

THE BEHAVIOUR OF IMPORTS IN SUB-SAHARAN AFRICA: A NEW EMPIRICAL INVESTIGATION

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ABSTRACT

The sustainable development of imports is a way for countries to expand their economic tasks by integrating values and social and environmental practices. This vision stands more as a necessary practice to ensure the viability of enterprises. We have attempted, in this paper, to evaluate the structure and determinants of the demand for imports in Sub-Saharan African (SSA) countries at the aggregated and disaggregated levels, using an equilibrium and disequilibrium models. It emerges from econometric estimation that real income, the real exchange rate and the variable *capacity to import* and industrialization were the determining factors in Sub-Saharan imports. The degradation of imports illustrates the elastic or inelastic nature of imported products. SSA countries must reshape their development strategies towards industrialization in order for them to achieve a progressive reduction of their imports. This imperative situation would be a means that cannot be ignored by these countries if they want to attract foreign direct investment which is a source for the development of firms and for boosting economic productivity.

Keywords: Structure, Trade, Imports, Development of Firms, the "Industrial capacity" Variable, Sub-Saharan African (SSA) countries.

INTRODUCTION

Since the end of the year 1984, Sub-Saharan African (SSA) countries have been confronted with an unprecedented economic crisis, although these days, an economic revival is announced. Because of this, Africa and particularly SSA countries have put in place programs designed to stamp out this economic stagnation under the impetus of the Bretton Wood institutions and other international organizations (OECD, WOC, WCED, GATT, etc.). The undoubtedly major phenomenon these countries must face, is that of their adaptation to the process of World trade liberalization which was sanctioned by the signature of the final Act of Marrakech and the creation of the World Trade Organization (WTO) in January 1995, and which concerns the development of firms and the strengthening of the industrial capacity by the World Commission on Environment and Development (WCED) in 1987. In the context of SSA countries, measures favouring the liberalization of the economy and industrial capacity were adopted. The abolition of the stabilization fund of agricultural products constitutes a major fact with regard to the place agriculture takes up in the economies of these countries. The responsible supply which takes into account environmental and social criteria in the process of buying goods and services is a way to reduce the impact on the environment.

Thus, as in most of the countries of the Franc Zone, programs have been successively applied apparently without great success, since SSA countries did not get out the bottleneck. The situation has reached a proportion such that for the first time, the authorities have ceased the regular payment of their internal and external commitments since 1988-93.

Between other corrective measures recommended by financial backers and other specialized organizations, appear reductions in government expenditures, the disengagement of the State from many sectors of economic activity by yielding them to the private sector which is capable of generating internal resources, and the promotion of exports with a view to increasing the takings in foreign currency necessary for the payment of imports.

The lack of foreign currency due to the drastic fall in the prices of basic products (coffee, cocoa, cotton etc.), has forced some countries of the sub-region to a rigorous control of foreign exchange and to a reduction of imports during a period of liberalization.

In this context of crisis, French-speaking SSA countries have been relying on their Operations Accounts at the French Treasury to import vital goods such as food, industrial products and the intermediary products (inputs) used in agricultural and industrial production. But France cannot continue to accept the debit balances of the Operations Accounts, for the simple reason that since the year 2000, they have been putting pressure on the Euro, and hence on its position in relation to the European single currency.

Hence the suggestion made by international institutions to the SSA States: to manage their low levels of available foreign exchange funds better; to control among others, imports because of the inability to attract foreign currencies through the exports of classical products such as coffee, cocoa, cotton, wheat etc., and which must incorporate the WTO and WCED principles.

Consequently, the main objective of this paper is:

- To highlight in greater detail, the structure and the origins of SSA countries imports;
- To evaluate the determinants of the demand for imports of SSA countries at both the aggregated and disaggregated levels using an equilibrium and disequilibrium models;
- To formulate, on the basis of empirical estimation, appropriate economic policies in a context of participation in the World Trade Organization (WTO), and to meet the needs of the present without compromising the ability of future generations (according to WCED).

From all this development, and considering the reform introduced in international trade by the WTO and the WCED, and relative to the structure of imports in SSA countries a question emerges, namely: to what extent can SSA countries benefit from the new order of the WTO and the WCED?

Several methods may be envisaged to answer this question. A possible method would consist of adopting OLAP functions and the clause Window of fenestration SQL (2003) which regroups two types of functions and data subsets.

As interesting as it may be, this method has a limit. It restricts the study of two types of distinct functions of goods operating on specific data sets called «window of data», and it is made up of data subsets of the global request. It is for this reason that it is reasonable to envisage the aggregate demand function as a continuous function. It only changes slightly and makes it possible to integrate the statistics of goods better. It facilitates the interpretation of data and the harmonization of cycles of revision for all the programs. This study is in line with this perspective.

The interest of this study is double. Firstly, it throws some light on the specification of adjustments which integrates the possibility of time lags in the model, and secondly it outlines the orientations of economic policies in an environment dominated by market mechanisms and sustainable development.

The structuring of the study will be based on two axes: in the first part, we deal with the composition and quantitative explanation of the demand for imports in SSA countries, and then in the second part, we carry out the econometric analysis of the imports sector in SSA countries and the perspectives.

