

Determinants of Imports in Guinea

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Contents

List of tables

List of figures

Abstract

1. Introduction	1
2. Literature review	4
3. Analytical method and tools	9
4. Analysis of results	12
5. Conclusion	16
Notes	17
References	18

List of tables

1	Evolution of the trade deficit between 2012 and 2016	2
2	Expected sign from variables	11
3	Extract from stationarity test results for variables at the 5% threshold	12
4	Augmented Dickey-Fuller Test on RESIDU	13
5	Estimation of the long term relationship by the ordinary least square method	13
6	Estimation of the error correction model	14

List of figures

- 1 Evolution of foreign trade between 1990 and 2015 (% of GDP) 2

Abstract

The objective of this paper is to examine the factors that influence Guinea's overall import demand using annual data covering the period 1980-2015. Through the Error Correction Model (ECM), we estimated the short- and long-term relationships to measure the effect of real investment expenditure, real effective exchange rate, real final consumption demand and trade policy on import demand, after testing the existence of a cointegration relationship between the different variables of the model.

The results showed that in the short term as in the long term, the demand for real investment, the real demand for final consumption and the trade policy based on the adoption of the new tariff system from 2005 are the main determinants of the import request in Guinea. These results allowed us to draw some implications for economic policy

Keywords: Import, ECM, Guinea.

1. Introduction

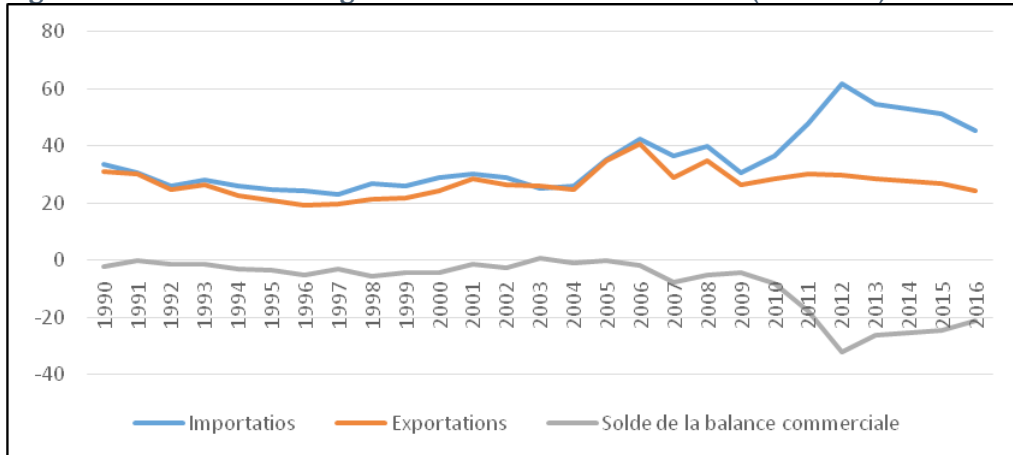
International trade is widely recognized as an essential element in expanding opportunities for economic growth. As such, international trade has been characterized as an economic growth engine. It fosters domestic efficiency, international specialization and competitiveness, ultimately leading to increased levels of aggregate production.

In addition, to sustain economic growth countries need high growth in demand for capital and consumer goods as well as raw materials to support this expansion. Therefore, economic growth requires the provision of additional resources to production. However, the provision of these additional resources cannot be supported by domestic supply alone, which implies that imports of external resources are needed to bridge the gap between the increasing domestic overall demand and the limited supply. Consequently, imports are regarded as an essential component of international trade and economic development.

Guinea, like other developing countries, is open to foreign trade, mainly supported by trade in raw materials. The country is endowed with an abundance of raw materials (bauxite, gold and diamonds). Foreign trade accounts for more than 78%¹ of Guinea's gross domestic product (GDP).

