United States International Trade Commission

Sub-Saharan Africa: Factors Affecting Trade Patterns of Selected Industries

First Annual Report

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Abstract

This report examines factors that affected trade patterns in sub-Saharan Africa (SSA) during 2001–05. Twelve industries are discussed: nuts (primarily cashews), cocoa butter and paste, cut flowers, prepared and preserved fish, acyclic alcohols, flat-rolled steel, petroleum gases (primarily liquefied natural gas), textiles and apparel (primarily apparel), unwrought aluminum, wood veneer, financial services, and tourism services. Most industries demonstrated strong growth in the value of exports during 2001–05), ranging from a 54 percent increase in the value of prepared and preserved fish exports to a nearly 300 percent increase in the value of cashew exports. Apparel was an exception, with growth of only 13 percent. The volume of exports also grew, but at a more modest rate, ranging from 1 percent for wood veneer to 160 percent for cashews.

The Commission found that increased export values were predominantly linked to four factors common among most of the selected industries: (1) demand growth and increased prices; (2) investment in new and expanded production capacity; (3) implementation of policies to promote industrial development, whether targeted to a specific industry or applied generally to all industries; and (4) improvements in general and industry-specific infrastructure. While SSA country governments had little control over global demand and prices, in many cases, the Commission found that various policies implemented by SSA governments contributed to the growth in exports. The Commission also identified other underlying factors that contributed to the development of various industries and facilitated African exporters' ability to respond to increased demand. These factors include: (1) availability of natural resources, (2) long-standing trade agreements and tariff preference programs, (3) abundant supply of low-wage labor, and (4) regional integration. In general, increased political stability and reduced conflict also contributed to improvement in the environment for economic and investment growth.

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Executive Summary

This report examines factors affecting sub-Saharan African (SSA) trade patterns in twelve industries selected by the United States Trade Representative that have experienced significant changes in exports. The twelve industries selected for study are: nuts (principally cashews), cocoa butter and paste, cut flowers, prepared and preserved fish, acyclic alcohols, flat-rolled steel, petroleum gases (principally liquified natural gas (LNG)), textiles and apparel (principally apparel), unwrought aluminum, wood veneer, financial services, and travel or tourism services.

The Commission found that while increased demand was the predominant factor affecting export growth in the selected industries during 2001–05, a number of government policies and initiatives related to investment, infrastructure, trade agreements, and regional integration also contributed significantly. Export values for most of the selected industries increased sharply during 2001–05 and ranged from 54 percent for prepared and preserved fish to nearly 300 percent for cashews, while apparel exports increased in value by 13 percent (table ES-1). Export volumes also grew, although at a more modest rate, ranging from one percent for wood veneer to 160 percent for cashews. A summary of findings, including the shifts in SSA exports, is presented in several tables at the end of this executive summary.

Summary of Factors Affecting Trade Patterns

The Commission compared the factors contributing to increased exports across the twelve industries and found a high degree of commonality (table ES-2). Increased export values and volumes for the selected products were predominantly linked to four factors:

- demand growth and increased prices in global and key SSA export markets;
- foreign and domestic investment in new and expanded production capacity;
- government policies (domestic and foreign) promoting SSA industry development, including internal policies that created export processing zones and fostered downstream processing, as well as external policies that provided tariff preferences, such as the African Growth and Opportunity Act (AGOA); and
- improvements in general and industry-specific infrastructure.

The Commission also identified government policies implemented prior to the study period that contributed to export growth, such as regional trade agreements and preference programs of developed countries. Policies promoting regional integration further contributed to investment and economic growth. In addition, abundant, relatively low-wage labor and availability of natural resources remained fairly stable and contributed to SSA exporters ability to meet growing demand.

SSA governments can affect these factors to varying degrees. Although SSA government policies have little effect on external market factors such as increased global demand and prices, they affect investment and production decisions that allow companies to increase export volumes in response to increased global prices. Furthermore, SSA governments implemented industrial policies, improved general and industry-specific infrastructure, and implemented trade policies to promote development of export-oriented industries, all of which contributed to increased exports. The factors contributing to increased exports from

SSA countries are summarized below and details by industry are provided in table ES-3 at the end of this section.

Demand Growth and Increased Prices

Much of the increased value of exports was linked to increased prices associated with growing demand—globally and in key SSA export markets—although, in some cases, increased export volumes also contributed to increases export values. For certain products, such as prepared and preserved fish, wood veneer, and flat-rolled steel, increased prices alone accounted for most of the growth in the export value. Increased quantities and values were clearly evident for acyclic alcohols, LNG, unwrought aluminum, cashews, and cocoa butter and paste.

Increased Investment in Production Capacity

Increased investment had a significant effect on export growth in the twelve SSA industries. Although investment was often made in response to increased demand and prices, SSA governments spurred the investment environment through various policies, including the formation of export processing zones in countries such as Madagascar, Swaziland, Kenya, and Lesotho. In many instances, all or some portion of the investment was financed by foreign direct investment and/or joint-venture activity between foreign and domestic investors, whereas in others, the government invested directly, such as the Nigerian joint venture that expanded LNG facilities.

For acyclic alcohols, unwrought aluminum, LNG, and cut flowers, increased investment was concentrated in the construction of new production and processing facilities. For flat-rolled steel, petroleum gases, cashews, cocoa butter and paste, and prepared and preserved fish, new investments resulted in expanded or updated plants. With respect to services, investment was critical to the expansion and updating of hotel accommodations in countries such as Angola and in banking facilities in countries such as Uganda.

Policies to Promote Industrial Development

A number of SSA government policies boosted export growth by supporting the expansion of an industry. In the cashew industry, foreign aid agencies, supported by domestic government policies, provided networking and marketing assistance to producers and technical assistance to growers that helped the industry respond to increased demand by expanding production, facilitating trade, and repairing and reopening closed processing facilities. Government policies to promote expansion of downstream processing, such as policies limiting log exports, encouraged wood veneer production. Government policies also stimulated Nigeria's LNG production by providing incentives to capture and export natural gas that previously had been lost through natural gas flaring. Increased tourism exports were stimulated by expanded SSA government promotional efforts and advertising. SSA governments licensed foreign-owned vessels to harvest fish in off-shore exclusive economic zones to maintain supplies of raw fish to the prepared and preserved fish industry, although various sources associated this practice with risk to domestic fishermen from overfishing. Apparel exports benefited from the establishment of export processing and industrial zones.

Foreign government development policies and multilateral trade agreements played an important role in enabling some SSA countries to increase exports, and policies in place prior to 2001 contributed to the ability of exporters to respond to policy changes during

2001–05. This is particularly noteworthy in the apparel sector. For example, the MFA (which was phased out in January 2005 by the Uruguary Round ATC agreement) and the Cotonou Agreement (which gave preferential access to the EU market) played a key role in the development of the apparel industry in SSA before 2001. AGOA, especially its third-country fabric provision, contributed to SSA countries' ability to increase exports of apparel to the United States during 2001–05. Although the phaseout of the MFA quotas led to a significant drop in SSA apparel exports in 2005, SSA apparel exports benefited from bilateral quotas on various apparel exports from China in 2005.

Various agreements enabling greater regional integration contributed to several SSA countries' ability to increase exports. Increased investment in apparel production was attracted to Lesotho, Botswana, and Swaziland by benefits linked to membership in the South African Customs Union. Mozambique's participation in the South African Power Pool facilitated expansion of unwrought aluminum production by providing Mozambique's aluminum smelter with reliable low-cost electricity produced from South African coal. In turn, Mozambique is able to export excess hydroelectric power to South Africa. Côte d'Ivoire's financial services exports benefit from its membership in a regional monetary union and as host of the regional stock exchange.

Other Factors Affecting Exports

The success of some SSA governments in achieving stable, more democratic political conditions and an improved economic environment has facilitated domestic and foreign investment, thereby promoting production and export growth. The increased country risk associated with political instability drives away investors as well as tourists, and as previously indicated, the ability to attract both foreign and domestic investment was a key factor associated with expanded export opportunities.

The abundant supply of relatively low-cost labor contributed to the development of the apparel industry, as well as the prepared and preserved fish and cut flower industries in SSA. Lack of skilled labor in the petroleum industry contributed to tourism exports in Angola.

Infrastructure and transportation service improvements were especially beneficial to exports of unwrought aluminum, cut flowers, tourism, and financial services. Aluminum smelters in South Africa and Mozambique process imported alumina into aluminum ingots for export, so adequate port facilities are a key component for the industry. Expansion and upgrades of the Maputo port facilities were key in the location of a new smelter in Mozambique. Cut flower exports require timely deliveries of a highly perishable product. Upgraded airports, roads, and cold storage facilities contributed to increased SSA exports of cut flowers. Improved airport facilities and increased direct routes contributed to increased tourism exports.

Natural Resources

The availability of natural resources will only result in increased exports if governments adopt appropriate trade and development policies. The Commission identified natural resources that encouraged investment or development in most of the selected industries. Investments in new and expanded production facilities for acyclic alcohol (methanol) production in Equatorial Guinea and LNG production in Nigeria are linked to those countries' abundant supplies of natural gas. South Africa's large coal reserves contribute to its comparative advantage in the production of acyclic alcohols (n-butanol), flat-rolled steel,

and unwrought aluminum as either a direct source of inputs or as a source of inexpensive electrical energy. Climatic conditions favoring plant growth are linked to the production of cashews, cocoa beans for processing into cocoa butter and paste, and cut flowers. Abundant and unique tropical forest resources support the production of wood veneer. Abundant and well-managed fisheries, particularly in the case of tuna, are able to supply raw fish to the prepared and preserved fish industry. Tourism benefits from SSA's abundant natural beauty, cultures, and wildlife.

Table ES-1 Sub-Saharan Africa: Summary of findings for selected industries

Industry	SSA exporters experiencing significant export growth	Key markets	Leading competitors in key markets	Factors affecting increased exports	SSA export increase from 2001 through 2005
Agriculture					
Cashews	• Côte d'Ivoire • Guinea-Bissau • Benin	• India • United States • European Union • China	• India • Brazil • Vietnam	• Demand growth and price increases • Increased investment • Policies to promote the industry	Value: • $309 million • 298 percent Volume: • 275 mt • 160 percent
Cocoa butter and paste	• Côte d'Ivoire • Ghana • Guinea-Bissau • Cameroon • Nigeria	• European Union • United States • Canada • Russia • South Africa • Ukraine	• Malaysia • Indonesia • Brazil • China • European Union • Ukraine • Domestic production in certain key markets	• Demand growth and price increases • Increased investment • Policies to promote the industry	Value: • $435 million • 117 percent Volume: • 63,000 mt • 24 percent
Cut flowers	• Kenya • Uganda • South Africa • Ethiopia	• European Union • Switzerland • Japan • Norway • South Africa • United States • Russia	• Colombia • Ecuador • Israel • Netherlands • Italy	• Increased investment • Policies to promote the industry • Infrastructure improvement	Value: • $207 million • 66 percent
Prepared and preserved fish	• Seychelles • Côte d'Ivoire • Mauritius • Ghana • Madagascar • Kenya • Senegal • South Africa • Namibia	• European Union	• Thailand • Philippines • Ecuador • Domestic production in certain key markets	• Demand growth and price increases • Increased investment • Policies to promote the industry	Value: • $216 million • 54 percent Volume: • 4,000 mt • 2 percent
Mining and Manufacturing					
Acyclic alcohols	• Equatorial Guinea • South Africa	• United States • European Union • China	• Trinidad and Tobago • Venezuela • Chile • Russia • United States • Canada • Domestic production in certain key markets	• Demand growth and price increases • Increased investment	Value: • $254 million • 271 percent Volume: • 482,000 mt • 75 percent
Flat-rolled steel	• South Africa • Kenya • Tanzania	• European Union • China • South Korea • Kenya • Uganda • Tanzania • Malawi • Rwanda	• Russia • China • Japan • India • Domestic production in certain key markets	• Demand growth and price increases • Increased investment • Policies to promote the industry	Value: • $886 million • 106 percent Volume: • 94,000 mt • 5 percent
LNG	• Nigeria • Angola • Equatorial Guinea	• European Union • United States • Turkey • Ecuador • Brazil	• Algeria • Qatar • Egypt • Norway • Russia • Saudi Arabia • Trinidad and Tobago • Canada	• Demand growth and price increases • Increased investment • Policies to promote the industry	Value: • $879 million • 163 percent Volume: • 3 million mt • 52 percent

Table ES-1 Sub-Saharan Africa: Summary of findings for selected industries—*Continued*

Industry	SSA exporters experiencing significant export growth	Key markets	Leading global comp etitors in key markets	Factors affecting increased exports	SSA export increase from 2001 through 2005
Mining and Manufacturing—*Continued*					
Apparel	• Madagascar • Lesotho • Kenya • Swaziland • Botswana • Ethiopia	• United States • European Union • Canada • Mexico • South Africa	• China • Mexico • Hong Kong • India • Turkey • Romania • Bangladesh	• Tariff preferences and trade agreements • Regional integration • Monetary policy • Policies to promote the industry	Value: • $283 million • 13 percent
Unwrought aluminum	• South Africa • Mozambique	• Japan • United States • South Korea • European Union	• Russia • Australia • Domestic production in certain key markets	• Demand growth and price increases • Increased investment • Policies to promote the industry • Infrastructure improvement • Regional integration	Value: • $784 million • 64 percent Volume: • 219,300 mt • 27 percent
Wood veneer	• Gabon • Côte d'Ivoire • Ghana • Cameroon • Equatorial Guinea	• European Union • United States • China • Morocco • Romania • Canada	• Russia • Australia • China • Canada • Domestic production in certain key markets	• Demand growth and price increases • Increased investment • Policies to promote the industry • Infrastructure improvement • Regional integration	Value: • $135 million • 61 percent Volume: • 5,200 m^3 • 1 percent
Services					
Financial services	• Côte d'Ivoire • Uganda • Mauritius • Swaziland		• United Kingdom • United States • Luxembourg • Switzerland • Domestic suppliers	• Demand growth related to increased merchandise trade • Increased investment • Policies to promote the industry • Infrastructure improvement • Regional integration	Value: • $140 million (1999 to 2003) • 230 percent
Tourism	• Angola • Botswana • Cape Verde • Ethiopia • Ghana • Kenya • Mali • Mauritius • Namibia • Rwanda • Sierra Leone • South Africa • Swaziland • Tanzania • Uganda	• European Union • Other SSA • United States • Brazil	• United States • European Union (Spain, France, Germany) • Other SSA suppliers	• Demand growth and price increases • Increased investment • Policies to promote the industry • Infrastructure improvement	Value: • $5.1 billion (2000 to 2004) • 61 percent

Source: Compiled by Commission staff.

ES-2 Sub-Saharan Africa, factors affecting trade patterns, by selected industry

Factors	Agriculture and Fisheries				Mining and Manufacturing						Services	
	Cashews	Cocoa butter and paste	Cut flowers	Prepared and preserved fish	Acyclic alcohols	Flat-rolled steel	LNG	Apparel	Unwrought aluminum	Wood veneer	Financial services	Tourism
Dynamic factors (factors that changed during 2001–05 and contributed to increased exports)												
Demand growth and/or price increases	X	X	X	X	X	X	X		X	X	X	X
Increased investment	X	X	X	X	X	X	X	X	X		X	X
Policies to promote the industry	X	X	X	X			X	X		X	X	X
Infrastructure improvement			X						X		X	X
Tariff preferences								X				
Underlying factors (factors that remained relatively stable during 2001–05 and that supported industry development and are indirectly linked to increased exports)												
Natural resources	X	X	X	X	X	X	X		X	X		X
Tariff preferences			X					X				
Labor supply			X	X				X			X	X
Regional integration						X		X	X		X	

Source: Compiled by USITC staff.

Table ES-3 Sub-Saharan Africa: Summary of factors affecting increased imports, trade patterns, comparative advantage, and industry development	
Cashews	• Coordinated support effort by international development agencies, NGOs, (Nongovernmental Organizations) foreign governments, and global traders to provide technical assistance at the grower level, provide marketing assistance, and coordinate public and private investment initiatives. National governments have also partnered with business organizations and others to promote the sector. • Strong global demand.
Cocoa butter and paste	• Growth in global demand and increased prices. • Increased capacity to process cocoa beans into paste and butter, probably driven by strong global demand and government policies designed to encourage downstream processing. In Ghana, a relatively stable business environment has prompted an increase in capacity. • Ready supply of cocoa beans for processing into paste and butter. Productivity improvements throughout the period generally yielded increased production, tempered by weather conditions. However, civil strife in Côte d'Ivoire has led to uncertainties regarding cocoa bean supplies and volatile cocoa bean prices. • Nigeria offers exemptions from taxes to encourage investment in processing.
Cut flowers	• Favorable climate, low wages relative to other developing suppliers in Latin America and Asia, and proximity to the EU market support industry development. • Preferential tariff treatment of exports to the EU market under the Cotonou Agreement and to the United States under AGOA. • Favorable investment environment, including infrastructure improvements and duty-free treatment of packaging, seeds, agrochemicals, and other inputs for flower farms in Kenya and Uganda. • A dynamic private sector environment with minimal government interference has led to the creation of large- and medium-scale companies in Kenya, which provide stability, technological leadership, a well-trained work force, and close linkages with European importers. • Status as a signatory to the International Union for the Protection of New Varieties of Plants provides the Kenyan industry with better access to new and better plant varieties. Increasingly sophisticated technology has improved productivity and the quality of the flowers, and local propagators now supply a large portion of the planting material needed by Kenyan producers. • USAID support for a cold storage facility at the airport in Uganda and subsequent shipping improvements have reduced freight rates and improved the quality and reputation of Ugandan flowers. USAID also supported the development of an active industry export association and provided technical support to facilitate new exports to the United States under AGOA.
Prepared and preserved fish	• Increased prices resulting primarily from the inability of worldwide fisheries production to keep pace with increasing global demand. • Because technology generally limits domestic fishing to in-shore waters, SSA governments are maintaining or increasing the supply of fish to canneries through licensing agreements with foreign-flaged vessels, which land their catches in SSA ports. Many SSA countries have such licensing arrangements, including Kenya, Mauritius, Ghana, and Madagascar, which have increased exports as a result. • Foreign direct investment has increasingly provided capital to build and efficiently operate onshore canneries and other processing facilities, particularly in Kenya, Ghana, Seychelles, and Mauritius.

Table ES-3 Sub-Saharan Africa: Summary of factors affecting increased imports, trade patterns, comparative advantage, and industry development—*Continued*	
Acyclic alcohols	• Growth in global demand for methanol and n-butanol. • Increase in SSA production capacity with opening of two major production facilities–one producing n-butanol in South Africa and one producing methanol in Equatorial Guinea. Both facilities take advantage of natural resource endowments (coal in South Africa and natural gas in Equatorial Guinea) to supply low-cost feedstocks in acyclic alcohol production. • Increase in the global price of acyclic alcohols due largely to the increased cost of crude oil and natural gas used as feedstocks and as energy sources in acyclic alcohol production.
Flat-rolled steel	• Growth in global and East African demand. • Increase in the global price of steel, reflecting increased costs for raw materials, particularly nickel used in stainless steel production. • Increased production capacity in South Africa, the major SSA exporter, as well as in Kenya and Tanzania.
LNG	• Strong global demand for natural gas and higher global prices in response to the increased demand. • Increased liquefaction and transport capacities in Nigeria, by far the largest SSA producer and exporter of petroleum gases. • Nigerian government policies aimed at diversifying the country's energy sector away from a reliance on oil to one based on both oil and natural gas. Policies include those to eliminate natural gas flaring by 2008 and to stimulate natural gas investment and commercialization.
Apparel	• U.S. trade preferences under the African Growth and Opportunity Act (AGOA), which has a third-country fabric provision. The EU also offers trade preferences under the Cotonou Agreement, but they are more restrictive. • Firms constrained by the Multi-Fiber Arrangement (MFA) established production facilities in SSA. • Abundant, inexpensive supply of labor for the relatively labor-intensive, cut-make-trim part of the production process common in SSA. • Membership in the Southern African Customs Union facilitated exports from Botswana, Swaziland, and Lesotho, attracting increased investment in apparel production facilities. • Export processing zones (EPZs) and industrial zones encouraged apparel investment. EPZ incentives vary by country but generally include duty reductions on fabric and inputs, capital investments, and tax holidays. Industrial zones are similar but generally do not require that products be exclusively for export. • Other SSA government incentives in the sector include provision of factory shells, preferential access to land, tax holidays for investors, preferential financing, rebates on machinery used in the production process, technical assistance, and infrastructure improvements.
Unwrought aluminum	• Strong global demand and increased prices resulting from the higher global demand. • Increased smelting capacity in South Africa and Mozambique, the primary SSA exporters of unwrought aluminum. Both countries possess the necessary combination of port access and access to an abundant, low-cost supply of electricity, which accounts for nearly 30 percent of production costs. South Africa uses its coal to generate low-cost electricity. Mozambique has an excess supply of hydro electric power and also uses South African electricity.

Table ES-3 Sub-Saharan Africa: Summary of factors affecting increased imports, trade patterns, comparative advantage, and industry development—*Continued*

Wood veneer	• Higher global prices for veneer and rising ocean freight rates increased the value of exports. • Shift in product mix of exports to include higher-valued veneer, particularly from Ghana. • Increased demand from Asia to supply its expanding furniture industry and from the United States in response to a disruption in its supply of mahogany from Latin America. • Ready supply of forest resources, including indigenous hardwood species that are particularly suitable for high-value end uses and are not available in other parts of the world. • SSA countries are developing supplies of certified wood products in response to growing demand. Wood products firms in Cameroon, the Republic of Congo, and Ghana are developing products to meet the requirements of an international certification scheme, the Forest Stewardship Council certification. • Government policies supporting veneer production include the development of new forest regulation and policies designed to encourage further local value-added processing of forest resources.
Financial services	• Increased merchandise trade has increased the demand for trade financing. • Increased investment in local branches by regional and multinational financial services companies. • Reform of government policies related to firm governance have contributed to increased investment in local branches. • Availability of highly educated workforce in selected SSA countries facilitates expansion of financial services offerings. • Regional integration promotes increased intra-regional trade in financial services, particularly in West Africa and Côte d'Ivoire.
Tourism	• Increased political stability and the associated decline in conflict helped increase demand for travel services in SSA. • Increased investment in new and refurbished hotel accommodations. • The natural sites, cultural sites, and wildlife attract tourists to SSA. • Government policies to increase promotion and advertising, which increased tourist arrivals. • Increased demand for business travel by multinational companies importing skilled labor that does not exist locally such as in the petroleum industry in Angola. • Improved airports and increased levels of direct flights increase SSA's accessability.

Source: Compiled by USITC staff.

CHAPTER 1
Introduction and Overview

The purpose of this report is to provide information on competitive factors affecting selected industries in sub-Saharan Africa (SSA) that have experienced significant shifts in exports.[1] This report identifies the leading SSA exporters, their key markets, and their global competitors; describes industry and market conditions; and identifies, describes, and analyzes factors that have contributed to significant changes in export growth and trade patterns in the selected SSA industries for the most recent five-year period for which data are available. In addition, the report includes brief overviews of the trends in SSA exports for the agriculture (including fisheries), mining and manufacturing, and services sectors.

Industry and Country Coverage

This report analyzes twelve SSA industries selected by the United States Trade Representative (USTR). USTR selected cut flowers, cocoa butter and paste, nuts, and prepared and preserved fish in the agriculture and fisheries sector; acyclic alcohols, unwrought aluminum, textiles and apparel, petroleum gases, flat-rolled steel, and wood veneer from the mining and manufacturing sector; and tourism and financial services for analysis in the services sector. For each industry, trade data were used to narrow the focus of the analysis to those countries within SSA that demonstrated substantial or consistent export value growth from 2001–05.[2]

Information Used in the Report

Merchandise trade data throughout this report, unless otherwise indicated, were obtained from Global Trade Information Systems, Inc.'s (GTIS) Global Trade Atlas database.[3] Industry sectors were defined based on 4-digit harmonized system (HS) classifications

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[1] On July 27, 2006, the Office of the United States Trade Representative (USTR) requested that the U.S. International Trade Commission (Commission) prepare three annual reports under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) addressing factors affecting trade patterns of selected industries in sub-Saharan Africa. This report is the first in that series. The USTR requested that the Commission submit its report by April 3, 2007. A copy of the request letter is included in app. A, and the Commission's notice of investigation, published in the *Federal Register* of August 29, 2006 (71 F.R. 51212), is in app. B.

[2] As in previous Commission reports and as defined by the World Bank, sub-Saharan Africa consists of the following 48 countries: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Republic of the Congo, Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Mali, Malawi, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

[3] *Global Trade Atlas* was the primary source of trade data for this report. Most data were collected as of August 29, 2006; however, GTIS periodically updates its database and certain values were updated at later times. All data are reported as nominal values unless otherwise indicated. Internal European Union trade was excluded. Throughout this report, references to the European Union (EU) refer to the EU25: Austria, Belgium, Cyprus, the Cyech Republic, Denmark Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lotvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

(appendix table D-1). To minimize the effect of incomplete trade data from SSA countries, the data presented for exports in this report represent the value of apparent exports rather than actual reported exports. That is, as import data are generally considered more reliable than export data, and export data from a number of SSA countries was limited, export trade values were derived by aggregating import data values (including insurance and freight) from all countries reporting to GTIS.[4] Furthermore, complete and reliable 2005 data for some industry sectors (e.g., financial services and steel) were not readily available.

Services industry definitions were based on the International Monetary Fund's (IMF) *Balance of Payments Manual.* Services sector data were compiled from various sources, including the IMF's *Balance of Payments Manual*, the United Nations World Tourism Organization's (UNWTO) *Yearbook of Tourism Statistics*, and the World Trade Organization's (WTO) *International Trade Statistics 2006.*

In addition to the trade data described above, information for this report was collected from a variety of industry and government sources, including domestic and foreign industry representatives; international organizations, including the WTO, the World Bank, the Food and Agricultural Organization (FAO) of the United Nations, and the IMF; U.S. and foreign government sources, including U.S. embassies in SSA countries and SSA countries' embassies in the United States; and submissions of interested parties. In addition, a team of Commission analysts traveled to Ethiopia, Kenya, and Tanzania to meet with local industry and government officials to gather data and information not readily available elsewhere.

Approach

The approach employed by the Commission to identify factors that affected trade patterns and increased exports in the selected industries included several steps. First, the Commission analyzed export data in the selected industries to determine whether changes in exports over the most recent five-year period primarily reflected changes in prices or changes in quantity. Second, examination of data was combined with information gathered from domestic and foreign industry and government sources, as well as international organizations, to identify factors that were related to demand and supply conditions affecting each selected industry. For example, factors relating to demand include growing global demand and changes in tariff preferences extended to the respective SSA countries in world markets. Examples of factors relating to supply include increased investment leading to increased capacity and changes in domestic government policies, such as tax policies, or infrastructure improvements.

The process used by the Commission to identify various factors that affected trade patterns and export changes is consistent with the process used by Redding and Venables; Fugazza; and Damijan, Fejančič, and Rojec in recent studies evaluating the determinants of regional export performance.[5] These studies decomposed total export performance into an external component, which they called "foreign market access," and an internal component, which they called "supplier capacity." The external component evaluated by these studies was based on data related to factors such as foreign demand, foreign market access, entry

[4] Import valuation for most countries reporting to GTIS is based on the cost, insurance, and freight, or C.I.F. value alt though this approach provided the broadest set of data, introduction of insurance and freight into the export values may cause additional variation. For example, increased freight costs associated with increased fuel costs over the period will also show up as increased exports.

[5] Redding and Venables, "Geography and Export Performance"; Fugazza, "Export Performance and Its Determinants"; and Damijan, Fejančič, and Rojec, "Growing Export Performance of Transition Economies."

conditions, and a country's location via-a-vis international markets. The internal component evaluated by these studies was based on data related to factors such as supply capacity, domestic policy variables, size of internal markets, internal geography, input prices, public investment in transportation infrastructure, institutional development, and technology. The studies evaluated determinants of trade performance on both a regional and country-specific basis.

Redding and Venables found that from 1970 to 1997, factors related to foreign market access were the greatest contributor to increased export performance in the SSA region, though some individual countries did demonstrate significant growth in exports related to supplier capacity.[6] Fugazza found that foreign market access made a positive contribution to export growth during 1988–95, while supply capacity growth made a positive contribution to export growth during 1992–09.[7] The Commission's finding that external factors related to increased global demand and prices contributed substantially to SSA export growth during 2001–05 was generally consistent with Redding and Venables, and Fugazza, who found that external factors related to foreign market access were the primary contributors to SSA countries' export performance during the periods they observed.[8]

The sources of data for this report include public sources of export data, telephone interviews, and e-mail correspondence with domestic and foreign industry representatives, as well as information from U.S. Embassy personnel via State Department cables. As noted, foreign travel was also undertaken to Ethiopia, Kenya, and Tanzania, where Commission staff met with government and industry representatives. The relative diversity of exports from this subset of countries allowed the Commission to obtain primary research information for several industries. In Kenya, Commission staff visited cut flower operations and apparel operations and met with cashew and flat-rolled steel industry representatives, as well as a number of association representatives at the Export Promotion Council. In Tanzania, Commission staff met with cashew industry representatives; Confederation of Tanzania Industries officials; Ministry of Industry, Trade, and Marketing officials; Tanzania Investment Centre officials; and representatives of the Tanzania Tourist Board; as well as visited the Urafiki textile mill. In Ethiopia, Commission staff met with Ministry of Trade and Industry officials, Ministry of Culture and Tourism officials, United Nations Economic Commission for Africa officials, and a number of representatives from the apparel and cut flower industries.

The factors identified in this report are not an exhaustive list and are not ranked according to significance. Any level of relative significance suggested in the report is based on the information gathered and is not the result of any statistical analysis, which was beyond the scope of this study.

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[6] Redding and Venables, "Geography and Export Performance," 21 and 30-31.
[7] Fugazza, "Export Performance and Its Determinants," 17.
[8] Ibid., 23; Redding and Venables, "Explaining Cross-Country Export Performance," 8.

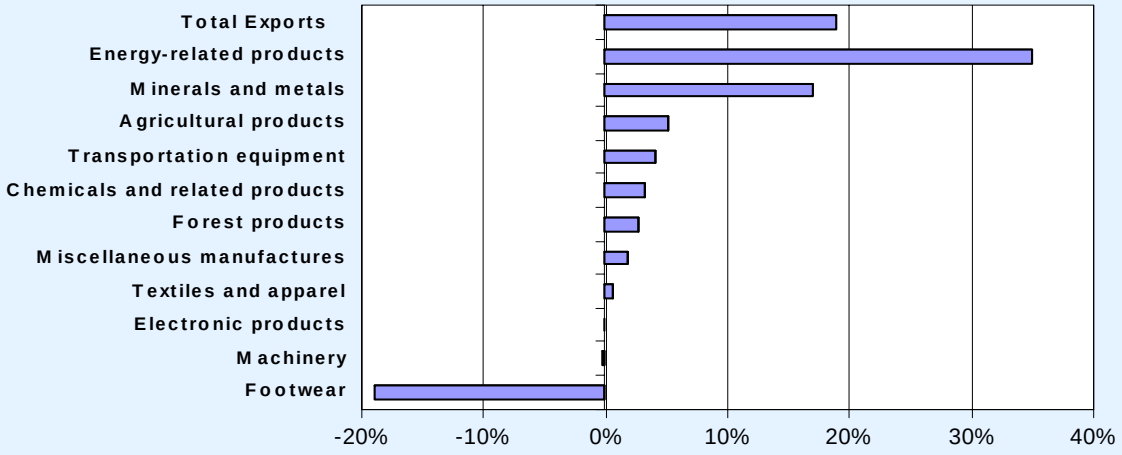
Organization of Report

The remainder of chapter 1 provides an overview of SSA sector exports and a summary of the report's findings. Chapter 2 discusses the selected agriculture (including fisheries) industries. Chapter 3 profiles the selected mining and manufacturing industries, and chapter 4 discusses the selected services industries.

Overview of SSA Sector Export Trade

After years of conflict and sluggish real economic growth, measuring just 2.4 percent on average during the 1990s, beginning in 2001 SSA registered its best economic performance since 1980.[9] Region-wide real Gross Domestic Product (GDP) grew at an average annual rate of 4.6 percent from 2001 through 2005, and is estimated to have grown at an annual rate of 5.8 percent during 2006.[10] Increased exports have helped fuel this economic growth, and from 2001–5, the value of merchandise exports from SSA increased by nearly 19 percent annually (figure 1-1).[11] By comparison, global exports increased by 14.3 percent annually over the same period.[12] The mining and manufacturing sector has increasingly dominated SSA's merchandise exports, accounting for 89 percent of the total (not including special provisions) in 2005. Although much smaller on an absolute basis, SSA services exports also increased significantly, growing by 68 percent from 2001–04.

Figure 1-1 Sub-Saharan Africa merchandise exports: Average annual growth rates by commodity sector, 2001–05



Source: GTIS, *Global Trade Atlas* , annual data compiled from reporting countries' official statistics, including EU external trade.

[9] International Monetary Fund, *World Economic Outlook Database.*
[10] Ibid.
[11] World Bank, *Africa Development Indicators 2006.*
[12] IMF, *World Economic Outlook*, 218.

Agriculture

Despite decreasing by 5.3 percent, from $20.9 billion in 2004 to $19.8 billion in 2005, the total value of agricultural sector (including fishery) exports was still 20.7 percent greater in 2005 than it was in 2001 (average annual growth of 5.2 percent). Growth in export value in agriculture lagged significantly behind the growth in mining and manufacturing. As a result, the share of SSA merchandise exports accounted for by agriculture fell from 16.3 percent of the total value of merchandise exports in 2001 to 11.3 percent in 2005. Furthermore, SSA export growth in the agricultural sector lagged behind growth in global trade in agriculture, which increased by 33.2 percent during the same period.[13] Seven SSA agricultural sectors each generated total export earnings of more than $1 billion in 2005: cocoa and cocoa preparations, fruits and nuts, fish, coffee and tea, cotton, tobacco, and sugar. These seven sub-sectors accounted for 74 percent of all SSA agricultural exports.

Four SSA agricultural industries are discussed in chapter 2. Ranked by 2005 export value they are: cocoa butter and paste, nuts, cut flowers, and prepared and preserved fish. From 2001–05, SSA exports in each of these industries grew by more than $100 million.

Mining and Manufacturing

Growth in mining and manufacturing exports was strong during 2001–05; however, it was concentrated in energy-related products and minerals and metals, which grew at average annual rates of 35 and 17 percent, respectively by value (figure 1-1). SSA exports of energy-related products grew nearly 140 percent by value during 2001–05, reflecting increased world petroleum prices as well as increased volume (table 1-1). Similarly, SSA exports of minerals and metals increased by 68 percent from 2001–05 as strong global demand increased the volume of exports and fueled higher prices for items such as gold, aluminum, steel, and copper. SSA exports of all other commodities in the mining and manufacturing sector rose just 9 percent from 2001–05.

Six industries in the SSA mining and manufacturing sector are analyzed in chapter 3. Ranked by 2005 export value, they are textiles and apparel, natural gas, unwrought aluminum, flat-rolled steel, veneer sheets, and acyclic alcohols. Exports increased significantly in five of the six sectors from 2001–05, with increases ranging from 61 to 271 percent. The one exception was textiles and apparel, which increased by 13 percent.

Services

Services exports represented about 15 percent of total SSA exports during 2001–04 (table 1-1).[14] The value of services exports increased irregularly during 2000–04. Services data were not completely available for 2005 (table 1-2). From the low of $14.9 billion in 2001, services exports increased by 68 percent to $25.0 billion in 2004. Although the value of all types of services increased during 2000–04, the value of each type of service did not increase at the same rate. As a result, the distribution among the types of services changed

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[13] GTIS, *Global Trade Atlas*, reporting countries' imports from around the world.

[14] "Services" refers to commercial services as defined by the IMF and consist of transportation, travel and tourism, and other services; other services include communications, construction, insurance, financial, computer and information, royalties and license fees, and other business services.

Table 1-1 Sub-Saharan Africa merchandise and services exports: Value by sector, 2001–05

Industry sector	2001	2002	2003	2004	2005
	Million dollars				
Merchandise exports:					
Energy-related products	38,348	36,232	47,695	66,786	91,747
Minerals and metals	23,995	23,230	27,518	35,693	40,311
Transportation equipment	5,280	4,867	6,333	6,742	6,137
Chemicals and related products	3,995	4,005	4,165	4,594	4,466
Forest products	3,889	3,701	4,036	4,423	4,308
Textiles and apparel	2,949	2,859	3,342	3,573	3,027
Machinery	2,480	2,184	2,262	2,603	2,446
Electronic products	1,208	1,084	1,130	1,239	1,207
Miscellaneous manufactured products	900	944	1,060	1,126	967
Footwear	102	89	58	53	25
Sub-total mining and manufacturing	83,146	79,195	97,599	126,832	154,641
Agricultural products (including fishery products)	16,386	17,280	20,079	20,883	19,783
Total merchandise exports	99,492	96,475	117,676	147,716	174,426
Total services exports	14,851	16,006	21,679	24,963	n/a
Total exports	114,343	112,481	139,355	172,679	n/a
	Percent				
Merchandise exports as a percent of total trade	87	86	84	86	n/a

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade and WTO International Trade Statistics 2006.

Table 1-2 Sub-Saharan Africa commercial services exports: Value by country, 2000–04

Country	2000	2001	2002	2003	2004
	Million dollars				
Total Africa	31,300	31,300	33,300	42,100	50,700
Total Sub-Saharan Africa	15,033	14,851	16,006	21,679	24,963
South Africa	4,888	4,533	4,578	7,722	8,772
Nigeria	1,833	1,653	2,524	3,473	3,336
Mauritius	1,066	1,218	1,146	1,274	1,449
Kenya	727	793	737	832	1,150
Tanzania	575	646	615	659	845
Other Sub-Saharan African countries	5,944	6,008	6,406	7,719	9,411

Source: WTO International Trade Statistics 2006.

over the period. Travel or tourism services accounted for 50 percent ($12.5 billion) of all SSA services exports in 2004, an increase from 41 percent ($6.2 billion) in 2000.[15] Transportation services accounted for 20 percent of all services exports in 2004, but this represented a decrease from 23 percent in 2000. All other services (including communications, construction, insurance, financial, computer and information services) decreased from 33 to 28 percent of all services exports during 2000–04.

Services exports from SSA are concentrated in the five leading exporters (South Africa, Nigeria, Mauritius, Kenya, and Tanzania), which accounted for $15.5 billion in services exports, representing 62 percent of all SSA services exports (table 1-2). Among these top SSA services exporters, levels of the types of services exported varied. In 2005, for example,

[15] WTO, *Statistical databases*, Travel services will hereafter be referred to as tourism.

tourism services dominated the services exports from South Africa (74 percent) and Tanzania (71 percent).[16] Other services (including communications, construction, insurance, financial, computer, and information services) dominated the services exports from Nigeria (79 percent) in 2005. For Mauritius, tourism (55 percent) and transportation (24 percent) services accounted for most of the services exports in 2005. In Kenya, services exports were divided between transportation services (49 percent) and tourism services (43 percent) in 2005. Tourism services and financial services are discussed in detail in chapter 4.

[16] WTO, *Statistical Databases*.

CHAPTER 2
Agriculture and Fisheries Industry Sector Profiles

The value of agricultural and fisheries exports from sub-Saharan Africa (SSA) grew moderately from 2001–04, before decreasing in 2005. Agriculture and fisheries exports decreased as a share of the total value of SSA exports because the value of mining and manufacturing exports grew at a much greater rate than agriculture and fisheries exports. The increased value of exports was generally driven by increased prices, although the quantity of cashew exports increased substantially as well. The following tabulation summarizes dynamic factors that contributed to increased exports and underlying factors that contributed to industry development in the agriculture and fisheries sector.

Factors	Cashews	Cocoa butter and paste	Cut flowers	Prepared and preserved fish
Dynamic factors (factors that changed during 2001–05 and contributed to increased exports)				
Demand growth and/or price increases	X	X	X	X
Increased Investment	X	X	X	X
Policies to promote the industry	X	X	X	X
Infrastructure Improvement			X	
Underlying factors (factors that were relatively stable during 2001–05)				
Natural Resources	X	X	X	X
Tariff Preferences			X	
Labor supply			X	X

Cashews[1]

Summary of Findings

SSA producers account for approximately one-quarter of the value of global trade in cashews, mainly in the unprocessed, in-shell form. The value of SSA cashew exports increased by nearly 300 percent during 2001–05, while export volumes also increased

[1] HTS subheading 0801 includes coconuts, Brazil nuts, and cashew nuts. The positive shift in SSA exports for the category, almost 300 percent by value, was driven mainly by cashews. Brazil nuts are not produced in Africa, and exports of coconuts remained steady throughout the period. During the 2001–05 period, the volume of coconut exports by Côte d'Ivoire, the only SSA exporter of significance, fluctuated downward slightly to approximately 15,500 metric tons while unit values increased slightly so that total value began and ended the period at $7.2 million. This section, therefore, covers cashews only.

steadily (table 2-1). In-shell cashew exports increased at a faster rate than shelled nuts exports—161 percent and 59 percent, respectively.

Table 2-1 Sub-Saharan Africa cashew exports, by selected exporters and key markets, 2001–05

Exporters	Key markets		Exports 2001	2002	2003	2004	2005	Percent change 2001–05
Côte d'Ivoire	**India**	*1,000 dollars*	19,701	49,410	46,062	80,427	114,334	480
		Metric tons	38,685	85,987	77,802	117,685	138,151	257
	USA	*1,000 dollars*	382	300	0	0	253	-34
		Metric tons	120	104	0	0	58	-52
	EU	*1,000 dollars*	1,170	239	62	32	25	-98
		Metric tons	331	73	25	5	5	-98
	All other	*1,000 dollars*	229	612	957	47	78	-66
		Metric tons	62	< 0.5	6,264	1,418	16	-74
	Total	*1,000 dollars*	21,483	49,950	47,081	80,505	114,690	434
		Metric tons	39,198	86,164	84,091	119,108	138,230	253
Guinea-Bissau	**India**	*1,000 dollars*	9,648	47,071	51,536	68,388	93,064	865
		Metric tons	16,897	62,319	70,841	81,444	89,078	427
	EU	*1,000 dollars*	8	103	126	389	1	-88
		Metric tons	2	39	43	81	1	-50
	USA	*1,000 dollars*	0	0	49,389	249,696	43,891	n/a
		Metric tons	0	0	12	70	25	n/a
	All other	*1,000 dollars*	0	0	0	0	0	n/a
		Metric tons	0	0	0	0	0	n/a
	Total	*1,000 dollars*	9,656	47,174	51,712	69,027	93,109	864
		Metric tons	16,899	62,358	70,896	81,595	89,104	427
Benin	**India**	*1,000 dollars*	7,956	21,255	30,419	35,075	49,830	526
		Metric tons	15,093	35,690	47,084	48,611	55,215	266
	China	*1,000 dollars*	41	37	0	0	0	-100
		Metric tons	206	184	0	0	0	-100
	EU	*1,000 dollars*	330	24	0	0	0	-100
		Metric tons	102	11	0	0	0	-100
	All other	*1,000 dollars*	92	4	2	0	0	-100
		Metric tons	205	0.5	2	0	0	-100
	Total	*1,000 dollars*	8,419	21,320	30,421	35,075	49,830	492
		Metric tons	15,606	35,885	47,086	48,611	55,215	254
Sub-Saharan Africa	**Total**	*1,000 dollars*	104,027	2,100,275	253,851	344,420	413,828	298
		Metric tons	171,990	3,233,775	390,304	439,714	446,513	160

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

Cashew-processing (shelling) industries have traditionally been small or nonexistent in most SSA producing countries, and shelled cashew exports accounted for only 1-2 percent of the volume of total cashew exports during 2001–05.[2]

In the last five years, international attention has focused on the development of the cashew

[2] East African cashew industries, which currently process approximately 20 percent of cashew production, have made more strides than their West African counterparts with regard to processed kernels.

sector as a driver for economic growth in the SSA region. The increase in exports of shelled cashews, although relatively small, reflects national and international efforts to promote cashew processing in SSA in order to capture more of the downstream value for the domestic cashew industry. The efforts of international aid agencies, foreign governments, traders, and marketers have led to increased technical assistance at the grower level, public and private investment in new or refurbished processing facilities with investor oversight, and networking and marketing assistance for SSA producers. These efforts and the increasing global consumption of cashews are the key factors contributing to SSA export growth.

Industry Overview

Cashew production in SSA is highly dispersed; more than five million small-scale farmers in more than a dozen countries produce cashews.[3] In the largest producing countries, up to two-thirds of the population may depend on cashews for their livelihood, and holdings can range from a few trees to a few acres per farmer. In some countries, such as Mozambique, cashew production is an important component of GDP (Gross Domestic Product); and taxes on export earnings are an important revenue stream for the national government. However, in most of Africa, tree productivity is less than one-third of its potential; and a dearth of processing facilities allows producers access to only the lowest-value portion of the production chain—raw in-shell nuts, which garner less than 10 percent of the value of shelled kernels.[4] The most productive age span for a cashew tree is five to twenty-five years, but many trees in SSA are over forty years old, contributing to low productivity.[5] Furthermore, farmers generally do not use fertilizers or pest control products, tree pruning is rare, and nuts are collected for harvest after they have fallen to the ground.

Marketing has traditionally been informal, characterized by few linkages between producers and buyers. Currently, SSA producers of in-shell nuts rely primarily on a single export market, India. The highly competitive Indian processing industry is the dominant global buyer of in-shell nuts. Indian processors imported more than 99 percent of global export volumes in 2005.[6] Typically, Indian buyers' representatives in SSA countries make offers on in-shell product based on global supply-and-demand conditions. Inconsistent SSA supplies, due to the small size and disorganization of SSA growers, contribute to volatile prices at the grower level.[7] Some national growers' organizations exist in the region but, until recently, have been characterized as only loosely organized, not involved in quality training, and not providing information on global market prices. For this reason, farmers generally have had a limited ability to make informed decisions on the timing and price of sales.[8] While relatively lower in-shell prices for SSA cashews may provide some advantage, the irregular quality of SSA cashews has decreased customer loyalty.

Processing, where it exists, is primarily home-based (box 2-1). Some SSA farmers have made home-based processing work by using pruned tree branches, shells, and pieces of testa

[3] TechnoServe, "Tanzania Cashew Industry."
[4] Ibid.
[5] Interview by Commission staff, Dar es Salaam, Tanzania, December 8, 2006.
[6] GTIS, *Global Trade Atlas.*
[7] Azam-Ali and Judge, *Small-scale Cashew Nut Processing.*
[8] U.S. Department of State, U.S. Embassy, Dakar, "Guinea-Bissau 2418B."

Box 2-1 Product Description for Cashews

Cashews are generally viewed as a high-value, luxury commodity, although of all edible nuts produced in the world, cashews are the second largest industry after peanuts. Cashews compete in the same market as other edible nuts, and demand for them is rising due to improved quality and consumer interest in the health benefits associated with nuts. Cashew trees flourish near the equator in the extreme heat of the tropics.[1] Nuts grow as a kidney bean-shaped leathery appendage on the bottom of the fruit of the cashew tree. When the ripe fruit falls to the ground, it is collected by harvesters, who then separate soft cashew shells from the fruit. The cashew nuts are washed in water and stored hydrated, during which time the kernels absorb moisture making them less likely to scorch or crack during the subsequent roasting and shelling process. Most SSA cashew production is exported in-shell because shelling and further processing do not generally take place in SSA countries.

Processing cashew nuts consists of removing the shells and the inner brown skin (testa) covering the kernel and is complicated by the presence of a toxic resinous fluid naturally present between the kernel and the shell. The fluid is caustic, causing blistering to human skin. Small-scale production generally involves roasting cashew nuts on trays in closed ovens fitted with an exhaust pipe. Modern processing operations heat large volumes of cashew nuts in large perforated cylinders rotating above a heat source, or by submerging them in heated oil. As the cashew nuts heat, the cashew nut shell liquid (CNSL) flows from the shell and can be collected and commercially sold.[2]

Once most of the fluid is released from the shell during the heating process, nuts are cracked manually on a hard surface with a wooden mallet. Even for large-scale processing, as is done in India, nuts are cracked manually to ensure the greatest percentage of whole kernels. The liquid residue that remains in the shell is harmful to skin, and thus gloves are worn or the nuts are rolled in sawdust or ashes before cracking to absorb the harmful liquid. Considerable skill is necessary to optimize the quantity of whole kernels, because broken kernels bring a lower market price. Various mechanized systems, involving small curved knives or projection against a solid casing, can be used but results in lower whole-kernel quality.[3] Shell pieces are then separated from kernels and kernel pieces, and the kernels are graded by size, color, and whole or broken pieces. Kernels are then dried, and the testa is removed by rubbing with fingers and/or peeling with a knife. Mechanical testa removal, which can include air-blasting, suction, or rubber rollers, also results in lower whole-kernel recovery. Kernels are further graded and vacuum-packed in airtight tins flushed with carbon dioxide. One hundred metric tons (mt) of in-shell cashews is roughly equivalent to 22 mt of kernels.[4]

[1] "The Story of Cashews," retrieved from www.thenutfactory.com on August 21, 2006.

[2] CNSL is used in applications where resistance to heat, friction, or acids is paramount, such as in the manufacture of brake linings, varnish, and plastic materials. Collection of the liquid, which is a mixture of anacardic acid and cardol, in large quantities for commercial use requires special hot-oil roasting equipment.

[3] Indian manual shelling results in up to 90 percent whole kernels, while mechanized shelling yields are generally lower, in the 70-75 percent range.

as fuel for cooking and drying nuts. In some cases, former plant managers have encouraged home-based processing by purchasing and supplying small quantities of in-shell cashews to home-based shellers and then selling the shelled nuts in local and regional markets.[9] The sale of the processed nuts provides year-round employment, compared to the sale of the raw in-shell nuts, which can only take place for a few months after harvesting.[10] Some processing plants have operated sporadically for decades. Plants have shut down for lack of resources to purchase cashew stocks. Insufficient supplies linked to the limited productivity of trees contributes to inefficient operation. Over the last decade, government-run plants in some countries have become privatized, with varying success. In the last several years, new and refurbished medium-scale processing capacity has come on line as the result of international public and private initiatives.

[9] Kanji, et al., "Liberalization, Gender and Livelihoods."

[10] Azam-Ali and Judge, *Small-scale Cashew Nut Processing*.

Medium-scale cashew processing plants in SSA have typically been mechanized (by externally powered machinery) or semi-mechanized (foot- or hand-operated equipment). These methods tend to result in lower yields of whole kernels than the semi-skilled manual processing practiced in India.[11] Processing plants throughout SSA have been hindered by breakdowns of machinery, shortages of spare parts, and inefficiencies due to low nut volumes and poor shelling performance of certain grades and sizes. Some improvements have been made. For example, in Guinea-Bissau, manually operated machines once imported from Brazil are now made locally, allowing repairs or replacements to occur more quickly. However, overall low levels of processing are also attributable to the lack of financing for raw materials purchases, lack of buyers, no national export brand, no credible quality certification, and a lack of product recognition in the international market.[12] Domestic processors in SSA are generally in the difficult situation of needing to pay low prices for raw nuts, so growers hold their supplies back and wait to sell to Indian processing representatives who generally pay more. SSA producers have not generally exploited valuable cashew by-products, such as cashew nut shell liquid, due to the prohibitive cost of specialized machinery and fuel.

Rapidly increasing cashew supplies, particularly from Vietnam and SSA suppliers like Côte d'Ivoire, have contributed to decreased prices for growers in the last few years. Irregular nut quality, due to improper processing in some cases, further reduces prices. The lack of adequate local transportation infrastructure, such as ports, harbors and roadways, as well as warehousing, increases costs.[13] In addition, industry representatives report that large buyers, especially in the United States, desire larger volumes of kernels than SSA processors are currently able to supply.[14] Other factors that increase costs and constrain SSA exports to the United States include transportation costs, product certifications that vary by state, and the increased cost of compliance with new U.S. government container security initiatives.[15]

In other markets, nut producers have been able to overcome the price-depressing effects of increased supplies. Almond producers have successfully increased almond consumption and value by promoting recent international research of the health benefits of the nuts. Similar research has been done on other nuts, including cashews; additional promotion could boost consumption and prices for the cashew industry.[16] The well-established cashew processing sector of India increases revenue by producing value-added cashew by-products such as juice, wine, and jam from the cashew apple, and the cashew nut shell liquid.

Sub-Saharan Africa Trade in the Global Context

SSA countries currently account for roughly one-third of global production of raw cashew nuts. In the early 1970s, more than two-thirds of global cashew production took place in Africa, led by Mozambique and Tanzania. However, in the mid-1970s, African production began to decline due to a combination of biologic, agronomic, and socio-political factors. The decline continued steadily until the late 1980s. In addition, depressed global prices for in-shell cashews at the end of the 1970s discouraged improvement in cultivation techniques and the replanting of cashew plantations throughout Africa. Today, SSA cashew production

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[11] Ibid.
[12] Wakabi, "African Cashews to Indian Factories."
[13] *African Cashew Alliance Newsletter*,"Export of raw cashews in Guinea-Bissau."
[14] U.S. Department of State, U.S. Embassy, Nairobi, Kenya, December 7, 2006.
[15] Ibid.
[16] *African Cashew Alliance Newsletter*, "Price Trends."

is concentrated in two main regions: West Africa, led by Nigeria, Côte d'Ivoire, and Guinea-Bissau; and East Africa, led by Tanzania and Mozambique. West African production is harvested in the same period as harvests in other Northern Hemisphere producers such as India and Vietnam, while East African production competes with that of other Southern Hemisphere producers such as Brazil.[17] Traditionally, much of SSA cashew production has been shipped in-shell to India for shelling and further processing.