THE COMPOSITION AND QUANTITATIVE EXPLANATION OF THE DEMAND FOR IMPORTS IN SSA COUNTRIES

Sustainable development (SD) is a way for firms, countries or regions to expand their economic mission by integrating values and social as well as environmental practices. This expanded vision of development is established increasingly as a necessary practice to ensure the viability of companies, and the regulation of import demand, either locally or internationally. Here, the objective for us is to describe the origin and structure of imports in the geographic space.

The Imports of SSA countries: Origin in the Geographic Space

The economies of SSA countries have been subjected to structural changes during the 1990s, and this has affected the mode or « pattern » of the foreign trade of these countries in a context that takes in account social equity, economic efficiency and environmental quality.

In the period following the independences of most of SSA countries in the 1960s, two thirds of their foreign trade was carried out with European countries (of which France, England, Germany etc.), and this trade was mainly concentrated on products).

Starting from the year 1992, two essential characteristics of the exports emerged: agricultural exports were diversified by the production of products such as coffee, cocoa, cotton, natural rubber, woods, palm oil, wheat etc., and certain agro-industrial products. The level of exports witnessed an increase of more than 120 %¹.

As concern geographic orientations, changes occurred on the destination of exports. The exports previously dispatched exclusively to France and England were increasingly oriented to other countries of the European Union (75%) against only 9 % to African countries. As an illustration, the share of exports to France and England fell from 41.87 % in 1992 to 16.06 % in 2013².

These trends are also observed at the level of imports. 56% of the imports came from European countries, Africa providing 16% of Sub-Saharan imports.

Imports of SSA countries: Their Demand Structure in the Geographic Space

The demand for imports has witnessed an average increase of about 20% per year. This growth is much more due to world inflation than to the very sensitive rise in the volume of these imports, which increased at the average rate of 11% per year or nearly at a rate of 2% above the growth rate of the entire economy at the end of the year 2013.

The structure of imports has witnessed a significant evolution: the proportion of the imports of food products, drinks and tobacco has decreased from 62 % of total imports in 1970 to 42 % in 2012. This evolution is the result of gains in foreign currency which will promote the purchase of intermediary goods necessary to investment which is a vector of economic growth.

In order to determine the composition and evolution of imports better, the components of imported goods are classified into five main categories:

1. The imports of food products, drinks and tobacco are incorporated in the variable IPABT which represents these imports whose volume is expressed in terms of tons or values.
2. The imports of energy and lubricants, raw products of animal and vegetable origins. Their relative share in total imports has decreased (see Figures 1-2). These imports are represented by the variable ELPBOAV, and their volume expressed in terms of tons or values.

¹ Statistics of the BEAC (2013), BECEAO (2013) and Afristat (2012).

² Statistical Reports of the World Bank (1997-2012), and of the IMF 2013.

3. The imports mineral products and half-products. These products are gathered in the variable PMPP and their volume is expressed in terms of tons or values.
4. This category is made up of materials of transport and tractors, agricultural and industrial equipment. It comprises machines and mechanical tools, materials of land transport. This import category is grouped together in the MTTEAI variable and its volume is expressed in terms of quantity and value.
5. The last category is made up of the consumption goods of households and firms which are used as inputs in the industry of imports substitutions. It also comprises manufactured products, and these imports are gathered together in the variable CME expressed in terms of quantity or value.

The preceding classification follows the presentation made by the Ministries of the Economy and Finance and the NIs³. Figures 1-2 illustrates the different components of imports as a proportion of total imports in terms of value.

It emerges from Figures 1-2 below that the imports of the consumption goods of households and firms constitute the most important component of imports in spite of a proportion that is decreasing: going from 43.8 % in 1970 to the high point of 68.7% in 2013 after going through 51.2 % in 1995 during the study period.

This proportion has witnessed changes over the years without necessarily decreasing below the threshold of 29.2 %, the lowest level in 1997.

By and large, this proportion witnessed a downward trend at the beginning the year 1998: this may be explained by the fact that industrial products were from then on being increasingly manufactured locally in the context of imports substitution policies.

The importation of means of transport and tractors - agricultural and industrial equipment constitutes the second major component of total imports. Actually, SSA countries import a significant share of their means of transport due to a developing heavy industry.

Despite the huge efforts made to produce mineral products and semi-products at the domestic level, the imports continue to rise, going from 14.4 % in 1970 to 39.3 % total imports in 2013. This suggests that domestic production did not have a significant impact in the reduction of total imports.

We must also mention the fact that the relative share of imports of energy, lubricants and raw products of animal and vegetable origins witnessed a serrated evolution with a downward trend, going from 6.5 % in the 1970s to 14.8% in the 1980 to reach the level of 5.3 % in 1997, 1998 and 1999, 7.1% in 2007, and 9.8% in 2013.

Food imports - drinks – tobacco make up a share that has remained quite small and stable from 1970 to 1993 at the average level of 7.9 %. But this share increased from 1993 to a level of 16.2 % in 1995, after having reached 18.1 % in 1994, 20% in 2005 and 23% in 2012.

