CONFIDENTIAL
62/GS/E

The Economy

Malagasy Republic

August 1973

NATIONAL INTELLIGENCE SURVEY

CONFIDENTIAL

NATIONAL INTELLIGENCE SURVEY PUBLICATIONS

The basic unit of the NIS is the *General Survey*, which is now published in a bound-by-chapter format so that topics of greater perishability can be updated on an individual basis. These chapters—Country Profile, The Society, Government and Politics, The Economy, Military Geography, Transportation and Telecommunications, Armed Forces, Science, and Intelligence and Security, provide the primary NIS coverage. Some chapters, particularly Science and Intelligence and Security, that are not pertinent to all countries, are produced selectively. For small countries requiring only minimal NIS treatment, the *General Survey* coverage may be bound into one volume.

Supplementing the *General Survey* is the NIS *Basic Intelligence Factbook*, a ready reference publication that semiannually updates key statistical data found in the Survey. An unclassified edition of the factbook omits some details on the economy, the defense forces, and the intelligence and security organizations.

Although detailed sections on many topics were part of the NIS Program, production of these sections has been phased out. Those previously produced will continue to be available as long as the major portion of the study is considered valid.

A quarterly listing of all active NIS units is published in the *Inventory of Available NIS Publications*, which is also bound into the concurrent classified Factbook. The Inventory lists all NIS units by area name and number and includes classification and date of issue; it thus facilitates the ordering of NIS units as well as their filing, cataloging, and utilization.

Initial dissemination, additional copies of NIS units, or separate chapters of the *General Surveys* can be obtained directly or through liaison channels from the Central Intelligence Agency.

The *General Survey* is prepared for the NIS by the Central Intelligence Agency and the Defense Intelligence Agency under the general direction of the NIS Committee. It is coordinated, edited, published, and disseminated by the Central Intelligence Agency.

WARNING

The NIS is National Intelligence and may not be released or shown to representatives of any foreign government or international body except by specific authorization of the Director of Central Intelligence in accordance with the provisions of National Security Council Intelligence Directive No. 1.

For NIS containing unclassified material, however, the portions so marked may be made available for official purposes to foreign nationals and nongovernment personnel provided no attribution is made to National Intelligence or the National Intelligence Survey.

Subsections and graphics are individually classified according to content. Classification/control designations are:

(U/OU) . . Unclassified/For Official Use Only
(C) . . . . . . Confidential
(S) . . . . . . Secret

This chapter was prepared for the NIS by the Central Intelligence Agency. Research was substantially completed by April 1973.

Malagasy Republic

CONTENTS

This chapter supersedes the economic coverage in the General Survey dated August 1968.

CONFIDENTIAL

FIGURES

The Economy

A. Economic appraisal (U/OU)

The Malagasy Republic, which occupies the island of Madagascar, is one of the poorer countries of Africa. Economic progress has been slow despite sizable French assistance. Per capita gross domestic product (GDP) in 1972 was about $135, slightly lower than the average for black Africa. Agriculture, which provides a livelihood for 85% of the people and accounts for about 75% of exports, has been growing at a rate slightly faster than that of the population. Most of the island's approximately 7 million inhabitants live in villages, producing the bare essentials for subsistence by traditional methods. A small upper income group is engaged in the more modern and profitable economic activities, e.g., commerce, finance, mining, foreign trade, and the professions. Several hundred European residents (mainly French) and European investors play an important role in financial, technical, and managerial activities. Economic growth is hampered by the country's distance from external markets, fluctuating world prices for its agricultural commodities, a lack of investment funds and skilled technicians, a poorly developed internal transport system, and the absence of experienced and imaginative economic leadership.

National output has been rising at an average annual rate of 4.5% in real terms in recent years, compared to a rate of population growth of about 2.3%. Unusually good harvests in 1970 pushed overall growth up to 6% to 7%. In 1971, however, agricultural production declined, and the pace of industrial development slackened; overall growth was about 4% (Figure 1). In 1972, the growth rate remained at about the 1971 level. Figure 2 shows the shares of the major economic sectors in the GDP in 1970. France continues to dominate the modern sector of Madagascar's economy, but French influence is gradually diminishing. French companies control most of the industry, plantation agriculture, banking, and international trade, and French products account for more than one-half of the total imports. Until its announced withdrawal in May 1973, Madagascar was a member of the franc zone, and its franc was freely convertible with the French franc. In recent years, commercial contacts with other countries have been expanding, particularly with European Community (EC) countries other than France and with Japan. Since 1968, when Madagascar accorded the other EC countries the same trade preference given to France, their share of the import market has increased from 13% to about 18%.

Government authorities have generally followed prudent financial policies. Growing surpluses in the government's current budget have helped finance expenditures on roads, dams, and other public projects; the remainder has been financed by foreign grants and loans, moderate domestic borrowing, and, in 1968-69, some drawing down of treasury balances. The government is normally a net creditor of the

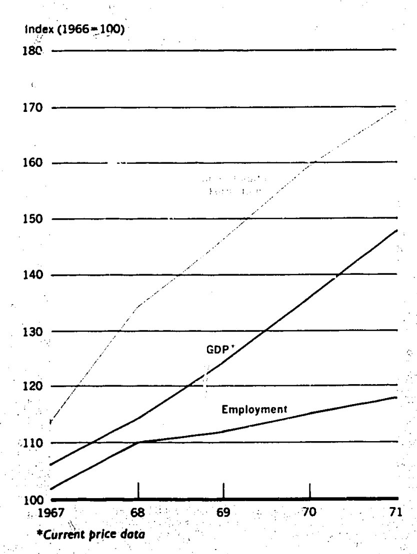

FIGURE 1. Economic indicators, 1967–71 (U/OU)

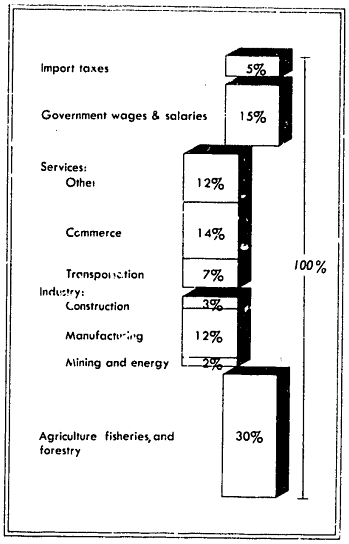

FIGURE 2. Gross domestic product, by sector of origin, 1970 (U/OU)

banking system, its impact on the monetary situation arising principally from the building up or drawing down of the treasury's cash balances.

