AGRICULTURAL EXPORT PERFORMANCE IN AFRICA: ELEMENTS OF COMPARISON WITH ASIA

Floribert Ngaruko

ESA Working Paper No. 03-09

June 2003

Agriculture and Economic Development Analysis Division

The Food and Agriculture Organization
of the United Nations

www.fao.org/es/esa

ESA Working paper No. 03-09
www.fao.org/es/esa

AGRICULTURAL EXPORT PERFORMANCE IN AFRICA: ELEMENTS OF COMPARISON WITH ASIA

June 2003

Floribert Ngaruko
Centre d'Etudes en Macroéconomie et
Finance Internationale (CEMAFI)
Université de Nice
France
e-mail: F_ngaruko@hotmail.com

Abstract

This study addresses the strategies and the factors of agricultural export performance in Africa compared with other regions, especially Asia. Regarding the figures of agricultural export performance across these regions, the study finds that agricultural export commodities, either primary or processed, are less diversified in sub-Saharan Africa as compared to Asia, but that diversification evolves more favorably in Africa compared to Asia for primary, as opposed to processed, agricultural exports. The paper also finds sharp sub-regional differences: CFA economies' agricultural exports are less diversified than those of non-CFA economies. Also, diversification dynamics are found to be less favorable in the CFA zone, but CFA economies appear to shift relatively more rapidly from primary towards processed commodity exports.

The study then investigates the extent to which the underlying strategies conform to international commodity price incentives. It confirms such conformity for primary commodities for Latin America and the Caribbean, followed by sub-Saharan Africa. As regards processed commodities, sub-Saharan Africa is found to have the best track record, followed by Latin America and the Caribbean. The study finds that Asian commodities have the most unfavorable structure, but that this structure improves the fastest. The study also analyzes the extent to which different strategies are complementary or substitutable. The findings support the hypothesis of complementariness relatively more so than that of substitutability, as if the line of demarcation separated good and poor performers more clearly than the specific strategies in which they perform, but the most dominating feature is the looseness of the relationship among different strategies.

To explain African versus Asian differences, a succinct review of the factors of performance in Asia and a discussion of their relevance for Africa is carried out. Thus, while human and physical capital is generally found to have played a central role in Asian export promotion, this study argues that these factors are not what make the difference with Africa in the first place. Likewise, this paper argues that neither macroeconomic stability, nor international market imperfections a make notable difference. A regression-based exercise shows that the impact of these factors on performance is subject to the quality of governance, thus suggesting that institutions are the decisive factor that determines performance in the first place.

To support this view, the paper proposes two contrasted African case studies – Burundi versus Uganda –, which suggest that the interactions between biased distributive politics and export policies are responsible for a large part of the African export counter-performance. Accordingly, the study argues that addressing institutions prior to, or at least along with, other efforts seeking to improve the macroeconomic environment and to liberalize and deregulate the economy is a requirement for African countries to significantly improve their agricultural export performance.

I. Introduction

Since the 1970s, the success stories of the "Asian Tigers" have made export-led growth to stand out as a reference developmental strategy. Yet most studies supporting this view have mainly focused on manufactured exports, which are believed to include many advantages over agricultural exports (Sekkat and Varoudakis, 2000). While the present-day way of looking at development emphasizes the advantages of manufactured exports, it is worth noting that around 30 percent of Asian exports are still primary and processed agricultural commodities. In Africa, this share amounts to 50 percent of the total exports. And part of the remaining share includes minerals, which do not have manufactured commodity advantages. This suggests that in the short and medium term, the economic dynamics—including the development of manufactures— will rely on agricultural exports, especially in Africa, where comparative advantages lie with primary commodity exports.

Export activities in general involve many actors and factors. Some of these are exogenous. This is the case of natural endowments and historical legacy, for example. But many others are endogenous, and imply economic and political choices. It is these choices that form different developmental strategies. Exports in general, and agricultural exports in particular, impact on development through the financing of capital accumulation, especially capital accumulation by lifting two types of constraints: the constraint of international liquidity and the constraint of solvability. With respect to the former, Africa has two distinct zones[1]. The *Communauté Française d'Afrique* (CFA) member economies, in contrast to the majority of African countries, face little constraint of international liquidity, thanks to their monetary integration with France –and now Europe– which ensures a non-limited convertibility of the CFA franc.[2]

Exports lift the constraint of solvability to the process of capital accumulation in that exporting provides opportunities for economies to make extra income – and thus extra-savings – that would not exist otherwise. Such benefits may be particularly considerable

---

[1] This study uses the terms Africa and sub-Saharan Africa interchangeably.
[2] This inference must be taken cautiously, since from the 1980s onward the CFA country members have witnessed changes tending to restrict the convertibility of the CFA franc (for a retrospective and prospective view of this issue, see M'Bet and Niamkey, 1993).

since important advantages such as economies of scale resulting from greater specialization and technological transfers are acknowledged to accrue from the participation to international markets. Two types of strategies are associated with the development of exports as a source of extra-income. Through price-competitiveness strategies, governments seek to incite to the production of export commodities at decreasing costs in order to be competitive on international markets. In contrast, non-price competitiveness strategies rather emphasize the specialization in products enjoying good international prospects in terms of price elasticity of demand either by creating niches in new, high pay-off, markets or by shifting national specialization toward more profitable activities of global commodity chains (Amable, 1992).

The central assumption of the latter strategy is that during the life of a product, the market power and profitability progressively shift from upstream activities (e.g., production) toward downstream specializations (e.g., distribution). Accordingly, rather than exporting primary commodities, it is the specialization in international commodity chains' activities enjoying little market power that represents weakness for an economy (Morrissey and Filatotchev, 2000). Hence there is strategic advantage to gradually shifting specialization toward downstream activities (e.g., cotton in period 1, textile in period 2, confection in period 3, and garment distribution in period 4). Gibbon (2001) recommends this strategy for primary commodity export development.

In some ways, export diversification can be viewed as a hybrid between price and non-price competitiveness. It refers to changing the composition of exports - that is, in the relative contribution of each export category to total export earnings - with a view to establishing a wider variety of exports with good market prospects abroad and not subjected to identical swings in international prices. In other words, diversification limits the dependence on a small number of products and hence reduces a country's vulnerability to industry-specific external shocks (IMF, 1987). To explain agricultural export performance in Africa as compared to Asia, this study particularly focuses on agricultural export diversification, on the shift from primary toward processed exports, and on the export responsiveness to international price incentives.

II. FIGURES AND STRATEGIES OF AGRICULTURAL EXPORT PERFORMANCE

This section focuses on the figures of agricultural export diversification in selected regions, including Africa, Asia, and Latin America and the Caribbean (LAC). In the first sub-section, the sources of data and the method of estimation of performance are presented. The second sub-section addresses the question of complementariness or substitutability between two strategies—agricultural export diversification and the shift from primary toward processed agricultural exports.

II.1. Export Diversification and Processing

Comparing different economies in terms of export product diversification requires adopting some degree of aggregation of export commodities with close characteristics, in order to have a classification that is both workable and enough detailed not to blur the main differences among products. Considered as homogenous, each of the clusters of products thus obtained is assumed to be an "equivalent product", even though the homogeneity of its component products is a decreasing function of the degree of aggregation. Much of the analysis of this study relies on the three-digit classification of the International Trade Centre (2000). According to this classification, 29 "equivalent products" are form the sector denominated "Fresh Food and Agro-based Products", while 30 "equivalent products" are form the sector "Processed Food and Agro-based Commodities". Hereafter, these categories are defined as primary agricultural exports and processed agricultural exports, respectively.

While the equivalent number of products is practical to capture the degree of export diversification, another indicator is required to account for the distribution of export sales across equivalent products forming each of these two categories. Indeed, two economies with the same number of equivalent products and the same export sales would have different indices of diversification if the export sales of one were concentrated on a smaller number of these equivalent products than the other. Hence, to take into account the distribution of export earnings across products, a measure of dispersion is calculated—the standard deviation of product sales across equivalent

products. As the standard deviation of product sales is an exponential function of the number of equivalent products, diversification is calculated as the ratio of the number of equivalent products over the logarithm of export sales' standard deviation, in order to have a linear metric of diversification.

Thus the index of diversification is calculated on an open scale, but two assumptions underlying this calculation exclude the possibility for the index of diversification to be infinite. The first is that an economy exports at least two equivalent products from each category. The second is that the export sales of each category are not quite equally distributed among equivalent products. By excluding the possibility for the standard deviation to be equal to zero, these two assumptions are conditions for the index of diversification not to be infinite. All the economies included in the sample of table 1 meet these conditions.

As for the diversification change index, it is calculated as a country's rank (and group of countries' average rank) with respect to the evolution of the index of diversification between 1996 and 2000. Thus, the economies with relatively more favorable dynamics have lower scores, while the economies that recorded a relatively more unfavorable evolution over this period have higher scores.   Based on these indices, table 1 shows the figures of agricultural export diversification from both static and dynamic perspectives for different groups of countries.

Table 1: Agricultural export performance across regions

	Primary Commodities				Processed Commodities			
	Diversification		Growth Rate %	Share %	Diversification		Growth Rate %	Share %
	In 2000	Change '96-00*			In 2000	Change '96-00*		
- AFRICA	3.73	74	8.28	41.1	4.02	89	8.0	9.38
CFA zone	2.98	84	5.08	40.2	3.69	98	11.3	7.67
Non-CFA zone	4.19	69	9.70	41.5	4.22	84	6.5	10.29
- ASIA	4.56	78	6.91	19.4	5.03	57	11.9	8.07
HPAEs	5.36	58	-0.40	3.6	5.49	58	2.0	4.60
Non-HPAEs	4.19	83	8.94	23.8	4.82	57	16.9	9.80
- LAC	4.44	89	5.04	25.4	5.14	65	14.1	16.89
- USA	4.32	32	2	6	5	12	0	3

Source: Rough data are from International Trade Center and the United Nations Statistics Department (2002).
Notes: - *: The scores are average rankings. The sample includes 168 countries for primary exports, and 141 countries for processed exports.
- "Growth rate" denotes the average annual growth rate of exports expressed in US dollars between 1996 and 2000.
- "Share" denotes the share of export products of the category in total exports.
- Africa includes 39 sub-Saharan economies; Asia includes 23 economies; HPAE includes Hong Kong, Malaysia, Indonesia, Singapore, South Korea, Thailand, and Taiwan; LAC (Latin America and the Caribbean) includes 28 economies. However, in some instances, the sample sizes are smaller due to missing data.