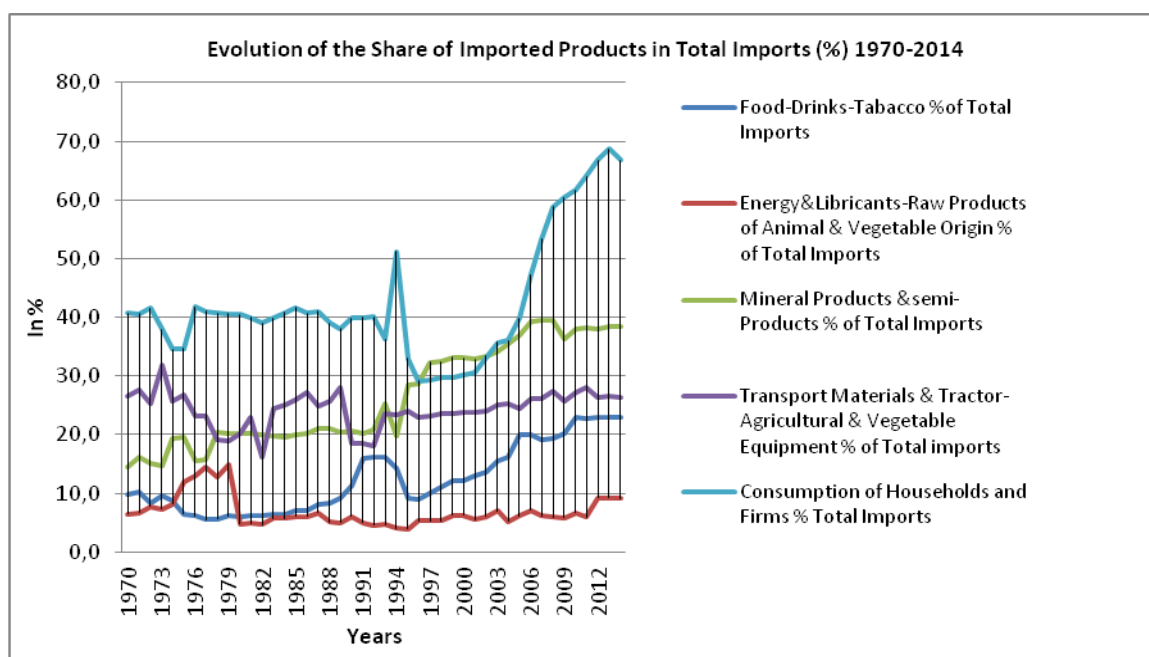
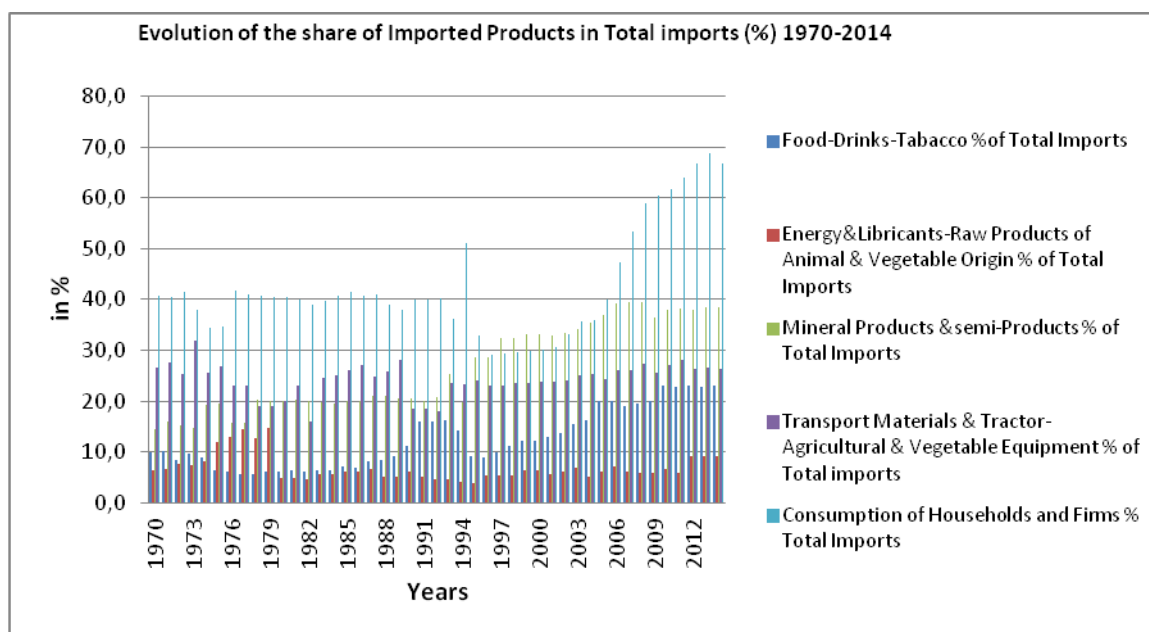
As to the origins of imports, a great diversification must be noted. The countries of the European Union (EU) are the main suppliers of imports with 56 % (the predominant position of France having eased to the profit of other

³ The National Institutes of the different countries of the CEMAC and UEMOA zones

countries) against 16 % for African countries. For example, the share of SSA countries' imports of French origin decreased to 76 % in 1984, to 49.1 % in 1993 and 35.3 in 1996, and reached 47 % in 2006 and 46% in 2013.

At the African level, the imports from neighbouring countries do not cease to increase over the years, going from 8.2 % in 2009 to the level of 16.3 % in 2011. In addition, According to the statistics of Afristat (2012) and of the general managements of customs of the countries under study, the imports of SSA countries amounted to 5389 billions of CFA Francs in 2013 against 3383 billions in 2006, which is a relative increase of about 59.3 %.