With low domestic agricultural production, characterised by a relatively steady decline in the share of the agricultural sector in GDP, from over 90% before independence to 62% in 1971, 46% in 1988, 24.16% in 2005, 22.04% in 2010 and 20.11% in 2014, Guinea imports a large part of the consumption demand of households and businesses. This high level of imports has led to a persistent deficit in the balance of trade for several years.

Indeed, over the period 1990 to 2015, exports increased by 23% while imports almost tripled in value (Figure 1). In 2011 the deficit on the balance of payments reached US\$1.28 billion, or about 25.6% of GDP.

Figure 1: Evolution of foreign trade between 1990 and 2015 (% of GDP)

Source: Author, based on World Bank data, 2018.

It should also be noted that Guinea is the 143rd importer, and the 124th country in terms of exports in the world. The country's trade balance has always been in deficit with a widening trend of the deficit in recent years (Table 1). This structural deficit in trade balance is primarily the result of the poor performance of the agriculture sector in terms of exports.

In 2015 Guinea exported US\$2.5 billion worth of goods and imported US\$3.32 billion worth of goods leading to a trade balance deficit of US\$706 million. The main imports are refined oil (9.8% of total imports) followed by rice, which accounts for 7%. Recently, the main export has been gold, accounting for 38.2% of total exports followed by aluminium ore, which accounts for 29.5%.

Currently, the Guinean market is flooded with foreign products, particularly from China, Japan, the Netherlands, India, Belgium, France and the United Arab Emirates. In short, products from all continents are available in Guinea (World Bank, 2018).

Table 1: Evolution of the trade deficit between 2012 and 2016

External trade indicators	2012	2013	2014	2015	2016
Imports of goods (millions USD)	2.254	2.230	2.242	1.971	2.151
Trade balance (excluding services) (millions USD)	-316	-253	-306	-411	-2.015

Source: World Bank (2018).

The constant growth in imports and their diversity raises the question of why Guinea imports so many products. Therefore, it is important to determine the factors that explain the country's import demand. It is against this background that we ask the question: What are the factors that influence import demand in Guinea? The general objective of this paper is to understand the behaviour of overall import demand and

its role in the country's economy. Specifically, this study aimed to identify and analyse the determinants of Guinea's import demand over the period 1980 to 2015.

The rest of the paper is divided into four sections. The first section presents the literature review, the second presents the methodology used and the third section provides the results obtained. The conclusion and policy recommendations are presented in the last section.

2. Literature review

There are several studies have examined the determinants of import demand. In our study, we present the most pertinent ones that fit within our research topic. For convenience, empirical evidence on African countries will be considered first, after which we present evidence from the rest of the world. Based on the literature reviewed, no specific studies on the determinants of import demand in Guinea are available. However, before presenting the empirical framework of our study, we first briefly present its theoretical framework.

a. Theoretical framework for determinants of import demand

In the trade literature, there are several theories that explain the determinants of import demand. But there are three main theories: the first one relates to the theory of comparative advantages or neo-classical trade theory; the second is the perfect substitute model or Keynesian trade multiplier; and the third refers to flawed competition also known as the new trade theory (Hong, 1999).

The first theory is based on the Heckscher-Ohlin theory, whose main idea is to explain how the volume and flow of international trade are affected by changes in relative prices. According to this theory, the volume and flow of international trade are explained by differences in endowments of factors of production in each country. The theory is not concerned with the effects of changes in income on trade as the level of employment is assumed to be fixed and production is assumed to be on a given production line. This suggests that import demand in this theory is based on the behavioural assumptions of large neo-classical microeconomic consumers and general equilibrium theory.

The second theory is based on macroeconomic multiplier analysis. In this model, relative prices are assumed to be rigid while employment is variable. The model assumes international capital mobility that fits passively to restore the balance of trade equilibrium. The central idea of this model is to show the relationship between income and import demand at the global level. The relationship can be defined by a few ratios such as the average and marginal import propensity and the import income elasticity. The perfect substitute model is based on the assumption that traded goods are perfectly substitutable. But in reality, traded goods are not perfect substitutes, hence both imported and domestically produced goods coexist in the same market (Goldstein and Khan, 1985).