The nation's second economic development plan, covering the period 1972-74, projected an average annual growth rate of 4.6%, with substantial increases in investment expenditures for new roads and agriculture. Prospects for carrying out this plan dimmed in 1972, however, when a new government introduced an austerity program featuring the elimination of several taxes. The new government will probably continue the policy of seeking foreign aid for its investment program. Since 1967, external aid has totaled about $50 million annually, mainly from France and other EC members.

B. Structure of the economy

Agriculture, fisheries, and forestry support 85% of the population, but they account for less than one-third of GDP. Much of the population is engaged in subsistence agriculture, in which productivity is particularly low. Rice is the principal food crop and a major export. Coffee is the chief exports, usually accounting for nearly 30% of annual foreign sales. Cloves and vanilla are other leading agricultural exports. Sales of livestock and meat, which accounted for nearly 10% of 1970 exports, have good growth potential. Industry, except for a handful of new modern plants, is limited to medium and small plants that produce foodstuffs, textiles, and construction materials. Most machinery and other modern manufactures must be imported. The leading minerals produced are chromite, graphite, and mica. Other minerals produced are coal, nickel, industrial and semiprecious stones, phosphate, gold, bauxite, titanium, uranium, and thorium. Offshore oil drilling is proceeding, but so far petroleum has not been found in significant quantities. Electric power output is small and represents only a fraction of the island's considerable hydroelectric potential. The geographic distribution of the country's principal economic activities is shown in Figure 3. (U/OU)

1. Agriculture, fisheries, and forestry (U/OU)

a. Terrain and climate

Madagascar lies astride the Tropic of Capricorn, about 250 miles across the Mozambique Channel from the southeast coast of mainland Africa. About 1,000 miles long and 375 miles wide at its broadest point, Madagascar is the world's fourth largest island, after Greenland, New Guinea, and Borneo. The terrain is generally rugged, consisting mainly of a mountainous central plateau with elevations up to 10,000 feet, eroded hills, and forests. The soil is generally poor for farming, except in the valleys, in several upland areas, and in some of the lowland regions, especially along the east and northwest coasts.

In spite of its tropical location, much of Madagascar has moderate temperatures because of the high altitude of the interior and the seasonal effect of moisture-laden, southeast trade winds. The east coast receives the most precipitation, with hurricane-type storms being a regular occurrence. Although rainfall decreases to the west, it is generally sufficient for agriculture, except in some semidesert areas of the south. Rainfall is heaviest between November and April, and cool, dry weather occurs from May to October.

b. Land use

Only about 5% of Madagascar's land surface of 230,000 square miles is cultivated (Figure 4), although about 15% of the land is potentially arable. Subsistence crops are grown on about two-thirds of the cultivated land and commercial crops on the remainder. Pastureland, prairies, and forests comprise

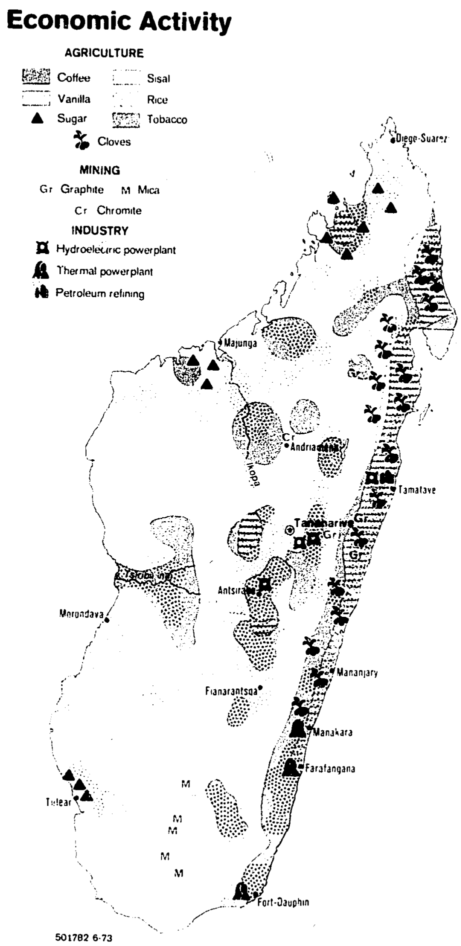

FIGURE 3. Economic activity (U/OU)

nearly 80% of the land area. Rivers, lakes, and wasteland account for most of the remainder.

Of the 4.4 million acres under cultivation and the 2.5 million acres lying fallow, about 90% is held by Malagasy farmers working family plots seldom larger than 5 acres. The rest is principally government-owned land, which is used for state farms and experimental stations or held idle. Landholding of European nationals, comprising only about 100,000 acres, provide more than one-third of Madagascar's agricultural exports. European nationals produce virtually all the sisal, most of the sugar, and a substantial portion of the bananas, tobacco, and cotton that are exported.

c. *Agriculture*

Subsistence farming accounts for more than half of agricultural output. State farms and agricultural producer cooperatives have been established to encourage the production of cash crops by subsistence farmers. These efforts have had little effect. Commercial farming normally is associated with larger farms located near cities or major roads. About 55% of commercial farm income is from sales on local markets. The main commodities produced for local consumption are rice, manioc, and meat; those produced for export are chiefly coffee, cloves, vanilla, rice, sugar, and animal products (Figure 5). Private farmers are assisted by government-financed regional development organizations and also by stabilization funds. The bulk of this assistance benefits only commercial farmers.