Leading Exporters

During 2001–05, global exports of cashews increased by 107 percent to $1.6 billion. By comparison, SSA exports grew by 298 percent to $414 million. In terms of value, the leading global exporters of cashews include India, Vietnam, and Brazil (see figure 2-1). Exports from these countries consist primarily of shelled kernels. India's leading position is facilitated by its stable production of raw cashews—between 450,000 and 470,000 metric tons (mt) annually during 2001–05—along with its large volume of raw cashew imports and large, established shelling industry. Industry reports indicate that India is currently implementing a replanting program with the intention of sourcing its in-shell nuts completely domestically in the future, possibly due to both transportation cost and traceability concerns.[18] Under such a scenario, India's demand for African in-shell product would likely diminish, providing further impetus for increased processing in SSA.

Vietnam and Brazil are the second and third largest exporters of cashew kernels, shipping 81,000 mt (valued at more than $377 million) and 38,000 mt (valued at more than $172 million) of kernels, respectively, in 2005. Vietnam produced 300,000 mt of raw cashews in 2003, well on its way to reach the goal of 450,000 mt by 2010 set by the Ministry of Agriculture and Rural Development.[19]

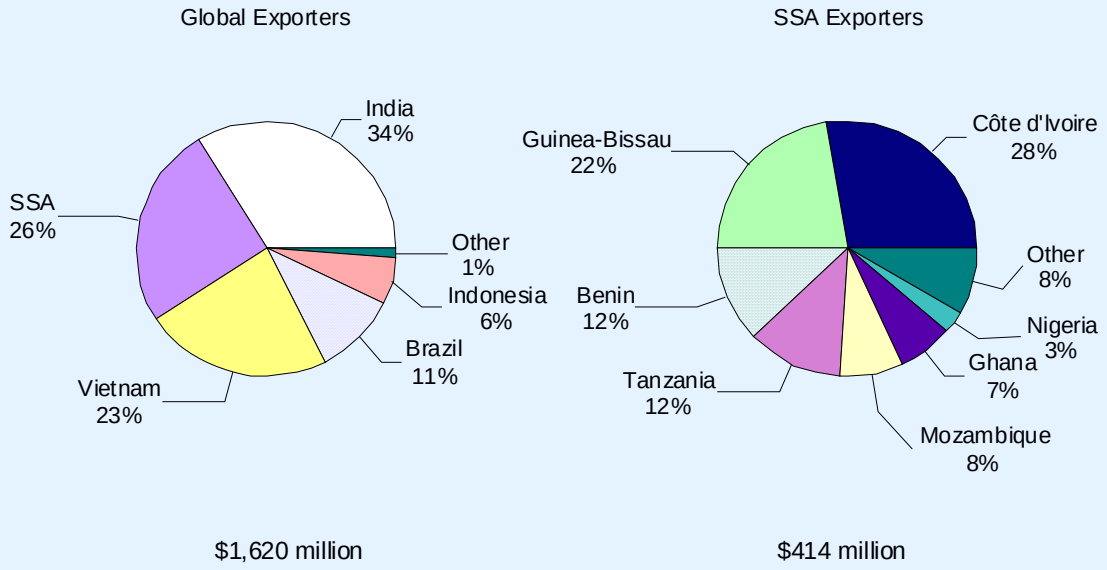
The SSA countries that experienced the largest increases in the volume of in-shell cashew nut exports from 2001–05 are Côte d'Ivoire, Guinea-Bissau, Benin, Ghana, Mozambique, Nigeria, and Gambia. Tanzania, Mozambique, and Kenya had the greatest increase of shelled cashew exports during the same period (table 2-2). Less than one percent of total SSA cashew exports were shelled in 2005. A slightly higher proportion was exported shelled in 2001 (1.3 percent). The decline in the ratio of shelled-to-in-shell exports reflects the rapid rise in exports of in-shell cashews (from about 170,000 mt to 443,000 mt) compared to shelled exports (from 2,265 mt to 3,604 mt).

[17] Northern Hemisphere crops are generally available between February and June, while Southern Hemisphere crops are available between September and January.

[18] Interview by Commission staff, Dar es Salaam, Tanzania, December 8, 2006.

[19] *Vietnam News: The Online English Daily*, "Cashew Industry to Crack Targets."

Figure 2-1 Leading global and sub-Saharan Africa exporters of cashews, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Table 2-2 Sub-Saharan Africa cashew production, in-shell exports and shelled exports, by leading countries

Cashew production (in-shell weight) 2004		Exports (in-shell cashews) 2005				Exports (shelled cashews) 2005			
Leading producer	*Metric tons*	*Leading exporter*	*Metric tons*	*$1,000*	*Average unit value $ per metric ton*	*Leading exporter*	*Metric tons*	*$1,000*	*Average unit value $ per metric ton*
Nigeria	213,000	Côte d'Ivoire	138,151	114,334	828	Tanzania	1,422	7,073	4,974
Tanzania	100,000	Guinea-Bissau	89,079	93,066	1,045	Mozambique	971	4,312	4,441
Côte d'Ivoire	90,000	Benin	55,177	49,741	901	Kenya	531	2,774	5,224
Guinea-Bissau	81,000	Tanzania	46,369	42,629	919	Guinea	227	928	4,088
Mozambique	58,000	Mozambique	32,213	27,988	869	Nigeria	157	420	2,675
Benin	40,000	Ghana	31,503	28,275	898	Côte d'Ivoire	81	356	4,395
Kenya	10,000	Nigeria	16,522	11,802	714	Malawi	65	307	4,723
Ghana	7,500	Gambia	12,498	11,396	912	Benin	37	89	2,405
SSA total	615,800	SSA total	442,909	397,115	897	SSA total	3,604	16,713	4,637

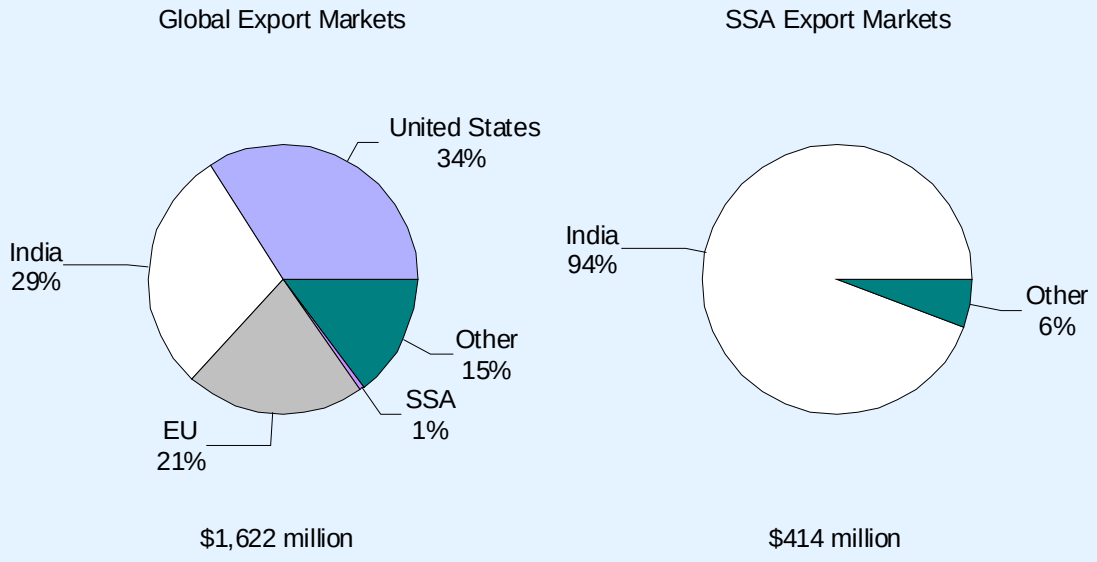
Sources: Production: Food and Agriculture Organization; Exports: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

Note.—Intra-SSA trade data were incomplete and inventory data do not exist. Therefore, differences in production and shipments may be attributable to transshipments and inventory changes, as well as to the difference in reporting years.

Leading Export Markets

The United States is the largest global importer of cashews (kernels), primarily because U.S. demand for all types of edible nuts is high and no domestic production of cashews exists. India is the second largest importer, but primarily of in-shell nuts, which are an input into its extremely large cashew processing industry (figure 2-2). The European Union (EU) is also a large importer of cashew kernels due to high per capita consumption and lack of a commercial cashew industry. There are no import tariffs for cashews in the United States or the EU and, in general, governments in Northern Hemisphere countries have not imposed other import barriers or sector support for cashew industries.[20]

Figure 2-2 Leading markets for global and sub-Saharan Africa exports of cashews, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

SSA exports of cashews are shipped almost exclusively to India for processing. More than 84 percent of East African export shipments and more than 99 percent of West African exports in 2005 went to India (figure 2-2). On a much smaller scale, SSA kernel exporters ship to the EU and the United States. The following tabulation identifies the principal competitors in SSA's leading export markets.

[20] Azam-Ali and Judge, *Small-scale Cashew Nut Processing*.

Market	SSA competitors
India (in-shell)	Indian domestic producers and Indonesia
EU (kernels)	Brazil, India, and Vietnam
United States (kernels)	Brazil, India, and Vietnam

Factors Affecting Trade Patterns

Development assistance and rising global demand were the key factors contributing to the growth in cashew exports from SSA during 2001–05. International development agencies have typically encouraged developing countries to increase higher-value agricultural exports to promote economic growth and reduce poverty. The cashew is an attractive export opportunity because international market demand for the nut is growing, few import barriers exist in consuming markets, and large portions of the African population are already engaged in production. However, revenues from in-shell cashews are only a small fraction of revenue from processed kernels African countries have traditionally produced very few processed kernels. In Tanzania alone, the forgone value of domestic processing has been estimated at 30,000 direct jobs paying $30 million, $40 million in processing revenues, and a 50 percent increase in export earnings.[21]

Demand Growth and Price Increases

Cashews are viewed as a luxury commodity with strong sales growth projected globally, due to improved nut quality; interest in the documented health benefits; and increasing incomes, particularly in Asia. Global demand for cashew kernel exports is currently estimated at 200,000 mt per year and is projected to grow at a rate of 5-8 percent annually over the next five years.[22] SSA cashew industry officials note the robust demand and acknowledge there is a need to solidify processing on the continent and to accelerate the production of quality nuts.[23] Low demand within SSA is attributed to a lack of awareness of cashews' nutritional value and their prohibitive prices for low-income consumers. However, the market for healthy foods is growing, and regional demand for cashew kernels is expected to increase.[24]

Policies to Promote the Industry and Increased Investment

During 2001–05, another factor that contributed to increased exports of SSA cashews was a coordinated support effort by international development agencies, non-governmental organizations (NGOs), and global traders. These groups facilitated sector development at the national and regional levels; oversaw comprehensive sector analysis to prioritize activity; provided technical assistance regarding high-yield varieties, improved tree

[21] TechnoServe, "Tanzania Cashew Industry."
[22] Wakabi, "African Cashews to Indian Factories."
[23] Ibid.
[24] U.S. Department of State, U.S. Embassy, Nairobi, "Kenya 4230A."

management, and processing efficiencies; assisted in the development of marketing channels; and coordinated private and public investment initiatives.

This support effort was precipitated by a number of published studies that examined the African cashew sector and its prospects for economic development.[25] These studies supported the idea that well-managed factories run by associations, local cooperatives, and small- and medium-scale private business operators could be viable in Africa.[26] A 2002 regional conference in Africa, sponsored by the International Trade Center UNCTAD/WTO Global Trust Fund (ITC/UNCTAD), highlighted the need to rehabilitate Africa's cashew sector. Subsequently, an initiative named "Trade Expansion in Cashew Nuts from Africa" was funded by ITC/UNCTAD and co-financed by the Common Fund for Commodities to establish a strong regional network and structure to support export development objectives for the cashew nut sectors in each of the participating countries. These included Tanzania, Mozambique, Guinea-Bissau, Côte d'Ivoire, Nigeria, Benin, Kenya, Senegal, and Madagascar. Regionally, the ITC/UNCTAD project has begun to build a network of players throughout the cashew value chain for improved communication, marketing, and information sharing of supply and demand conditions, including prices.

Development organizations, national governments, and private companies collaborated for the benefit of African cashew producers during the period. The U.S. government has supported SSA cashew industries through the U.S. Agency for International Development (USAID). The Sustainable Tree Crops Program, a regional public-private partnership based in Nigeria, supports smallholder tree crop farmers in West/Central Africa. The Netherlands Development Agency is providing business development, market access promotion, and supply chain development advisory services through its African regional offices. NGOs operating in the region provide agriculture extension services to growers, develop commercial channels for the product, and train local artisans to produce improved processing equipment to decrease the scorching and breakage of kernels that reduces kernel value.[27] U.S.- and EU-based cashew brokers representing African producers have increased market awareness of the African cashew industry.

In an effort to centralize the various efforts regarding African cashews, the African Cashew Alliance (ACA) was established in June 2005 as a public-private partnership. The ACA's main goals are to increase cashew farmer income, create jobs in the domestic cashew processing industries, and increase export earnings and economic growth. Membership in the Alliance includes representatives across the complete value chain, such as producers, processors, traders, and international buyers.[28] The ACA promotes information sharing, the development of a strategic plan for the sector, facilitation of fund raising efforts, prioritization of interventions to increase competitiveness, and promotion of African cashews

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[25] *Spore*,"Cashew: Shell Up and Ship Out." See also, Cramer, "Can Africa Industrialize by Processing Primary Commodities? The Case of Mozambican Cashew Nuts"; Waithaka, "Kenya: Assessment of the Situation and Development Prospects for the Cashew Nut Sector"; Sijaona, "Tanzania: Assessment of the Situation and Development Prospects for the Cashew Nut Sector"; Kanji, et al. "Liberalization, Gender and Livelihoods: The Mozambique Cashew Nut Case"; and Mitchell, "Tanzania's Cashew Sector: Constraints and Challenges in a Global Environment."

[26] *Spore*, "Cashew: Shell Up and Ship Out," Issue 123.

[27] EnterpriseWorks brochure. Enterprise Works, "Cashew Processing." www.vita.org/PDFs/Cashews_073003.pdf (accessed October 12, 2006).

[28] Founding members include Ahold, a leading food retail and food service provider; Kraft, one of the largest global marketers of cashews; Olam International, the largest global trader of cashews; and USAID. A complete membership listing can be found at http://www.africancashewalliance.com.

in the global marketplace. The coordinated effort has created incentives to invest in the SSA processing industry.

One broad private initiative, in particular, is having a significant effect on SSA cashew exports of processed kernels. Olam International (Olam) is a Singapore-based multinational firm at the forefront of cashew processing in the three main processing centers—India, Vietnam, and Brazil. In addition to processing cashews in these three traditional processing centers, Olam launched a multi-origin cashew processing initiative in the key producing countries across Africa in 2003, including Tanzania, Mozambique, Nigeria, and Côte d'Ivoire. The firm reportedly has plans to open facilities in Ghana and Guinea-Bissau. An initiative in Mozambique will reportedly supply finance and technology to assist in rebuilding its industry.[29] The company has indicated that cashew processing in Africa is a logical and integral step as a part of its overall cashew strategy, helping the company enhance its margins through freight savings and strengthening its competitive position in the industry.[30] Olam's investment in a cashew processing facility in Abidjan, Côte d'Ivoire, in 2003 contributed to a 37 percent increase in production there during 2003–05.[31]

Private investment initiatives and partnerships with African producers, such as those by Olam, have been attributed in part to rising transportation costs that make processing at the point of production an effective business strategy.[32] Also, new EU sanitary standards introduced in 2005 require traceability of foodstuffs back to the field where they were grown. This places the responsibility for safety with EU importers, who now demand that their suppliers guarantee product safety back to its origins. Additional country-specific efforts to increase cashew exports are described below.

Benin

In Benin, building up the cashew industry is seen as a way to reduce dependence on cotton. Farmers are being trained to grow cashews, and a guarantee fund has been established to help processors obtain loans from microfinance institutions. Since 2003, six small shelling units have opened.[33] In the first large, private cashew project in the past thirty years, Afokantan Benin Cashew SA, with a capacity to shell 1,500–2,000 mt of raw cashews, started processing Beninese cashew nuts in September 2006 under the brand name 'Pride of Africa Benin!' This initiative was started with the help of PSOM, an investment program of the Dutch government.[34]

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[29] *Spore*, "Cashew: Shell Up and Ship Out."
[30] Business Ethics Online, "Olam and TechnoServe Form Partnership."
[31] U.S. Department of State, U.S. Embassy, Abidjan, "Ivory Coast 1134."
[32] *Spore*, "Cashew: Shell Up and Ship Out."
[33] *Spore*, "Cashew: Shell Up and Ship Out."
[34] *African Cashew Alliance Newsletter*, "New Processor Gets Cracking in Benin."

Ghana

A six-year African Development Bank-sponsored project on behalf of the government of Ghana aims to increase raw and processed cashew production.[35] The Cashew Processors and Exporters Association of Ghana is active in promoting an organized national marketing scheme.[36] Five new processing plants are being established in Ghana.[37]

Guinea-Bissau

In Guinea-Bissau, the processing sector is limited; but it is improving its efficiency, quality, and international marketing with support from USAID contracts, the NGO EnterpriseWorks, and participation in the African Cashew Alliance. As recently as 2003, there were no processing plants operating. [38] However, home-based processing is now common and is seen as an activity suitable for small- or domestic-scale producers. A U.S. company, ROTA, and its processing division, Crown Cashew, are active in Guinea-Bissau in buying, shelling, and distributing cashews, particularly organic cashews, to the U.S. market. The firm ships nuts from its small cooperatives of cashew processors and from two larger-scale shellers, SiCajou and Agri-Bissau.[39] In addition, since 2000 technical and credit assistance from Fundei, a local foundation, has been tapped to establish several processing plants with a total capacity of 5,000 mt.[40] Sicaju, with a capacity of 1,000 mt, produces for the export market. Two other plants, Emicor and Djonde Lda mainly produce for the domestic and regional markets, although both facilities occasionally export their product through ROTA International and Global Trading.

Kenya

A four-year, $7.5 million program to enhance the competitiveness of the Kenyan horticulture sector was launched in 2003 by USAID-Kenya and implemented by Fintrac Inc. About 5,000 cashew nut farmers along coastal Kenya have received training in better tree management, and to date, yields for about 250 producer groups have increased from 3kg to 15kg per tree. As a result of this program, Kenya is expected to increase its cashew kernel exports to the United States.[41] Kenya's Ministry of Agriculture and the Kenyan Agricultural Research Institute have also funded programs to help cashew farmers meet EurepGAP standards, allowing them to remain in the EU market.[42]

Mozambique

Civil war in Mozambique during 1982–92 sharply cut production levels to below 25,000 mt. Production has gradually increased since then, reaching 58,000 mt in 2005.[43] The Mozambique Nut Processors Association, a business trade association, is currently working

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[35] Ibid., "Ghana goes for cashew production," www.africancashewalliance.com
[36] Ibid., "Sectoral activity," www.africancashewalliance.com.
[37] Wakabi, "African Cashews to Indian Factories."
[38] Nouwligbeto, "African Cashew Nuts in a Harsh World."
[39] U.S. Department of State, U.S. Embassy, Dakar, "Guinea-Bissau 2418B."
[40] Ibid.
[41] U.S. Department of State, U.S. Embassy, Nairobi, "Kenya 4230A."
[42] Ibid.
[43] USDA, FAO, *FAOstat database*.

with internationally based organizations and cashew alliances as well as with the Mozambique government to define and implement a competitive growth strategy for the industry.[44] In June 2005, USAID announced that newly branded 'Zambique' cashew nuts from Mozambique would be shipped to the United States. In 2006, fourteen processing plants with a combined annual capacity of 40,000 mt were operating, and 20,000 mt of cashew kernels were processed.[45]

Tanzania

In 2005 the government of Tanzania and the cashew nut producers of Tanzania developed and executed a joint Memorandum Of Understanding (MOU) that contained an incentive package of reduced government taxes and levies and a commitment from the processors to expand domestic processing.[46] USAID provided $393,000 to facilitate the effort. The MOU's goal is to increase processing in Tanzania by 10,000 mt per year over five years, resulting in 30,000 additional jobs and over $10 million in increased export earnings. The Cashew Board of Tanzania has recently overseen the reopening of four processing plants, three of which account for 80 percent of Tanzania's kernel exports.[47] Two of these were acquired by a private company, Micronix Systems Limited. Another, the Masasi Cashewnut Factory, is owned by an association of cashew processors.

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[44] African Cashew Alliance, "ACA Memorandum of Understanding Signed." www.africancashewalliance.com.

[45] Interview by Commission staff, Dar es Salaam, Tanzania, December 8, 2006.

[46] USAID Mission to Tanzania, "U.S. Ambassador Wants to Increase Cashew Processing and Exports."

[47] Interview by Commission staff, Dar es Salaam, Tanzania, December 8, 2006.

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Cocoa Butter and Paste

Summary of Findings

SSA exports of cocoa butter and paste increased by 117 percent in value during 2001–05, reaching $808 million (table 2-3), while global exports increased by 133 percent to $2.4 billion.[48] The SSA increase resulted from a combination of a general increase in the unit value of exports and an increase in the quantity exported from Côte d'Ivoire and Nigeria during the period. Contributing to SSA's ability to export cocoa butter and paste is the fact that SSA is the world's leading producer of cocoa beans, the raw material used in the production of these intermediate products. However, SSA accounts for a substantially smaller share of global production of cocoa butter and paste (14 percent) than of cocoa beans (70 percent).[49] SSA countries historically export a large share of raw cocoa beans to grinding facilities in consumer markets such as the EU and the United States and grind a smaller share domestically, producing cocoa butter and paste for export.

Growth in consumer demand for chocolate in the major consuming markets, Europe and the United States, was a factor contributing to increased SSA exports of cocoa butter and paste during the period under review. In addition, rising income and population levels bolstered the demand for cocoa products in nontraditional markets, particularly in Asia.[50] In response to higher demand, major global producers increased regional production to serve expanding global markets for intermediate cocoa products. Furthermore, SSA cocoa processing capacity benefitted from government efforts to increase downstream processing. A combination of other factors, including the availability of raw cocoa beans, government policies, labor issues, and civil strife, also affected SSA exports of cocoa butter and paste.

Industry Overview

The availability of a large and steady supply of cocoa beans has contributed to the development of a cocoa processing industry in the SSA region. SSA dominates the world in terms of land area devoted to growing cocoa beans. During 2001–05, SSA accounted for approximately 70 percent of the global area harvested for cocoa beans, or roughly 5 million hectares.[51] Ghana (2 million hectares), Côte d'Ivoire (1.8 million hectares), Nigeria (1 million hectares), and Cameroon (400,000 hectares) are the leading SSA producers of cocoa beans. The area harvested, as well as yields, increased during the period under review. As a result, additional supplies were exported as raw cocoa beans or processed and exported as cocoa butter and paste (box 2-2).

In addition to increased acreage, weather and productivity can affect cocoa bean production. Weather can cause significant year-to-year variation. However, increased use of better

[48] GTIS, *Global Trade Atlas.*

[49] ICCO, Calculated based on grindings of cocoa beans using a conversion factor of two-thirds.

[50] Chocolate & Confectionery International, "Chinese Acquiring a Taste for Ivorian Cocoa"; and Chocolate & Confectionery International, "China Holds Key to Cocoa Prices."

[51] USDA, FAO, *FAOstat database*.

Table 2-3 Sub-Saharan Africa exports of cocoa butter and cocoa paste, by selected exporters and key markets, 2001–05

Exporters	Key markets		Exports 2001	2002	2003	2004	2005	Percent change 2001–05
Côte d'Ivoire	**EU**	*1,000 dollars*	206,904	344,565	463,049	431,150	424,883	105
		Metric tons	140,998	149,051	156,528	162,923	172,819	23
	USA	*1,000 dollars*	8,605	18,119	36,243	46,833	67,699	687
		Metric tons	8,336	8,820	14,280	22,978	28,340	240
	Canada	*1,000 dollars*	2,716	6,990	23,162	28,344	37,796	1,292
		Metric tons	1,787	3,165	8,340	10,004	12,206	583
	All other	*1,000 dollars*	36,953	63,105	65,277	85,031	93,768	154
		Metric tons	25,051	27,649	22,476	31,314	34,624	38
	Total	*1,000 dollars*	255,177	432,781	587,730	591,359	624,145	145
		Metric tons	176,172	188,685	201,264	227,219	247,989	41
Ghana	**EU**	*1,000 dollars*	38,833	45,744	53,815	87,468	71,157	83
		Metric tons	35,456	27,907	21,727	33,069	33,753	-5
	USA	*1,000 dollars*	13,965	12,636	6,072	9,983	9,361	-33
		Metric tons	8,849	7,915	2,881	4,614	4,587	-48
	Russia	*1,000 dollars*	5,066	6,726	5,664	4,804	3,493	-31
		Metric tons	3,659	3,371	2,853	2,383	1,836	-50
	All other	*1,000 dollars*	5,542	15,248	7,834	9,376	14,882	169
		Metric tons	3,814	6,614	2,900	3,377	6,136	61
	Total	*1,000 dollars*	63,405	80,355	73,385	111,632	98,893	56
		Metric tons	51,778	45,807	30,361	43,443	46,312	-11
Cameroon	**EU**	*1,000 dollars*	33,803	34,546	29,449	25,887	22,272	-34
		Metric tons	24,556	16,173	10,622	10,328	9,516	-61
	USA	*1,000 dollars*	1,191	13,669	18,002	12,826	15,778	1,225
		Metric tons	948	5,925	7,202	5,973	7,180	657
	Canada	*1,000 dollars*	0	0	0	446	906	n/a
		Metric tons	0	0	0	125	281	n/a
	All other	*1,000 dollars*	11	0	75	0	0	-100
		Metric tons	10	0	50	0	1	-90
	Total	*1,000 dollars*	35,005	48,215	47,526	39,158	38,956	11
		Metric tons	25,514	22,098	17,874	16,426	16,978	-33
Nigeria	**EU**	*1,000 dollars*	12,217	17,753	27,669	29,546	33,132	171
		Metric tons	7,633	7,394	8,907	9,680	11,653	53
	South Africa	*1,000 dollars*	999	676	1,042	1,266	1,913	91
		Metric tons	242	240	304	258	420	74
	Ukraine	*1,000 dollars*	0	154	156	388	469	n/a
		Metric tons	0	75	80	134	186	n/a
	All other	*1,000 dollars*	1,281	3,590	3,151	1,496	197	-85
		Metric tons	815	1,785	1,362	646	103	-87
	Total	*1,000 dollars*	14,496	22,173	32,018	32,696	35,710	146
		Metric tons	8,690	9,494	10,653	10,718	12,362	42
Sub-Saharan Africa	**Total**	*1,000 dollars*	372,535	604,433	767,314	794,843	807,571	117
		Metric tons	264,777	274,202	269,926	305,334	327,197	24

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

Box 2-2 Product Description for Cocoa Butter and Paste

Cocoa butter and paste are derived from the beans of the cocoa tree (*Theobroma cacao*). Cocoa trees generally grow in tropical climates throughout the world between 20 degrees north and 20 degrees south of the equator.[1] Cocoa beans are contained inside pods that grow on the trees. The pods are harvested and opened and the beans are removed, cleaned, fermented, and dried. The beans are then roasted, ground, and screened to produce cocoa nibs. The nibs are milled to produce cocoa liquor, which consists of cocoa particles and cocoa butter. The cocoa liquor can then be pressed to extract the cocoa butter. The solid mass that remains is cocoa paste, which is also referred to as cocoa presscake. The cocoa butter content of the paste varies according to customer specification. The paste can be further processed to produce cocoa powder. Cocoa butter and cocoa paste are intermediate products and are used mainly in the production of candy and confectionery products, baked goods, beverages, and cosmetics.

[1] UNCTAD, http://r0.unctad.org/infocomm/anglais/cocoa/characteristics.htm.

production technologies such as fertilizer, insecticides, fungicides, plant varieties, and improved postharvest handling of cocoa beans have improved yields (table 2-4). Despite the improvement in productivity, yields in SSA substantially trail yields in Indonesia (1,245 metric tons/hectare), a major world competitor.

Cocoa bean production in SSA is characterized by a large number of small-scale farmers (table 2-5). Traditionally, these small holder farmers have not been well organized, which limits their bargaining position in markets dominated by large multinational buyers.[52] However, some farmers are organized into producer groups or cooperatives in order to bargain with cocoa buyers, and efforts are underway to improve the organization of SSA cocoa farmers. Ivorian cocoa farmers conducted a strike in October 2006, in part to demand higher cocoa bean prices.[53]

Table 2-4 Sub-Saharan Africa cocoa bean yields, by major producers, 2001–05

Country	2001	2002	2003	2004	2005
	Metric tons per hectare				
Côte d'Ivoire	711	744	751	782	757
Ghana	289	285	331	369	400
Cameroon	330	338	413	445	446
Nigeria	352	351	384	388	415

Source: FAO.

[52] ICCO, "Information on the Effects of Liberalisation on Ivory Coast's Cocoa Market"; and Chocolate & Confectionery International, "Grower export co-ops encouraged in Ivory Coast."

[53] U.S. Department of State, Embassy, Abidjan, "Côte d'Ivoire: Cocoa Producers Go On Strike."

Table 2-5 Small-scale cocoa growers: Number of small-scale cocoa bean growers, global share of small-scale growers, and global share of production, by SSA country

Region	Number of small-scale growers[a]	Share of global small-scale growers	Share of global production	
			1998	2005
	Millions	*Percent*		
Côte d'Ivoire	3.6	26	36	34
Ghana	3.2	23	12	16
Cameroon	1.6	11	4	5
Nigeria	1.2	9	11	12
Other sub-Saharan Africa	0.9	6	3	2
Total sub-Saharan Africa	10.5	75	66	70
Global total	14.0	100	100	100

Source: Lattre-Gasquet, Despreaux, and Barel, obtained from ICCO and FAO.

[a]Farms with fewer than 10 hectares, with cocoa as the main activity. Data are for 1998 but are not believed to have changed significantly.

Raw cocoa bean processing in the region is dominated by a relatively small number of companies operating one or a few plants in each country. A substantial share of SSA cocoa butter and paste production capacity is accounted for by subsidiaries of U.S. and EU firms, principally Archer Daniels Midland, Cargill, and Barry/Callebaut. These firms are the top three cocoa processors in the world.[54] The industry is heavily dependent on export markets, as domestic consumption of cocoa products in SSA countries is small (about 2 percent of the global total).

Sub-Saharan Africa Trade in the Global Context

Global trade in cocoa butter and paste totaled $2.4 billion in 2005.[55] Major exporters of cocoa butter and paste, with the exception of the Netherlands and the United States, are also major producers of cocoa beans. The Netherlands and the United States are major consumers of cocoa products and import raw cocoa beans for processing. A fraction of their cocoa product production is also exported.

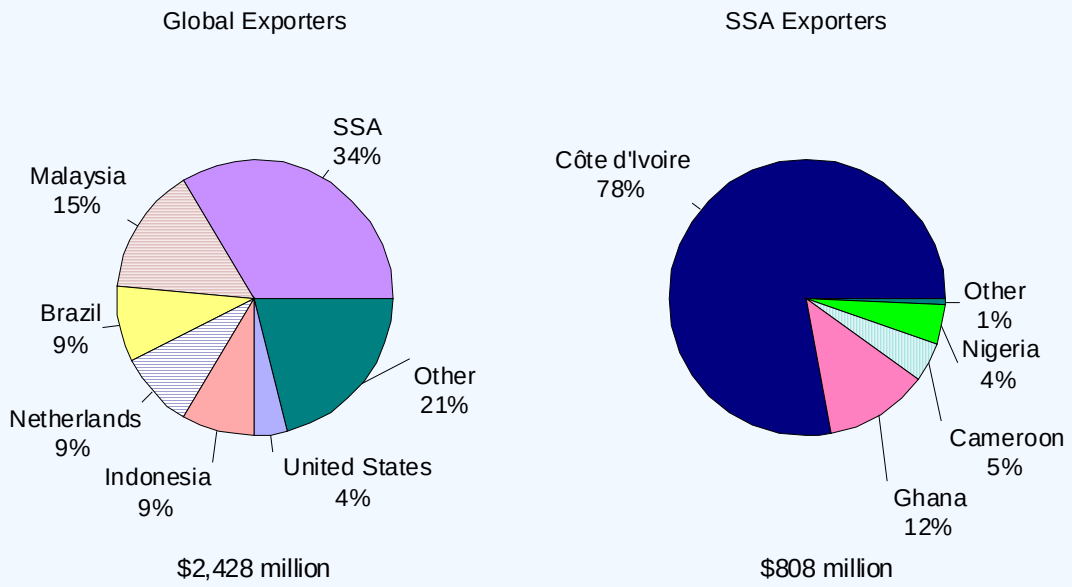
Many of the major markets for cocoa butter and paste have extensive cocoa products industries that rely on imported inputs to produce chocolate and confectionery products, as well as large, relatively affluent populations that consume these finished products. Most chocolate and confectionery manufacturers obtain cocoa products from a variety of sources and blend them in order to maintain a consistent final product.

[54] ICCO, "Which are the top cocoa processing companies and how much cocoa do they grind?"
[55] GTIS, *Global Trade Atlas.*

Leading Exporters

The primary global exporters of cocoa butter and paste in 2005 were Côte d'Ivoire, Malaysia, the Netherlands, Indonesia, Brazil, Ghana, and the United States (figure 2-3).[56] Of the value of global cocoa butter and paste exports in 2005, Côte d'Ivoire accounted for 26 percent and Ghana accounted for 4 percent. As the world's largest cocoa butter and paste exporter, Côte d'Ivoire accounted for over three-quarters of the SSA export value in 2005, followed by Ghana, Cameroon, and Nigeria (figure 2-3). Although the value of cocoa butter and paste exports from each of these countries increased during 2001–05, most of the value increase was accounted for by price increases. The volume of exports rose at a lower rate or, in some cases, fell during the period.

Figure 2-3 Leading global and sub-Saharan Africa exporters of cocoa butter and paste, 2005



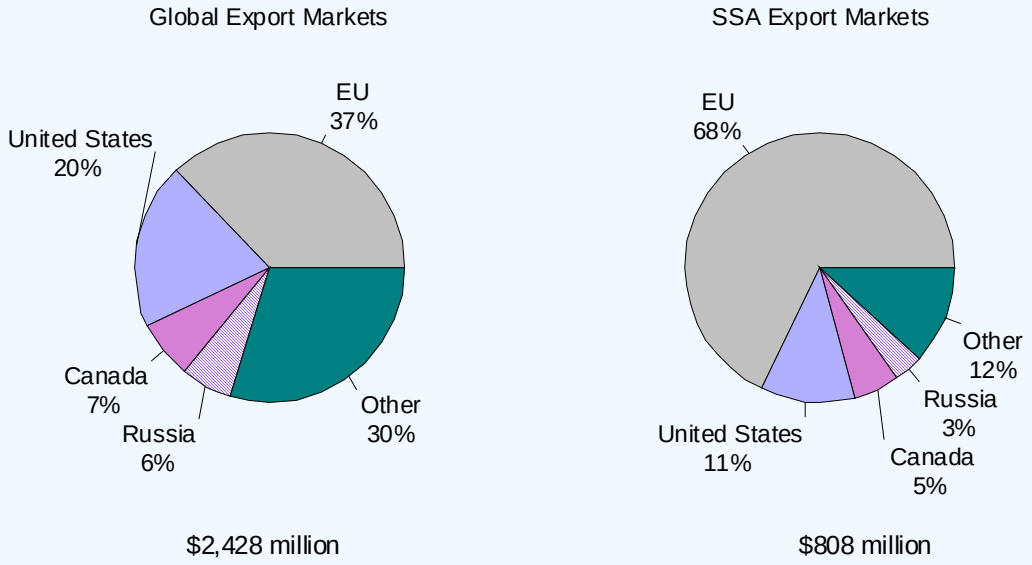
Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Leading Export Markets

The leading global markets for cocoa butter and paste are the EU and the United States, which together account for more than 50 percent of global imports (figure 2-4). These are also the leading markets for SSA exports of cocoa butter and paste. These countries are major producers of chocolate and confectionery products and import cocoa butter and paste

[56] GTIS, *Global Trade Atlas.*

Figure 2-4 Leading markets for global and sub-Saharan Africa exports of cocoa butter and paste, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

to supplement their domestic production of cocoa butter and paste, which is manufactured exclusively from imported cocoa beans. SSA exports to the EU are free of duty for both butter and paste under the Lomé Convention. SSA exports to the United States are free of duty under Generalized System of Preferences (GSP) provisions for some products and under Most Favored Nation (MFN) duty-free rates for other products.

Côte d'Ivoire is, by far, the largest foreign supplier to the EU market, accounting for 47 percent of the value of extra-EU imports of cocoa butter and paste in 2005. EU imports of these products from Côte d'Ivoire increased by 22 percent in quantity and doubled in value during 2001–05. Ghana was the fourth-leading supplier in 2005, accounting for about 8 percent of the total value that year. In the U.S. market, Côte d'Ivoire was the third-leading supplier in 2005 (14 percent of the total value), while Ghana was a relatively minor supplier (about 2 percent). Côte d'Ivoire was the second-leading import supplier to Canada, accounting for about 22 percent of the total value, and the third-leading supplier to the Russian market, accounting for 16 percent of the total in 2005. Other SSA countries were minor suppliers in both markets. For the key markets, the following tabulation identifies the leading competitors for SSA exports.

Market	SSA competitor
EU	EU domestic producers, Malaysia, Indonesia, and Brazil
United States	U.S. domestic producers, Malaysia, Brazil, Indonesia, and China
Canada	Canadian domestic producers, United States, and Brazil
Russia	Russian domestic producers, EU, Malaysia, and Ukraine

Factors Affecting Trade Patterns

Increased prices associated with growth in global demand drove up export unit values and was the primary factor affecting the increased value of SSA cocoa butter and paste exports. The volume of SSA exports also showed a healthy increase during the period. The volume of cocoa butter and paste exports, however, is dependent upon a number of factors, including the level of domestic cocoa bean production and the portion of domestic cocoa bean production that is exported versus that which is processed regionally. In turn, the quantity of cocoa butter and paste exports is influenced by the growth and utilization of SSA processing capacity and the variations in the supply of cocoa beans available for processing.

Foremost among the factors affecting the supply of cocoa beans available for processing are climatic and soil conditions in SSA, especially West Africa. Other factors include government policies, infrastructure, product quality, productivity, civil strife, labor issues, and development policies. To varying degrees, all of these have affected the structure of industry in SSA countries and, therefore, have also affected the proportion of beans that are processed in the region.

Demand Growth and Price Increases

Demand factors were similar for all SSA suppliers during the period. Cocoa and cocoa products are relatively high-priced luxury goods, the demand for which is affected more by income than by price.[57] Factors that contributed to increased demand during 2001–05 included rising populations and incomes in both the large, mature markets (Europe and the United States) and emerging markets (mainly in Asia).[58] The rising demand for high-quality, high-cocoa-content chocolate products also likely had a positive impact on SSA exports of cocoa butter and paste. Several recent studies have concluded that the consumption of certain cocoa products provides health benefits, which also may have affected the demand for cocoa butter and paste.[59] The impact of consumer health issues during the period was mixed, as

[57] The long-term price elasticity of demand for cocoa in major consuming markets has been estimated to range between 0.2 and 0.4, and the income elasticity of demand between 0.3 and 0.9. ICCO, "What is the price elasticity of demand for cocoa?" The long-term income elasticity of demand for chocolate in major consuming markets has been estimated to range between .08 and 1. ICCO, "Income Elasticity of Chocolate." The lower value is for Japan.

[58] Chocolate & Confectionery International, "Chocolate & Confectionery 2006: Review of the Year."

[59] See, for example, Chocolate Manufacturers Association, "Nutritional Information."

concerns regarding obesity had a negative effect and scientific evidence of health benefits of cocoa had a positive impact.[60]

Increased global demand for chocolate contributed to a strong general increase in market prices for cocoa butter and paste during 2001–05. During this period, the price of cocoa beans and cocoa paste peaked in 2002 before decreasing, albeit to levels in 2005 that were still 26-52 percent higher than in 2001 in certain markets. This fluctuation mainly reflected supply disruptions associated with civil strife in Côte d'Ivoire. The price of cocoa butter increased throughout the period, nearly doubling in a number of key markets.

Prices affect the SSA cocoa production sector mainly in terms of returns to farmers, which affect the availability of raw cocoa bean supplies, costs to cocoa processors for raw materials; and returns to cocoa processors. Increased returns to farmers appear to have contributed to increased production of raw cocoa beans. SSA accounts for approximately 70 percent of the global area harvested for cocoa beans, or roughly 5 million hectares, up from about 4.5 million hectares during the period under review.[61] Consequently, production in the four primary producing countries increased from 2.1 million mt to 2.5 million mt during 2001–05.[62] Because of low local demand for chocolate and cocoa products, the additional production must be either exported as raw cocoa beans or processed and exported as cocoa butter and paste.

Increased Investment

SSA cocoa processing capacity has increased recently, with additional expansions on the horizon (table 2-6). Increasing prices for cocoa products likely stimulated much of the new investment in SSA cocoa processing facilities, as major multinational processors expanded output to meet rising global demand for cocoa products.

However, increased processing capacity did not result in a greater portion of cocoa beans being processed regionally. Côte d'Ivoire ground about 27 percent of its raw bean production and Ghana ground 13 percent in 2005. The share of total SSA raw cocoa bean production processed in the region ranged from 18 to 21 percent during 2001–05. During this time, SSA production of cocoa butter and paste increased from 276,000 mt in 2001 to 315,000 mt in 2005, or by 14 percent.[63] Despite increased regional production of cocoa butter and paste, SSA's share of global cocoa butter and paste production remained at about 14 percent annually during the period.

Production decisions of the multinational cocoa processing companies are another factor that affects the proportion of cocoa beans exported raw versus being processed domestically and exported as cocoa butter and paste. Processors own plants within the SSA region, as well as outside the region; therefore, company decisions concerning where to process cocoa beans affect the quantity of beans processed regionally and thus have a direct impact on the quantity of cocoa butter and paste available for export. For example, in Côte d'Ivoire

[60] Chocolate & Confectionery International, "Chocolate & Confectionery 2006: Review of the Year."
[61] USDA, FAO, *FAOstat database*.
[62] Ibid.
[63] ICCO. Based on cocoa bean grindings, with a conversion rate of two-thirds.

Table 2-6 Sub-Saharan Africa: Number and capacity of cocoa processing plants, by selected country and firm

Country	Firm	Number of plants	Number of employees	Capacity	
				Current	Planned
				Metric tons, raw basis	
Côte d'Ivoire	Cargill	1	450	120,000	([a])
	Saco (Barry/Callebaut)	3	300	([a])	([a])
	Unicao (ADM Cacao)	1	([a])	([a])	([a])
	Cemoi (Cantalou)	1	200	([a])	([a])
	Pronibes	1	([a])	([a])	([a])
Ghana	Barry Callebaut	1	([a])	60,000	([a])
	Cocoa Processing Co.	1	569	30,000	65,000
	West African Mills	1	341	75,000	([a])
	Afrotropic Cocoa Processing	1	([a])	15,000	45,000
	Cargill	1	([a])	60,000	120,000
	Rakhat	1	([a])	([a])	50,000
Nigeria	Cocoa Industries Ltd.	1	([a])	30,000	([a])
	Ile-Oluji Cocoa Prod. Co. Ltd.	1	([a])	30,000	([a])
	Fantastic Traders	1	([a])	15,000	([a])
	Stanmark Cocoa Proc. Col Ltd.	1	([a])	10,000	([a])
	Multi-Trex Co.	1	([a])	10,000	([a])

Source: ICCO, Cargill, Barry/Callebaut, Orbis.

[a]Information not available or not applicable.

multinational buyers purchase over 70 percent of the cocoa bean production, but export most of these in raw form to be processed elsewhere.[64]

Policies to Promote the Industry

Côte d'Ivoire

Côte d'Ivoire liberalized its cocoa sector in the late 1990s as part of an IMF/World Bank structural adjustment program.[65] Government involvement in the cocoa sector currently is coordinated by the Cocoa and Coffee Regulatory Authority (ARCC) and the Bourse du Café et du Cacao (BCC). The ARCC approves cocoa bean buyers and exporters. The BCC establishes minimum growers' prices and prices for the collection and transport of cocoa beans and allocates export rights. The government also imposes the Droit Unique de Sortie, an export tax on cocoa products.[66]

[64] U.S. Department of State, Embassy, Abidjan, "Côte d'Ivoire: Cocoa Producers Go On Strike."
[65] USDA, FAS, "Côte d'Ivoire, Cocoa, New Marketing For Cocoa and Coffee, 2001," 2.
[66] The tax is 220 francs (about $0.45) per kilogram for cocoa beans and 210 francs (about $0.43) per kilogram for cocoa paste and butter. Bourse due Café et du Cacao, available at http://www.bcc.ci/dus.asp. Retrieved February 20, 2007.

Ghana

Among the major SSA producers, Ghana has the most extensive government involvement in the cocoa industry. The Ghana Cocoa Board's (COCOBOD) activities include research and development, setting quality grading standards, quality certification, and regulating internal cocoa marketing, and exports. All of these activities directly or indirectly affect Ghana's exports of cocoa butter and paste. COCOBOD sets prices for farmers and finances cocoa bean purchases with syndicated loans.[67] A loan of $850 million for the 2004/05 marketing year was secured from a group of thirty-two banks. Such loans have been secured for twelve consecutive years. There were twenty-two private-sector Licensed Buying Companies in 2003/04. The Ghanaian government has also established the Cocoa Research Institute of Ghana to conduct scientific research and development regarding such issues as hybrid plants, pest and disease control, and the development of new cocoa products.

Nigeria

Government involvement in the Nigerian cocoa industry is concentrated in the processing sector. The Nigerian cocoa industry was liberalized in 1986, which led to a decline in the quality of cocoa beans, and in the reliability of supplier-buyer contracts.[68] This encouraged the entry of European trading houses to buy cocoa beans.[69] In addition, market liberalization contributed to the closure of most of the twenty cocoa processing facilities that were operating at the time.[70]

The government of Nigeria grants export rebates and tax exemptions to cocoa processors. The Export Expansion Grant (EEG) encourages local cocoa processing by providing a 5 percent export tax rebate for purchase of cocoa beans and a 30 percent export tax rebate for processed cocoa products. Cocoa processors also are eligible for Export Processing Factory status that provides exemptions from taxes and levies by federal, state, and local governments. Investors reportedly have been purchasing and leasing idle cocoa processing facilities as a result of the EEG.[71] The number of active cocoa processing facilities has increased from one to six since the EEG was introduced in 2002.[72]

Other government involvement includes support to farmers to encourage the use of agricultural inputs and improved plant varieties and the development of new products. The National Cocoa Development Project is attempting to replace existing cocoa plants with improved, early-bearing, and disease-resistant varieties with the intent to double cocoa bean production in the near term.[73] The program reportedly has been ineffective due to the reluctance of farmers to bear the initial planting costs and interruption in production.

The Cocoa Research Institute develops new cocoa products and provides assistance in marketing and patenting these products.[74] The government also may offer cocoa products in

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[67] USDA, FAS, "Ghana, Cocoa, Annual Report, 2005," 6.
[68] ICCO, "Information on How the Marketing of Cocoa is Organised in Nigeria."
[69] USDA, FAS, "Nigeria, Market Development Reports, Nigeria's Cocoa Processing Industry, 2007," 4.
[70] Ibid. The reported annual capacity was more than 220,000 mt.
[71] USDA, FAS, "Nigeria, Market Development Reports, Nigeria's Cocoa Processing Industry, 2007," 6.
[72] Ibid.
[73] Ibid., 5.
[74] Ibid.

its Universal Basic Education program, a nutrition program for school children.[75] This policy could increase local demand for cocoa products. In addition, the Cocoa Association of Nigeria, a trade group, is involved with local promotion of cocoa products.[76]

Labor

Labor issues regarding cocoa bean production, especially child labor and fair returns to farmers, have been a concern in the SSA cocoa industry in recent years. Child labor has been an issue in SSA cocoa production for some time, and efforts have been made recently to identify and rectify the use of children in cocoa production.[77] The Harkin-Engel protocol provided a framework to address this issue, including the establishment of the International Cocoa Initiative and a certification system.[78] The issue of fair returns to cocoa farmers has been addressed by the establishment of a Fair Trade Certification Program.[79] This program guarantees a minimum price for participating growers. To date, two cocoa farm cooperatives in Côte d'Ivoire and one in Ghana participate in the program. Demands by farmers for higher returns led to a short-lived strike in Côte d'Ivoire in October 2006.[80]

Civil Strife

Recent civil strife in Côte d'Ivoire has affected the regional cocoa industry. Uncertainty regarding the reliability of raw cocoa bean supplies has contributed to volatility in raw cocoa bean prices during the period under review. Cocoa processors are seeking to diversify sourcing of cocoa beans. Investment in cocoa processing increased in neighboring Ghana because Ghana is viewed as having a relatively more stable business environment.[81] For example, Barry Callebaut recently doubled the capacity of its plant in Ghana.[82] Cargill also recently announced it would build a new cocoa processing plant in Ghana with an initial annual capacity of 60,000 mt, expandable to 120,000 mt annually.[83]

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[75] Ibid.
[76] Ibid.
[77] International Institute of Tropical Agriculture, *Child Labor in the Cocoa Sector of West Africa*; and Cargill, "Cocoa Industry Labor."
[78] Chocolate Manufacturers Association, "Protocol for the Growing and Processing of Cocoa Beans."
[79] Fairtrade Labeling Organizations International, "Cocoa"; and FairTrade USA, "Producer Profiles."
[80] U.S. Department of State, "Côte D'Ivoire: Cocoa Producers Go On Strike, Paralyzing Exports."
[81] Chocolate & Confectionery International, "Ivory Coast Security Concerns Prompt Price Spike"; Chocolate & Confectionery International, "Barry Callebaut Keen on Ghanaian Expansion"; Chocolate & Confectionery International, "Cargill to Construct Cocoa Processing Facility in Ghana"; and Barry Callebaut, *Annual Report 2004/05*, 24.
[82] Barry Callebaut, *Annual Report 2005/06*, 26.
[83] Cargill, "Cargill to Build Cocoa Processing Facility in Ghana."

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U.S. Department of State. U.S. Embassy, Abidjan. "Côte d'Ivoire: Cocoa Producers Go On Strike, Paralyzing Exports (ABIDJA 01167)," October 18, 2006.

Cut Flowers

Summary of Findings

SSA exporters of cut flowers have been able to expand production and exports, despite low grower and retail prices, because of their position as low cost producers. SSA exporters have been able to increase market share in the EU market because of their proximity to the EU relative to other major exporters (Colombia and Ecuador) and tariff preferences.

SSA exports account for just over one-fifth of global exports of cut flowers by value. Nearly all of these exports go to the EU (99 percent in 2005). Kenya, the largest SSA producer, recently became the top foreign supplier to the EU market. During 2001–05, SSA exports rose steadily, increasing 65 percent over the period, as other SSA countries in East and Southern Africa attempted to replicate Kenya's success in floriculture (table 2-7). Global exports increased by 41 percent, from $1.7 billion in 2001 to more than $2.4 billion in 2005.[84]

Sub-Saharan Africa's favorable climate and low wages provide a comparative advantage that has facilitated development and growth of the industry. Furthermore, increased exports during 2001–05 were facilitated by increased consumption in the EU as a result of low prices. In addition, exports from new SSA suppliers were facilitated by improved distribution chains for these highly perishable products, made possible through increasing investment attracted by government incentives.

Industry Overview

Kenya's floriculture industry was the first of the current SSA exporters to develop, and its industry is now maturing. A dynamic private sector environment, fostered by government policies, contributed to growth in Kenya. Other industries, such as those in Uganda, Ethiopia, Zambia, Senegal, and Malawi, are newer and much smaller, but are experiencing rapid rates of growth. These new industries are now competing for floriculture investment, from both outside and inside Africa (mainly Kenya).

The cut flower industry in SSA generally consists of a modest number of medium-sized firms, though some large firms do exist (box 2-3). Most firms have fewer than 20 hectares under cultivation, but large firms may cultivate up to 200 hectares of flowers. The industry as a whole is a large employer, and while most medium-sized firms employ less than 250 persons, large firms can employ up to 6,000 people. Large firms are generally integrated, with growing, packing, and shipping operations, while smaller firms tend to sell harvested flowers directly to exporters. Most firms are domestically owned, but foreign investment is increasing. The industry structures in the primary SSA exporters is described below.

[84] GTIS, *Global Trade Atlas.*

Table 2-7 Sub-Saharan Africa cut flower exports, by selected exporters and key markets, 2001–05

Exporters	Key markets	Exports 2001	2002	2003	2004	2005	Percent change 2001–05
		1,000 dollars					
Kenya	**EU**	160,672	186,023	236,758	294,360	331,896	107
	Switzerland	4,826	6,443	7,332	9,310	15,722	226
	Japan	1,964	1,879	2,291	3,678	5,512	181
	All other	1,920	1,411	2,259	3,267	4,617	140
	Total	169,382	195,756	248,639	310,615	357,747	111
Uganda	**EU**	11,555	14,626	19,865	25,907	27,831	141
	Norway	562	372	200	477	1,432	155
	South Africa	0	1	4	19	23	n/a
	All other	6	11	4	1	7	17
	Total	12,124	15,010	20,073	26,404	29,293	142
South Africa	**EU**	9,926	11,425	16,895	21,928	21,968	121
	Japan	1,930	2,127	2,351	2,720	2,550	32
	USA	1,058	866	833	883	1,064	1
	All other	5,542	4,514	3,554	2,632	2,266	-59
	Total	18,455	18,931	23,632	28,163	27,848	51
Ethiopia	**EU**	883	1,307	380	6,536	11,989	([a])
	Norway	3	622	1,434	473	748	([a])
	Russia	0	0	0	0	171	([a])
	All other	110	10	51	3	32	-71
	Total	996	1,939	5,234	7,012	12,849	([a])
Sub-Saharan Africa	**Total**	313,015	342,474	412,217	473,154	520,414	66

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

[a]Percent change was greater than 1,000 percent.

