in all countries except Uganda. Because of the absence of macroeconomic convergence, they advised against a hurried transition into a monetary union. Simons and Rosmy (2018) didn't assess the development of intraregional trade in the WAMZ but tested the validity of members' trade integration with the rest of the world, foreign aid, and foreign direct investment (FDI) in driving their common cycle. Using four different measures, they investigated the relative degree of synchronicity of the WAMZ with China and with Europe for the period 1970-2015. Empirical results support, by large, that trade integration with China, the targeted three European countries (France, Germany, and Italy) and the rest of the world are among the main drivers of the region's common business cycle. But there are more synchronized cycles between China and the WAMZ countries than there are between the targeted three European countries and the WAMZ. While FDI in its various forms was insignificant, foreign aid could only explain the common cycle at the 10% level. Houssa (2008) tested the effect of external supply shocks through term of trade shock while estimating the effects of demand and supply shocks on inflation and output growth within the ECOWAS. Globally, demand shocks are associated with monetary and fiscal policy shocks, internal supply shocks with negative rainfall shocks, and external supply shocks with term of trade shocks. Comparing fluctuations of aggregate demand and aggregate supply shocks across countries, he found that the WAMZ countries have, on average, the highest volatility of both output growth and inflation compared to the WAEMU countries. Combining those results with previous findings that supply shocks are more asymmetric among the ECOWAS member countries, he concluded that they will find it difficult to adjust to supply shocks if they form a monetary union. Lare-Lantone *et al.,* (2023) rather tested the neoclassical growth convergence assumption on the ECOWAS member countries towards the former colonizing countries' income growth rates over the period 1960-2020. They set each country's target income to be the shares of the colonizing country's post-colonial annual incomes equivalent to the ratio of their political independence year incomes. Empirical results and growth convergence figures reveal that none of the member countries' income reached the common steady state level. Comparatively, there have been more income growth rate convergences between the member countries and their former colonial countries than between themselves in the last four decades of the period. But there was higher intra growth convergence among former French colonies than among former British colonies and among former Portuguese colonies. As a group, former French colonies converged more towards their income targets than the others did. The authors derived that, in the post-colonial period, the

former colonizing powers transferred inadequate levels of capital and technology to allow the reach of the common steady state level by ECOWAS countries.

It remains that the literature fails to evaluate how shocks from former colonial countries influence the symmetries of these countries' macroeconomic variables responses. By attempting to fill that gap the current paper set to (i) test for the symmetries among the ECOWAS member countries' real variables responses to external supply shocks and (ii) evaluates the extent to which post-colonial economic and monetary ties affect the region's potential for economic integration.

3. Methodology

3.1 The Model

We extended the theoretical framework used to test the impact supply price shocks from the colonial country, the region, and the global economy exert on monetary sector variables in the ECOWAS to test the impact they exert on the real sector variables.

Initially, we assumed a small open economy with demand and supply functions as:

$$D_t = a_0 + a_1 P_t^D + a_2 Y_t \tag{1}$$

$$S_t = b_0 + b_1 P_t^S + b_2 Y_t \tag{2}$$

D_t is demand, S_t supply, P_t^D demand price, P_t^S supply price, and Y_t output. Its domestic savings and investment functions are:

$$I_t^D = c_0 + c_1 i_t^D + c_2 Y_t \tag{3}$$

$$I_t^S = d_0 + d_1 i_t^S + d_2 Y_t \tag{4}$$

I_t^D is investments, I_t^S savings, i_t^D money demand rate, and i_t^S money supply rate. The country imports goods from the region, its former colonial country, and the rest of the world (global economy.) Thus, its inflation, fiscal policy, and monetary policy depend on imports supply prices such that:

$$P_t = e_0 + e_1 P_t^G + e_2 P_t^C + e_3 P_t^R + e_4 T_t + e_5 Y_t \tag{5}$$

$$F_t = g_1 + g_1 P_t^G + g_2 P_t^C + g_3 P_t^R + g_4 T_t + g_5 Y_t \tag{6}$$

$$M_t = f_0 + f_1 P_t^G + f_2 P_t^C + f_3 P_t^R + f_4 T_t + f_5 Y_t \quad (7)$$

P_t is the equilibrium price, F_t fiscal policy, M_t monetary policy, P_t^C the former colonial country's supply price, P_t^G the global supply price, P_t^R the regional supply price, and T_t regional trade.

We further assumed that the country joins a regional monetary unification scheme that requires macroeconomic convergences of all members. Convergence criteria target inflation, interest rate, exchange rate, budget deficit, and public debt. However, while fluctuations in exchange rate and interest rate are primarily market-determined, inflation, budget deficit, and money supply result from economic policy and are often targeted by the central bank for money supply and the government for fiscal balance. The variables fiscal policy (F_t), monetary policy (M_t) and price (P_t) are then targeted for stability and full employment domestically, but also for monetary convergence as a requirement for monetary unification.

For simplicity, we assumed the central bank supplies a quantity of money sufficient to finance the fiscal balance and, thus, equated Equations (5) and (6) ($F_t \approx M_t$) to solve for the equilibrium values. But, contrary to the model in the first paper which solved for the equilibrium values of F_t, M_t and P_t, here we solved for the equilibrium values of output (Y_t), regional trade (T_t) and investments (I_t). After successive substitutions, we obtained a system of equations that links the targeted variables to the former colonial country's supply price, global supply price, and regional supply price such as:

$$\Delta Y_t = \delta_1 \Delta P_t^G + \delta_2 \Delta P_t^C + \delta_3 \Delta P_t^R + \mu_t^Y \quad (8)$$

$$\Delta T_t = \theta_1 \Delta P_t^G + \theta_2 \Delta P_t^C + \theta\gamma_3 \Delta P_t^R + \mu_t^T \quad (9)$$

$$\Delta I_t = \rho_1 \Delta P_t^G + \rho_2 \Delta P_t^C + \rho_3 \Delta P_t^R + \mu_t^I \quad (10)$$

The system sets changes in the country's output (Equation 8), regional trade (Equation 9), and investments (Equation 10) dependent on the global supply price, the supply price from its former colonial country, and the regional supply price with coefficients δ, θ, and ρ being cumulated sums of incremental changes, arising each period.

Since the objective of this study is to estimate the impact of foreign supply price shocks on small open economies while allowing for cross-country comparisons, the model of Blanchard and Quah (1989) is appropriate. It has already been adopted in several papers for the identification and cross-country comparison of macroeconomic shocks [Fielding and Shields (2000); Bayoumi and Eichengreen (1996)]. It generally consisted of estimating a reduced form VAR for inflation and output growth, and identifying structural shocks to each variable by imposing a set of restrictions that includes the theory-based assumption that in the long run output shocks can affect inflation but not vice versa. To fit Equations 8, 9, and 10 into the Blanchard and Quah (1989) framework, we let $\Delta Y_t, \Delta T_t$ and ΔI_t denote changes in the logarithm of output, regional trade, and investment; and be affected by structural shocks ε_t^G, ε_t^C and ε_t^R assumed uncorrelated. Further, we let X be the vector $[\Delta Y, \Delta T, \Delta I]'$ which follows a stationary process such that:

$$X_t = A_0\varepsilon_t + A_1\varepsilon_{t-1} + A_2\varepsilon_{t-2} + \cdots += \sum_{j=0}^{\infty} A_j\varepsilon_{t-j} \tag{11}$$

It can be written in matrix form as:

$$X_t = A_0(\dot{L})\varepsilon_t$$

$$\text{with } \varepsilon_t = [\varepsilon_t^G,\ \varepsilon_t^C,\ \varepsilon_t^R]'$$

Since X is stationary, it has a moving average representation such that:

$$X_t = \mu_t + C_1\mu_{t-1} + C_2\mu_{t-2} + \cdots += \sum_{j=0}^{\infty} C_j\mu_{t-j} \tag{12}$$

and $\mu_t = [\mu_t^G, \quad \mu_t^C \quad \mu_t^R]$ are reduced form shocks.

To identify the resulting system, we imposed 6 restrictions on it: 3 theoretical and the orthogonality, normality, and exclusion restrictions from the Blanchard-Quah framework. Using Cholesky transformation of the matrix obtained, the time series of structural shocks $\varepsilon_t = [\varepsilon_t^G,\ \varepsilon_t^C,\ \varepsilon_t^R]'$ can be derived from the relation as:

$$\varepsilon_t = A_0^{-1}C_0\mu_t \tag{13}$$

4. Data and empirical estimations

4.1 Data

For estimations purpose, we measured the output variable (Y) with GDP *per capita*, regional trade (T) with total imports from the rest of the ECOWAS, and investments (I) with Gross Fixed Capital Formation. The colonial country's supply price (P^C) is measured as each individual member country's PPP with France, Portugal, and the United Kingdom (UK) respectively. Benin, Burkina, Cote d'Ivoire, Guinea, Mali, Niger, Senegal, and Togo are the former French colonies. The Gambia, Ghana, Nigeria, and Sierra Leone are the former British colonies. Cape Verde and Bissau Guinea are the former Portuguese colonies while Liberia has been an independent country since its creation. To have fewer sub-groups, we treated Liberia also as a former British colony but dropped Cape Verde from the sample due to data limitations. We computed the global supply price (P^G) for each individual member as its PPP with the average of China, Germany, and the United States considered to influence the world's economy the most. We computed the regional supply price (P^R) for each member country as its PPP with the average of the rest of the ECOWAS members. Finally, we used the ADF-Fisher unit root test to secure the stationarity of each series with the change in its logarithm. Using the Akaike Information Criterion (AIC), we determined the optimal lags to be 2. Hence, we used 2 lags in the estimation of the SVAR models.

We estimated the variables using annual data obtained from the World Development Indicators (WDI) of the World Bank and the International Financial Statistics (IFS) and Directions of Trade of the International Monetary Fund (IMF) for the time period running from 1960 through 2019. We used annual data to circumvent the inconsistent availability of monthly data for all the ECOWAS member countries.

4.2 Results

In a SVAR model, we substituted structural domestic shocks with external supply price shocks from each of the former colonial countries (France, Portugal, and the UK), the regional economy, and the global economy to assess their impacts on member countries' output, regional trade, and investments. We then assessed how parallel supply price shocks from each of the former colonial countries concomitantly influence the symmetries of member countries' real sector variables responses to regional and global supply price shocks. Further, we derived the variance decomposition of changes in the real sector variables to assess each specific supply price shock's

contribution. Finally, we estimated the variables' impulse response functions to a unit regional supply price shock or an innovation in regional supply price given parallel supply price shocks influence from the former colonial country.

4.2.1 Symmetries of Convergence Variables' Responses to External Supply Price Shocks

We computed pair-wise correlation coefficients of member countries' output, regional trade, and investments responses to price shocks from each source to detect their symmetries. There is symmetry when the coefficient is equal to 0.5 or higher and asymmetry otherwise.

4.2.1.1 Symmetries of Output Responses to External Supply Price Shocks

The estimated pair-wise correlation coefficients point to a predominance of pairs of former French colonies sharing symmetric output responses to price shocks from France. Except the pair Niger-Togo which exhibits symmetric output responses to price shocks from France, Portugal, and the UK, most of the other countries which paired in sharing symmetric output responses to price shocks have different colonial heritages. It is the case of the pairs Burkina Faso-Bissau Guinea and the Gambia-Guinea's output responses to price shocks from France and Portugal and that of the pair Nigeria-Burkina Faso to price shocks from the UK. Ghana and Nigeria, the two largest economies of the WAMZ also paired in sharing symmetric output responses to price shocks from Portugal. Besides, Ghana also paired with Burkina Faso and Bissau Guinea respectively in sharing output responses to price shocks from France while Nigeria paired with the Gambia and Guinea respectively in sharing output response to price shocks from Portugal.

Pairs of former French colonies predominated in sharing symmetric output responses to regional price shocks given parallel price shocks from France. But they equally shared symmetric output responses to regional shocks with the other countries. As a result, the pairs Benin-Mali and Gambia-Guinea had symmetric output responses to regional price shocks given parallel price shocks from France and Portugal; the pair Nigeria-Liberia given parallel price shocks from Portugal; and the pair Nigeria-Mali given parallel price shocks from the UK. Only the pair Niger-Togo systematically shares symmetric responses to regional price shocks given parallel price shocks from each of the three former colonial countries. Yet, close proximity also explains the

pairing of Burkina Faso and Ghana, the Gambia and Guinea, Guinea and Senegal, and Benin and Niger in sharing symmetric output responses to regional price shocks.

It is revealed that pairs of former French colonies predominated again in sharing symmetric output responses to global price shocks given parallel price shocks from France though they equally paired with the other countries. Like the pair Benin-Mali, the pair Gambia-Guinea shares symmetric output responses to global price shocks given parallel price shocks from France and Portugal. Also, the pair Nigeria-Liberia, given parallel price shocks from Portugal and the pair Nigeria-Cote d'Ivoire, given parallel price shocks from the UK. Only the pair Niger-Togo persisted again with symmetric output responses to global price shocks given parallel price shocks from each of the three former colonial countries. Close proximity also explains the sharing of symmetric output responses to global price shocks by the pairs Ghana-Burkina Faso, Gambia-Guinea, Guinea-Senegal and Mali-Senegal.

In sum, most pairs of countries with symmetric output responses to price shocks from the colonial country also shared symmetric output responses to regional and global price shocks. Besides, the symmetries of their output responses to these shocks are also due in part to the proximity effect, possible cause of the persistent pairing of Niger and Togo, which are very close geographically but do not share any common border. Noteworthy is that, in addition to pair in sharing symmetric output response, Ghana and Nigeria pair also individually with the other WAMZ member countries.

4.2.1.2 Symmetries of Regional Trade Responses to External Supply Price Shocks

The pair Ghana-Burkina Faso only shared symmetric regional trade responses to price shocks from France; the pair Ghana-Guinea to price shocks from France and Portugal; and the pair Ghana-Senegal to price shocks from Portugal. The pair Niger-Togo is the only one to share symmetric regional trade responses to price shocks from France and the UK. Most of the pairs of countries with symmetric regional trade responses to regional price shocks like Ghana-Burkina Faso, Gambia-Senegal, Guinea-Senegal, Guinea-Bissau Guinea, Guinea-Liberia, Liberia-Bissau Guinea, and Mali-Senegal happen to be made of close neighbors.

The predominance of pairs of countries of different colonial heritages in sharing symmetric regional trade responses persisted to regional price shocks. The pair Ghana-Guinea shared

symmetric regional trade responses given parallel price shocks from France and Portugal. The pairs Bissau-Niger and Niger-Togo did so given parallel price shocks from France and the UK. Only the pairs Guinea-Senegal and Liberia-Niger shared symmetric regional trade responses to regional price shocks given parallel price shocks from each of the three former colonial countries. Close proximity also explains the symmetric regional trade responses by countries of the pairs Guinea-Mali, Guinea-Senegal, Liberia-Bissau Guinea, and Mali-Senegal. Ghana shared more regional trade symmetric responses to regional price shocks with other WAMZ countries except Nigeria.