Figures 1-2: Evolution of the share of imported products in total imports (%) 1970- 2014



Sources: Our calculations from syntheses of the statistical data of the National Institutes (NIs) (1968-2013), of the Customs Managements of the CEMAC and UEMOA zone (1970-2014) and the statistical bulletins of the BEAC - BCEAO (1975-2014).

At the level of Africa, countries of the Franc Zone have quite a small share of Sub-Saharan imports which amounts to only 2.5 %. This is a good indication of the nature of trade between Franc Zone countries, which are not very developed or diversified.

Despite the efforts made to diversify both the origins of imports and the destinations of exports, SSA countries of French expression remain strongly attached to the Franc Zone in the area of trade.

ECONOMETRIC ANALYSIS OF THE IMPORTS SECTOR OF SUB-SAHARAN AFRICA

This part of the study attempts to provide an explanation of the behaviour of imports in SSA countries based on the descriptions of the preceding data. Thus we will first examine the imports sector at two levels: the aggregated level, and the disaggregated level using two types of models: the «equilibrium » model and the «disequilibrium» model.

The equilibrium model assumes that there are no lagged variables in the system. Thus, the prices and the quantities imported adjust instantaneously to their respective equilibrium level. With available annual times-series data, this means that all the adjustments are realized within a year.

The disequilibrium model admits the possibilities of adjustment lags. In other terms, this means that the adjustment of current values to equilibrium values takes some time.

To integrate this possibility of a lag in the model, we used the « stock adjustment » approach which was developed by Koyck (1954), Nerlove (1958) and applied by Arize (1987), and then was revisited by Van Der Ploeg and De Zeeuw (1990), M'Bet (1996) and Tsirimokos (2011), all this at the aggregated level.

Next, we will examine each sector at a disaggregated level to highlight the behaviour of the imports of products or class of specific products better.

And finally, in a second step, we examine the orientations of the imports of SSA countries under the effect of WTO mechanisms.

The Demand for Imports at the Aggregated Level: the Equilibrium and Disequilibrium Models

Two continuous aggregated demand functions to express precisely. A choice that is justified by the fact that they change only slightly.

The Aggregated Imports Demand Function: the Equilibrium Model

The demand for imports is specified as a function in the log-linear form as follows:

$$\log M_t = x_0 + x_1 \log TCR + x_2 \log PIBR_t + x_3 \log \left(\frac{RX}{PM} \right)_t + \varepsilon_t$$

Where,

M_t = quantities of imported goods,

TCR = the real exchange rate defined according to the classical approach of purchasing power parity, for example, as the nominal exchange rate multiplied by the external price divided by the internal price,

RX = exports receipts,

$PIBR$ = real gross domestic product,

$\left(\frac{RX}{PM} \right)$ = the capacity to pay for imports (see Turnovsky, 1968, 1987, 2003 and 2011),

ε_t = error term,

t = year.

In addition, all the logarithms are natural. The model is used according to different specifications to integrate additional variables into the basic equation according to their pertinence.

$$\log M_t = x_0 + x_1 \log TCR + x_2 \log PIBR_t \quad (1)$$

We use this procedure to avoid multicollinearity between (RX/PM) and PIBR. However, since the deflators are different from the consumer price index of real GDP, we have estimated the impact of the capacity to import on the imports demand function. The results of the «equilibrium» are the following:

Specification 1: the basic equation (OLS)

$$\log M_t = 1.35 - 0.009 \log TCR + 1.48 \log PIBR_t$$

$$(0.8) \quad (-0.05) \quad (11.36)$$

$$\text{Adjusted } R^2 = 0.91; \text{ DW} = 1.83; \text{ F}(3; 30) = 143.2.$$

Specification 2: Sum of the variable « capacity to pay for imports (RX/PM) ».

$$\log M_t = 6.99 - 0.18 \log TCR_t + 0.39 \log PIBR_t + 0.46 \log \left(\frac{RX}{PM} \right)_t$$

$$(2.88) \quad (-1.37) \quad (1.12) \quad (2.79)$$

$$\text{Adjusted } R^2 = 0.94; \text{ DW} = 1.99; \text{ F}(4; 30) = 145.7.$$

The coefficients x_1 and x_2 are respectively the price and income elasticities of the demand for imports.

From the theoretical point of view, x_1 is negative, x_2 and x_3 positive. This means that an increase in the prices of imported products reduces the quantity to import, and an increase in real income or exports receipts increases the demand for imports.

The estimates of coefficients in Specification 1 above show that their signs are correct. However, the statistical criteria express the fact that only real income is significant; the real exchange rate has the expected sign without necessarily being significant.

R^2 adjusted to the degrees of freedom, is very high to characterize a performing model. The value of the Durbin Watson (DW) statistic indicates the absence of autocorrelation in the stochastic term.

An increase of 10 % in real income leads to an increase of 14.8 % in imports.

The coefficient estimates of Specification 2 are, on the other hand, statistically satisfactory. A rise of 10 % in the capacity to import leads to rise of 4.6 % in the demand for imports, while a 10 % increase in real income leads to a rise in imports of 3.9 %.