Box 2-3 Product Description for Cut Flowers

Cut flowers are an internationally traded, high-value commodity. World-wide retail trade is worth over $25 billion annually. Twenty to thirty types of cut flowers account for the vast majority of international sales. Roses are by far the most traded, but carnations, chrysanthemums, tulips, lilies, and anthurium are also important. Within each flower type multiple varieties exist, and new types are continually developed. In addition to typical aesthetic qualities, novelty is an extremely important factor in the successful marketing of new varieties, as the cut flower industry is essentially a fashion industry.

Although, as a category, cut flowers are highly perishable, certain varieties are relatively hardy and these varieties are traded internationally in large volumes. Over time, improved air transport and special packaging also have enhanced trade in cut flowers. Certain flowers are transported in flat boxes to minimize space, as air freight for cut flowers is measured in volume, not weight. Other more fragile and higher-value flower types are shipped with individual water holders on each stem end or in buckets of water.

Flowers take a number of routes to the consumer, depending on where they are grown and how they are to be sold. Some growers cut and pack flowers at their nurseries, sending them directly out to the consumer by mail order. Some flowers are sent to packing companies, who grade the flowers and arrange them in bunches for sale at retail outlets. Some flowers are graded and sleeved by the growers and sold to wholesale markets; the wholesalers in turn sell them to florists who sell completed arrangements to customers.

Kenya

The Kenyan floriculture industry employs approximately 100,000 people directly and 500,000 in related services.[85] There were approximately 2,000 hectares of cut flowers and foliage in Kenya in 2004,[86] almost all of which were dedicated to export. In 2005, flower export earnings were second only to tea.[87] The main growing area is Naivasha, several hours drive from the airport in Nairobi. Flowers are also being grown in several more remote regions. There are more than fifty types of flowers grown commercially in Kenya, but exports are mainly roses (about 70-75 percent of exports), bouquets of mixed flowers (about 10 percent), and carnations (about 3 percent).[88]

Although there are approximately 140 companies in the industry, production is concentrated on about twenty-five large- to medium-scale farms for nearly 75 percent of total exports.[89] More than 90 percent of domestic production is shipped for export, and only small amounts of flowers are sold by street vendors and florists in the urban centers of Nairobi and Mombasa. Most exports are shipped by air on commercial airlines, but recently some exporters have shipped flowers by sea out of the port of Mombasa.[90]

Kenyan exports grew 119 percent by value during 2001–05. Kenya supplies 31 percent of overall EU demand for cut flowers and 25 percent of the EU market for roses.[91] Increased supplies of mixed-flower bouquets have been encouraged by Kenya's growing direct trade with supermarkets, particularly in the United Kingdom.[92] Kenyan producers supply wrapped bunches and ready-to-display bouquets, which are labeled and date-coded. Its major customers are Marks and Spencer and Flamingo UK, which supplies other British supermarkets. Kenyan producers also have a 25 percent market share in the European supermarket chain Tesco.

Uganda

In 2005, cut flowers were Uganda's eighth-largest export by value and amounted to $35 million.[93] Most flower farms are located near Kampala, near Lake Victoria and the Entebbe Airport. There are nineteen farms on 240 hectares that annually export 7,200 tons of roses and chrysanthemums and employ 6,000 people, mostly women.[94] Industry estimates indicate that 10,000 Ugandans will be employed by the flower sector by 2007.[95] Uganda's soil and cool climate are well suited to flower production, and two rainy seasons per year provide ample water for irrigation.

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[85] U.S. Department of State, U.S. Embassy, Nairobi, "Kenya 4230B."
[86] Kenya Export Promotion Council, "Kenya: Supply Survey on Horticultural Products."
[87] Kenyan Export Processing Zones Authority, "Horticulture Industry in Kenya 2005."
[88] Kenya Export Promotion Council, "Kenya: Supply Survey on Horticultural Products."
[89] Ibid.
[90] Interview by Commission staff, Nairobi, Kenya, December 3, 2006.
[91] U.S. Department of State, U.S. Embassy, Nairobi, "Kenya 4230B."
[92] Kenya Export Promotion Council, "Kenya: Supply Survey on Horticultural Products."
[93] Ugandan Flower Exporters Association, "Uganda Provides Perfect Conditions for Cut Flower Production."
[94] U.S. Department of State, U.S. Embassy, Kampala, "Uganda 146622."
[95] Ibid.

Ugandan exports more than doubled by value during 2001–05. Virtually all Ugandan flowers are exported to the EU, approximately 60 percent to the Dutch auctions and the remainder directly to supermarkets and other EU retailers. Some of the Ugandan flowers sold at auction are purchased and redistributed to other countries of the EU, the United States, and Norway.[96]

South Africa

The South African cut flower and plant industry consisted of 900 companies on 1,050 hectares in 2004.[97] Cut flowers are grown mainly in the Western Cape and Gauteng Province. Western Cape production includes indigenous varieties, such as South Africa's national flower, the protea. The major cut flowers grown in Gauteng Province are roses, dendranthemas, and carnations. South African cut flower exports reached $25 million in 2005, a 60 percent increase from 2001.

Ethiopia

Ethiopia has ideal climatic conditions for the production of cut flowers due to the high altitude (2,000 meters above sea level) of the Addis Ababa region. There were thirty-two existing cut flower farms in 2005, up from three in 2001, including fifteen foreign-owned entities.[98] According to industry representatives, multiple new foreign investments from the Netherlands, Germany, India, and Israel may add 450 hectares with estimated total production valued at $400 million by 2007.[99] During 2002–05, the industry created seasonal and permanent employment for over 25,000 people, more than 70 percent whom are female. According to a recent study by the International Labor Organization, another 47,000 people were expected to be employed in the sector by the close of 2006.[100]

Prospects for continued rapid industry growth in Ethiopia are reportedly favorable. Efforts to increase greenhouse production are underway.[101] Greenhouse production is a form of intensive agriculture, with large amounts of high-value plant material grown in a relatively small area. The income-generating potential of greenhouse-grown cut flowers is much higher than that of traditional field crops in Ethiopia.[102] Greenhouse production capacity for cut flowers in Ethiopia is expected to increase three fold to four fold in the next one to two years.

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[96] Ugandan Flower Exporters Association, "Marketing: Auctions and Direct Sales."
[97] FloraCulture International, "World Flower and Plant Production."
[98] Tadesse, "Ethiopia Flower Exports to Challenge Coffee."
[99] Ibid.
[100] *Africa Research Bulletin: Economic, Financial and Technical Series*, "Flowers: Ethiopia."
[101] The Entomology Research Laboratory, http://www.uvm.edu/~entlab/ethiopia.html.
[102] Ibid.

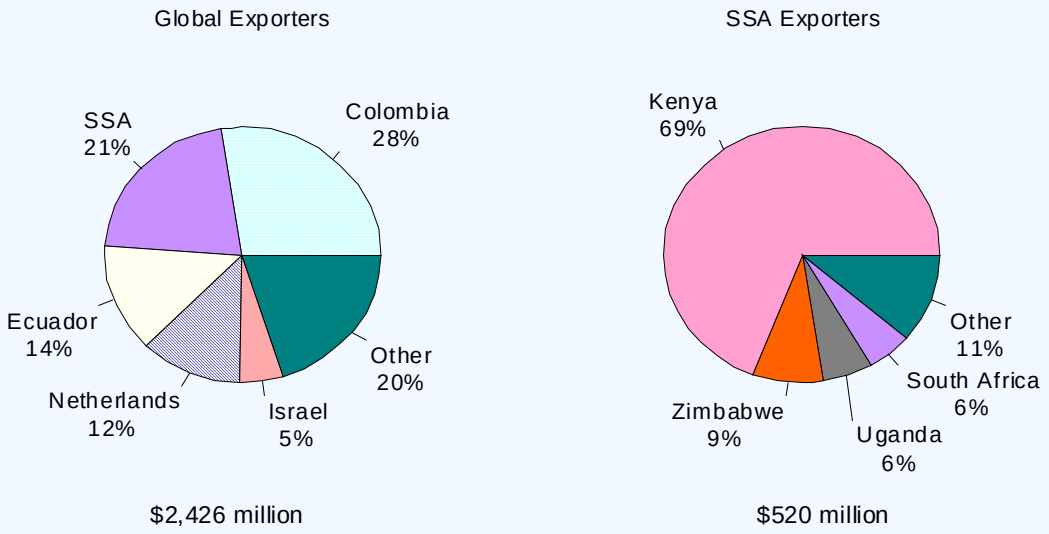
Sub-Saharan Africa Trade in the Global Context

Global exports of cut flowers increased by 41 percent, from $1.7 billion in 2001 to more than $2.4 billion in 2005.[103] SSA cut flower exports of more than $520 million in 2005 accounted for more than 21 percent of the total, up from 18 percent of the total in 2001.

Leading Exporters

The leading exporter of cut flowers to the world is Colombia, followed by Kenya, Ecuador, and the Netherlands. Colombia exported just over one-quarter of total world exports in 2005 (figure 2-5). Since 2000, when Kenya trailed both the Netherlands and Ecuador in global exports, global trade has increased by 38 percent. Kenya accounted for 31 percent of the increase during 2000–05. The vast majority of Colombian and Ecuadorian flowers are exported to the United States, while flowers from Kenya, Zimbabwe, and Uganda are almost exclusively exported to the EU.

Figure 2-5 Leading global and sub-Saharan Africa exporters of cut flowers, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Reflective of its position in the global cut flower trade, Kenya was by far the largest SSA exporter in 2005, with its exports accounting for more than two-thirds of the total. Zimbabwe, Uganda, and South Africa are also important SSA exporters of cut flowers, although small relative to Kenya. Kenya's flower industry developed in the late 1990s. Today, although 70 percent of its production is roses, Kenya is the most diversified of the

[103] GTIS, *Global Trade Atlas*.

SSA exporters. The rapid development of the industry included the construction of a modern cargo facility near the Nairobi airport, and in 1999 Kenya became the largest foreign supplier to the Dutch auction, surpassing Israel.

As the floriculture industry in Kenya begins to mature, other SSA suppliers that offer lower wages and improved infrastructure, such as Ethiopia, are emerging as attractive locations for flower production. Zimbabwe, whose production also developed rapidly in the late 1990s, became the third-largest supplier to the Dutch auction, behind Israel and Kenya, in 2000. Since that time, however, the floriculture industry in Zimbabwe has shrunk by 60 percent and its exports have fallen by one-third as political instability and governmental mismanagement have reduced productivity.[104] The SSA countries that have had the largest increases in exports of cut flowers during 2001–05 are Ethiopia, Uganda, Kenya, and South Africa. Production for export in Ethiopia, Uganda, and South Africa is a relatively new endeavor, and the cut flower industry in these countries has just recently begun to address issues such as improved technology and training, transportation, quality, and courting foreign investment.

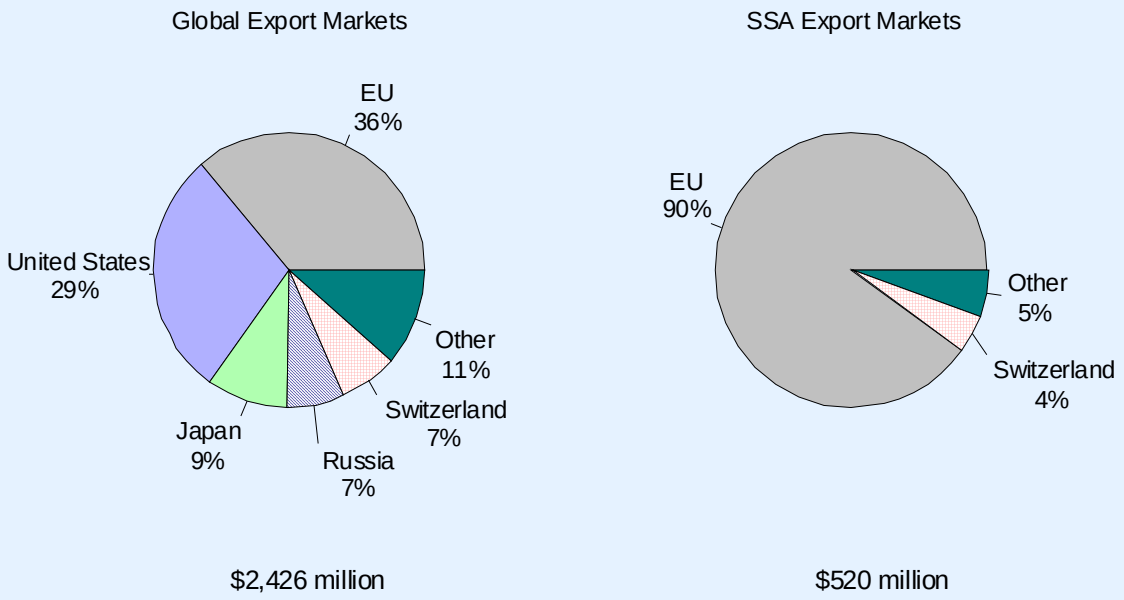
Leading Export Markets

The EU and the United States are the world's largest importers of cut flowers (figure 2-6). Although the EU is one of the highest per capita consumers of flowers, much of what is imported by the EU is reexported to other countries. The presence of large, long-established flower auctions in the Netherlands makes it the world's largest hub of import and reexport of flowers. The Netherlands also has an important cut flower growing industry; the Dutch have been growing flowers and plants commercially since the 1800s. In the United States, cut flower consumption per capita is relatively low, although imported South American roses, carnations, and chrysanthemums are increasingly available to U.S. consumers at low prices. Japan is an important market for flower exporters and is being increasingly served by Colombia and by Asian suppliers such as China and Malaysia, and less so by the EU. Russia is a rapidly growing new market for flower exports, more than doubling its imports during 2003–05. In 2005, the Russian market was served mainly by the EU, Ecuador, and Colombia.

SSA exporters of cut flowers ship almost exclusively to the EU, where they compete primarily against EU domestic producers and exports from Israel, Colombia, and Ecuador.Kenya is the top supplier of flower imports to the EU market—providing mainly roses and small quantities of mixed bouquets and carnations. The largest markets within the EU are the Netherlands, the United Kingdom, Germany, and France. Although very small, SSA exports to the United States have been growing; Kenya's exports of roses to the United States have more than doubled since 2002 to $803,000 in 2005. Ugandan exporters made their first shipment of roses under AGOA to the United States in February 2006, and weekly shipments have occurred since then.[105] Tariffs faced by SSA exports in the EU and U.S. markets are discussed later in this profile.

[104] Goldfain, "The African Marketplace."
[105] USDA, "USAID Helps Uganda's Roses."

Figure 2-6 Leading markets for global and sub-Saharan Africa exports of cut flowers, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Factors Affecting Trade Patterns

Increased demand in the global cut flower market has been driven by greater availability of a wider variety of good quality flowers, while low prices have also prompted increased consumption. Low-cost producers in SSA have been able to expand exports to meet the increased demand. Exports of cut flowers from SSA countries were originally encouraged by the success of floriculture production and export in other developing countries, particularly in South and Central America. South and Central America use export floriculture as an increasingly important component of their agricultural economies and as a driver of rural development. Moreover, traditional impediments to growth in SSA cut flower industries have been addressed by development assistance and incentives. These impediments have included an inability to maintain product quality throughout the distribution chain; inadequate transportation infrastructure; an inability to meet SPS requirements, as well as other entry regulations in foreign markets; and the lack of capital and affordable credit.

SSA's low labor and other costs relative to other developing suppliers (in the Americas and in Asia) and its proximity to the major consuming EU market provide SSA suppliers with a comparative advantage. These factors, combined with government incentives have facilitated increased investment in and growth of SSA's floriculture sectors. In addition, a recent trend toward direct supermarket sales by SSA exporters has contributed to lower

prices for flowers in the EU market and resulted in an increased export volume of mixed bouquets, particularly from Kenya. These conditions are enhanced by development assistance and preferential tariff treatment extended to SSA suppliers by major consuming markets. Additionally, SSA governments are increasingly offering investment incentives. SSA governments actively promote the relative benefits of their countries to potential investors, such as recent infrastructure improvements, fewer security concerns relative to other countries, and tax holidays (see below).

Increased Investment

In Kenya, a variety of private institutions and marketing arrangements have emerged that are able to adapt to changing market conditions.[106] The Kenya Flower Council (KFC) is active in many aspects of the industry. In response to market requirements it developed voluntary codes of practice for the health and safety of workers, pesticide use, environmental welfare, resource stewardship, and social responsibility. The KFC code ensures that growers comply with international standards on social, environmental, and technical issues.[107] Private sector initiatives are supported by the Horticulture Crops Development Authority (HCDA), a government parastatal and the main regulatory body charged with promoting development of the sector, licensing exporters, and disseminating marketing information. The HCDA also advises and trains growers, conducts trials of new technologies or varieties, inspects nurseries and planting materials, monitors and disseminates pricing and other market information, identifies local and export market outlets, and designs and implements quality standards. The consolidation and expansion of traditional markets and penetration into new markets has been overseen by the Export Promotion Council, which conducts market research, hosts trade missions, and arranges contact promotion programs between buyers and sellers.[108]

Private sector participation in management of the industry has led to the creation of large- and medium-scale companies that give a degree of stability and technological leadership to the sector. These companies have a well-trained labor force and close linkages with European importers. The presence of international and local seed companies, due in large part to Kenya's explicit recognition of breeders' rights through its status as a signatory to the International Union for the Protection of New Varieties of Plants convention, gives the industry better access to new and improved varieties. Improved technologies, including a greater choice of varieties and shipping media (such as aquapacks systems for transportation in water), result in improved product quality, but at a corresponding increased cost. As in most SSA industries, the adoption of such improved technology is often hindered by high credit rates.

The Kenyan cut flower industry has grown to the point where local propagators supply a large portion of the planting material needed by Kenyan producers. Production methods are becoming increasingly sophisticated, and improved technology has led to increased production per unit area and enhanced the quality of the flowers.[109] At the same time, the required advanced production systems make starting production a relatively expensive endeavor.

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[106] Kenyan Export Processing Zones Authority, "Horticulture Industry in Kenya 2005."
[107] Kenya Export Promotion Council, "Kenya: Supply Survey on Horticultural Products."
[108] Ibid.
[109] Ibid.

Policies to Promote the Industry and Infrastructure Improvement

In 1997, with the assistance of USAID, a modern cold storage facility was built near the Entebbe Airport for Uganda's Civilian Aviation Authority. Prior to this, maintaining a "cold chain" between the time the flowers leave a farm and the time they are placed on a cargo plane was a challenge; and poor-quality wilted flowers would often be rejected by buyers. The facility currently handles the majority of Ugandan flower exports.[110] The coordination of booking air freight and cargo space has been successful in preventing shipping bottlenecks and has led to reduced freight rates and reliable product arrivals.[111] Better coordination has also enabled the industry to increase the number of cargo carriers to Uganda due to increased throughput and efficiency of the facility. Increased Ugandan exports were also facilitated by a decrease in air freight costs to EU destinations, from $2.40 per kg in 2000 to $1.60 per kg in 2004. Subsequently, however, high world fuel prices reversed the downward trend.[112]

The development in 2000 of an active export association, the Ugandan Flower Exporters Association (UFEA), provided significant benefits to Ugandan growers. In addition to setting national quality standards, UFEA also provides producers with start-up advice, technical assistance, price and market information, and business contacts.[113] The UFEA is working on behalf of growers to reduce transportation costs through lower prices on jet fuel and tax credits on fuel for refrigerated trucks and to provide for the widespread use of refrigerated trucks throughout the industry.[114]

USAID also assisted the Ugandan industry in its efforts to export to the United States, where certain rose varieties can garner 20 cents per stem versus 12 cents in the Dutch market.[115] Exporters were trained by USDA's Animal and Plant Health Inspection Service on U.S. entry regulations, export documentation, and certification of origin necessary to take advantage of the duty-free status of roses under AGOA. The first shipments of Ugandan roses were made in February 2006.[116] Other USAID assistance has included funding trials for testing environmentally friendly hydroponics technology, which would improve both efficiency and productivity; thereby increasing quality and yields; and funding training for supervisors and managers in an Applied Tropical Floriculture Certificate course.[117]
The Japanese government is also providing assistance to the Ugandan floriculture industry. Two Ugandan flower operations are participating in the Japan External Trade Organization (JETRO) Flower Monitoring Project for East Africa. JETRO is a Japanese government-related organization that promotes trade and investment. The program sponsored a Japanese flower market survey conducted for Ugandan firms and their participation in the International Flower EXPO in Tokyo.

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[110] Ugandan Flower Exporters Association, "Fresh Handling Facility."
[111] Ibid.
[112] Ugandan Flower Exporters Association, "Performance."
[113] Ugandan Flower Exporters Association, "Publications."
[114] USAID, "Success Story: Uganda's Flower Industry is Up and Running."
[115] U.S. Department of State, U.S. Embassy, Kampala, "Uganda 146622."
[116] USAID, "USAID Helps Uganda's Roses Break Into the U.S. Market for the First Time."
[117] Ugandan Flower Exporters Association, "Training."

Kenya

The Kenyan government attributes early growth of the floriculture sector in the 1990s, in part, to the liberal macroeconomic policy environment and government encouragement of foreign investment and international trade.[118] Its main role in encouraging floriculture has been through infrastructure development, incentives, and support services.[119] The Kenyan government's National Export Strategy focuses on certain priority sectors, including horticulture, which includes cut flowers.[120] The Government Strategy for Revitalizing Agriculture (2004–14) seeks to increase productivity and profitability in agriculture by establishing a market-based agricultural credit and input system, reforming extension services, and promoting downstream processing. The investment and business environment in Kenya has been enhanced through government divestiture and privatization; the abolition of import and export licensing; the removal of administrative and price controls; freedom of movement of foreign exchange in and out of the country; liberalization in the banking sector; and the removal of import duties on packaging, seeds, agrochemicals, and other necessary inputs for floriculture exports.[121]

Certain government programs have been specifically designed as incentives to export-oriented investors, including export processing zones and the Tax Remission for Export Office, which facilitates benefits for intermittent imports used in export production. Kenya is also a member of the Multilateral Investment Guarantee Agency, the Africa Trade Insurance Agency, and the International Center for Settlement of Investment Disputes, which provide potential investors with protection for their investments in Kenya against a wide range of non-commercial risks.[122]

Industry observers have noted that current conditions—such as the strong Kenyan shilling, high energy costs in the production process, poor roads, corruption, crime, water shortages, and bureaucratic hurdles—may have influenced the movement of cut flower operations to other African countries during the period under review.[123] Since 2002, twenty-eight flower farms in Thika and Athi River have closed, five of which moved operations to Ethiopia. A shortage of skilled labor has occurred as production managers were recruited to work elsewhere.[124] According to industry reports, managers of thirty-seven farms in Naivasha have vocalized their discontent and expressed possible plans to relocate operations.[125] However, during the period under review, Kenyan growers stepped up efforts to diversify their product offerings to supermarkets, particularly of mixed bouquets. At the same time, they are increasingly selling directly to large retailers, bypassing the EU auction system, which has lowered prices to consumers and increased the volume of shipments.[126]

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[118] Kenyan Export Processing Zones Authority, "Horticulture Industry in Kenya 2005."
[119] Ibid.
[120] Kenya Export Promotion Council, "Kenya: Supply Survey on Horticultural Products."
[121] Ibid.
[122] Kenyan Export Processing Zones Authority, "Horticulture Industry in Kenya 2005."
[123] Goldfain, "The African Marketplace," and U.S. Department of State, U.S. Embassy, Addis Ababa, "Kenya 4230B."
[124] U.S. Department of State, U.S. Embassy, Addis Ababa, "Kenya 4230B."
[125] Ibid.
[126] Goldfain, "The African Marketplace," 28.

Uganda

The government of Uganda encourages export-led growth by granting duty-free import of most inputs for flower farms. The Uganda National Floriculture Industry Strategy Plan calls for a doubling in size of the flower sector from its present 180 hectares to 360 hectares by 2007, when it is expected to employ 10,000 people and bring in annual export revenue in excess of $50 million. The industry is now looking to expand the number of farms and the range of flowers and cuttings for export in order to achieve economies of scale and minimize freight rates. Investment is actively being encouraged.[127]

New investment expanding into western Uganda is part of a national strategy by the industry to increase production and diversification by encouraging investment in other climatic zones.[128] It is hoped that a newly paved road and investment in refrigerated trucks will offset the longer distance of the new operations from the main airport.[129] A modern cold storage facility near the airport and an organized export association that provides a statistical tracking system and timely market information facilitate cut flower exports.

Ethiopia

In the early 1990s, the government adopted a policy of rural-centered agricultural development for poverty reduction and economic development. With ideal growing conditions for flowers, floriculture was a prime candidate for development. The government has since encouraged foreign and local investment in agriculture in general; and floriculture has emerged as a major non-traditional export sector, with export value growing by more than ten fold from 2001–05. The government's 2004 promotional investment campaign for agriculture allocated land for flower farms and initiated infrastructure projects aimed at raising productivity.[130] Other incentives included an improved investment code, a five-year tax holiday, duty-free import of machinery, and offers for low-cost land leasing.[131] Investors also have access to low interest rate loans from a $350 million World Bank fund for the development of floriculture in Ethiopia.[132]

Relative to Kenya, labor, land, and freight rates in Ethiopia are inexpensive; and the infrastructure, such as roads, telecommunications, and water, is adequate for cut flower production and export.[133] Indian investors report that the low freight cost advantage of producing in and shipping from Ethiopia to the EU market is a key factor in their investment.[134] Since freight costs can account for over 50 percent of floriculture earnings, the 50-60 percent cost advantage of shipping from Ethiopia to Europe, versus shipping from India to Europe is significant.

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[127] Ugandan Flower Exporters Association, "Uganda Provides Perfect Conditions for Cut Flower Production."

[128] Ugandan Flower Exporters Association, "New Rose Farm Means Promising Future for Uganda."

[129] U.S. Department of State, U.S. Embassy, Kampala, "Uganda 146622."

[130] Goldfain, "The African Marketplace"; *Africa Research Bulletin: Economic, Financial and Technical Series*, "Flowers: Ethiopia"; and Interview by Commission staff, City, Ethiopia, December 13, 2006.

[131] Muriuki and Temple, "Ethiopia's Flowers Grow into New Forex Earner"; and Interview by Commission staff, City, Ethiopia, December 13, 2006.

[132] Vishwanath, "Africa Promises Bed of Roses for Floriculture Sector."

[133] Goldfain, "The African Marketplace."

[134] Vishwanath, "Africa Promises Bed of Roses."

Tariff Preferences

Duty-free treatment is extended to SSA cut flower exports to the EU market under the Cotonou Agreement, an international aid and trade agreement between the ACP (African, Caribbean, and Pacific) countries and the EU. Negotiations for ACP countries to enter into Economic Partnership Agreements (EPA) with the EU are underway and are expected to result in a series of new free trade agreements. According to the Kenya Flower Council, under an EPA, Kenya is not expected to be considered a least-developed country for these purposes and, in the absence of preferences, could potentially face duties of 9-11 percent on its flower exports to the EU market.[135] Of SSA countries that will continue to have least developed country status in the EU, Ethiopia in particular would be well situated to make the most of their duty-free status in the face of Kenya's potential loss of preferential access.

Under AGOA, roses receive preferential duty-free treatment in the U.S. market, whereas exports of other flower varieties continue to pay 3-7 percent duty. Though the volumes are currently small, duty-free treatment has encouraged increased shipments of SSA-produced roses to the United States.

[135] Kenya Flower Council, "Activities."

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Prepared and Preserved Fish

Summary of Findings

The principal SSA countries that produce and export prepared and preserved fish, primarily canned and semiprocessed tuna, are Côte d'Ivoire, Ghana, Senegal, South Africa, Namibia, Seychelles, Mauritius, Madagascar, Kenya, and South Africa. Together they accounted for nearly all SSA exports of prepared and preserved fish, which grew by more than 54 percent, from $396 million in 2001 to an estimated $612 million in 2005. However, the increase in value was primarily the result of increased prices in the European market. Export quantities varied by only 7 percent, from the low in 2003 to the peak in 2004 (table 2-8). In comparison, the value of global exports increased by 50 percent over that period. Several countries, such as South Africa and Namibia, showed decreased export volumes despite increased export values. By far, the leading market for SSA exports, is the EU, largely owing to historical ties between the two regions, as well as to the EU's trade preference programs for imports from developing nations. In the EU market, the main competitors for SSA exports include EU producers themselves and developing country exporters in the Pacific region and Latin America.

The main factors affecting the ability of SSA countries to maintain export quantities include the availability of raw material (harvested fish) in SSA waters, and the investment of capital to maintain and operate canneries. Fish availability is primarily a function of nature, but it can be managed by government control of fishing effort. For example, to harvest fish located offshore and out of the reach of local artisanal fishermen, countries such as Seychelles, Mauritius, and Côte d'Ivoire have increasingly enlisted foreign-flag vessels. Fish caught by such vessels tend to be landed in domestic ports and then exported. Another factor affecting SSA exports is availability of capital to efficiently operate on-shore canneries and other processing facilities, which are the main structural elements of the prepared and preserved fish industry. In countries such as Côte d'Ivoire, Ghana, Seychelles, and Mauritius this challenge has largely been met by foreign direct investment, including investment from fish processors and distributors in key SSA markets.

Industry Overview

The industries producing prepared and preserved fish in each of the nine major SSA exporting countries are comparable in structure (box 2-4). They mainly consist of factories (canneries) that process tuna, sardines, mackerel, etc., plus the (typically affiliated) foreign and domestic distributors that buy their output and the (typically unaffiliated) harvesters that supply them with fish. These factories are of two types: full-scale canneries, in which the loins are removed from whole fish and then further processed into canned product, and loining plants that only produce loins from whole fish, to be shipped (usually exported) to other canneries for final canning.

Table 2-8 Sub-Saharan Africa exports of prepared and preserved fish, by selected exporters and key markets, 2001–05

Exporters	Key markets		Exports 2001	2002	2003	2004	2005	Percent change 2001–05
Seychelles	**EU**	*Million dollars*	110.2	155.6	193.7	168.6	177.9	61
	Total		112.0	155.6	193.8	169.3	178.1	59
	Total	*1,000 metric tons*	41.2	43.1	37.3	37.1	39.7	-4
Côte d'Ivoire	**EU**	*Million dollars*	100.6	135.7	136.0	140.0	104.0	3
	Total		100.6	135.7	136.2	140.0	104.0	3
	Total	*1,000 metric tons*	47.3	53.3	45.6	50.1	31.0	-34
Mauritius	**EU**	*Million dollars*	61.5	67.3	71.2	80.4	105.0	71
	Total		62.2	68.0	73.0	81.5	109.5	76
	Total	*1,000 metric tons*	27.2	28.7	31.6	32.2	38.3	41
Ghana	**EU**	*Million dollars*	33.9	57.4	55.5	63.7	81.9	142
	Total		34.8	59.0	56.6	66.7	81.9	135
	Total	*1,000 metric tons*	15.0	26.1	25.9	30.4	31.2	108
Madagascar	**EU**	*Million dollars*	28.1	28.7	54.2	53.4	49.7	77
	Total		28.1	28.7	54.2	53.4	49.7	77
	Total	*1,000 metric tons*	14.6	15.4	17.2	18.0	19.8	36
Kenya	**EU**	*Million dollars*	21.2	8.2	10.7	31.8	40.8	92
	Total		21.2	8.2	10.7	31.8	40.8	92
	Total	*1,000 metric tons*	7.0	2.6	3.1	8.5	10.1	44
Senegal	**EU**	*Million dollars*	16.4	22.7	22.7	20.9	21.1	29
	Total		18.4	24.7	24.7	23.7	24.4	33
	Total	*1,000 metric tons*	10.6	9.2	9.2	7.8	8.1	-24
South Africa	**EU**	*Million dollars*	2.5	3.7	3.2	5.9	7.0	180
	Total		9.3	11.4	9.4	12.2	13.9	49
	Total	*1,000 metric tons*	11.2	12.1	6.7	6.6	7.4	-34
Namibia	**EU**	*Million dollars*	3.3	1.2	1.4	4.1	7.8	136
	Total		9.8	4.3	9.2	8.2	10.0	2
	Total	*1,000 metric tons*	13.4	5.4	6.5	5.7	6.0	-55
Sub-Saharan Africa	**EU**	*Million dollars*	377.7	480.5	548.6	568.8	596.8	58
	Total		396.4	495.6	567.8	586.8	612.3	54
	Total	*1,000 metric tons*	187.5	195.9	183.1	196.4	191.6	2

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade; Food and Agriculture Organization of the United Nations; U.S. Department of Commerce; and Commission staff estimates.

Box 2-4 Product Description for Prepared and Preserved Fish

Prepared and preserved fish products include canned fish (e.g., sardines, anchovies, and mackerel), breaded fish (such as fish sticks), caviar and caviar substitutes, fish-based prepared meals, and semi-processed products such as tuna meat (loins) used as raw material by canneries. Products of particular importance to SSA producers and exporters include canned fish (tuna, pilchards, and sardines) and tuna loins. Domestic and export markets for these products support an array of canneries and frozen-fish warehouses and transshipment facilities along the west and east SSA coasts.

An industry closely associated with the prepared and preserved fish industry is fish harvesting, from which whole fish are produced. This industry supplies raw material for the fresh/frozen fish industries and markets (not covered in this chapter), but it is also essential for supplying raw material for the prepared and preserved fish industry. As discussed below, the capital and labor for this industry that utilizes a resource from SSA waters are primarily supplied by non-SSA sources.

Fish processing factories are large enterprises, and there are only a few in each SSA country. Some countries, such as Ghana and Seychelles, have only one cannery each.[136] However, each cannery can employ up to 2,000 production-line employees.[137] Canneries are highly capital-intensive, and the investment required to establish them has come mostly from abroad. In most instances, EU sources have financed the processing facilities, but in a few cases there also has been investment from U.S. sources (e.g., StarKist in Ghana) or Japanese sources (Mitsubishi in Mauritius). Often the source of the financing is a canned-fish distributor in a developed country, and that distributor becomes the cannery's main customer.

The tuna or other fish that are used by the canneries in almost all SSA exporting countries are harvested mainly by foreign-owned vessels that either operate under the SSA country's flag or, if foreign-flagged, are licensed by the local country to fish in its waters. These foreign-owned vessels usually employ non-SSA crews.[138] Most fish species that are used for prepared or preserved fish products are found several miles from shore, beyond the reach of local, artisanal fishermen who use small boats in inshore fisheries. In each coastal SSA country there are usually only a few dozen large offshore harvesting vessels, while there are many hundreds of inshore harvesters.

As noted, there is little vertical integration between canneries and harvesters. Even the large offshore foreign-flag harvesting vessels generally are independently owned, although they might, in some cases, have short-term (e.g., annual) supply contracts with the canneries that buy their catch. In contrast, there are several cases of ownership or other contractual integration between SSA processing firms and their distributors in developed country markets. These include UK-based Princes Ltd. (a Mitsubishi subsidiary that markets canned food in Europe), which operates a tuna plant in Mauritius, and StarKist (a Del Monte subsidiary that markets canned tuna in many countries), with operations in Ghana and Seychelles.

The size and nature of the domestic market for prepared and preserved fish is an important structural determinant of the industry's export performance: the smaller the domestic market, the greater the dependence on exports in order to maintain the production levels needed to operate large canneries at efficient capacity. With the exception of South Africa, SSA markets for prepared and preserved fish are characterized by low consumer incomes (and therefore low local market prices compared with export markets), difficulties in transporting products from coastal facilities to inland population centers, and competition from alternative foods (including other seafoods such as fresh or frozen fish). Thus, production of prepared and preserved fish products throughout the SSA region is mainly for export.[139]

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[136] International Trade Centre UNCTAD/WTO, "Supply Survey on Seychelles' Fish and Fish Products, July-August 1999"; and "Mauritius & Seychelles dominate the U.K. tuna market," @tuna.com.

[137] Traditionally, production line employees have almost exclusively been women.

[138] *Eurofish Magazine*, "Africa's Fish Industry," 45–47.

[139] FAO, *FAOstat database*.

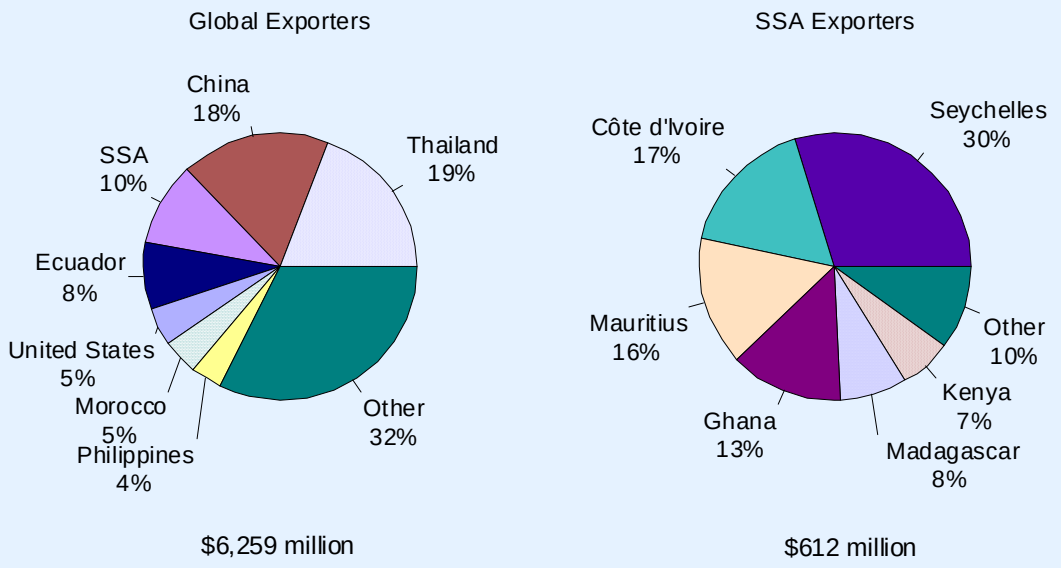
Sub-Saharan Africa Trade in the Global Context

World exports of prepared and preserved fish have increased steadily in recent years, to an estimated $8.4 billion in 2005, a 50 percent increase from $5.6 billion in 2001.[140] SSA exports increased at a similar rate,rising by more than 54 percent, from $396 million in 2001 to an estimated $612 million in 2005.

Leading Exporters

The world's leading exporters are (in descending order) Thailand, China, Ecuador, United States, Morocco, and Denmark, which together, with SSA, accounted for more than two-thirds by value of world exports of prepared and preserved fish in 2005 (figure 2-7). The leading SSA exporters of prepared and preserved fish in recent years include Seychelles, Côte d'Ivoire, Mauritius, Ghana, Madagascar, and Kenya. Together these countries accounted for almost 90 percent of SSA prepared and preserved fish exports. These countries are also the SSA region's leading harvesters of fish, although SSA fish processing frequently is supplied by imported fish and fish harvested by foreign-flag vessels operating in SSA waters.

Figure 2-7 Leading global and sub-Saharan Africa exporters of prepared and preserved fish, 2005



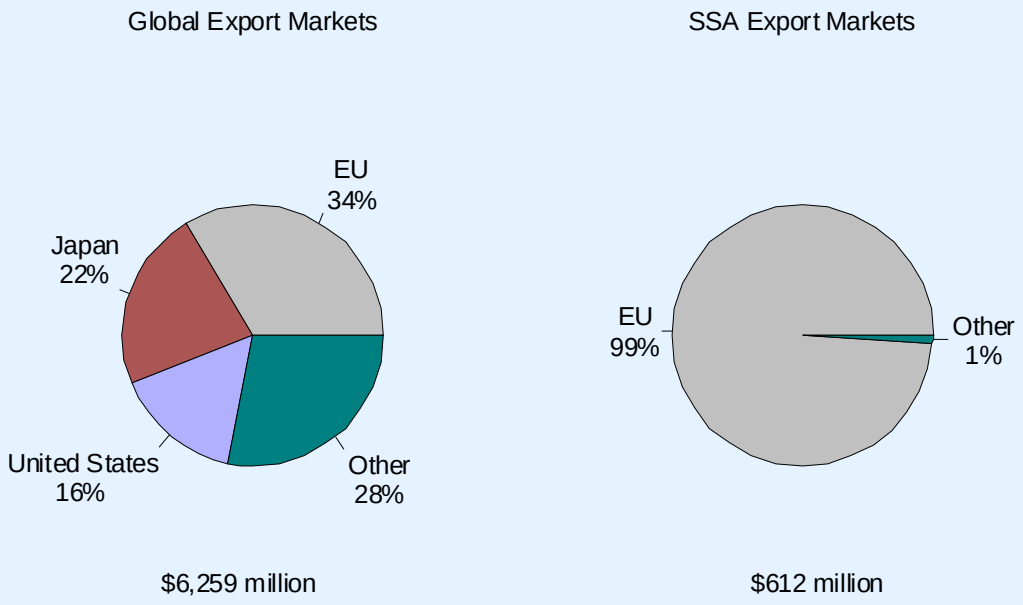
Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

[140] FAO and Commission staff estimates.

Leading Export Markets

Global markets for prepared and preserved fish reached an estimated $8.6 billion in 2005, up by 45 percent from $5.9 billion in 2001.[141] The world's leading importers are (in descending order) the EU, Japan, and the United States, which together accounted for about 72 percent by value of world imports of prepared and preserved fish in 2005 (figure 2-8).

Figure 2-8 Leading markets for global and sub-Saharan Africa exports of prepared and preserved fish, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

The leading species traded worldwide include tuna, sardines, salmon, and herring, all of which are traded mainly in canned form, although there also is an expanding trade in semi-processed tuna loins used as raw material by canneries.

The EU accounts for nearly all SSA exports of prepared and preserved fish, owing in part to the long-standing economic and cultural ties between certain EU members and several SSA countries, as well as to duty-free treatment under EU tariff preference programs. These ties have helped facilitate prepared and preserved fish exports to the EU. In 2005 such exports reached an estimated $597 million, or 96 percent of the total value of all SSA exports. The main competitors with SSA exporters in the EU market for prepared and preserved fish include EU producers and exporting nations in Southeast Asia and the Pacific

[141] Based on FAO import data, which is typically greater than reported export data.

Rim (e.g., Thailand and the Philippines) and Latin America (e.g., Ecuador). Some of these exporters are competitive with SSA exporters for many of the same historical reasons. In addition, several other developing countries benefit from preferential EU tariff treatment programs.

Intra-SSA trade (in excess of $15 million in 2005) accounted for the next largest market for prepared and preserved fish exports; for example canned or semi-processed sardines and related species exported from Namibia to South Africa and Angola; South African exports of similar products to Mauritius (which serves as a transshipment point for developed-country markets), Mozambique, and Ghana; and Ghanian exports of canned fish to Nigeria. Some of this trade is further processed and then reexported to the EU or other non-SSA markets.

By comparison, the United States is a very small market for SSA fish exports, accounting for an estimated $3.9 million (0.6 percent) of total SSA exports in 2005 (0.4 percent of total U.S. imports of this product group). However, the U.S. market has been growing in importance since 2005, due to increased U.S. tuna cannery demand for tuna loins from Mauritius.[142]

Factors Affecting Trade Patterns

The main factor contributing to the growth in value of SSA exports of prepared and preserved fish was increased prices in the European market. However, maintaining the quantity of exports required abundant and well managed fisheries in SSA to supply raw material (whole fish) to the canneries. Furthermore, SSA suppliers were able to obtain the necessary capital to maintain and operate these canneries, primarily through foreign direct investment by large multinational firms for export to their home markets.

Demand Growth and Price Increases

The primary factor affecting the increased export value of prepared and preserved fish products from SSA was an increase in export unit values to the EU. Overall, export unit values increased by 51 percent, from $2,114 per mt in 2001 to $3,196 per mt in 2005. The quantity exported in 2005 was only 2 percent greater than that exported in 2001 (table 2-8). As global demand for fish products has generally increased, production from marine fisheries worldwide has not kept pace. Global fish consumption rose from nearly 94 to 103 million mt from 1999 through 2003, while marine production was stable at nearly 80 million mt in 1999 compared with slightly more than 81 million mt in 2003. Aquaculture is increasingly relied upon to supply the difference.[143] Prices for wild-caught fish for processing in the EU, SSA's primary market, have increased due to depleted EU fisheries and EU Commission efforts to rebuild these fisheries by drastically cutting fishing quotas in EU waters.[144]

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[142] Conners Bros. Income Fund (owner of Bumble Bee Seafoods, a tuna canner), written submission December 14, 2006.

[143] FAO, *The State of World Fisheries and Aquaculture, 2004.*

[144] For example, Spain's Balearic Islands bluefin tuna fishery yielded less than 3,000 mt in 2006, down from nearly 15,000 mt in 1995; ElAmin, "Plight of Bluefin Tuna Highlights EU's Fish Crisis."

Increased Investment

As noted, another factor affecting SSA exports is capital availability to efficiently operate on-shore canneries and other processing facilities, the main structural elements of the prepared and preserved fish industry. This challenge has largely been met in the SSA region by foreign direct investment, mainly from fish processors and distributors in key SSA markets. Such investments include the previously noted plants operated by StarKist in Ghana and Seychelles, Princes' (Mitsubishi) plant in Mauritius, and Tri Marine's plant in Kenya. These plants produce primarily for the EU market, under labels owned by their parent firms.

Policies to Promote the Industry

Related to fishery abundance is the issue of licensing foreign-flag vessels to fish in a country's EEZ (Exclusive Economic Zone). As described below, many SSA countries issue licenses (in exchange for a fee) to foreign-flag vessels to harvest certain species within their EEZs. This is usually done when there is a surplus of fish relative to the SSA country's own fishing capacity.[145] Such licensing is common. The EU is the most active foreign player in the SSA region and has fishing agreements with Côte d'Ivoire, Madagascar, Mauritius, and Seychelles, among others. All of these countries export significant amounts of processed tuna to the EU.

The foreign licensing issue has several implications for exports. On one hand, the foreign-flag harvesters frequently land their catches in the SSA country's ports, which increases or helps maintain the supply of fish to local canneries. Without such foreign-flag harvests, canneries would be dependent on the limited catches provided by domestic harvesters. For example, Kenya's tuna processing industry relies mainly on harvests of tuna by foreign-owned vessels licensed to fish in its waters, because its own harvesters operate boats too small to traverse the distances needed to catch tuna.[146] Such licensing arrangements have allowed Kenya to be one of four SSA countries (the others being Mauritius, Ghana, and Madagascar) that increased the quantity and value of its exports of prepared and preserved fish during 2001–05. During that period, the volume share of exports from these four countries increased from 35 percent to 51 percent of the SSA total.

On the other hand, it is reported that, by catching such large amounts of fish in waters just beyond the reach of local fishermen, large foreign-flag harvesters may deplete the availability of fish to such local fishermen, thereby inhibiting the development of the SSA country's own harvesting capacity.[147] Senegal, after two decades of allowing EU harvesters in its waters, chose to end such activity in 2002, reportedly because foreign harvests depleted the availability of fish to local harvesters.[148] The importance of foreign-flag fishing vessels to maintaining export volume, however, is demonstrated by the fact that the quantity of

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[145] In fact, signatories to the United Nations Convention on the Law of the Sea (UNCLOS) are required to make surplus fish resources (in excess of the local country's capacity to harvest them) within their EEZ available to foreign-flag fleets. All of the major SSA producers/exporters of prepared and preserved fish are UNCLOS signatories.

[146] The largest element of this industry is a tuna plant in Mombassa operated by U.S.-based Tri Marine International, Inc., which exports tuna loins mainly to EU canneries. Gitonga, Okai, and Mutegi, "The Effects of the EU Ban on Lake Victoria Fish Exports on Kenyan Fisheries."

[147] Mutume, "Africa Seeks to Safeguard its Fisheries," 12.

[148] Ibid.

Senegal's exports of prepared and preserved fish products actually declined by 24 percent during 2001–05, after foreign-flag vessels were excluded from Senegal's fishery.

Natural Resources

An abundant and sustainable supply of whole fish is necessary to maintain exports of prepared and preserved fish products. As harvested wild fish are the primary source of this input in SSA countries, maintaining or increasing export quantities requires increased fishing effort as fish concentrations decline. However, increased fishing effort must be managed so as not to deplete the supply of fish in SSA waters. In the case of SSA countries, efforts to prevent depletion of fish stocks is typically managed by government control (such as through catch quotas). Because local fishing technology limits domestic fishing effort to in-shore waters (some of which is overfished), many SSA countries have increased off-shore fishing efforts and thereby maintained or increased fish availability to processing plants. Off-shore fishing has been increased by licensing of large foreign-owned harvesting vessels that fish within the 200-mile maritime limits (Exclusive Economic Zones, or EEZs) of SSA countries. Such licensed foreign fishing is common among SSA countries and contributes to the supply of fish to SSA processors because much of the foreign catch is landed in SSA ports.

Seychelles is a good example of a country whose fish processing industry benefits from adjacent abundant fish resources. Near-shore fish stocks include a number of mackerel species, which are harvested by local fishermen and sold either in domestic markets or to processors for export.[149] Tuna stocks are found further from shore and are harvested mainly by foreign-flag vessels. Such tuna are landed in Seychelles and either transshipped in whole frozen form to canneries elsewhere (about 85 percent of tuna landings are transshipped) or canned or cut into loins locally (mostly for export).[150] Government management measures for Seychelles fisheries include licensing of foreign-flag vessels and restrictions on the types of fishing gear that may be used and the areas or seasons during which fishing is allowed.[151]

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[149] FAO, "Fishery Country Profile: Seychelles," 3.

[150] Tuna are typically caught outside Seychelles' 12-mile territorial limit by foreign-flag craft; see FAO, "Fishery Country Profile: Seychelles," 4. As a result, the tuna are not considered a product of Seychelles when they are landed at the nation's port and re-exported, hence the use of the term "transshipped" rather than "exported."

[151] FAO, "Fishery Country Profile: Seychelles," 5-6.

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CHAPTER 3
Mining and Manufacturing Industry Sector Profiles

Overall growth in mining and manufacturing exports from sub-Saharan Africa (SSA) was strong from 2001 through 2005. Increased exports were driven by increased global demand and prices for energy and certain chemicals, minerals, and metal products. In many cases, multinational firms partnered with domestic entities, both private and public, to expand production and distribution capacity, which resulted in increased use of raw materials and natural resources. In some cases, exports benefitted from preferential tariff policies in key markets. The following tabulation summarizes dynamic factors that contributed to increased exports and underlying factors that contributed to industry development in the mining and manufacturing sector.

Factors	Acyclic alcohols	Flat-rolled steel	LNG	Textiles and apparel	Unwrought aluminum	Wood veneer
Dynamic Factors (factors that changed during 2001–05 and contributed to increased exports)						
Demand growth and/or price increases	X	X	X		X	X
Increased Investment	X	X	X	X	X	
Policies to promote the industry			X	X		X
Infrastructure Improvement					X	
Tariff Preferences				X		
Underlying Factors (factors that remained relatively stable during 2001–05)						
Natural Resources	X	X	X		X	X
Labor supply				X		
Regional Integration		X		X	X	

Acyclic Alcohols

Summary of Findings

Exports of acyclic alcohols from SSA increased in both value and quantity from 2001 through 2005. Export values rose steadily, increasing more than threefold, and export quantities nearly doubled (table 3-1). By comparison, global exports of acyclic alcohols roughly doubled in value over the same period.[1] SSA export volumes increased because two new acyclic alcohol production facilities were constructed in the region, a methanol plant in Equatorial Guinea and an n-butanol plant in South Africa. These production facilities made use of Equatorial Guinea's and South Africa's natural resources (natural gas and coal

[1] GTIS, *Global Trade Atlas.*

Table 3-1 Sub-Saharan Africa exports of acyclic alcohols, by selected exporters and key markets, 2001–05

Exporters	Key markets		Exports 2001	2002	2003	2004	2005	Percent change 2001–05
Equatorial Guinea	**USA**	*1,000 dollars*	24,954	51,906	93,574	88,325	144,445	479
		Metric tons	408,452	438,307	531,493	472,456	607,522	49
	EU25	*1,000. dollars*	24,520	27,733	67,197	41,310	75,844	209
		Metric tons	156,054	209,036	279,403	191,594	318,026	104
	Total	*1,000 dollars*	49,474	79,640	160,771	129,635	220,289	345
		Metric tons	564,506	647,343	810,896	664,050	925,548	64
South Africa	**EU25**	*1,000. dollars*	4,192	4,373	19,768	8,416	30,654	631
		Metric tons	7,025	7,908	31,634	12,914	40,349	474
	China	*1,000 dollars*	1,983	4,129	17,771	27,342	21,291	974
		Metric tons	2,371	5,809	31,325	40,042	24,051	914
	USA	*1,000 dollars*	3,515	2,908	6,954	10,639	17,458	397
		Metric tons	4,859	5,324	10,081	12,856	18,783	287
	All other	*1,000 dollars*	29,211	36,927	62,029	100,791	79,661	173
		Metric tons	68,083	79,329	108,316	148,978	120,232	77
	Total	*1,000 dollars*	38,902	48,337	106,522	147,187	149,064	283
		Metric tons	82,338	98,370	181,356	214,790	203,415	147
Sub-Saharan Africa	**Total**	*1,000 dollars*	93,646	130,474	275,755	283,654	347,461	271
		Metric tons	646,844	745,713	992,252	878,840	1,128,963	75

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

feedstocks, respectively). Investment in these facilities was driven by increased global demand and prices for acyclic alcohols. Together, Equatorial Guinea and South Africa accounted for more than 99 percent of SSA exports of acyclic alcohols in 2005. South Africa is the only SSA country that exported acyclic alcohols before the period under review. Equatorial Guinea's new facility, which began commercial production in 2001, was funded by direct investment from U.S.-based companies (see below).

Industry Overview

Equatorial Guinea and South Africa account for nearly all SSA production of acyclic alcohols; however, they do not generally compete against one another in the global market. Equatorial Guinea produces and exports only methanol, whereas South Africa primarily produces and exports propanol and n-butanol (box 3-1).

