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Rice imports in West Africa: trade regimes and food policy formulation

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Abstract

West African agriculture rice production represents only 50% of consumers' needs in the sub-region. The on-going negotiation on the Agreement on Agriculture and the establishment of a custom union within the ECOWAS offer an opportunity to reopen the discussion on the possible impact of appropriate trade regulation to stimulate the development of the domestic rice value chain. The poster is based on the review of the outcome of recent studies and national statistics, comparing the rice sector history across different West African countries. Policy measures have been determinant for the expansion of rice imports. But even when restrictions on imports or high tariffs have been implemented, their effect on local production stimulation has been limited. Indeed the competitiveness of domestic rice production does not depend only upon the cost efficiency of rice producer. It is adversely affected by the performance of the post-harvest operations which does not allow domestic product to match the quality of imported rice in terms of homogeneity and cleanliness. Consumers are ready to pay for a higher price for imported clean and well packed rice. Therefore the design of appropriate trade regulation cannot be limited to a discussion on the level of tariff to be applied by the ECOWAS custom union. Trade regulation could be used as buffer mechanisms to mitigate the negative impact of unpredictable world rice market trends on the willingness of private entrepreneur to invest in rice marketing and processing improvement.

1 Background, issue and objectives:

While trade liberalization is considered as an important stimulus for the expansion of smallholder based productions targeting global markets (coffee, cacao, tropical fruit, vegetables) an increasing attention has been given to its potential adverse impact on small holders' competitiveness on domestic food products markets (FAO,2007, Nouhine Dieye and al. 2007) Along this line the case of rice import expansion in several West African countries has been viewed has a typical case of adverse effects of trade liberalization on small holders' livelihoods (OXFAM, 2005, FAO 2006).

With an amount close to one billion of US Dollar in the recent year, rice imports weights heavily on Western African countries' currency reserve. It is the most important agro-food imports, representing around 20% of agricultural imports total value of the sub-regions throughout the last thirty years. The prevalence of rice imports is a symbol of the persistence of the food deficit in the sub-region, thus, its reduction has been a recurrent objective of the past and current food policies.

Initially triggered, by the food crisis of early seventies, the rapid growth of rice imports responds to an increasing demand induced by a change in West African consumers' behaviour. This rice diet transition has been supported by income growth and urbanization which have shifted urban consumers preferences in favour of a products that can be easily cooked, to the expense of other type of cereals and tuber crops that required more time to be prepared (Diagana et al., 1999, Hirsch, 1998). West African governments have attempted to stimulate rice domestic supply by investing in more capital intensive technology along a pattern similar to the Asian "Green Revolution" but have, so far, not succeeded in reducing significantly the rice deficit. The waves of structural reforms induced by Structural Adjustment Programs in the nineties resulted in a sharp reduction of public resources available for supporting rice production development while, concomitant trade liberalization measures further opened the Western African rice market to world suppliers.

While the reform implemented since the nineties did not lead to an improvement of the West African rice trade balance, and beyond of the sub-region food security, the paper discusses if the return to a more restrictive trade policy (i.e. higher tariff) is decisive for the revitalization of the West African rice economy?

2 Material and method.

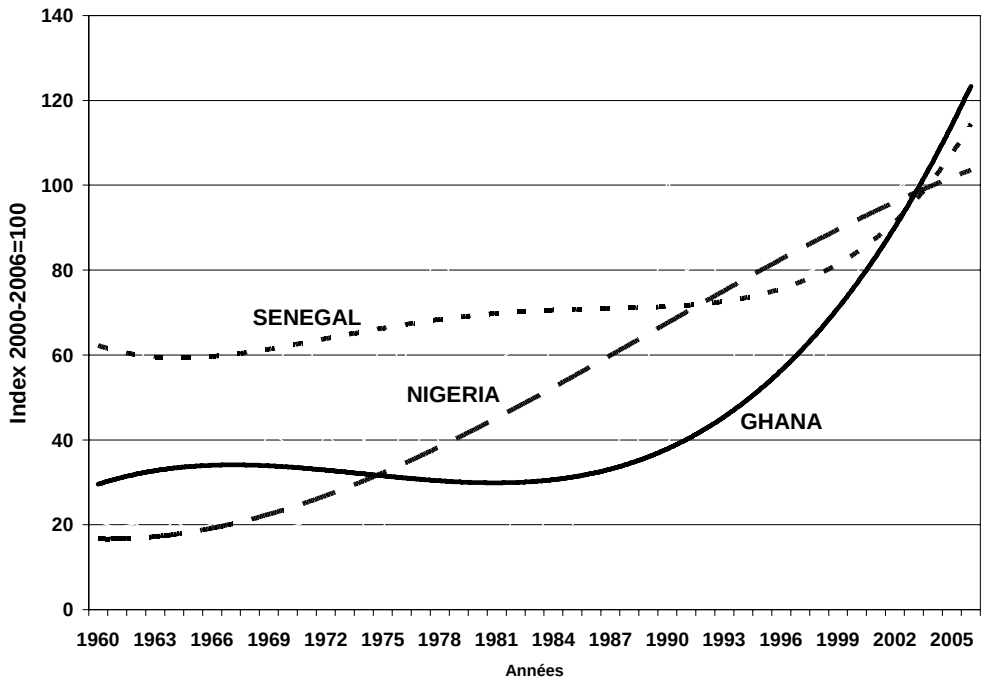
The issue is addressed on the basis of the comparison of trends followed by the rice economy in three major importing countries of the West African sub-region including Ghana, Nigeria and Senegal which are representative of different pattern of rice market development and who have enforced different trade policy on rice import. The comparison will rely on the analysis of time series extracted from major international database and national statistics, a review of published and unpublished literature complemented with information collected from various stakeholder involved in the rice economy.