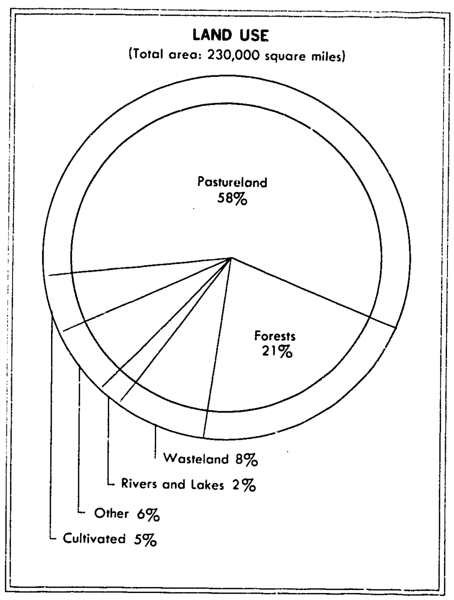

FIGURE 4. Estimated land use, 1970 (U/OU)

FIGURE 5. Production of main crops (U/OU)
(Thousands of metric tons)

	AVERAGE 1964-1968	1969	1970	1971
Rice.........	1,739	1,858	1,865	1,902
Manioc......	1,072	1,253	1,218	1,291
Coffee.......	70	57	63	65
Cloves.......	5	5	13	6
Vanilla.......	1	1	2	2
Sisal.........	28	30	26	22
Raffia........	12	14	9	*na*
Sugar........	104	98	102	93
Tobacco.	5	6	5	5
Cotton.......	8	17	19	24

na Data not available.

Agricultural output has been expanding at an average annual rate of 3% in recent years as the result of a gradual increase in farm inputs and a gradual improvement in agricultural techniques. Periodic cyclones cause considerable crop damage along the east coast. Another impediment to agriculture is the custom of slash-and-burn agriculture, which has exhausted and eroded a considerable part of the limited cultivated soil. Moreover, poor animal husbandry and the treatment of cattle as symbols of wealth have prevented the rational exploitation of the cattle herd.

A main objective of the second economic plan (1972-74) was to boost agricultural production by 25% in 3 years. On the face of it, this goal was overambitious, and the plan has been at least partly shelved. A particular effort is to be made to expand the cultivation of rice and other food crops throughout the island. Funds are to be provided to help establish modern farms by providing loans, guaranteeing prices to producers, clearing new areas for cultivation, and teaching modern farming methods. Other plan objectives include improvement of the road net to facilitate distribution of agricultural products, commodity price stabilization, and the development of processing facilities for agricultural products. In addition to raising agricultural production, it was hoped that the program would slow the exodus from the countryside, thereby easing the problem of urban unemployment.

(1) *Rice*—Rice is Madagascar's principal food crop and an important export product. It accounts for about half the value of the country's crop output. Due to increases in both yields and acreage, rice production between 1965 and 1968 rose from 1.59 million tons to 1.87 million tons. Since then, production has leveled off. Most of the crop consists of cheaper grades for home consumption. Increasing domestic requirements in recent years have diminished supplies available for export. Foreign sales dropped from about $11 million in 1970 to $7.5 million in 1971 and to $6.8 million in 1972. Better quality long-grain rice, developed and grown by European landholders, is the main type exported, and cheaper grades of rice are imported for local consumption. Purchases of rice—mainly from Burma, Thailand, and Brazil—actually exceeded exports by 25,700 tons in 1971. Nonetheless, net earnings from the rice trade that year amounted to $800,000.

Rice is grown throughout much of the island on roughly one-fourth of the cultivated land. About 55% of the rice land is irrigated, of which more than half is in the central highlands. Rice is an important crop along the east coast and in the rich alluvial river valleys of the northwest. Ordinary rice is produced principally by Malagasy farmers on small individual plots. Yields average about 1,800 pounds per acre, higher than in most other African countries but less than half the yields in Japan and the United States. Rice development programs are largely financed by the French Aid and Cooperation Fund (FAC) and the European Development Fund (FED). In addition, in July 1971 the International Development Association of the World Bank approved a loan to help finance an irrigation and development program that ultimately will open up new rice, tobacco, cotton and peanut fields in the Morondava river area in southwestern Madagascar.

The marketing of rice is handled by both the private sector and the government's Rice Marketing and Stabilization Board (BCSR). The BCSR has a monopoly in the province of Fianarantsoa, which accounts for more than one-fourth of Madagascar's rice production, and also in other major growing areas of the high plateau near Lac Alaotra and Belandriana. BCSR determines minimum producer prices throughout the country and issues export licenses.

(2) *Coffee*—Coffee is Madagascar's most important cash crop. Production, which fluctuates considerably because of variations in weather, dropped from a record level of 73,000 tons in 1967 to about 63,000 tons in 1970 and then rose to 65,000 tons in 1971. Foreign sales of coffee, valued at $39 million in 1971, accounted for almost 26% of all exports. France and the United States were the chief markets. Marketing is carried out under terms of the International Coffee Agreement (ICA), which limits exports to quota markets to 55,000 tons a year. The remainder may be sold in nonquota markets or stockpiled. Local consumption averages about 8,000 tons annually.