The SSA acyclic alcohols industry is highly concentrated. Methanol in Equatorial Guinea is produced by one firm, Atlantic Methanol Production Company LLC (AMPCO).[2] AMPCO is owned by subsidiaries of U.S.-based Noble Energy, Inc. (45 percent ownership), U.S.-based Marathon Oil Company (45 percent), and SONAGAS, EG, the national gas company of Equatorial Guinea (10 percent).[3]

[2] Industry official, interview by Commission staff, Houston, TX, November 3, 2006.
[3] AMPCO, "Ownership of the Atlantic Methanol Companies."

Box 3-1 Product Description for Acyclic Alcohols

Acyclic alcohols, as classified under HS heading 2905, encompass a wide range of organic chemicals. However, methanol, propanol, and n-butanol accounted for 97 percent of SSA exports in this category. Methanol, propanol, and n-butanol are often used as solvents or as inputs for other chemicals. Specifically, methanol is primarily used as an input in the production of formaldehyde, MTBE, and acetic acid. Propanol isomers tend to be used as solvents or inputs by the chemical industry, and to a lesser extent in consumer products such as cosmetics, perfumes, personal care products, and cleansers.[1] n-Butanol is principally used as an input for the production of other chemicals, such as acrylate monomers, which in turn are used to make plastics and textile fibers.[2] n-Butanol is also used as a solvent in paints, cosmetics, and perfumes.

The production processes for acyclic alcohols center on the use of fossil fuels as feedstocks. For example, the most common production method worldwide for methanol uses steam reacted with natural gas to form carbon monoxide and hydrogen, which are further processed to form methanol.[3] Most countries that produce propanol isomers also rely on feedstocks produced from natural gas and crude petroleum. However, the prices for these feedstocks have risen significantly, which has affected the cost of producing propanol. In contrast, the only SSA country to export nontrivial amounts of propanol, South Africa, uses a Fischer-Tropsch process that relies on coal as the primary feedstock instead of crude petroleum or natural gas. The dominant industrial process for n-butanol production worldwide uses carbon monoxide from steam reforming of either natural gas or products from crude petroleum refining. However, in South Africa, n-butanol is made from coal feedstocks.

[1] Unrun and Pearson, "n-Propyl Alcohol," 6; Logsdon and Loke, "Isopropyl Alcohol," 19.
[2] Billig, "Butyl Alcohols," 398.
[3] English, et al. "Methanol," 302–3.

In South Africa, the chemical industry, including the production of acyclic alcohols, is also dominated by one company, Sasol, Ltd. To reduce dependence on imported petroleum, Sasol was established as a state-owned company in the 1950s to produce synthetic crude petroleum from South Africa's vast coal reserves.[4] Sasol became a publicly traded corporation (on the Johannesburg Stock Exchange) in 1979 and currently has a market capitalization of over $21 billion and over 30,000 employees.[5] Sasol continues to use coal as a major feedstock for the production of certain chemicals (including acyclic alcohols).

Sub-Saharan Africa Trade in the Global Context

The leading global exporters of acyclic alcohols tend to have large reserves of crude petroleum and natural gas or a long history of producing petrochemicals from imported crude petroleum. Abundant crude petroleum and natural gas resources give acyclic alcohol producers an advantage in terms of lower-cost feedstocks. Some producers that have more limited crude petroleum and natural gas reserves have long histories of chemical production that give them the infrastructure and technical expertise to be competitive in the global market using imported feedstocks. Abundant supplies of natural gas and coal provide a large part of SSA's comparative advantage in the production of acyclic alcohols; South Africa's chemical industry has a unique history of using coal as a feedstock instead of crude petroleum.

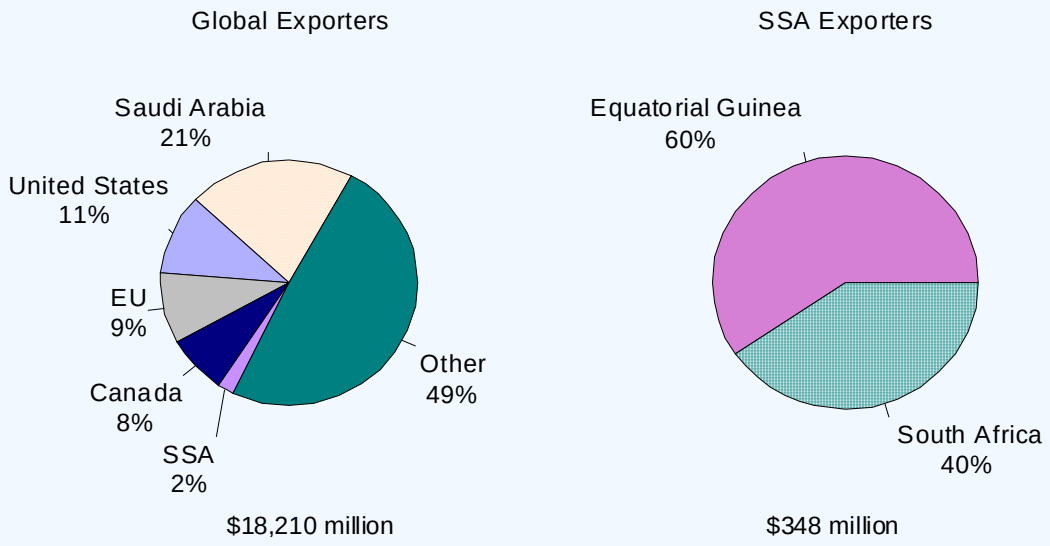
[4] EIU, "Country Profile 2005: South Africa."
[5] Sasol, Ltd, "Sasol: 50 Years of Innovation"; Bureau van Dijk, *Orbis Database*.

Leading Exporters

Saudi Arabia is the biggest single exporter of acyclic alcohols, due largely to its extensive crude petroleum and natural gas supplies (figure 3-1).[6] Certain other top exporters, including the United States, the EU, and Canada, are historical chemical producers. Chile, Russia, Trinidad and Tobago, and Venezuela are other competing exporters.

SSA is a relatively small global supplier of acyclic alcohols, and Equatorial Guinea and South Africa accounted for more than 99 percent of SSA exports in 2005 (figure 3-1).[7] From 2001 through 2005, methanol exports from Equatorial Guinea increased by 345 percent, and propanol and n-butanol exports from South Africa increased by 283 percent.[8] In total, SSA exports of acyclic alcohols rose by 271 percent during the period, compared with growth in global exports of 108 percent.

Figure 3-1 Leading global and sub-Saharan Africa exporters of acyclic alcohols, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

[6] Saudi Arabia's largest export in this category is ethylene glycol (72.7 percent of acyclic alcohol exports in 2005), which is not exported in large quantities by SSA countries. Therefore, Saudi Arabian exports do not compete directly with acyclic alcohol exports from SSA countries. GTIS, *Global Trade Atlas.*

[7] The next largest SSA exporter of acyclic alcohols was Liberia, which accounted for 0.7 percent of total SSA exports from 2001 through 2005.

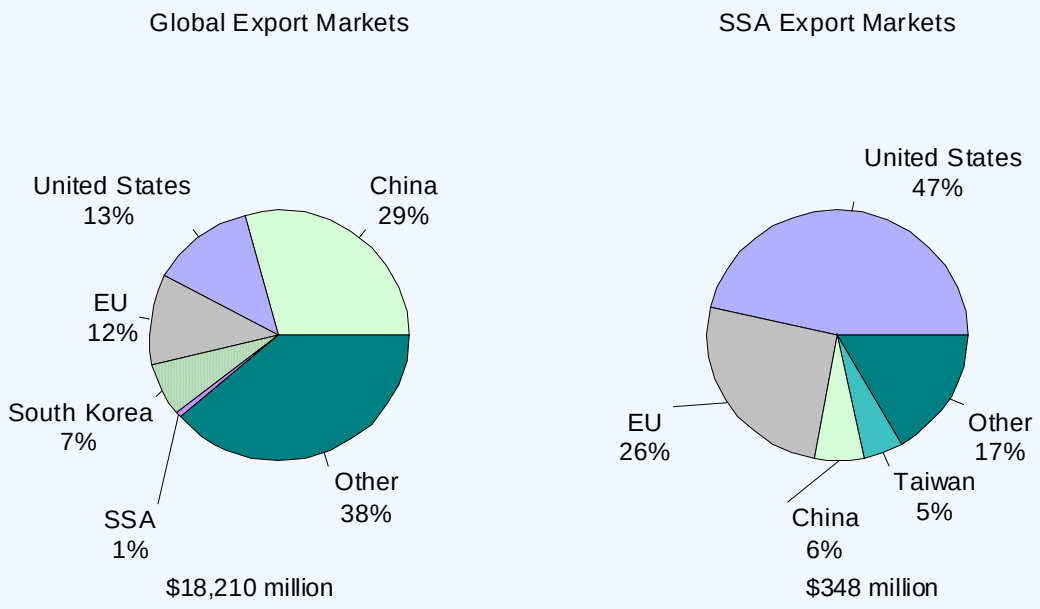
[8] Propanol and n-butanol accounted for 90.7 percent of South Africa's total acyclic alcohol exports in 2005. The next largest export was "Other Butanols" (HS 2905.14) at 5.2 percent.

Leading Export Markets

China, the United States, and the EU, were the largest global markets for acyclic alcohols in 2005 (figure 3-2). China's imports of acyclic alcohols have shown strong growth recently, in part due to that country's increased production of synthetic fibers to supply its textiles industry.[9] These three leading importers also produce acyclic alcohols domestically.

The United States, the EU, and China were also the three largest markets for SSA exports of acyclic alcohols (figure 3-2).[10] SSA exports to the United States increased from $29 million in 2001 to more than $162 million in 2005, and from 2.1 percent to 7.0 percent of U.S. imports. For the same period, SSA exports to the EU increased from more than $30 million to nearly $107 million, and from 2.5 percent to 4.8 percent of EU imports. SSA exports to China increased 965 percent, from $2 million in 2001 to more than $21 million in 2005. Equatorial Guinea principally exports methanol to the United States and the EU.[11]

Figure 3-2 Leading markets for global and sub-Saharan Africa exports of acyclic alcohols, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

[9] Industry official, interview by Commission staff, Houston, TX, November 3, 2006.
[10] GTIS, *Global Trade Atlas.*
[11] Ibid.

In 2005, Equatorial Guinea accounted for 10.5 percent of all U.S. methanol imports and 5.8 percent of all EU methanol imports.[12] Although U.S. imports from Equatorial Guinea enter free of duty under the Generalized Schedule of Preferences (GSP), U.S. imports from all other leading suppliers receive similar tariff treatment under free trade agreements (FTAs) or preference programs. Methanol from Equatorial Guinea enters the EU free of duty under the Lome Convention and the Cotonou Agreement.[13] Chile, a primary competitor in the EU market, receives a similar duty preference due to a bilateral FTA. EU imports from Russia, the other primary competitor, are subject to a 5.5 percent duty, but this tariff advantage has not resulted in Equatorial Guinea taking market share away from Russia because of the lower transportation costs related to Russia's proximity to the EU market.[14] The following tabulation identifies the principal competitors in Equatorial Guinea's leading export markets for methanol.

Market	Principal competitors
United States	Domestic U.S. producers, Trinidad & Tobago, Venezuela
EU	Chile, Russia

The three primary markets for South African exports of acyclic alcohols are the EU, China, and the United States. In 2005, South Africa accounted for 1.4 percent of EU acyclic alcohol imports, 0.4 percent of China's imports, and 0.7 percent of U.S. imports.[15] Acyclic alcohols from South Africa benefit from duty-free treatment in the U.S. market under GSP. Such tariff treatment allows it to compete with domestically produced products and products from Canada, which also enter free of duty under the North American Free Trade Agreement (NAFTA). South Africa benefits from a tariff advantage in the EU market compared to its primary competitors, the United States and Russia. South Africa has an FTA with the EU that eliminated duties on propanol and n-butanol.[16] In contrast, the United States and Russia face duties of 5.5 percent.[17] South Africa does not have a tariff advantage relative to its primary competitors in the Chinese market. The following tabulation identifies the principal competitors in South Africa's leading export markets for acyclic alcohols.

Market	Principal competitors
EU	United States, Russia
China	United States, Russia
United States	Domestic U.S. producers, Canada

[12] Ibid.
[13] European Commission Taxation and Customs Union, *Online Customs and Tariff Database*.
[14] Ibid.
[15] GTIS, *Global Trade Atlas.*
[16] European Commission Taxation and Customs Union, *Online Customs and Tariff Database*.
[17] Ibid.

Factors Affecting Trade Patterns

Both Equatorial Guinea and South Africa built new acyclic alcohol production facilities between 2001 and 2005 to leverage their natural resources in response to increasing global demand and prices for methanol and n-butanol. Direct investment from U.S.-based energy companies allowed Equatorial Guinea to take advantage of its natural gas reserves, while the South African firm Sasol used its coal-to-chemicals experience to further exploit that country's vast coal reserves.

Demand Growth and Price Increases

From 2001 through 2005, global demand for methanol as an input for making other chemicals and products, such as MTBE and polyurethane foam insulation, was very strong, and is expected to remain high.[18] Global demand for n-butanol increased in the period from 2001 through 2005 due to increased demand for butanol-derived chemicals used in water-based coatings and adhesives.[19] Environmental concerns drove the coatings and adhesives industries away from formulations based on organic solvents and toward water-based formulations that use n-butanol derivatives.

Prices for acyclic alcohols were also affected by increased global demand for crude petroleum and natural gas. Price increases for these items, which are used as feedstocks and as energy sources in acyclic alcohol production, resulted in increased production costs. To maintain profit margins and production levels, increased production costs were passed through to consumers in the form of higher prices for acyclic alcohol. A large share of the increase in the value of exports of acyclic alcohols from SSA in the period under review was due to a general worldwide increase in unit values for these and other petrochemicals, both due to increased demand for acyclic alcohol and higher production costs due to increased petroleum and natural gas prices. The unit price of acyclic alcohol exports from Equatorial Guinea increased from $88 per metric ton (mt) in 2001 to $238 per mt in 2005. Over that same period, the price of acyclic alcohol exports from South Africa rose from an average of $472 per mt to $738 per mt. The increase in the average unit value of South African acyclic alcohol exports was somewhat mitigated by an increase in the ratio of lower-valued n-butanol exports to propanol exports.[20]

Increased Investment and Natural Resources

In response to rising global demand and prices, AMPCO constructed a methanol plant in Equatorial Guinea that began commercial production in April 2001. This plant accounts for virtually all of Equatorial Guinea's methanol exports. A leading factor in the decision to construct a methanol plant in Equatorial Guinea was access to an inexpensive source of natural gas, the primary feedstock for producing methanol. Equatorial Guinea's natural gas reserves are estimated to contain 6.9 trillion cubic feet of natural gas.[21] Furthermore, natural gas prices in Equatorial Guinea (approximately $0.25 per million Btu (British thermal units)) are significantly lower than in certain other methanol-producing countries such as the United

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[18] Gibson, "Methanol High on Tight Supply."
[19] *Chemical Market Reporter*, "Chemical Profile: n-Butanol."
[20] GTIS, *Global Trade Atlas.*
[21] EIU, "Country Profile 2006: Equatorial Guinea."

States (approximately $8.00 per million Btu).[22] The AMPCO plant is able to take advantage of this price difference and produce a profitable product from the natural gas that is a by-product of crude petroleum production in the coastal waters of Equatorial Guinea.[23]

To take advantage of increased demand and prices, Sasol opened a new n-butanol production facility in 2002 in Sasolburg, South Africa. The new facility has an annual capacity of 150,000 mt and uses synthetic gas from coal as a feedstock.[24] The South African chemical industry is unique compared to chemical industries globally because it is based on South Africa's vast coal resources instead of on petroleum, of which South Africa has only small reserves. Since domestic coal prices do not tend to fluctuate as much as global crude petroleum prices, Sasol has some protection against the rising feedstock costs that confront industries in other countries. South Africa is currently the only country in the world with extensive experience in converting coal into chemicals and transportation fuels.

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[22] In the United States, natural gas demand for electrical generation is driven by environmental regulations and low capital costs of natural gas electrical generation plants relative to coal plants. Equatorial Guinea does not have the same demand for natural gas for electrical generation. MMBtu stands for “million British thermal units.” It is a measure of the energy in natural gas and the typical basis for natural gas prices. Industry official, interview by Commission staff, Houston, TX, November 3, 2006.

[23] AMPCO, “Atlantic Methanol Production Company History.”

[24] *Chemical Week*, “Sasol Goes Ahead with N-Butanol."

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Flat-rolled Steel

Summary of Findings

SSA exports of flat-rolled steel more than doubled from 2001 through 2005 to over $1.7 billion, mirroring the expansion in global trade for such products (table 3-2). SSA export growth benefited from increases in regional capacity and production of both carbon and stainless flat-rolled steels, coupled with increasing international steel prices that rose as a result of growing demand and escalating raw materials costs. In South Africa, the dominant SSA flat-rolled steel exporter, fluctuations in domestic demand also influenced annual export volumes, although overall export volumes increased during the period. Intra-SSA exports rose as well, due to growing economic integration in areas such as East Africa, the growth in South African shipments of flat-rolled products to Kenya and Tanzania for further processing, and increasing regional demand for construction and roofing materials.

Industry Overview

The flat-rolled steel industry in SSA is heavily concentrated in South Africa, the largest steel producer in Africa, and to a considerably lesser extent in Kenya and Tanzania. South Africa's industry is engaged in a variety of steel production processes, including production of crude steel and hot-rolling, as well as cold-rolling, galvanizing, and finishing (box 3-2). In contrast, the industries in Kenya and Tanzania are limited to cold-rolling, galvanizing, and finishing.

South Africa

The South African industry accounted for about 90 percent of flat hot-rolled steel production in SSA in 2005.[44] The industry is heavily concentrated among three multinational steel producers: Mittal Steel SA (formerly Iscor, Ltd.), which is the largest South African producer and a subsidiary of the world's largest steel producer; Highveld, recently acquired by Russian steel producer Evraz from Anglo-American; and Columbus, which is majority-owned by Spanish stainless steel producer Acerinox Group.[45] Mittal Steel SA produced 5 million mt of carbon flat-rolled steel in 2005, compared with 685,000 mt of carbon flat-rolled steel produced by Highveld and 500,000 mt of stainless flat-rolled products by Columbus.[46]

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[44] South Africa accounted for less than 1 percent of global crude steel production and global flat hot-rolled steel production in 2005. International Iron and Steel Institute, *Steel Statistical Yearbook 2006*, 51.

[45] In June 2004, LNM Holdings acquired Iscor, Ltd. (Iscor). As a result, Iscor changed its name to Ispat Iscor, in line with other LNM companies. In December 2004, Ispat International merged with LNM Holdings to form Mittal Steel Company. Ispat Iscor subsequently changed its name to Mittal Steel SA. *See* Mittal Steel SA, *Annual Report* (2004), 16.

[46] Mittal Steel South Africa, *Annual Report 2005*, 10; "Evraz to Buy Interest in Highveld Steel," *American Metal Market* (July 14, 2006); Acerinox Group, *Annual Report 2005*.

Table 3-2 Sub-Saharan Africa flat-rolled steel exports, by selected exporters and key markets, 2001–05

Exporters	Key markets		Exports 2001	2002	2003	2004	2005	Percent change 2001–05
South Africa	**EU**	*1,000 dollars*	250,001	182,861	270,040	463,850	525,902	110
		Metric tons	576,651	275,777	307,734	371,476	366,600	-36
	China	*1,000 dollars*	62,151	112,218	322,787	277,042	365,085	487
		Metric tons	153,462	261,537	527,994	391,390	360,663	135
	South Korea	*1,000 dollars*	30,553	55,006	95,554	70,135	127,423	317
		Metric tons	82,454	105,758	215,274	62,968	159,543	93
	Kenya	*1,000 dollars*	16,184	33,479	64,648	133,437	n/a	n/a
		Metric tons	63,164	100,025	152,852	236,829	n/a	n/a
	All other	*1,000 dollars*	441,916	457,593	565,266	824,129	646,437	46
		Metric tons	809,419	829,915	1,037,808	1,001,516	886,383	10
	Total	*1,000 dollars*	799,804	840,157	1,318,295	1,768,593	1,664,847	108
		Metric tons	1,685,150	1,573,012	2,241,662	2,064,179	1,773,189	5
Kenya	**Uganda**	*1,000 dollars*	12,786	19,434	10,709	12,106	26,140	104
		Metric tons	22,214	29,777	14,589	13,804	28,820	30
	Tanzania	*1,000 dollars*	2,136	1,821	3,495	5,764	n/a	n/a
		Metric tons	2,581	2,108	4,620	6,388	n/a	n/a
	Malawi	*1,000 dollars*	988	1,758	3,000	6,9234	7,689	678
		Metric tons	1,464	2,789	3,600	8,126	7,838	435
	All other	*1,000 dollars*	7,190	9,195	17,912	21,158	14,486	101
		Metric tons	12,213	12,221	19,651	15,637	16139	32
	Total	*1,000 dollars*	23,100	32,208	35,116	45,621	48,315	109
		Metric tons	38472	46,895	42,460	43,955	52,797	37
Tanzania	**Uganda**	*1,000 dollars*	370	756	3,341	7,590	6,765	1,728
		Metric tons	648	1,131	5,511	10,152	8413	1,198
	Rwanda	*1,000 dollars*	153	429	476	n/a	n/a	n/a
		Metric tons	225	632	637	n/a	n/a	n/a
	All other	*1,000 dollars*	376	97	42	315	512	36
		Metric tons	2,179	176	39	357	237	-89
	Total	*1,000 dollars*	899	1,282	3,859	7,905	7,277	709
		Metric tons	3,052	1,939	6,187	10,509	8,650	183
Sub-Saharan Africa	**Total**	*1,000 dollars*	838,661	893,948	1,377,557	1,830,592	1,724,645	106
		Metric tons	1,748,580	1,651,043	2,460,913	2,130,452	1,842,984	5

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

Note.—Export values and quantities are reported and aggregated at the 4-digit level for HS headings 7208, 7209, 7210, 7211, and 7212 (carbon flat-rolled products); 7219 and 7220 (stainless flat-rolled products); and 7225 and 7226 (alloy flat-rolled products). Export values and quantities were derived from reporting countries' import data. The volume of exports to "all other" markets was derived by subtracting the sum of the volume of principal export markets from the total volume of exports.

Box 3-2 Product Description for Flat-rolled Steel

Flat-rolled steels include a variety of intermediate steel products that are either wound into coils or cut to discrete straight lengths. Principal flat-rolled steel products include sheet, strip, and plate. These products are commonly differentiated by their physical dimensions, width, and thickness (gauge). Flat-rolled steels can be produced from carbon, stainless, or other alloy steels.

The manufacturing process for flat-rolled steel generally comprises three distinct stages: (1) melting and refining of crude steel, (2) casting of molten steel into semi-finished forms such as slab, and (3) hot-rolling semi-finished forms into hot-rolled mill products such as sheet, strip, and plate. These products may be sold as is or be subjected to further processing, including cold-rolling to further reduce thickness and enhance certain properties of the steel, and galvanizing to resist corrosion.

Flat-rolled steel is used in a diverse array of end-use market applications. Hot-rolled carbon steels are used in automotive applications, such as body frames, as well as to produce welded pipe and tube. Cold-finished sheet also is used in automotive applications, as well as in consumer appliances. Cut-to-length plate is used in load-bearing or structural applications, such as bridge work, and heavy transportation equipment. Corrosion-resistant carbon flat-rolled products and stainless steel flat-rolled products are used by the chemical and construction industries, as well as by appliance and industrial equipment manufacturers in applications where the corrosion resistance, heat resistance, or design characteristics of stainless steels are required.

Kenya and Tanzania

The steel industries in Kenya and Tanzania are considerably smaller in terms of production capacity and output than the industry in South Africa. Furthermore, with no crude steel production, these two industries depend on imported inputs, including imported hot-rolled coils to be further processed into cold-rolled coils. Cold-rolled product is in turn processed into galvanized sheet, as well as into color-coated sheet.[47] Kenya's four rolling mills have a total cold-rolled steel capacity of 220,000 mt, and its three galvanizing mills have a galvanizing capacity of 210,000 mt. By comparison, Tanzania's cold-rolling capacity is 69,000 mt with galvanizing capacity of 69,000 mt.[48]

In Kenya and Tanzania, and more generally East Africa, flat-rolled steel production is largely concentrated among affiliates of the Safal Group, which principally seeks to serve domestic and regional SSA markets. Mabati Rolling Mills, Ltd. (MRM), a member of the Safal Group, is Kenya's largest cold roller and galvanizer.[49] Other leading Kenyan producers include Standard Rolling Mills, Ltd., and Kenya United Steel Company, Ltd. Aluminium Africa Ltd., an affiliate of the Safal Group, is the largest flat-rolled producer in Tanzania.[50] M.M. Integrated Steel Mills, Ltd. (M.M. Steel), is Tanzania's other significant flat-rolled steel producer.

[47] Government of Kenya, Ministry of Trade and Industry, *The Iron and Steel Sub-Sector in Kenya*, 2.

[48] Aluminium Africa (ALAF) company representative, e-mail message to Commission staff, January 23, 2007.

[49] Mabati Rolling Mills (MRM) official interview by Commission staff, Nairobi, Kenya, December 4, 2006.

[50] ALAF company website. ALAF consumes most of its cold-rolled production in its galvanizing line. Thomas Yager, *The Mineral Industry in Tanzania*, 38.3.

Sub-Saharan Africa Trade in the Global Context

The largest global exporters of flat-rolled steel (by value) are also among the largest global producers. Global exports of flat-rolled steel more than doubled to over $94 billion from 2001 through 2005. Flat-rolled steel exports from SSA also nearly doubled to over $1.7 billion from 2001 through 2005.

Leading Exporters

In 2005, Japan was the largest exporter of flat-rolled products in terms of value, accounting for almost one-fifth of total global exports. Japan was followed by South Korea, Taiwan, Russia, the United States, and China (figure 3-3). South Africa, the SSA region's largest producer and exporter, is the 12th-largest global exporter and accounted for 2 percent of global exports.

South Africa accounted for virtually all (more than 96 percent) of SSA flat-rolled steel exports in terms of value in 2005 (figure 3-3). Kenya accounted for nearly 3 percent, whereas Tanzania accounted for less than one-half percent.

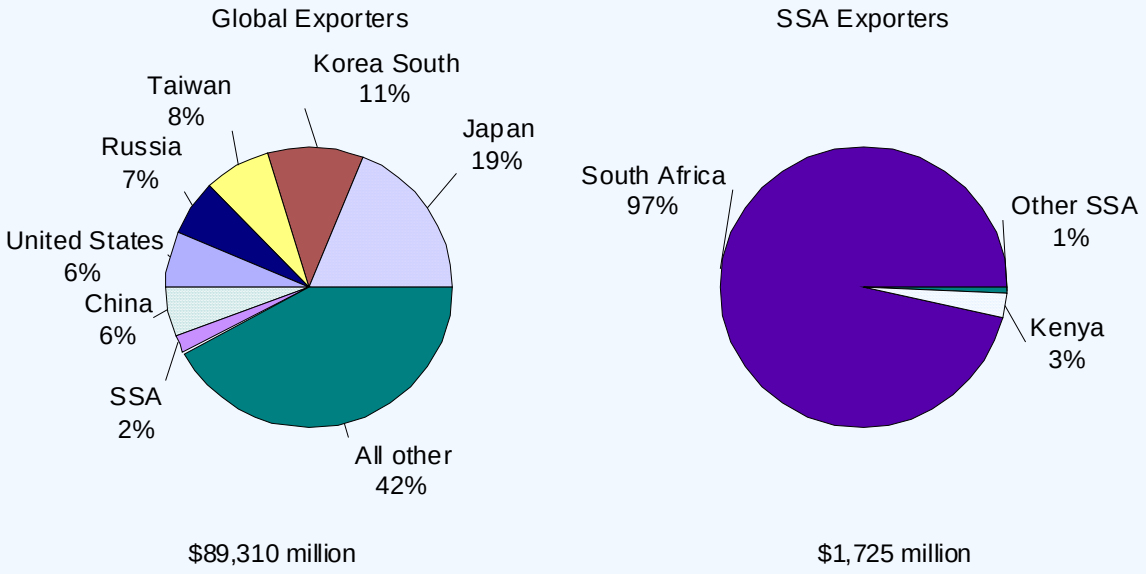
South African exports of all flat-rolled steel products increased approximately 108 percent, from $800 million in 2001 to $1.66 billion in 2005. During this time, the export value of stainless steel products rose significantly. As a result, stainless steel grew to account for 51 percent of the total value of South African flat-rolled steel exports by 2005, up from 43 percent in 2001. Although the value of South African flat-rolled steel exports increased substantially, the total quantity of exports increased by only 5 percent, from nearly 1.7 million mt in 2001 to approximately 1.8 million mt in 2005. Declining export volumes of certain hot-rolled steel products were offset by increasing export volumes of higher-valued items such as certain stainless flat-rolled products, certain cold-rolled products, and certain plated or coated products.

Kenyan exports of flat-rolled steel products reached approximately $48.3 million in 2005, representing a 109 percent increase since 2001. In terms of quantity, Kenyan exports of flat-rolled steel products increased 37 percent to approximately 52,800 mt in 2005. From 2001 through 2005, overall growth in Kenyan exports of flat-rolled steel products was primarily attributable to the increase in exports of galvanized sheet, which accounted for approximately 70 percent of the value and quantity of all Kenyan flat-rolled exports in 2005. Kenyan exports of galvanized sheet were largely shipped to the steel roofing market throughout East Africa.

Leading Export Markets

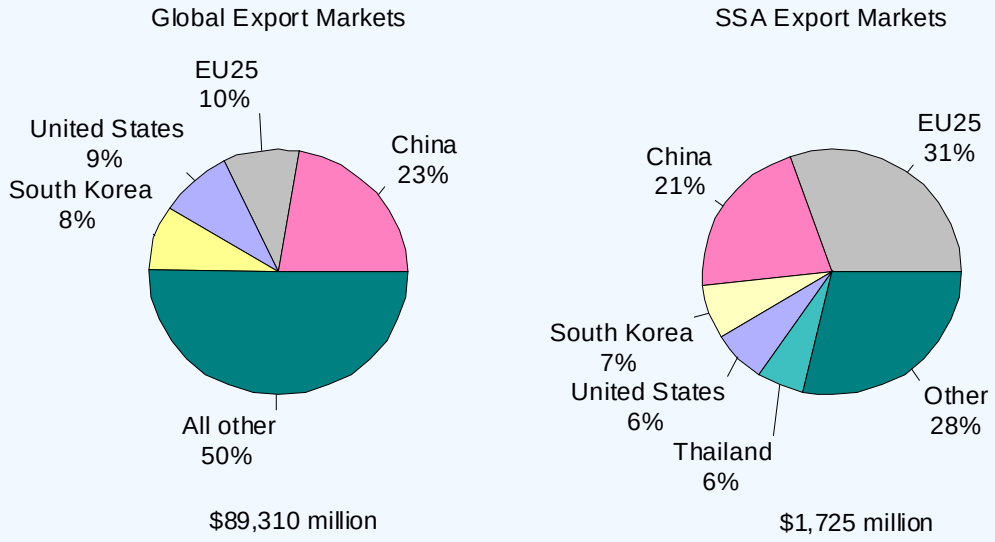
China is the largest market for flat-rolled steel exports, with Chinese imports accounting for 21 percent of all global imports in terms of value, followed by the EU, the United States, and South Korea (figure 3-4). Overall, the top ten importers of flat-rolled steel products accounted for over 74 percent of global imports. By comparison, SSA imports of flat-rolled steel products accounted for less than 1 percent of global imports, although this value is most likely understated, as several markets for SSA countries that reported an increasing

Figure 3-3 Leading global and sub-Saharan Africa exporters of flat-rolled steel, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Figure 3-4 Leading markets for global and sub-Saharan Africa exports of flat-rolled steel, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

import trend between 2001 and 2004 have not yet reported 2005 imports. In 2004, SSA imports of flat-rolled steel products accounted for about 1.2 percent of global imports.

The EU, China, South Korea, and the United States were the primary markets for SSA (predominantly South African) exports of flat-rolled steel products in 2005.[51] South African export volumes of stainless steel flat-rolled products to the EU (the largest SSA export market) increased while export volumes of carbon steel flat-rolled products declined. This shift to greater export volumes of stainless steel flat-rolled products to the EU resulted in a significant increase in the value of exports to the EU during the period, despite overall declining export volumes. SSA exports to the EU of flat-rolled products are free of duty. Declining South African exports of certain cold-rolled flat steel products and certain coated flat-rolled steel products to the EU coincided with increased exports of these items to China. SSA exports face tariffs ranging from 3 percent to 12 percent in the Chinese market.

Kenya has grown as an important regional market for South African exports of flat-rolled steel products, which rose from $16 million in 2001 to over $130 million in 2004. The vast majority of South African exports of flat-rolled steel products to Kenya are hot-rolled steel coils. From 2001 through 2004, South African export volumes of flat-rolled steel products to Kenya increased 275 percent, to almost 237,000 mt in 2004.

Although relatively small on an absolute basis, exports of flat-rolled steel products from Kenya and Tanzania to other eastern African markets increased during the period.[52] Regional SSA markets that have experienced increased imports from Kenya and Tanzania in recent years include Uganda, Malawi, and Rwanda. Other regional SSA markets for flat-rolled steel products that have developed in recent years include Burundi, southern Sudan, and the Democratic Republic of Congo.[53]

Primary global competitors for SSA exporters of flat-rolled steel products vary by principal SSA export market and are presented in the following tabulation.

Market	Competitor
EU	EU domestic producers, Russia, China
China	Chinese domestic producers, Japan, Taiwan, South Korea
Regional SSA markets	Japan, India
South Korea	South Korea domestic producers, Japan, China, Russia

[51] Data for 2005 Kenyan imports from South Africa (i.e., South African apparent exports to Kenya) are unavailable. Based on 2001–04 data for Kenya imports from South Africa, Kenya continued to grow as a regional market for South African exports.

[52] Although Uganda has a flat-rolled steel industry, exports volumes were small (i.e., under 2,000 mt per year). Export volumes were smaller in 2004 than they were in 2001, despite slightly higher export volumes in 2003.

[53] *The Monitor* (Uganda), "Roofings' Investments Grow as Its Market Share Doubles."

Factors Affecting Trade Patterns

The increased value of flat-rolled steel exports during 2001–05 is primarily a function of increasing international demand and prices for both carbon and stainless steel products, coupled with production and capacity gains.[54] In part, the dramatically increased costs of raw materials used to make steel contributed to the growth in steel prices. In particular, increasing global demand for nickel and chromium, two primary raw materials of stainless steel, raised stainless input prices. This contributed to the increase in the value of exports of stainless steel flat-rolled products.

The growth in SSA export volumes of flat-rolled steel is primarily a result of increases in capacity and production of both carbon and stainless flat-rolled steel products in South Africa in response to growth in regional and international demand. Furthermore, domestic demand for flat-rolled carbon steel products in South Africa influenced export volumes. Export volumes were reduced to accommodate periods of higher domestic consumption, and vice versa.

Although smaller in scale, regional SSA trade among East African countries increased as South Africa increasingly exported hot-rolled products to Kenya, and to a lesser extent Tanzania, to supply those countries' expanding cold-rolled and galvanizing operations. Correspondingly, exports from Kenya and Tanzania to other regional markets, such as Malawi, Rwanda, and Uganda have increased in response to growing demand for flat-rolled steel products in the construction and roofing sectors.

Demand Growth and Price Increases

Demand and prices for both carbon and stainless flat-rolled steel products increased across all major geographic areas of the world from 2001 through 2005, in contrast to a price collapse brought on by global oversupply conditions and slowing global economic growth in 2000 and 2001. Temporary safeguard measures introduced by, among others, the United States and EU, coupled with a reduction in steel capacity and production, reportedly helped boost carbon steel prices beginning in 2002.[55] Increasing demand in major steel consuming economies, such as China and the United States, drove the cost of raw materials, including steel scrap, stainless steel scrap, and nickel to new highs. Increasing demand coupled with rising raw materials costs contributed to the significant increase in flat-rolled carbon steel prices, and flat-rolled stainless steel prices in the latter part of the period compared to 2001.

During 2001–05, prices for certain hot-rolled carbon steel products more than doubled in the United States (143 percent increase to $599 per mt in 2005), Europe (124 percent to $477 per mt) and China (120 percent to $449 per mt).[56] Prices for certain cold-rolled carbon steel

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[54] Peter Dieterich (Secretary General of the South African Iron and Steel Institute), e-mail message to Commission staff, September 13, 2006.

[55] Iscor Limited, *Annual Report* (2002), 15; and *Annual Report* (2003), 24.

[56] CRU Group, *CRU Monitor: Steel*.

products and galvanized carbon sheet products in these regions followed similar increasing trends.[57]

Prices for stainless steel products soared during the period, driven by escalating raw materials costs, notably for nickel. Nickel prices increased by 148 percent to around $14,700 per mt, and continued to climb to over $30,000 per mt in late 2006.[58] High nickel prices drove stainless scrap prices to a five-year high of about $1,380 per mt in 2005, up over 135 percent compared to 2001.[59] As a result, stainless steel flat-rolled prices, including raw materials surcharges, increased significantly. For example, prices in the United States for certain hot-rolled stainless steel plate, including surcharges, increased by over 150 percent to an annual average of about $5,160 per mt in 2005 compared to 2001.[60]

Demand for flat-rolled steel in eastern and southern regional SSA markets also has increased in recent years, albeit sporadically in some countries, as a result of growing demand from the construction and roofing sectors.[61] In response to growing regional demand, flat-rolled steel producers such as Kenya's MRM, as well as other affiliates of the Safal Group, are focusing flat-rolled steel exports on the eastern and southern SSA region.[62]

Increased Investment

South Africa

Increased capacity and production in SSA during 2001–05 was largely a result of investment programs undertaken in South Africa by Iscor in collaboration with LNM Holdings (at facilities re-organized under Mittel Steel SA in late 2004), and Columbus to boost productivity and design capacity for liquid steel production, as well as to increase both hot-rolling and cold-rolling capacities to supply growing regional and international market demand. Mittal Steel SA currently has two mills—Vanderbijlpark and Saldanha Steel—devoted to the production of flat-rolled carbon steel products. Vanderbijlpark is an integrated mill that produces 3.8 million mt of liquid steel per year. This is used to produce hot-rolled plate and coil, as well as cold-rolled and finished strip and sheet. Saldanha Steel, which is largely export focused, produces 1.2 million mt of liquid steel per year, primarily used to produce thinner-gauged, hot-rolled coil.

From 2001 through 2005, the combined liquid steel production at both mills increased by 13 percent, from approximately 4.5 million mt in 2001 to almost 5.1 million mt in 2005.[63] The factors behind these production increases are the integration of the two plants following Iscor's purchase of the remaining 50 percent share of Saldanha Steel from South Africa's

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[57] From 2001 through 2005, prices for certain cold-rolled carbon flat products increased by 101 percent to $696 per mt in the United States, by 92 percent to $589 per mt in Europe, and by 116 percent to $592 per mt in China. Between 2001 and 2005, prices for certain galvanized flat-rolled products increased by 94 percent to $747 per mt in the United States, by 79 percent to $614 per mt in Europe, and by 70 percent to $627 per mt in China. CRU Group, *CRU Monitor: Steel*.

[58] London Metal Exchange (LME) AM spot bid price as reported by *American Metal Market*.

[59] Stainless steel scrap grade 304 solids, c.i.f. Europe, as reported by *Metal Bulletin*.

[60] *Purchasing Magazine*.

[61] Member countries of the East African Community, or EAC, are Kenya, Tanzania, and Uganda. Burundi and Rwanda are set to join in 2007. Member countries of the Common Market for Eastern and South Africa, or COMESA are Angola, Burundi, Comoros, Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, and Zimbabwe.

[62] MRM officials, interview by Commission staff, Nairobi, Kenya, December 4, 2006.

[63] Iscor Limited, *Annual Reports* (2001–03); and Mittal Steel South Africa, *Annual Reports* (2004–05).

Industrial Development Corporation in 2001; increased capital spending to boost productivity and design capacity at Saldanha and liquid steel production at Vanderbijlpark; and operational improvements at major rolling units, and in coke making and sinter production at Vanderbijlpark.[64] Additionally, re-engineering efforts in 2002 to transfer production of thinner-gauged, hot-rolled coil from Vanderbijlpark to Saldanha freed up an estimated 120,000 mt of capacity.[65] Technical and other business assistance was provided to Iscor by LNM Holdings between 2002 and 2004.[66] In 2005, the newly constituted Mittal Steel SA announced plans to install a galvanizing line to focus production on thin-gauge roofing material to meet demand from the low-cost housing market, as well as to expand capacity at its electro-galvanizing plant by 35 percent to meet demand from the automotive industry.[67] In late 2006, Mittal Steel SA commissioned a new $15.6 million galvanizing line with a capacity of 100,000 mt per year at Vanderbijlpark, with the objective of increasing local and regional market share for galvanized flat-rolled products and thereby reducing the need for imported material.[68] Looking forward, Mittal Steel SA reportedly will invest $1.1 billion to expand crude steel production by more than 2 million mt per year by 2010 at Vanderbijlpark, thereby substantially increasing South Africa's potential to supply its domestic market and to further increase exports.[69]

Stainless steel production at Columbus increased 9.5 percent from 516,000 mt in 2001 to approximately 565,000 mt in 2005. Production increases at Columbus resulted largely from a €110 million ($123 million) investment program approved by Acerinox, following its majority acquisition of Columbus in 2001, to increase production at the melt shop (crude steel production) and hot-rolling mill, and to boost cold-rolling capacity in order to diversify into thinner-gauged and higher-value cold-rolled products. Acerinox deemed Columbus an attractive acquisition based on its integrated manufacturing process, its proximity to raw materials, supply of inexpensive electricity, and high-growth domestic market for stainless steel.[70] Additionally, Acerinox pursued augmenting the growth of the plant's output and sales by providing its own technology and international commercial network.[71] Between 2003 and 2005, the annealing and pickling lines were enlarged, permitting a slight increase in production, while investments were made to undertake other process improvements.[72] Technical assistance for process improvements during this time was provided by engineers from Spanish parent Acerinox.[73]

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[64] Ibid., Sinter production is the process of producing small iron pellets from iron-bearing particles used to produce molten iron and steel.

[65] Iscor Limited, *Annual Reports* (2002).

[66] In 2002, Iscor signed a business assistance agreement with LNM Holdings. Through this performance-based agreement, LNM Holdings provided technical, marketing, and purchasing assistance to Iscor, subject to Iscor meeting specified annual cost-savings targets for a 3-year duration ending in December 2004. In return, Iscor issued a pre-determined percentage of shares to LNM Holdings. By June 2004, LNM Holdings raised its shareholding in Iscor to 50.01 percent, thereby acquiring control of the company. *See* Iscor, Ltd., "Business Assistance Agreement Entered into Between Iscor and LNM"; Iscor, Ltd., *Annual Report* (2003), 54 and 92; and Mittal Steel SA, *Annual Report* (2004), 16.

[67] Mittal Steel South Africa, *Annual Report* (2005).

[68] *Metal Bulletin*, "Mittal Steel SA Adds Galv Line after Slab Caster Restart."

[69] Ibid., "Mittal Steel SA Considers Imports As Demand Booms."

[70] Acerinox, *Annual Report* (2001), 7.

[71] Ibid.

[72] Acerinox, *Annual Reports* (2003–05); Lucien Matthews (General Manager, Commercial, Columbus Stainless), e-mail message to Commission staff, October 19, 2006.

[73] Lucien Matthews (General Manager, Commercial, Columbus Stainless), e-mail message to Commission staff, October 19, 2006.

Although Columbus increased the capacity and production of stainless steel at the melt shop and the hot-rolling and cold-rolling mills between 2001 and 2005, Columbus' hot-rolled production exceeded the capacity limitations of its cold-rolling mill during the period. As a result, excess hot-rolled product was generally exported to Asian market customers with cold-rolling capacity. From 2004 through 2005, demand for hot-rolled coil declined from Asian buyers and there was a relative price increase of South African stainless steel exports resulting from the appreciation of the rand relative to the U.S. dollar and the euro. These developments prompted Columbus to reduce liquid steel production and hot-rolled stainless steel sheet production by more than 20 percent.[74] Although demand in Asian markets for hot-rolled product reportedly rebounded in 2006, Columbus has continued to increase investments in downstream cold-rolling capacity in order to diversify its product mix, thereby reducing Columbus's dependence on foreign demand for its hot-rolled products that was concentrated in a few select export markets.[75]

Kenya and Tanzania

In Kenya and Tanzania, increased cold-rolling and galvanizing capacities, primarily by affiliate companies of the Safal Group, led to increased production and exports of cold-rolled, coated, and galvanized flat-rolled steel products. In 1999, MRM began construction of a $30 million continuous galvanizing plant in Kenya, co-financed by the International Finance Corporation (IFC) and the European Investment Bank (EIB), to meet increasing demand in both domestic and export markets. This resulted in the production of galvanized sheet and coils beginning the following year.[76] In 2001, MRM established an aluminum-zinc coating line, as well as a color coating line in the Athi River Export Processing Zone near Nairobi.[77]

In Tanzania, increased production from 2001 through 2005 corresponded with growth in export volumes over the period. Production growth was achieved through increases in capacity utilization and capacity expansion. ALAF increased production of galvanized sheets by over 40 percent to 33,000 mt per year, from 2001 through 2003 thereby increasing capacity utilization rates to around 80 percent at its galvanizing plant.[78] M.M. Steel has undertaken an expansion program, which includes the addition of a continuous hot-dip galvanizing line and an additional cold-rolling mill that will begin production in future years.[79]

Fluctuating Export Supply

South African exports of flat-rolled carbon steel products are affected by changes in domestic demand for these products. From 2001 through 2005, export volumes for flat-rolled carbon steel periodically declined in response to higher levels of South African domestic demand, and vice versa. Nevertheless, overall domestic shipments increased by 5.3 percent (approximately 2.7 million mt) and export volumes increased by 13.3 percent (approximately 2.3 million mt) during 2001–05. Domestic consumption of flat-rolled carbon steel products

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[74] Acerinox, *Annual Report* (2005).

[75] Lucien Matthews (General Manager, Commercial, Columbus Stainless), e-mail message to Commission staff, October 19, 2006.

[76] MRM officials, interview by Commission staff, Nairobi, Kenya, December 4, 2006; MRM company Website; International Finance Corporation; and the European Investment Bank.

[77] Ibid..

[78] Thomas Yager, *The Mineral Industry of Tanzania* (2001–2003).

[79] M.M. Integrated Steel Mills, Ltd. company Website.

varied from year to year, reaching a low of 44 percent of production and a high of 59 percent.[80] Correspondingly, annual exports of flat-rolled carbon steel products fluctuated from 41 percent to 56 percent of production.[81]

Annual South African domestic shipments of flat-rolled carbon steel products increased by 20 percent from approximately 2.1 million mt in 2001 to a little over 2.5 million mt in 2002. This increase corresponded to strong domestic demand for flat-rolled carbon steel products for durable goods, new developments in the mining industry, and depressed export prices.[82] Exports declined 11 percent to about 2 million mt during the same period.[83] In contrast, in 2003 domestic shipments of flat-rolled carbon steel products declined 22 percent to 2 million mt, attributable in part to lower domestic demand for durable goods and an appreciation of the rand that negatively impacted the competitiveness of domestic downstream steel consuming sectors.[84] Correspondingly, from 2002 through 2003 exports increased 42 percent to 2.6 million mt.

Domestic shipments again increased from 2003 through 2004 as a result of economic growth coupled with higher demand in the construction, building, automotive, and appliance sectors in South Africa. Mittal Steel SA correspondingly allocated lower volumes for international export and focused on local and regional markets.[85] Following lower domestic shipments and higher export volumes in 2005, domestic demand was reportedly strong in 2006, particularly for galvanized sheet.[86]

In contrast, South African flat-rolled stainless steel production is predominantly for export markets. Columbus is predominantly export oriented, as the domestic market and regional SSA markets for flat-rolled stainless steel products are relatively small compared to the larger domestic and regional SSA markets for flat-rolled carbon steel products. As a result, 70 to 80 percent of production of stainless steel is exported and is thus more dependent on foreign demand. Stainless steel production is reportedly adjusted as international market conditions warrant.[87]

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[80] Peter Dieterich (Secretary General of the South African Iron and Steel Institute), e-mail message to Commission staff, September 12, 2006.

[81] Peter Dieterich (Secretary General of the South African Iron and Steel Institute), e-mail message to Commission staff, September 12, 2006. Domestic shipment and export data for flat-rolled carbon steel products reported by SAISI members. Data do not include exports by service centers or non-SAISI members.

[82] Annual domestic shipments of flat-rolled carbon steel products as reported by the South African Iron and Steel Institute (SAISI); Iscor Limited, *Annual Report* (2002).

[83] Domestic shipment and export data for flat-rolled carbon steel products reported by SAISI members. Data do not include exports by service centers or non-SAISI members. Data provided to USITC staff by SAISI.

[84] Peter Dieterich (Secretary General of the South African Iron and Steel Institute), e-mail message to Commission staff, September 12, 2006; Iscor Limited, *Annual Report* (2003), 28.

[85] Mittal Steel South Africa, *Annual Report* (2004), 29.

[86] *Metal Bulletin*, "Mittal Steel SA Considers Imports as Demand Booms."

[87] Peter Dieterich (Secretary General of the South African Iron and Steel Institute), e-mail message to Commission staff, September 12, 2006.

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Liquified Natural Gas[88]

Summary of Findings

In recent years, natural gas has played an increasingly important role in helping meet the world's energy needs. In particular, liquefied natural gas (LNG) has filled the supply gap between domestic production and consumption of natural gas in large developed economies such as the United States and members of the EU. In SSA, LNG accounts for approximately two-thirds of petroleum gases exports, followed by relatively smaller export volumes of other liquefied petroleum gases (LPGs), such as liquefied propane and butane. Consequently, this industry profile will focus almost exclusively on LNG. As global LNG trade continues to grow, Nigeria is fast becoming an important supplier and is the only LNG producer and exporter in SSA. In other SSA countries such as Equatorial Guinea and Angola, plans to produce LNG for export are in varying phases of development, driven by the desire to commercialize natural gas resources and to reduce the amount of flared (burned) natural gas associated with crude petroleum production.

The increase in the value of SSA exports of LNG was due to rising natural gas prices driven by strong global demand for LNG supplies, coupled with strong production and export growth in Nigeria following the addition of LNG production and transport capacities. Increasing natural gas prices during the period contributed to faster growth in trade values relative to growth in trade volumes.

Industry Overview

Natural gas production (box 3-3) in SSA is heavily concentrated in Nigeria, which possesses large associated natural gas reserves and liquefaction capabilities. In 2006, Nigeria had an estimated 185 trillion cubic feet (about 5.2 trillion cubic meters) of proven natural gas reserves. This makes the country the largest natural gas reserve holder in Africa and the seventh-largest natural gas reserve holder in the world, accounting for 3 percent of total world proven natural gas reserves.[89] The natural gas industries in Angola and Equatorial Guinea are also supported by significant, albeit smaller, associated natural gas reserves.[90]

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[88] HTS heading 2711 includes petroleum gases either in a liquefied or gaseous state. Sub-Saharan Africa only exports significant quantities of petroleum gases in the form of liquefied natural gas (LNG) (HTS subheading 2711.11) and to a lesser extent, liquefied petroleum gases (LPGs), such as liquefied propane (HTS 2711.12) and liquefied butane (HTS 2711.13). The positive shift in SSA exports for HTS heading 2711, almost 130 percent by value, was driven principally by LNG. Nigeria is the only SSA producer and exporter of LNG, and the leading SSA producer and exporter of LPGs. Although other SSA countries such as Equatorial Guinea, Angola, and Congo-Brazzaville are engaged in the production of LPGs, such production is mainly derived from existing infrastructure associated with the production of crude petroleum, condensate (a light, valuable oil), or natural gas liquids present in associated natural gas (found with crude petroleum) and natural gas condensate fields. Given the predominance and growth of LNG exports within sub-Saharan Africa's overall exports of petroleum gases, this section covers LNG trade only.

[89] BP, *BP Statistical Review of World Energy*, 2006.

[90] Angola had an estimated 2 trillion cubic feet (about 5.7 billion cubic meters) of proved natural gas reserves in 2006. Equatorial Guinea had an estimated 1.3 trillion cubic feet of proved natural gas reserves in 2006. *Oil & Gas Journal* 104.47 (December 18, 2006) as reported by EIA, "World Proved Reserves of Oil and Natural Gas, Most Recent Estimates."

Box 3-3 Product Description for Liquefied Natural Gas (LNG)

Natural gas is a colorless and odorless gaseous mixture of hydrocarbon compounds, primarily methane, and is a cleaner burning fossil fuel than fuel oils and coal. Natural gas is extracted from the subsurface through wells and transported by pipeline to gas processing facilities, where natural gas and other hydrocarbon compounds such as butane, propane, and ethane, among others, are separated and cleaned. Much of the natural gas in sub-Saharan Africa comes from associated natural gas fields (found with crude petroleum) and historically has been a by-product of crude petroleum production.

When cooled to -161 degrees C (-260 degrees F) at atmospheric pressure, natural gas is condensed to a liquid (LNG), occupying one six-hundredth of its volume in a gaseous state. Unlike natural gas that is transported via pipeline, LNG is transported and stored at atmospheric pressure in super-insulated cryogenic containers aboard specially designed tankers that allow for long-distance transport to overseas markets. On the receiving end, LNG is transported to regassification terminals where it is heated, regassified, and transported via pipeline through gas distribution networks and ultimately to end-users. There are 52 LNG-receiving terminals worldwide, located primarily in Japan, Korea, and the United States.

Natural gas is used primarily for electrical power generation, heating, and petrochemical production. Natural gas components such as propane and butane may be used for heating and for cooking or industrial fuels.

