



Chapter 4

Trade Response

This chapter analyses the trade performance of West Africa at the regional level and highlights important commonalities and differences among West African countries.²⁹ Trade analysis is a useful complement to the analysis of production data, both because trade contributes to overall Agricultural growth and because trade data, at least for overseas trade, tend to be more reliable than production data and hence serve as a useful cross-check on the trends described in Chapter 3. For example, West African Agriculture's share in world exports and imports are a rough indication of the region's overall competitiveness in the production of different commodities.

The chapter begins by examining Agriculture's role in contributing to the region's overall trade balance and foreign exchange earnings. It then moves on to examine the trade balance for both Agriculture and food in total before examining the region's self-sufficiency ratios for key agricultural commodities. The self-sufficiency ratios compare domestic consumption with imports of given commodities. An increasing self-sufficiency ratio means that domestic consumption is increasingly met by domestic production, a proxy for competitiveness (unless it is driven by higher protection or subsidies). In contrast, declining self-sufficiency ratios imply that production did not fully meet increasing demand, pointing towards lower competitiveness. However, for certain products where countries of the region have no comparative advantage, a declining self-sufficiency ratio can also indicate an increased capacity to import. Finally, the chapter examines the evolution of food imports and how they mirror changes in consumption trends and the regional capacity for value addition.

After examining the import picture in detail, the chapter then turns to the region's performance in terms of agricultural exports. This analysis highlights the changing composition of West African exports and their contribution to export earnings, the trends and dynamics of individual export commodities over time and the changing competitive position of different West African agricultural exports compared to those from the rest of the world since the mid-1990s. The chapter then discusses the importance of intra-regional trade and examines the increasing demand for higher-quality products and better traceability both in overseas and regional markets.

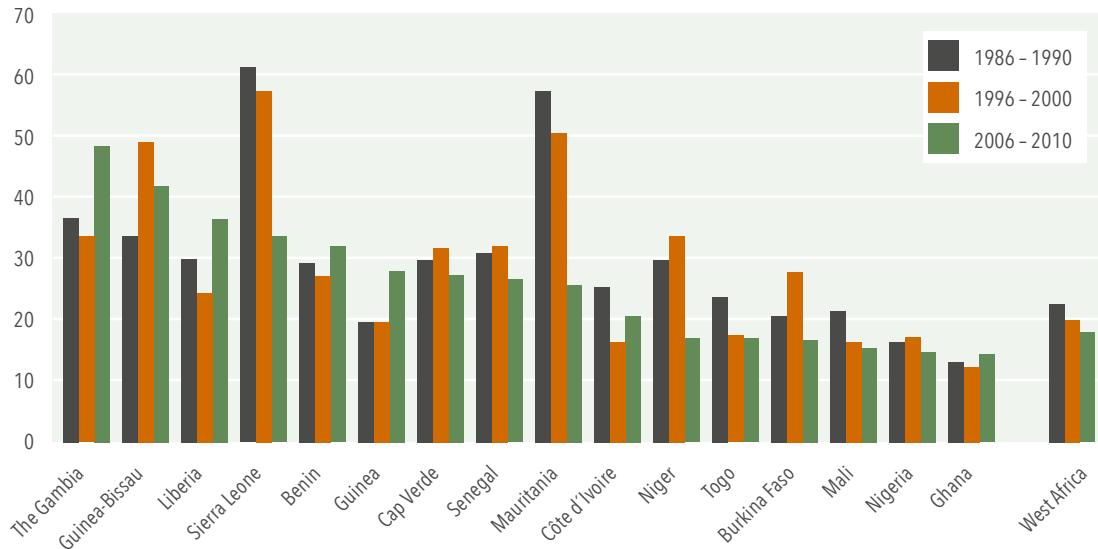
4.1 Agriculture's role in West Africa's merchandise trade

Although West Africa's agricultural trade with that of the rest of the world has been growing over the past decade, agriculture's share of the region's total merchandise trade has declined. On the import side, this has been due to growing imports of industrial and non-agricultural consumer goods, while on the export side it has resulted from the growth of mineral, petroleum and forestry exports. The share of agricultural imports in total merchandise imports stood at 23% in 1986-90, and since then it declined to

20% in 1996-2000 and further to 18% in 2006-10. Much sharper declines have occurred in the share of agricultural exports in total merchandise exports of the region, which declined from 24% in 1986-90 to below 10% in 2006-10.

While the importance of agricultural products in the external trade of the region as a whole has declined, this overall trend hides considerable variation among countries. In the case of imports (Figure 4.1), agricultural products accounted for at least 25% of merchandise imports for half of the countries in recent years (2006-10). For all West African countries, food products represent the lion's share of total agricultural imports.

²⁹ This chapter draws heavily on Konandreas, 2012a, b.

Figure 4.1 Share of agricultural products in total merchandise imports (%)

Source: Based on FAOSTAT data.

Differences between countries are much more pronounced regarding the contribution of agricultural exports in total merchandise exports. While for the region as a whole these products account for only 10% of merchandise exports (2006-10), this is due to the weight of some large mineral and petroleum-exporting countries, particularly Nigeria, in that aggregate. For 10 out of 16 West African countries (the ECOWAS states plus Mauritania), the share of agricultural products represented over 25% of merchandise exports in recent years.³⁰ For seven of these countries, the share was in excess of 40%, reaching 75% in the case of The Gambia (Figure 4.2).

Unlike the regional aggregate, there are also some countries for which the contribution of agricultural products in total merchandise exports has been increasing over time. These include The Gambia, Liberia, Benin and Guinea. For some of these countries, however, food products are not always the dominant part of agricultural exports (in contrast to the pattern for imports). The countries with strong non-food agricultural exports include Liberia (where rubber is a major export), Benin (cotton), Côte d'Ivoire (rubber), Burkina Faso (cotton) and Mali (cotton).

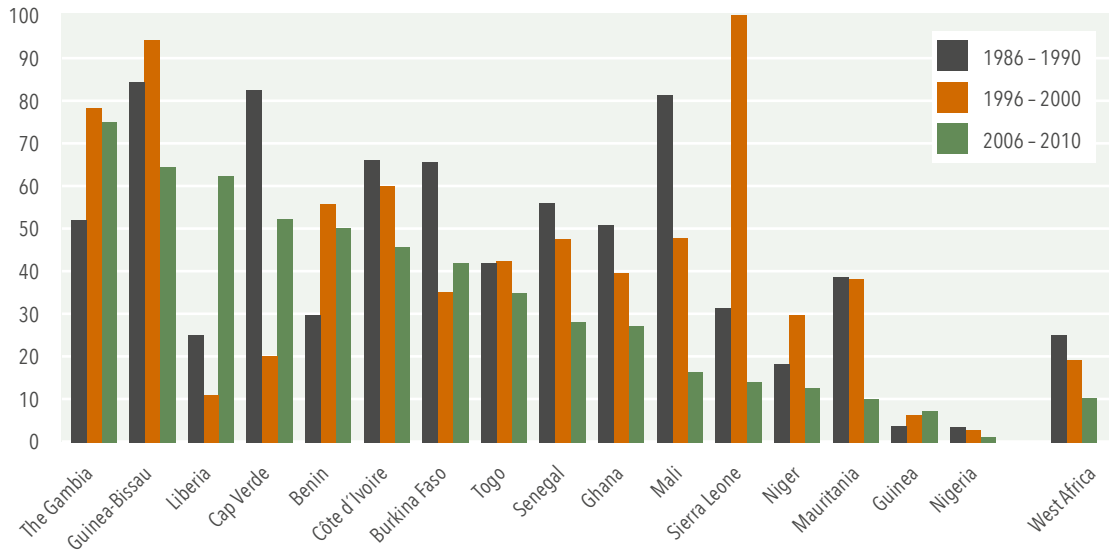
³⁰ Even though Mauritania has not been a member of ECOWAS since 2000, it is included in this analysis given its strong trade links with the rest of the region.

4.2 Aggregate trade balances: merchandise, agriculture and food

Total merchandise trade has been consistently positive for the region as a whole. Beginning in the early 2000s revenues from merchandise exports saw an exponential increase. This increase followed increased exploitation of non-agricultural resources (petroleum, minerals and forestry products), in part driven by the world commodity boom. A correspondingly strong growth in imports of all products ensued (Figure 4.3).

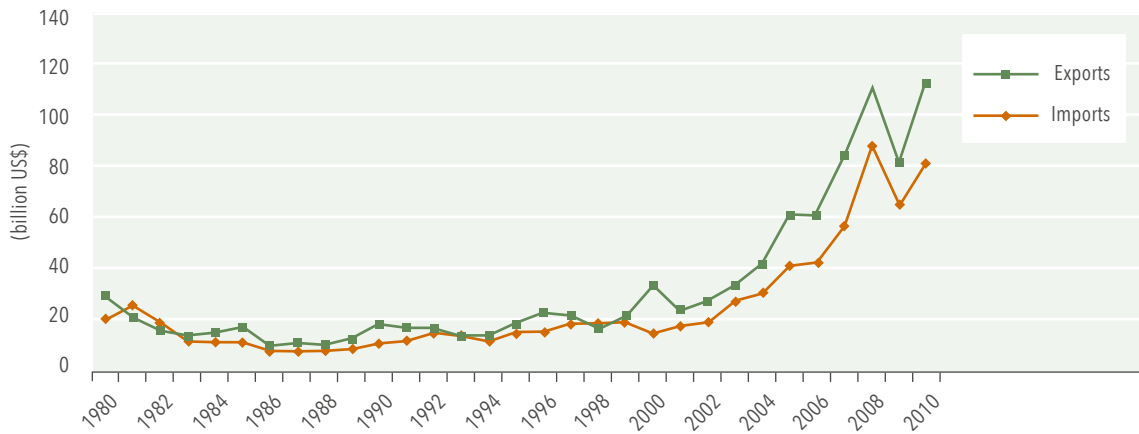
Together with the overall positive balance in total merchandise trade, the agricultural trade balance was also positive through the 1990s and remained on average marginally positive up to about 2005. This position has now been reversed, with agricultural imports exceeding agricultural exports by about US\$2.5 billion in recent years, largely on account of high growth of food imports (Figure 4.4). It is clear that the huge increase in agricultural (including food) imports coincided with the enormous increase in net merchandise exports of the region in recent years (Figure 4.5). Therefore, to a large degree the worsening agricultural and food trade balance reflects an increasing capacity to import due to growing non-agricultural revenues and not

Figure 4.2 Share of agricultural products in total merchandise exports (%)



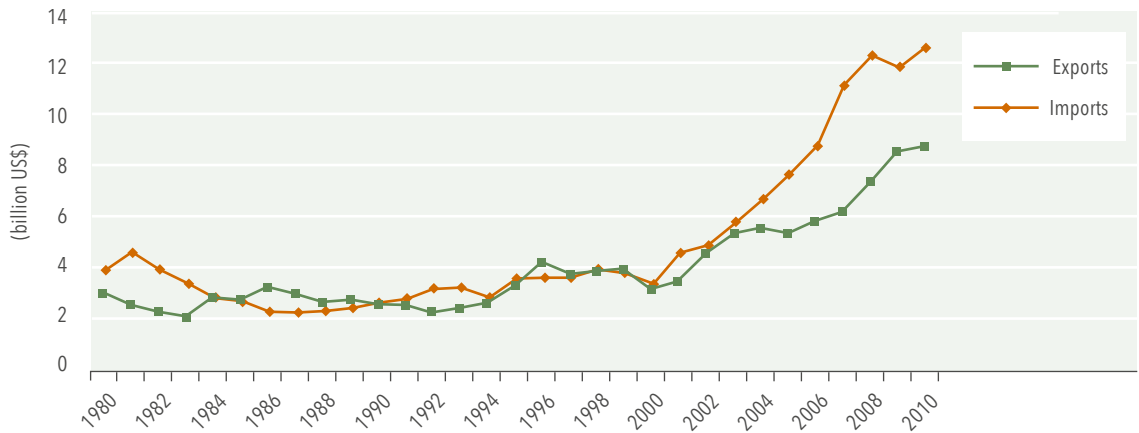
Source: Based on FAOSTAT data.