Coffee plantations, which occupy about 6% of the cultivated area, are concentrated mainly in the northern and eastern lowlands and foothills. Robusta, used chiefly for making instant coffee, is the main variety produced. Most coffee plots are small, often about an acre, and have low yields—generally 100 to 150 kilograms per acre. Commercial farms, owned mainly by foreign nationals, account for about 10% of the coffee acreage; their yields reach about 500 kilograms per acre. About two-thirds of the coffee trees are more than 20 years old. To avoid a fall in coffee output due to ageing trees, the government a few years ago started an educational program to promote better pruning techniques, the use of pesticides and fertilizers, and the replacement of old trees with selected plants of higher potential yield.

The government-operated Coffee Stabilization Fund sets the price paid to the producers, which varies according to grade and producing area. Exporters maintain their own warehouses and facilities for grading and processing. They arrange financing and either draw upon or contribute to the Coffee Stabilization Fund, depending upon the world market price and International Coffee Agreement export quotas.

(3) *Vanilla*—Madagascar is the world's largest producer of natural vanilla, accounting for about three-fourths of the world supply. Production from 1965 to 1969 averaged about 1,300 tons annually. Acreage increases between 1965 and 1968 boosted vanilla production to about 1,700 tons annually in 1970-71. Growing areas are concentrated along the northeast coast of the island, especially from Tamatave to Sambava, and inland to Andapa. Up to 50,000 people roughly 2% of the active working population, are directly employed in the vanilla industry as growers, curers, packers, or exporters.

Madagascar's 1971 exports of 1,160 tons of vanilla were valued at some $12.9 million, nearly 9% of total exports. The United States was Madagascar's biggest market for vanilla, taking 800 tons valued at $8.9 million. The rest went to France, West Germany, and Canada. Madagascar, the Comoro Islands and Reunion maintain a common marketing policy for vanilla, meeting each year with the major consumer countries to establish requirements and prices for the following season.

Because world demand for natural vanilla is limited, only about two-thirds of Madagascar's production is exported. Consequently, vanilla stocks have been increasing, amounting in mid-1972 to the equivalent of 1½ to 2 years' exports. Mainly because of Malagasy-funded publicity efforts, natural vanilla has made inroads on European markets, where consumption over the last 3 years has more than doubled. Advertising programs are now being launched on the U.S. market.

(4) *Sugar*—Sugar production in recent years has averaged about 100,000 tons annually, of which about 45,000 tons has been exported at prices somewhat above world market prices. The average price of sugar exports is raised by the sale of a substantial part of the exports through the Afro-Malagasy Common Organization (OCAM), which levies a small tax on sugar imported by member countries and pays a bonus to exporting countries—now only Madagascar and Congo. Most of the remainder of the sugar exports is sold to the United States under quotas established in the U.S. Sugar Act. Sugar exports in 1971 amounted to 33,400 tons, valued at $4 million; of this total, 25,000 tons went to Ivory Coast, Senegal, Niger, and Comoro Islands, and 18,300 tons went to the United States. Because of a drop in sugar production in 1971, Madagascar was unable to fill its quotas under the International Sugar Agreement and the OCAM Sugar Agreement.

The markets for sugar are uncertain. Certain OCAM members—Ivory Coast, Cameroon, and Chad—are increasing domestic production, and Senegal withdrew from the OCAM Sugar Agreement in 1970. The U.S. quotas are subject to annual review.

Because of the uncertain market, growers plan to hold sugarcane acreage at its present level of 52,000 acres. Most sugarcane is grown on large plantations, both European and Malagasy owned, situated in the northern river deltas and on Nosy Be (island). Yields average less than 10 tons per acre, about half as much as average South African yields.

(5) *Tobacco*—The production of tobacco has remained at a level of 5,000 to 6,000 tons in recent years. Nearly half of the crop is exported; the balance is used by local cigar, cigarette, and chewing tobacco manufacturers. Foreign sales, mainly to France, have been stable, averaging about 2,400 tons annually, valued at roughly $2.5 million. Tobacco is grown principally on French-owned plantations in the Tsiribihina river basin and in scattered areas of the central plateau. A major drawback to increased production is the failure to convert Madagascar's Maryland-type tobacco plantations to the Virginia and burley varieties, which for many years have been in much greater demand in France and other overseas markets.

(6) *Cloves*—Madagascar is the world's second-ranking producer of cloves (after Zanzibar), accounting for about 30% of the world's output. Exports of cloves and clove oil in 1971 were valued at $24 million, accounting for about 16% of total exports. Production is concentrated primarily on Ile Sainte-Marie[1] off the northeastern coast. Both production and exports of cloves fluctuate sharply, as shown in the tabulation below (quantity in metric tons):

	PRODUCTION	EXPORTS
1968	3,500	12,400
1969	4,800	1,000
1970	13,300	5,300
1971	6,300	7,500

To regulate Madagascar's share of the international market, Malagasy authorities intend to stabilize annual clove exports at about 8,000 tons by introducing more systematic stockpiling. About half of Madagascar's recent clove exports have gone to Malaysia and Singapore. Other major markets are the United States, Hong Kong, and West Germany. Clove oil is shipped mainly to the United States, France, and the United Kingdom.

(7) *Sisal*—Madagascar produces about 25,000 tons of sisal annually. Only about 1,000 tons a year are consumed locally in the manufacture of rope, twine, and rugs; the rest is exported. The bulk of the crop is grown on European-owned landholdings in the Mandrare river valley in the south and in the area around Tulear in the southwest. Since 1968, export values of sisal have ranged from $2.7 million to $3.2 million. In 1971, sisal accounted for about 2% of exports. Major markets were France, Belgium, Luxembourg, and West Germany.