3 Rice sub-sector features in Ghana, Nigeria and Senegal

The three countries have been selected because they combine the bulk of the rice trade in the sub-region. Nigeria is by far the first rice importer in West Africa with an average volume of 1 600 thousands tons of rice imported per year since year 2000. Senegal is the second importer with an average of 880 thousands tons and Ghana is the fourth one with 400 thousands tons (Cote d'Ivoire being the third). However beyond this common feature, the characteristics of the rice sub-sector in these three countries differs with respect to several indicators.

In terms of per capita apparent consumption rice is the core staple in Senegal (93 kg per head per year) while it is only one staple in a more diversified diet in Ghana and Nigeria with respectively 25 kg and 29 kg of rice consumed yearly per capita. The shift to rice consumption in Senegal started as early as the colonial period. Production efforts were then driven towards production of groundnuts to the detriment of millet and broken rice was imported from Indochina as cheap staple food. Nigeria has experienced its rice diet transition in the seventies (with a rice per capita consumption annual growth rate of 11%) induced by income growth triggered by the oil industry boom. Ghanaian consumers started to shift to rice only recently compared to the two other countries and experienced a faster growth of rice per capita since 2000 (figure 1).

Figure 1 : Per capita rice consumption trends (Index)



Source: computed from USDA PS&D, 2007

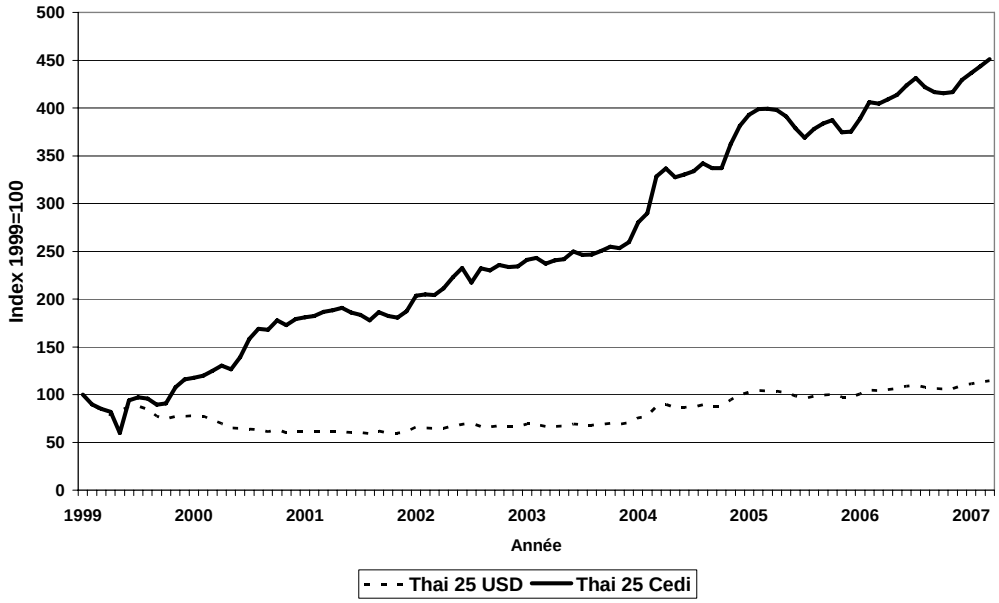
In terms of domestic supply Nigeria and Senegal production grew rapidly during the eighties with the implementation of ad hoc programs and development projects, while the development of rice production stagnated in the Ghana until the implementation of economic reforms in the early nineties. On the contrary, the nineties have been a period of stagnation for Senegal and Nigeria where rice development program have been hampered by macro-economic and agricultural policies reforms (i.e., in Senegal, devaluation and total withdrawal of the State, that was previously directly involved in rice sub-sector and rice imports; in Nigeria gradual removal of fertilizer subsidy,). In the recent years, the Ghanaian rice production growth initiated in the nineties has reached a plateau, while rice production in Nigeria and Senegal resume its expansion with respectively 5% and 3% annual growth.