Table 1 shows that agricultural export commodities, either primary or processed, are less diversified in sub-Saharan Africa compared with Latin America, and even less diversified than in Asia. For comparison, table 1 also provides the numbers for the United States of America. The index for the USA is a ratio between particularly high equivalent numbers of primary and processed products (27 and 30, respectively). But the index of diversification is relatively low due to the uneven distribution of product sales across equivalent products. Yet the numbers suggest that this economy made a substantial effort of diversification from 1996 to 2000, which contrasts with the little effort made at expanding agricultural export sales over this period.

As table 1 shows, primary commodity diversification change is more favorable in Africa compared with Asia, and even more favorable compared with Latin America. The figures for processed commodity diversification change are the opposite: the increase is higher in Asia, followed by Latin America. Finally, table 1 shows that Africa's strategy relies on primary commodities relatively more than Asia and Latin America, and that this will not change notably in the short run: not only do primary agricultural exports

represent a large share of the total exports in Africa, but also their growth rate is low compared with that of Asian and Latin American agricultural exports, either primary or processed.

Table 1 also shows some differences between sub-regional groups. In Africa, CFA countries' agricultural exports, either primary or processed, are less diversified than in non-CFA economies. Furthermore, diversification change is less favorable in CFA countries compared to non-CFA countries. This suggests that vis-à-vis diversification performance there may be an increasing gap between CFA and non-CFA sub-regions. However, while processed exports represent a larger share of the total exports in non-CFA economies, CFA economies seem to shift relatively more rapidly from primary towards processed commodity exports as the differences between the growth rates suggest. The combination of low diversification change and this high growth rate in fact results in an accelerated move towards more concentration of processed commodity exports in CFA economies. As regards Asian sub-regional differences, they are sharp as well. As table 1 shows, highly performing Asian economies (HPAEs) enjoy more diversification in both primary and processed agricultural exports, but the strategic importance of agricultural exports is low and decreases more rapidly in these economies.

II.2. Responsiveness to Commodity Price Incentives

The figures just mentioned raise an important question about the way different countries and regions respond to export commodity price fluctuations. In the economic literature, this question is controversial. While part of the literature emphasizes that agricultural products have low price elasticities of supply, Balassa (1990) and Abebayehu (1990) argue that agricultural exports—especially in Africa—are responsive to price incentives. Some authors even suggest that long-term fluctuations are beneficial for producers in that "they provide the opportunity to supply more when prices are low so that variability around an unchanged mean increases expected revenue" (Deaton, 1992).

Yet another controversy exists about the behavior of agricultural export prices in the long-term. While many economists admit that these prices decline, Deaton (1992) and Gersovitz and Paxton (1990) find that in the long run, the real prices of primary commodities exported by sub-Saharan Africa either have been without trend or have declined only gently. In contrast to long-run prices, there has been a clear decrease in international prices of agricultural export commodities over these past years. According to the United Nations Food and Agriculture Organization (FAO) (2002), coffee prices in particular have been severely depressed, followed by cotton, whose average prices in 2001 were down to 50 percent of their level in 1995. As regards cocoa prices, after a steady rise over the 1995 to 1998 period, they experienced a marked drop in 1999 and 2000. Tea prices were an exception to this trend: they remained relatively firm in recent years, but in 2001 they weakened substantially. Sugar prices have risen since 1999, at which time they had fallen to less than half their 1995 level. The trend in 2001 has been downward, although a slight recovery set in toward the end of the year.

To some degree, these controversies reflect the nature of a large part of agricultural production: in the long run, the supply may be elastic, but price trends are hardly clear; in the short run, price swings may be discernable, but the supply is hardly adjustable. According to Fontaine et al. (1995), the two-year price elasticity of supply for agricultural export commodities ranges from 0.1 to 0.7 in Africa, with products like coffee, cocoa, and peanuts in the high end of this range, while the price elasticity for tea and sisal is below 0.1. In this context, assessments of performance among countries and regions must be cautiously interpreted: not only does short-term behavior not necessarily reflect long-term trends, but also differences across countries and regions depend on the structure of export commodities for a given country at a given point in time. Yet, even though they are large in relative terms, the performance differences across countries and regions relate to products with low price elasticities in general.

Table 2 shows sector price indices for the short to medium term of five years—from 1996 to 2000—for primary and processed agricultural exports for different regions and sub-regions. For each category and each country, the proxy for the responsiveness to international market price incentives are based on relative unit values of exports (RUV) as calculated by the International Trade Center and the United Nations Statistics

Department (2002). The relative unit value is calculated as the ratio of the country's average unit value of exports to the world average unit value, while the average unit value represents values divided by quantities. Thus, the reference point of relative unit value is 1: if the relative unit value is below (above) 1, then the country exports its products at a lower (higher) price than the world average unit price. As such, relative unit values give an indication of the quality of export products. Indeed, according to the new theories of international trade, products are differentiated by quality, which is often reflected by differences in price. Hence the resort to relative unit values as a proxy of the extent to which the structure of an economy's exports is aligned on the international markets' price structure.

Table 2: Responsiveness to price incentives: regional and sub-regional differences

	Primary Commodities		Processed Commodities	
	RUV in 2000	RUV annual change	RUV in 2000	RUV annual change
AFRICA	1.61	4.21	1.28	0.44
CFA zone	1.08	4.40	1.70	2.80
Non-CFA zone	1.84	4.13	1.12	-0.46
ASIA	1.52	7.18	1.05	2.79
HPAEs	1.84	0.80	1.06	0.40
Non-HPAEs	1.43	9.06	1.04	4.11
LAC	1.67	2.92	1.12	0.96
USA	1.2	3	1.2	2

Source: Rough data are from International Trade Center and the United Nations Statistics Department (2002).

Note: RUV: relative unit value; RUV annual change from 1996 to 2000; Africa includes sub-Saharan African countries only; HPAE includes Hong Kong, Malaysia, Indonesia, Singapore, South Korea, Thailand, and Taiwan.

On this basis, table 2 shows that Latin American and the Caribbean economies are specialized in sets of primary agricultural commodities with relatively better price profiles, followed by sub-Saharan Africa. As regards processed commodities, sub-Saharan Africa has the best track record, followed by Latin America and the Caribbean. Asian agricultural export commodities appear to have the most unfavorable commodity structure but this structure improves the most rapidly. This suggests that the high track record in terms of diversification and diversification change mentioned earlier indeed responds to price incentive changes in this region.

From a dynamic perspective table 2 contrasts with sub-regional performance differences in terms of diversification: in sub-Saharan Africa, CFA economies have the best track record except for primary commodity prices. In Asia, agricultural export structure is more favorable in highly performing economies, especially for primary commodities, but the price profile for the rest of the Asian countries improves relatively more rapidly. In total, highly performing Asian economies seem to be lagging, but together with the decline of primary agricultural exports in these economies, this poor performance likely reflects the little emphasis put on agriculture by the export strategy, given that these economies are highly performing in manufactured exports.

II.3. Are the Different Strategies Complementary or Substitutable?

At first sight, some trade-off between strategies is discernable at sub-regional aggregate level, as the comparison of CFA economies with non-CFA economies suggested. Table 1 even points to some similarities between the strategies of non-CFA economies and those of HPAEs, on the one hand, and between the strategies of CFA economies and those of non-HPAEs on the other hand. The former sub-regions' strategies emphasize relatively more diversification than the shift from primary toward processed exports, while the latter sub-regions give priority to the shift from primary toward processed agricultural exports over the diversification of these exports. Yet region-based comparisons overlook the differences among countries. Table 3 offers a more systematic view of the relationships between different strategies.

Table 3: Correlation matrix

	SHIFT			DIVPRI			DIVPRIC			DIVPRO			DIVPROC			RUVPRI			RUVPRIC			RUVPRO		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
DIVPRI	.07	.02	.00																					
	.42	*.30*	*.71*																					
	-.86	-1.2	-.67																					
	.05	*.05*	*.13*																					
DIVPRIC	.42	1.00	.48	-4.1	-3.5	-1.4																		
	.19	*.04*	*.13*	*.45*	*.64*	*.79*																		
	-1.4	17.5	21.6	-6.2	12.1	18.1																		
	.92	*.36*	*.12*	*.68*	*.57*	*.22*																		
DIVPRO	.01	-.01	.01	1.13	1.53	1.23	.00	-.00	.00															
	.64	*.72*	*.71*	*.00*	*.00*	*.00*	*.98*	*.92*	*.88*															
	-.81	.16	.13	-.08	1.32	.81	-1.0	-.51	-.26															
	.26	*.89*	*.86*	*.87*	*.03*	*.05*	*.12*	*.58*	*.69*															
DIVPROC	-.51	-.17	-.47	-10	-3.9	-11	-.25	-.34	-.27	-2.1	-1.7	-3.0												
	.10	*.74*	*.15*	*.09*	*.63*	*.06*	*.09*	*.07*	*.10*	*.57*	*.69*	*.42*												
	31	8.7	-7.5	11.2	18.0	3.52	31.1	17.0	2.69	18.6	22.8	12.3												
	.03	*.66*	*.61*	*.47*	*.44*	*.81*	*.03*	*.35*	*.85*	*.24*	*.28*	*.41*												
RUVPRI	.00	-.00	.00	.37	.31	.26	.00	.00	.00	.15	.12	.10	-.00	-.01	-.01									
	.83	*.75*	*.94*	*.02*	*.23*	*.09*	*.3*	*.3*	*.22*	*.17*	*.42*	*.33*	*.11*	*.13*	*.20*									