(8) *Other cash crops*—Madagascar's other significant cash crops include lima beans, raffia, pepper, cotton, and peanuts. Lima beans are a main crop of the southwestern region, with annual production amounting to about 21,000 tons in recent years. More than half was exported, mostly to the United Kingdom, Japan, and Reunion. Exports of lima beans were valued at $2.5 million in 1971. Pepper and raffia, a fiber obtained from selected palm leaves, each accounted for about $1.5 million in exports in 1971. Exports of peanuts totaled 5,200 tons, or about 13% of the 41,000 tons produced, and were valued at about $1.3 million. A large part of Madagascar's production of peanuts is consumed domestically as refined peanut oil. Production of cotton more than ; oled between 1966 and 1971, reaching 23,000 tons in the latter year, largely due to increased plantings under the government's agricultural diversification program.

(9) *Staple food crops*—Principal food crops include rice, manioc, corn, cocoyams (taro), sweet potatoes, bananas, cereals, and pulses. Manioc (cassava), the second most important food crop, is produced at a rate of about 1.2 million tons annually; it is grown on about 10% of the country's cultivated area. The starchy root is ground into flour and is either eaten as a mush or used in preparing a variety of dishes. The area planted in corn decreased in 1970, and production declined from 143,000 tons in 1969 to about 116,000 tons in 1971. The cultivation of other domestic food crops has changed little in recent years.

Some diversification into cash crops is being encouraged by the government to draw more of the population into the cash economy and to increase food exports. Programs include the development of orange, oil palm, and coconut plantations and the cultivation of cocoa and tea on government experimental farms. One of the largest projects is a 2,500-acre oil palm plantation near Tamatave, where the government is also constructing a palm oil processing factory.

d. Livestock

Madagascar's livestock population, a resource of considerable potential, has not been adequately exploited. Only about one-quarter of the livestock production is included in the monetary sector of the economy. In 1971, the livestock population included 9 million cattle, 1 million goats, 650,000 sheep, and 570,000 swine. The poultry population was about 15 million. Meat production (including poultry) is estimated at 170,000 tons a year, of which 155,000 tons (mainly beef) are consumed domestically. The export value of cattle, meat, and other animal products rose from about US$7 million in 1967 to $15.3 million in 1971; their share of total exports remained unchanged at about 10%. Live cattle and beef products account for most of the export trade.

Conditions for livestock raising are generally good, and animal husbandry is carried on virtually everywhere on Madagascar except in the northeast and the extreme north. Grasslands cover about 60% of the country, but the pastures are generally of poor quality; the climate is favorable, water resources are adequate, and the island is generally free from the major animal diseases. The native cattle are humped zebu, the domestic herd of which suffers because of a

[1]For diacritics on place names see the list of names on the apron of the Summary Map in the Country Profile chapter and the map itself.

lack of selective breeding and overgrazing of the poor-quality pastures. The cattle population has increased only slowly because of the high mortality rate among calves and because of inadequate nutrition. Poorly developed markets, inadequate transportation and refrigeration facilities, and the keeping of cattle for personal prestige have limited the production of meat. Pigs are raised both for sale and family consumption. Sheep and goats are raised primarily for food. Poultry raising is mostly a family activity, with commercial poultry farming being limited mainly to farms adjacent to the cities.

Increased efforts are now being made to improve the cattle industry. With the assistance of the World Bank, the Malagasy Republic Government established a complex of 6 demonstration ranches, stocked with 225 brahmin cattle provided by the United States in November 1971. Two European firms, working with the Malagasy Republic Government, are setting up feedlots for fattening meat cattle in Majunga Province and other areas. The French Government is assisting in the construction of a slaughterhouse at the port of Majunga, with the expectation that the feedlots will in time support sizable meat exports. Another new slaughterhouse has been built in Morondava, and the government is considering a proposal submitted by several American ranchers for the establishment of a large cattle ranch nearby.

c. *Fisheries and forestry*

Despite some expansion in recent years, the fishing industry remains small. Fishing is not a popular occupation. Processing and marketing facilities are few. The estimated 1970 fish catch was 50,000 tons, of which more than two-thirds was freshwater fish that was consumed domestically. The development of commercial fishing has been confined mainly to shellfish and tuna in the coastal areas. The expansion of the shrimp fisheries has been particularly noteworthy; in 1971, exports of shrimp reached 2,000 tons worth $4.2 million, compared with 1967 exports of 775 tons worth $412,000. The government recently embarked on an expansion program for deep sea fishing, the first phase of which may require 3 to 4 years. It includes development of the fleet and port facilities.

Forests cover about 31 million acres, or about 21% of the island, but less than three-fourths of the timber is of commercial value. Tropical forests of the coastal zone and the lowland valleys produce the valuable and useful trees, such as ebony, rosewood, raffia palm, and mangrove. Raffia is the only forest product exported in substantial volume. Extensive reforestation projects were started in the mid-1960's, with the primary objective of establishing the base for a domestic paper industry. Natural conditions favor the growth of pines which are particularly suitable for paper manufacture. A major factor inhibiting the exploitation of forests has been the inadequate road network serving the forested areas.

2. Fuels and power (C)

Madagascar depends largely on imported petroleum to meet the energy needs of its urban areas. Hydroelectric power constitutes a second source of energy in the modern sector. The low-grade coal deposits of the island are virtually untapped. Wood is used as fuel in rural households. Eleven foreign oil companies, including seven U.S. firms, are participating directly or indirectly in oil exploration, both onshore and offshore, but no exploitable deposits of petroleum have been found.

The Malagasy Refining Company (SMR) in Tamatave supplies the domestic market with ordinary petroleum products and provides a sizable surplus for export. Owned jointly by the Malagasy Republic Government and by French, British, U.S., and Italian interests, the refinery was expanded in 1971 to a processing capacity of 700,000 tons of crude oil a year. The export value of petroleum products rose from $3.5 million in 1968 to $5.6 million in 1970, when it accounted for about 4% of total exports. Imports of crude oil totaled 568,000 tons in 1970, valued at $8.7 million.