Ghana shared symmetric regional trade responses to global price shock with Guinea given parallel price shocks from France but with Benin, Bissau Guinea, Liberia and Senegal given parallel price shocks from Portugal. The pair Mali-Nigeria is the only one to share symmetric regional trade responses given parallel price shocks from Portugal and the UK. Likewise, only the pair Liberia-Senegal shared symmetric regional trade responses to global price shocks given parallel price shocks from each of the three former colonial countries. Close proximity has also contributed to the symmetries of regional trade responses to global price shocks by the pairs Guinea-Bissau Guinea, Guinea-Mali, and Mali-Bissau Guinea.

Globally, there is a predominance of pairs of countries of different colonial heritages sharing symmetric regional trade responses. Besides, most pairs of countries with symmetric responses to shocks from the colonial country also shared symmetric responses to regional and global price shocks. While the proximity effect is a determinant of the symmetries of responses, it doesn't explain the symmetry of Ghana or Nigeria's regional trade responses to regional and global price shocks with regional countries they share no border with.

TABLE 1 - *Correlation of Output Cycles under Colonial Country's (France) Price Shock*

	Benin	Burkina	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.6	-0.4	1.0											
Gambia	0.0	-0.2	0.2	1.0										
Ghana	-0.1	0.5	-0.3	0.4	1.0									
Guinea	-0.4	0.0	0.4	0.5	0.2	1.0								
Bissau Guinea	0.1	0.8	-0.5	0.2	0.8	-0.2	1.0							
Liberia	-0.3	-0.1	0.1	-0.5	-0.2	0.2	-0.4	1.0						
Mali	0.5	-0.6	-0.2	0.0	-0.4	-0.1	-0.5	0.1	1.0					
Niger	-0.5	0.0	0.6	-0.3	-0.1	0.2	-0.3	0.2	0.0	1.0				
Nigeria	0.4	-0.3	0.0	0.1	-0.5	-0.1	-0.4	0.0	0.4	-0.1	1.0			
Senegal	-0.2	-0.3	0.2	0.3	-0.1	0.6	-0.3	0.3	0.3	-0.1	-0.3	1.0		
Sierra Leone	0.4	-0.6	0.2	0.1	-0.7	0.0	-0.6	-0.1	0.3	-0.3	0.3	0.2	1.0	
Togo	-0.2	-0.6	0.8	0.1	-0.4	0.5	-0.7	0.3	0.1	0.5	0.2	0.3	0.5	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

TABLE 2 - *Correlation of Output Cycles under Colonial Country's (Portugal) Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	0.1	1.0												
Cote d'Ivoire	0.8	-0.1	1.0											
Gambia	0.2	0.1	0.1	1.0										
Ghana	-0.1	0.4	-0.4	0.2	1.0									
Guinea	-0.1	-0.1	-0.5	0.5	0.4	1.0								
Bissau Guinea	-0.3	0.3	-0.1	-0.2	-0.5	-0.3	1.0							
Liberia	-0.5	-0.7	-0.4	0.2	0.1	0.2	-0.3	1.0						
Mali	-0.5	0.2	-0.2	-0.4	0.0	0.1	0.3	-0.3	1.0					
Niger	-0.6	0.4	-0.5	-0.2	-0.2	0.0	0.6	0.0	0.3	1.0				
Nigeria	-0.1	0.1	-0.4	0.6	0.8	0.8	-0.5	0.3	0.0	-0.1	1.0			
Senegal	0.2	-0.1	-0.1	0.4	0.0	0.0	-0.1	0.4	-0.9	-0.1	0.1	1.0		
Sierra Leone	0.1	0.7	0.2	-0.1	0.3	-0.1	0.1	-0.7	0.4	0.1	0.1	-0.6	1.0	
Togo	-0.4	-0.1	-0.2	0.2	-0.4	0.1	0.3	0.4	0.0	0.7	-0.2	0.0	-0.1	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

TABLE 3 - *Correlation of Output Cycles under Colonial Country's (UK) Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	-0.3	1.0											
Cote d'Ivoire	0.6	0.1	1.0										
Gambia	0.4	-0.4	0.1	1.0									
Guinea	-0.4	0.0	-0.3	-0.1	1.0								
Bissau Guinea	0.2	0.4	0.6	0.1	-0.4	1.0							
Liberia	0.2	0.3	0.4	0.1	0.2	0.1	1.0						
Mali	0.3	-0.3	0.3	0.6	0.2	0.3	0.3	1.0					
Niger	0.0	0.0	0.4	0.3	0.1	0.1	0.4	0.3	1.0				
Nigeria	-0.1	0.7	0.4	-0.7	-0.2	0.4	0.3	-0.5	-0.1	1.0			
Senegal	-0.6	-0.1	-0.7	-0.4	0.1	-0.3	-0.5	-0.5	-0.7	0.0	1.0		
Sierra Leone	0.6	-0.6	0.2	-0.1	0.0	-0.4	0.2	0.3	-0.1	-0.3	-0.2	1.0	
Togo	0.2	-0.4	0.6	0.0	0.2	-0.2	0.3	0.1	0.6	-0.1	-0.5	0.4	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

4.2.1.3 Symmetries of Investments Responses to External Supply Price Shocks

Estimated pair-wise correlation coefficients indicate that former French colonies paired with each other in sharing symmetric investment responses to price shocks from France. Only the pair Mali-Senegal shared symmetric investments responses to price shocks from France and Portugal and the pair Guinea-Togo to price shocks from Portugal and the UK. It remains that former French colonies paired equally as much with the other member countries in sharing symmetric investments responses. The fact that the pair Ghana-Nigeria also shared symmetric investment responses to price shocks from France is worth noticing. In addition, Ghana shared symmetric investments responses with Liberia and Sierra Leone respectively to price shocks from France and Portugal and Nigeria with Burkina Faso, Cote d'Ivoire, Liberia, and Togo respectively to price shocks from France and Portugal. It remains that, most of the countries with symmetric investments responses to price shocks from the former colonial country are close neighbors.

The pairs Benin-Nigeria, Benin-Liberia, Benin-Mali, Burkina-Togo, Mali-Cote d'Ivoire, Senegal-Cote d'Ivoire, Liberia-Nigeria, Niger-Sierra Leone, Gambia-Togo, and Liberia-Mali had each symmetric investment responses to regional price shocks given parallel price shocks from France. The pairs Gambia-Guinea, Guinea-Mali, Liberia-Sierra Leone, Nigeria-Togo, and Senegal-Togo had each symmetric investment responses to regional price shocks given parallel price shocks from Portugal. The pairs Benin-Guinea, Benin-Togo, Burkina-Guinea, Burkina-Mali, Burkina-Sierra Leone, Gambia-Liberia, Liberia-Niger, and Guinea-Togo had each symmetric investment responses given parallel price shocks from the UK. Only the pair Mali-Senegal had symmetric investments responses to regional parallel price shocks given parallel price shocks from France and Portugal. Close proximity is also found to determine the symmetries of some of the pairs' investments responses to regional price shocks.

The pair Niger-Togo had symmetric investments responses to global price shocks given parallel price shocks from France and Portugal and the pair Togo-Cote d'Ivoire given parallel price shocks from Portugal and the UK. Close proximity also explains the symmetries of investments responses to global price shocks by the pairs Benin-Nigeria, Mali-Cote d'Ivoire, Liberia-Mali, Gambia-Guinea, Guinea-Mali, Liberia-Sierra Leone, Benin-Burkina Faso, and the Gambia-Liberia.

To sum up, pairs of countries with symmetric investments responses to price shocks from the former colonial country also shared symmetric responses to regional and global price shocks given parallel price shocks from France. The proximity effect facilitated the symmetries of some of the countries' investments responses to price shocks from all sources.

4.2.2 Variance Decomposition of Changes in the Real Convergence Variables' Responses

We decomposed the variances of the changes in the ECOWAS member countries' output, regional trade, and investments to evaluate the contributions of price shocks from each source over a 10-year period. On average, changes in the region's output are due to price shocks from the region at 6.4%, the former colonial country at 4.8%, and the global economy at 4.0%. The 6.4% contribution by price shocks from the former colonial country to changes in the region's output resulted from 4.4% change in the former French colonies' output compared to 2.1% for former Portuguese colonies and 0.9% for former British colonies, summing up to 4.0% change in the WAEMU against 5.7% in the WAMZ. The 4.8% contribution of regional price shocks resulted from 9.7% change in the output of former French colonies, 1.3% change in the output of former Portuguese colonies, and 2.3% changes in the output of former British colonies, summing up to 9.0% change in the WAEMU and 3.3% in the WAMZ. The 4.0% contribution of global price shocks to changes in the region's output resulted from 4.7% change in former French colonies' output compared to 3.5% for former Portuguese colonies and 1.7% for former British colonies, summing up to 3.5% change in the WAEMU compared to 4.6% in the WAMZ. Globally, while changes in output in the region resulted from global price shocks the less, they were also less responsive to price shocks from the former colonial country in the WAEMU than in the WAMZ.

Changes in regional trade in the ECOWAS are generated by price shocks from the colonial country at 6.4%, the global economy at 5.6%, and the regional economy at 3.0%. The 6.4% contribution of price shocks from the former colonial country resulted from 5.4% change in former French colonies' regional trade compared to 4.1% for former Portuguese colonies and 5.2% for former British colonies. By zone, they sum up to 4.3% change in regional trade in the WAEMU against 8.7% in the WAMZ. The 5.6% contribution of global price shocks resulted from 5.2% change in former French colonies' regional trade, 3.5% for former Portuguese colonies and 6.1% for former British colonies, summing up to 2.8% in the WAEMU against 8.7% in the WAMZ. The 3.0% contribution of regional price shocks resulted from 3.9% change in former French colonies'

regional trade, 0.8% for former Portuguese colonies and 1% for former British colonies, summing up to 2.3% change in the WAEMU against 3.8% in the WAMZ.

Changes in investments in the ECOWAS are due to price shocks from the regional economy at 6.3%, the colonial country at 5.5%, and the global economy at 4.4%. The 6.3% contribution of regional price shocks is due to 7.3% changes in investments in the former French colonies, 7.6% in the former British colonies, and 1.0% in the former Portuguese colonies. It sums up to 5.4% in the WAEMU against 5.8% in the WAMZ. The 5.5% contribution of the former colonial country's price shocks is due to 7.5% changes in investments in the former French colonies, 2.8% in the former British colonies and 0.6% in the former Portuguese colonies. Aggregated by zone, it comes to 5.4% in the WAEMU against 5.8% in the WAMZ. The 4.4% contribution of global price shocks is due to 6.1% changes in investments in the former French colonies, 2.4% in the former British colonies, and 1.0% in the former Portuguese colonies. They sum up to 4.5% in the WAEMU against 4.4% in the WAMZ.

In summary, the decomposition of the variance of changes in the real sector variables revealed that, comparatively, price shocks from the former colonial country contributed the most to changes in investments in former French colonies. Regional price shocks contributed the most to changes in investments in the former British colonies. Global and regional price shocks contributed equally the most to changes in investments in former Portuguese colonies.

TABLE 4 - *External Supply Shocks Contributions to Economic Variables' Responses (%)*

	Output responses				
	GDPC	Colonial price	Global price	Regional price	Total
Former French colonies	77	4.4	4.7	9.7	95.9
Former British colonies	70.1	0.9	1.7	2.3	75.0
Former Portuguese colonies	43.2	2.1	3.5	1.3	50.0
WAEMU	66.9	4.0	3.5	9.0	83.4
WAMZ	72.0	5.7	4.6	3.3	85.7
ECOWAS	69.3	4.8	4.0	6.4	84.4
	Regional trade responses				
	Regional trade	Colonial Price	Global price	Regional price	Total
Former French colonies	85.5	5.4	5.2	3.9	100.0
Former British colonies	62.7	5.2	6.1	1.0	75.0
Former Portuguese colonies	41.7	4.1	3.5	0.8	50.0
WAEMU	78.0	4.3	2.8	2.3	87.5
WAMZ	64.5	8.7	8.7	3.8	85.7
ECOWAS	71.7	6.4	5.6	3.0	86.6
	Investments responses				
	GFCF	Colonial price	Global price	Regional price	Total
Former French colonies	79.1	7.5	6.1	7.3	100.0
Former British colonies	62.1	2.8	2.4	7.6	75.0
Former Portuguese colonies	47.3	0.6	1.0	1.0	50.0
WAEMU	71.3	5.4	4.5	6.4	87.5
WAMZ	69.3	5.8	4.4	6.3	85.7
ECOWAS	70.4	5.5	4.4	6.3	86.6

Source: Author's own estimations based on data from the IFS, Trade Direction, and the WDI.

4.2.3 Impulse Responses of Real Convergence Variables to a Regional Supply Price Shock

Finally, we evaluated each real sector variable's impulse responses to an innovation in regional price given parallel price shocks from France, Portugal, and the UK. We found that, globally, they adjust to the innovation at different speeds and magnitudes with member countries clustering around similar response paths.

4.2.3.1 Impulse Responses of Output to an Innovation in Regional Supply Price Shock

The graphs in Figure 1 show that Burkina Faso, Cote d'Ivoire, the Gambia and Bissau Guinea have comparable output response paths to the innovation in regional price shock given parallel price shocks from France. With the exception of Burkina Faso and Bissau Guinea, the paths fluctuate with large magnitudes between positive and negative responses before phasing out towards the end of the period, except for the Gambia. Niger, Nigeria, Senegal, and Togo have comparable output response paths which fluctuate at lower magnitudes between positive and negative responses before phasing out towards the end of the period. Ghana and Mali have comparable output response paths which fluctuate at very large magnitudes between positive and negative response damping progressively to the end of the period. Benin has an output response path, dissimilar to others', with largely fluctuating negative responses.

Figure 2 reveals that, given parallel price shocks from Portugal, Burkina Faso and Cote d'Ivoire exhibit comparable output response paths which fluctuate between positive and negative responses. The Gambia, Bissau Guinea, and Ghana exhibit initially decreasing positive responses which turn negative in the middle of the period before rebounding into positive. Niger, Nigeria, Senegal, and Togo have comparable output response paths which fluctuate at lower magnitude before phasing out at the end of the period. Once again, Benin exhibits a response path dissimilar to others' which fluctuates at lower magnitude between positive and negative responses before phasing out at the end of the period. Mali also has an output response path dissimilar to others' which exhibit a lower magnitude fluctuating negative response.