The highest rice deficit is experienced by Senegal with a domestic production that covers only 15% of the domestic demand, followed by Ghana that covers 29% of its consumption. Nigeria has a high level of self-reliance compared to regional standard with a ratio of 60% on average for the last six years.

Nigeria has been the most proactive in using tariff for attempting to control the ever increasing rice imports. Following the rice import ban removal in 1995, rice imports was imposed a tariff of 100% and reduce by half in the following years. Since 2000 with the successive import surge the tariff has increased up to 110%. In the case of Ghana, imported rice has a 20% ad valorem tariff to which a 12.5% VAT is added. An increase of the tariff from 20% to 25% was considered in 2003, in order to respond to the import surge. The option was eventually not retained for various reasons including the willingness of the authorities to maintain an economic policy that complies with the recommendations of Bretton Wood's institutions (BMOS AGRO-CONSULT, 2003).
In Senegal, up to 1996, broken rice trade (the bulk of the imports) was in the hands of the State and all the rice imports were submitted to a quota. Import tax was temporarily reduced from 38% to 16% after the devaluation (1994). After the import liberalisation, in 1996, a variable levy was voted to protect the domestic market from world price fluctuations, but it was never implemented. Since 2000 and the implementation of WAEMU Common Exterior Tariff, Senegalese rice market has the lowest tariff among the three country, with a fixed duty that correspond to 12% ad valorem.

The three countries differ significantly in terms of macro-economic context. Senegal is a member of the West African Economic and Monetary Union (WAEMU) and the CFA Franc pegged to the Euro, has appreciated against the US Dollar by almost 25% since 2000, which reduced its rice bill in local currency terms. On the contrary Ghanaian Cedi and Nigeria Naira has experienced a depreciation of their value against the US Dollar by 67% and 25% , which means that the price of imported rice expressed in local currency has increased by the same magnitude (figure 2 shows how the depreciation of the Cedi completely counteract the decrease of the world market price).

Figure 2 : Ghanaian Cedi exchange rate and imported rice cost



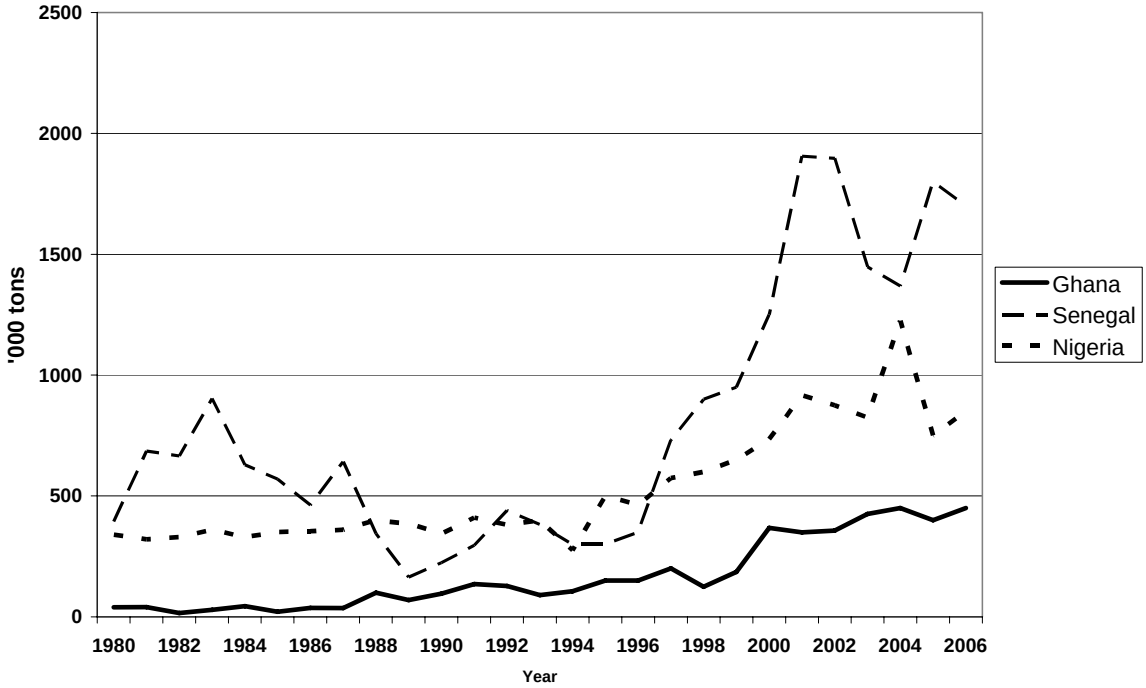
Source, OSIRIZ and IMF, 2007

In summary, Senegal is representative of a country where rice is the staple food with a domestic market broadly opened to rice imports and a high deficit and where market expansion is mainly caused by population growth. Nigeria is characterized by a high level of protection and a rice diet transition already completed to a large extent, while Ghana is representative of a country where the rice market is relatively open with an on-going rice diet transition.