Figure 4.3 Total merchandise trade of West Africa with the rest of the world.

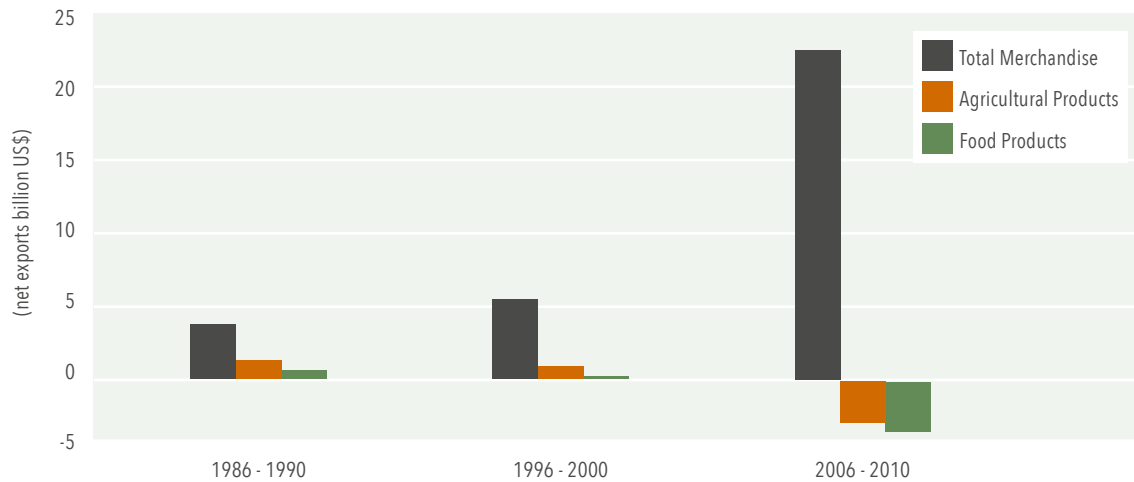


Source: Based on FAOSTAT data.

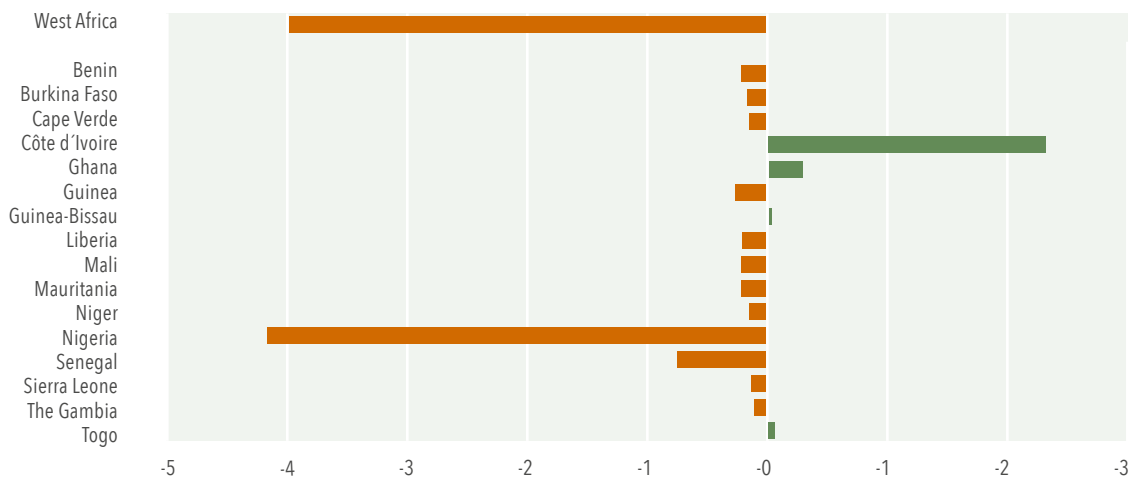
Figure 4.4 Food trade balance of West Africa with the rest of the world.



Source: Based on FAOSTAT data.

Figure 4.5 Trade balances over time of West Africa with the rest of the world

Source: Based on FAOSTAT data.

Figure 4.6 Food trade balance (net exports), 2006 - 2010 (million US\$)

Source: Based on FAOSTAT data.

necessarily declining agricultural performance of West Africa.³¹

The regional aggregate trade balance obscures huge variation among countries. In reality, while the merchandise trade balance of the region as a whole is indeed strongly positive, only two countries, Nigeria and Côte d'Ivoire, enjoy that position. Regarding agricultural trade balances, the overall regional trade deficit is shared by most of the countries of the region. Nigeria has by far the largest agricultural trade deficit, while a positive

agricultural trade balance is enjoyed by only four countries: Côte d'Ivoire, Ghana, Burkina Faso and Togo, with Côte d'Ivoire in a dominant position due to its huge cocoa exports. Within agricultural products, food trade imbalances are even more pronounced than those of agricultural products overall (Figure 4.6). The net trade deficit for food products for the region as a whole averaged US\$4 billion in 2006-10 compared to an aggregate for agricultural products of US\$2.7 billion during the same period. Four countries remain in a positive net trade position with respect to food in 2006-10: Côte d'Ivoire, Ghana, Guinea Bissau and Togo.

³¹ This view is reinforced by data on per capita food availability reviewed in Chapter 5, which show growing food availability per person in most countries during this period.

4.3 Imports: composition, trends and import dependency

4.3.1 Composition

Most agricultural imports, close to 90% in recent years, are food products, compared to just above 80% during most of the 1990s. All food commodity sectors, with the exception of fruits and vegetables, are responsible for the increasing food trade deficit (Appendix Figure A4.1). Cereals are by far the leading item in the food import basket, accounting for 41% of the value of food imports in the most recent period (2006–10), followed by vegetable oils (13%), fish (11%), dairy products (9%) and sugar (9%). Together these five commodity groups account for 83% of food items imported by the region (Figure 4.7).

The composition of food imports has changed somewhat over time. Cereals have remained steadily at the top of the list, as have fish, dairy products and sugar. Vegetable oils, however, have increased sharply, from seventh place in 1986–90 (4% of food imports) to second place in 2006–10 (13% of food imports). As discussed in Chapter 5, during this period West Africans were sharply increasing their consumption of fats and oils.

4.3.2 Geographical concentration of imports

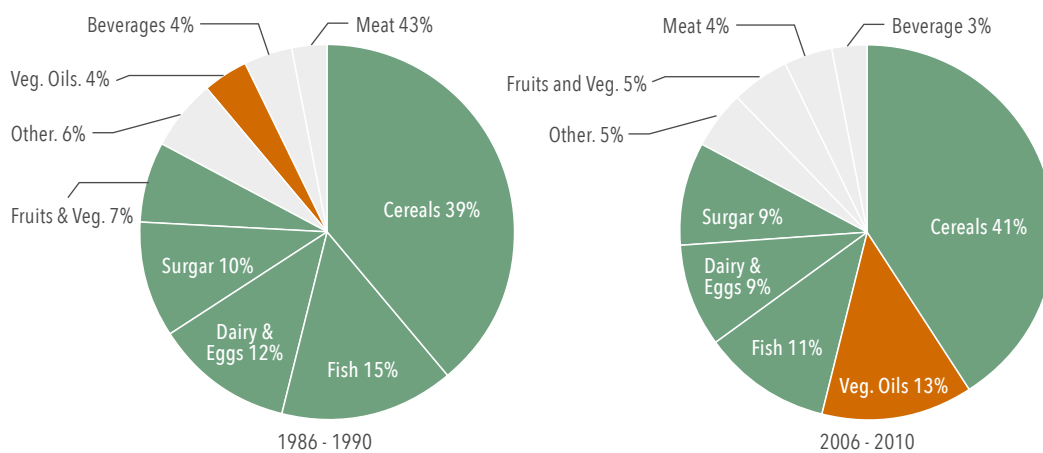
The imports of agricultural products are highly concentrated in a few countries (Table 4.1). Nigeria is by far the largest importer, followed by Côte d'Ivoire, Ghana and Senegal. This geographical concentration of imports follows very closely the population concentration of the countries in the region.³²

The same geographical concentration of imports is observed for individual commodity groups. Five countries (Benin, Côte d'Ivoire, Ghana, Nigeria and Senegal) account for the bulk of imports (Figure 4.8). The commodity with the highest geographical concentration of imports is fish, where these five countries account for nearly 97% of the region's imports in 2006–10. As noted elsewhere in this study, there is evidence that many of Benin's imports are subsequently re-exported to Nigeria.

What is also evident is the substantial increase in this geographical concentration of imports over time for most commodity groups. For example, in the case of vegetable oils, these five countries accounted for 47% of the region's imports in 1986–90,

³² Overall for all the countries of the region, the correlation coefficient between country population shares and shares of agricultural imports was 0.97 in the 2006–10 period (and 0.99 for merchandise imports).

Figure 4.7 Composition of food imports into West Africa over time



Source: Based on FAOSTAT data.