Installed electric power capacity at the end of 1971 was estimated at 58,000 kilowatts (kw.). Production during the year amounted to about 175 million kilowatt hours (kw.-hr.), nearly 35% of capacity. Per capita production is a meager 25 kw.-hr. Only a small percentage of the population has access to electricity. The larger cities are generally adequately supplied but not the outlying areas.

About 60% of the electric power capacity is in hydroelectric plants, which account for about two-thirds of the power generated; the remaining capacity is in small diesel plants. The two largest powerplants, the 18,000-kw. Mandraka and the 11,000-kw. Antelomita hydroelectric plants, serve Tananarive, which consumes over two-thirds of the country's electric power output. Other hydroelectric installations of lesser importance are located at Tamatave and Antsirabe.

The French-owned Madagascar Light and Water Company (EEM) produces the bulk of the country's electric power. The other major producer is the Madagascar Energy Company (SEM), a corporation owned jointly by the French (50%) and Malagasy Republic (50%) governments. Small thermal plants are operated by the Southern France Light Company (EAF) at Fort-Dauphin, Manakara, and Farafangana. In addition, a number of private users produce their own electric power in small diesel plants scattered throughout the country.

Transmission and distribution facilities have been developed in the larger towns, where most of the electricity is consumed. A few isolated low-voltage systems serve local consumers. The principal transmission line, 60-kv., links the Mandraka and the Antelomita powerplants, which are about 60 miles apart, and serves Tananarive and nearby towns. Distribution systems consist of 20- and 35-kv. primary lines, and 5- and 10-kv. secondary lines. Consumer current is 1- and 3-phase, 50-cycles, at 127/220 volts for public use, and 220/380 volts for industrial use.

The hydroelectric power potential is large. To meet expected increases in demand, several new hydroelectric and thermal installations are planned, and some existing plants will be expanded. The emphasis is on inexpensive electric power for industrial sites, such as the planned silicon-chrome plant near the Andriamena chromite mine and the planned cement plant at Antsirabe. Rural electrification programs financed by France are underway.

3. Minerals and metals (U/OU)

Mining is relatively unimportant in the economy, contributing only about 1% of GDP. The principal minerals mined are chromite, graphite, and mica; production of these minerals in 1967-71 was as follows (in metric tons):

	CHROMITE	GRAPHITE	MICA
1967	0	16,405	738
1968	0	16,071	838
1969	44,775	17,114	1,182
1970	104,689	18,312	943
1971	111,697	20,051	588

Exports of these products in 1971 amounted to $6 million—about 4% of total exports—of which chromite accounted for more than half. Other minerals produced include small quantities of piezoelectric quartz and beryl, as well as decorative and semiprecious stones. The large bauxite deposits at Manantenina have not yet been exploited, but a joint French-Malagasy company has been formed to study the feasibility of exploiting them. Prospecting operations for titanium, nickel, iron ore, gold, and other minerals are under way.

Mineral prospecting and exploitation have intensified, with further development depending largely on trends in export markets. The mining of chromite north of Tamatave was abandoned in 1965 because of low chrome content and low reserves, but mining was resumed in 1969 at a new site near Andriamena. As a result, output increased 150% and exports nearly quadrupled from 1969 to 1971, but recent world market price cuts and reduced purchases by Japan, a major customer, have jeopardized expansion plans. Madagascar is the leading world supplier of high-grade graphite. Present graphite production is only about half of capacity due to limited world demand. Lagging world demand also caused a nearly 35% decline in the value of mica exports in 1971.

4. Manufacturing and construction (U/OU)

Manufacturing is limited to the processing of local agricultural products and the small-scale production of light consumer goods. In recent years, about half of the value added by manufacturing has been accounted for by food-processing industries, one-fourth by textiles and apparel, and the remainder by metalworking and the manufacture of tobacco products, construction materials, and wood products. In 1970, industrial enterprises employed about 47,000 persons, or 1.4% of the economically active population. Manufacturing plants are concentrated mainly in the central high plateau around Tananarive and Antsirabe, which are major population centers with adequate transportation and electric power. Manufacturing, which represents about 12% of GDP, is mostly small scale and is heavily dependent on imports of equipment, raw materials, and management. Industrial development is restricted by a scarcity of capital, high internal transportation costs, and the small size of the domestic market.

Since independence in 1960, the government has promoted industrialization by setting up development institutions to finance or otherwise assist industry and by promulgating an investment code designed to attract foreign investment. A large proportion of manufacturing establishments are foreign owned and managed. A government agency, the National Investment Company (SNI), established in 1962, promotes industrial investment by participating in a number of corporations. Investments made by foreign enterprises in 1970 totaled $19 million primarily in textiles, concentrated milk, gelatin, and beer, but also including edible oils, plastic products, fertilizers, soap, vehicle assembly, and marble processing. The vehicle assembly project includes Berliet and Mercedes trucks, Land Rovers, and Renault and Peugeot automobiles.

The construction industry contributes about 3% of the GDP. Major construction activity in recent years has included housing, roads, industrial plants, port development, tourist facilities, and irrigation projects. Building materials such as cement, bricks, and tile are produced locally. Heavy construction equipment must be imported.

5. Domestic trade (U/OU)

Domestic trade activity is severely limited by the small size, poverty, and self-sufficiency of the rural market. Moreover, the distribution of goods from major commercial centers to the rural areas is hampered by an inadequate and costly inland transport system. Madagascar relies heavily on coastal shipping for domestic commerce. Domestic commerce is mainly in the hands of the French, Indians, and Chinese, the last two groups being most prominent at the retail level and in the small provincial towns. The retail sector includes some consumer cooperatives which are semipublic institutions; their share in total trading activity is less than 2% annually. The government manages a chain of retail stores, the "M" shops, through the General Distribution Company, the primary purposes of which are to stabilize prices, promote the marketing of locally produced goods, and provide employment and training.