4 Rice import trends changes and their determinants

The profile of rice imports in each country show (Figure 3), a slow increase up to the middle of the nineties for Senegal and Nigeria followed by a constant increase for Senegal and a more erratic patterns for Nigeria, while Ghanaian rice imports picked up only at the beginning of the 2000's .

Figure 3 : Rice imports in selected countries

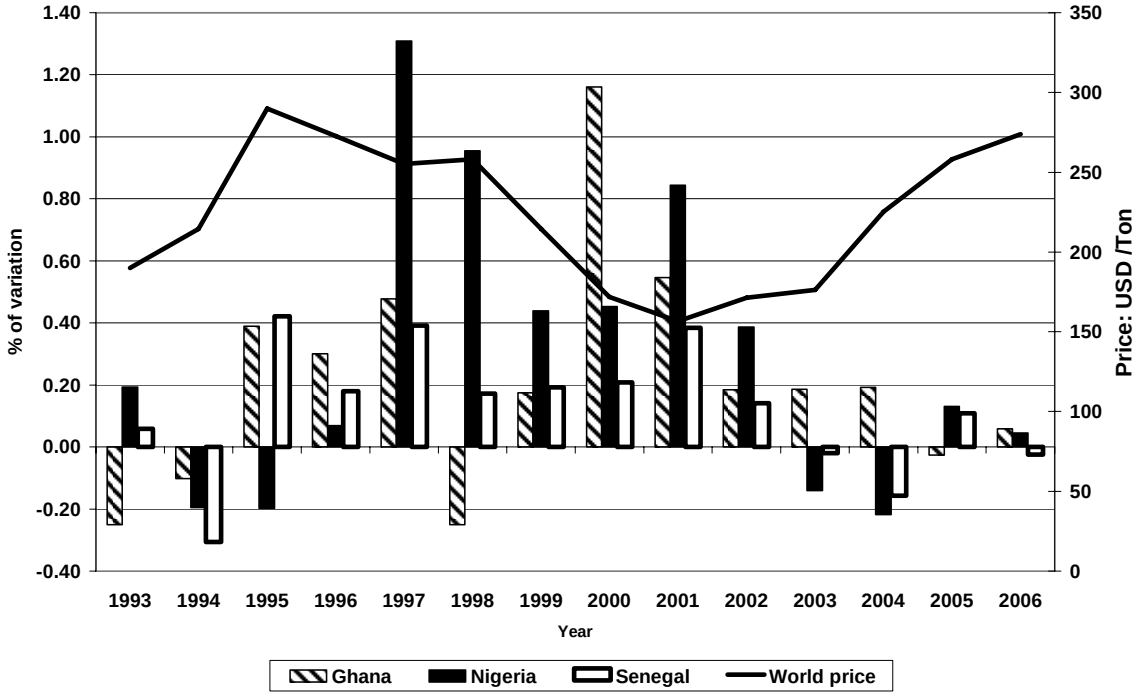


Source: USDA PS&D, 2007

Changes in import levels can be characterized on the bases of the concept of "imports surge" as defined by De Nigris (De Nigris, 2005), whereby a surge occurs if the import volume for a given year is 30% higher than the average volume recorded in the 3 previous years. By applying this definition to the level of rice import recorded in each country we found that, between 1990 and 2006, imports surges occurred 5 times for Ghana, 6 times for Nigeria and 3 times for Senegal (Figure 4).

The prevailing price of rice on the international market is not the major and unique determinant of these changes in imports volume. Thai 25% FOB Bangkok is taken as an indicator of the world rice market variations. Figure 4 shows that the first wave of imports surges observed in Nigeria in 1996 and 1997 occurred when the world rice price was at his highest level. These changes in imports volume were mainly induced by changes in the trade policy. In 1995, Nigeria authorities removed the ban on rice imports that was enforced ten years ago, shifting to a tariff based rice trade policy. In the same way, the rise of imports in Senegal from the mid-90's was directly related to imports liberalization, that was a component of the package of sub-sector reforms. However it is worth noting that the liberalization of the rice trade regime in Senegal in 1996 didn't have an effect comparable to the one recorded on rice imports in Nigeria. Since rice was already the major sources of supply in Senegal, the liberalization leaded to a continuous increase of imports, rather than a sudden surge, with no radical change in the share of imported rice compared to local rice.

Figure 4 : Price variation on the world market and import surge.