And finally, the third theory explains the effects of economies of scale, product differentiation and monopolistic competition on international trade. This theory uses three approaches to try to explain the effects of flawed competition on international trade by taking into account the approaches proposed by Marshall (1926), Chamberlin (1956) and Cournot and al. (1929). First, Marshall's approach assumes that the output is constant at the firm level but increasing at the industry level. In this case, if a firm increases its output, its average cost remains constant. Second, Chamberlin's (1929) approach assumes that an industry comprises many monopolistic firms, and new firms can enter the market and differentiate their products from those of existing firms so that any monopoly benefits at the industry level are eliminated. Finally, Cournot and al.'s approach assumes a market with only a few imperfectly competitive firms where each firm's output is considered like a datum.

Generally speaking, the theoretical literature suggests three models. However, two models are generally used to assess the import demand function. These are the imperfect substitute model and the perfect substitute model. The perfect substitute model assumes that traded goods are perfectly substitutable, suggesting that a country can be an importer or an exporter, but not both at the same time (Junz and Rhomberg, 1973).

But in reality, traded goods are not perfectly substitutable, hence imported goods and locally produced goods coexist in the same market. Additionally, the increase in trade among nations and the existence of intra-industry trade have raised questions about the validity of the perfect substitute hypothesis. The perfect substitute model has received less attention in empirical studies since it appears to be less realistic as opposed to the imperfect substitute model, which has received more attention.

In summary, the theoretical analysis showed that the comparative advantage theory, the perfect substitute theory and the imperfect substitute theory are the main theoretical drivers of import demand. These theories assume that import demand in a market economy can be entirely modelled by income and relative prices. The other factors that determine imports can be theoretically explained by income and prices. The imperfect substitute theory appears to be more realistic than the perfect substitute and comparative advantage theories.

b. *Empirical evidence in the African countries*

Economic literature tells us that there are empirical studies on the determinants of imports in some African countries, notably South Africa, Côte d'Ivoire, Congo, Kenya, Nigeria, Senegal and Zambia.

Indeed, Mwega (1993) estimated Kenya's import demand using the error-correction model for the period 1964 to 1991. He found that the short-term relative price (-0.156) and actual income (0.888) of imports in the short run are significant and insignificant for Kenya. Conversely, aggregate imports are sensitive to previous imports (0.181), lagged foreign exchange reserves (0.16) and foreign exchange earnings (0.129). The

error correction model (ECM) coefficient (-1.02) is considered significant, validating the ECM specification and suggesting that the errors are fully corrected within the year. He therefore concludes that, for Kenya, the estimation results suggest that policies that directly increase export earnings and access to external capital inflows are likely to have a greater impact on import volumes than policies that focus primarily on demand and exchange rate control.

Egwaikhide (1999) also reviewed the determinants of overall imports and their components into Nigeria between 1953 and 1989. In this study, he used the error-correction model to estimate the various equations in his model. The results indicate that foreign exchange earnings, relative prices and actual income all significantly determine the behaviour of total imports over the baseline period. The results also show that short-term import policies are determined by exchange rate dynamics, which are related to the long-term effect with respect to information feedback mechanism. Results from disaggregated imports also reveal the significance of foreign exchange. Thus, he concluded that if the Government of Nigeria wishes to increase imports, it is essential to implement economic policies that will enhance the flow of foreign exchange.