Aggregated Imports Demand Function: The Disequilibrium Model

We consider in the disequilibrium model that the change in imports is linked to the difference between the demand for imports during period t and real imports at period $t-1$. This means that the current demand for imports adjusts through a constant (c) to the deviations of the actual equilibrium demand. In concrete terms, the equation is written as follows:

$$\log M_t - \log M_{t-1} = c \log M_t - \log M_{t-1}$$

Where $0 < c < 1$; c , is considered as the speed of adjustment. In the form of a log-linear function, the basic disequilibrium model is the following:

$$\log M_t = y_0 + y_2 \log TCR_t + y_3 \log M_{t-1} + k_t$$

The variable imports capacity is adjusted as in Section 3.1.1 above. The estimation results are the following (see Specifications 3, 4 and 5 below):

Specification 3:

$$\log M_t = -0.6 + 0.171 \log TCR_t + 0.62 \log PIBR_t + 0.66 \log M_{t-1}$$

(- 0.41) (1.45) (2.45) (4.21)

$$\text{Adjusted } R^2 = 0.98; y = 2.68; F(4; 30) = 272.4$$

As concerns the sum of the import capacity variable and, in the order to check for autocorrelation, the iterative technique of Cochran-Orcutt is used as a correction process. We obtain:

Specification 4:

$$\log M_t = 1.25 + 0.12 \log TCR_t + 0.35 \log PIBR_t + 0.20 \left(\frac{RX}{PM}\right)_t + 0.64 \log M_{t-1}$$

(0.66) (1.00) (1.14) (1.12) (5.1)

$$\text{Adjusted } R^2 = 0.96; z = 1.94; F(5; 30) = 161.2;$$

$$RH0 = -0.40$$

$$(- 1.51)$$

Next the sum of the import capacity variable lagged one year.

Specification 5 :

$$\log M_t = 3.98 + 0.07 \log TCR_t + 0.40 \log PIBR_t + 0.47 \log \left(\frac{RX}{PM}\right)_{t-1} + 0.33 \log M_{t-1}$$

(1.94) (0.41) (1.62) (2.70) (1.53)

$$\text{Adjusted } R^2 = 0.98 \text{ Z} = 2.64; F(5; 30) = 281.1$$

The estimation of the basic disequilibrium equation illustrates quite well, the fact that real income and the dependent variable lagged one year have a significant positive impact on the demand for imports. The real exchange rate has a positive impact that is quite weak. The real exchange rate has an impact that is almost nil when the import capacity variable is summed up. This expresses the nature of the inelasticity of the demand for imports. The lagged dependent variable has quite a significantly positive impact. On the other hand, when we estimate the equation with the coefficient of the import capacity variable being lagged one period (Specification 5), all of the independent variables keep their signs, but the variable capacity to import lagged one period has a more significant positive impact. On the whole, all the different specifications through the statistical series are satisfactory at the conventional level.

The results obtained show that an increase of 10 % in the current exports receipts of SSA countries leads to a rise of 2 % in the imports, whereas a 10 % increase in the variable real exports receipts leads to a rise of 4.7 % in imports

The disequilibrium model helps determine the long-term elasticity coefficients. The coefficients y_1 , y_2 in Specification 3 are interpreted as short-term elasticity coefficients. When the lagged dependent variable is eliminated while in addition y_3 lies between 0 and 1, the long-term elasticity coefficients are estimated in the following manner:

$$c_1 = \frac{y_1}{1-y_3} \text{ and } c_2 = \frac{y_2}{1-y_3} . \text{ The ratio } c_3 = \frac{y_3}{1-y_3} \text{ is the average length of the adjustment period.}$$

We summarize the different short- and long-terms coefficients in Table 1 below.

Table 1: Elasticity Coefficients of the Short and Long Terms Demand for Imports

Period	Specification 3			Specification 4			Specification 5		
	Short term	long term	AAP (month)	Sort term	long term	AAP (month)	Short term	long term	AAP (month)
Real exchange rate	0.17	0.39	24	0.12	0.15	16	0.07	0.13	4
Real income	0.62	1.41	24	0.40	0.75	16	0.35	0.44	4
Capacity to import	-	-	-	0.20	0.30	16	0.47	0.70	4

NB: AAP = Average adjustment period (months)

Sources: Our calculations using the syntheses of the statistics of the BEAC (2012), BECAO (2011), and Afristats (2013).

The coefficients of Table 1 above display two orientations. Income elasticity coefficients increase from the short term to the long term, respectively for the different specifications. But the long-term income elasticity decreases from 1.41 in Specification 3 to 0.75 in Specification 4 to reach 0.44 in Specification 5.

In other words, part of the income effect is captured by the variable capacity to import and especially by products related to industrial firms. In addition, the long-term elasticity coefficients of the variable "capacity to import" increases from 0.30 to 0.70.

The second observation concerns the impact of the real exchange rate. The increase of this coefficient from the short term to the long term is small, and the long-term elasticity drops from 0.15 to 0.13 in Specification 5.

This means that when export receipts are deflated by the unit import price and are integrated in the model, the imports become insensitive to changes in the exchange rate. The average length of the adjustment period is about 2 or 24 months. This average falls with the slope of the variable of current export receipts. This expresses the fact that imports respond to the export receipts of the previous period. This result is valid from the empirical point of view, but ever since the crises of the years 1990-1994, an almost inverse behaviour is observed.