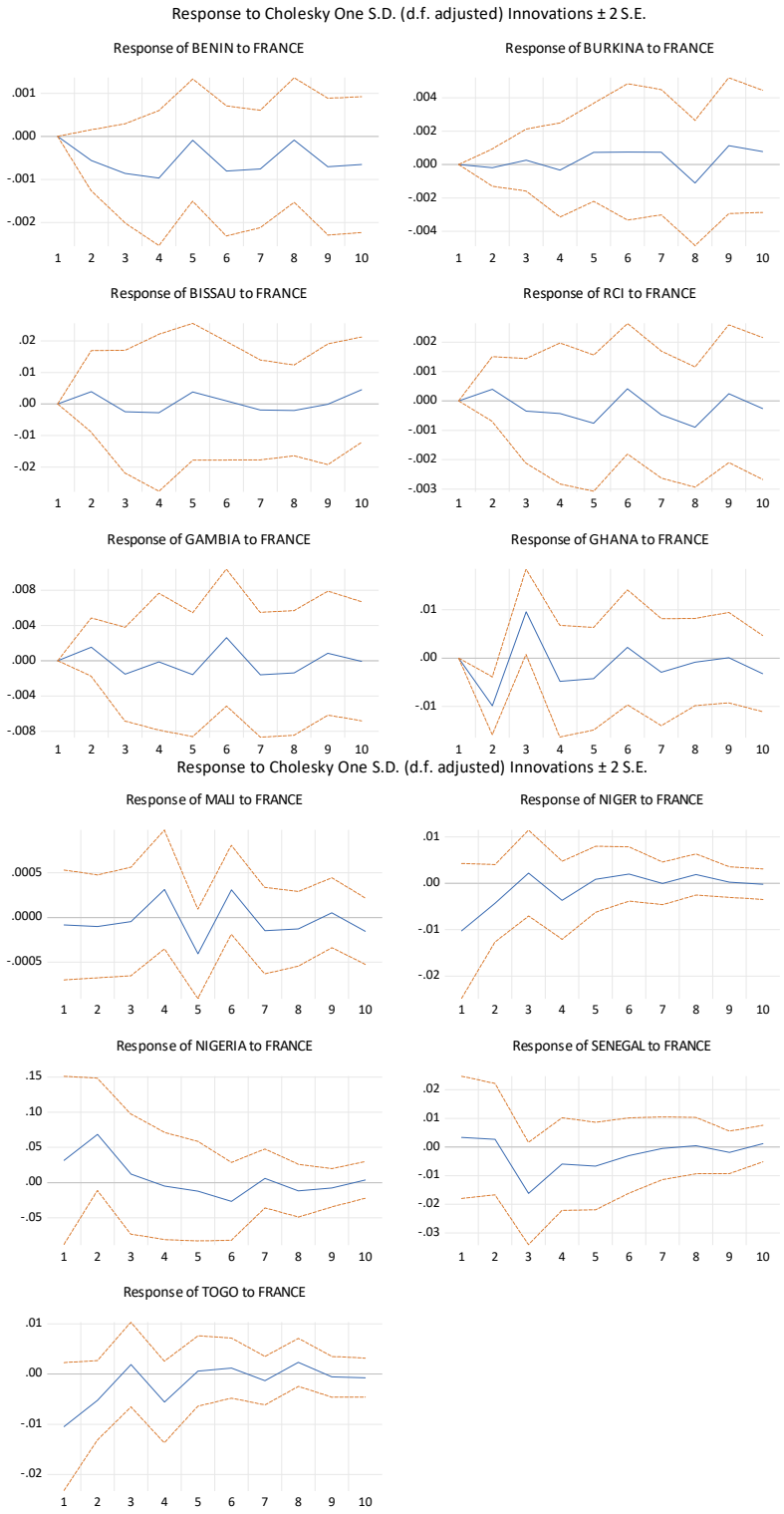
Figure 3 shows that, given parallel price shocks from the UK, Benin, Burkina Faso, Mali, Niger, Nigeria, Senegal, and Togo exhibit comparable paths with very weak output responses while the paths of Cote d'Ivoire, Bissau Guinea, and Gambia show almost no output response to the innovation.

Thus, globally, the innovation in regional price has a long run effect, on all member countries' output, which phases out by the end of the period. The fact that many countries persistently cluster together indicate a certain level of output convergence within each sub-group.

4.2.3.2 Impulse Responses of Regional Trade to an Innovation in Regional Supply Price Shock

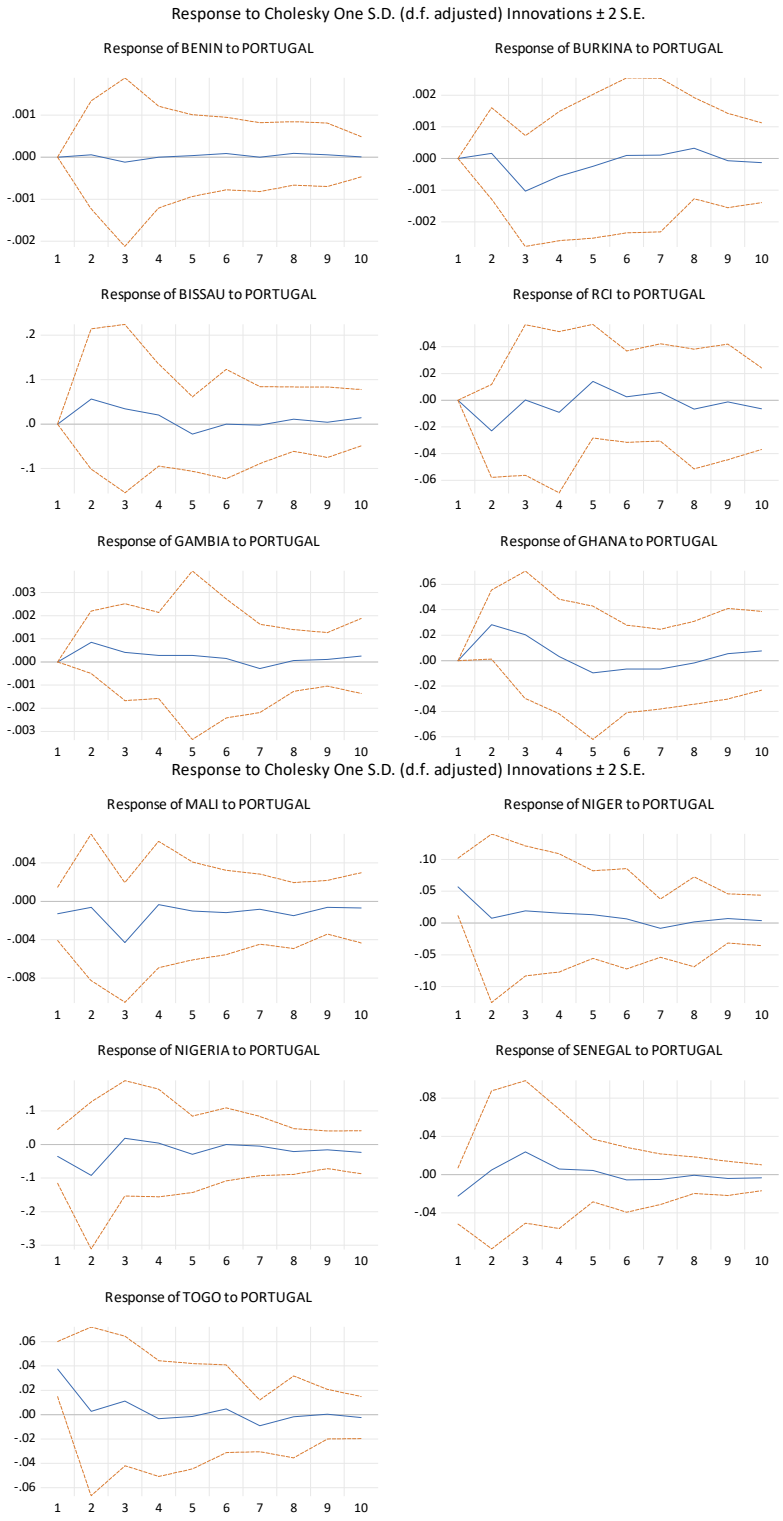
Given parallel price shocks from France, Benin, Burkina Faso, and Cote d'Ivoire exhibit similar regional trade response paths to the innovation in regional price with medium amplitude fluctuations between positive and negative responses that damp overtime before phasing out at Year-10. But, unlike the other two countries, Cote d'Ivoire's response remained systematically positive. The Gambia, Bissau Guinea, and Ghana exhibit comparable response paths which fluctuate between positive and negative responses. However, except the Gambia, the other two countries' responses are mainly negative. Niger, Nigeria, and Togo also exhibit comparable regional trade response paths which fluctuate at large magnitude between positive and negative responses but phased out progressively until the end of the period. Mali's response path remained systematically negative while Senegal's remained systematically positive.

FIGURE 1 - *Output Impulse Responses under Price Influence from France*



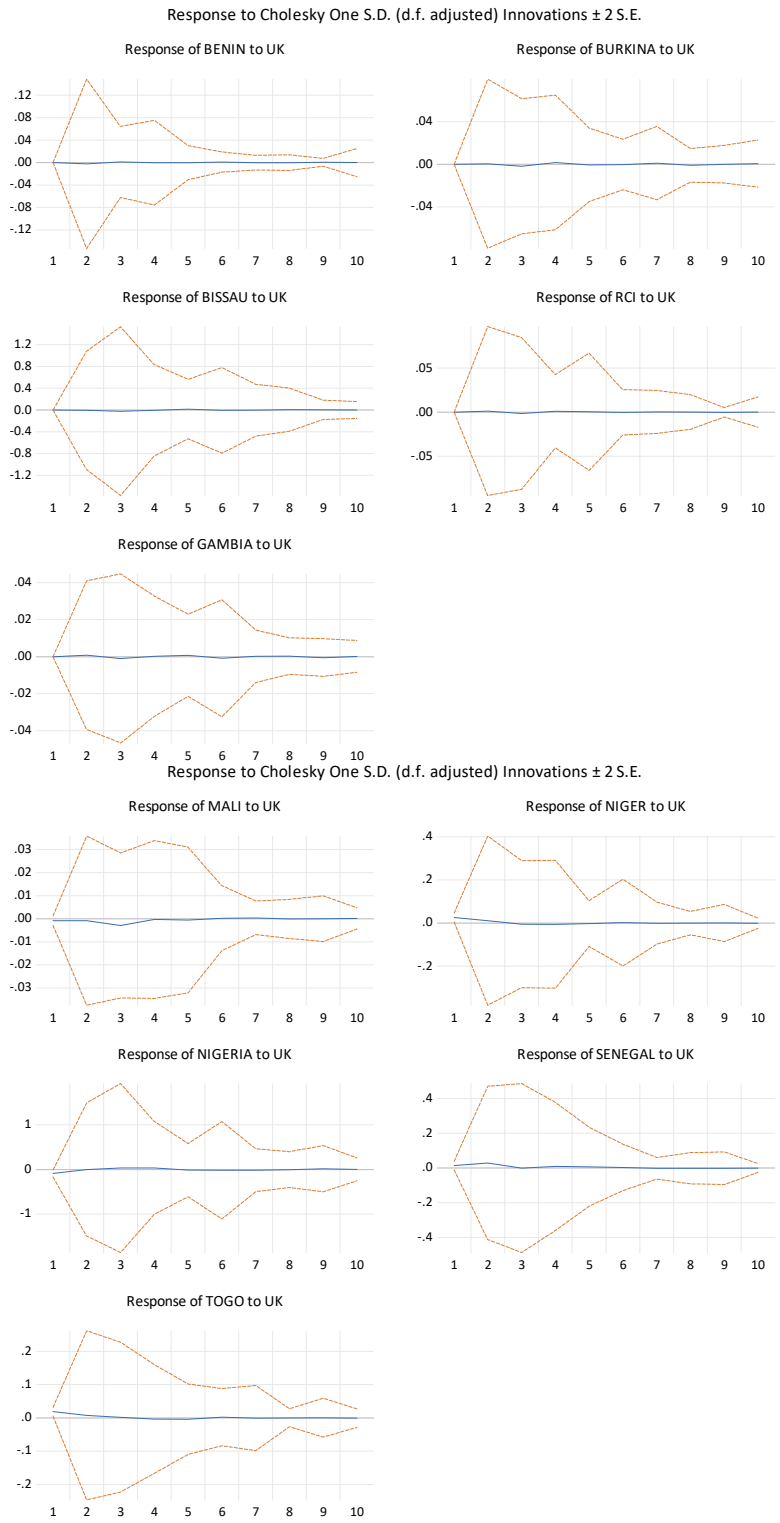
Source: Author's own estimations based on data from the IFS and the WDI.

FIGURE 2 - *Output Impulse Responses under Price Influence from Portugal*



Source: Author's own estimations based on data from the IFS and the WDI.

FIGURE 3 - *Output Impulse Responses under Price Influence from the UK*



Source: Author's own estimations based on data from the IFS and the WDI.

Given parallel price shocks from Portugal, Benin, Burkina Faso, and Cote d'Ivoire exhibit comparable regional trade response paths which fluctuate at medium magnitude between positive and negative responses before phasing out at the end of the period. However, while the response of Cote d'Ivoire is mainly positive, those of the other two countries are mainly negative. The Gambia, Bissau Guinea, and Ghana exhibit comparable paths with mainly positive responses fluctuating at lower magnitude. Mali, Nigeria, Niger, Senegal, and Togo's response paths fluctuate between positive and negative responses before phasing out at the end of the period. While Nigeria's response fluctuates at lower magnitude and Mali's at very large magnitude, Niger, Senegal, and Togo paths exhibit large amplitude responses, at the beginning of the period, which phase out progressively.

It is revealed that given parallel price shocks from the UK, almost all member countries have comparable regional trade response paths with very weak or almost no response to the regional price shock. Only Mali, Niger, Nigeria, and Togo exhibited very low magnitude short term negative or positive regional trade responses. This only suggests that price shocks from the UK do not influence the changes in the ECOWAS intraregional trade.

In sum, the innovation in regional price has a long run effect on the ECOWAS regional trade but phases out by the end of the period. The fact that member countries mostly persist in clustering in the same subgroup without any discrimination based on colonial inheritance suggests a certain level of convergence of regional trade among member countries.

4.2.3.3 Impulse Responses of Investments to an Innovation in Regional Supply Price Shock

The impulse response functions depict that, given parallel price shocks from France, Burkina Faso and Cote d'Ivoire have comparable investments response paths with positive responses to the innovation in regional price. But only the responses of Burkina Faso dropped progressively before phasing out at the end of the period. Bissau Guinea, the Gambia, and Ghana exhibit comparable response paths with fluctuating responses that are initially negative before turning positive. Benin, Mali, Senegal and Togo's investment response paths progressed from large magnitude short run negative responses to positive ones. Niger and Nigeria have comparable paths with systematically negative responses along the period.

Given parallel price shocks from Portugal, Benin, Burkina Faso, Cote d'Ivoire, the Gambia, Bissau Guinea, and Ghana exhibit comparable investments response paths to the innovation in regional price. They fluctuate between very low magnitude negative and positive responses. Mali, Niger, Nigeria, Senegal, and Togo also have comparable investments response paths which fluctuate at medium magnitude between negative and positive responses before phasing out. The exception is that Mali's investments response path exhibits a comparatively longer negative phase.