Cheelo (2009), in his studies on the determinants of import demand in Zambia, used an error-correction model to examine the determinants of imports and aggregate components between 1965 and 1997. The estimation results indicate that, in the short-term, foreign exchange earnings, international reserves, actual income and previous imports all significantly determined the behaviour of overall imports over the baseline period. The results also show that overall imports did not respond significantly to relative import prices. Lack of significance of relative price elasticity suggests that trade policies that rely excessively on expenditures, such as tariff and non-tariff restrictions or devaluations, did not contribute to trade policy reform efforts during the study period. In an attempt to examine the determinants of total imports and their components in Senegal between 1970 and 2001, Diawara (2005) used Moran's (1989) model by using the cointegration model and the error-correction model for the different estimates. The results showed that real GDP and the real effective exchange rate do not have a significant effect on Senegal's total imports. However, export earnings remain the main determinant of total imports. Otherwise, current prices and previous imports have a significant effect in the short and long term respectively. Results on disaggregated imports show that domestic production, real GDP and previous imports significantly affect real food imports in the long-term.

In 2010, Safoulanitou, L. N. (2010), focused on identifying factors that could explain the evolution of food imports in Congo using the error correction model. The results indicated that the exchange rate for the local currency, armed conflict, re-export trade, income and national production index all constitute the main factors responsible for food imports in the short and/or long term.

a. *Empirical evidence from the rest of the world*

Various studies on the determinants of import demand have been conducted around the world.

For example, in 1989, Moran estimated an import demand in cases where there are constraints on foreign trade. His study covered 21 developing countries over the period 1970 to 1983. For the purposes of the study, two models were specified: first, a general model with exogenous prices, in log-linear form, makes imports depend on earnings from foreign trade, previous international reserves, delayed imports, relative price and real income; the second model, also in log-linear form, includes two equations. One of the two equations describes import demand as a function of relative price, real income and delayed imports. The other equation that describes import supply is a function of trade earnings, previous international reserves and delayed imports.

The results show that, for the first model with fixed prices, all the parameters have the expected values and the coefficient of trade earnings is significant. Those of the second model show that the estimates of price and income elasticities are subject to a bias when trade earnings are explicitly considered in the import demand equation with endogenous prices.

Clarida (1996), in a study on import demand in the United Kingdom, assessed a long-term equilibrium relationship between imported consumer goods, the relative price of imports and the consumption of domestic goods. The study found that all these variables are cointegrated. The long-term price elasticity of import demand was estimated to be -0.95; the import demand elasticity for a constant increase in real expenditure was estimated to be 2.2. In his analysis, he used an econometric equation to estimate demand parameters for imported non-durable consumer goods for the United Kingdom using quarterly data covering the period 1967 to 1982.

Senhadji (1998) studied the import demand trends of 77 developed and developing countries over the period 1960 to 1993. He defined, based on relative prices, staggered imports and GDP from which exports are subtracted. The results show that, in general, price and income elasticities have the expected values and are statistically significant at the 5% threshold.

Rogers (2000), over the period 1968 to 1998, studied the import pattern of Fiji and identified the most important explanatory factors. Analysis of Roger's results shows that real GDP and the real effective exchange rate played an important role in the growth of imports. In the short term, the value of imports depends positively on the level of real GDP and the real effective exchange rate and negatively on the average tariff rate.

In the long term, the coefficient on real GDP suggests a double growth in value of imports in line with production increases. Rogers (2000) used the ECM method.

Kalyoncu (2006) sought to explain the determinants of import demand using quarterly data over the period 1994 to 2003) in Turkey by using cointegration techniques and the ECM. The results suggested that there is a long-term equilibrium

relationship between real import quantities, relative import price and real gross national product (GNP).

In conclusion, a significant body of literature exists that has examined the determinants of import demand in developing countries. And most studies have used the cointegration approach and with ECM as the estimation model. Thus, we use the same approach to estimate total import demand in Guinea.