.32	-1.0	-.70	.45	-.66	-.52	.10	-.78	-.59	.27	-.98	-.72	.65	-.80	-.78									
.52	.20	.14	.32	.37	.25	.77	.12	.07	.57	.15	.10	.22	.27	.09									
RUVPRIC																							
-.12	-.12	-.10	.31	5.63	.50	-.03	-.07	-.04	1.22	3.32	1.26	-.00	-.04	.016	3.90	4.92	4.44						
.27	.57	.35	.87	.07	.8	.47	.22	.42	.35	.05	.33	.98	.69	.79	.03	.02	.02						
5.25	5.39	1.81	-.04	5.81	1.42	-3.1	.58	4.18	.86	1.53	1.87	3.57	5.04	2.51	-3.3	4.03	6.20						
.30	.56	.72	.99	.51	.80	.50	.92	.35	.87	.84	.72	.53	.59	.62	.44	.50	.15						
RUVPRO																							
-.01	-.01	-.01	-.05	.07	-.07	-.00	-.00	-.00	.03	.06	.02	-.00	-.00	.00	-.01	.01	.02	.01	.01	.01			
.21	.18	.31	.62	.68	.48	.43	.25	.41	.69	.48	.80	.66	.74	.95	.94	.71	.79	.14	.24	.13			
.27	.66	.14	.29	.65	.07	.24	.53	.18	.35	.59	.15	.28	.61	.17	.24	.64	.19	.19	.53	.15			
.25	.13	.57	.27	.23	.81	.31	.19	.43	.18	.19	.58	.27	.16	.46	.31	.16	.43	.39	.19	.52			
RUVPROC																							
-.08	-.08	-.06	.11	1.94	.57	.05	.06	.04	.52	.84	.64	.03	.04	.02	-.64	.02	-.35	.12	.11	.10	6.32	6.62	5.43
.31	.62	.40	.95	.53	.74	.27	.38	.29	.63	.59	.55	.54	.63	.70	.64	.99	.81	.38	.56	.47	.03	.15	.07
-.91	7.9	4.91	-.54	5.7	2.91	-2.4	3.95	3.64	-.28	3.20	2.76	-3.4	2.37	3.96	-2.2	3.28	3.58	-3	2.78	3.65	-3.8	-.56	2.93
.80	.30	.18	.90	.55	.52	.53	.59	.33	.95	.70	.52	.42	.76	.30	.58	.68	.37	.47	.71	.33	.29	.94	.42

Notes: Each regression includes a constant, one exogenous variable, and one dummy. The sample for "R1" regressions includes African economies (dummy value 1) and Asian economies (dummy value 0); "R2" regressions include African economies only, with the dummy values 1 and 0 for CFA and non-CFA economies, respectively. "R3" regressions include non-CFA and highly performing Asian economies on

the one hand (dummy value 0), and CFA and non-Highly performing Asian economies on the other hand (dummy value 1). For each variable, the table shows, vertically: the coefficient of correlation of the exogenous variable, the p-value associated with this coefficient, the coefficient of correlation of the dummy variable, and the p-value associated with this dummy variable.

Variables: SHIFT: magnitude of the shift from primary toward processed commodity exports; DIVPRI: primary commodity diversification; DIVPRO: processed commodity diversification; RUVPRI: primary commodity relative unit value; RUVPRO: processed commodity relative unit value. The suffix "C" stands for "change".

By and large table 3 supports the hypothesis of complementariness relatively more than that of substitutability, but the most dominating feature is the looseness of the relationship among different strategies. If any, the line of demarcation lies more between good and poor performers than between the strategies and the sectors in which they perform. Thus, for example, if one considers a 95 percent confidence level, the correlation between the responsiveness to price incentives for primary commodities (RUVPRI) and primary commodity diversification (DIVPRI) supports the hypothesis of complementariness for the Asian and African sample. From a dynamic perspective, the RUVPRIC versus DIVPRO relationship supports the hypothesis of complementariness between processed commodity diversification and the improvement of primary commodity responsiveness to international price incentives.

The latter relationship also illustrates a more consistent trend, namely the divergence between poor and good performers. Indeed, it suggests that performance improves in countries with an already relatively good track record. The responsiveness to international price incentives by primary and processed agricultural commodities (RUVPROC versus RUVPRO, as well as RUVPRIC versus RUVPRI, relationships) illustrates this trend. Nonetheless, while the improvement of performance reinforces the already good track record in many instances, table 3 also illustrates that there may be significant trade-offs between strategies. The relationship between primary commodity diversification change (DIVPRIC) and the shift from primary towards processed commodity exports (SHIFT) in Africa illustrates such trade-offs.

As regards the regional and sub-regional differences, some illuminating findings also stem from table 3. Taking account of the shift from primary towards processed commodity exports, it suggests the fact for an economy to be African, especially a CFA economy, is a disadvantage as to the prospects for this economy to have much diversified primary commodity exports. Also, the fact for the economy to be African is a disadvantage as to the prospects to further diversify processed commodity exports. In contrast, taking account of primary commodity diversification, it suggests that African economies on the one hand, and CFA and non-highly performing Asian economies on the other hand, have an advantage as to their probability to have high diversification of processed commodity exports.

To sum up, results from the analysis of the question of complementariness or substitutability of different strategies suggest that the main differences among economies and groups of economies exist between good and poor performance more than between the strategies in which the different economies and regions perform. This point is key, since it suggests that agricultural export counter-performance is not essentially a problem of choice between strategies, but rather a result of some more fundamental factors referring to the political commitment. The following section attempts providing a more thorough insight into this hypothesis through the exploration of the factors of performance in Asia and their relevance for Africa.

III. THE FACTORS OF PERFORMANCE IN ASIA AND THEIR RELEVANCE FOR AFRICA

Much of the literature comparing Asian and African export policy and development focuses on manufactured commodities. Yet, the impact of the factors it focuses on extends to agricultural performance in the long run.[3] This section surveys the factors explaining performance in Asia in the short to medium term, and discusses their relevance for agricultural export performance in Africa. The first sub-section focuses on the factors of production, while the second sub-section addresses macroeconomic stability and non-price constraints to export performance. The third sub-section carries out a regression exercise aimed at analyzing how these factors affect performance for each of the agricultural export strategies defined in the previous section.

---

[3] The literature addressing the relationship between agricultural and non-agricultural development dates back to the 1950s (see for example, Kuznets, 1955), but its inspiration can be traced back to classical economists - especially Ricardo. It was refreshed in the 1970s, as authors like Ahluwalia (1976) and Chenery et al. (1975) showed that the rise of productivity in the non-agricultural sector of the economy entails productivity increases in the agricultural sector.

III. 1. Factors of Production

a. Physical capital

One influence emphasized by the literature attempting to explain the differences between Asia and sub-Saharan Africa in export development are the factors of production. Regarding physical capital, the contrast between Africa and the HPAEs is striking, especially since the second half of the 1970s (Figure 1). Some studies highlight that Asian exports have developed in part thanks to massive transfers of capital from industrial countries (Rodrik, 1994). Emphasizing the contrast between these flows and the few external resources that Africa has received since independence, these studies infer that this has been one key dimension of the marginality of Africa and that this explains the poor performance of African economies (Mbaye, 2002).

Figure 1: Investment over GDP ratio (%)
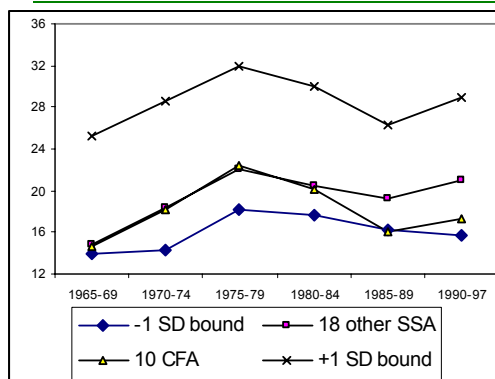
Source: O'Connel and Ndulu (2000).
Note: SD (Standard Deviation) relates to the whole sample for both charts.

In this respect, the figures are telling. Regarding foreign direct investment, in 1999 sub-Saharan Africa received about 10 times less than Asia. This particularly contrasts with the returns on investment. As Asiedu (2001) points out, these are higher in Africa (25–35 percent) than in other developing countries, including Asia (16 percent), but at the same time, sub-Saharan Africa has attracted only four percent of the total foreign

direct investment flows to developing countries. On the other hand, while capital flight represented 5–6 percent of private wealth per worker in Asia in 1990, it amounted to 40 percent in Africa (Collier et al., 2001). As Mbaye (2002) shows, in 1991, for instance, capital flight from Africa amounted to US$135 billion, five times as much as the total investment, 11 times as much as private investment, and 120 times as much as foreign investment. Mbaye estimates that the return of 10 percent of this amount would represent more than twice the private investment in Africa (excluding South Africa).

That the lowness of investment in physical capital and foreign investment may have affected African exports, especially agricultural export sectors, is beyond discussion. But it should be noted that if one takes due account of the various risks facing investment in Africa, even the low amount of physical capital invested in Africa has generally had lower productivity compared with HPAEs (Collins and Bosworth, 1996). Some economists have opportunely come to question the argument that decries the lack of sufficient investment in Africa (Devarajan et al., 2001). Indeed, while these figures support the argument emphasizing the weakness of investment in Africa compared to the HPAEs, they point to the need to get a comprehensive picture as to why even investment reaching African economies tends to fly away, in contrast to Asia.

In fact, as Ngaruko (2003) argues, the limitedness of the internal and external investment, and the subsequent poor performance are part of an equilibrium marked by an institutional environment inimical to high performance, and capital flight –which is in fact the opposite of foreign investment - plays the role of a regulator of the level of internal and external investment vis-à-vis this equilibrium. Hence, the core hypothesis of this study is that in Africa, institutions are an important constraint to performance in general, and agricultural export performance in particular, in that it determines the impact of other factors on performance. Supportive arguments to this hypothesis will be developed with respect to agricultural export performance throughout the remaining sections of this paper, but meanwhile, figures about other factors of performance are discussed.

b. Human capital

Human capital is also emphasized as an explanatory factor of Asian performance. In this perspective, statistical data illustrate large differences in human capital endowments between Africa and the HPAEs (Figure 2). Throughout the economic literature, these differences are presented as an explanation of different specializations. For instance, Wood and Mayer (2001) and Teal (1999) argue that the scarcity of skills relative to natural resources is consistent with the African specialization in primary exports, while the relative abundance of education in Asia is found to have boosted processed exports (Lall, 2002). However, like capital flight, the 'brain drain' points to the need to go beyond explanations emphasizing the lack of skilled people in Africa.

As Haque and Aziz (1998) show, sub-Saharan Africa is the most affected region in terms of 'brain drain' expressed as the share of educated people. Furthermore, education has low marginal returns in Africa compared to Asia. Primary education is particularly illustrative of this. Given that about 70 percent of Africans are farmers, primary education may be the most relevant factor for growth, since it affects agricultural productivity the most. Yet Lau et al. (1991) find that an increase of primary education by 10 percent raises agricultural productivity by 1.7 percent in Latin America, 1.3 percent in Eastern Asia, 0.1 percent in North Africa and Middle East, and only 0.03 in sub-Saharan Africa. Some studies even find a negative relationship in the latter region (Saito et al., 1994).