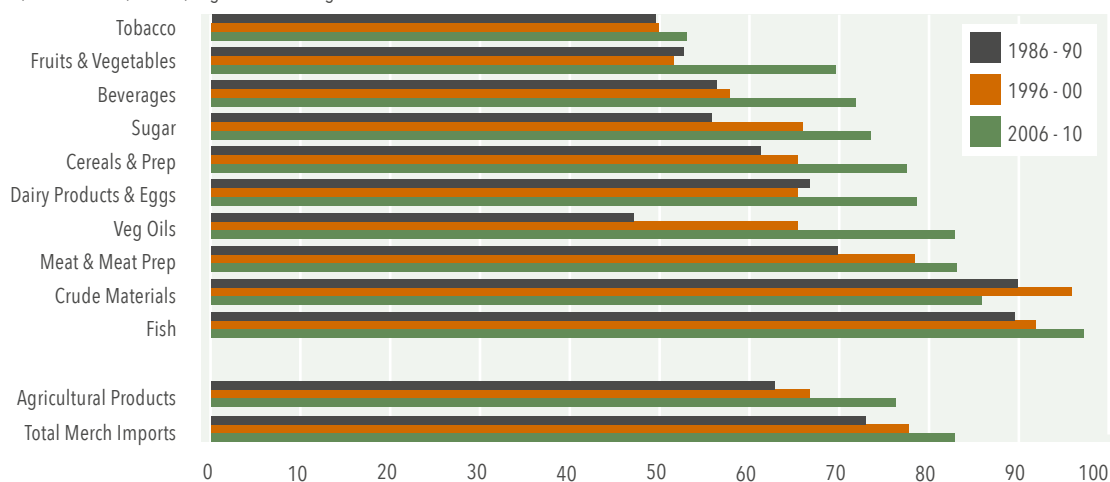
Table 4.1 Country shares in total regional imports (%)

	Total Merchandise Imports			Agricultural Imports		
	1986-90	1996-00	2006-10	1986-90	1996-00	2006-10
Benin	2.5	3.1	2.4	3.2	4.2	4.4
Burkina Faso	3.9	3.4	2.5	3.5	4.7	2.4
Cape Verde	1.0	1.2	1.0	1.3	1.8	1.5
Côte d'Ivoire	17.1	17.5	9.9	19.1	14.4	11.4
Ghana	8.4	11.6	12.1	5.0	7.3	9.8
Guinea	4.6	4.4	1.8	4.0	4.3	2.8
Guinea Bissau	0.5	0.3	0.3	0.8	0.7	0.6
Liberia	2.2	1.7	0.8	2.9	2.0	1.7
Mali	4.3	3.8	3.4	4.1	3.1	3.0
Mauritania	1.9	1.7	2.3	4.7	4.2	3.3
Niger	2.9	1.9	2.4	3.9	3.2	2.3
Nigeria	35.8	37.9	51.1	26.2	32.2	42.4
Senegal	9.0	7.0	6.8	12.3	11.1	10.1
Sierra Leone	1.3	1.1	0.8	3.4	3.1	1.4
The Gambia	1.1	1.1	0.4	1.8	1.8	1.1
Togo	3.7	2.3	2.0	3.9	2.0	1.9
West Africa	100.0	100.0	100.0	100.0	100.0	100.0

Source: Based on FAOSTAT data.

Figure 4.8 Shares of regional imports of top five importing countries^a

Benin, Côte d'Ivoire, Ghana, Nigeria and Senegal



Source: Based on FAOSTAT data.

^a The term Crude Materials includes raw commodities used as inputs for processing into food and other processed commodities. Raw commodities include, for example, soybeans, cotton, cottonseed, natural rubber, and hides and skins

and their share increased to 83% in 2006-10. Rapid economic growth, demographic changes and changes in consumption habits are the likely contributing factors to these trends.

In all commodity groups except meat and meat preparations, Nigeria is by far the largest importer. For some products (vegetable oils, fish, dairy, sugar), it accounts for 50% or more of the region's imports in recent years (2006-10).

4.3.3 Trends and dynamics of individual commodities

The value of total agricultural imports has grown at a rate of 11.5% from 1996-00 to 2006-10, about the same rate at which total merchandise imports of the region have grown. These aggregate rates are more than double the rates experienced during the previous decade (1986-90 to 1996-00), reflecting demographic changes in the region as a whole and growing capacity to import in some countries due to higher export earnings.

Among agricultural products, the fastest growing import commodity group is vegetable oils, with an annual increase in the value of imports of 18% for the region as a whole, followed by meat and meat preparations, beverages, fruits and vegetables. The increase in the growth rates for these last three commodity groups is indeed huge. Vegetable oils are a fast-growing import commodity for all countries. Except for Burkina Faso, Cape Verde, Guinea Bissau, Niger and Senegal, all countries had an annual growth rate of over 10%. Nigeria and Ghana have the highest growth rates for most products.

Imports of several commodities grew at an increasing rate over the past decade. The most important of these, in terms of volumes and values, include:

- » Rice and wheat, which grew at 9.8% and 9.6% respectively during the period 1996-2000 to 2006-2010 compared to 7% and 6%, respectively, in the preceding decade.
- » Palm oil, with an annual growth rate of 29% between 1996-2000 and 2006-2010 compared to 24% in the preceding decade.
- » Dairy products, with net imports of 'total milk equivalent' growing at 14% in 1996-2000 to 2006-2010 compared to 0.3% in the previous decade.
- » Chicken meat, with a 22% annual growth rate of net imports during 1996-2000 to 2006-2010.
- » Other meats including fresh bovine meat (11%), canned meat (10%), pig meat (15%), fresh sheep meat (23%) and goat meat (10%).
- » Non-alcoholic and alcoholic beverages. Net imports of non-alcoholic beverages increased at an annual growth rate of 26% from 1996-2000 to 2006-2010. Among alcoholic drinks, distilled beverages increased by 11%, beer by 11% and wine by 14%.
- » Tomato paste, with a growth rate of 17% during 1996-2000 to 2006-2010; peeled tomatoes (15%), carrots and turnips (20%), potatoes (10%), green onions (13%) and various forms of processed vegetables: preserved (15%), dehydrated (22%) and frozen (16%). Among fruit, accelerating net imports include apples at 16%, grapes (14%), oranges (14%), as well as dates (23%) and all kinds of fruit juices.

There are some important products for which the region was a net exporter prior to 1996 but now is a net importer and for which imports are growing at an accelerating rate. Most notably, this includes fish, with an annual rate of increase in net imports of 14% in 1996-2000 to 2006-2010 compared to growing net exports (at 5%) in the previous decade.

While these increases in the value of imports are partly due to world price increases over this period, volumes of imports also increased significantly for several commodities. These include all the top imported food commodities such as rice, wheat, fish, milk, palm oil, sugar, poultry, onions, and tomato paste.

There are some noteworthy trends regarding processed products, indicative of efforts in the region to expand local processing capacity. For example, while wheat net imports have been growing at 13% per year in the most recent period, wheat flour has been growing only at 1%, signifying a growing West African milling capacity. The same is true for certain other processed cereal products, such as breakfast cereals and macaroni, which have been growing at a decelerating rate during the 1996-2000 to 2006-2010 period, at

10% and 5%, respectively – less than half the rates of the previous decade. Other examples of likely expansion of domestic processing capacity include sugar, where net imports of refined sugar have been growing at a rate of 4%, compared to the rate of growth of raw sugar of over five times as much (at 20%) in the previous decade; and tobacco, with net imports of unmanufactured tobacco growing at 8% while cigarettes imports grew at 3%.

Also among processed products, there is a huge growth in the imports of fruit juices of various types. The annual growth rate for all fruit juices (both temperate and tropical juices) averaged some 27% in recent years. Nigeria, the largest importing country in the region, has banned importation of fruit juice in consumer-ready containers, leading to a shift towards imports of concentrates that are reconstituted, bottled and canned domestically. The strong import demand for fruit juices reveals a highly dynamic domestic market in all countries of the region, suggesting that there should be very good potential for development or further strengthening of local processing industries based not only on imported raw material but increasingly on processing locally available fruits.

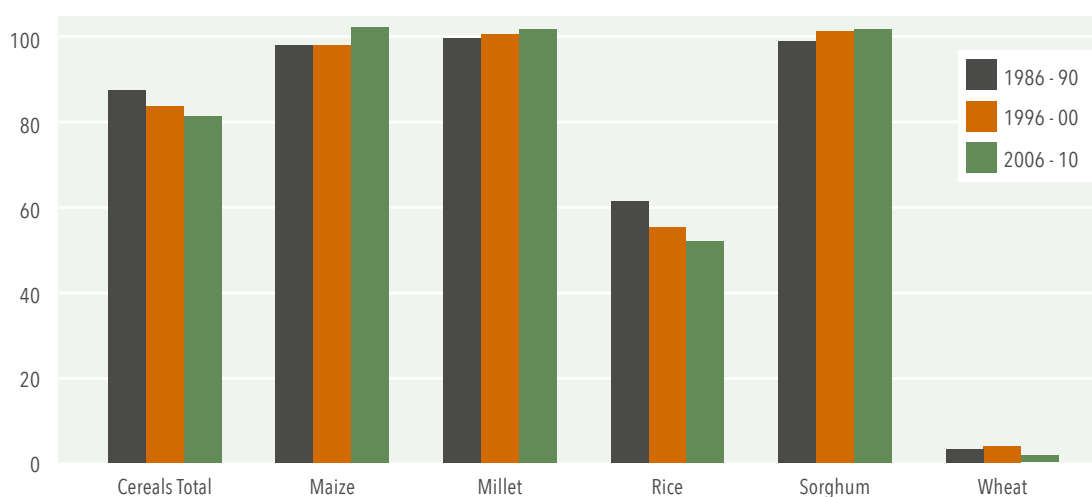
4.3.4 Import dependency

Self-sufficiency ratios (SSRs) for cereals

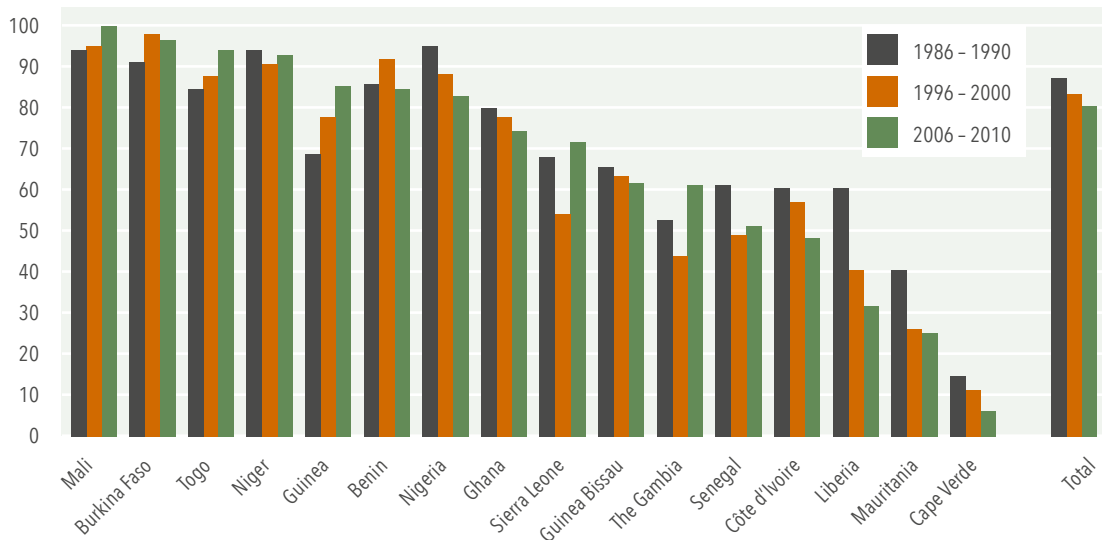
Cereals are the main item in the food import basket. They are of pivotal importance to the food security of the region, being the leading commodity group imported to meet food needs in normal years and more so in years of domestic production shortfalls. The dependence of the region on the world market of cereals has been on the rise in recent years and is now close to 20%. The region's overall self-sufficiency ratio (SSR) for cereals stood at 88% in the second half of the 1980s, and it has declined to an average of 81% in 2006-10 (Figure 4.9).