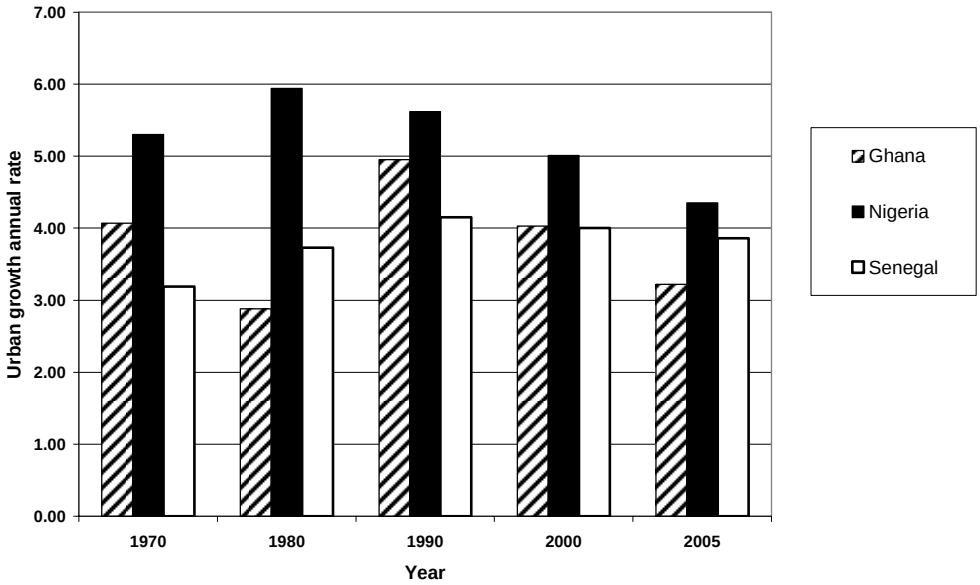


Source: computed from USDA PS&D, 2007

The second wave of surge that is observed in 2001 in Nigeria has been triggered by a combination of factors. On the domestic side, major staple food supply was tight which caused a rapid increase in the price of cassava, yam, and millet. Consumers shifted toward rice in order to mitigate the effect of other major staple price increase (USDA-FAS, 2001). In addition imported rice was more competitive at this time, since its price recorded its lowest level in ten years.

Ghanaian rice import rapid increase in the year 2000-2002 was not induced by changes in rice trade policy and could not be attributed to the low price prevailing on the world market which was offset by the sharp depreciation of the Cedi against the dollar at the same time (IMF, 2002). While in US dollar terms the Thai 25% broken rice price declined by 30% from 1999 to 2001, it corresponding value in Cedi terms increase three folds due to Cedi depreciation (figure 2). The rapid increase of Ghanaian rice import more related to structural changes in consumers' behaviour induced by a continuous increase of per capita income in a society that become radically more urban in its way of living and left gradually behind a diet inherited from rural areas. The combination of increasing urbanization, income growth in synergy with the increasing availability of imported rice could have brought the average urban population to pass a threshold and to accelerate their transition to a rice diet, a transitions that occurred 20 years before in Nigeria who have already achieved high urban growth rate (Figure 5).

Figure 5 : Urban annual growth rate.



Source: Globalis (2007)

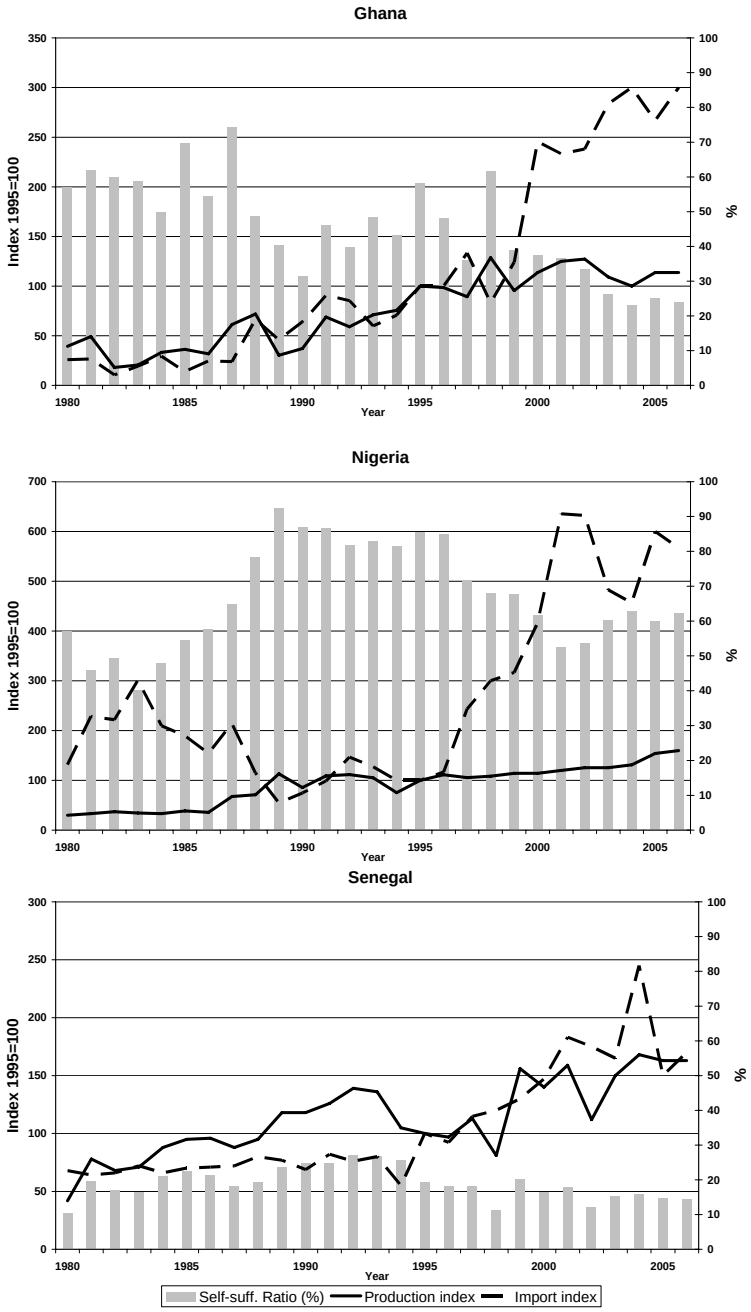
Another major determinant of rice imports increase is the accessibility. Easy availability on large scale and credit facilities make imported rice much more attractive for traders than local rice, how's supply is scattered and operators of very limited financial capacity.