3. Analytical method and tools

In this section we present the basis of our model and the analysis of the results obtained.

a. Choice of model

For our basic model we used that developed by Hemphill (1974) and later modified by Moran (1989) and Egwaikhide (1999) because this model is widely used by researchers who have worked on the determinants of import demand in certain African countries, notably in Senegal by Diawara & Kasse (2005) , in Congo by Safoulanitou, L. N. (2010) and in Zambia by Cheelo (2009). This allowed us to compare our findings with those obtained in countries similar to Guinea where the same study was conducted, such as Congo and Senegal.

b. Model specification and equations

The import demand function used in this research work was inferred:

$$M_t = f(PM_t, PD_t, Y_t) \quad (1)$$

$$M_t = f\left(\frac{PM_t}{PD_t}, Y_t\right) \quad (2)$$

where: M_t = import demand for the period t ; PM_t = import price for the period t ; PD_t = domestic price for the period t ; and Y_t = gross domestic product for the period t .

Equations 1 and 2 are known as the absolute and relative price formulations respectively, following the work of Goldstein and Khan (1985) who provide a summary and discussion of previous studies on relative price formulations.

The formulation assumes instantaneous adjustments by imports due to changes in domestic prices and income from the importer. Following the work of Giovanetti (1989), a partial adjustment model can be specified:

$$\Delta M_t = \delta (M_t^* - M_{t-1}) \quad (3)$$

with Δ , operator from $t-1$ to t difference), that is, $\Delta M_t = M_t^* - M_{t-1}$; δ is the adjustment coefficient ($0 < \delta < 1$); and M_t^* is the desired level of imports which is determined by the income and domestic prices from the importer. This gives the relative import demand expressed by Equation 4 which is derived from Equation 2.

$$M_t^* = \alpha_1 + \alpha_2 PM_t + \alpha_3 PD_t + \alpha_4 Y_t + e_t \quad (4)$$

By replacing Equation 4 in Equation 3, we obtain:

$$\Delta M_t = \delta (\alpha_1 + \alpha_2 PM_t + \alpha_3 PD_t + \alpha_4 Y_t + e_t - M_{t-1}) \quad (4a)$$

Mathematical rearrangement of the previous equation gives the following equation:

$$\Delta M_t = \delta \alpha_1 + \delta \alpha_2 PM_t + \delta \alpha_3 PD_t + \delta \alpha_4 Y_t + \delta e_t - \delta M_{t-1} \quad (4b)$$

Based on Equation 3 ($\Delta M_t = \delta (M_t^* - M_{t-1})$), we replace ΔM_t by $M_t^* - M_{t-1}$ in Equation 4a and by rearranging Equation 4b, we get:

$$M_t^* = \delta \alpha_1 + \delta \alpha_2 PM_t + \delta \alpha_3 PD_t + \delta \alpha_4 Y_t + (1 - \delta) M_{t-1} + \delta e_t \quad (5)$$

This is the dynamic linear import demand equation.

Equation 5 is usually specified in log-linear form, assuming that international trade theory links these different variables in a multiplicative form that can be derived, for example, from a cost-minimization framework (see, for example, Italianer, 1987). Moreover, empirical studies attempting to distinguish between the log-linear form and the simple linear form (Khan and Ross, 1977; Boylan and al., 1980) strongly support the first option. Finally, it makes more sense, for the period studied, to assume the constancy of elasticities rather than that of marginal propensities: this is a final argument in favour of the log-linear form. Thus, taking the logarithm of Equations 4 and 5, we obtain the following linear equation:

$$\ln M_t^* = a_1 + a_2 \ln PM_t + a_3 \ln PD_t + a_4 \ln Y_t + a_5 \ln M_{t-1} + \mu_t \quad (6)$$

In this equation: $a_1 = \alpha_1$, $a_2 = \delta \alpha_2$, $a_3 = \delta \alpha_3$, $a_4 = \delta \alpha_4$, $a_5 = (1 - \delta)$ et $\mu_t = \delta e_t$.