SSRs of individual countries vary widely, ranging from as low as 7% for Cape Verde to 100% for Mali in recent years (Figure 4.10). There are also major differences among countries regarding changes in their SSRs over time. Countries that have improved their reliance on domestic cereal supplies include Mali, Burkina Faso, Togo, Guinea, Sierra Leone and The Gambia. However, the majority of countries increased their dependence on imported supplies, with substantial increases for Nigeria, Côte d'Ivoire, Senegal, Liberia, Mauritania and Cape Verde.

Figure 4.9 *Self-sufficiency ratios of individual cereals in West Africa (%)*



Source: Based on FAOSTAT data.

Figure 4.10 Self-sufficiency ratios of total cereals by country (%)

Source: Based on FAOSTAT data.

There are significant differences in SSRs between commodities and countries. Given the limited potential for domestic production in the region, nearly all of the wheat consumed (99%) comes from abroad. Also, none of the countries meets fully its rice consumption needs from domestic production, although some of them do so to a considerable degree (Mali's SSR is 96%, Sierra Leone's is 80% and Guinea's is 80%). Nigeria, the largest rice consuming and producing country in the region, has seen a decrease in its SSR from 83% to 56% from the late 1980s to 2006-10 (Appendix Table A4.1, p.115).

On the other hand, in the case of local grains (millet, maize and sorghum), nearly all countries at least maintained their SSRs and some of them increased their domestic production considerably and moved into an export position. For millet, all countries aside from two (Liberia and Cape Verde) are at least self-sufficient. For sorghum, four countries are not self-sufficient (Senegal, Côte d'Ivoire, Liberia and Cape Verde), while in the case of maize about half of the countries meet their needs from domestic production alone.

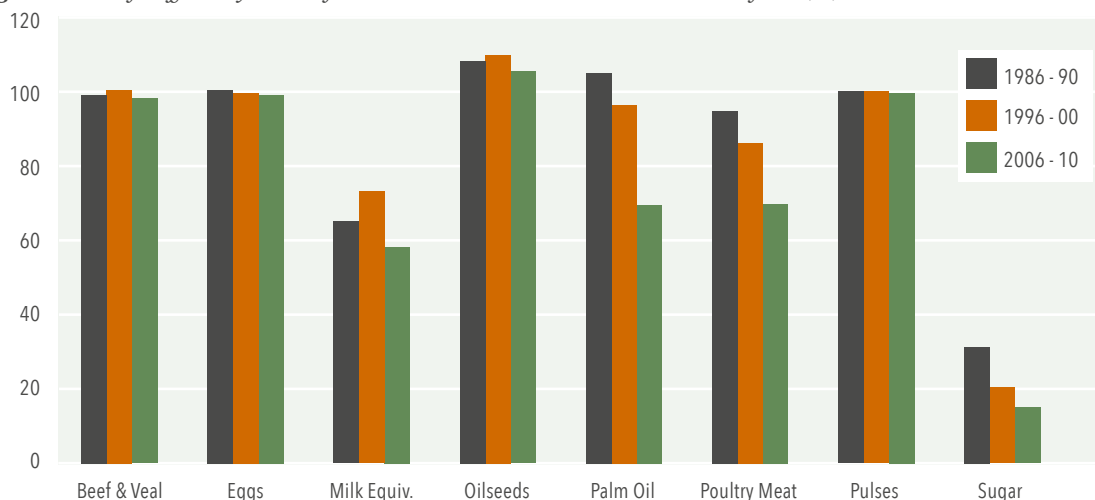
Self-sufficiency ratios for non-cereal commodities

Beyond cereals, regional SSRs are also declining for certain other basic food commodities. This is particularly true for milk, palm oil, poultry meat

and sugar (Figure 4.11). From a net exporting position or near self-sufficiency in the 1980s in both palm oil and poultry meat, the region turned into a net importer and has reduced its self-sufficiency ratio to below 70% in 2006-10. For milk and sugar, the region has always depended on imports to meet a large share of its needs, but further substantial reductions in their SSRs have been experienced in recent years as per capita consumption of these goods has expanded (see Chapter 5). In the case of sugar, the region now covers only some 15% of its aggregate needs, half the level of the 1980s.

As in the case of cereals, there are large differences among the countries of the region regarding their dependence on imports in these other basic food commodities (Appendix Table A4.2, p.117). None of the countries is self-sufficient in milk. Six countries (Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Liberia and Nigeria) actually produced less than one-third of the milk they consumed in 2006-10, and their dependence on imports is increasing.

For palm oil, all countries that are producers in the region, except Côte d'Ivoire and Benin, have decreased their SSR considerably in recent years. While palm trees are native to West Africa, the region has been unable to expand production and

Figure 4.11 Self-sufficiency ratios of selected non-cereal commodities in West Africa (%)

Source: Based on FAOSTAT data.

productivity to meet domestic and export demand. Other parts of the tropical world (especially Malaysia and Indonesia) are now the main producers and exporters of palm oil. These two countries alone now command an 80% share in global production and are the principal exporters to West Africa and elsewhere (Minal and Bahari, 2011).

Poultry meat is yet another commodity where SSRs for nearly all countries have been declining fast. While the regional average SSR is just below 70%, some countries (Cape Verde and The Gambia) now import over 80% of their expanding poultry meat consumption compared to meeting nearly fully their lower levels of consumption in the late 1980s. Other countries have also increased their dependence on imports to a considerable degree, and some have taken protective measures to limit this situation (e.g. Nigeria's ban on importation of chicken).

Finally in the case of sugar, although several countries never had production in any significant way, among those that did, only Niger appears to have managed to maintain its already low SSR. All other countries have increased their dependence on imported sugar, some to a considerable degree, as per capita consumption has grown.

These developments, largely driven by large increases in domestic demand due to demographic

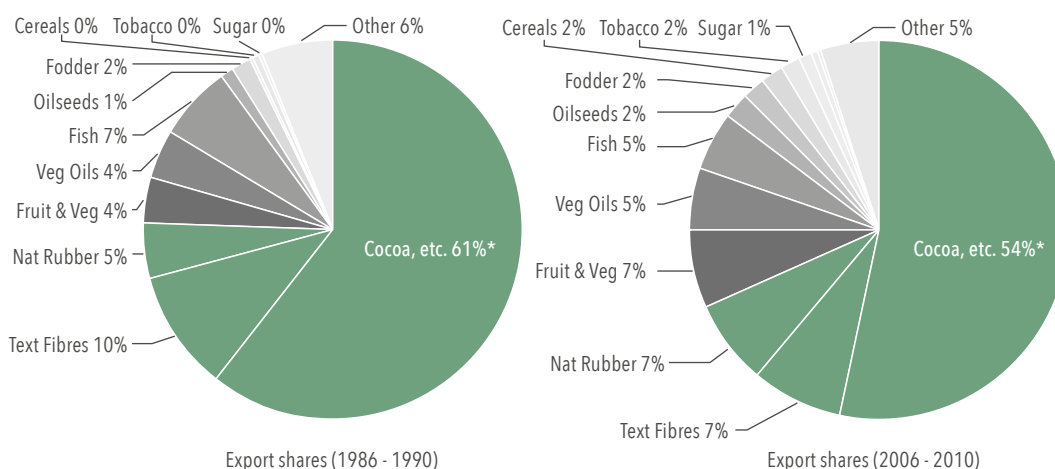
trends as well as rapid increases in export revenues in some countries, are likely to continue. OECD/FAO projects that SSRs for several non-cereal commodities will fall even further by 2020. On the other hand, SSRs for cereals are projected to improve slightly by 2020 on account of projected increases in coarse grains and rice production, but they would still remain well below SSR levels of the past (see Konandreas, 2012b for details).

4.4 Exports: composition, trends, and competitive position

4.4.1 Composition and contribution to export earnings

The dominant commodity groups within agricultural exports of West Africa are tropical products. The cocoa/coffee/tea/spices commodity group, together with textile fibres and natural rubber, account for well over two-thirds of its total agricultural exports (Figure 4.12). This concentration of exports in these three commodity groups was even more pronounced in the past, when they accounted for over three-quarters of agricultural exports.

By far the most important agricultural export commodity for the region as a whole is cocoa beans, accounting for nearly 40% of the total value

Figure 4.12 Composition of agricultural and fish exports over time

Source: Based on FAOSTAT data.

*Includes Cocoa beans, Cocoa paste, Cocoa butter, Cocoa husks shell, Chocolate Preps and Cocoa powder & Cake

of agricultural exports, and this share has remained relatively stable over time. Other top commodities, but far behind cocoa, are cotton lint (7.5% in 2006-10), natural rubber (7.5%), fish (5%), cocoa paste (5%), cocoa butter (4%), palm oil (4%), cashew nuts (3%) and coffee (2%). Overall, the cocoa-related export commodities account for 54% of agricultural exports.

While palm oil is a major and rapidly growing net import commodity for the region as a whole, it remains also an important export commodity for Côte d'Ivoire and to a lesser degree Liberia. As all other countries are net importers, it is evident that the exports of palm oil shown in the statistics include large amounts of re-exports. Such is clearly a case for Benin where exports during 2006-10 amounted to 170% of domestic palm oil production. The same is likely to be the case for other commodities for which the region is a net importer, such as rice, chicken, and cigarette and tobacco products.

As in the case of imports, the geographical distribution of exports is highly concentrated in a few countries. For the key exports of the region, a handful of countries account for nearly the totality of exports, with Côte d'Ivoire being by far the leading exporter in several commodities. These include cocoa and its by-products, natural rubber,

coffee, cashew nuts, palm oil and bananas. More geographically diversified export commodities include cotton lint, fish and tobacco among the main ones.

While the region is a net importer of fish, the types of fish exported and imported are not the same. Fish exports comprise high-value fish species fetching a much higher price than that of imported fish. Per unit values of fish exports by the region averaged three to four times the unit values of the region's imports.

4.4.2 Trends and dynamics of individual commodities

The value of exports of agricultural and food products has been growing at a rate of 6% from 1996-2000 to 2006-10, less than half the rate as in the previous decade (1986-90 to 1996-2000). This growth rate is also less than half that of total merchandise exports of the region; however, the latter has been dominated by petroleum exports and other mineral commodities that have been affected by a global boom in demand and attendant strong export prices.