LNG projects in SSA are funded through joint ventures between state-run companies and affiliates of vertically integrated international oil companies (IOCs) (table 3-3). Nigeria is the only SSA country that currently possesses the infrastructure to produce LNG, although plans to construct LNG facilities in Equatorial Guinea and Angola, both of which produce LPGs from associated natural gas reserves, are in varying phases of development.

Table 3-3 Ownership structure of LNG projects in sub-Saharan Africa

Country	LNG project	Company and participation
Nigeria	NLNG (Bonny Island)	Nigeria Liquefied Natural Gas, Ltd.: NNPC (49 percent) Shell Gas (25.6 percent) Total LNG Nigeria Ltd. (15.4 percent) Eni International (10.4 percent)
	Brass LNG (Brass Island) (proposed)	NNPC (49 percent) Eni International (17 percent) Brass Holding Co Ltd (Total) (17 percent) Philips (Brass) Ltd (ConocoPhilips) (17 percent)
	Olokola LNG (proposed)	NNPC (49.5 percent) Chevron Nigeria Ltd (ChevronTexaco) (18.5 percent) Shell Gas & Power Developments (Shell) (18.5 percent) British Gas Group (13.5 percent)
Equatorial Guinea	EG LNG (Bioko Island) (under construction)	Equatorial Guinea LNG Holdings, Ltd.: Sonagas (25 percent) Marathon Oil Corporation (60 percent) Mitsui & Co (8.5 percent) Marubeni Corporation (6.5 percent)
Angola	Angola LNG (proposed)	Sonangol (22.8 percent) Cabinda Gulf Oil Co. (ChevronTexaco) (36.4 percent) ExxonMobil (13.6 percent) BP (13.6 percent) Total (13.6 percent)

Source: Company literature.

Growth in Nigeria's natural gas sector is a response to the government's strategy to diversify its oil-based energy industry to an integrated oil and gas energy industry. This strategy is underlined by the government's intent to eliminate natural gas flaring by 2008 and raise natural gas export revenues to 50 percent of crude petroleum export revenues by 2010. These policies have added impetus to commercially exploit and monetize natural gas assets that historically have been underutilized. Government objectives to promote private investment by integrated oil companies (IOCs) and to provide a clearer natural gas development strategy and fiscal framework are among other factors moving the natural gas industry in the country.

The Nigerian National Petroleum Corporation (NNPC) is the principal shareholder in Nigeria's natural gas and LNG projects, as well as the regulatory body acting on behalf of the Nigerian government.[91] Incorporated in 1989 to produce LNG for export, Nigeria Liquefied Natural Gas Limited (NLNG), a subsidiary of NNPC, is the principal operating company in Nigeria engaged in LNG production. NLNG's liquefaction facilities on Bonny Island have an overall annual production capacity of 18 million mt of LNG and 3.4 million mt of LPGs and are expected to increase capacity to 22 million mt of LNG and 4 million mt of LPGs by 2007.[92]

Feed gas to supply NLNG liquefaction facilities is obtained through gas supply agreements between NLNG and three joint ventures that supply natural gas from several fields located primarily in the Niger Delta, where a significant portion of Nigeria's proved natural gas reserves are located.[93] The joint venture companies are affiliates of principal shareholders of NLNG, and include Shell Petroleum Development Company of Nigeria (Shell affiliate), Elf Petroleum Nigeria Limited (Total affiliate), and Nigeria Agip Oil Company (Eni-Agip affiliate).[94]

Similar to Nigeria yet smaller in scale, Equatorial Guinea and Angola have relatively large associated natural gas reserves, although neither country currently possesses the infrastructure to produce LNG. Rather, the majority of natural gas production is processed into LPGs or into natural gas condensate or methanol.[95] Natural gas is also re-injected into the subsurface either to help maintain reservoir pressure or to save it for later use. Excess natural gas is also flared.

GEPetrol, established in 2001, is the national oil company of Equatorial Guinea and operates as a commercial entity acting on behalf of the Ministry of Mines, Industry, and Energy, the state regulatory authority. Sonagas was created in 2005 as the national gas company of Equatorial Guinea, and represents the government's participation in all gas-related projects. Sonangol is Angola's national oil company and is co-project leader with a local affiliate of ChevronTexaco in the development of Angola is proposed LNG facility.

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[91] EIU, *Country Commerce Report: Nigeria*, 2.

[92] NLNG company Website.

[93] Ibid.

[94] The SPDC joint venture currently supplies feed gas from several fields, including Soku, Bonga, BNAG, Awoba, and Cawthorne Channel fields. The EPNL joint venture supplies feed gas from Obite and Ibewa fields. The NAOC joint venture supplies feed gas primarily from the Mbede and Obiafu-Obrikom fields. As additional liquefaction capacities come on line, gas supplies to NLNG will be supplemented by additional fields. NLNG company Website. Other companies that do not hold an interest in NLNG, including ConocoPhillips, also supply natural gas to Bonny Island.

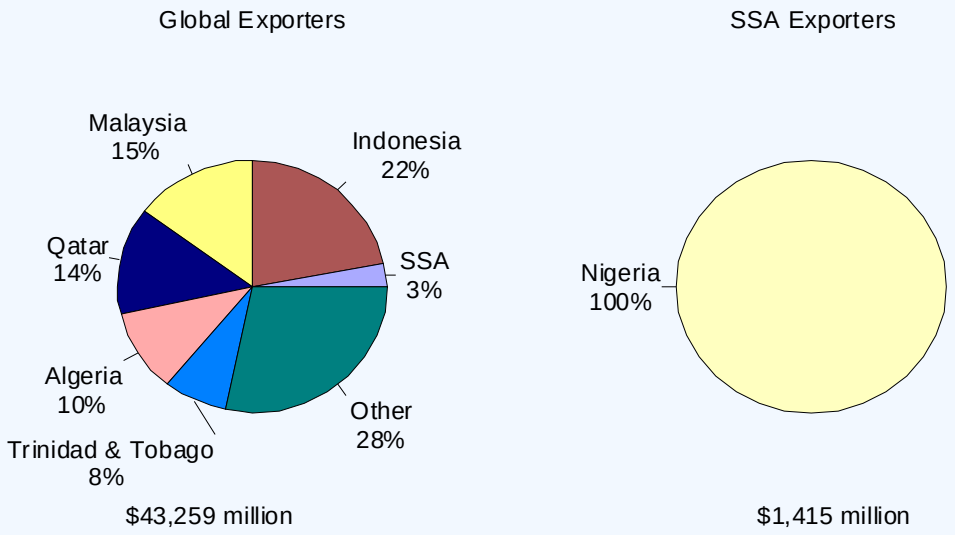
[95] Condensate is a natural gas liquid recovered from associated and nonassociated gas wells from lease separators or field facilities. For more information on the production of methanol in Equatorial Guinea, see section on acyclic alcohols in this chapter.

Sub-Saharan Africa Trade in the Global Context

Leading Exporters

World exports of LNG reached over $43 billion in 2005, a 93 percent increase compared to export values in 2001. LNG trade accounted for approximately 36 percent of the value of total natural gas trade in 2005. Principal exporters of LNG in terms of value and quantity were Indonesia, Malaysia, and Qatar (figure 3-5). Overall, the top ten exporters of LNG accounted for approximately 94 percent of the global LNG total in 2005. Nigeria was the eleventh-largest LNG exporter in terms of value in 2005.

Figure 3-5 Leading global and sub-Saharan Africa exporters of LNG, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Nigerian exports of LNG accounted for 3.3 percent of the total value of world LNG exports. Nigeria is the only producer and exporter of LNG among SSA countries. There are no currently operable pipelines to transport Nigerian natural gas to regional markets, so Nigerian exports of natural gas are entirely in the form of LNG.[96] From 2001 through 2005, Nigerian export volumes of LNG increased by more than 50 percent as additional capacity to produce and export LNG became operational during the period. In terms of value,

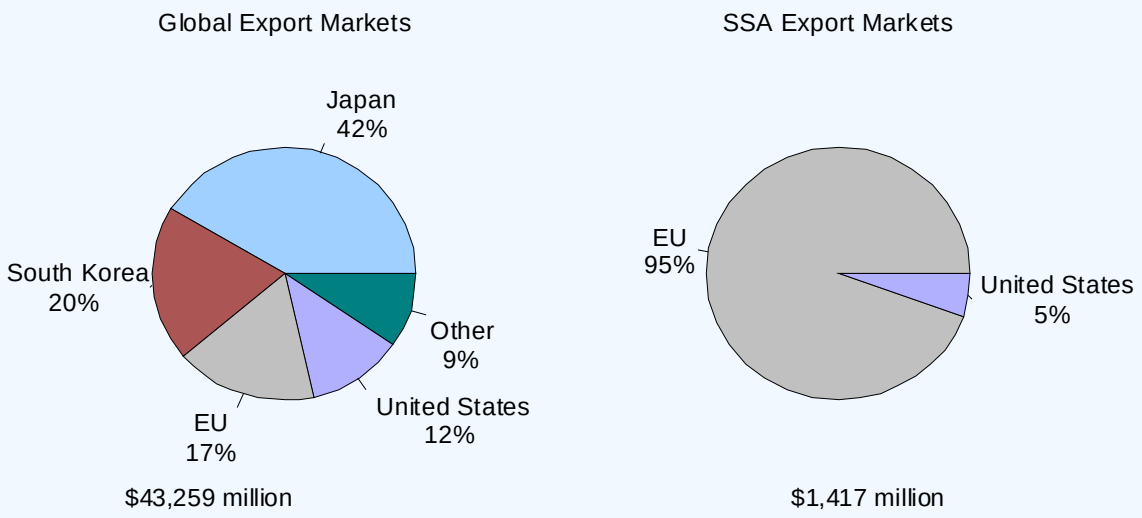
[96] Regional exports of Nigerian natural gas are expected to increase following the completion of the West African Gas Pipeline, a 421-mile pipeline that will supply natural gas to power generators and industrial consumers in Benin, Togo, and Ghana. First deliveries are tentatively scheduled for March 2007.

Nigerian export revenues increased by 175 percent to more than $1.4 billion, driven by production and export increases coupled with rising natural gas prices during the period.

Leading Export Markets

In 2005, world imports of LNG were approximately 138 million mt (189 billion cubic meters), an increase of 32 percent since 2001. Top importers of LNG are Japan, Korea, the EU, and the United States (figure 3-6). Most LNG exports to Japan and Korea come from Indonesia, as well as from Malaysia and Qatar. EU imports of LNG come mostly from Algeria and Nigeria. U.S. imports of LNG come primarily from Trinidad and Tobago and Algeria. The United States also imports LNG from Nigeria.

Figure 3-6 Leading markets for global and sub-Saharan Africa exports of LNG, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Because of the concentration of liquefaction facilities in Nigeria and their proximity to the large European and U.S. markets relative to other major importers of LNG in Asia, SSA exports are focused exclusively on these two markets.[97] Nigeria has been increasingly significant as a supplier of LNG to the European market. As a share of all EU imports of LNG, imports from Nigeria increased from 11 percent to 18 percent in 2005. Virtually all SSA exports of LNG to Europe and the Mediterranean region are destined for regassification terminals located in Spain, Portugal, France, Italy, and Turkey. In terms of both value and quantity, Nigerian exports of LNG to these markets increased significantly during 2001–05 (table 3-4). SSA exports of LNG are free of duty in the EU market.

[97] In 2003, Nigeria delivered LNG cargos to other Asian markets, including Japan, South Korea, and Taiwan. BP *Statistical Review of World Energy*, 2005.

Table 3-4 Sub-Saharan Africa exports of LNG, by selected exporters and key markets, 2001–05

Exporters	Key markets		Exports 2001	2002	2003	2004	2005	Percent change 2001–05
Nigeria	**Total EU[a]**	*1,000 dollars*	337,246	376,203	775,765	993,511	1,337,875	297
		Million mt	4.05	4.63	6.75	7.85	7.87	94
	Spain	*1,000 dollars*	278,100	248,064	649,907	672,448	927,486	234
		Million mt	1	1.18	3.08	3.51	3.65	265
	Portugal	*1,000 dollars*	([b])	([b])	34,459	171,503	263,081	n/a
		Million mt	0.19	0.31	0.62	0.96	1.15	505
	France	*1,000 dollars*	59,145	128,139	91,399	149,561	147,307	149
		Million mt	0.37	0.58	0.49	0.61	3.07	730
	USA	*1,000 dollars*	176,129	21,467	228,228	69,371	76,581	-57
		Million mt	0.79	0.17	1.04	0.24	0.17	-78
	Turkey	*1,000 dollars*	([b])	22,863	([b])	([b])	([b])	n/a
		Million mt	0.88	0.93	0.82	0.75	0.75	-15
	Total	*1,000 dollars*	514,169	421,234	1,021,961	1,159,416	1,414,456	175
		Million mt	5.72	5.72	8.61	9.19	8.79	54
Sub-Saharan Africa	**Total**	*1,000 dollars*	538,988	530,234	1,047,233	1,179,758	1,417,074	163
		Million mt (est.)	5.79	5.79	8.62	9.20	8.79	52

Source: BP Statistical Review of World Energy, 2002–2006; and GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

Note: Export values reported at the 6-digit level for HTS subheading 2711.11. Nigerian export quantities were derived from LNG export data as published by BP Statistical Review of World Energy 2002–2006, converted to million metric tons. Export quantities as reported by BP Statistical Review of World Energy are on a contractual basis and may not correspond to physical gas flows in all cases.

Although Nigeria is the only producer of LNG in Sub-Saharan Africa, total SSA exports of LNG show slightly higher values than do total Nigerian exports of LNG, likely reflecting relatively small intra-SSA shipments or reporting error.

[a] Total EU LNG import quantities reflect imports of Belgium, France, Italy, Portugal, and Spain.
[b] Did not report imports in terms of value.

From 2001 through 2005, Nigerian LNG exports to the United States fluctuated but declined in terms of both quantity and value, as most deliveries to the United States were under short-term contracts.[98] Following recent additions in production capacity, part of which is allocated to supplying the U.S. market, Nigerian LNG exports to the United States are expected to increase significantly. SSA exports of LNG are free of duty in the U.S. market.

Nigerian competitors for LNG vary by export market. Principal non-SSA suppliers of LNG to European, Mediterranean and, North American markets possess large natural gas reserves and liquefaction facilities. The following tabulation shows principal LNG suppliers to these markets in 2005.

Market	SSA competitors
European Union	Algeria, Nigeria, Qatar
United States	U.S. domestic producers, Trinidad & Tobago, Algeria, Egypt

[98] Between 2000 and 2003, Nigeria delivered more than 20 cargos under short-term contracts to the United States. U.S. Department of Energy, *Liquefied Natural Gas: Understanding the Basic Facts*, 4; and EIA, *The Global Liquefied Natural Gas Market: Status and Outlook*, 14.

Factors Affecting Trade Patterns

Increasing natural gas prices from 2001 through 2005 were a primary driver of increased export revenues, as tight global LNG supplies and increasing global demand created a seller's market.[99] Export growth in Nigeria was also supported by increased production of LNG resulting from increased liquefaction and transport capacities. Nigeria's endowment of natural gas reserves, as well as location in the Gulf of Guinea giving it proximity and access to the large LNG markets in Europe and the United States, contribute to its comparative advantage in supplying LNG to these markets.

Plans to construct LNG facilities in Equatorial Guinea and Angola are in varying phases of development and will help reduce the amount of natural gas currently flared in both countries. Equatorial Guinea has its first liquefaction terminal under construction, with the facility scheduled to become operational by late 2007.[100] Plans to develop an LNG facility in Angola are currently being studied, with a target date to begin exporting LNG set for 2011.

Demand Growth and Price Increases

Global demand for natural gas increased significantly from 2001 through 2005, which contributed to a significant increase in prices over the period. Natural gas prices generally rose in line with increasing crude petroleum prices through 2005. Two benchmark prices in the European and U.S. markets more than doubled from 2001 through 2005—to $6.69 per million Btu and $8.79 per million Btu, respectively.[101] Similarly, U.S. LNG import prices increased 96 percent to an annual average of $7.93 per million Btu in 2005, up from an annual average of $4.04 per million Btu in 2001.[102] In the United States, a reduction in crude petroleum output in the Gulf of Mexico after hurricanes Katrina and Rita, coupled with lower natural gas inventories that were drawn down the preceding winter, contributed to higher natural gas prices in late 2005.

At the same time that prices increased, global consumption of natural gas increased by about 12 percent from 2001 through 2005 to about 2,750 billion cubic meters.[103] Consumption increased across all regions. A large portion of this demand growth came from countries that are not members of the Organization for Economic Cooperation and Development.[104] For example, from 2001 through 2005 consumption increased significantly in China (75 percent), Pakistan (51 percent), and India (35 percent).[105] However, these countries accounted for only about 4 percent of global consumption of natural gas in 2005, up from 3 percent in 2001.[106] The world's largest consuming countries' share of global consumption of natural gas remained relatively stable from 2001 through 2005.

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[99] IEA, *Natural Gas Market Review 2006*, 16.

[100] U.S. Department of Energy, "Corporate Council on Africa Oil & Gas Forum Keynote Address," remarks for Energy Secretary Samuel Bodman.

[101] UK Heren National Balancing Point index and U.S. Henry Hub. *BP Statistical Review of World Energy 2006*.

[102] Prices as published by EIA were converted from U.S. dollars per thousand cubic feet to U.S. dollars per million Btu by multiplying by 0.969932.

[103] BP, *BP Statistical Review of World Energy, 2006.*

[104] IEA, *Natural Gas Market Review 2006*, 33.

[105] China consumed 94 percent of its production in 2005. India produced 83 percent of its consumption in 2005. Pakistan produced as much as it consumed in 2005. BP Statistical Review of World Energy, 2006.

[106] BP, *BP Statistical Review of World Energy*, 2006.

Increased Investment

Nigeria

From 2001 through 2005, the incremental addition of LNG liquefaction capacity ("trains") and LNG carriers contributed to a significant increase in LNG exports.[107] Nigeria's natural gas industry was started in 1995, when principal shareholders signed an investment agreement to build Nigeria's first natural gas liquefaction plant. Construction of the $3.8 billion NLNG facility, located at Bonny Island, began in 1996. The plant became operational in 1999, and by 2002 production capacity had increased to 11 million mt.[108] Initially some production was exported to the United States under short-term contracts.[109] However, the three original liquefaction trains are currently devoted to supplying France, Italy, and Turkey (combined 47 percent of production and export volumes) and Spain (53 percent).[110]

Exports will continue to increase as Nigeria continues to expand its LNG production and shipping capacity. Annual production capacity is expected to have reached 18 million mt by the end of 2006.[111] The majority of LNG production from new capacity added in 2006 will be exported to the United States (60 percent), with the remainder being exported to Spain (35 percent) and France, Italy, and Turkey (5 percent).[112] Additional production and storage capacity planned for 2007 should increase annual production capacity to 22 million mt and boost annual export revenues to around $4 billion.[113]

Since 1999, transport capacity for Nigerian LNG exports has increased in line with increasing production volumes. Special LNG transport ships directly owned by NLNG increased from four in 1999 to twelve in mid-2005, while NLNG also increased the number of chartered carriers during the period.[114] Five LNG carriers have been chartered by third-party ship owners to transport Nigerian LNG from the sixth liquefaction train and are scheduled for delivery between 2006 and 2008.[115] The addition of owned and chartered LNG carriers increased transport capacity from approximately 600,000 cubic meters in 1999 to 2.2 million cubic meters in 2005.[116] The increase in additional LNG carriers and transport

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[107] An LNG "train" is the designation given to each independent gas liquefaction unit.

[108] Ahmed, Abdul-Kadir K, "Nigeria LNG: Keys to Investments and Project Development."

[109] Between 2000 and 2003, Nigeria delivered more than 20 cargos under short-term contracts to the United States. U.S. Department of Energy, *Liquefied Natural Gas: Understanding the Basic Facts*, 4; and EIA, *The Global Liquefied Natural Gas Market: Status and Outlook*, 14. Liquefied natural gas produced in excess of planned quantities under sales and purchase agreements with long-term buyers is sold as spot cargo. NLNG company Website.

[110] NLNG has sales and purchase agreements with five European buyers, each with a contract of a 22.5-year duration: Gaz de France (France), Enel (Italy), Botas (Turkey), Gas Natural SDG (Spain), and Transgas (Portugal). Abdul-Kadir K Ahmed, "Nigeria LNG: Keys to Investments and Project Development;" and NLNG company Website.

[111] EIA, *Nigeria Country Analysis Brief*, 6; and NLNG company Website.

[112] Ahmed, Abdul-Kadir K, "Nigeria LNG: Keys to Investments and Project Development."

[113] NLNG company Website; EIA, *Nigeria Country Analysis Brief*, 6; Alexander's Gas & Oil Connections, "Nigeria Targets $4bn Annual From Gas Exports."

[114] Six of the seven LNG carriers to transport LNG from Trains 1 and 2 are owned by NLNG through its wholly-owned subsidiary, Bonny Gas Transport Limited (BGT). The seventh LNG carrier is chartered on a long-term basis from Shell Bermuda Overseas Limited. Three additional LNG carriers were acquired by BGT, funded partly with third-party financing, following the expansion of Train 3. Eight additional LNG carriers were built for the expansion of Trains 4 and 5. NLNG company Website.

[115] NLNG company Website.

[116] Ahmed, Abdul-Kadir K, "Nigeria LNG: Keys to Investments and Project Development."

capacity has boosted the number of LNG cargoes shipped per year. From 2004 through 2005, the number of LNG cargoes shipped increased from 170 to 600.[117] By 2008, NLNG expects to increase the number of owned and chartered LNG carriers to twenty-five, with an expected combined transport capacity of almost 3.2 million cubic meters by 2008.[118]

Regional exports of Nigerian natural gas are also expected to increase following the completion of the $590 million, 421-mile West African Gas Pipeline (WAGP) to supply power generators and industrial consumers in Benin, Togo, and Ghana.[119] In August 2006 the offshore segment of the WAGP was completed, with first deliveries tentatively scheduled for March 2007.[120] The WAGP will have an initial capacity of 200 million cubic feet per day (Mmcf/d) of natural gas and an expected full capacity of 450 Mmcf/d within fifteen years.[121]

Plans to develop additional LNG production facilities are currently being studied. A second LNG facility on Brass Island, located in Nigeria's central Niger Delta, would have an annual capacity of 10 million mt, with an operational date set for early 2011.[122] The feasibility of a third facility is currently being examined. This plant, to be located in the Olokola Free Trade Zone in Nigeria, would require additional investment of $7 billion, have an initial capacity of 11 million mt per year, and a maximum capacity of 33 million mt per year.[123]

Equatorial Guinea and Angola

From 2001 through 2005, natural gas production in Equatorial Guinea increased rapidly in response to new investments in projects to either process natural gas into condensate, methanol, or LPGs or re-inject natural gas into existing reservoirs such as the Alba field for use as feed gas for the planned LNG plant. Construction of Equatorial Guinea's first LNG facility is currently underway, with production and exports expected to begin in late 2007.[124] The facility required an investment of $1.4 billion by project shareholders and will have an initial capacity of 3.4 million mt per year.[125] It is expected to be one of the lowest-cost LNG operations in the Atlantic Basin.[126] Feed gas will be supplied from the Alba field under a long-term supply agreement.[127] The output of 3.4 million mt per year will be sold to BG Gas Marketing Ltd. under a seventeen-year purchase and sale agreement beginning in late 2007;

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[117] Alexander's Gas & Oil Connections, "Nigeria Targets $4bn Annually from Gas Exports."

[118] Ahmed, Abdul-Kadir K, "Nigeria LNG: Keys to Investments and Project Development."

[119] Chevron, *Nigeria Fact Sheet*. The West African Gas Pipeline Company Ltd, the pipeline owner and operator, is owned by an international consortium led by Chevron affiliate Chevron West African Gas Pipeline Ltd. (38 percent shareholder), NNPC (25 percent), Shell Overseas Holding Ltd. (17 percent), Takoradi Power Company Ltd (Ghana) (16 percent), Société Togoliase de Gaz (2 percent), and Société Bengaz SA (2 percent). ChevronTexaco, "Chevron begins installation of the West Africa Gas Pipeline."

[120] Alexander's Gas & Oil Connections, "Offshore pipelines between Ghana and Nigeria completed."

[121] EIA, *Nigeria Country Analysis Brief*, 7.

[122] Brass LNG Limited company website; ConocoPhillips, *Fact Book*, 30.

[123] ChevronTexaco, "ChevronTexaco and Others to Study Potential LNG facility in Nigeria"; EIA, *Country Analysis Brief: Nigeria*, 6.

[124] Marathon Oil Corporation, "Marathon and GEPetrol Announce Final Investment Decision on Equatorial Guinea LNG Project."

[125] Principal shareholders of the projects are Marathon Oil Company (60 percent interest), followed by Sonangas (25 percent interest), Mitsui & Co., Ltd. (8.5 percent interest), and a subsidiary of Marubeni Corporation (6.5 percent interest). Marathon Oil Corporation, "Marathon and Partners Award Front End Engineering and Design Contract."

[126] Marathon Oil Corporation, "Marathon and GEPetrol Announce Final Investment Decision."

[127] Ibid.

it is intended for export to the United States.[128] A second liquefaction train with a capacity of 4.4 million tons per year is currently being studied.

Plans to construct a 5 million mt per year LNG facility to be located in Soyo, northern Angola, are in developmental stages. The proposed LNG facility is tentatively scheduled to begin exporting LNG in 2011.[129]

Policies to Promote the Industry

Nigeria

Growth in the Nigerian natural gas sector is, in part, a result of government efforts to transition from an oil-based industry to an integrated oil and gas energy industry by exploiting and monetizing natural gas assets that have been underutilized. Historically, much of Nigeria's associated natural gas has been flared and thus lost because many of the crude petroleum fields lacked the infrastructure to separate the associated natural gas from crude petroleum during drilling.[130] Forty-three percent of Nigeria's total annual natural gas production is flared. This is the highest rate of any country in the world, accounting for an estimated 20 percent of the world total of flared natural gas.[131]

The reduction of natural gas flaring has been on the government's policy agenda since the mid-1990s. In 1995, the government increased penalties for every cubic foot of natural gas that crude petroleum producers flared.[132] The Nigerian government's determination to end flaring by 2008 and increase natural gas export revenues to 50 percent of oil revenues by 2010 has helped to spur new gas commercialization projects in the country.[133] Government initiatives aimed at developing the natural gas sector include duty-free and VAT-free imports of machinery and equipment, tax-deductible interests on loans for natural gas projects, and allowances for investment capital.[134] Other incentives include tax holidays for up to 5 years, as well as tax-free dividends for a period of 5 years.[135]

The Nigerian government also has emphasized the importance of private investment in the development of the country's natural gas sector. The NNPC has estimated that $15 billion in private sector investment is necessary to meet the country's natural gas development goals by 2010.[136] The Department of Petroleum Resources, a regulatory agency that oversees the activities of companies engaged in the energy sector, has stressed the continued importance of private sector-based investment and the presence of commercial entities to the development of Nigeria's natural gas industry.[137]

For example, Nigeria's natural gas and LNG sector is based on shareholder as well as third-party financing. The initial construction of the first and second liquefaction trains, which cost

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[128] Participants in the Alba field include Marathon, Noble Energy, and GEPetrol. "Marathon and GEPetrol Announce Final Investment Decision."
[129] U.S. Department of Energy, "Corporate Council on Africa Oil & Gas Forum Keynote Address."
[130] EIA, *Country Analysis Brief: Nigeria*, 6.
[131] Ibid.
[132] Nigeria Oil & Gas Online website.
[133] EIA, *Country Analysis Brief: Nigeria*, 5.
[134] EIU, *Country Commerce Report: Nigeria*, 20.
[135] Ibid.
[136] EIA, *Country Analysis Brief: Nigeria*, 5.
[137] Akoma Chinweoke, "Power–Key Driver of Domestic Growth of Gas in Nigeria–DPR Director."

approximately $3.6 billion, was financed by NLNG shareholders.[138] The third liquefaction train, with a cost of $1.8 billion (including new LNG carriers), was financed by shareholders and from revenue and surpluses generated from the first two trains.[139] NLNG shareholders financed 50 percent of the total cost to build the fourth and fifth liquefaction trains ($2.1 billion excluding LNG carrier acquisition costs). Third parties, including international and national bank syndicates supported by Export Credit Agency guarantees and insurances, financed the remainder.[140] The sixth liquefaction train is 100 percent financed by NLNG shareholders.[141] Funding for additional LNG carriers has been based on third-party financing and internally-generated cash revenues and shareholder funds.

Angola and Equatorial Guinea

Both Angola and Equatorial Guinea have underlined the need to reduce natural gas flaring. In Angola, the fifth-largest flaring country in 2004, the government declared a zero-flaring policy for all new fields and the elimination of routine flaring from existing fields by 2010.[142] Plans to reduce flaring have generally focused on natural gas re-injection into existing reservoirs and on the proposed LNG facility for LNG export.[143] Similarly, the government of Equatorial Guinea, working in conjunction with commercial entities, has initiated a number of natural gas utilization projects to reduce the amount of flared natural gas, including the development of an LNG production facility for LNG export. These activities did not affect SSA exports during 2001–05 but likely will have an impact following competition of LNG production facilities.

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[138] NLNG company website; Abdul-Kadir K Ahmed "Nigeria LNG: Keys to Investments and Project Development."

[139] NLNG company Website.

[140] Five international banks and six Nigerian banks participated in funding for the project, and include BNP Paribas, Citigroup, Credit Lyonnais, MCC, West LB, Citibank Nigeria, First Bank of Nigeria, FSB International Bank, Guaranty Trust Bank, Union Bank of Nigeria, and United Bank for Africa. The international facilities comprised four international commercial bank loans which were supported by Export Credit Agency (ECA) loan guarantees or insurances of $620 million. These loans were accompanied by an additional international bank loan of $180 million. ECAs include the Export-Import Bank of the United States, the Export Credits Guarantee Department of the United Kingdom (ECGD), Servizi Assicurativi del Commercio Estero (SACE) of Italy, and Gerling NCM. Alexander's Oil & Gas Corporation, "Nigeria targets $4bn annual from gas exports," and NLNG company Website.

[141] Ahmed, Abdul-Kadir K, "Nigeria LNG: Keys to Investments and Project Development."

[142] World Bank, Global Gas Flaring Reduction Partnership, "Top 20 Flaring Countries"; and IEA, *Energy Policy Review of Angola (Draft)*, 14 and 100.

[143] IEA, *Energy Policy Review of Angola (Draft)*, 14.

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Apparel

Summary of Findings

Exports of apparel from SSA increased 13 percent by value from 2001 through 2005 and accounted for 80 percent of total SSA exports of both textiles and apparel in 2005 (table 3-5). SSA countries largely benefited from the duty-free, quota-free access to the U.S. market granted under AGOA during 2001–05, while other countries were constrained by quotas under the Agreement on Textiles and Clothing (ATC).[143] This overall increase in exports from SSA during the 2000–05 period occurred despite a decline of $393 million from 2004 and 2005 as a result of the full phase out of global quotas for WTO (World Trade Organization) members on January 1, 2005, in accordance with the ATC.

Because apparel exports account for a large portion of exports from SSA's textile and apparel sector, as well as from the SSA countries that exported the largest shares of textiles and apparel, this section focuses on apparel trade only. While many SSA countries export apparel, six countries—Kenya, Lesotho, Madagascar, Swaziland, Ethiopia, and Botswana—will be discussed here.[144] These countries were chosen because they demonstrated increased apparel exports at average annual rates from 4 to 125 percent, and they sustained increased export levels from 2004 through 2005. These six countries accounted for 47 percent of SSA apparel exports and along with South Africa and Mauritius accounted for a total of 83 percent of SSA apparel exports. Although South Africa and Mauritius are among SSA's largest textile and apparel producers, they were not covered here because their exports did not increase during the five-year period under review.[145]

Trade agreements and preference programs, particularly AGOA's third-country fabric provision, the ATC, and EU Cotonou Agreement, served as strong catalysts for increased apparel exports from SSA. To a lesser extent, exports increased because of regional economic integration in southern Africa; individual country programs and state-sponsored policies, such as the creation of export processing zones (EPZs); infrastructure development projects; and, especially in Kenya, Lesotho, Madagascar, and Swaziland, other government investment and incentives that served to attract domestic and foreign direct investment (FDI), notably of Asian origin. More recently, Botswana and Ethiopia also have increased

[143] Textile and apparel exports to the United States under AGOA are limited to a regional cap, which limits AGOA countries to not more than 6.4 percent of all apparel articles imported into the United States, and LDBC's to no more than 3.5 percent. The regional cap and the LDBC sub-cap have not been reached.

[144] The SSA countries discussed here were selected based on one of two criteria: (1) countries that posted the largest value of apparel exports and showed an overall increase in exports from 2001 through 2005 (Madagascar, Lesotho, Kenya, and Swaziland); or, (2) countries that increased apparel exports by at least 50 percent during the period and by at least $1 million after expiration of the ATC in 2005 (Botswana and Ethopia).

[145] South Africa and Mauritius accounted for 36 percent of apparel exports in 2005, an overall decline from 2001. South Africa and Mauritius have attempted to position themselves to regain market shares lost after the expiration of the ATC. Both countries have taken measures to produce higher-value products (including man-made fiber fabrics in South Africa and high-end finished apparel in Mauritius) rather than compete with China on basic commodity type apparel items such as T-shirts, sweatshirts, and basic knitwear. South African exports of certain man-made fiber textile materials to the United States have increased from 2005 to the first half of 2006. Several apparel producers in Mauritius have stated that they are diversifying their product lines to exploit their competitive advantage in product quality.

Table 3-5 Sub-Saharan Africa apparel exports, by selected exporters and key markets, 2001–05

Exporter	Key markets	Exports 2001	2002	2003	2004	2005	Percent change 2001–05
		1,000 dollars					
Madagascar	**USA**	178,022	89,308	196,289	323,456	276,660	55
	EU	239,879	130,447	145,947	196,697	222,589	-7
	Canada	2,309	888	2,613	5,847	7,451	223
	Total	429,080	228,874	348,175	532,534	514,493	20
Lesotho	**USA**	214,809	321,259	392,472	455,759	390,712	82
	Canada	6,449	3,298	6,454	10,836	11,600	80
	EU	3,399	1,874	1,154	1,045	793	-77
	Total	224,865	326,905	401,017	468,121	404,097	80
Kenya	**USA**	64,567	125,493	187,729	277,175	270,542	319
	EU	1,666	997	1,439	3,197	3,052	83
	Canada	20	328	1,944	2,648	2,759	13,695
	Total	68,005	129,965	194,515	287,099	278,727	310
Swaziland	**USA**	47,960	89,065	140,666	178,644	160,856	235
	Canada	14	79	137	776	579	4,036
	Mexico	0.6	0	47	137	159	26,400
	Total	58,928	105,380	147,442	180,703	161,725	174
Botswana	**USA**	2,762	6,046	7,160	20,233	30,043	988
	EU	17,577	7,497	6,263	12,657	5,959	-66
	Canada	304	308	188	135	152	-50
	Total	21,296	14,722	13,840	33,160	36,457	71
Ethiopia	**USA**	400	1,308	1,763	3,335	3,605	801
	EU	131	31	98	713	1,018	677
	Total	655	1,376	1,984	4,175	4,739	624
Sub-Saharan Africa	**USA**	949,708	1,097,441	1,510,558	1,757,139	1,463,605	54
	EU	964,143	812,987	889,441	948,559	855,441	-11
	South Africa	22,808	28,576	25,640	29,549	39,874	75
	Canada	21,259	14,397	22,231	29,182	27,950	31
	Mexico	1,701	1,970	1,412	3,552	6,0670	3,467
	Total	2,149,236	2,108,691	2,561,618	2,825,747	2,432,290	13

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

exports of textiles and apparel due, in part, to strong government incentives and comparatively low wages.

Industry Overview[146]

Apparel exports from SSA, particularly from the countries discussed in this study, generally target the mid- and low-range basic apparel markets in the United States and EU. SSA exports of apparel largely consist of cut-make-trim (CMT) products.[147] The CMT segment in the apparel production process requires higher labor input and a lower capital component relative to other stages of the textile-apparel supply chain such as yarn or fabric production (box 3-4). Purchasers of finished apparel articles from SSA are largely retailers supplying the U.S. and EU markets.

Box 3-4 Product Description[1] for Apparel

The apparel industry covers a broad spectrum of products, including woven, knit, or nonwoven garments such as shirts, trousers, gloves, headwear, and neckwear. The vast majority of apparel exports from SSA, particularly to the United States, are consumer-ready products such as basic trousers, shorts, T-shirts, sweatshirts, and sweaters, largely made of cotton or man-made fibers.

[1] For a more comprehensive discussion of the production process and industry supply chain, see U.S. International Trade Commission, *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market.*

The SSA industry is characterized by a relatively high number of apparel firms concentrated in EPZs or industrial zones. Firms employ a relatively large number of low-skilled, mainly female workers (estimated at a combined total of 250,000 in the countries discussed here) earning $30-$120 per month.[148] Foreign investment in the industry is mostly of Asian origin but also includes some African (mainly South African and Mauritian) and European investment. Swaziland and Lesotho were particularly successful in attracting Asian industry investment, while Botswana attracted South African investment and Madagascar attracted Mauritian investment.

Madagascar

The Malagasy industry is concentrated in the apparel sector, with 121 apparel factories (28 exporting to the United States) and two textile factories.[149] Apparel factories are generally consolidated in EPZs and employ roughly 90,000 workers, each earning $45 per month. Apparel firms source fabric primarily from China, while some firms have recently

[146] Unless otherwise indicated, information contained in this section is sourced from U.S. Department of State, "Textile and apparel production capabilities in AGOA-eligible countries," August 2006.

[147] The CMT segment entails a process whereby all apparel inputs, including all fabric and materials, are shipped to manufacturers in a kit; the fabric is then cut into a pattern, sewn together, and further assembled into the finished apparel product.

[148] Wage data compiled from USITC staff interview (Kenya and Ethiopia), Institute for Policy Studies (Swaziland), U.S. Department of State, U.S. Embassy, Antananarivo, Madagascar, cable 161609Z, August 2006, and 080931Z (Madagascar), *ComMark Trust* (Lesotho), and *ComMark Trust*,"Botswana Textile and Apparel Sub Sector Study," (Botswana). Wages are estimates and generally do not include additional benefits or nonmonetary compensation. As such, wages are not fully comparable across countries.

[149] Data on number of firms, employment, production, and fabric sourcing contained in this section is sourced from U.S. Department of State, "Textile and Apparel Production Capabilities in AGOA-Eligible Countries," August 2006, unless otherwise indicated.

begun importing from Mauritius and Lesotho. Madagascar's two textile factories, COTONA and SOMACOU, source cotton domestically and employ a total of 1,500 workers.

Lesotho

Lesotho currently has one large textile mill and forty-two apparel firms producing roughly 26 million pairs of jeans and 90 million knit garments annually.[150] The apparel industry employs roughly 40,000 workers, a decline of 13,000 workers, or 25 percent, since 2004. Apparel workers in Lesotho earn $110-120 per month. Lesotho apparel firms source a vast majority of fabric from Asia, whereas the textile mill produces denim fabric using African cotton.[151]

Kenya

In 2005, the Kenyan industry consisted of twenty-five apparel factories and twelve textile mills located mostly in EPZs near Mombasa and Nairobi, down from thirty apparel factories in 2004.[152] Data from the Athi River EPZ indicate that industry employment increased consistently until 2003, declined slightly in 2004 (owing to the pending expiration of the ATC) and has since stagnated, with current employment at roughly 34,000 workers earning approximately $110 per month.[153] Kenyan textile mills generally produce for the domestic market, although at least one firm produces for export to high-end stores in Britain and elsewhere in the EU.[154]

Swaziland

In 2006, the textile and apparel industry in Swaziland consisted of one spinning textile mill and twenty apparel factories.[155] The apparel industry currently employs roughly 15,000 workers, down 50 percent from 2004, while the textile mill employs 100 workers, earning approximately $85 per month. A majority of apparel factories are owned by Taiwanese firms and source a vast majority of fabric from Taiwan and China, while the textile spinning mill sources its cotton from Zambia and Mozambique to produce yarn for export to South Africa.

Botswana

In 2006, the Botswana textile and apparel industry consisted of one textile factory and an estimated seven apparel factories, which employ a total of approximately 6,400 employees. Industry workers earn roughly $108 per month. Apparel firms source fabric largely from China, Taiwan, and India and, to a lesser extent, South Africa and Mauritius, and produce for inputs to produce apparel for export to the United States. The textile factory imports

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[150] *ComMark Trust,* "The Current State of Lesotho's Textiles and Apparel Industry."

[151] In December 2006, the U.S. Congress passed the Africa Investment Incentive Act. The Act includes incentives for African apparel firms to utilize African fabrics and specifically states that the Lesotho-based denim mill produces sufficient denim to supply the region with 30 million square meter equivalents of denim.

[152] Industry officials, interview by Commission staff, Athi River EPZ, Kenya, December 5, 2006, and *EPZ Performance Under the African Growth and Opportunity Act (AGOA), 2000-2006,* EPZA Report, 2006.

[153] Ibid.

[154] Industry officials, interview by Commission staff, Athi River EPZ, Kenya, December 5, 2006.

[155] Knitting and dyeing operations were projected to commence at a new mill during late 2006.

cotton yarn from Zambia and Zimbabwe to produce toweling for export to South Africa and Mauritius.[156]

Ethiopia

Ethiopia currently has fifteen textile mills, including eight vertically integrated mills that produce largely for the domestic market, and forty-three apparel factories that supply the domestic and, to a lesser extent, the export market, with workers earning around $30 per month.[157] Ethiopian apparel exports are shipped from a few Ethiopian firms producing basic sportswear for a few consistent U.S. and EU buyers. Ethiopia is the only country included in the study that exports more textiles ($9.2 million in 2005) than apparel ($4.7 million in 2005). In 2005, 97 percent of Ethiopia's $9.2 million in textile exports was destined for the EU, and consisted largely of bed and kitchen linens.

Sub-Saharan Africa Trade in the Global Context

Total global apparel exports increased by 31 percent, from $159.5 billion in 2001 to $209.3 billion in 2005. Meanwhile, SSA apparel exports increased by 13 percent, from $2.2 billion in 2001 to $2.8 billion in 2004 before declining to $2.4 billion in 2005.[158]

Leading Exporters

The three largest global exporters of apparel are China, Turkey, and Hong Kong, together accounting for nearly one-half of global apparel exports in 2005 (figure 3-7). China, the largest exporter, also had the largest increase in export value from $46 billion in 2001 to $81 billion in 2005, or 76 percent. Of China's $35 billion increase in apparel exports, $18 billion (more than 50 percent) occurred from 2004 through 2005, after global quotas were removed on January 1, 2005, in accordance with the ACT.[159]

Of SSA exporting countries, Kenya registered the largest increase in apparel exports during the period, at $211 million, followed by Lesotho ($180 million), Swaziland, ($103 million), and Madagascar ($86 million). Botswana and Ethiopia, though having relatively smaller shares of apparel exports from SSA during the period, shipped $37 million and $5 million, respectively, in 2005, and posted increases of $15 million and $4 million during the period (figure 3-7). Additionally, only Botswana and Ethiopia, increased their exports of apparel from 2004 through 2005. Exports from other SSA countries described here and SSA as a whole declined. With the exception of Ethiopia, which exports more textiles than apparel, exports from all of the selected countries are heavily concentrated in the apparel sector, and consist largely of non-knit suits, blazers, trousers or skirts, knit sweaters, pullovers, and sweatshirts.

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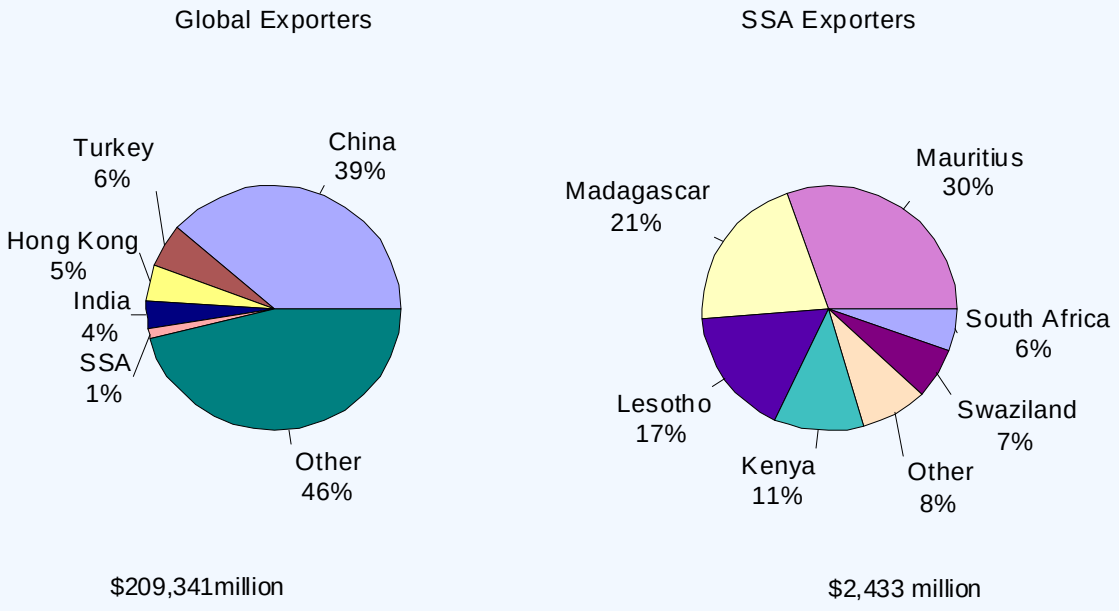
[156] U.S. Department of State, "Textile and Apparel Production Capabilities in AGOA-Eligible Countries," August 2006.

[157] Ibid.

[158] GTIS, *Global Trade Atlas.*

[159] Ibid.

Figure 3-7 Leading global and sub-Saharan Africa exporters of apparel, 2005



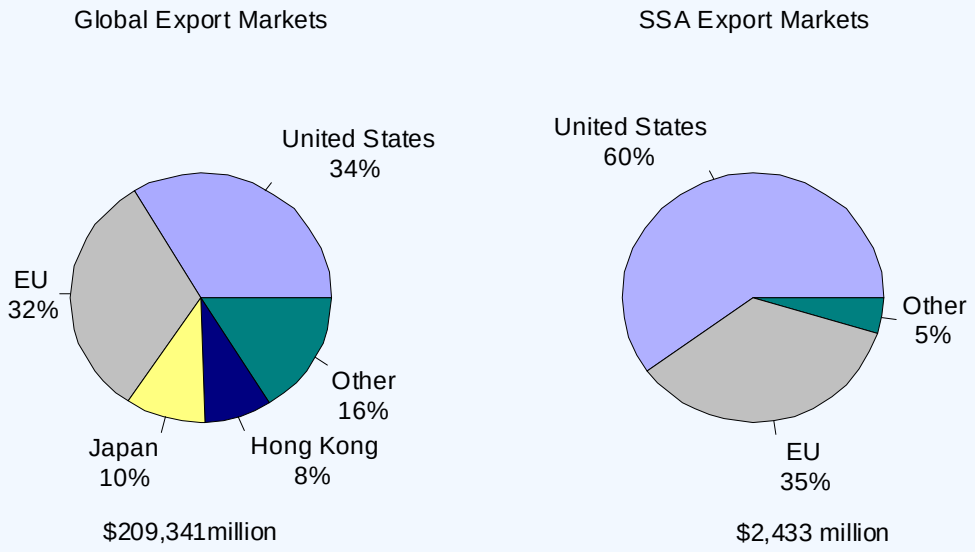
Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Leading Export Markets

The leading global markets for apparel are the United States, EU, Japan, and Hong Kong (figure 3-8). These four economies accounted for 84 percent of global apparel imports in 2005. In 2002, the first year after AGOA's implementation, the United States surpassed the EU as the largest market for SSA apparel exports (table 3-5). SSA exports to the United States grew by 85 percent, from $950 million in 2001 to a high of $1.8 billion in 2004, before a slight decrease to $1.5 billion in 2005. SSA exports to the EU fluctuated downward by $109 million during the period, from $964 million in 2001 to $855 million in 2005. Of the six countries discussed, Lesotho, Kenya, and Swaziland exported mainly to the United States during the entire period. Botswana's and Madagascars's leading export market shifted from the EU to the United States from 2002 through 2003.[160] Although Ethiopia shipped more apparel to the United States than to the EU, the majority of its textiles and apparel exports were destined for the EU, reportedly owing largely to shipments of bed and kitchen

[160] More recently, firms in Madagascar have increasingly targeted the EU as an important export destination. Textile and apparel exports from Madagascar to the EU now represent roughly two-thirds of industry exports. U.S. Department of State, U.S. Embassy, Antananarivo, Madagascar, cable 161609Z, August 2006.

Figure 3-8 Leading markets for global and sub-Saharan Africa exports of apparel, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

linens for Swedish-based retailer IKEA.[161] Tariff treatment for SSA exports is discussed later in this profile.

The size of the apparel markets in the United States and EU increased during 2001–05, as did the market share of imported apparel relative to domestic production. The primary global competitor in both the U.S. and EU apparel markets is China, whose share has increased rapidly and currently accounts for 24 percent of the U.S. import market (20 percent of the total U.S. market) and 33 percent of the EU import market.[162] The following tabulation identifies the principle competitors for SSA exports in the U.S. and EU markets.

Market	SSA competitors
United States	China, Mexico, Hong Kong, and India
EU	China, Turkey, and Bangladesh

[161] Industry official, interview by Commission staff, Addis Ababa, Ethiopia, December 14, 2006.

[162] The U.S. apparel market was estimated at $83.9 billion in 2005. Data estimated based on: U.S. Census Bureau, *Current Industrial Report: Apparel*, and U.S. import and export data from *Global Trade Atlas*. China remains the largest apparel exporter to the United States despite quantitative restraints.

Factors Affecting Trade Patterns

Trade agreements and programs such as the Multi-Fiber Arrangement (MFA) and the Cotonou Agreement were important factors that led to the development of textile and apparel industries in SSA. AGOA was, however, a major catalyst for increased SSA apparel exports to the United States from 2001 through 2005. The Southern African Customs Union (SACU) played an important role in enabling Lesotho, Swaziland, and Botswana to take advantage of tariff preferences granted under the aforementioned trade programs. To a lesser extent, government programs and policies in the selected countries combined with tariff preferences to encourage industry investment during the period. Other supply-side factors such as abundant labor and a historical presence of a textile and apparel industry were likely to have contributed to increased industry investment in these countries.

Tariff Preferences and Trade Agreements

The Multi-Fiber Arrangement and the Agreement on Textiles and Clothing[163]

The MFA, which preceded the Agreement on Textile and Clothing (ATC), was the predominant mechanism in regulating international trade in textiles and apparel from 1974 through 1994 and contributed to the development of the apparel industry in SSA.[164] The MFA enabled textile and apparel importers such as the United States and EU, for example, to establish quantitative limits on imports of textile and apparel articles in order to prevent market disruption. MFA restrictions differed from country to country and generally constrained exporters in Asian countries more than countries in other regions.[165] Many Asian firms looked abroad to establish apparel production facilities in countries less constrained by quotas, such as those in SSA.[166] In 1995, members of the General Agreement on Tariffs and Trade (GATT) established the ATC, which required countries to phase out the MFA and eliminate quotas in four stages over a ten-year transition period ending January 1, 2005. The largest transition, which required countries to ensure that the final 49 percent of textile and apparel trade was in conformance with GATT and, as such, not subject to regularized quotas, did not take place until January 1, 2005.

Lomé Convention and Cotonou Agreement

After it was first signed in 1975, the Lomé Convention supported further development of SSA apparel industries by encouraging FDI in the SSA apparel industry by allowing the use of third-country fabric.[167] However, subsequent Lomé Conventions (negotiated every five years) required the use of local fabric. Furthermore, the Cotonou Agreement that replaced the Lomé Convention in June 2000, generally requires that fabric inputs be sourced from

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[163] See U.S. International Trade Commission, *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market.*

[164] For a more comprehensive discussion of the MFA and ATC, see USITC, *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market*, 1-8.

[165] USITC, *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market*, 2-4.

[166] USITC, *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market*, Chap. 2.

[167] The first Lomé Convention, between African, Carribean, and Pacific (ACP) countries and nine European countries, granted nonreciprocal trade preferences to ACP exports and allowed duty-free, quota-free access of textile and apparel products to these European markets without a local content provision. Lall, "FDI, AGOA and Manufactured Exports From a Landlocked, Least-Developed African Economy: Lesotho."

African, Caribbean, and Pacific (ACP) countries—subject to a double transformation rule—for exports to qualify for duty-free status.[168]

The African Growth and Opportunity Act

By allowing the use of third-country fabric as an input in apparel for export to the United States, the AGOA was a major factor contributing to increased SSA apparel exports to the United States from 2001 through 2005. Signed into law in May 2000, AGOA granted duty-free, quota-free treatment to U.S. apparel imports and selected textiles imports from eligible SSA countries until 2015. It also granted duty-free treatment to apparel exports from lesser-developed beneficiary countries (LDBCs) using third-country fabrics.[169] The third-country fabric provision enables LDBCs to utilize fabric inputs sourced from third-party countries (i.e., non-U.S., non-SSA) and receive duty-free access to the U.S. market. In 2002, SSA apparel exports of products highly constrained by quotas (largely on Asian countries) accounted for 73 percent of SSA's apparel exports to the United States.[170] In 2005, of the $365.2 million in total U.S. apparel imports under AGOA, 89 percent, or $325.5 million, was of apparel made with third-country fabrics.[171]

Quotas on Chinese Textile and Apparel Imports[172]

During May through August 2005, the United States took ten safeguard actions in response to rising imports from China. In November 2005, the United States and China signed a Memorandum of Understanding (MOU), which superceded previous safeguards and established quotas on U.S. imports of various textile and apparel items from China until 2008. Products in categories 347 and 348 are two of the three largest categories of apparel exports from SSA to the United States and are included in the MOU.[173]

In July 2005, the EU established import quotas on textile and apparel items in ten product categories from China, including cotton fabrics, T-shirts, pullovers, trousers, blouses, bed

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[168] Generally, two manufacturing steps or processes must take place in the beneficiary country or meet the cumulation requirements to confer origin. For example, most apparel is assembled in the beneficiary countries from fabric made and cut in the beneficiary or EU countries. A recent study prepared for the European Commission finds that EU rules of origin "have had the effect of suppressing apparel trade (or even preventing it from taking place at all..." between the countries of the SADC and the EU. European Commission, *Sustainability Impact Assessment of the EU-ACP Economic Partnership Agreements*, 23, 68–69.