The Import Demand Function: The Disaggregated Disequilibrium Model

From the preceding development, the structure of imports illustrates that they are classified by the products that we may present in three large sub-groups: (1) the imports of food-drinks- tobaccos products (*MPATB*); (2) the imports of energy-lubricants-raw products of animal and vegetable origins; mineral products and semi-products (*MELPBOV*), and (3) materials of transport- tractors-agricultural-industrial equipments, and consumption goods (*MTEAIBC*). Synthetically, the general equation for estimating the model is of the form:

$$M_t = M(TCR, PIBR)M_t$$

We adjust to this basic equilibrium equation, the dependent variable lagged for a period in order to obtain the disequilibrium model. The latter makes it possible to obtain the long-term coefficients. The ordinary least squares (OLS) estimation method is used and the autocorrelation is corrected according to the stage. The estimation results are presented in Table 2 below.

Table 2: Estimated Coefficients of the Disaggregated Import Demand: the Equilibrium Model

	Constant	log <i>TCR</i>	log <i>PIBR</i>	adjusted R ²	DW	F
Log <i>MPATB</i>	9.79 (3.89)	- 0.79 (-3.65)	0.97 (7.12)	0.90	2.2	80
Log <i>MTEAIBC</i>	6.40 (1.42)**	-0.46 (-1.16)**	1.32 (5.71)	0.75	2.24	25
Log <i>MELPBOV</i>	- 6.6 (-2.43)	0.51 1.82)**	2,12 (14.23)**	0.93	1.65	110

** Significant at the 10% level.

The results indicate that real income has a positive and highly significant impact. The real exchange rate has a negative impact which is expected, except for energy and lubricants - raw products of animal and vegetable origins – mineral products - semi-products.

In the equilibrium model for example, an increase of 10% in real income would lead to a 9.7 % rise in the imports of food-tobacco-drinks products, and a 13.2 % and 21.2 % increases in the imports of transport materials, agricultural-industrial tractor-equipment and energy-lubricants, raw products of animal- vegetable origins, and mineral products respectively. The impact of income is significant at the conventional level. Energy products and lubricants seem to respond more strongly to the increase in income.

Table 3: Estimation of the Disaggregated Demand for Imports: the Disequilibrium Model

	Constant	log <i>TCR</i>	log <i>PIBR</i>	log <i>VDR</i>	adjusted R ²	DW	F
Log <i>MPATB</i>	7.6 (2.41)	- 0.45 (-2.22)**	0.63 (3.6)	0.19	0.92	2.32	85
Log <i>MTEAIBC</i>	2.80 (0.91)	- 0.36 (- 0.63)	0.94 (1.93)**	0.19 (0.60)	0.70	2.21	15
Log <i>MELPBOV</i>	- 3.56 (-1. 43)	0.40 (1.72)	0.41 (1.7)**	0.88 0.88	0.95	2.1	118

Log *VDR* = log of the lagged dependent variable; it is significant at the 10 % level.

Sources: Results obtained from estimated equations.

The results of the estimates obtained change remarkably with the disequilibrium model.

The sign of the real income effect is always positive as expected, but it is reduced. For instance, a rise of 10 % in real income leads to an increase of 6.3 % in food – drinks – tobacco products, a rise of 4.1% in energy products – lubricants – raw products of animal and vegetable origins – imported mineral products and a 9.4 % rise in the materials of transport and tractors- agricultural – industrial equipments, and the imported consumption goods of firms and households.

The real exchange rate still has the expected negative sign, except for the sign of the energy products - lubricants- raw products of animal and vegetable origins. This expresses the inelastic nature of these last products. By taking account of these estimates, Table 4 presents the calculated short and long terms elasticity coefficients by group of products.

Table 4: Short and Long Terms Imports Elasticity Coefficients.

Variables	Period			
	Short term		Long term	
	relative price	income	relative price	income
<i>MPATB</i>	- 0.45	0.63	- 0.78	0.97
<i>MTEAIBC</i>	- 0.36	0.94	- 0.45	1.31
<i>MELPBOV</i>	0.40	0.41	0.50	2.1

Sources: Calculated from Tables 2 and 3

The figures in Table 4 highlight interesting trends. Short-term elasticities are lower than those of the long term, in conformity the capacity to adjust.

As concerns energy products-lubricants- raw products of animal and vegetable origins – mineral products and materials of transport and tractors –agricultural and industrial equipments, the long-term income elasticity coefficients are higher, thus making these goods sub-classes of luxury goods.

For energy- lubricants- raw products of animal and vegetable origins- mineral products, the long-term income elasticity coefficient is 2.1. A rise of 10 % in real income leads to an increase of 21 % in the imports of these products. This corroborates with the fact that when the income of individuals increases, they devote a significant part of it to the consumption of energy – lubricants – mineral products. Moreover, the price elasticity coefficient of energy - lubricants-raw products of animal and vegetable origins is positive by opposition to the prediction of economic theory. This sign shows the inelastic nature of the products concerned. But, these proportions have negative effects on the environment and people (smoking with the risk of related diseases).

After highlighting the structure and the origins of the imports of SSA countries, and having isolated the determinants of imports by product, we may inquire as to whether SSA countries can benefit from the perspectives of the WTO and WCED without risking marginalization.