5 Impact of rice import changes on the domestic rice sub-sector

In terms of rice market share, local rice has been decreasing from the mid-90's to now, showing that the bulk of the increase of rice consumption had been covered by imports. But rice imports expansion did not cause a fall of the domestic production as shown in Figure 6 which compares rice production and importation trends on an index basis. The impact of import increase on domestic production differs from on country to another. In the case of Senegal, the production started decreasing in 1993 (up to 1998), as the whole sub-sector has been dismantled by the withdrawal of the State, whereas imports started increasing three years after, after they were liberalised. However production picked up again in the late nineties, despite record imports. In Nigeria the import ban first stimulated the production expansion, but hasn't been efficient to maintain a steady and long term growth. After its removal, rice production resume slowly its expansion. In Ghana the depressive impact of imports on production seems rather clear: from 10% annually during the nineties, the rice production growth slowed down to a stagnant level of production, concomitantly with the acceleration of rice import that occurred in 2000.

It is also worth noting that import growth is slowing down in both, Senegal and Nigeria in the very recent years, regardless of their different level tariff. Indeed in the case of Senegal, the current high level of per capita consumption limits the potential for market expansion through change in diet structure and rice demand evolves according to population growth.

Figure 6 : Importations, production trends index and self reliance ratio (1980 – 2006; 1995=100)



Source: computed from USDA PS&D, 2007

In Nigeria, the impact of a high tariff policy has been mitigated by the development of unofficial trade as it was already the case during the rice import ban period. Market observers estimate un unofficial trade represents almost half of total rice imported in the

country (USDA, FAS 2007), which means that the tariff effectively applied to rice imports is closer to 50% compared to the official 100%. Therefore, in the Nigerian case the slowing down of import growth after the post-liberalization import boom cannot be solely attributed to an increase in tariff but should also be related to the evolution of the local demand.