[169] Lesser-developed countries are countries with an annual per-capita GDP of $1,500 or less in 1998 as designated by the World Bank. In December 2006, the Africa Investment Incentive Act was signed into law. The Act extends the third-country fabric provision until 2015 and includes additional incentives to increase investment in textiles and apparel in AGOA-eligible countries.

[170] The highly constrained categories included cotton and man-made fiber knit tops, pants and shorts, nightwear, and underwear. USITC, *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market*, 3–13.

[171] Exports from the selected countries to the United States are concentrated under HS headings 6110, 6203, and 6204, with ad valorem MFN duty rates ranging up to 32 percent.

[172] Safeguards on imports of textile and apparel from China are permitted in accordance with paragraph 242 of China's Accession agreement to the WTO, which states that members may consult with China in order to avoid or ease textile and apparel market disruption. The agreement allows WTO member states to introduce specific safeguard measures on imports of Chinese textiles and apparel if the subject imports were disruptive to the market.

[173] Products in category 348 include women's and girls' trousers, breeches and shorts of cotton or blue denim, not knit (HTS subheading 6204.62.40), whereas category 347 includes men's and boys' trousers, breeches, and shorts of cotton, blue denim, or corduroy, not knit (HTS subheading 6203.42.40).

linens, dresses, brassieres, table and kitchen linens, and flax yarn, until 2008.[174] SSA industry exports to the EU are concentrated in some of the aforementioned items.

Policies to Promote the Industry and Other Country-specific Factors

All six of the countries discussed here secured apparel investment, in part, through the creation of EPZ or industrial zones. Madagascar, Swaziland, Kenya, and Lesotho encouraged apparel investment in EPZs, while Botswana and Ethiopia developed industrial zones. EPZ textile and apparel investment incentives vary by country, but notably include duty reductions on fabric and inputs, capital investments, five- or ten-year tax holidays, and varying degrees of technical assistance in complying with administrative and bureaucratic requirements.[175] For example, in Kenya, most apparel firms are located in EPZs.[176] In Kenya, AGOA-related exports accounted for 75 percent of total EPZ exports from 2000 through 2006 and accounted for an average of over 90 percent of EPZ employment (currently 39,000) from 2000 through 2005.[177]

Industrial zones in Ethiopia and Botswana are similar to EPZs, but generally do not require that products be produced exclusively for export. In Ethiopia, textile and apparel firms are eligible for special incentives regardless of where factories are physically located. Since 2003, the government of Ethiopia has developed over 6,000 hectares as industrial zones. The zones are fitted with physical infrastructure such as paved roads, water, and electricity and are located near major transportation routes.[178]

Madagascar

Madagascar's geographic proximity to Mauritius, the region's second-largest textile and apparel producer, contributed positively to the growth of the Malagasy industry. While the majority of apparel industry investment is from Asian firms, Mauritian firms also invested in Madagascar during 2001–05. Compared to Mauritius, Madagascar possesses an abundant labor supply and AGOA third-country fabric provision eligibility. One industry source indicated that at least one Mauritian firm chose to relocate apparel production to Madagascar because it was a neighboring French-speaking country with lower industry wages and AGOA third-country fabric provision eligibility. The restrictions placed on U.S. and EU imports of textiles and apparel from China will be a factor in determining the future viability of Madagascar's industry noted a U.S. government source.[179]

Lesotho

The government of Lesotho implemented several programs aimed at increasing investment in the apparel industry during 2001–05, primarily through the Lesotho National Development Corporation (LNDC), the main government entity that promotes industrial development in Lesotho.[180] The LNDC facilitates apparel FDI through the provision of factory shells in industrial zones and provides technical assistance to enable firms to take

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[174] Official Journal of the European Union, July 9, 2005.
[175] United Nations Industrial Development Office, Kenya Benchmarking Study, 2004.
[176] WTO. *East African Community Trade Policy Review: Kenya.*
[177] Industry officials, interview by Commission staff, Athi River EPZ, Kenya, December 5, 2006, and *EPZ Performance Under the African Growth and Opportunity Act (AGOA), 2000-2006.* EPZA Report, 2006.
[178] Government official, interview by Commission staff, Addis Ababa, Ethiopia, December 13, 2006.
[179] U.S. Department of State, "Textile and Apparel Production Capabilities in AGOA-Eligible Countries."
[180] EIU, *Country Report: Lesotho,* 16.

advantage of a five-year tax holiday and the SACU duty Credit Certificate Scheme (DCCS). The DCCS is managed by South Africa and provides reimbursement of a portion of the associated import duties for certain products, including textiles and apparel. An industry source credits the DCCS with enabling Lesotho firms to remain viable after the expiration of the ATC in January 2005.[181]

Apparel firms are located primarily near the South African border in the Maseru industrial zone. Exports from land-locked Lesotho are facilitated by easy access to modern shipping facilities and simplified customs procedures as a member of SACU. Industry sources suggest that Lesotho has fully adjusted to the post-ATC environment in 2006, as evidenced by the re-opening of all factories that closed after the ATC expiration in 2005.[182]

Kenya

A historical textile and apparel industry dating to the 1960s, a strong EPZ scheme and other favorable government incentives, and a well-educated workforce combined to create a competitive environment for the apparel industry in Kenya.[183] Government incentives in the sector include a ten-year tax holiday for new industry investment, tax-free inputs, and priority access to factory space, as well as national treatment for foreign investors. The Kenyan textile and apparel industries are led, in part, by Kenyan entrepreneurs with strong technical skills and industry knowledge developed initially during the 1960s and 1970s when the industry received strong government support. Some investors reinvested in the industry after AGOA, with the United States as the target market. Kenyan apparel industry leaders are optimistic that the newly-expanded AGOA legislation will foster increased industry investment and exports to the United States.[184]

Swaziland

The government of Swaziland offers incentives to apparel investors similar to those offered by other SSA apparel exporters. These include a ten-year tax holiday, national treatment for foreign investment, and easy access to one of four industrial areas. The largest industrial area, Matsapha, is located near the South African border with reportedly easy access via road or rail to the port of Durban. During 2001–04, the Swazi government was particularly adept at securing Asian apparel investment by providing factory shells in its industrial zones and working through the Swazi Investment Promotion Authority, which serves as an all-inclusive resource for industry investors.

Botswana

The government of Botswana targeted the textile and apparel industry as a high-priority sector and supports manufacturing, including the apparel industry, by maintaining sound long-term fiscal management, practicing good governance, ensuring low labor costs, applying low tax rates, providing a sufficient transportation infrastructure, and maintaining a stable exchange rate.[185] The Botswana Export Development and Investment Authority provides industrial rebates for machines and materials used to manufacture industry exports

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[181] *ComMark Trust,*"The Current State of Lesotho's Textiles and Apparel Industry."
[182] Ibid.
[183] For additional information on the Kenyan EPZ scheme, see 3–56.
[184] Industry official, interview by Commission staff, Athi River EPZ, Kenya, December 5, 2006.
[185] WTO, *Southern African Customs Union Trade Policy Review: Botswana.*

and has focused on the textile and apparel industry in particular.[186] One industry analyst noted that at least one firm had relocated from Madagascar to Botswana to take advantage of Botswana's attractive government incentives, while another firm relocated from Zimbabwe to Botswana to escape the country's steadily increasing political and economic tensions.[187]

Ethiopia

In 2003, the Ethiopian government implemented a series of measures aimed at increasing exports of textiles and apparel to $500 million by 2019.[188] In 2005, Ethiopian exports of textiles and apparel totaled $13.9 million, an increase of 33 percent since the measures were introduced in 2003.[189] Starting in 2004, the government of Ethiopia sold nearly all of its 36 apparel firms and over one-half of its 12 textile mills to private investors.[190] New FDI in the industry includes Turkish and Chinese investment in textile mills and Italian investment in an apparel factory.[191] Industry incentives include: preferential financing through the Bank of Ethiopia; a five-year tax holiday for industry investors and an additional two-year tax holiday for foreign investors; a duty-drawback scheme for inputs and capital investments; and preferential access to land.[192] In addition, the government made substantial investments in the development of industrial zones throughout the country and greatly improved Ethiopia's physical infrastructure. In contrast to other regional producers, the Ethiopian industry has benefited in the past few years from road improvement projects, which eased transport to the port of Djibouti; low-cost, reliable electricity; and the lowest wage rate among the selected countries.

Regional Integration

Membership in SACU was an important factor that contributed to the competitiveness of the apparel industries in Botswana, Swaziland, and Lesotho. SACU members, which also include South Africa and Namibia, must adhere to several criteria important to attracting FDI, including harmonization of customs, exchange rates, taxation, and industrial policies.

Exchange rate stability in general facilitates international trade. Therefore, SACU membership and the attendant policies linking domestic currencies in Swaziland, Lesotho, and Botswana to the more stable South African rand benefit apparel exports from these countries. The Swazi lilangeni and the Lesotho loti are pegged at parity to the South African rand, while the Botswana pula is linked to a basket of currencies with a strong emphasis on the rand. The government of Botswana devalued the pula in April 2005, and one industry source suggests that this devaluation has encouraged industry investment from firms operating elsewhere in the region. In contrast, the Swazi Central Bank cited the high price

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[186] Ibid.

[187] Industry analyst, telephone interview by Commission staff, November 9, 2006.

[188] State Minister, Ethiopia Ministry of Trade and Industry, interview by Commission staff, Addis Ababa, Ethiopia December 13, 2006.

[189] In 2003, Ethiopia's industry exports totaled $9.3 million.

[190] Government and industry officials, interview by Commission staff, Addis Ababa, Ethiopia, December 14, 2006.

[191] Ibid.

[192] State Minister, Ethiopia Ministry of Trade and Industry, interview by Commission staff, Addis Ababa, Ethiopia December 13, 2006.

of the rand in 2005 as a causal factor in the lack of new FDI in Swaziland, particularly in the textile and apparel sector.[193]

Labor

The segment of the apparel production chain that takes place in SSA, the CMT (cut, make, and trim) process, is labor intensive. Accordingly, the abundant supply of inexpensive labor in SSA contributed to development of the apparel industry in the region. Monthly industry wages in the selected countries currently range from $30 in Ethiopia to $110-$120 in Lesotho.[194] By comparison, the range for monthly wages in South Africa is $160-$320, while monthly wages in China range from $45 to $125, though estimates vary widely.[195]

[193] Central Bank of Swaziland, "Recent Economic Development."

[194] Wage data compiled from interview by Commission staff (Kenya and Ethiopia), Institute for Policy Studies, (Swaziland), U.S. Department of State, U.S. Embassy, Antananarivo, Madagascar. Cable 161609Z. August 2006 and 080931Z (Madagascar), *ComMark Trust* (Lesotho), and *ComMark Trust,* "Botswana Textile and Apparel Sub Sector Study," 32 (Botswana). Wages are estimates and generally do not include additional benefits or non-monetary compensation. As such, wages are not fully comparable across countries.

[195] South African wage data from *ComMark Trust,* "Botswana Textile and Apparel Sub Sector Study," 32.

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Unwrought Aluminum

Summary of Findings

South Africa and Mozambique are the primary producers of unwrought aluminum among SSA countries, with two smelters operating in South Africa and a third smelter operating in Mozambique.[199] Together, South Africa and Mozambique accounted for 9 percent of global production in 2005, the overwhelming majority of which was exported to major aluminum-consuming markets in the EU and Japan. Exports from South Africa and Mozambique collectively increased at an average annual rate of 20 percent, from $930 million in 2001 to $1.9 billion in 2005 (table 3-6).

The primary drivers of increased exports of unwrought aluminum from South Africa and Mozambique have been strong global demand and prices, expansion of existing smelting capacity, and construction of new smelting capacity. Smelters in SSA countries are currently operating at full capacity in response to the strong global demand. Current plans call for additional production capacity to be added after 2010, depending on continued existence of sufficient electricity generation capacity at cost-competitive levels.

In general, unwrought aluminum production is shifting from traditional locations in North America and western Europe to regions that possess competitive supplies of electrical power, favorable logistics in terms of port locations that improve access to raw materials and markets for finished products, and adequate supplies of labor and low construction costs. South Africa and Mozambique possess the necessary combination of competitive power supplies and port access to accommodate competitive aluminum smelting operations. Given the dearth of usable raw materials (bauxite and alumina) in South Africa and Mozambique, these countries have engaged in production sharing arrangements whereby they import raw materials from outside the SSA region, add value by converting the materials into unwrought aluminum, and largely export the unwrought aluminum for further processing.

Industry Overview

The global aluminum industry is dominated by five large companies: Alcoa and Kaiser (United States), Alcan (Canada), Alusuisse (Switzerland), and BHP Billiton (Australia).[200] BHP Billiton, the world's fifth-largest aluminum producer, dominates the production of unwrought aluminum in South Africa and Mozambique. The majority of aluminum alloys produced by smelters in South Africa and Mozambique serve high-volume, commodity-type electrical, construction, and automotive markets. These smelters are technically capable of

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[199] Alcan and the government of Cameroon produce unwrought aluminum in a joint venture smelter at Alucam. Kassakovich, "From Canada to Cameroon, Alcan Keeping Options Open: Alucam Capacity May Tripile Under New Deal." Both parties have signed a letter of intent for the potential upgrade and expansion of the smelter and the construction of a new hydroelectric power station to supply the facility. Annual capacity of the smelter is currently 90,000 mt. The upgrade will increase capacity to 260,000 mt annually by 2010. Ghana's aluminum smelter closed in April 2003. In 2006, it was reported that Alcoa and the government of Ghana had reached an agreement to restart Ghana's aluminum smelter in Tema to produce limited quantities of unwrought aluminum.

[200] The industry is comprised of firms engaged in the extraction of raw bauxite, the refining of raw bauxite into alumina, production of primary aluminum from alumina, and the manufacture of semi-fabricated and finished aluminum products.

Table 3-6 Sub-Saharan Africa exports of unwrought aluminum, by selected exporters and key markets, 2001–05

Exporters	Key markets		Exports 2001	2002	2003	2004	2005	Percent change 2001–05
South Africa	Japan	*1,000 dollars*	152,910	241,089	291,779	358,049	298,509	95
		Metric tons	98,603	171,325	197,757	204,770	157,526	60
	United States	*1,000 dollars*	27,394	19,782	13,381	68,898	142,939	422
		Metric tons	19,268	14,984	9,346	39,814	74,425	286
	South Korea	*1,000 dollars*	211,289	171,843	115,220	100,010	115,374	-45
		Metric tons	133,513	123,488	77,902	56,581	59,539	-55
	All other	*1,000 dollars*	231,506	238,973	229,645	394,054	279,621	21
		Metric tons	180,541	168,685	151,690	225,052	143,843	-20
	Total	*1,000 dollars*	623,099	671,686	650,025	921,011	836,443	34
		Metric tons	431,925	478,482	436,695	526,217	435,333	1
Mozambique	EU	*1,000 dollars*	306,880	404,719	527,004	861,632	1,022,109	233
		Metric tons	209,981	292,616	357,903	501,095	528,775	152
	South Africa	*1,000 dollars*	0	1,762	0	0	0	n/a
		Metric tons	0	1,200	0	0	0	n/a
	Total	*1,000 dollars*	306,880	406,481	527,004	861,632	1,022,109	233
		Metric tons	209,981	293,816	357,903	501,095	528,775	152
Sub-Saharan Africa	Total	*1,000 dollars*	1,228,427	1,274,255	1,360,590	1,917,699	2,012,879	64
		Metric tons	824,506	902,660	911,351	1,101,885	1,043,806	27

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

producing highly specialized alloys for aerospace applications, but since demand for such applications is more limited, BHP Billiton reserves such production for its other smelters (box 3-5).[201]

Box 3-5 Product Description for Unwrought Aluminum

Aluminum originates in oxide form as alumina, which is refined from bauxite ore. Bauxite ore is generally mined in tropical and subtropical regions, including Africa, the West Indies, South America, and Australia. To form primary, or *unwrought* aluminum, alumina is electrolytically reduced to a metal form in primary smelting plants. Aluminum is often blended with other metals to form aluminum alloys possessing properties more desirable to specific end uses. Aluminum smelting is energy intensive; therefore, smelters tend to be located in areas that have access to abundant supplies of energy. In remote locations, electricity may be generated specifically for the aluminum smelter.

Unwrought aluminum is an intermediate product that is usually produced in the form of ingots or slabs. The only use for unwrought aluminum is to manufacture (via rolling mills) wrought aluminum shapes (plates, sheets, strips, foil, etc.) that are eventually used to form finished downstream aluminum products. Typical end-use market applications for wrought aluminum include: (1) transportation equipment (e.g., parts for motor vehicles and aircraft); (2) packaging (e.g., beverage cans); (3) construction (e.g., aluminum siding); and (4) electrical applications (e.g., electricity distribution cables).

[201] Dr. Tony Paterson, Aluminium Federation of South Africa, telephone interview by Commission staff, October 31, 2006.

South Africa is the largest producer of unwrought aluminum in Africa, producing 830,000 metric tons (mt), representing 56 percent of the continent's production in 2005, and is ranked as the world's eighth-largest aluminum producer.[202] However, South Africa exports only slightly more than one-half of its production. BHP Billiton holds majority ownership of South Africa's only two aluminum smelters, Hillside Aluminum and Bayside Aluminum, both located in Richards Bay on the country's east coast.[203] Bayside primarily serves the domestic South African market while Hillside's production is predominantly exported. South Africa has no economically exploitable deposits of bauxite and no alumina production facilities. All alumina feedstock used in primary aluminum production is imported, principally from Australia.[204]

Mozambique has only recently become a major global producer of aluminum since construction of the Mozal smelter near Maputo in 1999.[205] BHP Billiton owns 47.1 percent of the plant, but holds the marketing rights to 75 percent of the smelter's total output.[206] Mozambique produced an estimated 555,000 mt in 2005, making it the second- largest producer in Africa, with almost 37 percent of the African continent's total production.[207] Mozambique ranked as the world's tenth-largest aluminum producing country in 2005. However, Mozambique is SSA's largest aluminum exports with virtually all of its aluminum production exported. Like South Africa, Mozambique is dependent on imports for supplies of raw materials.

Sub-Saharan Africa Trade in the Global Context

Global production of unwrought aluminum totaled 31.2 million mt in 2005.[208] China, with 7.2 million mt of production, and Russia, with 3.7 million mt of production, were the largest global producers in 2005, followed by Canada and the United States, producing 2.8 million mt and 2.5 million mt, respectively.[209] The top four producers represented nearly 52 percent of the global total.

Leading Exporters

From 2001 through 2005, global export volume of unwrought aluminum increased by 32 percent to 16.1 million mt. By comparison, SSA export volumes increased by 27 percent to 1,043,806 mt during the same period. Among the leading producers, Russia was also the world's leading exporter of unwrought aluminum in 2005, accounting for 26 percent of the global total (figure 3-9). Australia and China each accounted for 12 percent while Canada accounted for 10 percent of global exports. Among SSA countries, Mozambique and South Africa ranked fifth and sixth among all global exporters of unwrought aluminum, by volume. Mozambique and South Africa combined to account for 93 percent of SSA exports of unwrought aluminum in 2005 (figure 3-9).

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[202] Plunkert, *Mineral Commodity Summaries*, 23.

[203] The Department: Trade and Industry South Africa (DTI), *South Africa Metals Sector Development Strategy 2006* (Draft), 32.

[204] Ibid., 31.

[205] The Mozal smelter is Mozambique's largest foreign investment project to date (*2006 CIA World Factbook, http://www.theodora.com/wfbcurrent/ mozambique/ mozambique_economy.html*).

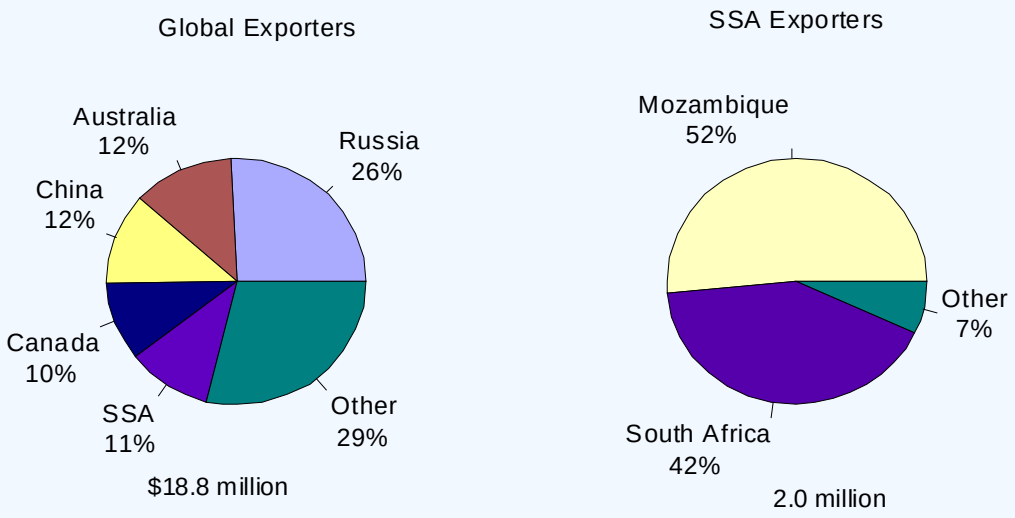
[206] BHP Billiton Website, "Mozal."

[207] Plunkert, *Mineral Commodity Summaries, 2006*, 23.

[208] Ibid.

[209] Ibid.

Figure 3-9 Leading global and sub-Saharan Africa exporters of unwrought aluminum, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

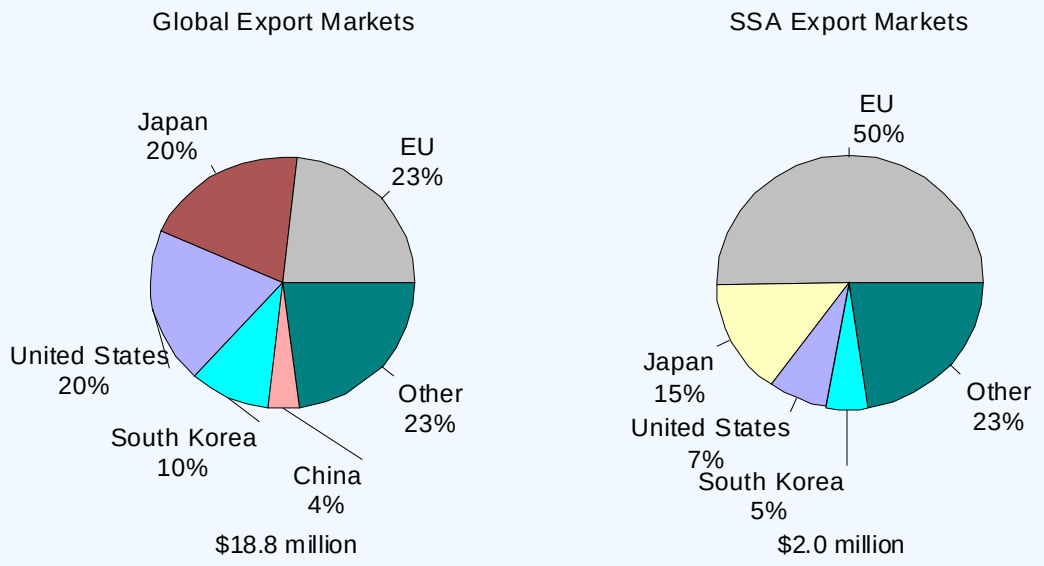
Leading Export Markets

The EU was the largest market for global exports of unwrought aluminum in 2005, followed by Japan and the United States (figure 3-10). These three markets were also the leading destinations for SSA exports. All of Mozambique's 2005 exports of unwrought aluminum were destined for the EU, largely due to Mozambique's exemption from EU aluminum import duties under the EU-ACP Cotonou Agreement.[210] Japan was the principal export destination for South African exports in 2005, accounting for 36 percent of South African exports. The United States was the second-leading destination for exports from South Africa, accounting for 17 percent of total exports from South Africa. Imports of unwrought aluminum enter both Japan and the United States free of duty. The following tabulation identifies the principal competitors in SSA's leading export markets.

Market	SSA competitors
United States	U.S. domestic production, Russia, and Canada
EU	EU domestic production, Russia, and China
Japan	Russia, China, and New Zealand

[210] *American Metal Market,* "Billiton's Mozal II smelter produces ingot early."

Figure 3-10 Leading markets for global and sub-Saharan Africa exports of unwrought aluminum, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Factors Affecting Trade Patterns

The growth of SSA exports of unwrought aluminum was largely driven by investments in production capacity and growth in global demand. The investment in SSA aluminum operations is part of a larger process wherein the production of unwrought aluminum is undergoing a geographical shift from traditional locations in North America and western Europe to regions such as the Middle East, Russia, Australia, and Africa. Reasons behind the shift include the need for competitive supplies of power and favorable logistics—both in terms of access to raw materials and access to key end-use markets—as well adequate supplies of labor and low construction costs. South Africa and Mozambique, as described in detail below, possess sufficient supplies of electricity and the port facilities necessary to support expansion of the aluminum smelting industry.

Demand Growth and Price Increases

In general, growth in unwrought aluminum exports from SSA has been affected by increased global demand and prices for aluminum in industrial applications, such as transportation and building construction. Global consumption of refined aluminum has grown by 17.7 percent, from 25.4 million mt in 2002 to 29.9 million mt in 2005. At the same time, the average price of aluminum traded on the London Metal Exchange increased by 112.1 percent from $1,349 per mt in 2002 to $2,861 per mt in May 2006.[211]

[211] World Bureau of Metal Statistics, *World Metal Statistics*, June 2006, 9 and 148.

Global demand is expected to continue to grow in the future. Future increases in consumption of aluminum will be driven primarily by China, India, Russia, and Brazil.[212] Asia is expected to account for 60 percent of future demand growth and, by 2020, is expected to consume as much aluminum as the entire world presently consumes.[213]

Increased Investment

Nearly 30 years ago, BHP Billiton, with access to large bauxite deposits in its native Australia, invested in aluminum smelting capacity in South Africa to gain access to its low-cost electricity. Since then, BHP Billiton has substantially augmented its SSA smelting capacity with increased investment in South Africa and Mozambique. Capacity expansions have had a significant effect on SSA exports, as roughly one-half of South Africa's production and nearly all of Mozambique's production is destined for export.

BHP Billiton entered the South African industry in 1971. At that time, South African production totaled 22,000 mt. By 2001, BHP Billiton had increased its total South African production to 662,000 mt. An expansion of the Hillside plant's primary aluminum capacity, completed in 2003, increased annual production capacity at that facility alone to 670,000 mt, equivalent to more than two-thirds of 2005 exports. As a result, South Africa's total production capacity increased to 851,000 mt in 2005.[214]

South Africa's position as a major global producer and exporter of aluminum will be further solidified if an anticipated investment by Alcan Aluminum, the world's second-largest aluminum producer, is completed. Alcan and the South African Industrial Development Corporation are considering the construction of a new smelter at Coega, in the Eastern Cape. Production of aluminum from the planned smelter would almost entirely be exported to major global markets in Japan and Europe. Alcan is seeking to assume 30 percent ownership of the joint venture project. If construction of the new smelter occurs, it is expected that aluminum ingots will be produced starting in 2008.[215] The decision to construct the smelter partly will depend on the ability of Alcan to secure a low-cost power source for the project.[216] Alcan is currently in negotiations with state-owned electricity supplier Eskom Holdings Ltd. of South Africa to secure electricity for the project.[217] Alcan has already secured a 2.2 billion rand ($370 million) tax credit from the South African government for this planned smelter.[218]

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[212] Alcoa Corporation, *Annual Report, 2005*, 1.

[213] While per capita levels of consumption in India and China are relatively low (approximately 1.1 and 4.4 pounds, respectively), it is projected that demand in these nations will increase with increasing industrialization and as sectors such as electronics and motor vehicles become increasingly important. DTI, *South Africa Metals Sector Development Strategy 2006* (Draft), 30.

[214] Of aluminum sold to the domestic industry, it is estimated that about 60–70 percent is exported after only a limited value-added component. Principal aluminum users in South Africa are the automotive and packaging industries, followed by light engineering, electrical cable, and heavy transport. In the past 10 years, the automotive industry's demand for aluminum, mainly in the form of castings, has increased more than threefold to an average of more than 240 pounds per car. DTI, *South Africa Metals Sector Development Strategy 2006* (Draft), 32 and 34; and Plunkert, *Mineral Commodity Yearbook, Aluminum, 2006*, 5–18.

[215] Expected capacity of the new smelter is 660,000 mt per year. Alcan expects to assume 30 percent ownership of the joint venture project, with the remainder to be owned by the South African government and its Industrial Development Corporation. Alcan is expected to spend $800 million on the project.

[216] Piasecka, "Alcan Close to Power Deal for S. Africa Smelter Project."

[217] Piasecka, "Alcan Signs 25-year Power Contract With Eskom for Goega Smelter."

[218] Swindells, "Alcan must reapply for tax credit for Coega aluminum smelter plan."

Production of primary unwrought aluminum in Mozambique more than doubled from 270,000 mt in 2001 to an estimated 555,000 mt in 2005.[219] In 2003, BHP Billiton launched an $860 million capital expansion program to increase annual capacity at its Mozal operations by 253,000 mt, resulting in a rated production capacity of 540,000 mt annually. The decision to expand operations was driven by a favorable outlook for aluminum prices globally and the favorable economic environment under which the smelter was operating in Mozambique, including access to raw materials through its parent company and access to necessary port facilities in Maputo. In 2005, BHP Billiton announced plans to further expand its Mozal smelter to an annual capacity of 750,000 mt. The company is expected to proceed with the most recent expansion project once it secures additional energy supplies. The additional capacity should become operational within two to three years.[220]

Infrastructure Improvement

Port facilities that can handle large volumes of bulk imports of alumina as well as large volumes of unwrought aluminum ingots for export were an important factor in selecting locations for investment in aluminum smelting operations in South Africa and Mozambique. Although SSA does possess some bauxite deposits, those located in South Africa and Mozambique are of low quality and are not commercially viable. As a result, aluminum smelters located in SSA must import the primary input into the smelting process, alumina, from other sources. Furthermore, the large majority of unwrought aluminum produced in SSA is exported rather than consumed locally.

Richards Bay is South Africa's leading bulk port and also its most modern. The port was built in 1976 for the export of coal and during the 1990s expanded into the handling of other bulk cargoes. The port has facilities dedicated to the importing of alumina and the exporting of unwrought aluminum.

The port in Mozambique through which alumina and unwrought aluminum transit is in Maputo, strategically close to the BHP Billiton smelter. The port of Maputo is the largest in Mozambique and is situated close to South Africa and to large developing markets in Asia. In 2003, the Maputo Port Development Company launched a development plan for the facility in order to create a modern international trading port. Key improvements include restoring the approach channels to sufficient depth, initiating continuous 24/7 port operations, tightening security, rebuilding internal roads to carry heavy road traffic and railway capacity, and installing new handling equipment at the port.[221] One of the two main components of the port includes the Matola Bulk Terminals with four deepwater berths for handling bulk minerals, petroleum, aluminum, and grain.

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[219] Plunkert, *Mineral Commodity Summaries, 2006*, 23.
[220] Pawlek, "The Primary Aluminum Industry at the Turn of the Year 2005–2006."
[221] *Ports and Ships*,"Port Maputo."

Natural Resources

Aluminum smelting is an energy-intensive industry, with the cost of electricity accounting for nearly 30 percent of production costs. Therefore, investment in new plants and capacity expansion at existing facilities depends on a continued supply of low-cost electricity. South Africa possesses extensive coal supplies that are utilized for low-cost electricity generation. Mozambique produces an excess supply of hydroelectric power, which is linked to the Southern Africa power grid, complementing South Africa's coal-generated electrical capacity.

South Africa's principal competitive advantage in terms of unwrought aluminum production is its plentiful supply of low-cost electrical energy, more than 90 percent of which is generated from coal. When South Africa's current aluminum smelters were built during the 1990s, electricity in South Africa, in terms of cost per kilowatt hour (kwh), was the lowest or second-lowest in the world.[222] Electrical generation capacity in South Africa was overbuilt during the 1980s when actual economic growth was much lower than projected, resulting in surplus electrical generating capacity in the country and lower prices for large industrial consumers.[223] Economic growth in South Africa has since absorbed much of the overcapacity in electricity production. Prices have risen, and thus reduced some of the price advantage enjoyed by large industrial consumers. Nonetheless, aluminum smelters are given a price advantage by the state-owned South African electrical utility, Eskom, due to the large volumes consumed and the consistency of demand since the smelters operate 24 hours a day.[224]

Mozambique is a significant exporter of electricity based on output from the Cahora Bassa Dam and other hydroelectric facilities, which account for almost 96 percent of Mozambique's electric power production.[225] Mozambique produced 15.0 billion kwh of electricity while consuming 10.5 billion kwh in 2003.[226] The Cahora Bassa hydroelectric project is among the largest suppliers to the Southern Africa Power Pool. In late 2005, Eskom of South Africa was purchasing approximately 60 percent of the production from the Cahora Bassa project.

Although both South Africa and Mozambique are lacking in key raw materials used in the production of unwrought aluminum, their geographic location on the Indian Ocean and their excellent port facilities permit these smelters to benefit from low-cost alumina exported from BHP Billiton-owned alumina refineries in western Australia and Brazil. The rise in global raw material prices for bauxite and alumina since 2003 has favored the use by BHP Billiton's aluminum facilities in SSA of alumina sourced from their company-owned,

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[222] Dr. Tony Paterson, Aluminium Federation of South Africa, telephone interview by Commission staff, October 19, 2006.

[223] U.S. Department of Energy, "An Energy Summary of South Africa."

[224] Dr. Tony Paterson, Aluminium Federation of South Africa, telephone interview by Commission staff, October 19, 2006. Under these agreements, Eskom and the government of South Africa have traded excess electricity capacity to attract significant foreign investments, most notably in aluminum. In the case of aluminum, 30-year contracts linked to the price of aluminum metal were agreed upon for the initial investments. Base rates were established at a certain point in time and varied monthly with the London Metal Exchange price for aluminum and the exchange rate between the U.S. dollar and the South African rand. Recently, the government of South Africa has prohibited Eskom from entering into new contracts linked to aluminum prices while, at the same time, South Africa's electricity surplus has dwindled. U.S. Embassy, Johannesburg, official e-mail message to Commission staff, December 11, 2006.

[225] *Encyclopedia of the Nations*, "Mozambique: Energy and Power."

[226] CIA, "Mozambique."

offshore refineries. The only nation in SSA with known indigenous bauxite reserves is Guinea. Although Guinea was the third-leading producer of bauxite in the world in 2004 after Australia and Brazil and also a leading global producer of alumina, both South Africa and Mozambique import alumina principally from BHP Billiton's plants in Australia and Brazil. Large-scale commercial production of petroleum coke and petroleum pitch also does not exist in SSA countries, so BHP Billiton sources its coke and pitch from the Gulf region of the United States.

Both South Africa and Mozambique possess reserves of bauxite, but the quality of these reserves is not high enough (less than 50 percent alumina content) to be commercially viable.[227] Almost all the alumina used by the aluminum smelters in South Africa and Mozambique is supplied by Australia and Brazil, which supply almost one-half of the world's commercial bauxite and meet nearly 35 percent of the global aluminum market's need for alumina.[228] All imported alumina enters South Africa duty free and passes through the ports of Richards Bay and Maputo.

Regional Integration

Due to its location in far southwestern Mozambique, the Mozal aluminum smelter does not have a direct connection to the Cahora Bassa Dam project, but is instead supplied from the Southern Africa Power Pool by Eskom.[229] At the time of the smelter's construction, its most reliable source of electricity in the region was located in South Africa. Eskom, however, did not have transmission or supply jurisdiction in Mozambique. In response, the Mozambique Transmission Company SARL (Motraco) was formed in 1998 to supply reliable electricity to the Mozal aluminum smelter. Motraco is a private joint-venture company formed by Eskom, Electricidade de Mozambique, and Swaziland Electricity Board. It owns transmission lines connecting the electrical grids in South Africa, Mozambique, and Swaziland.

[227] Dr. Tony Paterson, Aluminium Federation of South Africa, telephone interview by Commission staff, October 31, 2006.

[228] Plunkert, *Minerals Yearbook, Bauxite and Alumina, 2004*, tables 11 and 12.

[229] Eskom, "Mozambique Reclaims Cahora Bassa."

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Wood Veneer

Summary of Findings

SSA accounts for a significant portion of the global veneer supply. From 2001 through 2005, the value of SSA wood veneer exports increased steadily at an average annual rate of 12.6 percent (table 3-7), which was noticeably faster than the annual rate of increase in the value of global exports (8.7 percent). As a result, SSA exports as a share of global wood veneer exports rose from 8.1 percent to 10.3 percent. By far, the EU remains the largest market for SSA veneer exports. Industry sources report that the internal SSA market is strong and believe that actual export values are somewhat higher than reflected by official exports statistics. In contrast to export values, SSA production declined during the period, and export quantities did not show a pattern of steady increase (table 3-7).

The increase in value of SSA exports of veneer was generally due to higher prices and, in certain countries, a shift toward producing higher-value sliced veneer. Rising ocean freight rates were also a factor.[250] In addition, a number of other factors (e.g., increasing demand for certified wood products, disruption of mahogany supplies, increasing demand from emerging markets, and increased use of lesser-known species) also influenced the market for African veneer. Without exception, SSA countries producing veneer are pursuing policies, such as log export bans, designed to encourage the further processing of forest resources to capture more value from those resources. Foreign government policies affecting international trade in veneer are not believed to have had a major impact on the SSA veneer trade. Large consuming countries typically have zero or low tariffs on wood veneer.

Industry Overview

Geography and climate influence the type of veneer manufactured and exported by SSA producers.[251] In 2005, hardwood veneer accounted for over 95 percent of the value of SSA veneer exports because most of the indigenous tree species are hardwood (box 3-6). Some SSA countries are well endowed with species considered to be particularly suitable for high-value end uses.[252] As these valuable indigenous species generally do not grow in other parts of the world, SSA countries enjoy a sustainable competitive advantage with respect to the wood products made from them. SSA veneer production and exports are highly concentrated in countries along the west coast of central Africa or within the Congo Basin that are well endowed with forest resources (e.g., Gabon, Côte d'Ivoire, Ghana, Cameroon, and Equatorial Guinea). However, the sources are changing, as readily accessible coastal areas become depleted.

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[250] Because actual SSA export statistics are not generally available, the country-specific data used in this analysis are market countries' reported imports from SSA, the value of which includes ocean freight. Marine transportation rates have risen steadily due to increasing energy costs, and a U.S. industry official reported that outbound marine freight rates for SSA veneer exports increased at an average annual rate of 10.7 percent from 2001 through 2005. Ocean freight accounts for approximately one-half of the cost of veneer delivered to the southeastern United States. Industry official, e-mail message to Commission staff, October 23, 2006.

[251] In general, softwood tree species typically predominate in natural forests at higher latitudes of the world, whereas hardwood tree species predominate in natural forests at lower latitudes.

[252] So-called "valuable" hardwood species are those whose technical properties (e.g., strength, natural durability, machining properties) and appearance (e.g., grain, figure, texture, color) make them suited for high-value end uses. FAO. *Promotion of Valuable Hardwood Plantations in the Tropics*, 4.

Table 3-7 Sub-Saharan Africa exports of wood veneer, by selected exporters and key markets, 2001–05

Exporters	Key markets		Exports[a] 2001	2002	2003	2004	2005	Percent change 2001–05
Gabon	**EU**	*Million dollars*	28.7	43.7	61.0	79.0	79.7	178
	Morocco		0	4.2	6.1	6.1	8.5	n/a
	United States		5.0	4.9	4.8	6.1	4.6	-8
	All other		4.7	4.3	7.2	6.8	4.7	0
	Total		38.4	57.1	79.1	98.0	97.5	154
		1,000 m³	255.6	263.5	281.8	309.5	256.7	0
Côte d'Ivoire	**EU**	*Million dollars*	55.0	47.5	53.2	58.3	67.1	22
	United States		2.4	3.5	3.5	4.4	6.5	171
	Romania		0.0	1.3	1.7	3.5	4.0	n/a
	All other		8.1	7.8	9.2	8.4	2.4	-70
	Total		65.5	60.2	67.6	74.7	79.9	22
		1,000 m³	189.0	113.4	117.3	121.0	155.6	-18
Ghana	**EU**	*Million dollars*	39.0	38.2	44.0	41.6	42.9	10
	United States		15.7	17.7	14.2	16.5	17.3	10
	Canada		2.3	3.1	3.3	4.6	3.6	57
	All other		5.6	6.2	9.8	13.3	8.4	50
	Total		62.7	65.2	71.4	76.1	72.2	15
		1,000 m³	234.3	179.0	342.5	457.5	184.7	-21
Cameroon	**EU**	*Million dollars*	20.9	25.0	34.1	38.6	49.2	135
	United States		1.2	1.3	0.9	0.8	1.1	-8
	China		0.05	0.9	0.6	0.4	0.9	1,700
	All other		3.2	2.8	4.3	3.5	2.1	-34
	Total		25.4	30.0	39.9	43.2	53.3	110
		1,000 m³	62.0	169.2	277.9	60.0	66.0	6
Equatorial Guinea	**EU**	*Million dollars*	8.1	9.3	10.7	19.2	20.5	153
	China		0	0.6	0.3	0.5	0.8	n/a
	United States		0.02	0	0.5	0.2	0.2	900
	All other		0.1	0.05	0	0	0	-100
	Total		8.3	10.0	11.5	19.9	21.5	159
		1,000 m³	23.7	N/A	25.5	36.3	38.4	62
Sub-Saharan Africa	**EU**	*Million dollars*	165.5	172.4	224.6	259.4	284.6	72
	United States		25.8	31.3	29.1	29.4	33.3	29
	Morocco		0	4.3	6.4	6.2	8.6	n/a
	All other		29.9	34.2	42.3	44.8	29.3	-2
	Total		221.1	242.2	302.4	339.9	355.8	61
		1,000 m³	905.3	789.3	1,281.1	1,032.1	910.5	1

Source: GTIS, *Global Trade Atlas*, annual data compiled from reporting countries' official statistics, including EU external trade.

[1] Wood veneer is traded in different units of measure, and importing countries report quantities of veneer imports in one or more units of measure (e.g., square meters, cubic meters, metric tons, kilograms), which gives rise to various reporting errors. Incorrect data were eliminated or if possible, corrected. Errors were evident in the following: Indonesian imports from Gabon and South Africa reported in cubic meters; Brazilian imports from Cameroon reported in cubic meters; Spanish imports from Côte d'Ivoire, Cameroon, Liberia, South Africa (2002), and Equatorial Guinea (2002); and Greek imports from Cameroon.

Box 3-6 Product Description for Wood Veneer

Wood veneer is a thin sheet of wood that is the principal raw material of plywood, and as a result, its demand is driven primarily by the demand for plywood. Veneer may be manufactured from either hardwood (broad-leafed) or softwood (coniferous) logs, but the typical end uses for softwood and hardwood plywood are quite different. Unlike softwood plywood, which is used for structural end uses, such as residential or commercial construction, hardwood plywood is generally used for relatively high value nonstructural purposes such as furniture, flooring, cabinets, and paneling. Its appearance is often a defining feature.

The production process starts with veneer or peeler logs and proceeds using one of two basic methods— rotary or sliced. The rotary method is typically used to produce low-cost softwood veneer and some low-end hardwood veneer. To make rotary veneer, a log is spun in a lathe as a long (parallel) knife is held against it. Continuous veneer is peeled in a fashion analogous to unrolling paper towels. Sliced veneer, which is used as face veneer in high-value applications, is inherently more valuable than rotary veneer because it is more costly to manufacture and because of the relative scarcity of the high quality trees necessary to make appearance grade veneer. For sliced veneer, logs are sawn into half logs or quarter logs to create a flat surface, across which a knife is drawn. With respect to veneer produced in SSA, the value of sliced veneer may be 3.5 to 4.0 times that of rotary veneer.[1] Once the veneer is peeled or sliced, it is kiln-dried and graded.

[1] Ghana Forestry Commission, TIDD, *Reports on Export of Wood Products*: December 2001 to 2005.

Sub-Saharan Africa Trade in the Global Context

Despite these natural advantages, total SSA veneer production reportedly declined from 924,000 cubic meters in 2001 to 893,000 cubic meters in 2005.[253] SSA veneer production also dropped relative to global production, decreasing from 11.0 percent (by quantity) in 2001 to 9.3 percent of global production in 2005.[254] Table 3-8 shows the number of veneer mills and reported production in some of the large veneer-producing countries. In most cases, the number and size of the veneer mills is small relative to the size of the forest resources. The SSA wood products processing industry is characterized by obsolete, often ill-maintained equipment.[255] As financing is generally unavailable locally for small- to medium-sized secondary timber-processing enterprises, EU expatriate firms account for much of the total production in SSA countries.[256] Those producers in SSA countries with very little further processing capability are highly dependent on veneer export markets.[257]

[253] Due to difference in both reporting countries and unit of measure conversion factors FAO production data are not directly comparable with GTA trade data shown in table 3-1. FAOStat, September 19, 2006.

[254] Ibid.

[255] African Timber Organization (ATO), *Promoting the Further Processing of Tropical Timber in Africa*, 8.

[256] ATO, *Promoting the Further Processing of Tropical Timber in Africa*, 8, and Oliver and Fripp, TTF, "Producer Country Draft – Congo Brazzaville."

[257] Comparison of quantity data for veneer production and export is complicated by the different units of measure used to report veneer exports. However, it is apparent that a very large portion of veneer production in SSA countries is exported.

Table 3-8 Number of veneer mills and veneer production volume in selected SSA countries

Country	Mills[a]	Production[b]
		Cubic meters
Gabon	8	120,300
Côte d'Ivoire	19	274,000
Ghana	8	300,000
Cameroon	1	47,300
Republic of the Congo	n/a	32,000
Democratic Republic of the Congo	6	1,000

Sources: ATO, *Promoting the Further Processing of Tropical Timber in Africa,* 43, Anzele, *Côte d'Ivoire Solid Wood Products Annual 2004*, Gain report no. IV4013, 12; and FAOSTAT, September 19, 2006.

[a]The estimated number of mills is for 2002, except Côte d'Ivoire, which is 2003.
[b]2005 FAOStat veneer production figures. Data for Equatorial Guinea are not available.

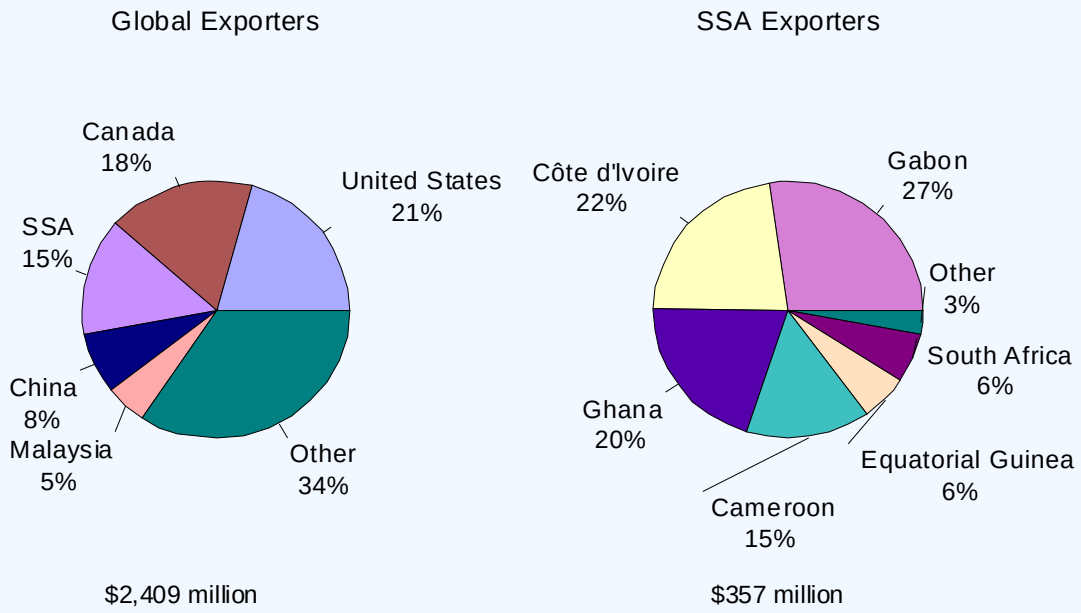
Leading Exporters

In 2005, the United States, Canada, and China were the top three global exporters of wood veneer and collectively accounted for 47 percent of the value of the reported $2.4 billion in veneer exports (figure 3-11). These three countries also are among the leading producers of veneer.[258] The United States and Canada both have substantial forest resources. China does not, but fueled by imported logs, its veneer industry nevertheless expanded at an average annual rate of 24 percent during 2001–5 to become the largest global producer of wood veneer.[259] Three SSA countries—Gabon, Côte d'Ivoire, and Ghana—are among the top ten exporters. Collectively, SSA countries accounted for nearly 15 percent of global exports of wood veneer in 2005 (figure 3-11).

From 2001 through 2005, five countries—Gabon, Côte d'Ivoire, Ghana, Cameroon, and Equatorial Guinea—accounted for more than 90 percent of the value of SSA veneer exports.[260] The value of SSA exports exhibited strong growth during the period, rising by 61 percent to $356 million (as compared to the 34 percent growth in global exports). However, the quantity data do not show a similar pattern of increase as the value data.[261] The quantity of SSA of exports increased from 905,000 cubic meters in 2001 to 1.3 million cubic meters in 2003 and then fell to 910,000 cubic meters in 2005 (table 3-7).

[258] FAOStat, September 19, 2006.
[259] Ibid.
[260] Despite their location and large forest resources, veneer production and exports by the Democratic Republic of Congo, the Republic of Congo, and the Central African Republic have been inhibited by a variety of factors.
[261] Analysis of export quantity trends is complicated by the fact that veneer exports are reported in several units of measure (e.g., kilograms or mt, square meters, cubic meters).

Figure 3-11 Leading global and sub-Saharan Africa exporters of wood veneer, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

Leading Export Markets

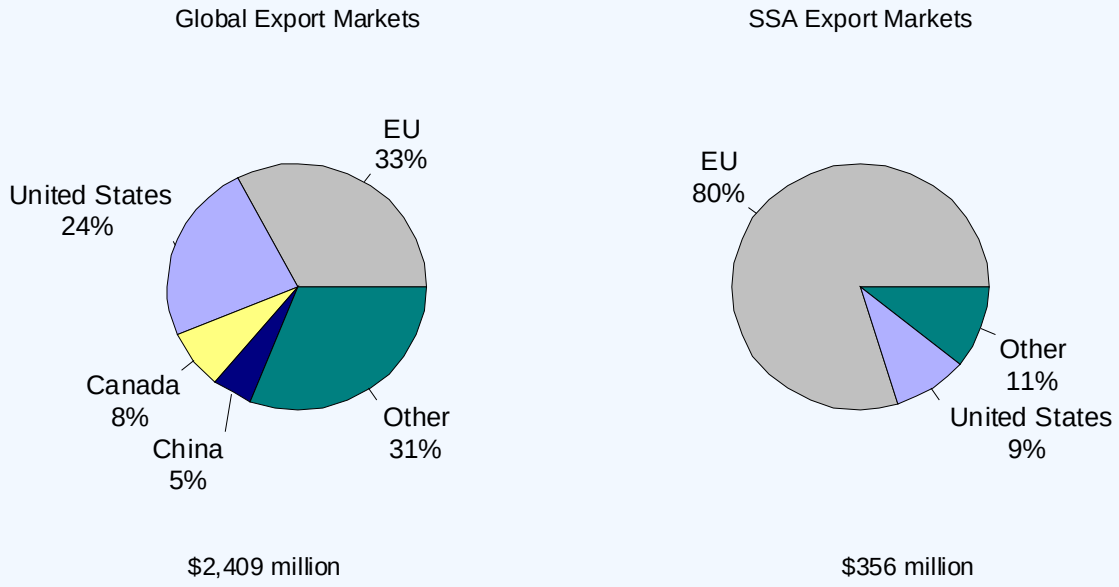
In 2005, 85 percent of the $2.4 billion in global veneer imports were of hardwood veneer.[262] As appearance is the primary defining feature of hardwood veneer, the species of wood used is an important consideration. Relatively few species are commercially important, and demand for appealing species drives global trade in hardwood veneer. Europe, North America, and Asia consume significant quantities of wood veneer (figure 3-12). Veneer quality specifications reportedly vary among regional markets, with Europe and Japan demanding tight growth rings and/or consistent texture while North America and Asia accept more marks and more figure.[263]

The EU remains by far the largest market for SSA veneer exports, accounting for 80 percent of such exports in 2005 (figure 3-12). SSA countries have had strong ties with European countries, and European wood products firms have developed close business relationships

[262] The ratio of hardwood veneer imports to total imports remained about the same during the 2001–05 period. Global trade in softwood veneer is limited because softwood plywood is used for lower-value end uses and its markets are confined to countries where wood frame construction predominates (e.g., the United States and Canada). *Global Trade Atlas.*

[263] Wiedenbeck, et al. *Defining Hardwood Veneer Log Quality Attributes*, 5.