Top performing commodities are those whose values of net exports are growing at an accelerating rate in the most recent decade (1996-2000 to

2006-10) compared to the previous decade. Among these are cocoa beans and all cocoa by-products, natural rubber, oilseeds, fodder and feeding stuffs, and a small number of fruits and vegetables. Rates of growth over the past decade have been as follows: cocoa beans (7%), cocoa paste (23%), cocoa butter (9%), rubber (11%), oilseeds (11%), fodder and feeding stuffs (9%), all of them at rates greater than in the preceding decade.

Some fruits and vegetables also enjoy this accelerating net export status, such as mangoes and even tomatoes, although the latter's net export value is small. Most of them, however, while increasing, are growing at a slowing rate, and for several fruits and vegetables the region has already switched into a net import position, reflecting growing domestic per capita consumption of these products (see Chapters 5 and 6). Other commodities whose exports have grown, but at a slowing rate over the past decade, include cotton lint (1% growth rate compared to 5% in the previous decade), cashew nuts, sesame seed, bananas, green beans, yams, ginger, papayas, watermelons and eggplants.

Another category of products are those whose net exports have been falling over the past decade. Among the most important of these is coffee, with a net export value declining by 4.9% in the most recent period following a decline of 4.5% in the previous period; palm kernel oil (4% decline); and cottonseed (3.3% decline). The aggregate group of Fruits and Vegetables also falls under this declining net exports category, with an overall 9.5% decline rate compared to a massive positive net export growth in the previous decade.

Finally, there are several commodities in the "emerging net exports" category, implying that they have switched from being imports to net exports between the periods of the study. Notable among these commodities is maize. The value of maize net exports has been growing by 13.7% between 1996-2000 and 2006-10, compared to growing net imports (4.3%) during the preceding decade. In absolute terms, the value of other commodities in this emerging net exports category is small; however, some of them have had an impressive net export growth performance that could make them

promising candidates for continued growth. Some commodities in this category include almonds (83% growth rate), flour of roots and tubers (33%), green chillies and peppers (25%) and Brazil nuts (72%).

4.4.3 Competitive positioning of agricultural exports

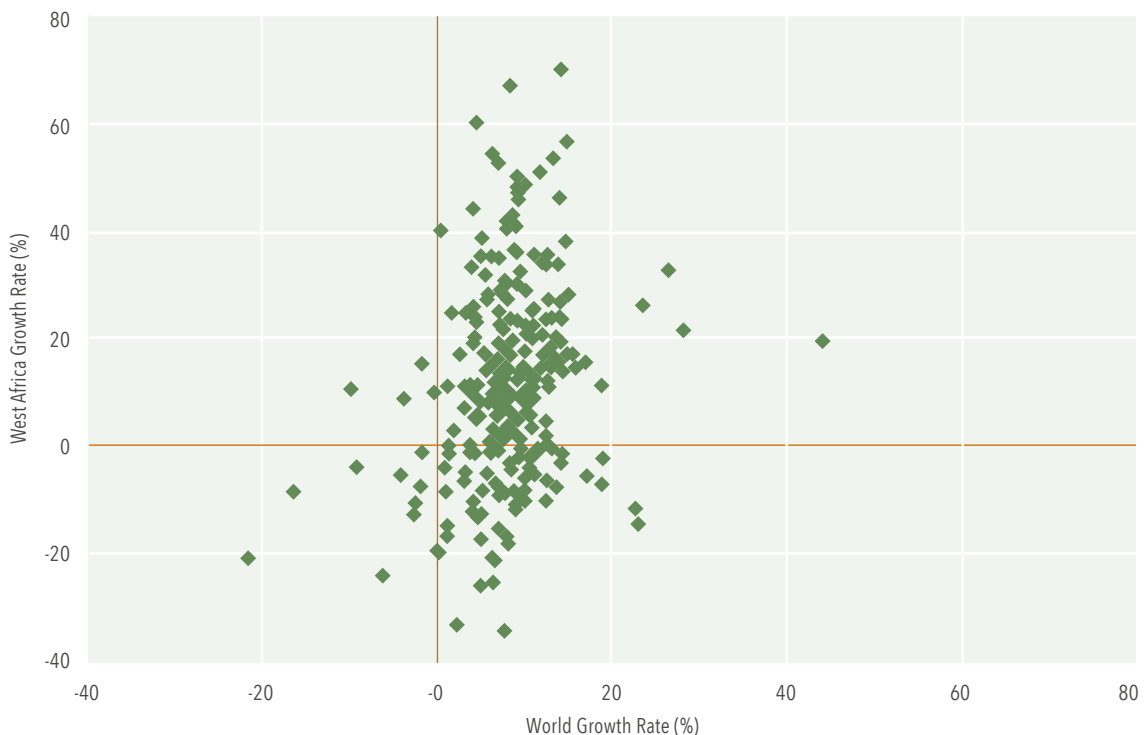
Overall, the region is a relatively small player in world trade. The share of the region in world exports of agricultural products amounted to a mere 0.89% in recent years (2006-10 average), slightly better than the region's share in total merchandise exports of 0.67%. Its share in agricultural products has declined considerably over time while that of total merchandise exports has increased on account of petroleum exports. West Africa's annual rate of growth of agricultural exports was 6.2% during the 1996-00 to 2006-10 period, some 20% less than the rate for the world as a whole of 7.7%.

The opposite was the case for total merchandise exports, where the region's aggregate annual rate of growth was 13.3% compared to the world total of 9.4%. This differential between West Africa's and world growth rates is not a recent phenomenon, and in fact it was more pronounced during the preceding decade (1986-90 to 1996-2000). However, the export performance of West Africa compared to the world varies widely, with some commodities clearly doing much better than the world averages and some performing much worse. Figure 4.13 compares West Africa's export performance by commodity to that of the rest of the world. Each commodity's performance is mapped into one of the four quadrants of the figure. Out of all agricultural products for which West Africa had average aggregate exports of US\$5 000 or more in 2006-10 (265 commodities in total), the majority of them (183 commodities) are mapped in the upper right-hand quadrant, implying a positive growth in both West Africa and the world as a whole.

Within these commodities, there are several for which West African exports are doing much better than those from the rest of the world. These include cocoa paste, cocoa powder and cake, cashew nuts, sesame seed, sheanuts, natural rubber, mangoes, bananas, papayas, watermelons, sorghum, flour of

Figure 4.13 Mapping growth rates of main West African export commodities^a

1996 - 00 to 2006 - 10



Source: Based on FAOSTAT data.

^a 265 commodities with average regional exports above US\$5 000 in 2006-10

roots and tubers, dried cassava, cassava starch, and linseed oil. A fair number of the principal export commodities of West Africa generally correspond to dynamic sectors of the world market, growing at a rate comparable to that of the world's average. In addition to the above commodities, these include cocoa beans, palm oil, sesame seed, and cocoa husk shells. For some products within the category of "overachievers" the high export growth rates registered were largely due to re-exports. These include, among others, cigarettes, palm oil, rice, olive oil, wine, flour of wheat, chicken and turkey meat, macaroni, infant foods, and tomato paste.

At the other extreme, there are ten commodities for which both West Africa and the world have a negative growth rate. Some of them include cottonseed cake, kolanuts, pineapple juice, copra and different types of skins.

For 68 commodities, the performance of West Africa is negative while the world's is positive. These include some important commodities, such as fish,

green and roasted coffee, cottonseed, carded cotton, cotton lint, palm kernel, palm kernel oil, palm cake, coconuts, coconut oil, spices, dry onions, garlic, plantains, lemons and limes, citrus juice, honey, sesame oil, groundnut oil, groundnuts shelled, pineapples, and wet salted cattle hides.

Fish, traditionally a major export commodity of West Africa, has experienced a negative export growth rate although world exports have been growing by 6%. Similarly, exports of cotton lint, also one of the major export commodities of West Africa (a 6.2% share in the world market and a 7.5% share in West Africa's agricultural exports), have been practically stagnant during the 1996-2000 to 2006-10 period (at 0.3%). This apparent lack of dynamism in West Africa's cotton exports may be due to competition from other major cotton suppliers, including those that subsidise production. Also the disruption of the cotton value chain linked to restructuring and mismanagement of the value chain in countries like Mali may have contributed to the decline (see Chapter 10 for details).

Finally, four export commodities are “achievers in adversity”, i.e. growing in West Africa despite declining world exports. These include cottonseed oil, cassava flour, natural gums and must of grapes.

Out of the 265 commodities considered, in 78 of them (nearly 30%) West Africa had a negative rate of growth compared to only 14 (some 5%) for the world as a whole. This difference explains the slower growth in West Africa’s aggregate exports of agricultural products compared to that of the world as a whole.

While the region has a small share in world agricultural trade, for some commodities it is a major player in world export markets. For 20 commodities the region accounts for over 5% of world exports, and for some of them it is the sole or main exporter. Among the largest by far are cocoa beans and cocoa-related products, cashew nuts, cotton lint and natural rubber, which make the bulk of the contribution to export earnings of the region.

4.5 Intra-regional trade

West Africa has long been linked together through interregional trade, dating back to the caravan trade of pre-colonial times. Major north-south and east-west flows of livestock, coarse grains, cowpeas, and horticultural products such as onions have existed for many years and have increased substantially over the past 30 years in response to the growth of urban consumption centres along the coast that are far removed from the major production basins for many of these products. Re-exportation of rice and wheat, often induced by differences in exchange rates and fiscal policies across countries, have also been widespread in certain areas (e.g. between Nigeria and its neighbours and between The Gambia and Senegal). In addition, Nigeria’s frequent imposition of import bans on products such as frozen poultry has stimulated a lively clandestine trade in these items between the country and its neighbours, particularly Benin. As consumption patterns have diversified within the region (see Part II), there has also been an expansion in trade of staples such as gari, attiéké and yams from the coastal states toward the Sahel (Soulé and Gansari, 2010).

4.5.1 A largely under-reported trade

Unfortunately, data on intra-regional trade are fragmented and of uncertain quality.³³ The elimination of official export taxes for regionally traded goods as part of the regional integration processes of WAEMU and ECOWAS reduced incentives of customs services to carefully record such flows, and often traders try to avoid official control posts to avoid having to pay bribes to cross the borders. As a result, official data underestimate the importance of intra-regional trade vis-à-vis extra-regional trade. Official estimates of the volume of all intra-regional trade put it at no more than 16% of the total value of commercial trade of the region (Soulé and Gansari, 2010). The official data show a low degree of sourcing of imports from within the region, particularly for the coastal states, whose seaports provide easy access to international suppliers. Nigeria, the largest market in the region, has the lowest share of supplies sourced intra-regionally according to official trade data. This apparent low reliance on regional markets may be driven by the sheer volume of imports by Nigeria, which may not be easily secured within the region on a regular basis. Another reason could be well-established trade channels with firms from outside the region, more competitive prices and more consistent quality considering the large volumes being imported.