Given parallel price shocks from the UK, all member countries exhibit comparable investments response paths to the innovation in regional price with very low or no responses to suggest that price shocks from the UK do not influence changes in member countries' investments.

Globally, the innovation in regional price has a long run effect on member countries' investments, which phase out by the end of the period. The persistent clustering of some member countries in the same subgroup without any discrimination based on colonial inheritance seems to indicate a certain level of convergence of their investments' responses.

5. Discussions

Empirical results reveal that most pairs of countries with symmetric output responses to price shocks from the colonial country also shared symmetric output responses to regional and global price shocks. This finding is consistent with Mafusire and Brixiova (2012) who found that positive output shocks had long run effects on inflation in all EAC countries.

The predominance of pairs of countries of different colonial heritages sharing symmetric output responses to these external price shocks persisted to regional trade and investments. This finding contrasts with the predominance of pairs of former French colonies sharing symmetric monetary variables responses to the same shocks. Nevertheless, pairs of former French colonies still predominated in sharing symmetric output responses to price shocks from France. Yet, given parallel price influence from France, they also mostly paired with each others in sharing symmetric output responses to regional and global price shocks. Their pairing with the other colonial heritage countries in sharing symmetric real sector variables responses to price shocks is however also attributable to the proximity effect to which Brada *et al.* (2005) also attributed the strong cointegration of monetary aggregates among some EU countries.

In fact, similarly to the case of monetary convergence variables, the proximity effect is revealed to be a determinant of symmetric responses to regional and global price shocks. It explains the persistent pairing of Burkina Faso and Ghana, the Gambia and Guinea, Guinea and Senegal, Benin and Niger, and Mali and Senegal. It also probably explains the persistence of the pair Niger-Togo in having symmetric real sector variables responses. Though these two countries are very close geographically, they share no border. The two biggest WAMZ economies of Ghana and Nigeria share more symmetric output responses with the other member countries than they share symmetric monetary variables responses with them.

Variance decompositions of changes in the real sector variables reveal that regional price shocks contributed the most to changes in output in the ECOWAS. However, price shocks from the former colonial country and global price shocks contributed more to changes in output in the WAMZ than in the WAEMU. On the other hand, regional price shocks contributed the most to changes in output in the WAEMU countries as also evidenced in the case of the monetary convergence variable inflation. Inversely, regional price shocks contributed the least to changes in regional trade but the most to changes in investments. The fact that investments are most sensitive to regional price than regional trade suggests that there are more investment capital flows than trade flows across the region. Besides, the symmetries of investments responses to regional and global shocks between Benin, Cote d'Ivoire, Nigeria, and Togo may reflect some level of investments convergence along the Abidjan-Lagos Corridor.

Similarly to the monetary convergence variables, the real convergence variables also adjust to an innovation in regional price at different speeds and different magnitudes. Globally, the innovation in regional price has long run effects on all member countries' output, regional trade and investments which phase out by the end of the period. These results occurred given parallel price shocks from France and Portugal while price shocks from the UK exert no or very marginal influence on member countries' regional trade and investments. While countries with comparable response paths clustered together, they clustered more in any given subgroup for real sector convergence variable than in the study by Lare-Lantone and Anoruo (2022) where there was evidence in the case of monetary convergence variables. Besides, the fact that most member countries persistently cluster together without any discrimination based on colonial inheritance suggests a certain level of output, regional trade, and investments convergence within each formed sub-group. However, the preponderance of former French colonies in sharing symmetric

monetary variables responses to price shocks resurged with their output and investments responses given parallel price shocks from France. As in the case of the monetary variables' responses to the external price shocks, that preponderance is attributed to the WAEMU countries' common currency, the CFA franc, which undermines the effects of regional and global price shocks, and as a result pulls them away from the rest of the ECOWAS in term of monetary convergence. Regional policies should look to stop that phenomenon through the following two avenues. First, since the proximity effect explains largely the symmetries of close neighboring WAEMU and WAMZ member countries' real variables responses to external supply price shocks, a proof that they do transmit real sector to each other through trade, boosting exchanges among them can attenuate the phenomenon. Second, as the costs of idiosyncratic shocks decrease, delinking the CFA Franc from the euro for a regional common currency will be the ultimate solution. Doing so will help harmonize the shocks they receive which will, in turn, facilitate the economic integration of the region.

6. Conclusion

We extended the analysis of the impact former colonial countries exert on the ECOWAS member countries' monetary convergence variables to their real convergence variables. Using the same SVAR framework, we substituted domestic structural shocks with supply price shocks from the former colonial country (France, Portugal, and the UK), the region and the global economy, to assess their effects on output, regional trade, and investments. The results exhibit more symmetric real variables' responses to parallel price shocks than with monetary variables (inflation, fiscal policy, and monetary policy) responses. They revealed a predominance of pairs of countries of different colonial heritages sharing symmetric real variables' responses to the external supply price shocks in contrast with the predominance of pairs of former French colonies sharing symmetric monetary variables' responses. Within the ECOWAS, regional supply price shocks contributed the most to changes in output while global supply price shocks contributed the least. Supply price shocks from the former colonial country contributed the most to changes in regional trade while regional supply price shocks contributed the least. Regional supply price shocks contributed the most to changes in investments while global supply price contributed the least. While regional supply price shocks contributed the most to changes in the WAEMU, price shocks from the former colonial country contributed the most to these changes in the WAMZ. While supply price shocks from former colonial countries contributed the most to changes in

regional trade in the WAEMU, they contributed equally the most with regional supply price shocks to these changes in the WAMZ. Regional supply price shocks contributed the most to changes in investments in both the WAEMU and the WAMZ.

Impulse responses to an innovation in regional supply price reveal that supply price shocks from the UK exert no or very marginal influence on member countries' regional trade and investments. Contrary to their monetary convergence variables' impulse responses paths to the innovation, member countries exhibit more comparable real variables' impulse responses paths. As a result, they persistently clustered in the same subgroups, suggesting more convergence among the real variables than monetary variables. Such contrasting results lead to question whether real sector performances and cross-border transactions within the region are fully accounted for in domestic fiscal and monetary policies. That question is also rooted in the fact that the proximity effect also determines the symmetries of WAEMU and WAMZ member countries' monetary and real variables responses to external supply price shocks. Undermining the fact that, along the effects of these external shocks, the CFA franc pulls the WAEMU countries away from the rest of the ECOWAS in terms of monetary convergence, can only jeopardize the regional integration process. Boosting trade among close neighboring countries which do not share the same currency will facilitate the economic integration process. But, delinking the CFA franc from the euro for a regional common currency will be the ultimate solution. As evidence is offered here that inherited colonial ties do impact the regional monetary and economic regional integration of the ECOWAS, future research should look to extend the analysis to the convergences of institutions and financial markets.

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ANNEXES

CORRELATION OF CYCLICAL SHOCK

TABLE 5 - *Correlation of Output Reactions to Regional Price Shock in Presence of France Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.6	-0.4	1.0											
Gambia	0.0	-0.2	0.2	1.0										
Ghana	-0.1	0.5	-0.3	0.4	1.0									
Guinea	-0.4	0.0	0.4	0.5	0.2	1.0								
Bissau Guinea	0.1	0.8	-0.5	0.2	0.8	-0.2	1.0							
Liberia	-0.3	-0.1	0.1	-0.5	-0.2	0.2	-0.4	1.0						
Mali	0.5	-0.6	-0.2	0.0	-0.4	-0.1	-0.5	0.1	1.0					
Niger	-0.5	0.0	0.6	-0.3	-0.1	0.2	-0.3	0.2	0.0	1.0				
Nigeria	0.4	-0.3	0.0	0.1	-0.5	-0.1	-0.4	0.0	0.4	-0.1	1.0			
Senegal	-0.2	-0.3	0.2	0.3	-0.1	0.6	-0.3	0.3	0.3	-0.1	-0.3	1.0		
Sierra Leone	0.4	-0.6	0.2	0.1	-0.7	0.0	-0.6	-0.1	0.3	-0.3	0.3	0.2	1.0	
Togo	-0.2	-0.6	0.8	0.1	-0.4	0.5	-0.7	0.3	0.1	0.5	0.2	0.3	0.5	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

TABLE 6 - *Correlation of Output Reactions to Regional Price Shock in Presence of Portugal Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.8	-0.1	1.0											
Gambia	-0.2	0.1	0.1	1.0										
Ghana	0.1	0.4	-0.4	0.2	1.0									
Guinea	0.1	-0.1	-0.5	0.5	0.4	1.0								
Bissau Guinea	0.5	-0.7	-0.4	0.2	0.1	0.2	1.0							
Liberia	0.3	0.3	-0.1	-0.2	-0.5	-0.3	-0.3	1.0						
Mali	0.5	0.2	-0.2	-0.4	0.0	0.1	-0.3	0.3	1.0					
Niger	0.6	0.4	-0.5	-0.2	-0.2	0.0	0.0	0.6	0.3	1.0				
Nigeria	-0.1	-0.1	0.4	-0.6	-0.8	-0.8	-0.3	0.5	0.0	0.1	1.0			
Senegal	-0.2	-0.1	-0.1	0.4	0.0	0.0	0.4	-0.1	-0.9	-0.1	-0.1	1.0		
Sierra Leone	-0.1	0.7	0.2	-0.1	0.3	-0.1	-0.7	0.1	0.4	0.1	-0.1	-0.6	1.0	
Togo	0.4	-0.1	-0.2	0.2	-0.4	0.1	0.4	0.3	0.0	0.7	0.2	0.0	-0.1	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

TABLE 7 - *Correlation of Output Reactions to Regional Price Shock in Presence of UK Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	-0.3	1.0											
Cote d'Ivoire	-0.6	-0.1	1.0										
Gambia	-0.4	0.4	0.1	1.0									
Guinea	-0.4	0.0	0.3	0.1	1.0								
Bissau Guinea	0.2	0.4	-0.6	-0.1	-0.4	1.0							
Liberia	0.2	0.3	-0.4	-0.1	0.2	0.1	1.0						
Mali	0.3	-0.3	-0.3	-0.6	0.2	0.3	0.3	1.0					
Niger	0.0	0.0	-0.4	-0.3	0.1	0.1	0.4	0.3	1.0				
Nigeria	0.1	-0.7	0.4	-0.7	0.2	-0.4	-0.3	0.5	0.1	1.0			
Senegal	-0.6	-0.1	0.7	0.4	0.1	-0.3	-0.5	-0.5	-0.7	0.0	1.0		
Sierra Leone	0.6	-0.6	-0.2	0.1	0.0	-0.4	0.2	0.3	-0.1	0.3	-0.2	1.0	
Togo	0.2	-0.4	-0.6	0.0	0.2	-0.2	0.3	0.1	0.6	0.1	-0.5	0.4	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

TABLE 8 - *Correlation of Output Reactions to Global Price Shock in Presence of France Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.6	-0.4	1.0											
Gambia	0.0	-0.2	0.2	1.0										
Ghana	-0.1	0.5	-0.3	0.4	1.0									
Guinea	-0.4	0.0	0.4	0.5	0.2	1.0								
Bissau Guinea	0.1	0.8	-0.5	0.2	0.8	-0.2	1.0							
Liberia	-0.3	-0.1	0.1	-0.5	-0.2	0.2	-0.4	1.0						
Mali	0.5	-0.6	-0.2	0.0	-0.4	-0.1	-0.5	0.1	1.0					
Niger	-0.5	0.0	0.6	-0.3	-0.1	0.2	-0.3	0.2	0.0	1.0				
Nigeria	0.4	-0.3	0.0	0.1	-0.5	-0.1	-0.4	0.0	0.4	-0.1	1.0			
Senegal	-0.2	-0.3	0.2	0.3	-0.1	0.6	-0.3	0.3	0.3	-0.1	-0.3	1.0		
Sierra Leone	0.4	-0.6	0.2	0.1	-0.7	0.0	-0.6	-0.1	0.3	-0.3	0.3	0.2	1.0	
Togo	-0.2	-0.6	0.8	0.1	-0.4	0.5	-0.7	0.3	0.1	0.5	0.2	0.3	0.5	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

TABLE 9 - *Correlation of Output Reactions to Global Price Shock in Presence of Portugal Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.8	-0.1	1.0											
Gambia	-0.2	0.1	0.1	1.0										
Ghana	0.1	0.4	-0.4	0.2	1.0									
Guinea	0.1	-0.1	-0.5	0.5	0.4	1.0								
Bissau Guinea	0.5	-0.7	-0.4	0.2	0.1	0.2	1.0							
Liberia	0.3	0.3	-0.1	-0.2	-0.5	-0.3	-0.3	1.0						
Mali	0.5	0.2	-0.2	-0.4	0.0	0.1	-0.3	0.3	1.0					
Niger	0.6	0.4	-0.5	-0.2	-0.2	0.0	0.0	0.6	0.3	1.0				
Nigeria	-0.1	-0.1	0.4	-0.6	-0.8	-0.8	-0.3	0.5	0.0	0.1	1.0			
Senegal	-0.2	-0.1	-0.1	0.4	0.0	0.0	0.4	-0.1	-0.9	-0.1	-0.1	1.0		
Sierra Leone	-0.1	0.7	0.2	-0.1	0.3	-0.1	-0.7	0.1	0.4	0.1	-0.1	-0.6	1.0	
Togo	0.4	-0.1	-0.2	0.2	-0.4	0.1	0.4	0.3	0.0	0.7	0.2	0.0	-0.1	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

TABLE 10 - *Correlation of Output Reactions to Global Price Shock in Presence of UK Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	-0.3	1.0											
Cote d'Ivoire	-0.6	-0.1	1.0										
Gambia	-0.4	0.4	0.1	1.0									
Guinea	-0.4	0.0	0.3	0.1	1.0								
Bissau Guinea	0.2	0.4	-0.6	-0.1	-0.4	1.0							
Liberia	0.2	0.3	-0.4	-0.1	0.2	0.1	1.0						
Mali	0.3	-0.3	-0.3	-0.6	0.2	0.3	0.3	1.0					
Niger	0.0	0.0	-0.4	-0.3	0.1	0.1	0.4	0.3	1.0				
Nigeria	-0.6	-0.1	0.7	0.4	0.1	-0.3	-0.5	-0.5	-0.7	1.0			
Senegal	0.1	-0.7	0.4	-0.7	0.2	-0.4	-0.3	0.5	0.1	0.0	1.0		
Sierra Leone	0.6	-0.6	-0.2	0.1	0.0	-0.4	0.2	0.3	-0.1	-0.2	0.3	1.0	
Togo	0.2	-0.4	-0.6	0.0	0.2	-0.2	0.3	0.1	0.6	-0.5	0.1	0.4	1.0

Source: Author's own estimations based on data from the IFS and the WDI.