A number of studies are supportive to this finding. In the case of Cote d'Ivoire, Gurgand (1993) argues that higher average levels of education of farmer household members are associated with lower supply of agricultural labor. Supportive to this view, Orivel (1995) argues that educated people are reluctant to engage in agriculture in Africa, and that when they do not find jobs in the modern sector, especially as public servants, they prefer to stay unemployed. Azam (1999) proposes a political economic insight into the factors underlying this rather counter-intuitive behavior. In his attempt at an explanation of the relationship between distributive politics and ethnicity, the author argues that for educated people in Africa, migrating to the city is often more profitable than engaging in agriculture, even though collectively, this is often a counterproductive

strategy: the communities send educated members of the family to the city to ensure political participation for the family and even for the whole ethnic group, and to collect some money from the formal sector and the government, while the coalition of educated elite members are able to extract from the people left behind, and with the help of the benevolence of the state, much more than they send back.

Figure 2: Share of population of 25 years or more with secondary education (%)
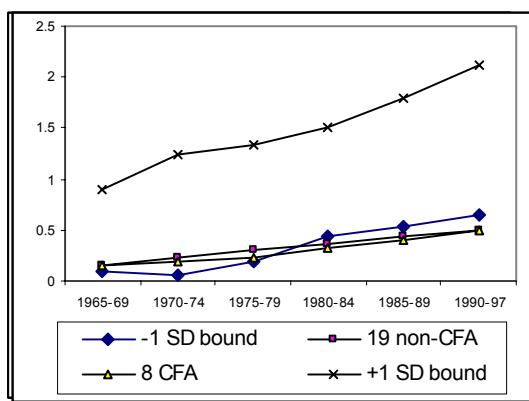
Source: O'Connel and Ndulu (2000).
Note: SD (Standard Deviation) relates to the whole sample for both charts.

With respect to agricultural performance, these figures are particularly telling since the lack of education is found to weaken the impact of extension services, much of which require some level of education that enables farmers to mobilize and to treat a large mass of information (Orivel, 1995: 79).

The way this may affect agricultural non-traditional exports and agricultural export diversification in Africa may be devised in relation with horticultural exports. These past few years, horticultural exports have emerged as potentially important for agricultural export diversification. Two central features of these products are their strict quality standards, generally defined in a top-down fashion, and the fact that handling these standards requires some education (Sterns and Busch, 2002). Hence the deficit of educated people in agriculture may impede African economies from diversifying their agricultural exports through the introduction of non-traditional horticultural products.

III. 2. Macroeconomic Environment and Market Imperfections

a. Macroeconomic environment

These developments illustrate that the weakness of agricultural export performance in Africa relative to Asia involves problems that go beyond the explanations based on the limitation of endowments in factors of production. One constraint that has received attention is the group of factors assembled under the generic terms macroeconomic environment and market imperfections.

Macroeconomic stability, fiscal discipline, real exchange rate alignment, and other policies like aid that affect these variables play a central role for the success of export promotion policies (Sekkat and Varoudakis, 2000; Wijnbergen, 1985), even though some microeconomic and sectoral components of the Washington consensus (liberalization, privatization, and market deregulation) are controversial (Elbadawi, 2002). The comparison between Africa and Asia in this respect shows that in the latter region, macroeconomic standards were pretty good compared to African figures during the 1970s. But it also shows that since the 1980s, stabilization policies and reforms monitored by the International Monetary Fund and the World Bank have improved the macroeconomic environment in Africa considerably. Yet the impact in terms of export performance was modest, as they mainly consisted in an extensive shift of resources towards export sectors with limited intensification of export production (Ngaruko, 1998).

To illustrate the limits of macroeconomic stability at improving export performance in Africa, CFA countries are a case in point. As mentioned earlier, the CFA economies enjoy a special monetary and budgetary status, which includes considerable macroeconomic stability. Virtually no other African economies have as stable and transparent a macroeconomic environment as CFA economies do. In particular, the monetary and budgetary arrangements between these countries and France virtually exclude any risk of high inflation, while ensuring high credibility for the monetary policy. Though real exchange rates were over-evaluated prior to 1994, the devaluation of the CFA franc in January 1994 has largely realigned them. Yet this has not proven to have

been of much benefit in terms of agricultural export performance. Rather, the previous section has illustrated that in many perspectives the CFA economies' performance has been lower than that of non-CFA countries.

In fact, rather than a paradox, these figures are consistent with the economic and institutional environment in CFA economies. In a model investigating political and economic interactions in policy reform in Africa, Ngaruko (2003) shows on the basis of the comparison of CFA with non-CFA zones over the 1990 to 2000 period, that the combination of macroeconomic stability, high international liquidity, and institutional decay increases benefits to corruption and capital flight more than to export performance.

As regards liberalization reforms, they are found to have played a minor role in non-traditional export performance in Asia (Helleiner, 2002). Rather, it was selective governmental interventions in support of particular forms of non-traditional exporting activities, including those aimed at encouraging foreign direct investment into specific sectors, and that were the key to the success of the 'Asian tigers'. In contrast, African governments have typically not developed strong supply-side supports—neither general nor selective—to encourage investment in non-traditional commodities comparable to those used in Asia or Latin America, except in some countries. Even when this was the case, for instance with export processing zones, these policies largely failed to boost non-traditional exports in Africa (Helleiner, 2002).

b. Non-price constraints

Non-price constraints to export performance include two types of factors. The first type includes exogenous constraints, which result from industrial countries' policies and are out of the control of Africans. These include the crowding out effect of the massive subsidies that the governments of industrial economies provide to agriculture in their countries. Agricultural subsidies in rich countries of about $300 billion a year suppress world prices, undermining developing-country exports. Recently, the World Bank (2002a) and Stern (2002) found that full elimination of agricultural protection and production subsidies in the rich countries would increase global trade in agriculture by

17 percent, with agricultural and food exports from low and middle-income countries rising by 24 percent.

As regards barriers against agricultural processed exports, escalating tariffs—duties that are lowest on unprocessed raw materials and that rise sharply with each step of processing and value added—confine African countries to the export of unprocessed commodities. Ghana and Côte D'Ivoire export unprocessed cocoa beans; Uganda and Kenya export raw coffee beans; and Mali and Burkina Faso export raw cotton (World Bank, 2000).

Safety standards and other potentially protectionist anti-dumping actions form the second source of restrictions against African exports (Gersovitz and Paxton, 1990). With specific respect to agricultural export diversification, Tsunehiro (2001) argues that implementation of the European Union's new aflatoxin standards will reduce African exports to Europe of nuts, cereals, and dried fruits. These products are considered as non-traditional and are highly sensitive to aflatoxin standards. The author estimates that the European standards will reduce health risks by only about 1.4 deaths per billion a year but will cut African exports to Europe by 64 percent, worth US$670 million, compared with these products' international standards. These restrictions particularly conflict with other arrangements meant to favor African agricultural exports. This conflicts with other arrangements like the Yaoundé-Lomé-Cotonou conventions, meant to create incentives to the benefit of African exporters, and depending on the structure of the economy's exports, this may cancel out much of the benefits accruing from these arrangements (Lecomte, 2001).

Other types of non-price constraints include the factors over which agents may have some control—such as incomplete or missing information about appropriate technology for producing competitive goods and services for both international and domestic markets, requirements for penetrating overseas markets and creating a niche in new and high pay-off markets, and market intelligence regarding consumer tastes and producers' needs in overseas markets (Elbadawi, 2002). The response to these constraints shows an important contrast between Africa and the HPAEs. By and large, HPAE experiences show that public policies were determinant, even though public intervention in each HPAE in part followed a specific pattern.

As Lall (2002) argues, each of the HPAEs contributed to one or more of the four elements of a successful export-push strategy: (i) access to input imports at world prices through free trade zones, export processing zones, bonded warehouses, duty drawbacks, or tariff exemptions; (ii) export financing through programs aimed at ensuring access to credit, often at subsidized prices; (iii) subsidized programs aimed to promote overseas market penetration. Particularly, organizations sponsored by governments and involving overseas communities have invested considerable effort in helping export firms, especially smaller and new ones, to overcome informational constraints; and (iv) policy flexibility.

As a result of these strategic choices, exports were made more profitable than domestic sales, and exporters had confidence that favorable policies would be maintained in addition to stable and predictable macroeconomic environments and efficient labor markets. As regards the political economy that made this strategy feasible, Lall (2002) mentions strong and stable governments clearly committed to export promotion, efficient and relatively honest bureaucracies insulated from daily political pressures, a fair degree of economic equity and national consensus on economic goals, participation of businesses to the design of interventions, and punishment of enterprises that failed to meet their performance criteria.

Here likely lie the most decisive factors explaining the differences between Asia and Africa in export performance. The weakness and the instability of African governments, the ambiguity and inequity of the policies they enforce, pervasive corruption among public officials, over-centralization of decision-making, and the inability to punish wrong-doing cronies probably account for a major part of the failure of African governments to improve the export performance of their economies. The following sub-section proposes a deeper insight into the impact of institutions and governance on agricultural export performance.

III. 3: Institutions and Governance as Determinants of Performance

This sub-section consists of a test for the way governance and institutions affect agricultural export performance in Africa and Asia. The first paragraph outlines the specification of the relationship between governance and performance to be tested, and presents the data used in the regression exercise. The second paragraph shows and interprets the results.

a. Specification and Data

The discussion of the factors of performance and of their relevance for Africa in the previous section points to two different specifications of the way governance, institutions and the resulting policies affect agricultural export performance. The first is the classical specification of the relationship between two or more factors:

$$PERF = a_0 + a_1 F_1 + a_2 F_2 + ... + a_n F_n + a_{n+1} GVCE + \varepsilon_1 \qquad (1)$$

where *PERF, F(i)* , and *GVCE* denote the index of performance, the ith factor of performance, and the index of governance, respectively. According to this specification, an increase in the amount of the factor of performance results in an improvement of performance. This view is questionable in the light of the figures just discussed in the previous section. Indeed, as the discussion of the role of physical capital, education and macroeconomic stability emphasized, not only do institutional failures affect performance directly, but also –and perhaps more importantly– they affect the way these factors impact on performance. Therefore, one may hypothesize an alternative specification:

$$PERF = b_0 + b_1 F_1 GVCE + b_2 F_2 GVCE + ... + b_n F_n GVCE + \varepsilon_2 \qquad (2)$$

The main difference between equations (1) and (2) is that the latter assumes that it is the interactions between the factor of performance and governance that explain performance, while the former assumes that governance and other factors explain performance quasi-separately. To estimate the impact of governance on agricultural

export performance in the following sub-section, both specifications will be tested, and the comparison of the results will show which one is more relevant.