Between 2009 and 2013, CILSS, with assistance of the USAID-supported ATP and EATP projects, began monitoring cross-border trade for ruminant livestock, cereals, and onions at 50 key observation points in West Africa in order to obtain better estimates of the volume and value of regional agricultural trade (Josserand, 2013). The resulting information shows that regional agricultural trade is much larger and more diverse than is generally recognized. For example, using data from this monitoring system and reasonable assumptions about livestock production and offtake rates, Josserand estimates that official statistics capture no more than a third of the value of cattle and small ruminant exports of Burkina Faso and Mali to other countries in the region (*ibid.*). Offi-

³³ For further analysis of regional staple food trade view Maur and Shepherd (forth coming)

cial figures on the regional grain trade, as reported through FAOSTAT, are even more deficient. For example, while official data show millet and sorghum exports from Mali in 2010/11 totalled 280 tonnes, the CILSS study recorded 4 827 tonnes over a similar period. For Nigeria, the figures were even more shocking: official statistics recorded only 45 tonnes of millet and sorghum exports, while the CILSS monitoring noted over 53 000 tonnes (*ibid.*). Already in the 1990s, studies by Seyni and Soulé estimated the total regional cereal trade between Nigeria and its immediate neighbours (Benin, Nigeria, Chad and Cameroon) at nearly 500 000 tonnes per year (Soulé and Gansari, 2010).

4.5.2 Major products traded regionally

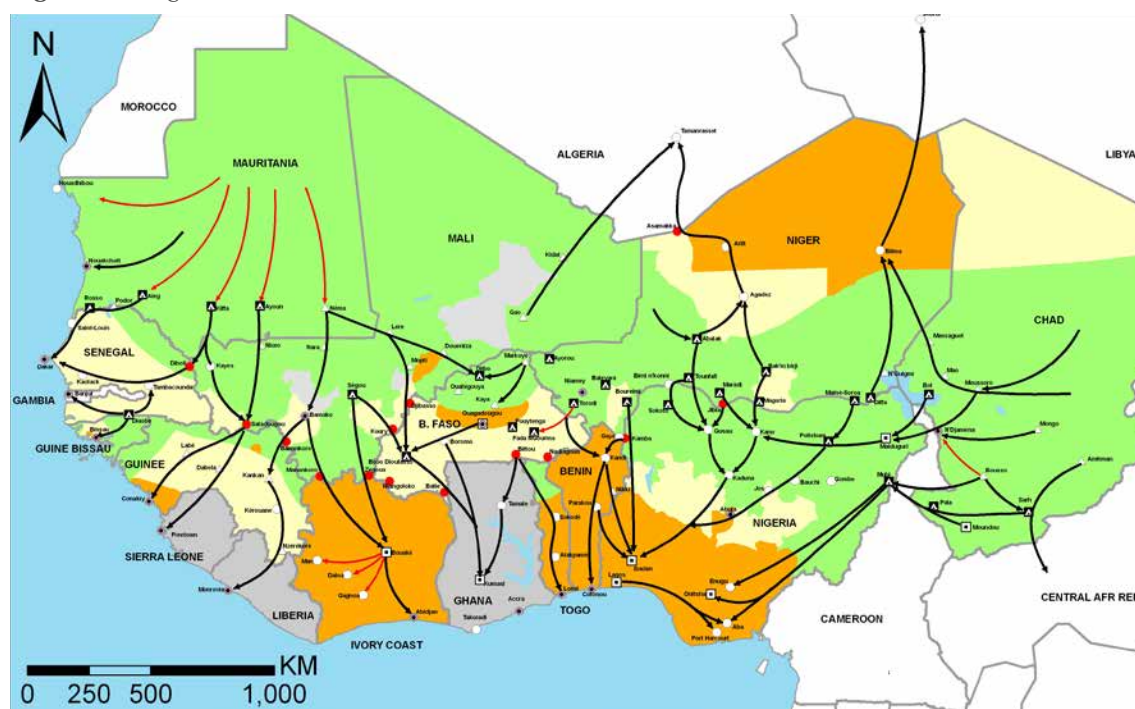
Regional trade is an important contributor to the food security of West African countries, allowing them to access a broader range of products than they produce domestically and helping them to balance fluctuations in national production with imports and exports. It is also a growing source of income for West African farmers given the growing

regional demand for an expanding range of food products. Among the key agricultural commodities important in regional trade are the following:³⁴

Ruminant Livestock. Exports of cattle, sheep and goats typically flow from the Sahelian and Sudano-Guinean zones towards the demand centres of the humid coast, where disease problems limit ruminant livestock production (Figure 4.14). There are also some exports of sheep and goats to North Africa, particularly at times of major Muslim holidays such as Tabaski. In recent years, demand from Nigeria has led to expanded flows of cattle eastward from Mali and Burkina Faso towards Nigeria, but the volume of this trade fluctuates depending on the Naira/CFA franc exchange rate (Makadji *et al.*, 2013). The regional trade in livestock has proven resilient in adapting to various political and economic shocks affecting West Africa. For example, the Ivorian crisis of the 2000s combined with the paving of the road between Bamako and Dakar led to a major shift in Malian cattle exports

³⁴ FEWSNET provides maps of the regional trade flows for many of these products. Because of space considerations, only the map for livestock flows is included below.

Figure 4.14 Regional Ruminant Livestock Trade Flows, 2010



Source: FEWSNET

from Côte d'Ivoire to Senegal, while the emergence of Liberia and Sierra Leone from civil wars led to an expansion of exports of both cattle and small ruminants from the Sahel to these countries (ibid.). As discussed in Chapter 10, a major challenge for the regional ruminant livestock trade will be expanding its capacity to respond to the likely rapid expansion in demand for meat along the coast in the coming decades.

Coarse grains (millet, sorghum, and maize). Trade in coarse grains flows in both a north-south and a south-north direction, depending on the season. The largest flows appear to be between Nigeria, Benin, and Niger, with over 50 000 tonnes of millet and sorghum flowing northward, while Nigeriens export livestock and cowpeas to their southern neighbours. The Niger/Nigeria trade is strongly influenced by the Naira/CFA franc exchange rate. In 2005, when the Naira jumped strongly in value, the direction of the grain trade reversed, contributing the Niger's severe food shortage that year (Kelly *et al.*, 2008). Ghana, Benin, Togo and Côte d'Ivoire all export maize to their northern neighbours (and Ivorian maize also transits through Mali to Senegal), particularly during the Sahelian hungry season starting in June, which corresponds to the period of the main maize harvest in the coastal countries. Later in the season, the direction of the flow frequently reverses, with maize from Mali and Burkina flowing southward as well as eastward to Niger. In recent years, rising demand for maize to be used as poultry feed has further stimulated regional trade in this grain, although inconsistent quality and reliability of trade flows often leads feed millers along the coast to look to overseas suppliers instead.

Rice. All countries in West Africa are net importers of rice, but there is a substantial trade in re-exported rice across borders (Haggblade *et al.*, 2012; Soulé and Gansari, 2010). In addition, some of the major rice producers in the region (e.g., Guinea and Mali) export some locally produced, higher-valued rice (e.g. parboiled rice from Guinea) to their neighbours, while compensating with imports of cheaper Asian rice to cover some of their domestic consumption.

Cowpeas. As described in Part II, cowpeas are an increasingly important source of high-quality protein in several countries, particularly Nigeria, Niger, Ghana, Burkina Faso and Mali. Nigeria is the world's largest producer of cowpeas, but is a net importer, with Niger being the largest exporter in the region. Though largely uncaptured by official statistics, border monitoring in the mid-1990s estimated Niger's cowpea exports to Nigeria at nearly 35 000 tonnes (Soulé and Gansari, 2010). Burkina Faso and Mali are also major suppliers to the coastal states, such as Ghana and Togo. Given the drought tolerance of cowpeas, which makes them particularly adapted to changing climatic conditions in the Sahel, and the growing demand for low-cost protein sources by coastal consumers, it is likely that the regional cowpea trade will continue to grow.

Horticultural products. Niger, and to a lesser extent Mali and Burkina Faso, have been major exporters of onions in both fresh and dried forms to the coastal countries for many years. During certain market windows, this trade competes in the coastal markets with imports from Europe, particularly the Netherlands. Since the 1994 CFA franc devaluation, the range of horticultural products in regional trade has broadened, as the devaluation made regionally produced products more competitive with imports from Europe. Particularly strong growth has been experienced in potato exports from Mali to Côte d'Ivoire and tomato exports from Burkina Faso to Ghana.

Roots and tubers. As documented by FEWSNet, there has been a growing trade in cassava products and yams, both among the coastal countries and from the coastal countries to the Sahel, as consumers in the Sahelian countries begin to diversify their staple food consumption away from just cereals (see Part II). Increasingly, processed cassava products are marketed by modern retailers in the Sahelian countries as a quickly prepared alternative carbohydrate product for the emerging middle class.

4.5.3 Constraints and growth prospects

As discussed in detail in Chapter 12, poor road infrastructure, rules that restrict competition in the

trucking industry, administrative barriers, difficulties and risks of transferring funds across countries with different monetary systems, growing insecurity and rent-seeking by police and border officials all restrict the volume and raise the costs of regional trade. These factors also push much of the trade toward the informal sector, as traders try to circumvent official channels, in most cases to avoid a direct or indirect cost in doing business, especially a cost perceived to be unjustifiable and unfair. This, in turn, leads the trade to remain largely unrecorded, which hampers the development of more trade-friendly policies. Many of the efforts being carried out currently by regional organizations such as ECOWAS and WAEMU, discussed in Chapter 12 attempt to address these constraints.

Despite these constraints, expansion of intra-regional trade offers the largest export opportunity for many of the countries in the region over the coming 10 to 20 years. Given current demand projections for major agricultural commodities in the region, if imports from outside of West Africa continue to cover 15% of the region's food consumption as they have in the past, regional trade will have to expand four-fold by 2040 to cover the remaining consumption gap, mainly in the coastal countries (Josserand, 2013). Moreover, given the proximity of the neighbouring markets and the generally lower quality standards in these markets compared with export markets in the North, regional exports represent the easiest markets for West African countries to capture. They can also serve as training grounds for developing the supply chains that can eventually penetrate overseas markets.

4.6 Quality demands in regional and overseas export markets

In both overseas markets and regional markets, demand is becoming more differentiated. As discussed more in Part II, in regional markets, one segment of the market consists of the large number of low-income consumers whose primary emphasis remains on obtaining basic calories and proteins at low cost. A second segment is made up of an emerging middle class that puts increasing importance on quality and diet diversity.

Within both groups, however, diets are evolving, with the potential for very rapid growth in the demand for animal products, fruits, vegetables, cooking oils, and processed foods if per capita incomes continue to grow robustly in the region (see Chapter 6). The ability of individual West African countries to capture these markets on their doorsteps will depend on their ability to be consistent and reliable suppliers of quality products at competitive prices. Consumers see overseas imports as providing benchmarks in terms of price, quality, food safety and consistent availability; and failure to meet such benchmarks (e.g. through disruptions of supply due to export bans) will shift demand increasingly away from West African suppliers.