Figure 3-12 Leading markets for global and sub-Saharan Africa exports of wood veneer, 2005



Source: GTIS, *Global Trade Atlas,* annual data compiled from reporting countries' official statistics, including EU external trade.

with African veneer producers.[264] Although ranked second behind the EU, the United States is a relatively small market for SSA veneer. Industry sources report that American consumers are coming to appreciate African species, but traditionally they have preferred indigenous or South American species.[265] Increased Asian demand for veneer is being driven principally by Asia's expanding furniture industry.[266] Currently, SSA exports of wood to China are mainly in the form of logs to feed Chinese veneer production, but veneer exports are trending upward.[267] Most of the leading consuming markets have low or zero tariffs on imports of wood veneer. The following tabulation identifies the principal competitors in the leading markets for SSA veneer exports.

[264] Industry official, telephone interview with Commission staff, October 12, 2006.
[265] Industry officials, telephone interviews with Commission staff, October 10 and 12, 2006.
[266] Industry official, telephone interview with Commission staff, October 10, 2006.
[267] Hervé Bourguignon (Secretariat General, *Interafrican Forest Industries Association* (IFIA)) e-mail message to Commission staff, October 30, 2006.

Market	Principal SSA competitors
EU	United States, Romania, Croatia, Switzerland, Domestic producers
United States	Canada, Brazil, EU, China, Domestic producers
China	United States, Malaysia, Taiwan, EU

Reported SSA exports do not include intra-SSA exports other than those reported by South Africa. However, industry sources report that the internal market for veneer in SSA is strong and believe that actual intra-SSA exports are somewhat higher than reported because informal intra-SSA exports go unrecorded.[268] For example, Ghana's wood products producers are exploring new markets in the Economic Community of West Africa States. Also, Nigeria, which has overland access to Ghana through Benin and Togo, is reportedly a large consumer of wood products from Ghana.[269]

Factors Affecting Trade Patterns[270]

Various factors influenced SSA veneer exports from 2001 through 2005. SSA exports generally benefitted from solid demand from both traditional European customers and new customers in Asia and North America. Veneer demand was also influenced by purchasers' developing preference for certified wood products from sustainable sources. SSA's indigenous species are well suited for veneer and, at least in Ghana, export values benefitted from a shift in product mix toward higher-value sliced veneer. Export quantities, however, were somewhat limited by various factors, such as raw material constraints and civil unrest. In general, SSA veneer-producing countries pursue policies designed to encourage local processing of forest resources and have worked with industry to encourage development of sustainable sources of forest resources.

Recent trends in exchange rates have somewhat undermined the competitive position of African veneer in international markets because SSA exports are priced in euros while South American exports are priced in U.S. dollars.[271] Specifically, the recent strengthening of the euro has made Brazilian veneer increasingly competitive in Europe relative to African woods. This change has made SSA core-stock veneer less competitive in the United States.[272]

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[268] Hervé Bourguignon (Secretariat General, IFIA), e-mail message to Commission staff, October 30, 2006.

[269] As Nigerian purchasers generally pay cash, prices are discounted, but they are not strict with respect to veneer quality. Industry official, telephone interview with Commission staff, September 28, 2006, and ITTO, Tropical Timber Report, September 1–15, 2005, 5.

[270] Indigenous species of African woods may have many common names depending on country of origin. In this report, the Harmonized Schedule pilot name, if available, will be used as a common reference to particular species. If no pilot name exists, the lead name as shown in *Tropical Timbers of the World* will be used. The first reference to a species will be followed by its scientific name.

[271] Oliver, Fripp, and Roby, "Wood Products Trade – Africa & Europe."

[272] Pedersen, "Market Report Draft – Spain," and International Wood Products Association, written submission.

Demand Growth and Price Increases

Within the wood products industry, different woods are informally categorized as red woods or white woods based on their general color. Market prices for either are influenced by global supply and demand. In 2002, a disruption in the supply of an important South American red wood, mahogany (*Swietenia spp.*), benefitted certain SSA suppliers as it led to panic buying in the United States of African red woods such as Acajou d'Afrique (*Khaya spp.*), Sapelli, (*Entandrophragma cylindricum*), and Sipo (*Entandrophragma utile*) by some traditional users of mahogany.[273] This development, in combination with the existing demand from European countries, caused a scarcity of Acajou d'Afrique and upward pressure on the price of sliced veneer.[274] Although some producers of mahogany (e.g., Peru, Bolivia, and Central American countries) resumed mahogany shipments by 2004 and restored some balance to veneer markets, Acajou d'Afrique has now been established as a substitute for mahogany in the U.S. market.[275]

From 2001 through 2005, SSA benefitted from a general increase in Asian wood products demand, which resulted in a rise in trade for such items between Africa and Asia, particularly okoumé (*Aucoumea klaineana*) from Gabon, the Democratic Republic of the Congo, and Equatorial Guinea.[276] Although China buys more logs than veneer, SSA exports of veneer to China are also increasing.[277] Industry sources attribute the increased Asian demand to that region's expanding furniture industry.[278] Other new markets for SSA veneer include the Russian Federation and East European countries.[279]

In general, global markets for wood products in recent years have increasingly demanded wood products that are certified to be from legal and sustainable sources. Although the extent of illegal logging in SSA countries is uncertain, the preference of veneer buyers has nevertheless shifted toward veneer from certified sources.[280] In general, veneer from certified sources is more expensive than veneer from uncertified sources. An industry source has speculated that the push by purchasers to buy certified veneer may have already had a price impact.[281]

Although reliable price data are not generally available for all SSA countries, the available data suggest that veneer prices increased at an average annual rate of approximately

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[273] In 2002, reacting to reports that mahogany (*Swietenia macrophylla*) was being illegally and/or unsustainably logged in Brazil, the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed mahogany in appendix II instead of the previous listing in CITES appendix III. Of the three appendices to CITES, appendix I affords the most protection and appendix III the least. Commercial trade for appendix II species requires a CITES permit. The change interrupted the heretofore large flow of Brazilian exports of mahogany veneer to the United States. Brazilian mahogany veneer reportedly remains unavailable. Industry official, e-mail message to Commission staff, September 27, 2006; CITES, "CITES Trade Controls to Take Effect for Mahogany"; Caldwell, "Bigleaf Mahogany Market Still Shrinking"; and International Wood Products Association, written statement.

[274] Industry official, e-mail message to Commission staff, September 27, 2006; and Ghana Forestry Commission, TIDD, *Reports on Export of Wood Products: December 2001 to 2005*.

[275] Industry official, e-mail message to Commission staff, September 27, 2006; and industry official, telephone interview with Commission staff, October 10, 2006.

[276] Oliver, Fripp, and Roby, "Wood Products Trade – Africa & Europe."

[277] Tariff rates, which are less for logs to China and India than for veneer, tend to encourage exports of logs rather than veneer. Tariff rate information found at *http://www.ita.doc.gov/td/tic/tariff/country_tariff_info.htm*.

[278] Industry official, telephone interview with Commission staff, October 10, 2006.

[279] Industry official, telephone interview with Commission staff, September 27, 2006.

[280] TTF, "EU & International Market Drivers."

[281] Industry official, telephone interview with Commission staff, October 10, 2006.

4 percent during the period of 2001–5.[282] Along with other global suppliers, SSA exporters benefited from these price increases.

Natural Resources

Veneer production and exports are highly concentrated in countries along the west coast of central Africa or within the Congo Basin.[283] However, the availability of forest resources and the principal sources in Africa are shifting due to over-exploitation of readily accessible coastal forests. The declining resource bases in some West African countries have only been partly offset by new sources in more remote inland areas (e.g., Republic of the Congo, Central African Republic) where difficult logistics and poor infrastructure are a clear obstacle to the expansion of veneer exports.[284] According to an industry source, of the five largest SSA veneer exporting countries, Gabon, Cameroon, and Equatorial Guinea still have abundant resources, while Ghana and Côte d'Ivoire do not.[285]

SSA veneer-producing countries have been working to develop supplies of certified wood products, which tend to command higher prices in world markets. Efforts are advancing along two paths. First, government efforts are underway to develop a certification system tailored specifically to African countries (i.e., the Pan African Forest Certification).[286] Second, private wood products firms in Cameroon, the Republic of the Congo, and Ghana are currently working to meet the requirements of an international certification scheme (i.e., Forest Stewardship Council certification).[287]

According to industry sources, SSA veneer producers are using more lesser-known species, although there is not a consistent strategy for their development.[288] They have also increased production of high-value face and back stock relative to lower-value core stock.[289] Both trends have tended to increase the overall value of veneer exports.[290]

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[282] Ghana Forestry Commission, TIDD, *Reports on Export of Wood Products: December 2001 to 2005*.

[283] Forest cover in Africa is approximately 650 million hectares or 17 percent of the continent's total area. Generally, forest land in African countries is state-owned with access being granted to forest industries through concessions. Oliver, Fripp, and Roby, "Wood Products Trade – Africa & Europe."

[284] ITTO, *Status of Tropical Forest Management 2005*, 69.

[285] Hervé Bourguignon (Secretariat General, IFIA), e-mail message to Commission staff, October 30, 2006.

[286] Oliver and Fripp, "Producer Country Draft – Gabon," and ITTO, *Status of Tropical Forest Management 2005*, 80.

[287] Oliver and Fripp, "Producer Country Draft – Cameroon"; Oliver and Fripp, "Producer Country Draft – Congo Brazzaville"; and Oliver and Fripp, TTF, "Producer Country Draft – Ghana."

[288] Because lesser-known species have not been commercially exploited, larger logs are generally available, and the veneer is typically higher quality and grade. These species are generally not found in abundance, so they are more expensive to harvest than more common species. As they are higher value and more expensive, increased use of lesser known species may have helped push up the value of SSA veneer exports. ATO, *Promoting the Further Processing of Tropical Timber in Africa*, 7; and industry official, telephone interview with Commission staff, October 10, 2006.

[289] Ghana's exports of high value veneer (i.e., sliced veneer, curls veneer, and layons) increased from 31 percent (by quantity) of total exports in 2001 to 39 percent in 2005. Because high value veneer is almost 4 times as valuable as rotary veneer, it accounted for 63 percent (by value) of total exports in 2001 and 71 percent in 2005. Ghana Forestry Commission, TIDD, *Reports on Export of Wood Products: December 2001 to 2005*.

[290] ATO, Promoting the Further Processing of Tropical Timber in Africa, 7; and industry official, telephone interview with Commission staff, October 10, 2006.

Gabon

Estimates of Gabon's total forest area range from 21.3 million to 25.8 million hectares, all of which is owned by the state.[291] Gabon is traditionally a strong exporter; approximately 90 percent of its production is exported. Gabon has recently taken measures to restrain exports of logs in order to encourage downstream production of veneer and other processed products.[292] The Société Nationale des Bois du Gabon, a privately managed enterprise sanctioned by the government, has a monopoly on log exports of the two main species, okoumé (*Aucoumea klaineana*) and ozigo (*Dacryodes spp*.).[293] Production is heavily focused on okoumé, which is used mainly for veneer and plywood.[294] Although of lesser quality than Acajou d'Afrique, the lower-priced okoumé veneer affords a competitive advantage to Gabon in international markets, particularly in China.[295]

Most veneer exports to Europe are destined for the French plywood sector; veneer and plywood exports have reportedly replaced okoumé log exports to France.[296] One factor in Gabon's increasing veneer exports was the start-up in 2003 of a new sliced veneer mill, that produces veneer almost solely for export.[297] However, industry sources believe maintaining production levels depends on utilizing a wider range of species rather than confining harvesting to "few species."[298]

Côte d'Ivoire

Estimates of Côte d'Ivoire's total forest area range from 7.1 million to 11.7 million hectares.[299] Forest land is owned either by the state or by local communities.[300] Côte d'Ivoire has a well-developed processing industry and was formerly the largest supplier of further-processed African hardwood products.[301] Despite a ban on log exports of valuable species, an increasing scarcity of logs is attributed to civil war (which has contributed to deforestation throughout the country), bush fires, and the production of charcoal and

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[291] ITTO, *Status of Tropical Forest Management 2005*, 91–92; and Oliver and Fripp, "Producer Country Draft – Gabon."

[292] Imposition of a 20 percent log export tax in 1996 reportedly made veneer production increase by 2003. Hervé Bourguignon (Secretariat General, IFIA), e-mail message to Commission staff, October 30, 2006; and ITTO, *Status of Tropical Forest Management 2005*, 92, 95.

[293] Cessation of SNBG price setting was scheduled to take place, January 1, 2006 and be replaced by a log export quota system. The change was postponed due to producers concerns that a price war would ensue. ITTO, *Tropical Timber Market Report*, February 16–28, 2006, 2, November 16–30, 2005, 2, and May 16–31, 2006; and ITTO, *Status of Tropical Forest Management 2005*, 93.

[294] Also known as gaboon, okoumé is a utilitarian species that is softer than other red woods and does not finish as well. It is often used for core stock. Exports of okoumé logs to China have declined due to the log export tax and increasing scarcity. Industry official, telephone interview with Commission staff, September 28, 2006; and Oliver and Fripp, "Producer Country Draft – Gabon."

[295] Industry official, e-mail message to Commission staff, September 27, 2006.

[296] Oliver and Fripp, "Producer Country Draft – Gabon"; and Pedersen, "Market Report Draft – France."

[297] The mill, belonging to a Dutch firm (Van Hout), was moved from Holland to Gabon. The firm already had a rotary mill in Gabon. Industry official, telephone interview with Commission staff, September 28, 2006.

[298] Oliver and Fripp, "Producer Country Draft – Gabon."

[299] ITTO, *Status of Tropical Forest Management 2005*, 85.

[300] Ibid., 86.

[301] Hervé Bourguignon (Secretariat General, IFIA), e-mail message to Commission staff, October 30, 2006; and Oliver, Fripp, and Roby, "Wood Products Trade – Africa & Europe."

fuelwood.[302] As a result, the veneer industry in Côte d'Ivoire has reportedly resorted to log imports from other SSA countries to supplement its diminishing local log supply.[303]

Ghana

Estimates of Ghana's total forest area range from 2.7 million to 6.3 million hectares.[304] A log export ban, good transportation infrastructure, and a stable political environment are factors that have contributed to the development of more downstream wood products processing (particularly veneer) than in other African countries.[305] However, the country's log supply is dwindling, the quality of the remaining growing stock has decreased, and there is now excess capacity in production facilities.[306] Nevertheless, from 2001 through 2005, the value of Ghana's veneer exports increased due to a favorable change in the mix of sliced and rotary veneer.[307] In an effort to offset the declining resource, a sliced veneer company in Takoradi is reportedly developing a new product, buttress sliced veneer, to be sliced from stumps.[308]

Cameroon

Estimates of the forest land in Cameroon range from 13.3 million to 23.8 million hectares, most of which belongs to the state.[309] Cameroon's policy to encourage further processed wood products is reflected in its ban on log exports of commercially valuable species.[310] Major export species are obeche (*Triplochiton scleroxylon*), sapelli, missanda (*Erythrophleum spp.*), and okoumé.[311] In 2005, Italy absorbed 78 percent of Cameroon's veneer exports.[312]

The forest resources are heavily exploited in the southern part of the country, and harvests, which are close to long-term sustainable limits, are reported to be significantly lower than installed processing capacity can accommodate.[313] However, in recent years, forest management has been encouraged through an improved legal and regulatory framework, and an international NGO has been appointed as an official independent observer.[314]

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[302] ITTO, *Status of Tropical Forest Management 2005*, 88; and Anzele, *Côte D'Ivoire Solid Wood Products Annual 2004*, 3–4.

[303] Anzele, *Côte D'Ivoire Solid Wood Products Annual 2004*, 4.

[304] ITTO, *Status of Tropical Forest Management 2005*, 98.

[305] Oliver and Fripp, "Producer Country Draft – Ghana," and Hervé Bourguignon (Secretariat General, (IFIA), e-mail message to Commission staff, October 30, 2006.

[306] One lesser species, Fuma (*Ceiba pentandra*) is used for rotary veneer for core stock, much of which is exported to the United States. Industry officials, telephone interviews with Commission staff, September 28, 2006 and October 10, 2006; Ghana Forestry Commission, TIDD, *Reports on Export of Wood Products: December 2001 to 2005*; industry official, telephone interview with Commission staff, September 28, 2006; and Oliver and Fripp, "Producer Country Draft – Ghana."

[307] Ghana Forestry Commission, TIDD, *Reports on Export of Wood Products: December 2001 to 2005*.

[308] ITTO, *Tropical Timber Report*, August 16–31, 2005, 9.

[309] Oliver and Fripp, TTF, "Producer Country Draft – Cameroon"; and ITTO, *Status of Tropical Forest Management 2005*, 58–59.

[310] Exports of lesser-known species are permitted for market development purposes. ITTO, *Status of Tropical Forest Management 2005*, 62, and Oliver and Fripp, "Producer Country Draft – Cameroon."

[311] Oliver and Fripp, "Producer Country Draft – Cameroon"; and industry official, telephone interview with Commission staff, September 28, 2006.

[312] ITTO, *Tropical Timber Report*, January 16–30, 2005, 2.

[313] Oliver and Fripp, "Producer Country Draft – Cameroon"; Oliver and Fripp, TTF, "Producer Country Draft – Cameroon"; and ATO, *Promoting the Further Processing of Tropical Timber in Africa*, 8.

[314] Oliver and Fripp, "Producer Country Draft – Cameroon."

Policies to Promote the Industry

Several SSA-veneer producing countries have new or relatively new forest regulations that likely have contributed to their ability to produce and export veneer.[315] In general, SSA veneer-producing countries have pursued policies designed to encourage further local processing of forest resources. Such policies include tax schemes, export bans, preferential duty treatment, privatization of state-owned timber firms, and changes in the way logging concessions are awarded.

Downstream value-added wood processing is encouraged through log export restrictions in the form of partial or total log export bans (Nigeria, Ghana, Côte d'Ivoire, and Cameroon) or local log processing quotas (Central African Republic, Gabon, and the Republic of Congo).[316] Gabon is privatizing the state-controlled monopoly for okoumé trade, and the Republic of the Congo has privatized five state-controlled timber firms since 1998.[317] Measures such as industrial incentives and the granting of concessions subject to the establishment of processing capacity have been applied to attract foreign investment in veneer processing.[318] For example, veneer manufacturers in Côte d'Ivoire benefit from tax holidays and exemption from duties on imports of machinery and other essential inputs.[319]

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[315] ITTO, *Status of Tropical Forest Management 2005*, 58–104.

[316] ATO, *Promoting the Further Processing of Tropical Timber in Africa*, 8; and Oliver and Fripp, "Producer Country Draft – Cameroon."

[317] Oliver and Fripp, TTF, "Producer Country Draft – Gabon"; Oliver and Fripp, "Producer Country Draft – Congo Brazzaville."

[318] ATO, *Promoting the Further Processing of Tropical Timber in Africa*, 8.

[319] Anzele, *Côte d'Ivoire Solid Wood Products Annual 2004*, 10.

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CHAPTER 4
Services Sector Profiles

Exports of commercial services from sub-Saharan Africa (SSA) totaled more than $23 billion in 2004 and represented about 15 percent of the total value of SSA exports from 2001 through 2004.[1] Travel or tourism services accounted for about 50 percent of the total, up from 41 percent in 2000.[2] Increased political stability reduced or eliminated conflict in a number of SSA countries and contributed to the growth in tourism exports for both business and leisure travel. Government policies that facilitated the expansion of accommodations and helped to market their countries' tourism potential also succeeded in attracting more tourists. Financial services trade data are included in the "other" commercial services category (along with communications, construction, insurance, and computer and information services), which totaled nearly $6.5 billion and represented about 28 percent of all commercial service exports between 2000 and 2004.[3] Although financial service exports represent a small fraction of this total, exports of financial services are growing rapidly. Increased exports of financial services are linked to increased merchandise exports that increase demand for trade financing services. Exports of financial services also benefitted from government reforms that attracted investment and facilitated expansion of the infrastructure necessary for the financial services industry to grow. The following tabulation summarizes dynamic factors that contributed to increased exports and underlying factors that contributed to industry development in the services sector.

Factors	Financial services	Tourism
Dynamic Factors (factors that changed during 2001–05 and contributed to increased exports)		
Demand growth and/or price increases	X	X
Increased investment	X	X
Policies to promote the industry	X	X
Infrastructure improvement	X	X
Underlying Factors (factors remained relatively stable during 2001–05)		
Natural resources		X
Labor supply	X	X
Regional integration	X	

[1] Commercial services consist of transportation, travel and tourism, and other services, which include communications, construction, insurance, financial, computer and information, royalties and license fees, and other business services.

[2] Travel services will hereafter be referred to as tourism. Based on data compiled from WTO "Statistical databases."

[3] Transportation services account for the remaining 22 percent of total commercial service exports.

Financial Services

Summary of Findings

The financial services industry has an important place in the region's growth prospects, although SSA is not among the major world exporters of financial services (box 4-1). Within the region, the financial services industries have grown steadily in recent years, and reported exports have increased by up to 230 percent, from $61 million in 1999 to $201 million in 2003 (table 4-1).[4] Increases in financial service exports appear to stem from trade financing activities and stock market activity. Trade financing, comprising aspects of intermediation services and financial guarantees and commitments, provides a means to facilitate merchandise trade and manage the trade-related risks borne by importers and exporters.[5] Trade financing is an integral component of trade, especially when trade relationships are new, when small- and medium-sized firms are involved and when trade-related risks are perceived to be high. Trade financing is usually provided by commercial banks and government entities such as export-import banks, export credit insurance agencies, and state trading enterprises. Common forms of trade financing include pre-shipping financing, post-

Box 4-1 Product Description for Financial Services

International trade in financial services encompasses banking and other financial services traded between residents and non-residents. As defined by the WTO, financial services include deposit taking and lending; intermediation; financial leasing; payment and money transmission services; guarantees and commitments; money market, foreign exchange, and derivative trading; securities activities; money brokering; asset management; and other related services such as financial data processing and credit reference. IMF export data, which are used in this report, include service fees for lines of credit, financial leasing, and foreign exchange transactions, as well as commissions and fees for securities transactions, commodity futures trading and asset management. IMF export data does not include intermediary or auxiliary services associated with insurance or pension funds.[1]

Exports of financial services may be provided through a number of different methods, including foreign consumers traveling to the provider's home market, as well as cross border transactions utilizing electronic communications or the postal service. Local consumers' purchases from foreign-owned affiliates located in the consumer's home market are the predominant mode of trade. However, these transactions are not captured in export statistics. Transactions between local consumers and foreign-owned institutions located in the local market are not captured in the export data of either the institution's home country or that of the local country.

[1] IMF, *Balance of Payment Statistics Yearbook of Statistics*: 2005; WTO, Annex on Financial Services.

[4] The actual increase in exports of financial services from SSA may differ due to data deficiencies. Countries reporting to the IMF, which is the source of most data found in this discussion, differ from 1999 through 2004.

[5] Financial intermediation encompasses firms, such as banks, acting as intermediaries who borrow from consumers/savers and lend to firms that need investment. Gorton and Winton, "Financial Intermediation," 1.

Table 4-1 Sub-Saharan Africa financial services exports, 1999–2004[a]

Country	1999	2000	2001	2002	2003	2004
	Million dollars					
Benin	5.90	2.60	2.60	3.20	0.60	([b])
Botswana	1.10	4.10	2.80	1.40	1.90	([b])
Cape Verde	0.52	0.01	0.04	0.04	0.14	([b])
Côte d'Ivoire	23.40	28.20	46.80	38.70	47.50	([b])
Eritrea	0.50	0.60	([b])	([b])	([b])	([b])
Ethiopia	9.60	3.60	4.10	4.10	5.00	2.90
Guinea	0.30	0.10	0.30	0.20	([a])	([b])
Guinea-Bissau	([b])	([b])	([b])	0.02	0.73	([b])
Madagascar	1.00	1.00	1.00	([b])	2.00	([b])
Mali	0.70	0.80	1.50	2.40	2.00	([b])
Mauritius	([b])	21.40	68.00	17.60	12.70	17.90
Mozambique	([b])	([b])	([b])	8.40	4.00	1.50
Namibia	6.50	2.50	1.20	1.30	([a])	([b])
Niger	0.10	0.40	0.40	0.60	0.20	([b])
Sao Tome and Principe	0.25	0.28	0.24	0.25	([a])	([b])
Senegal	4.80	5.30	6.60	4.40	5.60	([b])
Sierra Leone	([b])	([b])	([b])	0.40	0.10	0.50
Sudan	([b])	([b])	([b])	0.40	0.80	0.90
Swaziland	([b])	([b])	([b])	([b])	97.70	290.80
Tanzania	4.00	4.00	3.90	4.30	4.20	2.40
Togo	2.30	3.60	0.70	3.60	0.40	([b])
Uganda	([b])	([b])	([b])	0.90	15.10	45.80
SSA total	60.97	78.49	140.18	92.21	200.67	362.70

Source: International Monetary Fund, *International Financial Statistics Yearbook*.

[a] IMF export data include service fees for lines of credit, financial leasing, and foreign exchange transactions, as well as commissions and fees for securities transactions, commodity futures trading and asset management. IMF export data does not include intermediary or auxiliary services associated with insurance or pension funds. IMF, *Balance of Payment Statistics Yearbook of Statistics: 2005*; WTO, *Annex on Financial Services*.

[b] Not available

shipping financing, buyer's credit, and supplier's credit. Pre- and post-shipping finance, comprising short-term loans and lines of credit, provides exporters with capital to cover wages, overhead, and input costs necessary to fill export orders and to continue operations until payment is received. Buyer's and supplier's credit are loans made by financial institutions and exporters in the exporting market, respectively, to importers in order to finance the importer's purchase.[6] In the sub-Saharan context, indigenous and foreign-invested sub-Saharan banks would export these services by providing them to merchandise traders in neighboring African and overseas countries. Financial institutions that engage in trade financing are most numerous in South Africa, Côte d'Ivoire, and Kenya. Swaziland and Uganda also have active trade financiers.[7] Exports of trade financing services tend to grow as merchandise trade grows, evidence of which is found throughout this report.

[6] United Nations Economic and Social Commission for Asia and the Pacific, *Trade Facilitation Handbook*, 59–64.

[7] Batten and Bryant, "Trade Finance and Economic Development in Sub-Saharan Africa," 4–5.

It is believed that the countries of focus in this chapter—Côte d'Ivoire, Mauritius, Swaziland, Uganda—also export securities services. All are home to developing stock markets, the largest of which is the West African Regional Bourse in Côte d'Ivoire.[8] Foreign purchases of stocks in these growing markets require payments of fees and commissions to indigenous stockbrokers, recorded as exports of financial services by these countries.

The financial services industry exerts an economy-wide influence. The efficient allocation of scarce capital, through services such as intermediation, equity investment, and trade financing, supports and contributes to the competitiveness and export potential of all domestic economic sectors. Higher levels of competitiveness in the agricultural, manufacturing, and energy sectors promote economic development, which in turn promotes further development of the financial services industry.[9] Thus, economies with limited natural resources, such as Mauritius, have used the financial services sector as a means to promote and strengthen their position in the global marketplace.

Industry Overview

In general, SSA financial services industries are quite small relative to the global financial services market. Unlike the global market, where individual firms tend to have little market power, formal financial services in SSA markets are highly concentrated. A few large firms, generally affiliates of European banks that specialize in financing commodity exports, dominate the commercial banking sector.[10] These trade financing activities facilitate both imports and exports of manufactured goods and encompass the credit-end financing services mentioned above.

The SSA financial services market environment also differs from that of other world markets. SSA financial services markets, with the exception of South Africa and Mauritius, are generally characterized by low levels of affordable bank credit extended to the private sector in comparison to other developing countries' markets.[11] Reasons for low credit levels include regulatory barriers for non-bank financial intermediation, weak judicial and enforcement systems, and high levels of risk due to information asymmetry between lenders and borrowers.[12] High levels of risk and weak regulatory systems drive high interest rate spreads that characterize many SSA financial services markets. For example, in 2002, the difference between reference lending and deposit rates in Zambia was 36 percent.[13]

Financial services is both a capital- and technology-intensive industry, and small domestic markets can limit access both to capital, and the ability to take advantage of economies of scale present in the industry.[14] As a result, regional agreements initiating financial integration are increasingly common among SSA countries. For example, Cameroon, the Central African Republic, Chad, the Republic of the Congo, Equatorial Guinea, and Gabon share a

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[8] United Nations Development Programme, *African Stock Markets Handbook*, 7.

[9] See, for example, International Financial Services London (IFSL), "Benefits of Liberalising Financial Services and Promoting Access to Finance," and "Impact of Liberalising Financial Services"; Dobson, "Further Financial Services Liberalization in the Doha Round"; and Claessens, Demirguc-Kunt and Huizinga, "How Does Foreign Entry Affect the Domestic Banking Market?"

[10] French, "New Directions for African Financial Services," 27.

[11] Sacerdoti, "Access to Bank Credit in Sub-Saharan Africa: Key Issues and Reform Strategies," 4.

[12] Ibid., 7.

[13] Ibid., 29.

[14] Hansohm, Hodge, and Ndulo, "State of Trade in Services and Service Trade Reform in Southern Africa," 36–7.

common currency as members of the Economic and Monetary Community of Central Africa, one of some 30 regional trade agreements in Africa.[15] Additionally, for many SSA countries, it is not feasible to expect to export a large volume of financial services outside elements of trade facilitation.[16] Instead a number of countries, such as South Africa and Mauritius, have focused on becoming a financial center for the region. Côte d'Ivoire is another example of this—Abidjan hosts the regional stock exchange, as well as being a member of the central bank for the West African Economic and Monetary Union (WAEMU).[17]

The structure of individual financial services industries varies widely among SSA countries due to factors such as size, levels of economic development, and the degree of reform undertaken in the financial services sector. For example, Uganda's financial services industry consists of three segments – large domestic banks, subsidiaries and branches of international banks, and small (both domestic and foreign) banks.[18] In contrast, Swaziland's financial service industry is dominated by subsidiaries of three South African banks and the government-run Swazibank.[19]

Sub-Saharan Africa Trade in the Global Context

Financial services, as defined above (box 4-1), are provided by commercial banks, savings institutions, credit unions, investment banks, securities and commodities brokerage firms and exchanges, and other financial institutions. It is difficult to determine how the SSA financial markets compare with the global financial services market because reliable statistics on SSA services trade are not generally available. However, in 2003, reported SSA exports of financial services totaled nearly $201 million, or 0.21 percent of the $97 billion world total.[20]

Leading Exporters

In 2003, the United Kingdom, the United States, Luxembourg, and Switzerland were the top exporters of financial services (figure 4-1). These four countries combined to account for over 65 percent of the reported $97 billion in financial services exports.[21] European firms dominate the global commercial banking sector, accounting for 48.2 percent of market share in 2002, while U.S. firms control over one-half the market in the global investment banking and brokerage sector.[22]

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[15] Jansen and Vennes, "Liberalizing Financial Services Trade in Africa: Going Regional and Multilateral," 2.

[16] Hansohm, Hodge, and Ndulo, "State of Trade in Services and Service Trade Reform in Southern Africa," 45.

[17] Economist Intelligence Unit, *Country Profile – Côte d'Ivoire*.

[18] Cihak and Podpiera, "Bank Behavior in Developing Countries: Evidence from East Africa," 10.

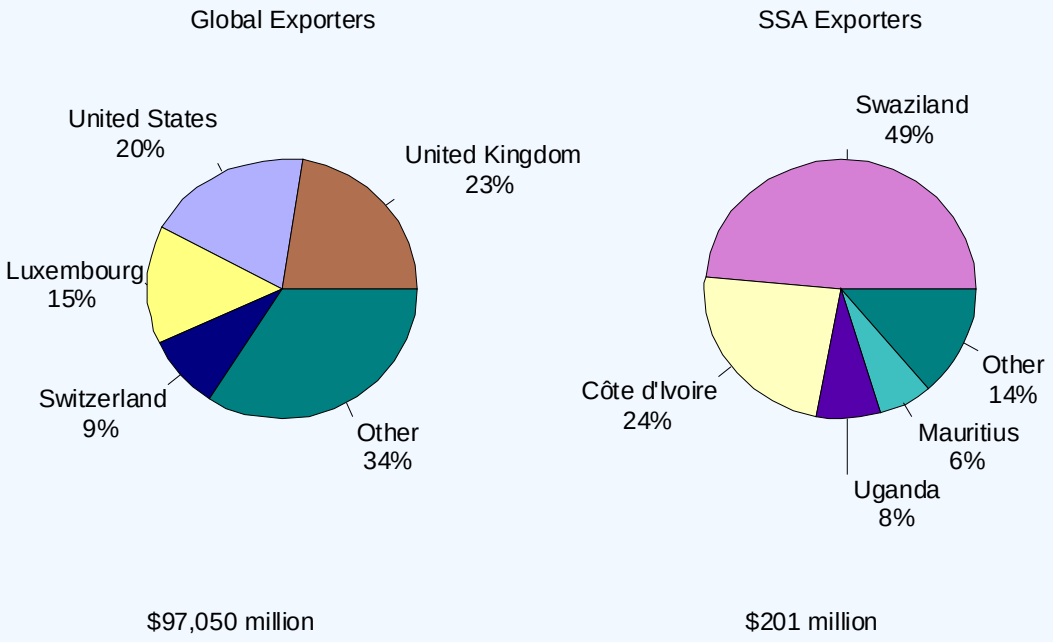
[19] Genesis Analytics, "Access to Financial Services in Swaziland," 8.

[20] The period 1999–2003 was chosen due to considerations of data availability and consistency. USITC staff calculations used IMF Balance of Payments data. Totals were calculated based on statistics from reporting countries only. The IMF provides the most detailed breakdown of services export data, although the list of reporting countries is limited.

[21] U.S. ITC staff estimates. Totals are based on statistics from reporting countries only. The IMF provides the most detailed breakdown of services export data; however, the list of reporting countries is limited.

[22] Datamonitor, *Global Commercial Banks*, October 2003; Datamonitor, *Global Commercial Banks*, May 2005; Datamonitor, *Global Investment Banking and Brokerage*, May 2005.

Figure 4-1 Leading global[a] and sub-Saharan Africa[b] exporters of financial services, 2003



Source: IMF, Balance of Payments Yearbook of Statistics, 2005

[a] World totals are calculated as the summation of all countries who reported Balance of Payments data to the IMF.
[b] Sub-Saharan Africa totals are composed of the 23 countries which report Balance of Payment data to the IMF. South Africa is omitted, although it is the largest financial services marekt in Sub-Saharan Africa, because it did not report financial services data.

Twenty-two SSA countries reported financial services export data to the International Monetary Fund (IMF) for at least two years between 1999 and 2004. South Africa, the largest economy in SSA, also has the most advanced financial services industry. However, South Africa does not report financial services data to the IMF, and banking and securities data are aggregated with data from the country's large insurance industry when reported to the World Bank. As a result, it is difficult to identify banking and securities trends and exports; insurance exports are highly volatile from year to year, due to methods of calculation, thus overshadowing shifts in exports of other financial services. Although South Africa's financial services industry is one of the top SSA exporters—it exported $32 million of financial services to the United States alone in 2003—it is omitted from this discussion due to the lack of data.[23]

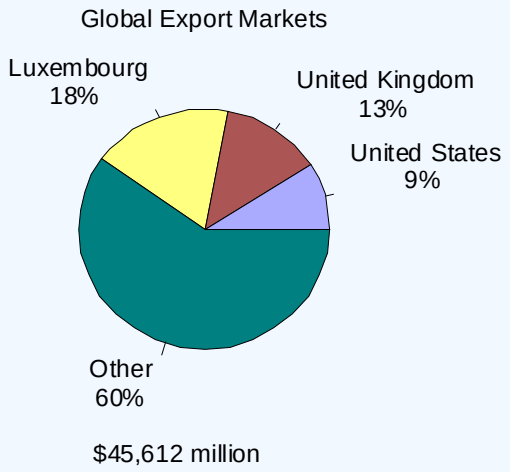
Of those SSA countries that reported financial services exports, four SSA countries reported exporting more than $10 million in financial services during 2003. Three of these—Côte d'Ivoire, Uganda, and Mauritius—reported significant export growth.[24] The fourth, Swaziland, did not report financial services data to the IMF in 1999–2002. However, in 2003, it accounted for almost one-half of SSA financial services exports.

[23] IMF, *Balance of Payment Statistics Yearbook*; US Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*; World Bank.
[24] IMF, *Balance of Payment Statistics Yearbook*.

Leading Export Markets

In 2003, Luxembourg, the United Kingdom, the United States, Belgium, and Germany were the leading importers of financial services (figure 4-2). Total imports of these five countries accounted for over one-half of reported financial services imports. As in the case of the leading exporting countries, the largest markets for financial services exports tend to be in more-developed economies. These markets have both the wealth and infrastructure necessary to handle large financial transactions and services.

Figure 4-2 Leading markets for global[a] exports of financial services, 2003



Source: IMF, Balance of Payments Yearbook of Statistics, 2005

[a] World totals are calculated as the summation of all countries who reported Balance of Payments data to the IMF.

Specific data on leading importing markets for SSA financial services are not available. However, developed countries, such as the United States or EU, are major trading partners for SSA countries. This suggests that they are also importers of SSA trade financing exports.[25] They also may import securities-related services, as SSA's capital markets tend to have a higher return on investment than markets in developed countries, thus providing incentive for investment. Due to the nature of trade financing services, it is also likely that SSA markets import trade financing from neighboring SSA markets. Among global importers, SSA countries accounted for less than 1 percent of the $45.6 billion in world financial services imports in 2003.[26] Côte d'Ivoire, Swaziland, and Kenya were the leading

[25] Economic Commission for Africa, "Assessing Regional Integration in Africa."

[26] U.S. ITC staff estimates. Totals are calculated based on statistics from reporting countries only. Additionally, financial services export statistics are more reliable than import statistics. Financial service import statistics are often significantly under reported because importing countries lack information on transaction margins (e.g., the difference between buying and selling prices of financial instruments, or the difference between borrowing and lending rates). The difference between total global exports ($97 billion) and imports ($45.6 billion) of financial services reflect these difficulties. OECD, "Round Table on

(continued...)

reporting SSA importers of financial services in the global market, accounting for almost 75 percent of the region's total.

Factors Affecting Trade Patterns

There is limited data on SSA economies, and few studies focus on SSA trade in financial services. Thus it is difficult to identify with certainty those factors that influenced export volumes in SSA financial services from 1999 through 2003. However, existing research on the general structure of exports in the financial services industry renders it possible to identify those characteristics that likely contributed to trends in financial services exports from SSA.

Demand Growth

The export potential of the financial services industry grows as the financial sector becomes more robust, and demand for trade financing services may increase as a result of trade growth in merchandise and agricultural goods. A strong financial services industry can encourage manufacturers or producers to locate in a country, due to the availability of financial infrastructure and services, and thereby enhance a country's merchandise export capacity.[27]

Exporting SSA firms may require letters of credit stating that overseas importers can pay for merchandise. Similarly, foreign importing firms may need documentation showing that the SSA exporter has the financing necessary to produce the desired goods in sufficient volumes. Commercial banks with international departments routinely provide trade financing services in addition to other banking services or provide credit and financing in concert with institutions specifically geared to providing trade and development financing. For example, in Malawi, an affiliate branch of Mauritian-based Loita Bank is co-managing both a facility for exporters and an equity fund for the private sector in Southern African Development Community countries.[28] Thus, development of the finance sector promotes greater economic growth and enables greater export volumes, providing the potential for additional exports of financial services.

Policies to Promote the Industry

The contribution of financial services to economic growth in SSA has been widely recognized, and consequently governments are now making efforts to reform the industry and its support systems. Support system reforms include creating a controllable, reliable system of financial information on borrowers; strengthening claims recovery and collateral realization processes; establishing more appropriate bank resolution processes, which protect creditors; establishing new markets and product development; and increasing competition among banks through market access.[29] SSA governments are initiating programs and

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[26] (...continued)
Sustainable Development, Providing Services to Foreign Nationals," 34.

[27] OECD, "Intertwined: FDI in Manufacturing and Trade in Services," 25; OECD, "Services Trade Liberalisation: Identifying Opportunities and Gains Part One: Examples of Developing Country Services Export," 5.

[28] Economics Intelligence Unit, "Country Report Malawi - Main Report: January 1, 2000."

[29] Sacerdoti, "Access to Bank Credit in Sub-Saharan Africa: Key Issues and Reform Strategies," 7–8.

regulations designed to develop these support systems, such as the establishment of credit bureaus in Uganda and the adoption of a regional accounting system in the WAEMU.[30]

Regional Integration

The interregional expansion of financial services throughout SSA also contributes to growth in financial services exports. In the financial services industry, research has shown a linkage between commercial presence and cross-border delivery of services.[31] In fact, in many markets, commercial presence is a precondition for trade. If a firm has entered a foreign market via a subsidiary or branch, this facilitates remote service delivery between the home and foreign markets. For example, South Africa's Standard Bank Investment Corporation (Stanbic) has a presence in 17 African countries, as well as in Europe, the Americas, and Asia.[32] Although local transactions incurred by these subsidiaries are not included in South African export statistics, export volumes will increase if the South African branches of Stanbic perform data processing or credit reference services for their foreign subsidiaries. Thus, expansion into the neighboring SSA region is another factor contributing to increased exports of financial services.

Infrastructure Improvement

Similarly, improvements in infrastructure can contribute to growth in financial services exports. Infrastructure levels in South and East Africa have historically been among the lowest in the world.[33] Utilities, such as electricity and telecommunication services, are basic inputs necessary for the operation of financial institutions, particularly as advances in technology allow remote service provision and international financial intermediation.[34] Services that can be delivered digitally are more likely to become increasingly internationalized, and can facilitate increased exports through linkages with other modes of service provision, as mentioned above.[35] Transportation infrastructure, such as road and railway systems, also indirectly affect the ability to export financial services by influencing volumes of agricultural and merchandise exports, thus affecting the level of demand for financial services supporting trade.

Country Profiles

Mauritius, Uganda, Swaziland, and Côte d'Ivoire are among the largest SSA exporters of financial services and also are among the countries that demonstrated significant growth.

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[30] Ibid., 9.

[31] OECD, Working Party of the Trade Committee, "Inter-Modal Linkages in Services Trade," 11.

[32] The African locations include Botswana, Democratic Republic of Congo, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe. Stanbic Website.

[33] Donaldson, Sader, and Wagle, "Foreign Direct Investment in Infrastructure, The Challenge of Southern and Eastern Africa," 2.

[34] OICU-IOSCO, "Report on Cross-Border Activities of Market Intermediaries in Emerging Markets," 9.

[35] OECD, "7th OECD International Trade Statistics Expert Meeting ITS and OECD-EuroStat Meeting of Experts in Trade-In-Services Statistics (TIS)."

Côte d'Ivoire

Financial service exports from Côte d'Ivoire increased from $23.4 million in 1999 to $47.5 million in 2003.[36] Although Côte d'Ivoire has experienced significant political and economic instability during this period, several factors likely contributed to the increase in its exports of financial services including, increased demand for trade financing and stronger stock market performance.

Côte d'Ivoire is a member of the central bank and monetary authority for WAEMU and has the largest banking sector in the region.[37] Côte d'Ivoire also hosts the regional stock exchange, the Bourse Regionale des Valeurs Mobilieres (BRVM), which opened in 1998.[38] The banking sector is concentrated, with six banks holding more than 75 percent of total assets.[39]

Côte d'Ivoire is a leading exporter of agricultural goods, such as coffee and palm oil, which creates demand for export financing.[40] Although the economy contracted in 2002 due to political instability, the country was more stable in 2003, and goods exports increased from $4.6 billion in 1999 to $5.8 billion in 2003.[41] Côte d'Ivoire is the world's largest exporter of cocoa, and cocoa exports were strong until the end of the period.[42] These exports were a driving factor in economic growth, and Côte d'Ivoire benefitted from higher prices in the world market through 2002.[43]

During the period 1999–2003, the trading volume of the stock and bond exchange also increased, which may have driven demand for investment-related financial services. Domestic law promotes Côte d'Ivoire as a regional financial center and also promotes technology to enable electronic trading, facilitating cross-border provision of financial services. All trading on the BRVM, the regional stock exchange for the WAEMU, must occur electronically and take place through a resident broker.[44]

Government initiatives to reform and strengthen the regulatory system also positively influenced exports. The government established a new accounting system in 2001 and is working to improve the regulatory system. In particular, it is working to supplement the current Central Credit Register with another credit bureau, further strengthening the financial support systems.[45]

Mauritius

Mauritius's financial sector accounts for around 10 percent of Gross Domestic Product (GDP) and has been growing at an average rate of 9 percent annually. Mauritius also hosts the Stock Exchange of Mauritius, established in 1988, which has been successful at raising

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[36] IMF, *Balance of Payments Statistics Yearbook 2005.*

[37] Western African Economic and Monetary Union member countries are: Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. World Bank, *Africa Development Indicators 2006*.

[38] Economist Intelligence Unit, *Country Profile: Côte d'Ivoire.*

[39] Côte d'Ivoire Embassy Cable.

[40] CIA World Factbook, "Côte d'Ivoire."

[41] Economist Intelligence Unit, "Country Report Côte d'Ivoire–Main Report, December 2003" and "Country Report Côte d'Ivoire– Main Report, September 2006."

[42] Economist Intelligence Unit, "Country Report Côte d'Ivoire– Main Report, September 2006."

[43] USITC phone conversation with State Dept. Representative, November 15, 2006.

[44] Côte d'Ivoire Embassy Cable.

[45] IMF, " Access to Bank Credit in Sub-Saharan Africa: Key Issues and Reform Strategies," 8–9.

local capital through bonds, stocks, and securities.[46] From 1999 through 2003, the value of financial services exports fluctuated, increasing from $21.4 million in 2000 to $68 million in 2001, decreasing in 2002, reaching a low of $12.7 million in 2003, and then rebounding in 2004 to more than $17.9 million (table 4-1).[47] Demand for trade financing was a major factor in export trends during the period.[48]

The onshore banking industry is highly concentrated, with the two multinational Mauritian banks, Mauritius Commercial Bank and the State Bank of Mauritius, accounting for 70 percent of market share.[49] Mauritius' major exports are sugar and textiles, and 40 percent of bank credit is concentrated in these two industries, in addition to tourism. Fluctuations in export volumes of sugar and textiles influence the volume of financial services exports, due to changes in demand for trade financing activities. For example, in 2002, a hurricane significantly diminished sugar production, which makes up 25 of export earnings.[50]

Swaziland

In 2003, Swaziland exported $97.7 million in financial services, which increased to $290.8 million in 2004.[51] This increase was most likely linked to a significant increase in merchandise trade from $593 million in 2003 to $792 million in 2004.[52] Other factors influencing export volumes are an improving exchange rate and recent economic growth. The contribution of the banking, insurance, and real estate sector to GDP has been growing rapidly, accounting for 7.5 percent of GDP in 1999.[53] Swaziland's banking sector consists of three South African-based commercial banks, the government-owned Swazibank, and the Swaziland Building Society.[54] Swaziland's capital market, the Swaziland Stock Exchange, currently has low levels of market capitalization and liquidity.[55]

Swaziland's export-based economy, particularly in agricultural products, is linked to growth in financial services. Swaziland frequently generates trade surpluses from exporting sugar, often in the form of soft drink concentrate, and wood pulp. In 2003, Swaziland became the largest supplier of soft drink concentrates in Africa.[56]

Possibly in recognition of the economy's reliance on merchandise exports, the financial services industry offers an increasing number of services supporting merchandise

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[46] Economics Intelligence Unit, "Country Profile Mauritius - Main Report: November 1, 2005."

[47] IMF, *Balance of Payments Statistics Yearbook 2005.*

[48] Offshore banking is defined as the cross-border intermediation of funds and provision of services to non-residents by banks residing in offshore centers. Transactions generally occur between financial institutions and in currencies other than that of the country hosting the offshore center. Offshore centers are defined as jurisdictions offering preferable regulations to offshore banks, particularly exemption from a number of regulations normally imposed on onshore financial institutions, such as reserve requirements, certain taxes, and interest or exchange rate regulations. IMF, "Offshore Banking: An Analysis of Micro- and Macro-Prudential Issues," 5; and U.S. Department of State, U.S. Embassy, Port Louis. "USITC Study on Sub-Saharan Africa: Information on Mauritius and Seychelles."

[49] IMF, *Financial Sector Assessment: Mauritius*, 3.

[50] U.S. Department of State, Country Background Note: Mauritius. http://www.state.gov/r/pa/ei/bgn/2833.htm [accessed January 5, 2007].

[51] Data is not available for 1999–2002; IMF, *Balance of Payments Statistics Yearbook of Statistics: 2005.*

[52] GTIS, *Global Trade Atlas.*

[53] Genesis Analytics, "Access to Financial Services in Swaziland," 52.

[54] The three banks are: Nedbank, Standard and FNB. Genesis Analytics, "Access to Financial Services in Swaziland," 8.

[55] Genesis Analytics, "Access to Financial Services in Swaziland," 25.

[56] Central Bank of Swaziland, "Recent Economic Developments."

exportation, particularly for smaller businesses. The Small Scale Enterprise Loan Guarantee Scheme was initiated in the 1990s to increase the participation of small-scale enterprises in the economy and is administered by the Central Bank through the commercial banking industry.[57] The government further increased access to financing for small- and medium-sized enterprises from 2002 through 2004, promoting a rapid increase in general merchandise exports.[58] During the period, Swaziland's exports also became more competitive as a result of a depreciated currency value.[59]

Uganda

Exports of financial services from Uganda increased from less than $1 million in 2002 to $15.7 million in 2003 and $45.8 million in 2004 (table 4-1).[60] The primary factor in the growth of Uganda's financial services exports is demand for trade financing, as a result of economic growth and commercial lending. Research suggests other factors include increased investment activity, government reforms, and investment in infrastructure.

From 1999 through 2003, Uganda's economy increased at an average annual rate of 7 percent.[61] The state-owned Bank of Uganda, in charge of financing and administering the Export Refinance Scheme, provides export finance for nontraditional products by channeling credit through commercial banks.[62] From June 2000 through December 2003, the percent of total credit provided by commercial banks designated for trade and services activities increased from 47 percent to 57 percent.[63] Ugandan banks have also increased levels of lending to foreign institutions, which likely accounts for growth in exports of financial services. From 2001 through 2002, the levels of lending to foreign banks almost doubled.[64]

Research suggests that efforts by the Ugandan government to improve financial support systems have also contributed to increases in exports. In late 2002, Uganda's largest state-owned bank was privatized, increasing efficiency and competitiveness in the financial services sector.[65] The government has also introduced improvements to accounting standards, initiated plans for a national credit reference bureau, increased supervision of banks, and drafted anti-money laundering legislation.[66]

Uganda has also made improvements in infrastructure that have promoted exports of financial services. Initiatives to improve the road system facilitate exports of manufacturing and agricultural goods, thus increased demand for trade financing. The telecommunication infrastructure has also been improving, with a growing number of Internet service providers

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[57] WTO, "Trade Policy Review, Swaziland."

[58] IMF, *Balance of Payments Statistics Yearbook 2005.*

[59] U.S. Department of State, "Background Note: Swaziland." Economics Intelligence Unit, "Country Report Swaziland – Main Report: October 1, 2005."

[60] IMF, *Balance of Payments Statistics Yearbook 2005.*

[61] USITC Staff calculations based on World Bank Wolrd Development Indicator data. *WDI Online*.

[62] Non-traditional products are defined as all commodities other than raw form coffee, cotton, tea, and tobacco. WTO, "Trade Policy Review, Annex 3: Uganda," 239.

[63] Bank of Uganda, *Current State of the Ugandan Economy*, 13.

[64] IMF, "Uganda: Financial System Stability Assessment," 8.

[65] IMF, "Bank Behavior in Developing Countries, Evidence from East Africa," 7.

[66] IMF, "Access to Bank Credit in Sub-Saharan Africa: Key Issues and Reform Strategies," 30; and IMF, "Uganda: Financial System Stability Assessment," 22.

and increased accessibility to both land and mobile phone lines. This facilitates sectoral growth and exports of financial services.[67]

The Uganda Stock Exchange is another factor promoting financial exports. Although current trading volume is small, Uganda's stock exchange attracts regional investors, and levels of capitalization in the market have been increasing.[68] Moreover, all management and brokerage services are provided by Ugandan firms. Thus all stock purchases on behalf of non-Ugandan firms result in fees and commissions for Ugandan brokers, which register as exports in the current account.[69]

[67] WTO, "Trade Policy Review, Annex 3: Uganda," 263.
[68] Bank of Uganda, *Current State of the Ugandan Economy*, 28.
[69] OICU-IOSCO, "Report on Cross-Border Activities of Market Intermediaries in Emerging Markets," 17.

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Tourism

Summary of Findings

From 2000 through 2004, SSA tourism service exports grew by nearly 87 percent, an average annual growth rate of more than 17 percent.[71] By comparison, global international tourism receipts grew 26 percent over the same period, an average annual growth rate of 5 percent.[72] Fifteen countries in SSA saw significant increases in tourism service exports (table 4-2). South Africa is the largest provider of tourism services among all SSA countries, accounting for more than one-half of all exports of tourism services in 2004. Other large exporters included Mauritius, Tanzania, Botswana, Kenya, and Ghana—each with more than $450 million worth of travel service exports in 2004. Common factors can be seen in these countries' increased exports. First, the countries were free of civil conflict; not only do tourists avoid areas with conflict, stable countries attract business and these businesses attract business travelers. Second, countries that provided incentives for investment in the accommodations sector experienced an increase in tourism. Such investments increased the availability and improved the quality of available hotel rooms, facilitating tourist arrivals. Finally, nations that marketed their tourism potential succeeded in attracting more tourists.

Industry Overview

Apart from a country's endowment of tourist attractions, which include climate, scenery, ecology, ethnography, history, architecture, and business opportunities, other factors can affect appeal to prospective tourists. These include accessability, comfort, value, and image. Accessability refers to the amount of time and effort needed for tourists to reach the country. Travelers prefer destinations that are conveniently and inexpensively reached, both when in transit to the country and when traveling within the country. After arriving, tourists prefer a destination with clean, comfortable, and modern accommodations. Additionally, tourists seek value in transport, accommodations, and shopping. Finally, the projection of a positive image attracts tourists. Tourists' individual preferences for a destination vary; however, to attract tourists a destination must have visibility and be perceived as safe. Advertising can affect perceptions in both these areas. Additionally, tourists might choose a destination perceived to be eco-friendly or have a benevolent government (box 4-2).