TABLE 11 - *Correlation of Imports under Colonial Country's (France) Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	0.2	1.0												
Cote d'Ivoire	-0.4	-0.9	1.0											
Gambia	-0.4	0.0	0.0	1.0										
Ghana	0.4	0.5	-0.3	0.0	1.0									
Guinea	0.1	0.3	-0.2	-0.3	0.5	1.0								
Bissau Guinea	0.2	-0.5	0.4	0.3	-0.2	0.0	1.0							
Liberia	-0.1	0.0	0.0	0.3	0.0	0.2	0.4	1.0						
Mali	0.4	-0.2	-0.1	-0.7	-0.1	0.1	0.0	-0.6	1.0					
Niger	0.3	-0.1	0.0	-0.1	0.3	0.6	0.5	0.7	-0.1	1.0				
Nigeria	0.2	0.1	-0.1	0.1	0.1	-0.1	-0.3	0.1	-0.3	-0.1	1.0			
Senegal	-0.1	0.1	0.0	0.1	-0.3	-0.5	-0.3	-0.7	0.1	-0.9	0.2	1.0		
Sierra Leone	-0.1	0.1	-0.2	0.3	-0.4	-0.2	-0.2	0.0	-0.4	0.0	0.4	0.1	1.0	
Togo	0.2	-0.3	0.1	0.2	0.4	0.3	0.2	0.3	0.0	0.7	0.0	-0.7	-0.1	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 12 - *Correlation of Imports Under Colonial Country's (Portugal) Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	0.1	1.0												
Cote d'Ivoire	0.3	0.0	1.0											
Gambia	0.2	-0.5	0.1	1.0										
Ghana	-0.5	-0.5	-0.4	0.2	1.0									
Guinea	0.0	-0.2	-0.2	0.2	0.7	1.0								
Bissau Guinea	0.6	0.0	0.3	0.1	-0.5	0.0	1.0							
Liberia	-0.1	-0.7	-0.1	0.4	0.6	0.3	0.1	1.0						
Mali	0.8	0.3	-0.1	0.3	-0.3	0.2	0.2	-0.3	1.0					
Niger	0.2	0.7	-0.3	-0.4	-0.2	0.1	-0.2	-0.5	0.6	1.0				
Nigeria	-0.4	0.0	0.1	-0.7	0.3	0.1	-0.2	-0.1	-0.5	0.1	1.0			
Senegal	-0.2	-0.6	0.0	0.5	0.6	0.6	0.0	0.5	-0.3	-0.5	-0.2	1.0		
Sierra Leone	-0.3	0.5	-0.4	0.1	-0.2	-0.4	-0.4	-0.2	0.1	0.4	-0.3	-0.3	1.0	
Togo	0.2	0.1	-0.8	0.1	0.1	0.3	0.0	0.0	0.5	0.4	-0.4	0.0	0.3	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 13 - *Correlation of Imports under Colonial Country's (UK) Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	-0.2	1.0											
Cote d'Ivoire	-0.2	-0.4	1.0										
Gambia	-0.2	0.3	-0.8	1.0									
Guinea	-0.3	0.3	0.1	-0.2	1.0								
Bissau Guinea	-0.6	0.0	0.0	0.1	0.5	1.0							
Liberia	-0.6	0.3	0.2	0.1	0.5	0.6	1.0						
Mali	0.3	0.0	-0.2	0.1	-0.5	-0.7	-0.7	1.0					
Niger	-0.5	-0.3	0.2	0.2	-0.2	0.5	0.5	-0.3	1.0				
Nigeria	0.1	0.2	-0.3	0.4	0.3	0.1	0.3	-0.6	0.0	1.0			
Senegal	0.5	0.2	0.0	-0.2	-0.6	-0.8	-0.6	0.6	-0.4	-0.3	1.0		
Sierra Leone	0.2	-0.1	0.0	-0.1	0.1	0.1	0.4	-0.4	-0.1	-0.1	-0.1	1.0	
Togo	-0.5	-0.4	0.2	-0.1	0.2	0.8	0.3	-0.4	0.7	-0.1	-0.7	-0.2	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 14 - *Correlation of Imports to Regional Price Shock in Presence of France Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	0.2	1.0												
Cote d'Ivoire	-0.4	-0.9	1.0											
Gambia	-0.4	0.0	0.0	1.0										
Ghana	-0.4	-0.5	0.3	0.0	1.0									
Guinea	-0.1	-0.3	0.2	0.3	0.5	1.0								
Bissau Guinea	0.2	-0.5	0.4	0.3	0.2	0.0	1.0							
Liberia	-0.1	0.0	0.0	0.3	0.0	-0.2	0.4	1.0						
Mali	0.4	-0.2	-0.1	-0.7	0.1	-0.1	0.0	-0.6	1.0					
Niger	0.3	-0.1	0.0	-0.1	-0.3	-0.6	0.5	0.7	-0.1	1.0				
Nigeria	-0.2	-0.1	0.1	-0.1	0.1	-0.1	0.3	-0.1	0.3	0.1	1.0			
Senegal	-0.1	0.1	0.0	0.1	0.3	0.5	-0.3	-0.7	0.1	-0.9	-0.2	1.0		
Sierra Leone	-0.1	0.1	-0.2	0.3	0.4	0.2	-0.2	0.0	-0.4	0.0	-0.4	0.1	1.0	
Togo	0.2	-0.3	0.1	0.2	-0.4	-0.3	0.2	0.3	0.0	0.7	0.0	-0.7	-0.1	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 15 - *Correlation of Imports to Regional Price Shock in Presence of Portugal Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	0.1	1.0												
Cote d'Ivoire	0.3	0.0	1.0											
Gambia	-0.2	0.5	-0.1	1.0										
Ghana	-0.5	-0.5	-0.4	-0.2	1.0									
Guinea	0.0	-0.2	-0.2	-0.2	0.7	1.0								
Bissau Guinea	-0.6	0.0	-0.3	0.1	0.5	0.0	1.0							
Liberia	-0.1	-0.7	-0.1	-0.4	0.6	0.3	-0.1	1.0						
Mali	0.8	0.3	-0.1	-0.3	-0.3	0.2	-0.2	-0.3	1.0					
Niger	-0.2	-0.7	0.3	-0.4	0.2	-0.1	-0.2	0.5	-0.6	1.0				
Nigeria	0.4	0.0	-0.1	-0.7	-0.3	-0.1	-0.2	0.1	0.5	0.1	1.0			
Senegal	-0.2	-0.6	0.0	-0.5	0.6	0.6	0.0	0.5	-0.3	0.5	0.2	1.0		
Sierra Leone	0.3	-0.5	0.4	0.1	0.2	0.4	-0.4	0.2	-0.1	0.4	-0.3	0.3	1.0	
Togo	0.2	0.1	-0.8	-0.1	0.1	0.3	0.0	0.0	0.5	-0.4	0.4	0.0	-0.3	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 16 - *Correlation of Imports to Regional Price Shock in Presence of UK Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	-0.2	1.0											
Cote d'Ivoire	-0.2	-0.4	1.0										
Gambia	-0.2	0.3	-0.8	1.0									
Guinea	0.3	-0.3	-0.1	0.2	1.0								
Bissau Guinea	-0.6	0.0	0.0	0.1	-0.5	1.0							
Liberia	-0.6	0.3	0.2	0.1	-0.5	0.6	1.0						
Mali	0.3	0.0	-0.2	0.1	0.5	-0.7	-0.7	1.0					
Niger	-0.5	-0.3	0.2	0.2	0.2	0.5	0.5	-0.3	1.0				
Nigeria	0.1	0.2	-0.3	0.4	-0.3	0.1	0.3	-0.6	0.0	1.0			
Senegal	0.5	0.2	0.0	-0.2	0.6	-0.8	-0.6	0.6	-0.4	-0.3	1.0		
Sierra Leone	0.2	-0.1	0.0	-0.1	-0.1	0.1	0.4	-0.4	-0.1	-0.1	-0.1	1.0	
Togo	-0.5	-0.4	0.2	-0.1	-0.2	0.8	0.3	-0.4	0.7	-0.1	-0.7	-0.2	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 17 - *Correlation of Imports to Global Price Shock in Presence of France Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	0.2	1.0												
Cote d'Ivoire	-0.4	-0.9	1.0											
Gambia	-0.4	0.0	0.0	1.0										
Ghana	-0.4	-0.5	0.3	0.0	1.0									
Guinea	-0.1	-0.3	0.2	0.3	0.5	1.0								
Bissau Guinea	0.2	-0.5	0.4	0.3	0.2	0.0	1.0							
Liberia	-0.1	0.0	0.0	0.3	0.0	-0.2	0.4	1.0						
Mali	-0.4	0.2	0.1	0.7	-0.1	0.1	0.0	0.6	1.0					
Niger	-0.3	0.1	0.0	0.1	0.3	0.6	-0.5	-0.7	-0.1	1.0				
Nigeria	-0.2	-0.1	0.1	-0.1	0.1	-0.1	0.3	-0.1	-0.3	-0.1	1.0			
Senegal	0.1	-0.1	0.0	-0.1	-0.3	-0.5	0.3	0.7	0.1	-0.9	0.2	1.0		
Sierra Leone	-0.1	0.1	-0.2	0.3	0.4	0.2	-0.2	0.0	0.4	0.0	-0.4	-0.1	1.0	
Togo	0.2	-0.3	0.1	0.2	-0.4	-0.3	0.2	0.3	0.0	-0.7	0.0	0.7	-0.1	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 18 - *Correlation of Imports to Global Price Shock in Presence of Portugal Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.3	0.0	1.0											
Gambia	0.2	0.5	-0.1	1.0										
Ghana	0.5	-0.5	-0.4	-0.2	1.0									
Guinea	0.0	0.2	0.2	0.2	-0.7	1.0								
Bissau Guinea	0.6	0.0	-0.3	0.1	0.5	0.0	1.0							
Liberia	0.1	-0.7	-0.1	-0.4	0.6	-0.3	-0.1	1.0						
Mali	-0.8	0.3	-0.1	-0.3	-0.3	-0.2	-0.2	-0.3	1.0					
Niger	0.2	-0.7	0.3	-0.4	0.2	0.1	-0.2	0.5	-0.6	1.0				
Nigeria	-0.4	0.0	-0.1	-0.7	-0.3	0.1	-0.2	0.1	0.5	0.1	1.0			
Senegal	0.2	-0.6	0.0	-0.5	0.6	-0.6	0.0	0.5	-0.3	0.5	0.2	1.0		
Sierra Leone	0.3	0.5	-0.4	-0.1	-0.2	0.4	0.4	-0.2	0.1	-0.4	0.3	-0.3	1.0	
Togo	-0.2	0.1	-0.8	-0.1	0.1	-0.3	0.0	0.0	0.5	-0.4	0.4	0.0	0.3	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 19 - *Correlation of Imports in Reactions to Global Price Shock in Presence of UK Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	-0.2	1.0											
Cote d'Ivoire	-0.2	-0.4	1.0										
Gambia	-0.2	0.3	-0.8	1.0									
Guinea	-0.3	0.3	0.1	-0.2	1.0								
Bissau Guinea	-0.6	0.0	0.0	0.1	0.5	1.0							
Liberia	0.6	-0.3	-0.2	-0.1	-0.5	-0.6	1.0						
Mali	-0.3	0.0	0.2	-0.1	0.5	0.7	-0.7	1.0					
Niger	-0.5	-0.3	0.2	0.2	-0.2	0.5	-0.5	0.3	1.0				
Nigeria	0.1	0.2	-0.3	0.4	0.3	0.1	-0.3	0.6	0.0	1.0			
Senegal	0.5	0.2	0.0	-0.2	-0.6	-0.8	0.6	-0.6	-0.4	-0.3	1.0		
Sierra Leone	0.2	-0.1	0.0	-0.1	0.1	0.1	-0.4	0.4	-0.1	-0.1	-0.1	1.0	
Togo	-0.5	-0.4	0.2	-0.1	0.2	0.8	-0.3	0.4	0.7	-0.1	-0.7	-0.2	1.0