The overseas export demand facing West African Agriculture is also changing, with Asia growing in importance as an export destination (e.g. for West African cotton) and strong competition from new competitors in certain value chains, such as Vietnam in coffee. While there still remains ample room for expanding export earnings from bulk commodity exports, especially from the Guinea-Savannah zone (World Bank and FAO, 2009), export markets are increasingly demanding in terms of quality control and product differentiation (Drechsler, 2011). Such quality control requires tighter vertical coordination in value chains, for example through delivery contracts between farmer organizations and exporters that specify production and post-harvest handling practices. Thus, West African Agriculture faces a dual challenge in the overseas export market similar to that it faces in the domestic and regional markets: driving down the real cost of output to serve the mass market, which still has a commodity focus; and responding to a growing demand from higher-income consumers for more diversified and higher quality products. These issues are explored in more detail in Chapter 10.

4.7 Summary of main findings

West Africa has become increasingly dependent on international markets for several key foods, such as rice, wheat, fish, dairy products, meats (particularly

poultry), fruit juices, and vegetable oil. Imports, however, are heavily concentrated among the “big four” countries of Nigeria, Ghana, Côte d’Ivoire and Senegal and appear to be linked as much to those countries’ increased capacity to import, due to rising export earnings resulting from the world commodity boom, as to their lacklustre agricultural growth. Nonetheless, the growing trade imbalance for some of these products, driven by rapidly growing demand for them throughout the region (see Part II), raises questions about the scope for import substitution. As we shall see in Part III and IV, the desire for such import substitution is driving much of Agricultural policy as well as agroprocessors’ strategies in the region.

On the export side, the region is heavily dependent on cocoa exports, which are overwhelmingly dominated by Côte d’Ivoire and Ghana. There are a few promising “growth exports” such as natural rubber and some fruits. A major challenge, however, will be to try to revive some of the export value chains that have previously been major foreign-exchange-earners but whose performance has lagged in recent years, such as cotton, cashews, and coffee. Another challenge is to incorporate greater value-added into exports. This is being done successfully in cocoa (see Chapter 10), but has not extended to many of the other exports aside from a few high-quality horticultural crops.

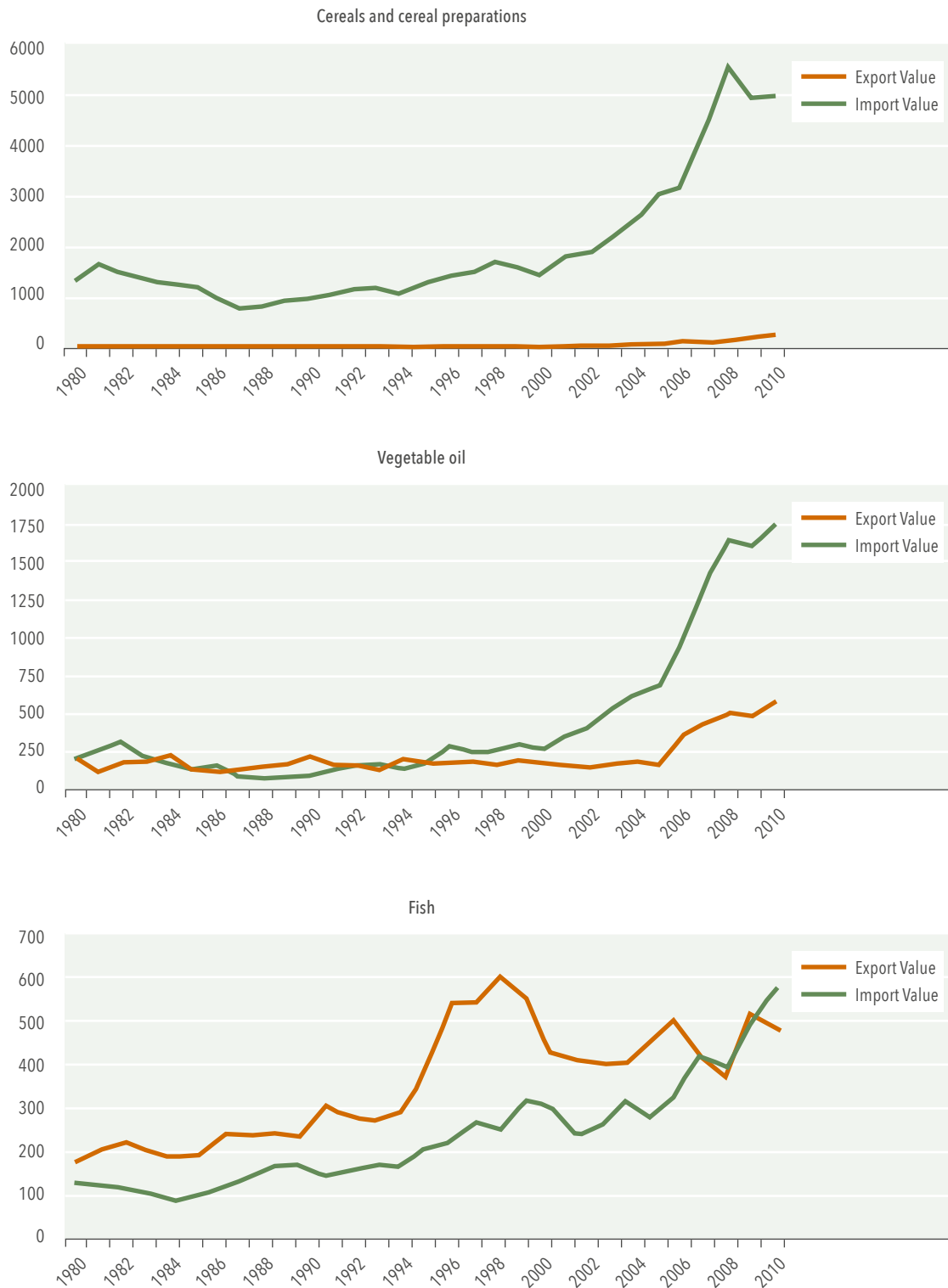
Trade, however, involves not only exchange with countries outside of the region. While data on intra-regional trade are weak, it appears currently to be a grossly under-reported and under-exploited opportunity to expand markets and diversify consumption patterns and export earnings. Such trade is particularly important for the smaller and inland countries of West Africa in order for them to benefit from economies of scale and enjoy a wider range of consumption options. The desire to build an integrated regional market as part of a strategy of economic diversification lies at the heart of ECOWAS and its agricultural policy, ECOWAP. The opportunities and challenges involved in this endeavour are explored in Chapters 12.

In both the regional market and the international market, demand is becoming increasingly differentiated, with both a strong demand for bulk commodities and a growing demand for higher quality, value-added products. The forces driving these changes in demand are explored in detail in Part II, while Part III analyses their implications for the structure and vertical coordination of West African agricultural value chains and retailing systems.

Appendix to Chapter 4

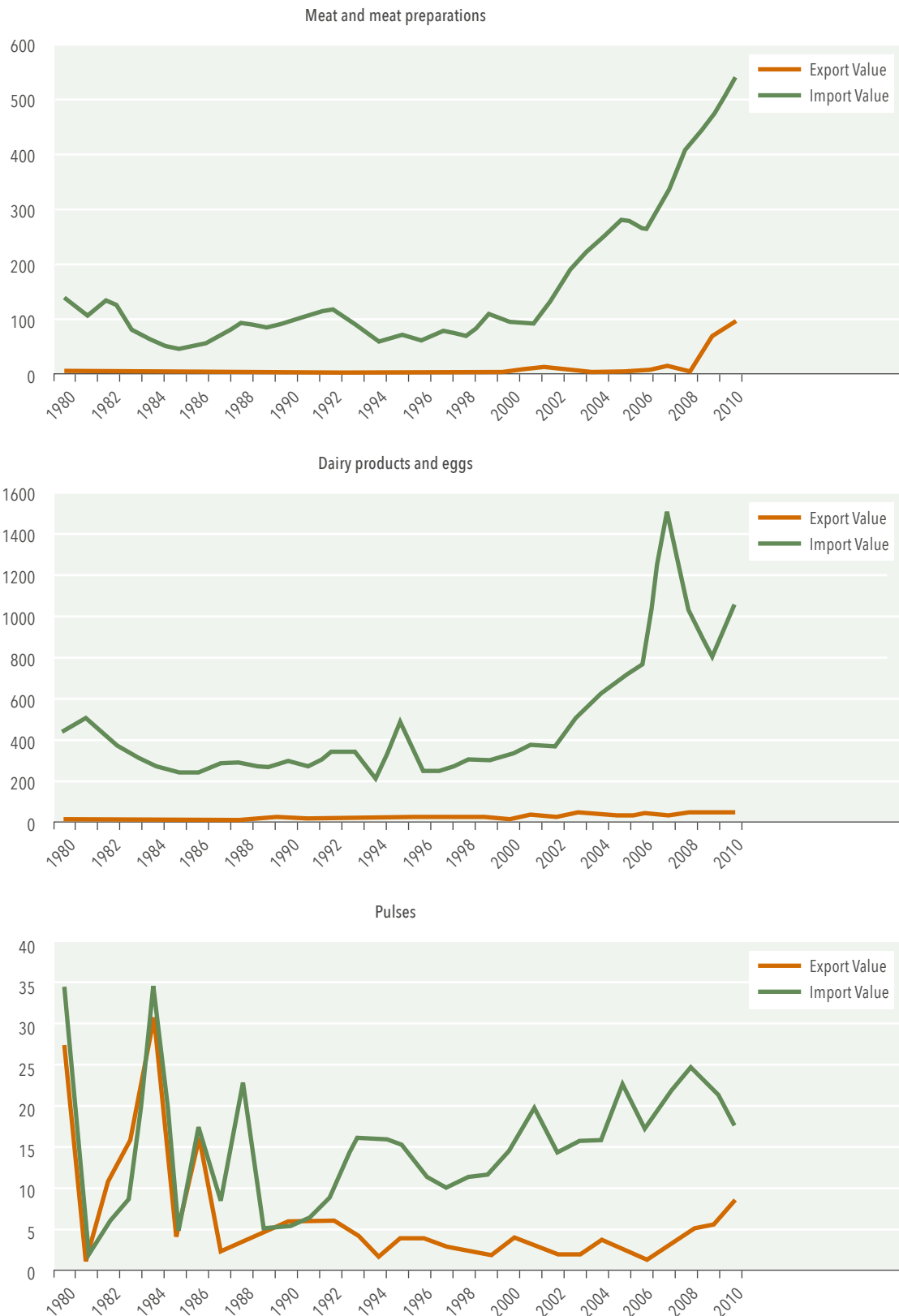
Appendix Figure A4.1 Aggregate trade balances of West Africa with the rest of the world.