The Perspectives of the Imports of SSA Countries under the Effect of the WTO System

In an attempt to stamp out the persistent economic recession in SSA countries, backers and other liberal donors have recommended a set of rules or programs. Several of these programs have been implemented in SSA countries since 1988, involving series of measures and reforms. These measures comprise the reform of the public sector characterized by the disengagement of State from several sectors of activity and the liberalization of foreign trade. The set of rules which governs world trade at present imposes particular challenges to trade and to international payments. This multilateral framework, in which the actors of international trade relations may henceforth develop their activities according to a loyal trade, is governed by principles (namely: Ayasamy (1996) and Graz (2013)). Below, we will attempt to explore the measures concerning the perspectives of trade liberalization in SSA countries from the point of view of beneficial participation in the WTO and WCED.

More specifically, before 1988, a regime of quotas and a regime import licences prevailed to control imports. Since 1988 however, trade liberalization has led to the suspension of quantitative restrictions and has replaced them with tariff protection.

Sub-Saharan Africa (SSA) has recast the regulation of customs and foreign trade on the basis of new principles.

This wind of liberalization has created an increasingly fierce competition on the local market between products made in Africa and identical imported products. Relatively high customs duties applied to imported products are at the origin of various frauds against which the authorities have devised more or less effective measures. The result of all these liberalization measures have been for SSA countries as for most of the Franc Zone countries, a general craze for importation as M'bet (1992; 1996) pointed out in the case of Ivory Coast.

During the periods of 1989-1993 and 1999-2002-2008 imports witnessed a remarkable fall. This situation was due to the rise in import duties despite the pressures of Sub-Saharan industrialists, who insisted on the institution of values of reference, since the capacity to import depends on the export receipts of the country. The institution of an export subsidy (of 10 %) appears as a measure aiming to boost exports on the foreign market. The need for coordination and harmonization of the actions of the different organizations involved in the present and future trade negotiations of the WTO is desirable if SSA countries want to increase their exports.

Consequences of Liberalization Measures

We will attempt here to inquire into the impact of liberalization measures on the Sub-Saharan economy. The establishment of a system of protection which encourages efficient import substitution, the introduction of a new investments code which takes account of the implantation of dynamic industrial domestic units, and the export subsidy, the acknowledgement for the delivery of authorization of licences or certificates for the suppliers of services, either by harmonization or by agreed criteria at the international level aim at the revival economic growth through the revival of the export industrial sector. The more or less loyal implementation of these principles contributes to the appearance of new products, new markets, new financial and price mechanisms whose effects can be examined: à I the short, middle and long terms.

In the short term, the fundamental purpose of these reforms concerns production employment, prices, public finance and sustainable development.

- With regard to production and the market for employment, the successive cuts in manpower by the firms, which were caused by the fall in product prices and the cost of the labour factor, led to an increasing unemployment in urban centres which are the major sources of employment. It must be noted that the fall in the employment was due to bankruptcy and the closing of most of the firms.

- Another immediate effect of these measures of economic reflation was contrary to expectations in spite of its relatively acceptable impact on employment and production. The introduction of extra expenses on imports to substitute for quantitative import restrictions was the increase in fraudulent imports, oddly food products, the materials and consumption of households and firms.

- At the level of prices, there was observed a modification in relative prices within the different domestic industrial activities, the essential goal being the stimulation of domestic production through a rise in the prices of these goods relative to the prices of those goods that cannot be exchanged and to services. Since the imports of food- drinks- tobacco rose from 8.1 % to 16.2 % between 1998 and 1994 and from 20% to 23% in 2012.

In addition, the general price index has risen from 94.4 n 1999 to 423.2 % in 2011, that is, a relative increase of 3.48 % in six years. This increase is also explained by an enhancement of fiscal policy, which was oriented firmly towards a maximal collection of budgetary resources, characterized by the expansion the tax base, and particularly of the value-added tax (VAT) as recommended by the IMF and in force since January 1st 1999. Another reason for the rise in prices is linked to government decisions. To limit the negative effects of tobacco consumption, the rate of duties is very high.

In the medium and long terms, extra import expenses were progressively reduced. But the expected effect did not follow adjustment by costs reduction measures and restructuring was not effective for firms stricken by a brutal change in their protection. This adjustment induced losses in production and employment. In the medium and long terms, it was expected that the continuation of the generalization of the reform program would produce a positive impact on production, employment and fiscal balances. Unfortunately, this was not effective. Inflationary pressures remained unchanged.

Perspectives for a Beneficial Participation

The Sub-Saharan African economy is progressively heading for the process of total foreign trade liberalization in the respect of the WTO and WCED system. In view of this phenomenon, two attitudes are called for according to Chavagneux, 2007).

If one is pessimistic, a national economic policy is no longer possible in a world where trade and capital circulate quite freely (Brittan, 1995). Actually, since the authorities are at the mercy of transnational markets, they can no longer independently make decisions based on the comparative advantages of such and such a strategy.

If one is optimistic, he or she recognizes the fact that transnational markets prevent national authorities from resorting to inflationary policies and thus, cut any entry in a vicious circle. The latter consists of attempts to increase output and employment by having recourse to a budget deficit or by any other process which may result in risks of an inflation similar to the one that was running wild in the 70s, and whose development could not be stopped without provoking a grave recession (Duboz and Houser, 2013).