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 20 - *Correlation of Investments Cycles under Colonial Country's (France) Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	1.0	1.0												
Cote d'Ivoire	0.7	0.7	1.0											
Gambia	0.1	0.1	0.1	1.0										
Ghana	1.0	1.0	0.7	0.1	1.0									
Guinea	-0.1	-0.1	-0.2	-0.1	-0.1	1.0								
Bissau Guinea	0.1	0.1	-0.1	-0.6	0.1	0.4	1.0							
Liberia	0.6	0.6	0.3	0.1	0.6	-0.4	0.1	1.0						
Mali	0.8	0.8	0.6	0.0	0.8	0.0	0.0	0.6	1.0					
Niger	0.0	0.0	0.0	0.1	0.0	0.2	-0.1	0.0	0.1	1.0				
Nigeria	0.7	0.7	0.5	0.1	0.7	-0.5	0.0	0.5	0.4	0.2	1.0			
Senegal	1.0	1.0	0.7	0.1	1.0	-0.1	0.1	0.6	0.8	0.0	0.7	1.0		
Sierra Leone	0.3	0.3	0.4	0.2	0.3	-0.4	-0.5	0.0	0.2	-0.6	0.1	0.3	1.0	
Togo	0.3	0.3	0.1	0.5	0.3	0.5	0.1	0.2	0.4	0.7	0.2	0.3	-0.5	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 21 - *Correlation of Investments Cycles under Colonial Country's (Portugal) Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.1	-0.1	1.0											
Gambia	0.3	0.0	0.5	1.0										
Ghana	0.3	-0.5	-0.2	0.1	1.0									
Guinea	0.3	-0.2	-0.2	-0.5	0.3	1.0								
Bissau Guinea	0.5	0.5	0.5	0.4	-0.2	0.2	1.0							
Liberia	-0.2	0.2	0.0	0.1	0.4	-0.3	-0.1	1.0						
Mali	0.3	-0.4	-0.3	-0.2	0.4	0.5	-0.1	-0.4	1.0					
Niger	0.4	0.2	-0.6	-0.2	0.3	0.0	-0.2	0.4	-0.1	1.0				
Nigeria	0.1	0.1	0.2	-0.3	-0.2	0.1	0.4	-0.4	0.2	-0.3	1.0			
Senegal	0.4	0.1	-0.6	0.0	0.0	-0.1	-0.1	-0.4	0.6	0.3	0.2	1.0		
Sierra Leone	-0.4	-0.2	-0.2	-0.1	0.7	0.1	-0.4	0.5	0.1	0.1	-0.3	-0.3	1.0	
Togo	-0.4	-0.2	0.7	-0.1	-0.3	-0.1	0.1	0.0	-0.4	-0.5	0.5	-0.7	-0.1	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 22 - *Correlation of Investments Cycles under Colonial Country's (UK) Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	0.3	1.0											
Cote d'Ivoire	-0.5	-0.1	1.0										
Gambia	0.1	0.4	0.1	1.0									
Guinea	0.5	0.6	-0.3	0.2	1.0								
Bissau Guinea	0.2	0.3	-0.4	0.0	0.3	1.0							
Liberia	-0.1	-0.3	-0.3	-0.6	0.2	0.0	1.0						
Mali	0.1	-0.5	-0.2	-0.7	-0.4	0.2	0.1	1.0					
Niger	0.2	0.5	0.1	0.3	-0.1	-0.4	-0.6	-0.2	1.0				
Nigeria	-0.2	0.2	0.1	-0.3	-0.3	0.1	0.2	0.3	0.0	1.0			
Senegal	0.0	-0.1	-0.4	0.0	-0.3	0.0	-0.3	0.4	0.4	0.0	1.0		
Sierra Leone	-0.2	0.6	0.4	0.5	0.1	-0.2	-0.5	-0.4	0.7	0.3	0.1	1.0	
Togo	0.6	0.2	-0.5	-0.1	0.5	0.4	0.2	-0.1	0.1	-0.2	0.2	0.0	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 23 - *Correlation of Investments Reactions to Regional Price Shock in Presence of France Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	0.7	-0.1	1.0											
Gambia	0.1	0.3	0.1	1.0										
Ghana	-0.6	0.1	-0.3	0.3	1.0									
Guinea	0.1	-0.6	0.2	-0.4	-0.2	1.0								
Bissau Guinea	0.1	0.0	-0.1	-0.6	0.0	0.0	1.0							
Liberia	0.6	-0.2	0.3	0.1	-0.7	0.1	0.1	1.0						
Mali	0.8	0.0	0.6	0.0	-0.6	0.0	0.0	0.6	1.0					
Niger	0.0	-0.6	0.0	-0.1	0.1	-0.1	0.1	0.0	-0.1	1.0				
Nigeria	0.7	0.1	0.5	0.1	-0.6	0.3	0.0	0.5	0.4	-0.2	1.0			
Senegal	0.2	-0.2	0.5	0.3	0.0	0.2	-0.3	0.4	0.6	-0.2	0.0	1.0		
Sierra Leone	0.3	-0.6	0.4	0.2	-0.1	0.3	-0.5	0.0	0.2	0.6	0.1	0.2	1.0	
Togo	0.3	0.5	0.1	0.5	0.1	-0.2	0.1	0.2	0.4	-0.7	0.2	0.4	-0.5	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 24 - *Correlation of Investments Reactions to Regional Price Shock in Presence of Portugal Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.1	-0.1	1.0											
Gambia	-0.3	0.0	-0.5	1.0										
Ghana	0.3	-0.5	-0.2	-0.1	1.0									
Guinea	0.3	-0.2	-0.2	0.5	0.3	1.0								
Bissau Guinea	-0.5	-0.5	-0.5	0.4	0.2	-0.2	1.0							
Liberia	-0.2	0.2	0.0	-0.1	0.4	-0.3	0.1	1.0						
Mali	0.3	-0.4	-0.3	0.2	0.4	0.5	0.1	-0.4	1.0					
Niger	-0.4	-0.2	0.6	-0.2	-0.3	0.0	-0.2	-0.4	0.1	1.0				
Nigeria	-0.1	-0.1	-0.2	-0.3	0.2	-0.1	0.4	0.4	-0.2	-0.3	1.0			
Senegal	0.4	0.1	-0.6	0.0	0.0	-0.1	0.1	-0.4	0.6	-0.3	-0.2	1.0		
Sierra Leone	-0.4	-0.2	-0.2	0.1	0.7	0.1	0.4	0.5	0.1	-0.1	0.3	-0.3	1.0	
Togo	0.4	0.2	-0.7	-0.1	0.3	0.1	0.1	0.0	0.4	-0.5	0.5	0.7	0.1	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 25 - *Correlation of Investments Reactions to Regional Price Shock in Presence of UK Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	0.3	1.0											
Cote d'Ivoire	-0.5	-0.1	1.0										
Gambia	-0.1	-0.4	-0.1	1.0									
Guinea	0.5	0.6	-0.3	-0.2	1.0								
Bissau Guinea	0.2	0.3	-0.4	0.0	0.3	1.0							
Liberia	-0.1	-0.3	-0.3	0.6	0.2	0.0	1.0						
Mali	-0.1	0.5	0.2	-0.7	0.4	-0.2	-0.1	1.0					
Niger	-0.2	-0.5	-0.1	0.3	0.1	0.4	0.6	-0.2	1.0				
Nigeria	-0.2	0.2	0.1	0.3	-0.3	0.1	0.2	-0.3	0.0	1.0			
Senegal	0.0	-0.1	-0.4	0.0	-0.3	0.0	-0.3	-0.4	-0.4	0.0	1.0		
Sierra Leone	-0.2	0.6	0.4	-0.5	0.1	-0.2	-0.5	0.4	-0.7	0.3	0.1	1.0	
Togo	0.6	0.2	-0.5	0.1	0.5	0.4	0.2	0.1	-0.1	-0.2	0.2	0.0	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 26 - *Correlation of Investments Reactions to Global Price Shock in Presence of France Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	0.7	-0.1	1.0											
Gambia	0.1	0.3	0.1	1.0										
Ghana	-0.6	0.1	-0.3	0.3	1.0									
Guinea	0.1	-0.6	0.2	-0.4	-0.2	1.0								
Bissau Guinea	0.1	0.0	-0.1	-0.6	0.0	0.0	1.0							
Liberia	0.6	-0.2	0.3	0.1	-0.7	0.1	0.1	1.0						
Mali	0.8	0.0	0.6	0.0	-0.6	0.0	0.0	0.6	1.0					
Niger	0.0	-0.6	0.0	-0.1	0.1	-0.1	0.1	0.0	-0.1	1.0				
Nigeria	0.7	0.1	0.5	0.1	-0.6	0.3	0.0	0.5	0.4	-0.2	1.0			
Senegal	-0.2	0.2	-0.5	-0.3	0.0	-0.2	0.3	-0.4	-0.6	0.2	0.0	1.0		
Sierra Leone	0.3	-0.6	0.4	0.2	-0.1	0.3	-0.5	0.0	0.2	0.6	0.1	-0.2	1.0	
Togo	-0.3	-0.5	-0.1	-0.5	-0.1	0.2	-0.1	-0.2	-0.4	0.7	-0.2	0.4	0.5	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 27 - *Correlation of Investments Reactions to Global Price Shock in Presence of Portugal Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Ghana	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0													
Burkina	-0.1	1.0												
Cote d'Ivoire	-0.1	-0.1	1.0											
Gambia	-0.3	0.0	-0.5	1.0										
Ghana	0.3	-0.5	-0.2	-0.1	1.0									
Guinea	0.3	-0.2	-0.2	0.5	0.3	1.0								
Bissau Guinea	-0.5	-0.5	-0.5	0.4	0.2	-0.2	1.0							
Liberia	-0.2	0.2	0.0	-0.1	0.4	-0.3	0.1	1.0						
Mali	0.3	-0.4	-0.3	0.2	0.4	0.5	0.1	-0.4	1.0					
Niger	-0.4	-0.2	0.6	-0.2	-0.3	0.0	-0.2	-0.4	0.1	1.0				
Nigeria	-0.1	-0.1	-0.2	-0.3	0.2	-0.1	0.4	0.4	-0.2	-0.3	1.0			
Senegal	-0.4	-0.1	0.6	0.0	0.0	0.1	-0.1	0.4	-0.6	0.3	0.2	1.0		
Sierra Leone	-0.4	-0.2	-0.2	0.1	0.7	0.1	0.4	0.5	0.1	-0.1	0.3	0.3	1.0	
Togo	-0.4	-0.2	0.7	0.1	-0.3	-0.1	-0.1	0.0	-0.4	0.5	-0.5	0.7	-0.1	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 28 - *Correlation of Investments Reactions to Global Price Shock in Presence of UK Price Shock*

	Benin	Burkina Faso	Cote d'Ivoire	The Gambia	Guinea	Bissau Guinea	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Benin	1.0												
Burkina	0.5	1.0											
Cote d'Ivoire	-0.5	-0.3	1.0										
Gambia	-0.1	-0.2	-0.1	1.0									
Guinea	0.2	0.3	-0.4	0.0	1.0								
Bissau Guinea	0.3	0.6	-0.1	-0.4	0.3	1.0							
Liberia	-0.1	0.2	-0.3	0.6	0.0	-0.3	1.0						
Mali	-0.1	0.4	0.2	-0.7	-0.2	0.5	-0.1	1.0					
Niger	-0.2	0.1	-0.1	0.3	0.4	-0.5	0.6	-0.2	1.0				
Nigeria	-0.2	-0.3	0.1	0.3	0.1	0.2	0.2	-0.3	0.0	1.0			
Senegal	0.0	0.3	0.4	0.0	0.0	0.1	0.3	0.4	0.4	0.0	1.0		
Sierra Leone	-0.2	0.1	0.4	-0.5	-0.2	0.6	-0.5	0.4	-0.7	0.3	-0.1	1.0	
Togo	-0.6	-0.5	0.5	-0.1	-0.4	-0.2	-0.2	-0.1	0.1	0.2	0.2	0.0	1.0

Source: Author's own estimations based on data from the IFSand the WDI.

TABLE 29 - *Average Variance Decomposition under Cyclical Shock from France Price*

	Decomposition of GDPC: France				Decomposition of IMPORTS: France				Decomposition of GFCF: France			
	GDPC	France	Global	Region	Imports	France	Global	Region	GFCF	France	Global	Region
Benin	64.1	6.7	10.4	18.8	89.9	1.6	4.5	4.0	63.0	12.1	16.6	8.3
Burkina	84.0	4.8	4.9	6.3	88.3	5.9	2.9	2.9	85.9	6.2	1.5	6.4
Cape Verde	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cote d'Ivoire	86.5	2.7	7.2	3.5	74.1	19.0	0.1	6.8	85.3	8.9	5.6	0.2
Gambia	94.2	0.5	0.8	4.4	82.5	13.1	1.3	3.2	73.8	1.7	2.1	22.4
Ghana	94.7	1.7	3.2	0.4	78.8	3.2	16.7	1.2	87.5	1.1	0.6	10.7
Guinea	75.1	2.2	17.8	4.8	48.4	9.9	8.2	33.5	82.0	7.0	4.4	6.6
Bissau Guinea	80.1	4.9	10.0	5.0	86.2	6.2	6.4	1.1	93.6	1.1	3.4	1.8
Liberia	44.7	34.0	17.2	4.1	60.6	31.9	5.4	2.2	82.4	9.4	5.9	2.3
Mali	81.9	3.0	9.5	5.7	89.2	6.2	3.3	1.2	81.0	9.9	5.9	3.2
Niger	67.5	7.6	5.0	19.9	97.2	0.4	0.7	1.8	92.4	4.0	2.5	1.0
Nigeria	92.3	2.0	5.2	0.5	77.3	13.0	8.0	1.7	86.3	8.5	4.1	1.1
Senegal	72.4	12.9	4.7	10.0	95.5	1.3	2.6	0.6	69.0	10.2	0.4	20.4
Sierra Leone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Togo	87.8	3.4	7.8	1.0	85.6	9.9	0.5	4.1	92.4	5.5	1.0	1.1
French colonies	77.4	5.4	8.4	8.8	83.5	6.8	2.8	6.8	81.4	8.0	4.7	5.9
British colonies	70.3	1.0	2.3	1.3	59.6	7.3	6.5	1.5	61.9	2.8	1.7	8.6
Portuguese colonies	40.1	2.4	5.0	2.5	43.1	3.1	3.2	0.6	46.8	0.6	1.7	0.9
WAEMU	68.0	5.1	6.2	8.2	77.5	5.5	1.8	2.7	71.1	7.1	4.2	5.1
WAMZ	68.7	6.5	7.8	2.7	62.0	11.1	6.6	6.1	72.2	4.1	2.9	6.4
ECOWAS	68.4	5.7	6.9	5.6	70.2	8.1	4.0	4.3	71.6	5.7	3.6	5.7

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 30 - *Average Variance Decomposition under Cyclical Shock from Portugal Price*

	Decomposition of GDPC: Portugal				Decomposition of IMPORTS: Portugal				Decomposition of GFCF: Portugal			
	GDPC	France	Global	Region	Imports	France	Global	Region	GFCF	France	Global	Region
Benin	46.5	12.7	7.8	33.0	74.6	1.1	18.0	6.3	57.6	2.9	20.9	18.6
Burkina	97.6	0.6	0.0	1.9	78.3	18.2	0.8	2.7	88.5	4.9	2.8	3.8
Cape Verde	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cote d'Ivoire	94.9	0.6	1.3	3.3	88.7	5.0	1.8	4.5	94.4	1.6	1.1	2.9
Gambia	87.6	3.0	4.1	5.3	91.6	1.6	6.5	0.4	86.9	4.1	4.0	5.0
Ghana	98.8	0.1	0.3	0.8	91.6	0.4	6.5	1.4	90.7	1.0	0.3	8.0
Guinea	83.6	4.6	4.7	7.1	51.4	0.2	46.5	1.9	47.6	17.8	19.0	15.6
Bissau Guinea	93.4	4.5	1.9	0.2	77.9	8.8	10.7	2.7	96.4	1.6	0.4	1.6
Liberia	57.9	32.8	4.6	4.7	39.9	24.7	23.3	12.1	80.2	7.9	10.9	0.9
Mali	82.8	4.1	6.2	6.9	74.1	20.6	3.4	1.9	88.3	6.2	2.0	3.5
Niger	73.6	5.9	3.3	17.2	95.2	0.1	2.1	2.7	87.9	4.9	5.0	2.1
Nigeria	91.5	0.4	0.2	7.8	87.4	1.3	10.7	0.5	74.9	8.3	1.9	14.9
Senegal	90.8	0.1	1.8	7.4	86.4	0.5	12.4	0.7	61.7	1.0	18.7	18.6
Sierra Leone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Togo	98.3	0.1	1.6	0.0	98.5	0.2	0.3	1.0	92.6	1.4	0.7	5.4
French colonies	83.5	3.6	3.3	9.6	80.9	5.7	10.7	2.7	77.3	5.1	8.8	8.8
British colonies	69.5	0.9	1.2	3.5	67.7	0.8	5.9	0.6	63.1	3.3	1.5	7.0
Portuguese colonies	46.7	2.3	0.9	0.1	38.9	4.4	5.4	1.3	48.2	0.8	0.2	0.8
WAEMU	73.1	3.0	2.7	8.7	74.5	5.7	4.8	2.5	71.4	2.9	6.4	6.9
WAMZ	73.3	6.5	2.2	3.7	62.8	5.3	14.9	2.7	68.1	5.8	5.2	6.6
ECOWAS	73.2	4.6	2.5	6.4	69.0	5.5	9.5	2.6	69.9	4.2	5.8	6.7