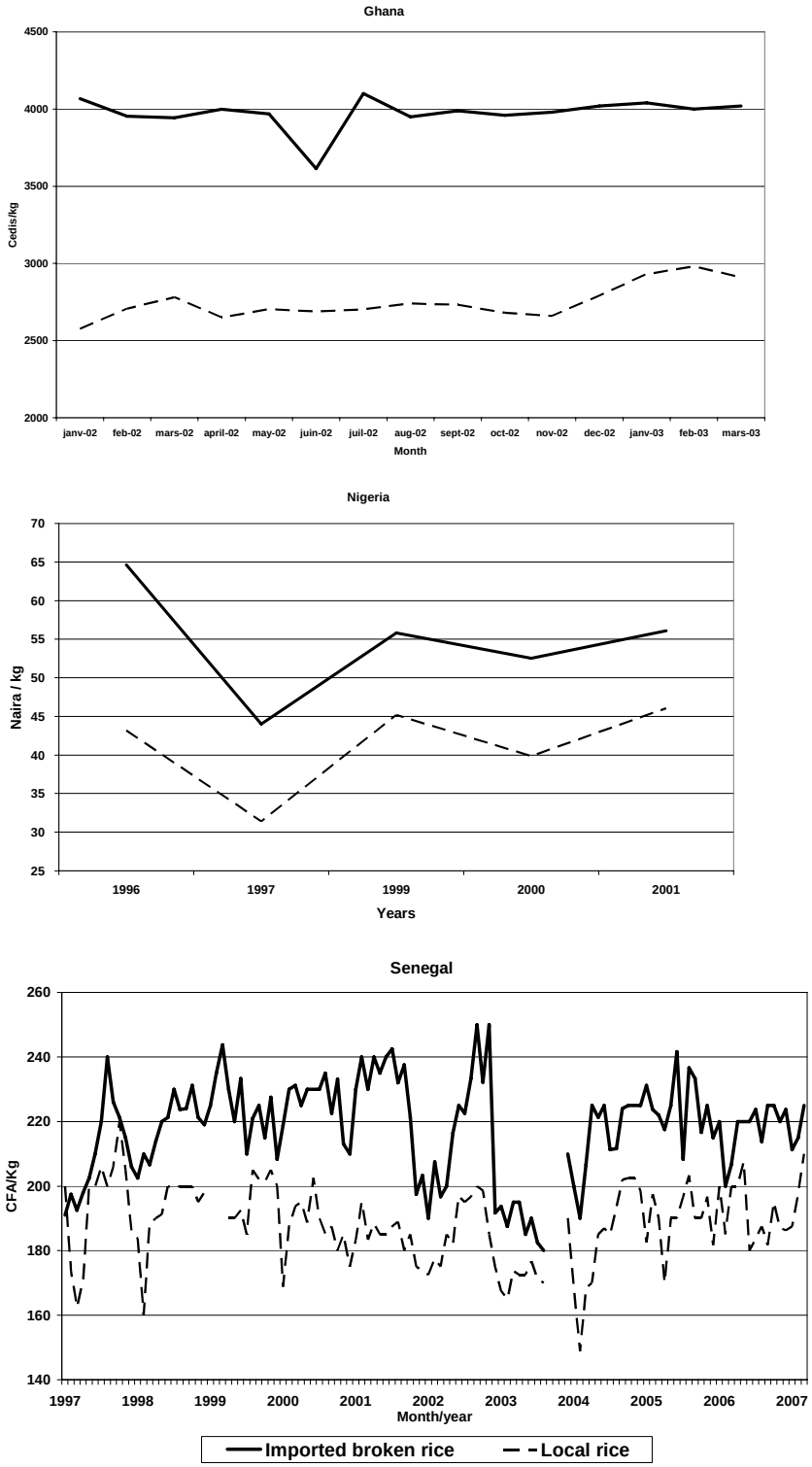
Eventually, the constant and sharp increase of the rice price on the world market since 2001 compounded with a threefold increase of shipment cost between Asian exporting countries and West African harbours has certainly contributed to the slowing down of rice import expansion.

6 Constraints mitigating the impact of tariff enforcement.

The comparison of the imports and production trends among the three countries shows that they are no differing radically in spite of different level of tariff applied. The mitigated capacity of the highest tariff policy to effectively better contain rice import than the lowest tariff policy can be attributed to factors that characterize the rice economy.

A first factor is the rather low sensitivity of consumers to imported rice price. The devaluation of the CFA in 1994 gave an opportunity to observe the impact of an increase in imported rice price in four West African countries: Senegal, Mali, Burkina Faso and Côte d'Ivoire (Diagana et al., 1999). The outcome of consumers' surveys shows that instead of reducing their imported rice intake, consumers have responded to the imported rice price increase caused by the devaluation by reducing the consumption of other food items (meat, wheat product…) while they maintained or relatively less reduced their level of imported rice consumption. Traditional cereals and other staple didn't benefited as it was expected from the imported rice price increase, with the exception of maize in Burkina Faso, and of domestic rice in Mali the consumption of which increased. These studies underline the low sensitivity of consumers to price level because they give more importance to imported rice non-price attributes (availability, cooking easiness …) that supersede the increase in the price. A similar situation was observed in Nigeria, where consumers preferred to purchase imported rice even at a price that was 20% to 30% higher than the local rice (Lançon et al., 2002). The higher value attributed to imported rice compared to the local rice is a common feature of the rice market in the three countries (Figure 7). It means that the expansion of the imported rice market share is not backstopped by a price battle between rice importer and local rice dealers. This price gap between the imported and local rice does also confirm that the two categories of product are not considered as equivalent by consumers.

Figure 7 : Imported rice and local rice price evolution (current price).