As regards the indices of performance and their metrics, they are the same as those presented earlier in the second section. That is, the shift from primary toward processed agricultural export commodities (SHIFT) is proxied as the growth rate gaps between these two export categories. The proxy of the responsiveness of export commodity structure to price incentives (RUVPRI and RUVPRO) is the relative unit value for both export categories. Also, diversification, defined as in the second section (DIVPRI, and DIVPRO), is proxied by the ratio between the number equivalent products and the logarithm of the standard deviation of export sales across these equivalent products.

As regards the factors of performance, six exogenous variables are used:

(i) The first is education. This variable is calculated from World Bank data as the average of primary and secondary net enrollment ratios for each economy for 1997 (World Bank, 2001).

(ii) The second factor is macroeconomic policy. This variable is proxied by the index of management of inflation and current account. This index is based on annual assessments of the quality of policy performance of World Bank's borrowers. The criteria and methodology of these assessments have evolved over time to incorporate lessons from experience as well as research findings. Beginning in 1998, the country performance assessments (CPIA) were broadened to include an evaluation not only of the government's policies but also of the institutions in place to implement them. Now, the CPIA include 20 variables, one of which is the management of inflation and current account. The indices used in the regression analysis below are drawn from the World Bank (2000) issue of CPIA report.

(iii) The third variable is external investment, which is defined as the average ratio between net foreign direct investment and gross domestic product in 1990 and 1999 (UNDP, 2001).

(iv) The fourth variable is total investment, defined as the average ratio between the gross domestic investment and gross domestic product for 1990 and 1999 (World Bank, 2000).

(v) The fifth variable is a dummy (1 if the economy is African, 0 if the economy is Asian).

(vi) The sixth variable captures governance and institutions, which equals the average of the six Kaufmann, Kraay, and Zoido-Lobaton (1999) measures of institutional development, where larger values signify better institutional development. These measures are based on an unobserved components model that aggregates over 300 indicators, ranging from ratings by country experts to survey results. The component dimensions of governance are defined as follows: (a) Voice and accountability captures the extent to which citizens can choose their government, political rights, civil liberties, and an independent press; (b) Political instability and violence denotes the likelihood that a government will be overthrown by unconstitutional or violent means; (c) Government effectiveness represents the quality of public service delivery, competence of civil servants, and the degree of politicization of the civil service; (d) Regulatory burden captures the extent of governmental controls on goods markets government interference in the banking system, excessive bureaucratic controls on starting new business, and excessive regulation of private business, and excessive regulation of private business and international trade; (e) Rule of law denotes the extent of persons and property against violence or theft, independent and effective judges, contract enforcement; and (f) Graft represents the use of public power for private gain, corruption.

b. Results

Table 4 shows the results of the estimation of equations (1) and (2). By and large, these results confirm the hypotheses about the role of governance and institutions: the comparison of (1) and (2) types of equations confirms that governance and various factors explain agricultural export performance interactively better than separately. This is particularly supportive to the hypothesis that the impact of the factors of performance is subject to the quality of the institutional environment. Yet, the results do not contrast significantly Africa with Asia, as the parameters for the dummy suggest. The explanation of this may be the differences among various economies forming each of

26

these regions. Indeed, as the earlier analysis has argued, there are important differences between CFA and non-CFA sub-groups, as well as between HPAEs and non-HPAEs. These differences account for much of the low significance of the Africa-versus-Asia dummy.

In many instances, the impact of the exogenous variables on performance conforms to the effect usually assumed as to how these factors affect performance in general, and export performance in Asia in particular. This is the case of the impact of education and the quality of macroeconomic policy on the responsiveness to primary commodity price incentives (RUVPRI). In other instances, the weighting of factors of performance with governance makes the impact to turn both positive and significant. The case of the total investment as an explanatory factor of primary export commodity diversification (DIVPRI) illustrates this.

Table 4: Governance as a determinant of agricultural export performance

Dependent variable	RUVPRI		DIVPRI*		SHIFT		DIVPRO	
	Eq.1	Eq.2	Eq.1	Eq.2	Eq.1	Eq.2	Eq.1	Eq.2
Education	0.5*	1.44*	0.85*	-0.44*	1.60*	70.2*		
	(0.68)	(0.00)	(0.01)	(0.00)	(0.92)	(0.00)		
Macroeconomic Policy	0.93*	1.48*	0.68*	0.39*	-25.2*	11.2*	-0.10*	0.17*
	(0.64)	(0.06)	(0.08)	(0.04)	(0.40)	(0.42)	(0.47)	(0.10)
External Investment			0.01	0.01	-51.9*	-34.7*	0.11*	-0.14*
			(0.36)	(0.00)	(0.00)	(0.03)	(0.13)	(0.14)
Total Investment			-0.01	0.01	-5.73*	-88.2*	0.02*	0.24*
			(0.52)	(0.06)	(0.74)	(0.00)	(0.79)	(0.01)
Governance	-0.14		0.17		-41.1*			
	(0.96)		(0.12)		(0.26)			
Dummy	-0.02	0.54	-0.10	-0.05	0.40	-3.20	-0.05	-0.03
	(0.97)	(0.25)	(0.51)	(0.68)	(0.95)	(0.56)	(0.15)	(0.36)
R^2	0.02	0.25	0.42	0.70	0.75	0.81	0.31	0.40
R^2_a	-0.11	0.19	0.27	0.63	0.68	0.76	0.17	0.26
Prob (F-stat)	0.95	0.02	0.04	0.00	0.00	0.00	0.10	0.05
N	34	36	31	31	27	27	22	22

Notes: Each equation includes a constant; p-values are in parentheses.
* The variable is included in the regression as logarithm.

However, the weighing of different factors of performance with governance makes the impact of some of these factors turn to unusual figures. For example, the explanation of primary agricultural export diversification shows an adverse, significant, impact of the interaction between education and governance on performance. The equation explaining the magnitude of the shift from primary towards processed commodity exports (SHIFT) also shows such adverse effects with respect to

investment. Also, the equation explaining processed commodity export diversification (DIVPRO) shows that the interaction between governance and macroeconomic policy, and that between governance and external investment change the sign of the coefficients of correlation in opposite directions, though at a low level of significance. These rather counterintuitive findings stem from a concatenation of many factors, some of which refer to the accumulation and the allocation of the factors of performance.

Indeed, for each agricultural export strategy, performance likely requires specific factors in specific proportions. The consequence is that for a given strategy, redundant and over-supplied factors may tend to have low significance or even negative and significant coefficients. This problem is particularly critical in economic environments like Africa, where rent-seeking politics undermine institutions, and where various distortions result in the over-accumulation of some types of factors, and in the under-accumulation of others[4]. As a result, the significance of governance as an explanatory variable of agricultural export performance lies with the improvement of the goodness of the fit between different proxies of performance and factors more than with the sign of the coefficient of correlation.

As the discussion of the allocation of human capital between agricultural and non-agricultural sectors illustrated earlier, this problem may extend to the allocation of factors of performance across sectors. Due to the trade-offs that characterize the allocation of productive resources between agricultural and non-agricultural sectors, an increase in the amount of a given factor may disproportionately benefit to the latter sector to the detriment of the former. Therefore, given that the regression exercise relies on variables that capture the quantities of various factors at the macroeconomic level, it may include a bias since it does not take into account the uneven distribution of these resources across sectors. The second section provided an illustration that substantiates this problem, as it showed that highly performing Asian economies record some agricultural export counter-performance, as a result of the fact that in these economies, the investment effort disproportionately benefits manufacturing to the

---

[4] Gallagher (1991) provides illustrations of this. As regards human capital particularly, Azam et al. (1996) find that in Africa, secondary education expenditures behave as predatory - even though the distributive character of such expenditures is acknowledged elsewhere - thus suggesting that poor governance may be closely associated with high school enrollment ratios.

detriment of agricultural exports. In Africa, the 'anti-farmer bias' is even more dramatic, and the following section argues that it is part of distributive politics that constrains agricultural export performance even more severely.

IV. DISTRIBUTIVE POLITICS AND AGRICULTURAL EXPORT PERFORMANCE: BURUNDI AND UGANDA CASE STUDIES

This section proposes an explanation of export performance, based on the patterns of distributive politics in Africa. To provide a thorough insight into the political and economic factors explaining low export performance, it develops two case studies illustrating both a failure and a success of an agricultural export strategy. After a brief review of the related literature in the first sub-section, the second sub-section focuses on Burundi to illustrate the political economic factors of failure. The third sub-section develops the Uganda case study to illustrate the factors of success.

IV.1. The Anti-Farmer Bias and Agricultural Export Performance

In his seminal book, Herbst (2000) argues that in the history of state construction in Africa, the difficulty to project power over and controlling harsh and sparsely populated spaces inhabited by hostile populations has made trade play a particular role: African governments have consistently relied on indirect taxation and non-tax revenues, especially on taxes on trade, since this source of revenue requires the control of some access points on the border rather than the control over the whole country. Supportive to this view, a strand of literature following the World Bank's 1981 Berg report and Bates (1981) argues that African governments have tended to overtax agriculture, notably through export taxes.

Consistent with the theory developed by Chenery and Syrquin (1975), the argument asserts that this has limited agricultural structural transformation and impeded development at large by lowering productivity increases in agriculture and thus preventing the shift of labor from agriculture to other sectors of the economy. On the other hand, a large part of the economic literature argues that in competitive equilibrium, marginal products of labor are equalized across sectors. However, a

tradition dating back to the 1950s argues that marginal products structurally differ substantially across sectors during the process of development. With reference to these contributions, Figure 3 presents the figures for sub-Saharan Africa compared with five HPAEs and a group of 38 non-African economies. It shows the evolution of the ratio between the average productivity of an individual non-farmer and the average labor productivity of an individual farmer.