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE 31 - *Average Variance Decomposition under Cyclical Shock from UK Price*

	Decomposition of GDPC: UK				Decomposition of IMPORTS: UK				Decomposition of GFCF: UK			
	GDPC	UK	Global	Region	Imports	UK	Global	Region	GFCF	UK	Global	Region
Benin	59.7	4.3	1.2	34.8	97.5	0.8	1.3	0.4	67.3	5.3	10.1	17.2
Burkina	95.9	1.3	1.5	1.3	96.1	0.4	2.6	0.8	87.8	5.9	0.6	5.7
Cape Verde	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cote d'Ivoire	0.0	0.0	0.0	0.0	94.1	0.7	0.7	4.5	90.7	2.8	0.7	5.8
Gambia	89.8	0.7	0.9	8.6	85.8	12.8	0.3	1.1	91.0	1.1	0.3	7.6
Ghana	95.2	1.2	3.3	0.3	81.9	1.3	16.6	0.1	66.1	1.8	15.7	16.4
Guinea	84.5	4.1	8.0	3.4	80.0	14.6	2.4	3.1	58.7	25.9	14.0	1.4
Bissau Guinea	85.4	3.0	9.0	2.6	86.0	9.4	3.5	1.1	94.0	1.0	2.1	2.8
Liberia	66.8	19.3	3.9	10.1	72.1	15.2	2.6	10.1	74.8	15.4	2.5	7.3
Mali	79.3	5.2	4.5	11.1	90.6	5.2	1.4	2.8	83.5	9.3	3.2	4.0
Niger	67.5	9.8	1.9	20.8	94.7	3.6	0.5	1.3	92.9	4.3	1.5	1.4
Nigeria	96.8	1.3	1.9	0.0	75.1	15.4	7.2	2.3	88.3	6.4	0.3	5.1
Senegal	81.9	2.5	2.2	13.4	98.0	1.2	0.1	0.8	58.6	15.0	5.0	21.4
Sierra Leone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Togo	92.1	7.0	0.4	0.5	85.4	2.9	8.5	3.2	89.8	7.0	2.1	1.2
French colonies	70.1	4.3	2.5	10.7	92.0	3.7	2.2	2.1	78.6	9.4	4.7	7.3
British colonies	70.4	0.8	1.5	2.2	60.7	7.4	6.0	0.9	61.3	2.3	4.1	7.3
Portuguese colonies	42.7	1.5	4.5	1.3	43.0	4.7	1.8	0.6	47.0	0.5	1.1	1.4
WAEMU	59.6	3.8	1.5	10.2	82.0	1.8	1.9	1.7	71.3	6.2	2.9	7.1
WAMZ	74.1	4.2	3.9	3.6	68.7	9.8	4.6	2.5	67.6	7.4	5.0	5.8
ECOWAS	66.3	4.0	2.6	7.1	75.8	5.6	3.2	2.1	69.6	6.7	3.9	6.5

Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

TABLE X - *Variance Decomposition of the Source of Domestic Price Cyclical Change in Response to Price Shocks from the Former Colonial Country*

Variance Decomposition of Output

	France				Portugal				UK			
	GDPC	France	Global	Region	GDPC	Portugal	Global	Region	GDPC	UK	Global	Region
French colonies	77.4	5.4	8.4	8.8	83.5	3.6	3.3	9.6	70.1	4.3	2.5	10.7
British colonies	70.3	1.0	2.3	1.3	69.5	0.9	1.2	3.5	70.4	0.8	1.5	2.2
Portuguese colonies	40.1	2.4	5.0	2.5	46.7	2.3	0.9	0.1	42.7	1.5	4.5	1.3
WAEMU	68.0	5.1	6.2	8.2	73.1	3.0	2.7	8.7	59.6	3.8	1.5	10.2
WAMZ	68.7	6.5	7.8	2.7	73.3	6.5	2.2	3.7	74.1	4.2	3.9	3.6
ECOWAS	68.4	5.7	6.9	5.6	73.2	4.6	2.5	6.4	66.3	4.0	2.6	7.1

Variance Decomposition of Imports

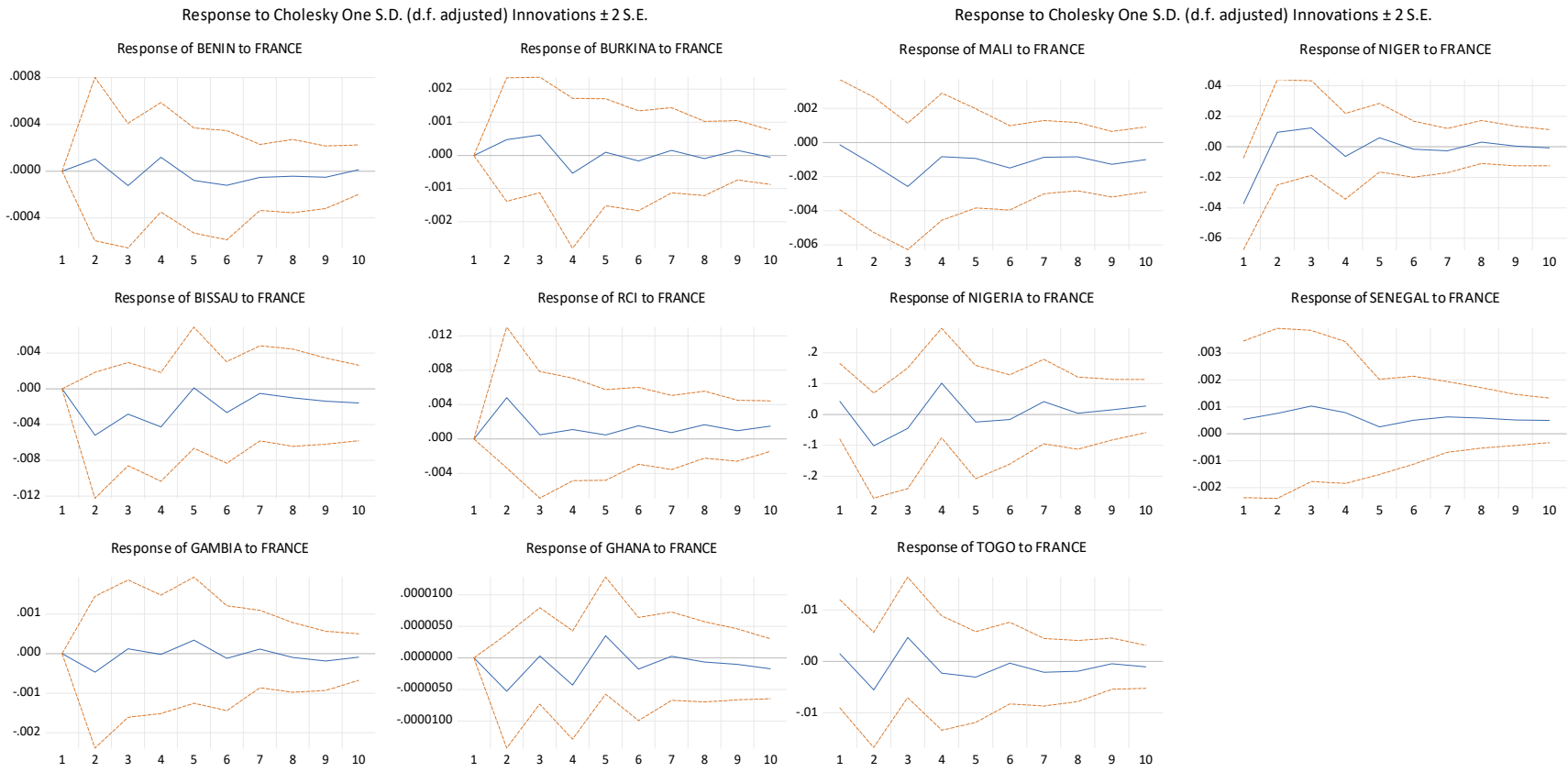
	France				Portugal				UK			
	Imports	France	Global	Region	Imports	Portugal	Global	Region	Imports	UK e	Global	Region
French colonies	83.5	6.8	2.8	6.8	80.9	5.7	10.7	2.7	92.0	3.7	2.2	2.1
British colonies	59.6	7.3	6.5	1.5	67.7	0.8	5.9	0.6	60.7	7.4	6.0	0.9
Portuguese colonies	43.1	3.1	3.2	0.6	38.9	4.4	5.4	1.3	43.0	4.7	1.8	0.6
WAEMU	77.5	5.5	1.8	2.7	74.5	5.7	4.8	2.5	82.0	1.8	1.9	1.7
WAMZ	62.0	11.1	6.6	6.1	62.8	5.3	14.9	2.7	68.7	9.8	4.6	2.5
ECOWAS	70.2	8.1	4.0	4.3	69.0	5.5	9.5	2.6	75.8	5.6	3.2	2.1

Variance Decomposition of Investments

	France				Portugal				UK			
	GFCF	France	Global	Region	GFCF	Portugal	Global	Region	GFCF	UK	Global	Region
French colonies	81.4	8.0	4.7	5.9	77.3	5.1	8.8	8.8	78.6	9.4	4.7	7.3
British colonies	61.9	2.8	1.7	8.6	63.1	3.3	1.5	7.0	61.3	2.3	4.1	7.3
Portuguese colonies	46.8	0.6	1.7	0.9	48.2	0.8	0.2	0.8	47.0	0.5	1.1	1.4
WAEMU	71.1	7.1	4.2	5.1	71.4	2.9	6.4	6.9	71.3	6.2	2.9	7.1
WAMZ	72.2	4.1	2.9	6.4	68.1	5.8	5.2	6.6	67.6	7.4	5.0	5.8
ECOWAS	71.6	5.7	3.6	5.7	69.9	4.2	5.8	6.7	69.6	6.7	3.9	6.5

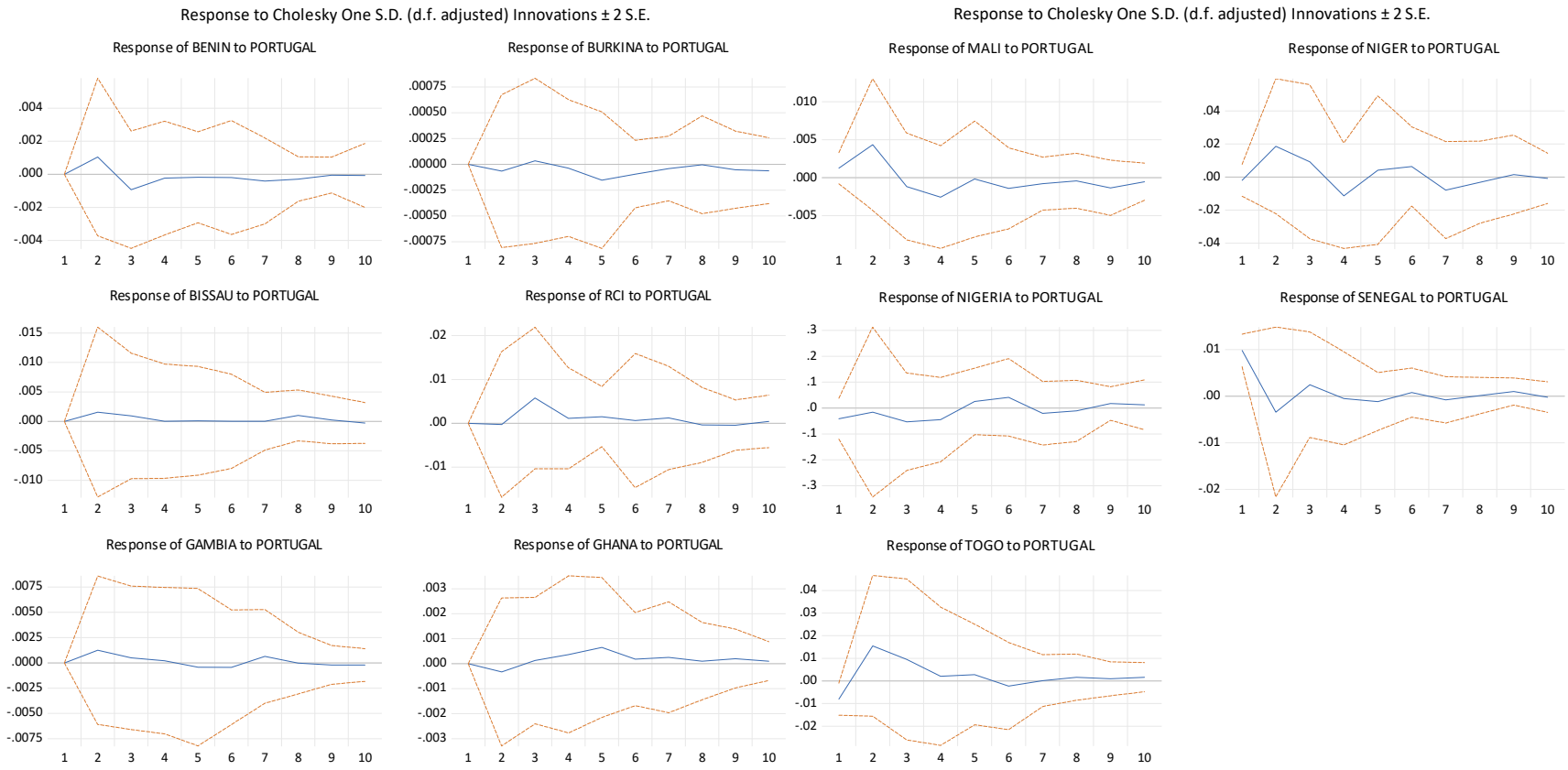
Source: Author's own estimations based on data from the IFS and the WDI.