Sub-Saharan Africa Trade in the Global Context

Large, stable, and highly developed economies tend to have substantial and well-developed tourism industries specifically designed to cater to domestic travelers and foreign visitors, primarily from adjacent and other developed economies. These countries account for a large share of global exports of tourism services. In contrast, small, developing SSA countries, which may be expensive and difficult to get to from some destinations, accounted for a small portion of the global market for tourism service exports.

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[71] Data for 2000–04 are from 30 reporting economies. For 1999–2003, total growth was 56.5 percent, a 9.4 percent compound annual growth rate, with 41 economies reporting. In total, SSA has 48 economies. USITC calculations based on data from IMF, *Balance of Payment Manual*.

[72] UNWTO, *Tourism Highlights*.

Table 4-2 Sub-Saharan Africa travel services exports, value of expenditures, by selected exporter, 2000–04

Countries	2000	2001	2002	2003	2004	Percent change 2001–04
			Million dollars			
Angola	18	22	37	49	66	267
Botswana	222	230	319	457	549	147
Cape Verde	41	54	65	85	125	205
Ethiopia	57	51	72	114	173	204
Ghana	335	351	358	414	466	39
Kenya	283	309	276	339	495	75
Mali	40	88	104	128	130	225
Mauritius	632	612	697	856	871	38
Namibia	160	236	218	333	405	153
Rwanda	23	25	31	30	44	91
Sierra Leone	11	14	38	60	58	427
South Africa	2,677	2,564	2,909	5,523	6,300	135
Swaziland	37	31	62	101	95	157
Tanzania	377	432	444	461	594	58
Uganda	165	165	172	184	266	61
Total of profiled exporters	5,078	5,184	5,802	9,134	10,637	109
Total SSA	5,934	6,080	6,827	10,056	11,074	87

Source: UNWTO, *Yearbook of Tourism Statistics* and IMF, *Balance of Payments Manual*.

Box 4-2 Product Description for Tourism Services

A country is said to have exported travel and tourism services when foreign nationals make purchases in that country during a visit of less than one year. The value of tourism exports is measured by the total expenditures of foreign visitors irrespective of the purpose of visit, be it leisure, recreation, business, or other activities. In general, the largest components of exported tourism services are expenditures for meals and lodging. Expenditures on transportation services between countries, such as airfare, and direct spending on education or health care services are excluded from the measure of tourism exports. (In the case of visitors whose primary purpose is the consumption of education or health care services, their spending on goods and services other than direct expenditures on education and health care is considered a tourism export, even if their stay exceeds one year.) Expenditures by foreigners who work for a domestic business during their visit are also excluded.[1]

[1] IMF, *Balance of Payment Manual*.

Leading Exporters

The five largest global exporters of tourism services in 2004 were the United States ($74.5 billion), Spain ($45.2 billion), France ($40.8 billion), and Italy ($35.7 billion) (figure 4-3).[73] In 2004, SSA accounted for 2.7 percent of total tourist arrivals, and only 2.0 percent of total tourist expenditures.[74] The five largest SSA exporters were South Africa, Mauritius, Tanzania, Botswana, Kenya, and Ghana (figure 4-3).[75] South Africa, by itself, represented more than one-half of SSA's total tourism exports.[76] SSA's overall tourism exports grew by 88.6 percent from $6 billion in 2000 to $11 billion in 2004, an average annual growth rate of 17.4 percent.[77] By comparison, global international tourism receipts grew 26 percent from $496 billion in 2000 to $623 billion in 2004, an average annual growth rate of 5 percent.[78] The strongest growth among SSA countries was seen in the following 15 countries: Angola, Botswana, Cape Verde, Ethiopia, Ghana, Kenya, Mali, Mauritius, Namibia, Rwanda, Sierra Leone, South Africa, Swaziland, Tanzania, and Uganda, which are detailed below. In these 15 countries, tourism exports grew by 109 percent, an average annual rate of nearly 22 percent, from 2000 through 2004 (table 4-2).

Leading Export Markets

Tourists to the largest global exporters of travel services primarily arrived from adjacent or other developed countries. Nearly 57 percent of tourist arrivals to the United States came from Canada and Mexico in 2005; travelers from the United Kingdom and Japan were also among the most frequent visitors to the United States. More than three-quarters of tourists arriving in Spain and France came from other EU countries, primarily the United Kingdom, Germany, and the Netherlands; and the French represented a significant share of the visitors to Spain. Primary visitors to Italy included Germans, French, Swiss, and Austrians.

In contrast, the primary consumers of SSA tourism services are Europeans, although intra-SSA tourism is a significant portion of total arrivals in some countries (table 4-3). Even in countries where African tourist arrivals exceed European tourist arrivals, total expenditures by Europeans often exceed expenditures by Africans, due to longer durations of stay by Europeans and preferences in accommodations.[79] African travel appeals to European tourists because, in addition to historic and cultural significance, shared time zones and established air routes increase accessibility.

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[73] UNWTO, *Tourism Highlights*.

[74] Ibid.

[75] UNWTO, *Yearbook of Tourism Statistics*.

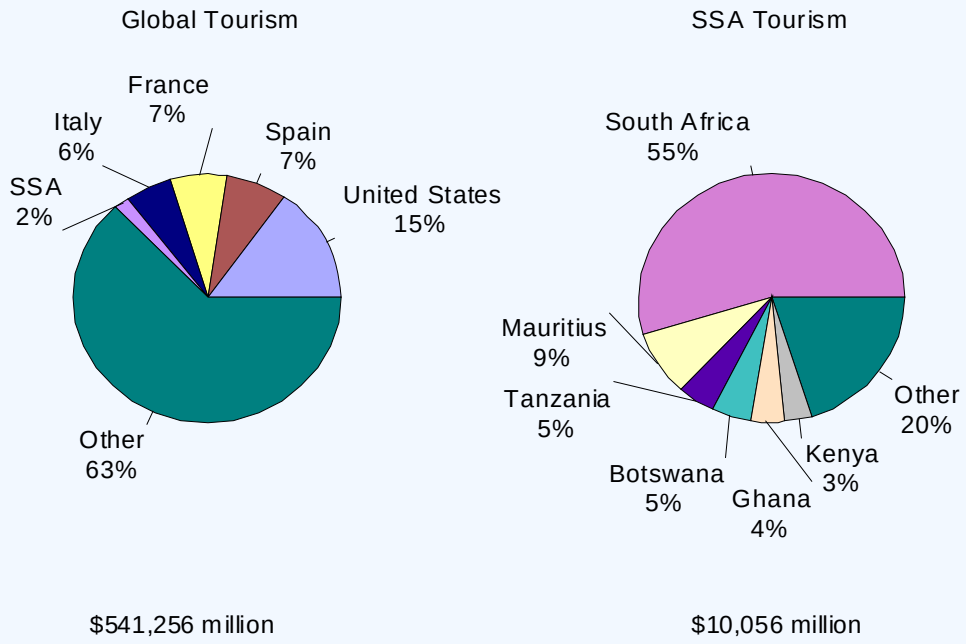
[76] Ibid.

[77] Data for the 2000–2004 period are from 30 reporting economies. For the period 1999–2003, total growth was 56.5 percent, a 9.4 percent compound annual growth rate, with 41 of the 48 SSA economies reporting. USITC calculations based on data from IMF *Balance of Payment Manual*.

[78] UNWTO, *Tourism Highlights*.

[79] Data on expenditures for visitors from individual foreign economies are limited. EIU, *South Africa Country Profile*, July 1, 2006.

Figure 4-3 Global and sub-Saharan Africa tourism, 2003



Source: International Monetary Fund Balance of Payments Manual 2005.

Table 4-3 Sub-Saharan Africa travel services exports, total arrivals and leading sources by selected exporter

Countries	Total arrivals	Leading sources									
		Country	%	Country	%	Country	%	Country	%	Country	%
Angola (2002)	90,532	**Portugal**	19.0	**France**	13.4	**South Africa**	10.7	**Brazil**	7.6	**United Kingdom**	7.5
Botswana (2003)	975,465	**Zimbabwe**	44.7	**South Africa**	36.4	**Zambia**	3.6	**Namibia**	3.0	**United Kingdom**	1.5
Cape Verde (2005)	197,844	**Italy**	35.2	**Portugal**	25.4	**Germany**	10.7	**France**	7.2	**South Africa**	4.8
Ethiopia (2003)	179,910	**United States**	12.5	**Djibouti**	12.1	**United Kingdom**	5.0	**Kenya**	3.9	**Italy**	3.5
Ghana (2003)	530,827	**Nigeria**	13.7	**United Kingdom**	8.7	**United States**	6.6	**Germany**	4.8	**Côté d'Ivoire**	4.8
Kenya (2003)	1,146,099	**Germany**	15.7	**United Kingdom**	15.5	**Tanzania**	11.2	**Uganda**	7.0	**UnitedStates**	6.6
Mali (2005)	142,814	**France**	26.5	**United States**	6.8	**Benelux countries**	6.3	**Spain**	4.9	**Italy**	4.9
Mauritius (2005)	761,063	**France**	42.0	**United Kingdom**	12.5	**South Africa**	7.7	**Germany**	7.4	**Italy**	5.7
Namibia (2003)	695,221	**Angola**	32.0	**South Africa**	31.9	**Germany**	8.3	**Zambia**	4.8	**Botswana**	3.3
Rwanda (2001)	113,185	**Uganda**	34.0	**Dem. Rep. of Congo**	25.2	**Tanzania**	16.5	**Burundi**	8.4	**Kenya**	2.0
Sierra Leone (2005)	40,023	**Africa**	54.5	**Europe**	24.7	**Americas**	11.8	**Asia**	5.9	**Middle East**	3.2
South Africa (2005)	7,368,742	**Lesotho**	22.5	**Swaziland**	12.3	**Botswana**	10.8	**Zimbabwe**	10.5	**Mozambique**	8.1
Swaziland (2005)	311,656	**South Africa**	43.1	**Europe**	31.4	**Unspecified**	23.0	**Americas**	1.4	**Asian**	1.0
Tanzania (2005)	617,754	**European Union**	50.0	**United States**	20.0						
Uganda (2005)	467,728	**Kenya**	29.6	**Rwanda**	17.2	**Tanzania**	10.8	**United Kingdom**	6.0	**United States**	4.7

Source: UNWTO, *Yearbook of Tourism Statistics*.

Factors Affecting Trade Patterns

Over the period 2000-2005, SSA tourism export growth was driven by increased demand from both business and leisure travelers and by changes in domestic government policies that facilitated or promoted tourism and travel. However, in addition to growth in demand and domestic government promotion, fluctuating currencies may also have affected tourism exports from SSA.

In several SSA countries, currency depreciations appear to have had a positive effect on tourism service exports. Among the fifteen countries with significant increases in tourism exports, five had currencies that depreciated by more than 50 percent vis-a-vis IMF Special Drawing Rights. However, depreciation of the local currency does not always facilitate additional tourism. If tourism service transactions take place in something other than the local currency, then the benefits of a depreciation are mitigated. For example, significant depreciation of the Angolan kwanza from 2000 through 2004 had a limited effect on the tourism industry, as all tourist transactions in Angola are conducted in U.S. dollars.[80] Moreover, if the local currency is pegged to the currency of most visitors, changes in the value of the local currency have little impact. For example, Cape Verde's currency is pegged to the euro, the local currency of the majority of visitors to Cape Verde, so exchange rates have had a limited impact on tourism.[81]

Demand Growth

Decreased conflict and more stable governments in SSA countries have contributed to increased demand for tourism services in SSA. Both business and leisure travelers have increased their demand for travel services in SSA. For example, business persons increased their travel to diamond mines in the Democratic Republic of the Congo, copper reserves in Zambia, and other countries with resource industries in the region.[82] This reflects the common practice of joint ventures between domestic and foreign companies, in which managerial, and technical personnel from a company's foreign partner travel to SSA. These individuals' expenditures while in SSA increase tourism exports.

More-stable governments and less conflict provide leisure travelers with a greater sense of security and comfort. A greater sense of security opens Africa's natural beauty, distinctive cultures, and diverse wildlife to more potential travelers.[83] People that were previously unwilling to travel because of security concerns are now willing to travel to SSA. A number of the domestic government policies outlined below are also aimed at increasing the demand for travel to SSA.

Policies to Promote the Industry

Government policies, including the reintroduction of wildlife, new investment in transportation infrastructure, enhanced spending on advertising, and improved conditions for foreign investment in the tourism industry have contributed to expanded tourism exports in

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[80] Hudleston, "Angola Looks to Beaches, Game to Put It On Africa's Tourist Map."
[81] EIU, *Cape Verde Country Profile*, February 1, 2006.
[82] UNWTO, "UNWTO Signs New Agreement to Help African Tourism."
[83] Ibid.

many SSA countries. For example, efforts to re-populate animals that attract safari-goers include Angola's reintroduction of the elephant and Uganda's reintroduction of the rhino.[84]

Direct spending on advertising increases international recognition, thereby attracting tourists. SSA countries with recent advertising campaigns include Kenya, South Africa, Swaziland, and Tanzania. In the case of Kenya, for example, tourist arrivals from countries targeted by a marketing campaign increased, while arrivals from similar countries where marketing campaigns were not conducted decreased.[85]

Streamlining regulations and providing tax breaks for foreign investment in tourism also facilitate expansion of the tourism industry. SSA countries that have recently improved investment conditions in the tourism industry include Angola, Djibouti, Ethiopia, Ghana, Mali, Tanzania, and Uganda. In Mali, for instance, increased construction in the hotel sector followed 2002 legislation providing tax relief for such activities.[86] Consequently, total hotel rooms increased by one-third from during 2002–04.[87]

Infrastructure Improvement

Examples of SSA transportation upgrades include airport improvements, which increase tourist arrivals by facilitating accessability. SSA countries with recent airport expansions include Angola, Mozambique, South Africa, and Uganda. Increased airport capacity in South Africa, for instance, allowed for a 38.9 percent increase in incoming international flights.[88] This and other examples are discussed in more detail in the individual country profiles below.

Country Profiles

South Africa

South Africa has many features that indicate a strong comparative advantage in providing tourism services, such as a good climate, sandy beaches, modern cities, wildlife reserves, sporting facilities, and extensive use of the leading tourism language, English.[89] In order to capitalize on its potential as a tourism destination, South Africa Tourism (SAT), a quasi-governmental agency, conducted a global marketing campaign over the past five years.[90] In addition to such marketing, other factors in South Africa's recent tourism growth include improved facilities for business travelers, liberalization in entry visa requirements, and an increase in international flights to South Africa.

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[84] Trivedi, "Elephants Airlifted to Repopulate War-Torn Park in Angola;" and The World Conservation Union, "African Rhino Numbers Increase."

[85] Tourism Trust Fund, "The Tourism Marketing Recovery Programme (TMRP)."

[86] WTO, *Trade Policy Review Mali*, 65.

[87] UNWTO, *Yearbook of Tourism Statistics*, CDRom.

[88] Airports Company South Africa, "Traffic Stats."

[89] EIU, *South Africa Country Profile*, July 1, 2006.

[90] In 2005, South African Tourism received 80 percent of its budget through government grants. South African Tourism, *2005/06 Annual Report*, 153.

SAT was established by the Tourism Act of 1993 to promote tourism in South Africa.[91] It does so through advertising, operating foreign promotional offices, and training foreign travel agents. The success of SAT's marketing strategy has received praise from South African government officials who believe its marketing efforts have been the central driver behind the increase in tourism in South Africa.[92] SAT estimates that for each rand spent on marketing South Africa as a business-tourism destination, it sees an additional 35 rands in tourist receipts.[93]

SAT's advertising budget was expanded beginning in 2000. A $25.3 million advertising campaign was undertaken in France, Germany, Italy, the Netherlands, the United Kingdom, and the United States.[94] In 2002, SAT reviewed the countries targeted; and the advertising campaign was extended to China, India, Kenya, and Tanzania.[95] The marketing campaign uses traditional means of advertising, including billboards (both stationary and on public transportation), magazine ads, television, and radio. Arrivals have increased from each of the countries in which advertising campaigns were conducted, and in some cases growth from targeted countries has exceeded the pace of the overall increase in arrivals to South Africa.

Aside from advertising, SAT's other programs involve direct outreach. For instance, SAT has promotional offices in ten countries and provides toll-free hotline service in six others.[96] A second form of outreach is the online training of foreign travel agents in how to sell South Africa as a tourism destination. Travel agents who complete the training are permitted to advertise on SAT's website.[97] A final SAT outreach program is the creation of strategic alliances with foreign travel agents. For instance, in 2004, SAT solidified partnerships with the top ten travel agencies in Kenya.[98]

Business tourism, another sector promoted by SAT, was further stimulated by the opening of the Cape Town International Convention Centre in 2003. The new facility hosted both the Cape Town Grand Champions Tennis tournament and the World Convention for the International Confederation of Principals in 2005.[99] Business tourism makes a large contribution to increased tourism revenues. The expenditures of a meeting delegate are, on average, three times greater than those of a leisure tourist. Furthermore, business tourism has

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[91] In addition to its promotion and marketing functions, SAT also has a research function, such as cooperating with South African government agencies to improve South Africa's TSA. South African Tourism, *2002/2003 Annual Report*, 49; and South African Tourism, *Manual for Promotion of Access to Information*, 2.

[92] South African Department of Environmental Affairs and Tourism, "SA Takes Steps to Ensure a Wide Range of 2010 Tourism Options."

[93] South African Tourism, *2004/05 Annual Report*, 54.

[94] EIU, *South Africa Country Profile*, August 1, 2003.

[95] South African Tourism, *Tourism Growth Strategy*, 20. Additionally, from 2003 through 2005 advertising was expanded to include Australia, Botswana, Japan, Lesotho, Mozambique, Nigeria, Swaziland, and Zambia.

[96] South African Tourism has representational offices in Australia, China, France, Germany, India, Italy, Japan, the Netherlands, the United Kingdom, and the United States, and also provides toll free hotlines in Austria, Belgium, Canada, Ireland, Sweden, and Switzerland. South African Tourism, *2005/06 Annual Report*, Back cover.

[97] The training is known as the "SA Fundi Tourism Expert Course." South African Tourism, *2002/03 Annual Report*, 52.

[98] South African Tourism, *2005/06 Annual Report*, 102.

[99] Deloitte, "South Africa's Popularity Drives Double-digit Hotel Growth."

been proven to generate future tourism—37 percent of business travelers to South Africa return as leisure travelers within five years.[100]

Liberalization in entry visa requirements has attracted tourists by facilitating entry. South Africa currently allows visa-free entry for visitors from five of its neighboring countries: Botswana, Lesotho, Mozambique, Namibia, and Swaziland.[101] Visitors from these five countries in 2005 represented 56.7 percent of arrivals and 59.2 percent of tourism receipts.[102] In April 2005, South Africa began offering visa-free entry for citizens of Mozambique. Consequently, arrivals from that country increased 67.6 percent in 2005.[103] Additionally, South Africa recorded progress in processing entry visas for Tanzanians in 2004. This reduced processing time from five days to three days and likely contributed to the 5 percent rise in Tanzanian tourist arrivals in 2005.[104]

Finally, additional international flights to South Africa have facilitated increased arrivals. From 2000 through 2005, the number of international flights arriving at South Africa's three international airports—Johannesburg O.R. Tambo, Cape Town, and Durban—increased 38.9 percent from 19,537 to 27,129.[105] The larger number of international flights to South Africa has lowered costs and increased convenience for travelers, thereby stimulating demand.

Kenya

Kenya's established game parks, diverse cultures, and beach resorts readily attract tourists. However, growth in Kenya's tourism exports has been uneven, with insecurity limiting growth from 1997 through 2003.[106] Stagnation in tourism growth began in 1997 following unrest in refugee camps and continued as Kenya suffered terrorist attacks in 1998, 2001, and 2002. In May 2003, due to continued terrorist threats, air traffic from the United Kingdom was terminated for nearly one month.[107] Consequently, tourism exports decreased 10.7 percent in 2003.[108] It was not until 2004 that tourist arrivals exceeded 1996 levels.[109]

An expanded marketing initiative by the Kenya Tourist Board (KTB) to counteract the negative effects of civil unrest, terrorist attacks, and disrupted air connections contributed to increased tourism exports. The KTB is a quasi-governmental organization that was established in 1997 and charged with marketing Kenya as a tourist destination.[110] The KTB marketing effort incorporates print and electronic media, trade show booths, public relations

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[100] Deloitte, "South Africa's Popularity Drives Double-digit Hotel Growth"; and South African Tourism, *2004/05 Annual Report*, 53.

[101] South African Department of Home Affairs, "South Africa and Mozambique Sign a Visa Waiver Agreement."

[102] South African Tourism, *2005/06 Annual Report*, 139.

[103] South African Tourism, *2005/06 Annual Report*, 139; and South African Tourism, *2004/05 Annual Report*, 107.

[104] South African Tourism, *2005/06 Annual Report*, 102; and UNWTO, *Yearbook of Tourism Statistics*, CDRom.

[105] Airports Company South Africa, "Traffic Stats."

[106] Kenya Tourist Board, *Kenya Tourist Board Corporate Strategic Plan 2005/2008*, iv.

[107] Wichira, "The horrifying result of US travel ban on Kenya."

[108] UNWTO, *Yearbook of Tourism Statistics*, CDRom.

[109] Kenya Tourist Board, *Kenya Tourist Board Corporate Strategic Plan 2005/2008*, iv.

[110] Kenyan Tourist Board Official, interview by Commission staff, Nairobi, Kenya, December 7, 2006.

initiatives, industry outreach, and the Internet.[111] The KTB also operates eight representational offices abroad.[112]

In 2003, the KTB was expanded under an initiative known as the Tourism Market Recovery Programme (TMRP), which was partially funded by a $26.4 million grant from the EU.[113] The TMRP was implemented between September 2003 and March 2004 and specifically targeted ten European markets.[114] The TMRP expanded the KTB's advertising and outreach programs, established partnerships with 64 tour operators, and updated and translated the KTB Website into five languages.[115]

The TMRP was a success for the markets it targeted. Visitor arrivals from TMRP markets during the period January–July 2004 increased 17.4 percent compared with the same period in 2003, while arrivals from non-TMRP European markets fell 24 percent.[116] Following the success of the TMRP, the government of Kenya has increased funding to the KTB, matching the budget levels that achieved success over the TMRP period.[117]

In addition to security assurance marketing, substantive measures to increase security have also contributed to increased exports of tourism services. In 2003, Kenya established the 200-member Kenya Tourist Police Unit (KTPU). The sole purpose of the KTPU is to provide increased security in tourist areas.[118] Kenya also established a national counterterrorism center to decrease the threat of terrorism against the tourist industry.[119]

An additional factor in Kenya's increased tourism exports is wildlife conservation. The conservation program is part of the trilateral agreement with Tanzania and Uganda that formed the East African Community in 2000.[120] The three countries now mutually conserve, manage, and promote the sustainable use of wildlife that migrate across their borders. Initiatives include anti-poaching operations and concordance in hunting regulations.[121]

Angola

The end of Angola's 26-year civil war in 2002 has allowed its tourism service exports to grow. Land mines and damaged infrastructure, however, still limit tourism growth outside the capital, Luanda.[122] Business travelers, led by oil industry workers, are the primary

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[111] Kenya Ministry of Tourism and Wildlife, "Destination Marketing."

[112] Ibid.

[113] The KTB worked collectively with the Tourism & Transport Consult and the Tourism Trust Fund in implementing the program. EIU, *Kenya Country Report*, May 8, 2006.

[114] TMRP was implemented in the United Kingdom, Germany, France, Italy, Belgium, the Netherlands, Switzerland, Denmark, Sweden and Spain. Tourism Trust Fund, "The Tourism Marketing Recovery Programme (TMRP)."

[115] Tourism Trust Fund, "The Tourism Marketing Recovery Programme (TMRP)."

[116] Ibid.

[117] Kenya Tourist Board, *Kenya Tourist Board Corporate Strategic Plan 2005/2008*, 29.

[118] Ibid., 18.

[119] Ibid., 18.

[120] Ibid., 15.

[121] Ibid., 15.

[122] Nathan Associates Inc., *Angola: Diagnostic Trade Integration*, 15–17.

consumers of Angolan tourism services.[123] Foreign oil workers provide technical assistance in drilling because there is a lack of domestic expertise.[124] To attract recreational tourists, Angola has also worked to replenish animal populations, such as elephants, in its national parks.[125]

Nevertheless, growth in Angolan tourism services has been constrained by a lack of accommodations.[126] Although the number of available hotel rooms grew 37.0 percent (from 6,832 to 9,358) from 2000 through 2004, the hotel occupancy rate exceeds 90 percent in Luanda, and the shortage has pushed the average price of a hotel room in Luanda to $220.[127]

Botswana

Botswana's government policies contributed to growth in tourism services exports. For example, a November 2003 bill established a Tourism Board and a tourism development fund.[128] Moreover, the government of Botswana has facilitated the growth in lodges, bed and breakfasts, and self-service apartments by issuing micro-loans financed by the Citizen Entrepreneur Development Agency.[129] Consequently, tourist accommodations grew 49.5 percent from 2000 through 2003.[130]

Cape Verde

Tourism is a significant and growing portion of the Cape Verdean economy, accounting for 11.2 percent of GDP in 2004, up from 4 percent in 1998. In fact, the tourism sector received 90 percent of the nation's total foreign direct investment in 2005 and 56.3 percent of total investment in 2004.[131] The number of hotel rooms rose accordingly from 2,489 in 2001 to 4,406 in 2005, helping to accommodate increased demand.[132] Investment is attracted by Cape Verde's stable government and favorable climate.

Ethiopia

Ethiopia has tremendous potential as a recreational tourism destination, with numerous historic sites, such as the churches at Roha and the recently repatriated Axum obleisk, and regions of natural beauty that include the Simien Mountains. Additionally, the African Union headquarters in Addis Ababa also draws business travelers to Ethiopia.[133] However, until recently tourism has not been a government priority, and development in the sector lagged.[134]

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[123] UNWTO data on Angolan tourist arrivals is unclear, with 6.2 percent of arrivals reporting the purpose of visit as "leisure, recreation and holiday," 10.8 percent reporting "business and professional," and 83.0 percent reporting "other." Nathan Associates Inc., *Angola: Diagnostic Trade Integration*, 15–17.

[124] U.S. Department of Energy, Energy Information Administration, *Angola Energy Data*.

[125] Trivedi, "Elephants Airlifted to Repopulate War-Torn Park in Angola."

[126] Nathan Associates Inc., *Angola: Diagnostic Trade Integration*, 15–17.

[127] UNWTO, *Yearbook of Tourism Statistics*, CDRom; and Nathan Associates Inc., *Angola: Diagnostic Trade Integration*, 15–17 and Hudleston, "Angola Looks to Beaches, Game to Put It On Africa's Tourist Map."

[128] EIU, *Botswana Country Profile*, April 1, 2006.

[129] Ibid.

[130] UNWTO, *Yearbook of Tourism Statistics*, CDRom.

[131] EIU, *Cape Verde Country Profile*, February 1, 2006.

[132] UNWTO, *Yearbook of Tourism Statistics*, CDRom.

[133] EIU, *Business Africa*, April 1, 2005.

[134] Ethiopian government official, interview by Commission staff, Addis Ababa, Ethiopia, December 13, 2006.

Conflict has been a limiting factor in Ethiopian tourism services exports. Although exports increased through 2004 after the end of Ethiopia's war with Eritrea in 2000, the trend ended in 2005 due to domestic political violence and unrest in neighboring Somalia.[135] Conflict has not only constrained tourist demand, but also may have damaged tourism infrastructure, including hotels. Available hotel rooms fell from 6,499 in 2000 to 3,497 in 2003.[136] However, construction is underway on new hotel facilities in Addis Ababa, including a joint venture between Kuwaiti and French investors.[137]

Ghana

Increased tourism in Ghana can be attributed to tax incentives to businesses investing in the tourism sector and other government-backed stimuli.[138] Partly as a result of these incentives, increase in the supply of hotel rooms in Ghana has been steady, up from 13,641 in 2000 to 18,079 in 2004.[139] New hotel facilities have helped Ghana attract conferences. Additionally, Ghana's strategic tourism development plan, initiated in 2003, builds tourism capacity by promoting education in the hospitality industry, providing evaluation of tourism business plans, and organizing cultural festivals.[140]

Mali

Mali's tourism potential is based on a diverse cultural history. Attractions include four United Nations Educational, Scientific, and Cultural Organization world heritage sites and an ethnologically interesting population, including the Dogon and Touareg peoples.[141] Two stimuli—hosting the African Nations Cup and tax relief for tourism sector investors—have enabled Mali to begin to achieve its tourism potential.

Hosting the 2002 Confederation of African Football Nations Cup required Mali to increase its tourism capacity.[142] Providing sports venues, transportation, and lodging of internationally recognized standards is a prerequisite for Nations Cup hosts.[143] To improve lodging capacity, Mali increased its number of hotel rooms from fewer than 1,000 in 1992 to 3,492 by 2002.[144] Furthermore, airports in five cities—Bamako, Kayes, Mopti, Segou, and Sikasso—were upgraded.[145] Even after the Cup, the upgraded facilities allowed Mali to continue to attract tourists previously deterred by a lack of amenities.

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[135] EIU, *Ethiopia Country Profile*, February 9, 2006 and Hammer, "Ethiopia Opens Its Doors, Slowly."

[136] However, this recorded decline in hotel beds is contested by Ethiopian officials, who believe the number of beds have increased over time with stability and estimate the current total to be approximately 12,000 (Ethiopian government official, interview by Commission staff, Addis Ababa, Ethiopia, December 13, 2006); and EIU, *Ethiopia Country Profile*, February 9, 2006 and UNWTO, *Yearbook of Tourism Statistics*, CDRom.

[137] EIU, *Ethiopia Country Profile*, February 9, 2006.

[138] U.S. Department of State official, e-mail message to Commission staff, September 8, 2006.

[139] UNWTO, *Yearbook of Tourism Statistics*, CDRom.

[140] EIU, *Ghana Country Profile*, August 10, 2006.

[141] The four UNESCO world heritage sites in Mali are the cliff of Bandigara, the old towns of Dejenné, Timbuktu, and the tomb of Askia.

[142] In 1998, Mali was chosen to host the 2002 African Nations Cup, a biennial soccer tournament of African nations.

[143] Colombant, "Soccer Cup injects hope and worry into Mali," 7.

[144] EIU, *Mali Country Profile*; August 3, 2005, and Colombant, "Soccer Cup injects hope and worry into Mali," 7.

[145] Ibid.

Legislation favorable to investment in the tourism industry helped maintain momentum in the tourism sector's growth after 2002. The Tourism and Hotel Investment Code, ratified in 2002, grants investors relief from the business tax, the tax on industrial and commercial profits, and customs duties on equipment.[146] Hotel expansion in Bamako since the passage of the bill includes the construction of the Hôtel Massaley and the refurbishment of both the Hôtel de l'Amitié and the Grand Hôtel.[147] Consequently, the rise in the total number of hotel rooms continued from 2002 through 2004, growing from 3,492 to 4,659.

Mauritius

Both the influence and budget of the Mauritius Tourism Promotion Authority (MTPA) were recently expanded, likely contributing to increased tourist arrivals. An August 2004 law authorized penalties for tourism operators that do not meet statutory quality requirements.[148] Also, the MTPA's promotional budget was doubled, and it shifted focus to middle-price tourist markets from the premium-price market it previously sought.[149] As part of this shift, it has tried to encourage tourism from India, including encouraging businesses to accept payment in Indian rupees.[150]

Namibia

Namibia's careful ecological management has contributed to increased tourism exports. Namibia's tourism development policy focuses on low-volume, high-value tourism. Annual visitors are capped at 800,000 to avoid resource depletion and ecological damage. Furthermore, Namibia continues to expand preserved natural spaces. For instance, in 2004, the government of Namibia designated over 16,000 square miles as a new national park, Sperrgebiet.[151] Overall, the development policy has been a success with the average expenditure per visitor increasing from $211 in 2000 to $363 in 2003.[152]

Rwanda

As violence in Rwanda has decreased, tourism has increased. In 2000, only 3,700 foreigners visited its national parks. By 2005 the number had grown to over 16,000.[153] Rwanda has chosen to develop low-volume, high-value tourism. For example, at Virunga National Park, where visitors can see gorillas, daily passes cost $250 and capacity is limited to 35 visitors.[154]

Sierra Leone

Sierra Leone's 10-year civil war ended in 2002, and foreign nationals are beginning to return. The majority of arrivals reported "other" than business or leisure as their purpose of

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[146] The Tourism and Hotel Investment Code is law Number 02-015 of June 3, 2002. WTO, *Trade Policy Review Mali*, 65.

[147] Mali Ministry of Crafts and Tourism, "Inauguration of the Hotel Massaley"; and Mali Ministry of Crafts and Tourism, "Summit of the CEN-SAD in Mali."

[148] EIU, *County Profile Mauritius*, July 1, 2006.

[149] EIU, *Country Report Mauritius*, March 1, 2006.

[150] Ibid.

[151] EIU, *Country Profile Namibia*, August 16, 2006.

[152] UNWTO, *Yearbook of Tourism Statistics*, CDRom.

[153] EIU, *Rwanda Country Profile*, May 2, 2006.

[154] Ibid.

travel and are likely visiting friends and family. Prior to the war, approximately 100,000 tourists, mostly French beach-goers, arrived annually.[155]

Swaziland

The government of Swaziland has engaged in tourism promotion in order to regain market share. Although Swaziland's tourism services exports have been growing, tourism as a percent of GDP is still below its 1995 level.[156] Since neighboring South Africa's 1995 legalization of casinos, Swaziland's gaming industry is no longer a significant attraction for South African tourists.[157] As a result, the government of Swaziland has sought new methods to attract tourists and extend their length of stay. One such method is rail tourism. From 2003 through 2005, the number of rail tourists increased from 4,060 to 8,500.[158] However, rail passengers' length of stay tends to be short, so other investments are being made. Examples include a $290 million investment in a resort and game reserve at Lavumisa, on the country's southern border with South Africa, and the construction of a new international airport at Sikhuphe.[159]

Tanzania

Tourists are attracted by both Tanzania's beach resorts, including those on Zanzibar, and its national parks, including Serengeti.[160] Beginning in 2000, Tanzania began a privatization program, selling state-owned lodges and hotels. For instance, Hotels and Lodges Limited, a Mauritian investment group, purchased four such hotels. Privatization has introduced new investment and marketing skills, which have aided tourism services export growth.[161]

Other factors contributing to Tanzania's increased tourist arrivals include a marketing campaign in the United States and increased international flights to Tanzania.[162] In 2004, marketing campaigns promoting Tanzania were conducted in Florida, New York, Los Angeles, and Houston;[163] and arrivals from the United States increased from 40,000 in 2004 to 45,000 in 2005.[164] Added flights to Tanzania increased passenger convenience, stimulating demand. Beginning in April 2002, British Airways introduced direct air service from London, shortening flying times by two hours, while KLM added additional weekly flights in both 2001 and 2002.[165]

Uganda

Uganda has focused on niche and community-based sustainable development to foster tourism growth. Uganda's niche products include white-water rafting, birdwatching, and

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[155] EIU, *Sierra Leone Country Profile*, September 30, 1996.
[156] EIU, *Swaziland Country Profile*, September 7, 2006.
[157] Ibid.
[158] Ibid.
[159] EIU, *Business Africa*, July 1, 2006 and EIU, *Swaziland Country Report*, July 1, 2004.
[160] EIU, *Tanzania Country Report*, June 9, 2006.
[161] EIU, *Tanzania Country Report*, February 1, 2004; and EIU, *Tanzania Country Report*, February 18, 2000.
[162] TTB official, interview by Commission staff, Dar es Salaam, Tanzania, December 11, 2006.
[163] Ibid.
[164] Ibid.
[165] *Airline Industry Information*, "British Airways adjusts schedules for east African routes;" and *Air Highways Magazine*, "British Airways Dar to London"; and *Air Highways Magazine*, "KLM Royal Dutch Airlines Daily Service to Tanzania."

angling, in contrast to the safari focus of its neighbors, Kenya and Tanzania.[166] Examples of Uganda's development style include the distribution of 20 percent of national park gate receipts to local communities, while providing additional support to park management through sustainable activities such as bee-keeping and agro-forestry.[167]

[166] Kenya and Tanzania also promote beach holidays. Uganda, as a landlocked country, cannot.

[167] Leonard, "Can tourism bring Africa back to life?"; and EIU, *Uganda Country Report*, February 25, 2000.

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APPENDIX A
REQUEST LETTER

EXECUTIVE OFFICE OF THE PRESIDENT
THE UNITED STATES TRADE REPRESENTATIVE
WASHINGTON, D.C. 20508

JUL 26 2006

DOCKET NUMBER 2495

Office of the Secretary Int'l Trade Commission

2006 JUL 27 PM 3:02

The Honorable Daniel R. Pearson
Chairman
U.S. International Trade Commission
500 E Street, S.W.
Washington, D.C. 20436

Dear Chairman Pearson:

As you know, one of the President's important trade policy initiatives has been to assist sub-Saharan African (SSA) countries to bolster their economic growth and development through trade. Utilizing programs such as the African Growth and Opportunity Act (AGOA), the African Global Competitiveness Initiative, and various other initiatives, the Administration has sought to stimulate economic growth and competitiveness in the SSA region by promoting free markets, expanding U.S.-SSA trade and investment, and facilitating SSA's integration into the global economy.

To assist U.S. trade policy makers, it would be helpful to have the U.S. International Trade Commission (the "Commission") provide certain information on the competitive factors affecting industries within SSA that have experienced significant increases or decreases in exports.

Pursuant to authority delegated by the President to the United States Trade Representative under Section 332(g) of the Tariff Act of 1930, I therefore request that the Commission prepare annual reports, for a period of three years, that provide brief overviews of the trends in SSA exports in the agricultural, mining and manufacturing, and services sectors, as well as profiles of SSA industries within those sectors that produce products, as indicated below, that have shown significant export shifts in recent years. The reports should be based on the most recent five year period for which data are available.

Each profile should be concise and include the following information, to the extent the data are available:

- a description of the leading industries within SSA that export the subject products, including their position relative to global competitors;
- identification of the leading SSA exporting countries and their key markets; and
- analysis of the competitive factors, by country, that have contributed to the shift in exports. (Such factors may include access to inputs, labor, technology, investment, trade policies, e.g., tariffs and trade preference programs such as AGOA, privatization, and liberalization.)

The primary focus of the profiles should be on the leading country exporters for each product, but, to the extent practicable, the profiles should also contain some information on industries in all countries within SSA that export the subject products.

The first annual report should cover industries that produce the following products: 1) agriculture -- cut flowers, cocoa butter/paste, nuts (coconuts, brazil nuts, and cashews), and prepared/preserved fish; 2) mining and manufacturing -- acyclic alcohol, unwrought aluminum, textiles and apparel, petroleum gas (liquified natural gas), flat-rolled steel, and wood veneer sheets; and, 3) services -- financial services and tourism. The Commission is requested to deliver the first report no later than April 3, 2007.

The second and third reports should be delivered 12 and 24 months, respectively, after delivery of the first annual report. Consultations between the Commission and USTR on the industry coverage in the second and third reports should be completed no later than 2 months after receipt of the prior year's study.

I anticipate that the Commission's reports will be made available to the public in their entirety. Therefore, the reports should not contain any confidential business or national security information.

The Commission's assistance in this matter is greatly appreciated.

Sincerely,

Susan C. Schwab

APPENDIX B
FEDERAL REGISTER NOTICE

INTERNATIONAL TRADE COMMISSION
[Investigation No. 332-477]

Sub-Saharan Africa: Affecting Trade Patterns of Selected Industries

AGENCY: United States International Trade Commission.
ACTION: Institution of investigation and scheduling of hearing.

SUMMARY: Following receipt on July 27, 2006 of a request from the United States Trade Representative (USTR) under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)), the U.S. International Trade Commission ("the Commission") instituted investigation No. 332-477, *Sub-Saharan Africa: Factors Affecting Trade Patterns of Selected Industries.*

EFFECTIVE DATE: August 18, 2006.

Background.—As requested by the USTR, the Commission will conduct an investigtion under section 332(g) and prepare three annual reports providing certain information on the competitive factors affecting industries within Sub-Saharan Africa (SSA) that have experienced significant shifts in exports.

In each of the reports, the Commission will provide an overview of the trends in SSA exports in the (1) Agriculture, (2) mining and manufacturing, and (3) services sectors, as well as profiles of SSA industries within those sectors that produce products (as identified by the USTR) that have shown significant export shifts in recent years. The reports will be based on the most recent 5-year period for which data are available.

Each industry profile will provide the following information, to the extent data are available:

- A description of the leading industries within SSA that export the subject products, including their position relative to global competitors;
- Identification of the leading SSA exporting countries and their key markets; and
- Analysis of the competitive factors, by country, that have contributed to the shift in exports. (Such factors may include access to inputs, labor, technology, investment, trade policies-e.g., tariffs and trade preference programs such as the African Growth and Opportunity Act (AGOA), privatization, and liberalization.)

As specified in the USTR's letter, the first annual report will cover industries producing the following products: (1) Agriculture—cut flowers, cocoa butter and paste, nuts (coconuts, Brazil nuts, and cashews), and prepared and preserved fish; (2) mining and manufacturing—acyclic alcohol, unwrought aluminum, textiles and apparel, petroleum gas (liquified natural gas), flat-rolled steel, and wood veneer sheets; and (3) services—financial services and tourism.

The Commission expects to deliver the first annual report to the USTR by April 3, 2007. The second and third reports will be delivered 12 and 24 months, respectively, after delivery of the first annual report.

The Commission anticipates that industry coverage for the subsequent reports will be determined in consultation with the USTR no later than 2 months after delivery of the previous year's report.

FOR FURTHER INFORMATION CONTACT: Project Leader: Brad C. Gehrke (202-205-3329 or brad.gehrke@usitc.gov). Deputy Project Leader: Joanne E. Guth (202-205-3264 or joanne.guth@usitc.gov).

Industry-specific information may be obtained fromthe above persons. For more information on legal aspects of the investigation, contact William Gearhart of the Commission's Office of the General Counsel at 202-205-3091 or william.gearhart@usitc.gov. The media should contact Margaret O'Laughlin Office of External Relations at 202-205-1819 or margaret.olaughlin@usitc.gov. Hearing impaired individuals are advised that information on this matter can be obtained by contacting the TDD terminal at 202-20501810. General information concerning the Commission may also be obtained by accessing its Internet server (http://www.usitc.gov). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS–ONLINE) at http://www.usitc.gov/secretary/edis.htm.

Public Hearing: A public hearing in connection with the first report in this investigation will be held beginning at 9:30 a.m. on December 6, 2006, at the United States International Trade Commission Building, 500 E Street, SW., Washington, DC. All persons have the right to appear by counsel or in person, to present information, and to be heard. Persons withing to appear at the public hearing should file a letter to such effect with the Secretary, United States International Trade Commission, 500 E Street, SW., Washington, DC 20436, not later than the close of business (5:15 p.m. EST) on November 13, 2006, in accordance with the requirements in the "Written Submissions" section below.

Written Submissions: In lieu of or in addition to participating in the hearing, interested parties are invited to submit written statements or briefs concerning the first report in this investigation. All written submissions, including requests to appear at the hearing, statements, and briefs, should be addressed to the Secretary, United States International Trade Commission, 500 E Street, SW., Washington, DC 20436. Any prehearing statements or briefs should be filed not later than close of business, November 15, 2006; the deadline for filing posthearing statements or briefs is close of business, December 15, 2006. All written submissions must conform with the provisions of section 201.8 of the *Commission's Rules of Practice and Procedure* (19 CFR 201.8) Section 201.8 of the rules requires that a signed original (or a copy designated as an original) and fourteen (14) copies of each document be filed. In the event that confidential treatment of the document is requested, at least four (4) additional copies must be filed, in which the confidential information must be deleted (see the following paragraph for further information regarding confidential business information). The Commission's rules do not authorize filing submissions with the Secretary by facsimile or electronic means, except to the extent permitted by section 201.8 of the rules (see *Handbook for Electronic Filing Procedures*, *http://www.usitc.gov/secretary/fed_reg_notices/rules/documents/handbook_on_electronic_filing.pdf*; persons with questions regarding electronic filing should contact the Office of the Secretary at 202-205-2000 or edis@usitc.gov.

Any submissions that contain confidential business information must also conform with the requirements of section 201.6 of the *Commission's Rules of Practice and Procedure* (19 CFR 201.6). Section 201.6 of the rules

requires that the cover of the document and the individual pages be clearly marked as to whether they are the "confidential" or "non- confidential" version, and that the confidential business information be clearly identified by means of brackets. All written submissions, except for confidential business information, will be made available in the Office of the Secretary to the Commission for inspection by interested parties.

In her request letter, the USTR stated that she intended to make the Commission's report available to the public in its entirety, and asked that the Commission not include any confidential business or national security information in the report it sends to her office. Consequently, the Commission's report will not contain any such information. Any confidential business information received by the Commission in this investigation and used in preparing the report will not be published in a manner that would reveal the operations of the firm supplying the information.

Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Secretary at 202-205-2000.

By order of the Commission.

Issued: August 23, 2006.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. E6-14302 Filed 8-28-06; 8:45 am]

BILLING CODE 7020-02-P

APPENDIX C
SUMMARY OF VIEWS OF INTERESTED PARTIES

S.C. Young Kim Fat (Ms), Chargé d' Affaires, a.i. Embassy of the Republic of Mauritius[1]

In her submission, the charge d'affaires for Mauritius indicated the importance of the U.S. market to Mauritian exports, particularly with respect to apparel. However, she said that Mauritius has not benefitted from and, in the case of apparel, has actually been harmed by the African Growth and Opportunity Act (AGOA). Exclusion from the third country fabric rule and expiration of the Multi-Fiber Arrangement (MFA) have caused foreign investment in the apparel industry to exit Mauritius. The charge d'affaires indicated that Mauritius needed more flexible rules of origin with respect to AGOA to prevent further erosion in its apparel industry. Furthermore, she said that Mauritius lacks the capacity to take advantage of AGOA provisions as they relate to agricultural exports and that Mauritius's agricultural exports to the United States could benefit from trade capacity-building activities.

The submission noted that, at the time that AGOA was enacted, Mauritius was the largest sub-Saharan Africa (SSA) exporter of apparel to the United States. Mauritius has since dropped behind Lesotho, Kenya, Madagascar, Swaziland, and South Africa into sixth place, as apparel exports have decreased from a 2002 peak of 47 million square meter equivalents (SMEs) to 29 million SMEs. The charge d'affaires attributed this decline to two factors. First, Mauritius does not qualify for the Special Rule for Lesser Developed Beneficiary countries (third-country fabric provision) that allows duty-free access to apparel made from fabric not originating in beneficiary countries. (Mauritius requested and received temporary access to the third-country fabric provision; however, the charge d'affaires stated that the waiver was in place for only 7 months, which was an insufficient time to generate or maintain investment in the apparel and textile industry.) Second, expiration of the MFA eliminated benefits to Mauritian apparel production resulting from quota restrictions. Both of these factors have resulted in the closing of apparel factories and the loss of jobs as foreign investors moved their production to more-favorable locations. The charge d'affaires states that termination of the MFA and unavailability of third-country fabric has caused 23 factories to close, entailing the loss of 25,600 jobs. She advocated the addition of a value-added provision to AGOA to determine origin as a way for Mauritius to promote local fabric production and increase its apparel exports.

The charge d'affaires identified agriculture as an area where Mauritius might benefit from AGOA provisions. However, she stated that Mauritius's agricultural exports are restricted by its lack of capacity to penetrate the U.S. market for agricultural goods because of high U.S. standards and lack of knowledge of the marketing and distribution system. She indicated that Mauritius would benefit from capacity-building assistance with respect to meeting U.S. standards and understanding the U.S. distribution system.

[1] S.C. Young Kim Fat (Ms), Charge d'Affaires, Embassy of the Republic of Mauritius, written submission.

Suzanne Morgan
International Wood Products Association[2]

In her statement, Suzanne Morgan said that the International Wood Products Association (IWPA) represents importers, manufacturers, transportation companies, port authorities, customs brokers, and overseas producers, many of whom import wood veneer sheets from SSA. She identified two markets for SSA wood veneer sheets in the United States: (1) the market for high-end architectural applications in residential and commercial construction, which is expanding; and (2) the market for core-stock veneer used by U.S. hardwood plywood manufacturers, which is contracting, though it is by far the largest in terms of volume.

Ms. Morgan further indicated that shifts in U.S. imports of SSA wood veneer products are the result of U.S. market conditions, not the result of the availability or quality of SSA wood veneer. First, the U.S. economy, in general, has slowed. Second, direct imports of hardwood plywood (most notably from China) has lessened demand for domestic hardwood plywood produced from African core-stock. Other factors that the IWPA identified as constraints on U.S. imports of SSA wood veneer are availability and cost of shipping services, greater scrutiny during inspection of product from Africa relative to product from other sources, and weakness in the U.S. dollar.

Ms. Morgan indicated that many IWPA members have worked with SSA wood veneer suppliers for decades and the Ghana Forestry Commission is an IWPA overseas member. The IWPA also works with SSA wood veneer producers through its involvement in the International Tropical Timer Organization.

Christopher D. Lischewski, President and CEO of Connors Bros. Bumble Bee Foods[3]

In his statement, Mr. Lischewski said that Bumble Bee Foods, with several brands of seafood and other foods, distributes tuna under the largest brand of seafood in the United States. It operates the last two remaining tuna canneries in the United States, in California and Puerto Rico. He indicated that Bumble Bee Foods supports the current U.S. duty structure for canned tuna and believes it has provided significant economic benefits to the SSA region. SSA exporters currently supply large amounts of tuna loins to Bumble Bee for the U.S. market. Five years ago, virtually no such trade existed. The firm attributes the growth of such trade to the AGOA.

Much of the tuna used by Bumble Bee is harvested by Taiwanese vessels, purchased by Bumble Bee, and shipped to Mauritius (and elsewhere) for loining and re-export to Bumble Bee for canning. The loining stage of processing is labor intensive, and this system helps provide jobs in Mauritius and other SSA countries. Bumble Bee has invested significant

[2] Suzanne Morgan, International Wood Products Association, written submission.
[3] Christopher D. Lischewski, President and CEO, Connor Bros., Bumble Bee Foods, written submission.

procurement and technical resources in the SSA industry and favors policies that encourage the growth of the tuna loining industry in that region.

However, Mr. Lischewski said that U.S. duties on whole or loined tuna (0 to 1 percent) from Africa are lower than those on canned tuna (6 to 35 percent); therefore reduction of canned tuna duties would encourage exports from Africa of canned tuna and weaken the U.S. canned tuna industry. Bumble Bee does not favor reductions in the U.S. duties on canned tuna, especially when the EU duty of 24 percent is prohibitively high for U.S. exporters. Enabling SSA countries to undertake the low-cost, labor-intensive stages of tuna processing helps both their industries and the U.S. industry.

APPENDIX D
HARMONIZED TARIFF SCHEDULE CATEGORIES

Table D-1 Harmonized tariff schedule categories included in select industries

Industry sector	HTS headings or sub-headings included	Description
Cut flowers	0603	Cut flowers and buds suitable for bouquets or ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared
Cocoa butter and paste	1803	Cocoa paste, whether or not defatted
	1804	Cocoa butter, fat and oil
Nuts	1801	Coconuts, brazil nuts and cashew nuts, fresh or dried
Prepared or preserved fish	1604	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs
Acyclic alcohol	2905	Acyclic alcohols and their halogenated, sulfonated, nitrated or nitrosated derivatives
Unwrought aluminum	7601	Aluminum, unwrought
Petroleum gases	2711	Petroleum gases and other gaseous hydrocarbons
Flat-rolled steel	7208	Flat-rolled iron or nonalloy steel products, 600 mm (23.6 in.) or more wide, hot-rolled, not clad, plated or coated
	7209	Flat-rolled iron or nonalloy steel products, 600 mm (23.6 in.) or more wide, cold-rolled, not clad, plated or coated
	7210	Flat-rolled iron or nonalloy steel products, 600 mm (23.6 in.) or more wide, clad, plated or coated
	7211	Flat-rolled iron or nonalloy steel products, less than 600 mm (23.6 in.) wide, not clad, plated or coated
	7212	Flat-rolled iron or nonalloy steel products, less than 600 mm (23.6 in.) wide, clad, plated or coated
	7219	Flat-rolled stainless steel products, 600 mm (23.6 in.) or more wide
	7220	Flat-rolled stainless steel products, less than 600 mm (23.6 in.) wide
Wood veneer sheets	4408	Veneer sheets and sheets for plywood and other wood sawn lengthwise, sliced or peeled, not more than 6 mm (.236 in.) thick
Textiles and apparel	The U.S. International Trade Commission includes in the definition of textiles and apparel the following items: 3926.20, 4015, 4203, 4303, 4304, 50, 5103, 5104, 5105, 5106, 5107, 5108, 5109, 5110, 5111, 5112, 5113, 5202, 5203, 5204, 5205, 5206, 5207, 5208, 5209, 5210, 5211, 5212, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 7019, 9404.30, 9404.90. Exports from sub-Saharan Africa in most of these categories were small or negligible; exports from sub-Saharan Africa were dominated by subheadings: 6110, 6203, and 6204.	
	6110	Articles of Apparel and Clothing Accessories, Knitted or Crocheted; sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted
	6203	Articles of Apparel and Clothing Accessories, Not Knitted or Crocheted; Men's or boys' suits, ensembles, suit-type jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear)
	6204	Articles of Apparel and Clothing Accessories, Not Knitted or Crocheted; Women's or girls' suits, ensembles, suit-type jackets, blazers, dresses, skirts, divided skirts, trousers, bib and brace overalls, breeches and shorts (other than swimwear)

Source: Compiled by Commission staff from U.S. International Trade Commission, Harmonized Tariff Schedule of the United States (2006).