In our study, import demand for goods and services (IMP) will be treated as an endogenous variable, while real investment demand (RID), real final consumption demand (RFCD), trade policy (TP) and the real effective exchange rate (RER) will be treated as exogenous variables. Hence the following equation:

$$\ln IMP_t = a_0 + a_1 \ln DIR_t + a_2 \ln TCR_t + a_3 \ln DRCF_t + a_4 \ln PCM_t + \mu_t \quad (7)$$

with, LnIMPt , LnDIRt , LnTCRt , LnDRCF_t , LnPCMt and μ_t which represent respectively the logarithm of real imports of goods and services for the period t ; logarithm of real investment expenditure for the period t ; logarithm of the real effective exchange rate for the period t ; logarithm of the real final consumer demand (RFCD) for the period t ; logarithm relating to the trade policy variable for the period t ; and the error term for the period t .

Economic theory suggests that if the sum of the elasticities of imports and exports is greater than one, a decline in trade conditions should lead to a decline in net imports. At the exchange rate level, a depreciation of the exchange rate is expected to lead to an increase in the volume of imports, since a larger share of low-income countries rely on tariff income. However, currency appreciation could potentially lead to a decrease in imports. According to Phillips and Perron (1988), a positive relationship between import demand and the exchange rate is expected.

Agreeing with the economic theory, we assume that real investment demand and real final consumption expenditure have a positive impact on import demand. With respect to trade policy, it is agreed that a trade policy that raises taxes on imported goods would result in a decrease in import demand and that a decrease in these taxes would encourage import demand. Table 2 summarizes the expected values for the different variables in our equation under estimation.

Table 2: Expected sign from variables

Variables	Expected sign
Real investment demand (RID)	+
Real final consumption demand (RFCD)	+
Real effective exchange rate (REER)	+
Trade policy (CTP)	-

Source: Author, 2018.

c. Data sources

In this section, we describe the data used to estimate our equation. We estimated the import demand function using annual data covering the period 1980 to 2015. The data obtained are from the World Bank, World Development Indicators (WDI) of 2018 and the International Financial Statistics (IFS) of the International Monetary Fund (IMF) of 2018.

4. Analysis of results

a. Series stationarity test

The various stationarity tests through the Augmented Dickey-Fuller Test (ADF) were performed under the Eviews 9 software. The results are presented in Table 3.

Table 3: Extract from stationarity test results for variables at the 5% threshold

Variables	ADF in levels		ADF as the primary difference	
	ADF	CV	ADF	CV
LnIMP	-2.079629	-3.544284	-4.821144	-3.548490
LnTCR	-2.030929	-3.548490	-4.474549	-3.552973
LnDIR	-2.075446	-3.544284	-6.051251	-3.552973
LnDRFC	-3.627545	-3.568379	-5.128822	-3.548490
LnPCM	-1.951574	-3.544284	-5.819754	-3.548490

Source: Our calculations based on Eviews.9 software, 2018.

Analysis of information in Table 3 shows that all variables are stationary in first difference. We recall that when the ADF statistic is greater in absolute value than the critical value (CV), the variable is stationary, and it is non-stationary when the ADF statistic is less in absolute value than the CV. In this case, the level of integration is 1 for a threshold of 5% because all the variables are stationary in the first difference, that is, I (1). The stationarity test having been verified, we then moved to the cointegration test.

b. Cointegration test

Since the variables have the same integration level of I (1), we use the two-step method of Engel and Granger (1987) to perform the cointegration relationship.

Step 1: Ordinary least squares estimation of the long-term model:

$$\text{LnIMP}_t = a_0 + a_1 \text{LnDIR}_t + a_2 \text{LnDRFC}_t + a_3 \text{LnPCM}_t + a_4 \text{LnTCR}_t + e_t \quad (8)$$

The result is given by the following equation:

$$\text{LnIMP}_t = -2.4234 + 0.2960 \cdot \text{LnDIR}_t + 0.7735 \cdot \text{LnDRCF}_t + 0.4485 \cdot \text{LnPCM}_t + 0.0384 \cdot \text{LnTCR}_t + e_t \quad (9)$$

Step 2: ADF test on the residue e_t

H_0 : Unit Root on Residue e_t (Non Cointegration)

H_1 : No Unit Root on Residue e_t (Cointegration)

The Augmented Dickey-Fuller result on the residue generated by the long-term model is given in Table 4.