Figure 3: Evolution of Non-Farmer vs. Farmer Average Productivity Ratio
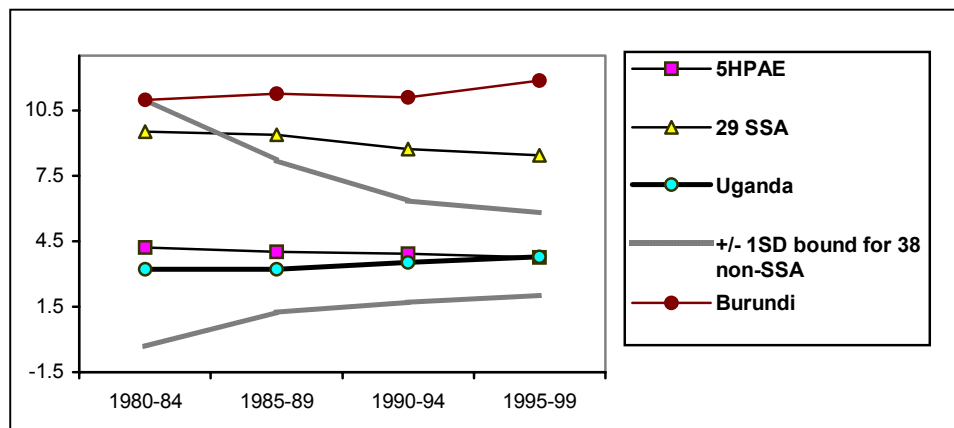
Source: *Adapted from O'Connel and Ndulu (2000).*
Notes: SD= Standard Deviation; SSA: sub-Saharan Africa. Average labor productivity is defined as the ratio of the sectoral value added in constant 1995 dollars to sectoral employment.

Figure 3 suggests that Africa has had low transformation, at least at the high level of sectoral aggregation used here: there is no evidence of a steady convergence with the levels characteristic of developing countries in general, particularly the highly performing Asian countries. The evolution of the one standard deviation bound for non-African economies shows that these economies enjoy a steady convergence of non-agricultural versus agricultural individual earnings ratio toward the HPAEs' level. In this perspective, Burundi is a case in point. It diverges not only from the HPAEs' trend but also from Africa's line, reflecting the severity of the bias against agriculture in this country. In contrast, Uganda seems to converge toward the HPAEs' line. In fact, the comparison of these two countries' scores with African averages with respect to the 'anti-farmer bias' as well as to various indicators performance of tables 1, 2 and 5 illustrate this contrast as well. Thus, Burundi and Uganda represent contrasted

positions of a wide spectrum, which includes the majority of African economies between these countries' positions, and their comparison may thus be illuminating as to how distributive politics affect performance in Africa.

That the distributive politics and taxation underlying the figures presented above are an impediment for agricultural export development is largely admitted (Jerome and Ogunkola, 1999). Particularly, as McMillan (2001) argues, such self-defeating indirect tax rates lie in the time-inconsistency of low-tax policy in a context where poor governance and political instability arising as both a cause and a consequence of this distributive politics shorten the time horizon for public decision-makers.

Table 5: Ugandan figures in trade and exports diversification (2000)

	Uganda		Burundi	
	Primary commodities	Processed commodities	Primary commodities	Processed commodities
Value of exports ($ million)	278	10	38	2
Share of national exports (%)	79	3	95	5
Average growth rate of export sales 1996-2000	10	17	-1	0
Relative unit value (world average=1)	4.8	2.6	0.7	2
Average annual change in relative unit value (%)	39	-14	-5	-7
Export commodity diversification	5.8	7.2	2.6	2.2
Rank for change in export commodity diversification (1996-2000)*	2	2	37	122

Source: International Trade Centre (2002).
* The samples for the four columns include 168, 141, 125, and 130 countries, respectively.
For the definition of commodity diversification and of relative unit value, see section 2.

The comparison between Ugandan and Burundian performance in agricultural exports conforms to this pattern as well as to the evidence presented in Figure 3: Burundi has poor performance in terms of both primary and processed agricultural export diversification, from both static and dynamic perspectives, while in contrast, Uganda presents better performance. This contrast is a result of differences in the pattern of politics and governance that developed in these two countries over the past few decades. During its post-colonial history, Burundi has experienced a continuous decay in governance and a worsening of armed conflicts as a consequence of political and economic imbalances among ethnic groups and regions, while Uganda has taken important steps to improve politics and governance since the mid-1980s.

IV.2. Export Counter-performance in Burundi

Burundi is a small country, landlocked between Tanzania on the east and southeast, the Democratic Republic of the Congo on the west, and Rwanda on the north. Burundi has three agricultural exports, each of which corresponds to a specific ecosystem: cotton in the western warm plains bordering Lake Tanganyika, coffee in the central and northeastern plateaus, and tea in the cold central and southern mountains. These three products were introduced in Burundi by the colonial system. Together, they accounted for 92 percent and 91 percent of agricultural commodity exports in 1980–84 and 1995–99, respectively, illustrating a low diversification of agricultural exports.

With more than 6.5 million people living on 27,000 square kilometers, Burundi has a high population density. Burundi's population has three ethnic groups with different traditions in terms of economic activity. The Hutus, 85 percent of the total population, are traditionally farmers. The Tutsis, 14 percent, are traditionally herders. The Twas, just 1 percent, are traditionally hunters and gatherers. However, the use of the expression 'ethnic group' may be misleading in the case of Burundi. In fact, as it exists today in Burundi, ethnicity is a result of political construction (Ngaruko and Nkurunziza, 2000). Since the 1930s, ethnicity was used as a tool for the divide-and-rule colonial polity to shape a political leadership and administrative authority dramatically biased against Hutus and Twas.

Coupled with regionalism after independence, ethnicity has nurtured a vicious circle, whereby it shapes distributive politics responsible for sharp ethnic and regional polarization, causing repetitive violent conflicts that in turn play a central role in shaping leadership. Three Tutsi military dictators from the same commune in Bururi province have ruled Burundi for 34 of the 40 years since independence, which has been marred by massacres of civilians and recurrent civil war, often used to eliminate political opponents. This violence has been between the Hutus and Tutsis, with subtler –and less violent– conflicts between the Bururi Tutsis and non-Bururi Tutsis and also clashes between the Bayanzi and the Bashingo clans of Bururi Tutsis. Thus since the mid-

1960s ethnicity and regionalism have shaped much of the public policies to the benefit of Tutsis, especially those originating from the southern province of Bururi, who have dominated the government and the army.

As a consequence, by the end of the 1990s, Bururi ranked fourteenth in a total of 15 provinces in terms of food production per capita—the best indicator of income status for Burundi's dominantly subsistence agriculture economy— and unlike most of the remaining 14 provinces, Bururi has little cash crop production, so its low per capita food production is not in any way compensated by other agricultural activities. Yet this province ranked second in terms of income per capita. As there is no other specific natural resource Bururi may claim to depend on to boost its per capita income, the ranking reflects enormous transfers, disguised in various developmental programs paid for by the government as well as by donors[5].

These transfers to Bururi province are confirmed by the comparison between Bururi's rank in terms of its relative contribution to taxes and its various ranks as a beneficiary of public services, paid for by the central government. Thus Bururi falls below the one standard deviation bound in terms of population per hospital ratio, population per health center ratio, and per capita tax, but it falls over the one standard deviation bound in terms of per capita income, overall enrolment ratio, and human development index (Ngaruko and Nkurunziza, 2002). These inequalities are magnified by the fact that the Hutus of Bururi are largely excluded from the benefits other than externalities provided by public infrastructure.

These patterns of distributive politics have conferred a particular role to agriculture, especially coffee exports. Table 6 illustrates that the rationale for the government devoting large assets to the Office des Cultures Industrielles du Burundi (OCIBU) - the marketing board for coffee - has little to do with value-added and a great deal to do with huge earnings. These represent part of the agricultural levy, which is used to finance public expenditures in general, particularly to cover the deficits of the rest of public enterprises. As Ngaruko and Nkurunziza (2000) argue, these deficits result from the employment policy of these corporations. Largely dominated by employees and

---

[5] Thus, for example, in the 1980s, the Fifth Five-Year Plan of economic and social development allocated 66% of gross fixed capital formation to a geographical area comprising Bujumbura, the capital city and its surrounding areas, and the southern province of Bururi out of the 15 provinces of the country.

managers originating from Bururi, these corporations are also responsible for Burundi being one of the countries with the highest ratio between the average wage per public employee and gross domestic product per capita in Africa.

Table 6: The public market for coffee and the state-owned enterprises sector

Variables	Salaries	Total assets	Debts	Value added	Earnings (before subsidies)
Total 32 public enterprises (excluding OCIBU)	6236	57225	76147	14796	-3653
Average for public enterprises (excluding OCIBU)	195	1788	2380	462	-114
	(263)	(2061)	(3907)	(835)	(423)
OCIBU	246	32314	20041	3795	3337

Source: IMF (2000).
Notes: Standard deviation in parentheses; OCIBU: Office des Cultures Industrielles du Burundi.

As a result of this predatory policy, it has come to be less and less profitable for peasants to produce coffee and other export crops. Generally speaking, for comparable land quality, food crops are much more profitable than industrial crops for peasants. Table 7 illustrates this with respect to the three major agricultural exports in 1985, one year before the ongoing collapse of international commodity prices of coffee. As table 7 shows, growing export and industrial crops under the prevailing conditions is clearly a misallocation of resources (labor and land), especially in a country where land is so scarce. This is a clear instance where, by pushing peasants to grow export crops that generate more public revenue through predatory taxation, the strategy of the state has been set in opposition to farmers' interests.

As a consequence of the high transaction costs associated with the participation in markets due to government levy, peasants have opted for a second-best strategy. In order to minimize their participation to markets - and so limit their exposure to predatory taxation - peasants seek to grow most of the food crops they consume. Yet they still need to grow some cash crops, which will enable them to purchase the commodities they do not produce, in conformity with the typical behavior of peasants confronted with an unfavorable macroeconomic policy environment (Gosh, 1986).

35

Table 7: Land and labor returns for selected crops, current Burundi Francs (1985)

Crops	Average Yield (kg/ha) [1]	Price 1985 (Fbu/kg) [2]	Income (000Fbu/ha) [3=1*2]	Work Days [4]	Daily Income [5=3/4]
Food Crops					
Beans	800	46.5	37.2	210	177.1
Peas	550	82.6	45.4	210	216.3
Cassava	6,370	21.1	134.4	342	393.0
Potatoes	5,750	18.9	108.7	435	249.8
Groundnuts	790	74.5	58.9	240	245.2
Bananas	11,240	11.0	128.6	253	488.7
Export Crops					
Coffee	240	160	38.4	500	76.8
Dry Tea	731	17	12.4	526	23.6
Cotton	1,185	35	41.5	255	162.6

Source: World Bank (1988).

Thus, in the long run, due to the over-taxation of agriculture, it is the incompressible amount of the needs in terms of these latter commodities that has determined the amount of cash crops the households have grown. In Burundi, where farmers account for 92 percent of the population, the home produce covers much of the household's food needs, and virtually all cash products are export crops. Compared with the 'first-best' strategy, consisting in specializing exclusively in food crops, this second-best strategy implies high opportunity costs for farmers as the difference between the prices of food crops and export produces shows.