Value of Imports and Exports (million US\$), 1980 -2010



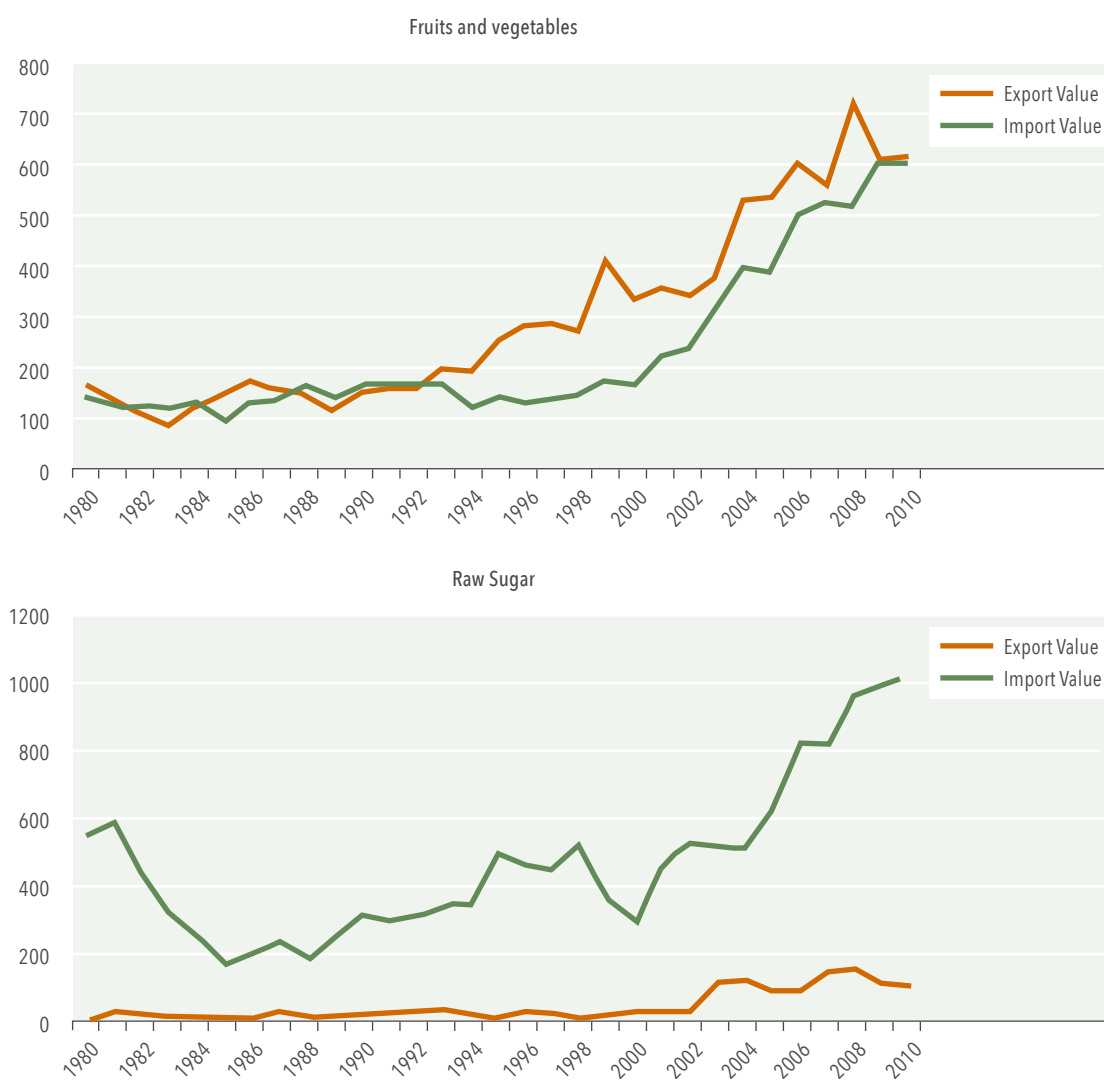
Appendix Figure A4.1 Aggregate trade balances of West Africa with the rest of the world (continued).

Value of Imports and Exports (million US\$), 1980 -2010



Appendix Figure A4.1 Aggregate trade balances of West Africa (continued)

Value of Imports and Exports (million US\$), 1980 -2010



Source: Based on FAOSTAT data.

Appendix Table A4.1 Evolution of SSRs for cereal commodities by country

	Year	Cereals Total	Maize	Millet	Rice	Sorghum
Benin	1986-90	86.0	100.0	100.0	7.1	113.0
	1996-00	91.9	106.9	100.0	21.6	104.9
	2006-10	84.6	107.3	112.4	19.3	105.7
Burkina Faso	1986-90	91.5	86.1	99.5	29.7	98.6
	1996-00	91.6	100.2	99.9	25.7	100.1
	2006-10	96.8	108.7	102.9	34.1	104.8
Cape Verde	1986-90	14.9	26.0	0.0	0.0	0.0
	1996-00	11.2	21.3	0.0	0.0	0.0
	2006-10	6.8	25.7	0.0	0.0	0.0

Source: Based on FAOSTAT data.

Appendix Table A4.1 Evolution of SSRs for cereal commodities by country (continued)

	Year	Cereals Total	Maize	Millet	Rice	Sorghum
Côte d'Ivoire	1986-90	61.0	103.3	96.7	51.9	78.9
	1996-00	57.1	101.6	99.5	43.9	80.8
	2006-10	48.3	96.8	100.0	34.1	79.2
The Gambia	1986-90	53.0	93.9	102.7	21.1	100.0
	1996-00	43.7	87.7	100.0	13.0	100.0
	2006-10	61.8	120.5	107.2	21.4	110.1
Ghana	1986-90	79.9	98.4	100.0	36.5	97.0
	1996-00	77.9	97.8	100.0	38.0	98.6
	2006-10	74.7	106.4	100.0	28.7	101.3
Guinea	1986-90	69.2	99.2	100.0	66.5	100.0
	1996-00	77.2	97.7	100.0	77.2	100.0
	2006-10	85.7	106.4	105.4	79.7	100.0
Guinea-Bissau	1986-90	65.9	95.6	100.0	60.1	96.8
	1996-00	63.7	89.6	100.0	53.2	100.0
	2006-10	62.2	88.7	100.0	52.8	107.5
Liberia	1986-90	61.4	0.0	0.0	64.7	0.0
	1996-00	40.7	6.2	0.0	63.0	0.0
	2006-10	32.4	0.0	0.0	39.0	0.0
Mali	1986-90	94.9	93.1	103.4	75.0	103.9
	1996-00	95.8	104.6	101.1	84.9	101.1
	2006-10	100.3	109.6	103.1	96.4	107.9
Mauritania	1986-90	40.9	65.9	100.0	36.1	89.8
	1996-00	26.4	96.5	76.4	37.4	92.0
	2006-10	25.3	76.3	100.0	29.2	101.3
Niger	1986-90	94.1	26.9	99.4	59.3	95.0
	1996-00	90.5	15.8	98.9	23.3	95.6
	2006-10	93.2	28.5	101.1	16.1	104.2
Nigeria	1986-90	95.1	100.2	100.3	82.6	99.3
	1996-00	88.3	99.2	100.6	64.3	101.1
	2006-10	83.2	101.2	102.0	56.4	100.4
Senegal	1986-90	61.5	86.6	95.6	22.0	82.2
	1996-00	48.9	65.7	99.8	11.8	94.3
	2006-10	51.8	89.1	100.0	24.2	96.2
Sierra Leone	1986-90	68.4	80.8	100.0	70.7	100.0
	1996-00	53.9	36.5	100.0	62.3	100.0
	2006-10	72.0	74.9	100.0	80.3	100.0
Togo	1986-90	85.2	101.7	100.0	32.5	97.6
	1996-00	88.0	103.1	100.0	50.3	100.0
	2006-10	94.3	114.0	100.0	44.5	103.9
West Africa	1986-90	87.7	98.5	100.0	61.6	98.9
	1996-00	83.3	98.2	100.1	54.9	100.5
	2006-10	81.4	102.4	101.9	51.8	101.7

Source: Based on FAOSTAT data.

Appendix Table A4.2 Evolution of SSRs for selected non-cereal commodities by country

	Year	Beef & Veal	Eggs	Milk Equivalent	Oilseeds	Palm Oil	Poultry Meat	Pulses
Benin	1986-90	100.0	99.9	66.4	167.8	111.6	86.2	99.7
	1996-00	100.0	99.3	43.7	244.1	134.5	26.9	99.6
	2006-10	99.7	99.8	42.6	116.8	143.0	22.6	99.8
Burkina Faso	1986-90	100.0	99.8	67.5	118.6	0.0	100.0	100.9
	1996-00	100.0	100.0	80.6	127.6	0.0	99.9	99.4
	2006-10	100.0	100.0	85.9	142.4	0.0	99.8	100.8
Cape Verde	1986-90	91.9	98.9	26.5	61.4	0.0	98.4	82.9
	1996-00	85.3	94.1	31.3	38.3	0.0	53.8	46.4
	2006-10	67.3	94.1	32.8	94.3	0.0	8.3	44.5
Côte d'Ivoire	1986-90	59.5	99.7	8.5	100.6	152.0	87.2	92.0
	1996-00	96.8	99.5	18.8	101.4	128.7	92.0	97.2
	2006-10	82.7	99.3	22.4	108.7	140.8	95.5	92.0
The Gambia	1986-90	100.0	77.8	32.7	135.0	100.0	100.0	100.0
	1996-00	99.8	41.6	29.1	123.2	64.5	36.8	89.2
	2006-10	98.9	34.3	14.1	121.1	7.1	19.2	88.9
Ghana	1986-90	100.0	99.6	43.1	108.7	101.9	78.7	98.5
	1996-00	91.0	99.4	40.9	118.0	105.8	55.8	99.9
	2006-10	78.5	99.9	19.0	114.7	62.9	26.7	83.1
Guinea	1986-90	100.0	100.0	74.7	102.6	100.0	85.0	100.0
	1996-00	100.0	100.0	73.7	108.3	97.1	85.8	96.0
	2006-10	100.0	99.7	78.3	100.2	66.4	53.2	97.7
Guinea-Bissau	1986-90	100.0	100.0	73.1	142.1	103.6	95.1	97.1
	1996-00	100.0	100.0	87.2	119.1	89.8	85.9	84.7
	2006-10	100.0	100.0	83.2	97.4	58.0	62.2	73.1
Liberia	1986-90	100.0	99.8	6.4	95.5	115.9	80.7	95.4
	1996-00	100.0	73.7	12.5	100.0	112.4	71.4	24.0
	2006-10	100.0	58.0	6.9	99.7	75.2	58.5	42.6
Mali	1986-90	100.0	100.0	89.7	113.5	0.0	100.0	100.7
	1996-00	100.0	100.0	87.6	114.4	0.0	99.9	100.0
	2006-10	100.0	99.6	92.8	109.4	0.0	99.3	99.0

Source: Based on FAOSTAT data.