Source : SRID(2006), FMARD (2002),CSA (2007)

The main objective pursued by imposing a tariff on rice import is to restore the competitiveness of the local production, therefore assuming that local production would not be financially viable without any protection. The comparative advantage of the local rice production has been one of the key issues in the West African food policy debate in since the early eighties (Pearson et al, 1981; Hirsch, 1999). The debate has been eventually closed with the generalization of economic reforms from mid-nineties onward. However, the comparison of the outcome of several studies that was carried out at different point in time to measure the comparative advantage of West African rice cropping system's shows that the computed Domestic Resource Cost (DRC) tend to decrease indicating a trend toward an improvement of the domestic rice production economic efficiency (Table 1). It should, however, be underlined that the liberalization did have a screening effect and that rice cropping systems performance vary across ecologies, depending upon the level of yield achieved and the level of tradable input incorporated into the production technology. While, the less efficient input and water intensive system have not been able to pursue their operation, one outcome of the rice sub-sector liberalization have been a renewal of the attention given to rainfed rice production systems because their profitability have been less affected by the devaluation of the West African currencies that resulted in a higher price for tradable input and capital such as fertilizer and agricultural equipments.

Table 1 : Rice based cropping systems Domestic Resource Cost in West African countries across the years.

Systems		Irrigated		Lowland rainfed		Upland rainfed	
Intensification level		High	Low	High	Low	High	Low
Countries	Year						
Senegal	1978	1.99		1.26		1.04	
Senegal	1996	1.16			0.98		
Senegal *	2002	0.67	2.94		0.67		
Nigeria	1990	1.01	1.49	0.62	0.51	0.67	0.72
Ghana**	1998		0.17		0.17		0.12
Côte d'Ivoire	1978	2.99	1.74	1.67		1.51	1.35
Côte d'Ivoire	1993	1.01		0.89	0.89	1.11	1.05
Côte d'Ivoire	1995	0.80		0.69	0.47	0.90	0.59
Mali	1978	0.58		0.65	0.72		
Mali	1996	0.40					

Source: Lançon, F. (2001), *PNUE (2005), **Seini(1998)

Even if the improvements in economic efficiency terms concern only selected cropping systems, it indicates that the viability of rice production in West Africa do not necessarily depend upon the enforcement of a high tariff. It also reveals that the opportunity offered by technically sound and economically viable cropping systems does not necessarily lead to their dissemination and to a revitalization of the domestic production.

The rather complex, if not weak, linkages, or interdependence, between price level and supply and demand dynamic results from an increasing segmentation of the West African rice markets. The liberalization of rice import did not resulted in a one integrated market

where domestic and foreign sources of rice supply do compete one against the other on the basis of one price for an homogenous and standard good. The West African rice market is primarily segmented on the basis of quality attributes that match different consumers' requirements and preferences. Senegal imports almost exclusively "100% broken rice", with an increasing preference for aromatic broken, a type of rice that the local rice industry is not able to provide (Drame, 2003). Nigeria imports mainly parboiled rice, which corresponds to the traditional way of preparing rice. Nigerian consumers do prefers imported rice for its cleanliness and homogeneity, even though they prefers the taste and texture of certain variety of local rice. This rice market segmentation is also materialized by different marketing channels for imported and local rice, local rice being mainly distributed by retailers in market place while imported rice is retails through a network of grocery and small shops. Beyond the taste and appearance, consumers are also sensitive to the services that can be associated with the purchase of rice such as credit, or delay payment mechanisms, which are often provided by imported rice retailers and more seldom by local rice dealer. Eventually rice markets are also segmented on a spatial basis, imported rice dominating major urban centres markets while local rice is mainly distributed in rural areas and smaller towns (NIPON KOEI LTD, 2006, 2006b, Lançon 2003).

7 Conclusion: rice policy and trade policy

The decision made by the 29th ECOWAS head of state summit in January 2006 to enforce a CET a the scale of the ECOWAS by January 2006 have reopened the debate among policy analyst, decision makers and other stakeholders on the interdependence between trade and the agricultural policy. The review of the recent trends of the rice economy in Ghana, Senegal and Nigeria put in perspective with the different degree of rice market liberalization shows that the enforcement of higher tariff could not be the only incentive for accelerating domestic rice production expansion. The particular position of rice in West African urban diet, the strong segmentation of the rice market on the basis of local and imported rice attributes are major factors that hinder the expected impact of tariff enforcement. Local rice producers, and in particular the ones who have a comparative advantage in rice production, would only be able to withdraw any benefit from a tariff increase if they are able to market their product under the same conditions as the ones prevailing for imported rice, and to compete with imported rice not only in terms of price but also in terms market attributes and services.

This modernisation of the local rice value chain, in the downstream segment in particular, requires a long term investment in capital good and the emergence and reinforcement of appropriate institution to improve quality management along the chain. Agro-industrial entrepreneurs might not be able to make such an investment if the market environment remains too risky and unstable. The recent tension on the world rice market which resulted in a doubling of the rice price in the last five years, does not necessarily contribute to establish such a enabling stable environment even though, an increase in the rice parity price might be seen as a positive evolution. Rather than considering trade policy instrument as mechanisms for isolating the local rice economy from external competition, it would be more relevant to conceive them as buffer mechanisms that

would create the require time horizon for the implementation of policy in favour of the modernization of the rice industry that can compete with rice imports in terms of price but also in terms of quality.

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