Such second-best strategies and the underlying policies explain much of the lack of diversification of agricultural exports in Burundi, where not one non-traditional agricultural export product has been durably introduced in the post-colonial era of this country. Thus, the example of Burundi illustrates that in a context in which farmers are compelled to develop strategies relying on the minimization of their participation in markets, there is little chance for an economy to diversify agricultural exports through the introduction of non-traditional produces.

IV. 3. The Ugandan "Success Story"

In contrast to Burundi, Uganda is a success story. Yet these two countries have a number of resemblances. Both host war-prone societies, and predation-induced political violence has historically played a prominent role in Ugandan post-colonial history as well (Collier, 1999). Over the period 1971–86, both the Ugandan economy and the Ugandan society collapsed. In 1972 President Amin declared 'economic war' against non-Ugandans. This marked the beginning of an economic turmoil and predation, which resulted in nationalization and transfer of assets owned by the large and commercially dominant Asian community. Around 60,000 mostly Asian non-nationals were expelled at short notice. The advent of Amin's regime also marked the beginning of escalating political and social disorder. By 1979, when Amin was overthrown, up to 500,000 Ugandans had died as a result of violence and there had been two insurgency attempts by exiles. In 1986, the year that marked the return of political order, some 7 percent of the population was displaced.

Whereas Uganda's export base was diversified in the 1960s, since the early 1970s the sources of export earnings narrowed, and an increasing share of export earnings and the budget came from coffee. The collapse of non-traditional agricultural exports was in part a result of the expulsion of Asians, who prior to 1972 financed the production of many crops. When the Asians departed, no new mechanisms were created to provide crop finance. As Ssemogerere and Kasekende (1994) point out, the state, through the cooperative system, bought the crops but paid farmers late - up to one year late in some cases. Consequently, the farmers reallocated their resources away from annual export crops to food crops.

Table 8: Uganda: Non-traditional agricultural export produces in the 1980s
(current US$ Mio)

	Beans	Maize	Unmilled cereals	Bananas	Bogoya	Flowers	Ginger	Pineapples	Vegetables
1981-82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984-85	0.21	0.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1988-89	3.62	0.37	3.21	0.38	0.40	0.8	0.48	0.74	0.85

Source: Ssemogerere and Kasekende (1994).

Since the late 1980s, a number of non-traditional agricultural export products were re-introduced (table 8) as a result of a concatenation of many factors, which makes the Ugandan success story more complex but also potentially even more illuminating than if it were a straightforward story of crisis and recovery of just the coffee sector. The story of this success can be traced back to the early 1980s, when the National Resistance Movement (NRM) undertook notable efforts to put in place a new administration, to create new modes of governance, and to mobilize peasants in the conquered territories in order both to transform them into a human resource for the struggle and to popularize its program. The NRM had a 10-point program, which materialized in a consultative forum in the late 1980s, some three years after its victory. The forum resulted in many recommendations, which ranged from liberalization and privatization to divestiture and reduction of excessive government expenditures. In the governance area, public interfacing was strengthened and the government became more open to dialogue and discussion, while the reform policies got more internalized by both public servants and outsiders (Kasekende et al., 2002). Table 9 illustrates these changes over a 20-year period.

As table 9 shows, the indices of economic freedom, political rights, and civil liberties have been on rise over the period. It shows that the convergence between Uganda and the HPAEs in terms of the non-farmers versus farmer earnings ratio took place in a context of increasing economic and political openness. Interestingly, the negative sign of the decreasing gap between Uganda and the HPAEs' trend suggests that the asymptotic convergence has been achieved by a policy more favorable to non-

agricultural sectors. This conforms to Collier (1998), who notes that non-agricultural sectors are relatively more vulnerable to war and thus benefit the most from peace.

Table 9 also shows that at the same time, the share of the top three export commodities - coffee, cotton, and tea, all of them traditional agricultural exports - has declined. Consistent with the increase of agricultural non-traditional export commodities illustrated by table 8, these figures suggest that the creation of a competitive and transparent environment may lead to the diversification of agricultural export products more effectively than pernicious distributive manipulations, albeit to the benefit of farmers, as long as these manipulations depart from merit-based mechanisms.

Table 9: Uganda versus HPAE: Policy indices and agricultural export diversification

	1980–84	1985–89	1990–94	1995–99
Share of top 3 agricultural export commodities (Uganda)	0.91	0.95	0.75	0.69
Non-farmers versus farmers' earnings ratio				
Uganda	3.20	3.21	3.51	3.79
Gap vis-à-vis HPAEs' average	-1.30	-1.29	-0.99	-0.71
Economic freedom index				
Uganda	2.86	2.98	4.78	6.51
Gap vis-à-vis HPAEs' average	3.9	4.1	2.7	0.8
Political rights and civil liberties				
Uganda	4.80	4.70	5.50	4.30
Average HPAE	4.50	4.08	4.04	3.75

Source: Gwartney et al. (2002) for the economic freedom indices (0-to-10 scale, lowest to highest level of freedom).
- Freedom House for the political rights and civil liberties (0-to-7 scale, best to worst).
- World Bank's African Development Indicators CD-ROM for non-farmers versus farmers' earnings, and for the share of the top three agricultural export commodities.

In total, the case of Uganda shows that its success in introducing agricultural non-traditional export commodities was a result of a comprehensive effort. This effort included economic modernization, state building, and improvement of governance. In this perspective, Uganda has similarities with the highly performing Asian economies, in that sound governance was a central factor of their success as the previous section argued. The case of Uganda thus suggests that the failure of the reforms that have sought to improve export performance in Africa likely owes a great deal to the neglect of the institutional dimension.

V. Summary and Policy Implications

This study has attempted to address agricultural export performance in Africa as compared with Asia. The study showed that agricultural exports, either primary or processed, are less diversified in sub-Saharan Africa compared with Latin America and Asia, but that Africa tended to catch up between 1996 and 2000, especially in non-processed exports. However, important differences exist in CFA economies, where agricultural exports are less diversified and grow more slowly, even though the CFA zone records a faster shift from primary toward processed agricultural commodities. As regards the response to commodity price changes, Asia seems to enjoy the best adjustment velocity, except for highly performing economies, where agricultural exports play a minor role as a developmental strategy. In sub-Saharan Africa, CFA economies appeared to compare particularly favorably with non-CFA economies for processed commodity price changes.

The third section surveyed the factors reported to explain success in Asia and discussed the capacity for these factors to explain the low performance of agricultural exports in Africa. While the gaps in human and physical capital, macroeconomic stability, non-price constraints including industrial countries' trade barriers, and absence of information about international markets were accepted as possible explanations, internal institutional failures were emphasized as responsible for export counter-performance in the first place, since they tend to maintain these gaps. In fact, the regression exercise carried out in this section confirmed that the institutional factors that make the difference between poor and good performers in Asia are also relevant in Africa. These include strong and stable governments clearly committed to export promotion, efficient and relatively honest bureaucracies insulated from frequent political pressures, economic equity and national consensus on economic goals, the participation of businesses in the design of interventions, and punishment of enterprises failing to meet their performance criteria.

Specifically, the fourth section illustrated how distributive politics underlying economic policy undermine agricultural export diversification as well as the shift toward

processed agricultural exports. Comparing Africa to Asia and to a group including non-African developing economies, this section found that the bias against agriculture is relatively more pronounced in Africa. The Burundi and Uganda case studies have provided supportive arguments to the hypothesis of a negative relationship between biased distributive politics and export performance. The Burundi case study illustrates that an important and worsening anti-farmer bias is associated with low agricultural export performance, while the Uganda case study illustrates how the alleviation of distortions underlying the anti-farmer bias was associated with a notable improvement of agricultural export performance.

By emphasizing differences among African countries and groups of countries, this study suggests that the is no single policy blueprint which can hold for the whole region. In countries like Burundi, where farmers are compelled to develop second-best strategies as a consequence of inimical predatory policies, the solution for export performance to improve substantially lies less with export policy per se than with improvements in governance, particularly its distributive dimension. Therefore, addressing institutions prior to or at least along with other efforts seeking to improve macroeconomic standards and to liberalize and deregulate the economy is a requirement. Indeed, unless the rules of the game are addressed appropriately in these countries, other efforts have little chance to succeed. In countries like Uganda, where a move toward sounder and clearer rules of the game seems to prevail, where institutionalized corruption and the temptation to implement inequitable policies are more or less under control, particular emphasis should be placed on price as well as non-price constraints to export performance.

Yet equal attention should still be paid to governance and transparency as well, at least for two main reasons. The first relates to the interpretation of the differences between Burundi and Uganda vis-à-vis the rest of Africa: though considerable, these differences must be viewed as relative. Indeed, Burundi and Uganda represent contrasted positions of a wide spectrum, which includes the majority of African economies between these countries' positions. However, these countries do not represent extremes. As cases like Mauritius, which are closer to the highly performing Asian economies than to the typical African economy illustrate, there exist a number of

African economies that compare more favorably than Uganda in terms of both governance and performance. This suggests that high pay offs may be associated with institutional improvements even in countries with an already fairly good track record. The second reason relates to the time required for institutional reforms to translate in to irreversible changes. Experience shows that even when major institutional improvements have occurred, it takes a long period of gestation before they translate into sustainable changes. It takes even more time to result in real trust, which is particularly required for public officials to get consensus around selective interventions that direct benefits from some activities and groups of citizens toward others in order to create incentives for export performance.

REFERENCES

Abebayehu, T. (1990): "Supply and demand for exports in some African countries: A simultaneous equation model", Journal of Quantitative Economics (India), vol. 6.

Ahluwalia, M.S. (1976): "Inequality, Poverty and Development", *Journal of Development Economics*, 3: 307-342.

Amable, B. (1992): "Effets d'Apprentissage, Compétitivité Hors-Prix et Croissance Cumulative", Économie Appliquée, Tome 45 No. 3, p. 5-31.

Asiedu, E. (2001): "On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Different?" World Development, vol. 30 No. 1

Azam, J. P. (1999): "The Redistributive State and Conflicts in Africa", Mimeo, ARQADE and IDEI, University of Toulouse.

Azam, J. P., Berthélémy, J. C. et Calipel, S. (1996): "Risque Politique et Croissance en Afrique", Revue Economique, n° 3.

Balassa, B. (1990): "Incentive Policies and Export Performance in Sub-Saharan Africa", World Development, vol. 18 No. 3.

Bates, R. (1981): *Markets and States in Tropical Africa*. Berkeley: University of California Press.

Chenery, H. and Syrquin, M. (1975): *Patterns of Development 1950-1970*. New York: Oxford University Press.