C. Economic policy and development (U/OU)

1. Policy

The primary goals of the new government that came to power in 1972 are to achieve greater economic independence and to broaden economic relations with countries other than France. Madagascar's withdrawal from the franc zone is in keeping with these goals, and the Malagasy can be expected to seek increased assistance from other Western governments, including the United States. The government particularly wants to reduce its dependence on France for economic assistance, and despite continued preferential trade agreements with France, trade with other countries is increasing in importance. The government encourages foreign investment that contributes to the diversification of the economy, generates new exports, or promotes substitution of domestically produced goods for imports. At the same time, the government is pushing the development of Malagasy entrepreneurship and the replacement of foreign personnel by Malagasy nationals in both the private and public sectors.

Shortly after independence in 1960, the government established the General Planning Commission to formulate long-term national development programs. The first 5-year plan, extending from 1963 to 1968, called for total public and private investment expenditures of \$545 million. Actual capital outlays, however, amounted to only \$325 million, owing to delays in the implementation of projects and to shortages of funds. The lack of trained technicians and of comprehensive and reliable statistics hampered planning. To step up economic development the government in 1968 launched a Program of Large Operations (*Programme de Grandes Opérations*), under which government investments were accelerated and concentrated in more directly productive areas, especially in agriculture. As a result, public sector investment rose from an annual average of about \$12 million in the period 1964-67 to \$61.4 million in 1968.

The planning process broke down to the extent that no program was devised that included 1969. The government developed a second 5-year plan to start in 1970, but when that plan proved infeasible, an interim 1972-74 plan was introduced. In 1969, 1970, and 1971 government economic policies focused primarily on increasing investments for productive activities, mainly agriculture. Investment priorities in the 1972-74 plan correspond closely to those of the earlier plan, emphasizing the development of infrastructure, agriculture, and exports. The 3-year plan was designed to consolidate the earlier programs and establish a foundation for a followup 5-year plan. Starting in 1972, annual government budgets were scheduled to become progressively more detailed in order to relate federal capital expenditures to planned sectoral growth.

For 1972, the former Malagasy Republic Government had budgeted \$205 million, an increase of 6.8% in central government expenditures. About half of the increase would have financed new capital investment, primarily in roads and agriculture. The new government, however, initiated austerity measures which resulted in reduced expenditures in some areas. Thus, the government's 1972 expenditures probably did not exceed those of 1971. In 1971, central government expenditures totaled \$193 million, and receipts were \$180 million; the deficit was covered by foreign borrowing and some drawdown of treasury holdings. Government operating expenses accounted for about 76% of total expenditures, capital investments for 21%, and debt servicing for about 5%. The most important source of revenue was import duties, which accounted for 30% of the total, followed by value added taxes (17%), income taxes (16%), and various excise taxes (13%).

a. Government finance

Public finance comprises four basic accounts: the central government, the annexed budgets, the six provinces, and the municipalities. The central government accounts for more than two-thirds of revenues and expenditures. The annexed budgets are the revenue and expenditure statements for seven autonomous public agencies and a number of public and semipublic enterprises. The six provincial governments have separate budgets that are jointly controlled by the Ministries of Finance and Economy and of Interior. Provincial revenues are derived mainly from a head tax, a tax on cattle, and from central government subsidies. The bulk of provincial expenditures are on education and health, since the provinces pay primary school teachers and the personnel of local health centers and hospitals (but not those of regional hospitals in the chief provincial towns). Municipalities derive their revenues from special levies (e.g., a surtax on the basic rate of the head tax) and from central government subsidies. Municipal expenditures are mainly for local administrative services, road maintenance, water supply, and other urban facilities. Most of the four accounts are combined for budgetary purposes into a consolidated budget (Figure 6).

The annual budget of the central government includes an ordinary budget covering the recurring costs of running the government and an investment budget, which includes some development expenditures. The latter includes only those investment expenditures that are financed from domestic resources—primarily indirect taxes—and foreign borrowing; public investment financed by foreign grants is not accounted for in the budget. The percentage distribution of central government current revenues and expenditures in 1971 (fiscal year and calendar year coincide) was as follows:

Revenues:	
Income taxes	16
Import taxes and duties	30
Export taxes and duties	5
Value-added tax	17
Excise taxes	13
Miscellaneous	10
Total taxes	91
French budget support	3
Other nontax revenue	6
Total nontax revenue	9
Total revenue	100
Expenditures.	
Operating	95
Public debt service	5
Total expenditures	100

Consolidated budgets for 1967-70 reflected substantial increases in ordinary (current) budget surpluses, as revenue growth outstripped operating expenditures. Major factors contributing to this development were an expansion of the tax base concomitant with the growth of the economy, the substitution in 1969 of a value-added tax for the turnover tax, and a marked improvement in the collection of direct taxes in 1970. An austerity program also contributed to an exceptionally large surplus in 1970. Ordinary budget surpluses, however, have only partially offset growing capital expenditures, which in recent years accounted for about one-fifth of government expenditures.

FIGURE 6. Consolidated budget, 1967–71* (U/OU)
(Millions of U.S. dollars)

	1967	1968	1969	1970	**1971
Current budget:					
Revenues	140.0	156.3	171.8	185.2	180.0
Expenditures	129.6	140.4	151.3	156.0	166.0
Current account surplus	10.4	15.9	20.5	29.2	14.0
Capital expenditures	21.7	37.5	45.1	45.8	27.0
Overall deficit	11.3	21.6	24.6	16.6	13.0

*The fiscal year coincides with the calendar year.
**Budget estimates.