FIGURE 4 - *Imports Impulse Responses under Price Influence from France*



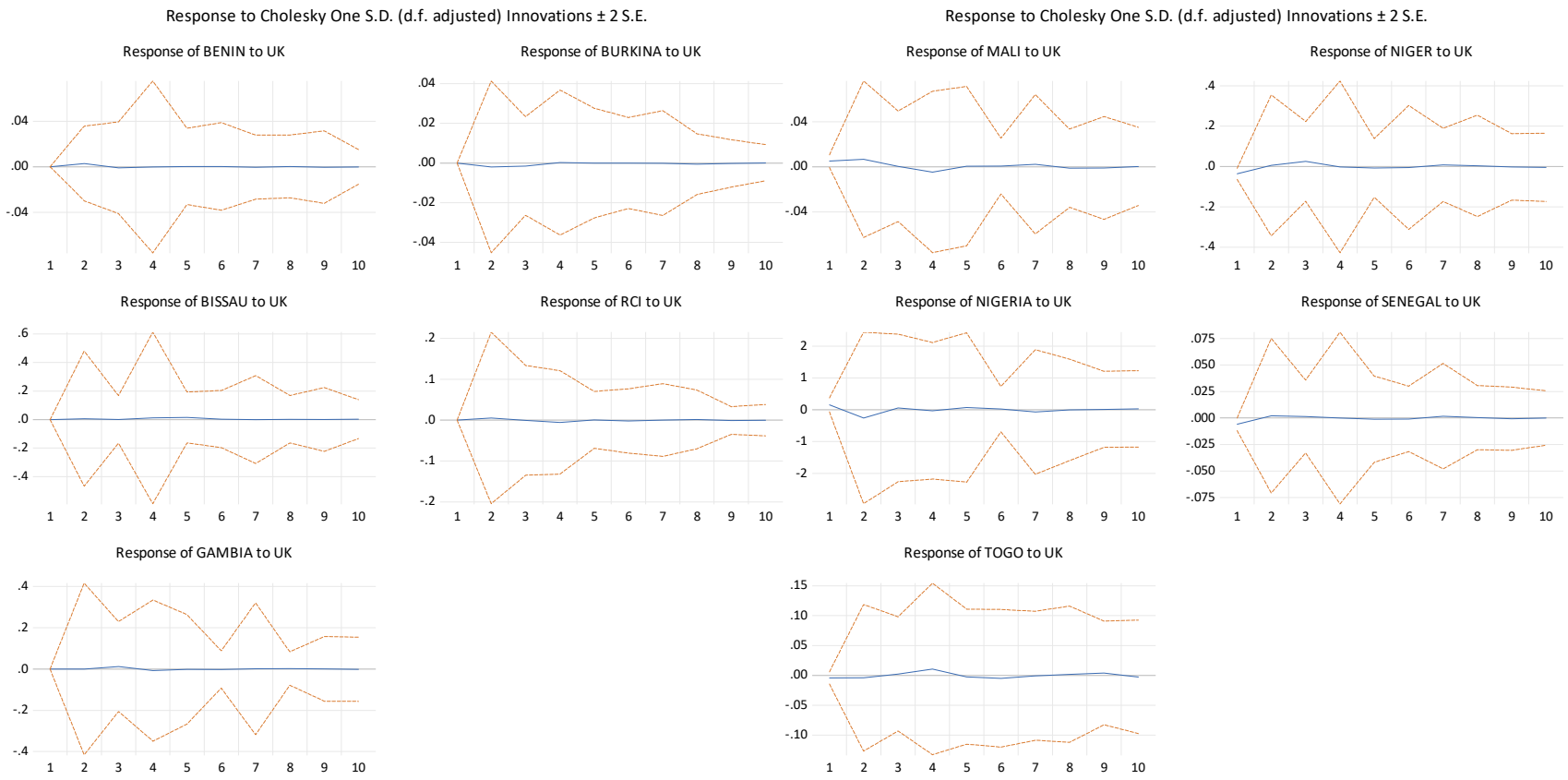
Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

FIGURE 5 - *Imports Impulse Responses under Price Influence from Portugal*



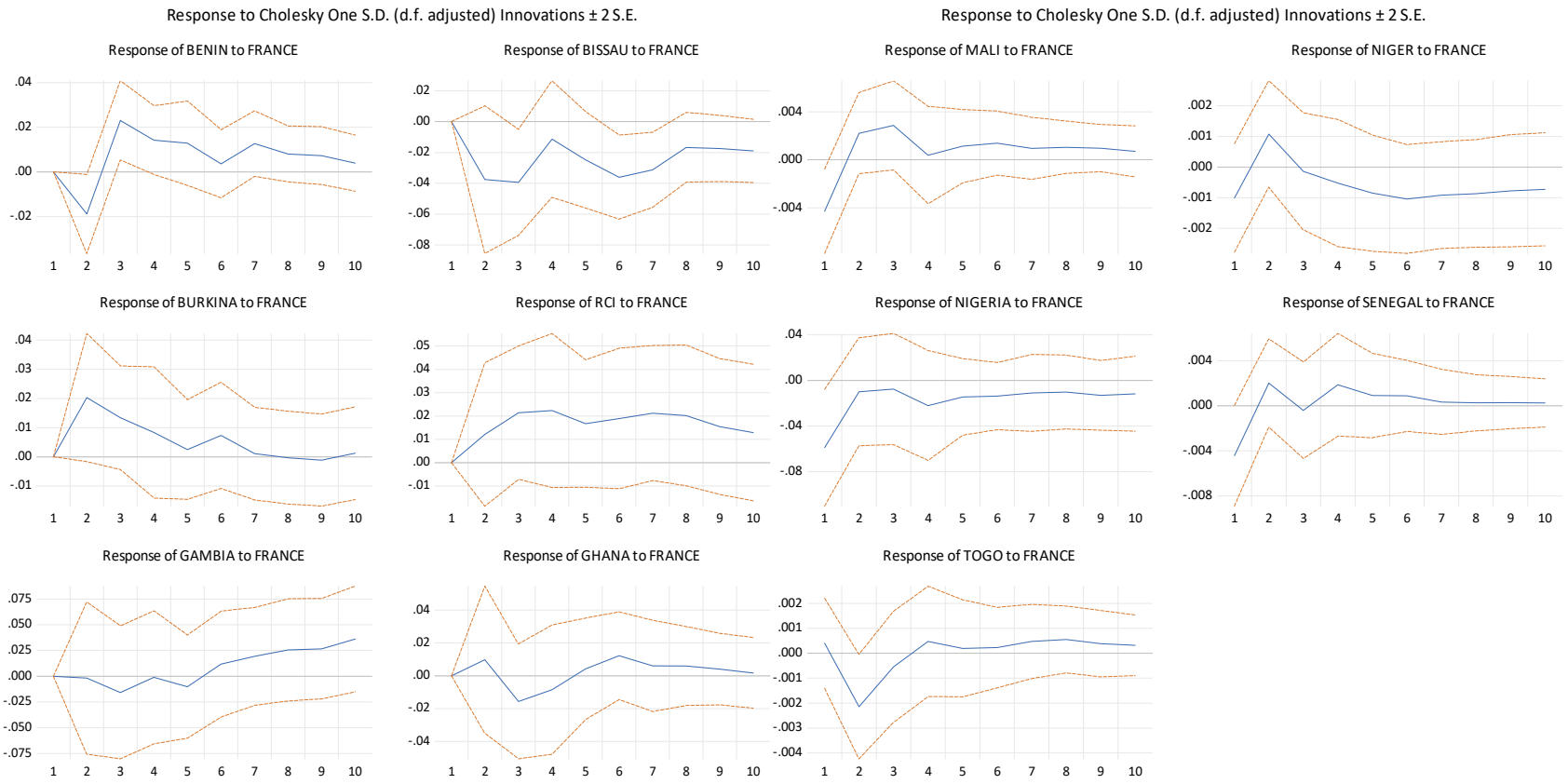
Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

FIGURE 6 - *Imports Impulse Responses under Price Influence from the UK*



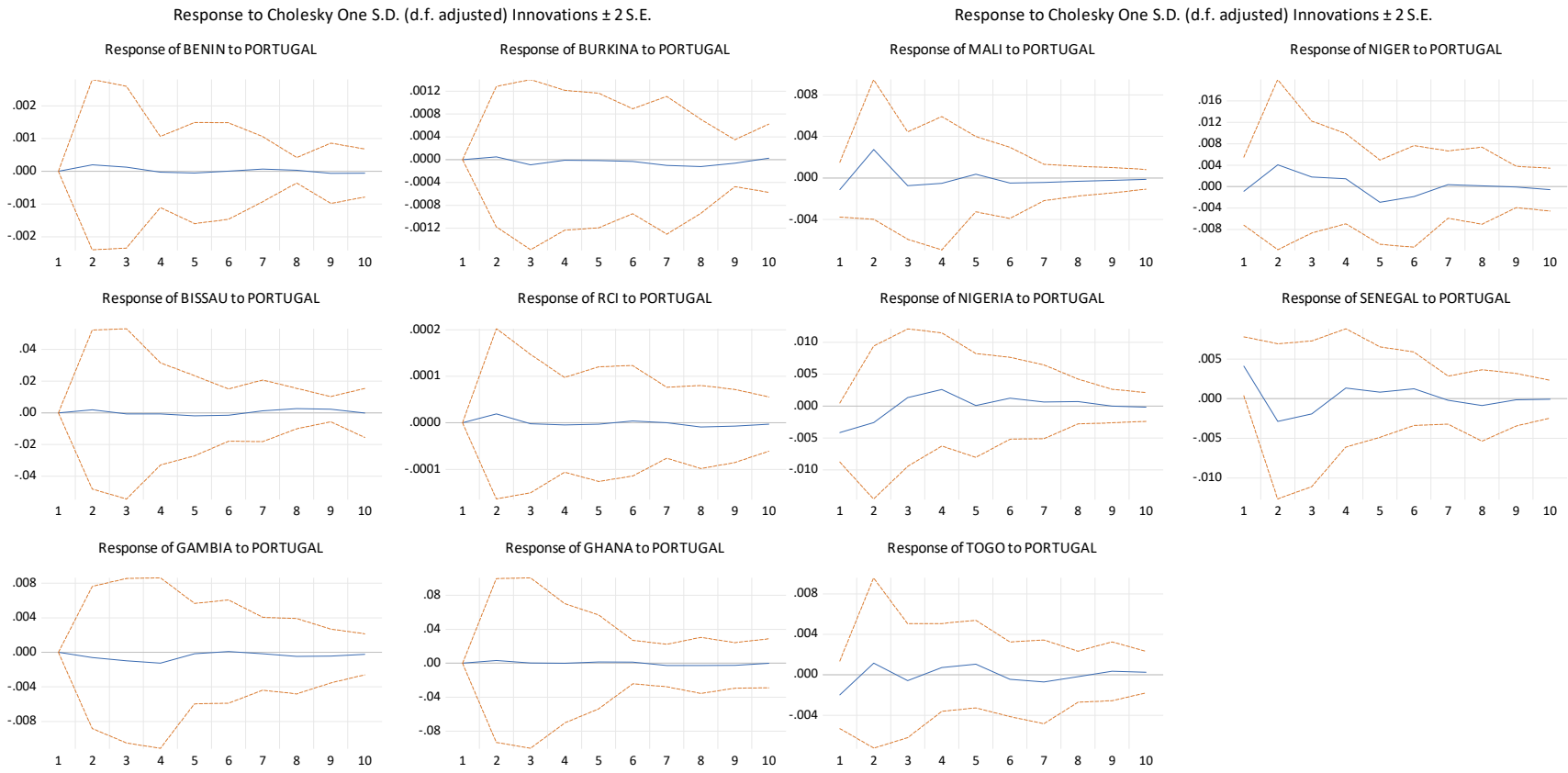
Source: Author's own estimations based on data from the IFS, Trade Directions, and the WDI.

FIGURE 7 - *Investments Impulse Responses under Price Influence from France*



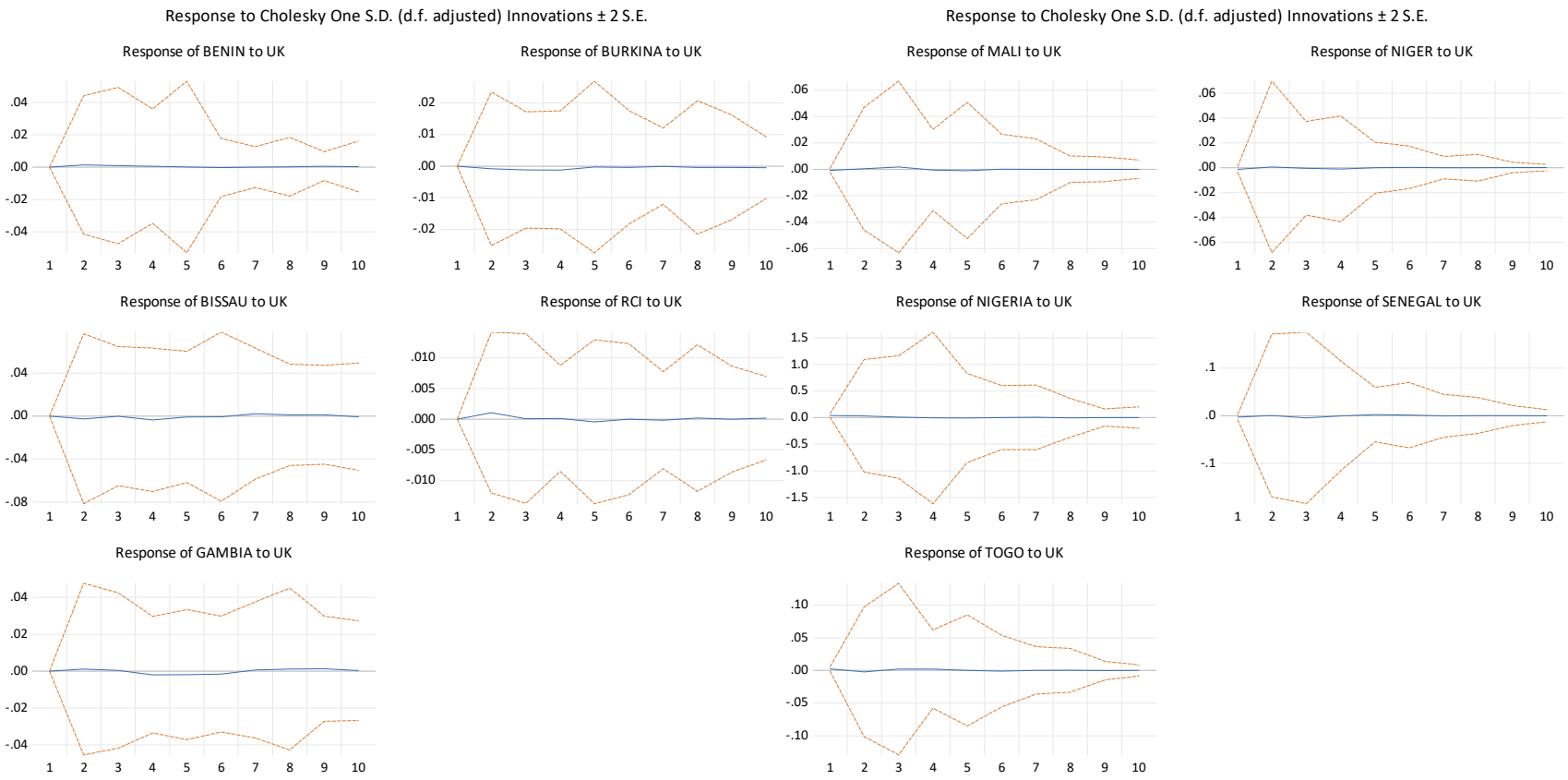
Source: Author's own estimations based on data from the IFSand the WDI.

FIGURE 8 - *Investments Impulse Responses under Price Influence from Portugal*



Source: Author's own estimations based on data from the IFSand the WDI.

FIGURE 9 - *Investments Impulse Responses under Price Influence from the UK*



Source: Author's own estimations based on data from the IFS and the WDI.