The analysis of facts shows that Sub-Saharan Africa applies in its general principles, the broad orientations of the rules of the game of world trade. From then on, the committee of access to the market declares not to have received, up to 1997 (Annual Report WTO,(1997) and Djaowe (2009)), complaints concerning the failure to execute the commitments taken by a member as far as tariff reduction is concerned.

In addition, the global situation of the Sub-Saharan Africa (SSA) economy was progressively put back on its feet following the reforms and measures of economic and trade policies since the year 1988, particularly as concerns growth (GDP per head 5% in 1996/97) and inflation. However, these results should not mask the not very satisfactory performances of public finances, above all in the area of fiscal and customs taxes (Goreux, 2003 and Guillaumont 2009). An evaluation of the results of the agreements of the WTO final Act makes it possible to observe the following: the weakness of African countries in general as far as negotiations are concerned, since the contracting parties have negotiated individually facing blocs that have a common position (countries of Asia, the European Union, etc.) ; the structural weakness of their economies which do not represent more than 4% of world trade; the greatest exposition of the exports of African countries to a greater competition which maintains customs tariffs at a higher level than that of those in force in the developed countries of Asia and the European Union (Afristat,2012). Moreover, the foundations of sustainable development are the reconciliation of solidarity between countries, peoples, between generations and resources sharing; the caution (to avoid disasters related to imports); the participation (of each country, continent, in order to ensure sustainable project and success) and the responsibility (of each country, industry etc.) (Lourdel et al., 2006).

This situation contributes to the restriction of the autonomy of the des authorities of SSA countries as far as the choice of tax rates, the tax system, or the regulatory scheme of trade policy (IMF, 2001). For this, some kind of control is called for even in a liberalized world.

Moreover, SSA countries must find the best ways to increase trade with foreign countries. An adequate legal framework must underlie this mechanism.

In the context of the WTO, one must insist on the African position. African countries should search for all the dispositions which would exempt them from conforming totally to the final Act, even if it means making the new

applications late (Bamou et al. (2006) and Djaowe (2009)). A negotiation that would make possible to take advantage of sectoral margins of exemptions is necessary. As part of WCED, the Sub-Saharan African countries must also implement decisive steps to start managing environmental resources and to ensure sustainable progress the survival of humanity

CONCLUSION

The purpose of this paper was firstly to study the behaviour, evolution, and the spatial origins of the imports of SSA countries from 1970 to 2014. Secondly, it emerges from the examination of the data in the first part of the study that the share of the European Union countries (with a high percentage for France) has decreased. This results from a greater diversification of the suppliers of SSA countries. However, Europe still takes up the first place.

The second part of the study has quantitatively evaluated the determinants of the imports demand function in SSA countries. Real income, the real exchange rate, and the variable "capacity to import and industrialization", were the determining factors in the imports of these countries. The degradation of imports illustrates the elastic or inelastic nature of imported products.

Finally in the third part of the study, the measures taken to follow the prescriptions of trade liberalization from 1988 to 2014 were described.

The imposition of the surtax and tariff surcharges was the essential tools. But studies on the impact of the application of the liberalization reform measures from the perspective of the WTO and the WCED on the Sub-Saharan economy are still in progress. The results of these studies alone will be able to indicate the net impact of all these reforms on the economies. These results will help to know if the objective of reflating the economy at the basis in a period of recession is reached in this era of liberalization in the trade sector. However, one may fear that SSA countries and the other countries of the continent, which are under the effect of the persistent crisis, can suffer from the reorientation of trade between the European Union and Asiatic countries which seem to offer certain opportunities.

SSA countries should reorient their development strategies towards industrialization in order to limit their imports progressively. The trade liberalization that leads SSA countries to depend on manufacturing and semi-manufacturing products, would see tariff and above all non-tariff barriers emerge, a situation which would not induce the foreign currency receipts necessary these countries to balance their still fragile balances of payments. The non-primary export products of SSA countries must have outlets in world markets. According to Schuh (1987), it is paradoxical for multilateral organizations to put a lot of pressure on developing countries to liberalize their economies, while at the same time, they integrate restrictions in theirs. With the introduction of services in the WTO and the WCED negotiations, developed countries have placed themselves on a sphere towards which developing countries, such as those of Sub-Saharan Africa cannot pretend to reach, since they have no comparative advantage in this domain. Given all the elements, the measures of liberalisation in the WTO and the WCED context cannot ensure a sustained reflation of the Sub-Saharan economy. However, we think that the WTO and the WCED could help to take advantage of the reinforcement of the rules and of the international institutions, rather than become their victim and thus promote trade. Moreover, it could also help them to accede easily to the modern « facilities » that exist for trade, to distribution circuits and to information networks which would make them more capable of participating effectively in the development of world trade (ONU-CEA, 2008). In many Sub-Saharan African countries, international economic relations are serious problems in terms of environmental management. Sustainable development is not a state of equilibrium, but rather a process of change in which the exploitation of resources, investment choices, the dynamics of imports, the orientation of

technological development and institutional change, are based on present and future needs. This situation is imperative for SSA countries, and it means that must be addressed to attract foreign direct investment which is a source for the development of firms and for boosting economic productivity.

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