Collier, P., Hoeffler, A. and Pattillo, C. (2001): "Flight Capital as a Portfolio Choice", The World Bank Economic Review, vol. 15 No. 1.

Collier, P. (1999): 'The Challenge of Ugandan Reconstruction, 1986-98", mimeo, The World Bank, Washington, DC, Http://www.worldbank.org/research/conflict/papers/uganda.pdf

Collier, P. (1998): "On the Economic Consequences of Civil War", Oxford Economic Papers, vol. 51.

Collins, S. M. and Bosworth, B. P. (1996): "Economic Growth in East Asia: Accumulation versus Assimilation", *Brookings Papers on Economic Activity*, 2.

Deaton, A. (1992): "Commodity Prices, Stabilization and Growth in Africa", Woodrow Wilson School of Public and International Affairs Working Paper No. 166, Princeton University, New Jersey.

Devarajan, S., Easterly, W. R. and Pack, H. (2001): "Is Investment in Africa Too Low or Too High? Macro and Micro Evidence", World Bank Policy Research Working Paper No. 2519, The World Bank, Washington DC.

Dolan, C. and Humphrey, J. (2000): "Governance and trade in fresh vegetables: Impact of UK supermarkets on the African horticulture industry", The Journal of Development Studies, Vol. 37 No. 2, pp. 147-176.

Elbadawi, I. (2002): "Real Exchange Rate Policy and Non-Traditional Exports in Developing Countries", in Helleiner, G. K. (Ed): Non-Traditional Export Promotion in Africa. Experiences and Issues. UNU/Palgrave.

FAO (2002): *The State of Food and Agriculture 2002*, FAO, Rome.

Fontaine, J. M., Treillet, S. and Yenturk, N. (1995): "Les Politiques d'Exportation, Logique des Prix, Logique des Quantités", in Hugon, P. et al. (Dir.): L'Afrique des Incertitudes, Tiers-Monde IEDES, Paris.

Gallagher, M. (1991): *Rent-Seeking and Economic Growth in Africa*, Westview Press, Boulder.

Gersovitz, M. and Paxton, C. H. (1990): *The Economies of Africa and the Prices of Their Exports*, Princeton, New Jersey.

Gibbon, P. (2001): "Upgrading primary production: A global commodity chain approach", World Development, Vol. 29 No. 2, pp. 345-363.

Ghosh, D. (1986), "Savings Behaviour in the Non-Monetized Sector and Its Implications", Savings and Development, 2.

Gurgand, M. (1993): "Education et production agricole en Cote d'Ivoire", Revue d'Economie du Développement, No. 4.

Gwartney, J. and Lawson, R. with Park, W., Wagh, S., Edwards, C. and Rugy V. de (2002): *Economic Freedom of the World: 2002 Annual Report*. Vancouver: The Fraser Institute.

Haque, N. U. and Aziz, j. (1998): "The Quality of Governance: 'Second-Generation' Civil Service Reforms in Africa", IMF Working Paper WP/98/164, International Monetary Fund, Washington DC.

Helleiner, G. K. (Ed.). 2002. Non-Traditional Export Promotion in Africa. Experiences and Issues. Palgrave-United Nations University.

Herbst, J. (2000): *State and Power in Africa. Comparative Lessons in Authority and Control*. Princeton University Press, Princeton, New Jersey.

International Monetary Fund (1987): "Export Diversification in Developing Countries. Trends and the Impact of Policies", World Economic Outlook: Staff Studies, SM/87/93, April.

International Monetary Fund (2000): Burundi: Statistical Annex. International Monetary Fund, Washington, D.C.

International Trade Centre (2000): "The Trade Performance Index", Background Paper, UNCTAD/WTO, Geneva.

International Trade Center and the United Nations Statistics Department (2002): Personal Computer Trade Analysis System CD-ROM.

Jerome, A. and Ogunkola, O. (1999): "Characteristics and Behaviour of African Commodity/Product Markets and Market Institutions and their Consequences for Economic Growth", Background Paper prepared for AERC Collaborative Research Project on "Explaining Africa's Economic Growth Performance", AERC, Nairobi, Kenya.

Kasekende, L. A., Atingi-Ego, M. and Sebudde, R. K (2002): "The African Growth Experience. Uganda Country Case Study", Work in Progress, AERC, Nairobi, Kenya.

Kuznets, S. (1955): "Economic growth and income inequality", *American Economic Review*, 45(1): 1-28.

Kaufmann, D., Kraay, A., and Zoido-Lobaton, P. (1999): Aggregating Governance Indicators. World Bank Research Working Paper 2195, Washington, DC.

Lall, S. (2002): "Selective Policies for Export Promotion: Lessons from the Asian Tigers", in Helleiner, G. K. (Ed): Non-Traditional Export Promotion in Africa. Experiences and Issues. UNU/Palgrave.

Lau, L. J., Jamison, D. T. and Louat, F. F. (1991): «Education and Productivity in Developing Countries: An Aggregate Production Function Approach», Working Paper No. 612, The World Bank, Washington, DC.

Lecomte, H. B. S. (2001): "Effectiveness of Developing Country Participation in ACP-EU Negotiations", Working Paper, Overseas Development Institute, London.

McMillan, M. (2001): "Why kill the golden goose? A political-economy model of export taxation", Review of Economics and Statistics, Vol. 83 No. 1, pp. 170-184.

Mbaye, S. (2002): "L'Afrique noire face aux pièges du libéralisme" Le Monde Diplomatique, Juillet, 23-23.

M'Bet, A. and Niamkey, A. M. (1993): "European Economic Integration and the Franc Zone: The Future of the CFA Franc After 1996", Research Paper No. 19, African Economic Research Consortium, Nairobi, Kenya.

Morrissey, O. and Filatotchev, I. (2000): "Globalisation and trade: The implications for exports from Marginalized economies", *The Journal of Development Studies*, Vol. 37 No. 2, pp. 1-12.

Ngaruko, F. (2003); "Corruption and Reform in Africa: Political Economic Model and Analysis" Forthcoming (in *World Development)*.

Ngaruko, F. (1998): *Essai d'Analyse Institutionaliste du Financement de la Croissance Economique en Afrique sub-Saharienne*, PhD Dissertation, University of Nice.

Ngaruko, F. and Nkurunziza, J. D. (2000): "An Economic Interpretation of Conflict in Burundi", Journal of African Economies, 9 (3), October.

Ngaruko, F. and Nkurunziza, J. D. (2002): *War and its Duration in Burundi*, World Bank/ Yale University project on "The Economics of Political and Common Violence", Yale University.

O'Connel, A. O. and Ndulu, B. J. (2000), "Background Information on Economic Growth", *AERC Explaining African Economic Growth Project,* Nairobi, Kenya.

Orivel, F. (1995), "Education Primaire et Croissance Economique en Afrique sub-Saharienne: Les Conditions d'une Relation Efficace", *Revue d'Economie du Développement*, No. 1.

Perkins, D. and Roemer, M. (1994), "Differing Endowments and Historical Legacies", in Lindauer, D. L. and Roemer, M. (Eds): *Africa and Asia: Legacies and Opportunities in Development*. San Francisco, ICS Press.

Rodrik, D. (1994): "Getting Interventions Right: How South Korea and Taiwan Grew Rich", NBER Working Paper Series No. 4964, December.

Saito, K. A., Mekonnen, H. and Spurling, D. (1994): Raising Productivity of Women Farmers in Sub-Saharan Africa, World Bank Discussion Papers 230, Washington, D.C.

Sekkat, K. and Varoudakis, A. (2000): "Exchange rate management and manufactured exports in Sub-Saharan Africa", Journal of Development Economics, Vol. 61 No. 1, pp. 237-253.

Ssemogerere, G. N. and Kasekende, L.A. (1994): "Constraints to the Development and Diversification of Non-Traditional Exports in Uganda", Research Paper 28, African Economic Research Consortium, Nairobi, Kenya.

Stern, N., "Dynamic Development: Innovations and Inclusion", Munich Lectures in Economics Series, Forthcoming (Massachusetts University Press).

Sterns, P. A. and Busch, L. (2002): "Standard setting in the African horticultural export market: bottom-up or top-down approach?", Journal of Economic Issues, vol. 36 No. 2, 527-537.

Teal, F. (1999): "Why can Mauritius export manufactures and Ghana not?", The World Economy, Vol. 22 No. 7, pp. 981-993.

Tsunehiro, O. (2001): "A Race to the top?: A Case study on food safety standards imports", Policy Research Working Paper No. 2563, The World Bank, Washington DC.

UNCTAD/WTO: "The Trade Performance Index", http://www.193.194.138.121/tradstat/welcome.htm

UNDP (2001): *Human Development Report 2001*, United Nations, New York.

Wijnbergen, S. V. (1985): "Aid, export promotion and the real exchange rate: an African dilemma?" Centre for Economic Policy Research Discussion Paper Series No. 88, December.

Wood, A. and Mayer, J. (2001): "Africa's export structure in a comparative perspective", Cambridge Journal of Economics, Vol. 25 No. 3, pp. 369-394.

World Bank (1981): "Accelerated Development in Sub-Saharan Africa: An Agenda for Action", The World Bank, Washington, DC.

World Bank (1988), "Burundi. Structural Adjustment and Development Issues. Background Papers" Report No. 6754-BU, The World Bank, Washington DC.

World Bank (2000): "Country Policy and Institutional Assessments", The World Bank Institute, Washington, DC.

World Bank (2001): World Development Indicators 2001, The World Bank, Washington DC.

World Bank (2002a): "World Bank Chief Economist Urges Cuts in Rich Country Agricultural Subsidies", http://web.worldbank.org/WBSITE/EXTERNAL/NEWS.

World Bank (2002b): *Development Indicators*, The World Bank, Washington DC.

ESA Working Papers

WORKING PAPERS

The ESA Papers are produced by the Agriculture and Economic Development Analysis Division (ESA) of the Economic and Social Department of the United Nations Food and Agriculture Organization (FAO). The series presents ESA's ongoing research. Working papers are circulated to stimulate discussion and comments. They are made available to the public through the Division's website. The analysis and conclusions are those of the authors and do not indicate concurrence by FAO.

ESA

The Agriculture and Economic Development Analysis Division (ESA) is FAO's focal point for economic research and policy analysis on issues relating to world food security and sustainable development. ESA contributes to the generation of knowledge and evolution of scientific thought on hunger and poverty alleviation through its economic studies publications which include this working paper series as well as periodic and occasional publications.