Table 4: Augmented Dickey-Fuller Test on RESIDU

	t-statistic	Prob.**
Augmented Dickey-Fuller statistic test	-6.245181	0.0001
Test critical values:		
1% level	-4.252879	
5% level	-3.548490	
10% level	-3.207094	

(**) indicates that the significance threshold is 5%.

Source: Our calculations based on Eviews.9 software, 2018.

The probability value is less than 5% therefore we accept the hypothesis of residue stationarity. The variables then LnIMP, LnDIR, LnDRCF, LnPCM and LnTCR are cointegrated at the 5% threshold.

The presence of a cointegrating relationship between the variables makes it possible to estimate an ECM, using the Engel-Granger approach (i.e., two-step estimation) by the ordinary least squares (OLS) method.

c. Error Correction Model

Estimation of the ECM by the Engel-Granger approach helps to determine the short and long-term relationship through the estimation of a single equation. The Engel-Granger model estimation is done in two steps.

Step 1: Ordinary least squares estimation of the long term model

Table 5: Estimation of the long term relationship by the ordinary least square method

Variables	Coefficient	Std. error	Prob.
C	-2.423851	2.666681	0.3704
LNDIR	0.295947	0.165027	0.0827*
LNDRCF	0.773495	0.169562	0.0001**

LNPCM	0.448473	0.165964	0.0111**
LNTCR	0.038405	0.041797	0.3653
R-squared	0.955433	F-statistic	166.1464
Adjusted R-squared	0.949683	Prob (F-statistic)	0.000000

** (*) indicates that the significance threshold is 5% (10%).
Source: Author based on results obtained from Eviews.9 software.

Step 2: Estimation of the dynamic model relationship (short term) by MOLS

Table 6: Estimation of the error correction model

Variables	Coefficient	Std. error	Prob.
C	0.020483	0.022813	0.3766
D(LNDIR)	0.338062	0.098656	0.0018**
D(LNDRCF)	0.569984	0.188754	0.0052**
D(LNPCM)	0.313078	0.173165	0.0810*
D(LNTPCR)	0.061184	0.042238	0.1582
ERREUR (-1)	-0.359150	0.126561	0.0082**
R-squared	0.492644	F-statistic	5.631808
Adjusted R-squared	0.405168	Prob (F-statistic)	0.000956

** (*) indicates that the significance threshold is 5% (10%).
Source: Author based on results obtained from Eviews.9.

The quality of this model's estimation seems good with respect to the probability of the Fisher statistic (0.0001).

i. Interpretation of the error correction coefficient

In this equation, the coefficient of the ERROR variable (-1) (equilibrium return force) is the error-corrected coefficient. The coefficient associated with the return force is negative (-0.3582) and significantly different from zero at the 5% threshold. There is therefore an error correction mechanism: in the long term, the imbalances between import demand and real investment demand, real final consumption demand, real gross domestic product and real growth rate offset each other, so that the series have similar trends.

The coefficient -0.3582 represents the speed at which any imbalance between desired and actual levels of import demand is reversed in the following year of any shock.

Thus, the shocks on import demand in Guinea are corrected—they are 35.82% by the “feedback” effect. In other words, a shock observed in the course of 1 year is fully absorbed after 2 years and 8 months ($1/0.3582$ years = 2.78 years).

ii. Interpretation of short-term and long-term elasticities

According to Table 5, real investment demand and real final consumption demand are statistically significant at the 5% threshold, while the trade policy variable is only significant at 10%. This implies that in the short term, these three variables are determinant in explaining import demand in Guinea.

Thus, if real investment demand and real final consumption demand increase by 1% (100%) respectively, then import demand will increase by 33% and 57% respectively. These conclusions are similar to those obtained by Margot and al. (2015) on Chinese consumption of luxury goods from abroad. The author shows how the increase in the consumption of luxury goods has increased the level of imports, and the result is that the Guinean economy is characterized by an increase in household consumption expenditure. Mainly food and other basic necessities are imported in large quantities to cover excess domestic demand.

With regard to demand for real investment, it should be noted that, since the production capital goods of Guinean enterprises consist mainly of imports, investment has a limited impact on the growth of the national economy, which is reflected in the growth of the country's imports.

In 2005 Guinea adopted the Economic Community of West African States (ECOWAS) trade policy based on the West African Economic and Monetary Union (WAEMU) harmonized Common External Tariff as part of the gradual integration of the country's economy into the sub-regional economy. In the short term, this has a positive impact on the growth of imports into Guinea. It is entirely ad valorem and comprises four rates. The basic average of its tariff rates has not changed since 2005 and stands at 12.1%.

Guinea consolidated 41.1% of its tariff headings at ceiling rates, including all agricultural products and 31.4% of non-agricultural products. The average consolidated rate is 21.2%, that is, 39.4% for agricultural products and 11.2% for non-agricultural products. However, on about 10.3% of the tariff headings, the applied rates exceed the consolidated rates. Other duties and taxes are bound at 0 (despite the imposition of various duties and taxes on the products under consideration), 23%, 43%, 53%, 63% or 93%. Thus, the adoption of this new tariff regime, marked by a reduction or cancellation of certain taxes compared to the old tariff system, has favoured imports from countries in the sub-region, which have increased Guinea's overall import demand. In the long term, the trade policy variable and real final consumption demand are statistically significant at the 5% threshold. While real investment demand is only significant at the 10% threshold.

Finally, real investment demand, trade policy and real final consumption demand are the variables that explain the aggregate import demand in Guinea in our study.

5. Conclusion

The purpose of this study was to examine the determinants of Guinea's aggregate import demand function over the period 1980 to 2015. The demand function was based on the traditional import demand function developed by Hemphill (1974) and later modified by Moran (1989) and Egwaikhide (1999). The model was adjusted by adding real investment demand, real final consumption demand, real exchange rate and trade policy as explanatory variables in the aggregate import demand function. First, the results revealed that real final consumption demand, real investment demand, trade policy, and the exchange rate are cointegrated.

Second, in both the short and long term, the results revealed that real investment demand, real final consumption demand and trade policy are statistically significant in Guinea's aggregate import demand function. These results show that Guinea is highly dependent on final consumption demand, which partly justifies the large increase in import demand. The results also underscore the positive impact that the country's adoption of the new WAEMU tariff system has had on its import demand through the sub-region's integration policy.

With this in mind, we recommend that the Guinean authorities promote and encourage national production in order to achieve self-sufficiency in terms of responding to the needs of the country's population, implement a local consumption strategy and create a business environment conducive to national enterprises through a return to political stability and the establishment of a legal and institutional framework for the implementation of policies conducive to development.

We also recommend that the national authorities, in the framework of trade policy, continue their modernization policies for the practice of the commercial sector to reduce the weight of the informal sector and establish a climate of healthy and fair competition, as well as the promotion of national exports, especially in the non-mining sectors, to make trade a real engine of growth.

Notes

- 1 The World Bank, World Development Indicators (2018).

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To strengthen local capacity for conducting independent, rigorous inquiry into the problems facing the management of economies in sub-Saharan Africa.

The mission rests on two basic premises: that development is more likely to occur where there is sustained sound management of the economy, and that such management is more likely to happen where there is an active, well-informed group of locally based professional economists to conduct policy-relevant research.

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