Madagascar's public debt is primarily external. Foreign and domestic liabilities at the end of 1970 amounted to $95.4 million and $1.3 million, respectively. About $75 million of the external debt in 1970 consisted of loans from other governments, of which almost 80% was from France and the remainder from West Germany, the United States, and Israel. Cumulative loans from the World Bank group rose from $2.2 million in 1968 to $11.4 million in 1970. The debt burden has been light. Service payments on the external debt in 1970 were estimated at $6.9 million, equivalent to less than 5% of export earnings in that year.

b. Money and banking

Madagascar's monetary and financial system was integrated with the French system in an agreement concluded in 1960. However, France's unwillingness to concede the degree of monetary independence sought by the Malagasy led Madagascar to withdraw from the franc zone in May 1973. As a member of the franc zone, Madagascar held its central bank's exchange reserves in an operating account with the French Treasury, Malagasy francs (FMG) were fully convertible into French francs, and there were no limitations on transfers between the two countries. The French Treasury, however, controlled the policies and activities of Madagascar's central bank.

The banking system includes a central bank—the Malagasy Bank of Issue (IEM)—four commercial banks, a development bank—Malagasy National Development Bank (BNM)—and the Postal Checking System. The IEM, established in March 1962, issues national currency, determines monetary policy, and has regulatory power over credit and the other banks. The Madagascar and Comoros Bank (BMC) and two other commercial banks act on behalf of the IEM in the provinces, where they are the paying and receiving agents for the Treasury. The IEM pays no interest on Treasury deposits.

The banking system is well developed. Commercial bank branches throughout the country function mainly as sources of short-term credit for agricultural production, imports, and domestic trade. The four commercial banks are owned principally by foreign interests, largely French, with the Malagasy Republic Government holding a 35% interest in one and 12.5% interest in another. The BNM, which is about three-quarters Malagasy- and one-quarter French-owned, extends short-, medium-, and long-term credit to individuals, companies, and public institutions for economic development, particularly in agriculture. It may finance handicraft industries, manufacturing, and housing. The Postal Checking System handles both demand and savings deposits.

The money supply at the end of 1970 amounted to $156 million, of which currency constituted $85 million, demand deposits $64 million, and postal checking deposits $7 million. Net foreign assets of the banking system at the end of 1970 were about $50 million. Until December 1971 the exchange rate for the Malagasy franc was FMG 278 to US$1; the present rate is FMG 256 to US$1.

2. Manpower

In 1970 the economically active population was estimated at 3.25 million persons, or about 46% of the total population (Figure 7). Of this number less than

FIGURE 7. Economically active population (U/OU)
(Thousands)

	1967	1968	1969	1970
Private sector:				
Industry	43	44	45	47
Agriculture	45	39	41	42
Commerce and banking	40	44	46	45
Servants	45	38	40	41
Construction	17	15	16	16
Services*	35	42	44	47
Total	225	222	232	238
Government employees	34	41	45	49
Proprietors, farmers, farmhands	2,535	2,747	2,820	2,885
Other, including unemployed	100	86	80	78
Total	2,894	3,096	3,177	3,250

*Includes salaried employees in transport, communications, and utilities.

9% were salaried workers; most of the remainder were engaged in subsistence endeavors. The youthfulness of the population—in 1971 almost half were less than 15 years of age—is reflected in the labor force. Registered unemployment figures are not significant, because the majority of unemployed do not register. Moreover, large numbers are underemployed or seasonally unemployed.

The economically active population in 1969 and 1970 increased at annual rates of 2.6% and 2.5%, respectively, about the same as the total population growth. The government has increased employment at a faster rate than any other sector, but it still employed only 1.5% of the total economically active population in 1970. The government hires a large portion of the graduates from secondary schools, colleges, and universities. Underemployment in the agricultural sector is common and migration to urban areas, which is partly seasonal, has created additional problems in urban areas. Young people move to urban areas after the harvests, some remaining there and others returning to their villages before the next planting season.

The population is a mixture of Africans, Asians, and Arabs, sprinkled with about 30,000 French. The main features of the labor force are its predominantly subsistence character, its shortage of skills, and its inability to perform many middle- and high-level jobs. Most of the managerial and supervisory jobs are filled by French nationals, while many skilled craftsman are Reunionese, Yemeni, and other foreigners. To alleviate this situation, on-the-job training programs have been established to upgrade the skills of Malagasy employees. Other training programs include teaching managerial skills to small- and medium-scale entrepreneurs and providing vocational instruction for those who have never been on a payroll.

D. International economic relations (U/OU)

1. Foreign trade

Madagascar depends heavily on the exchange of primary products (predominantly agricultural) for foreign consumer and capital goods. Since independence, trade balances have been negative, and the value of exports has averaged only two-thirds of the value of imports (Figure 8). An enlarged deficit in 1971 reflected short-run difficulties in the domestic economy. The 1971 export value of some $147 million was only 1% greater than that of 1970, but imports increased 26%, to $214 million. The resulting deficit of $67 million was about $41 million more than that of 1970, when trade performance was about the best of

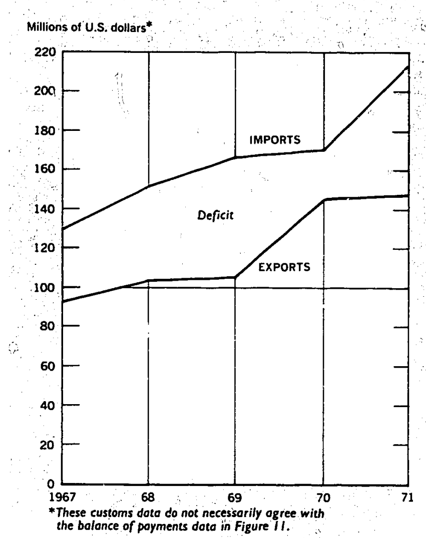

FIGURE 8. External trade balance, 1967–71 (U/OU)

the past decade. During the first 7 months of 1972, the deficit reached an estimated $37 million, $3 million more than in the similar 1971 period.

Major exports are coffee, vanilla, rice, and animals and animal products (Figure 9).

France remains Madagascar's primary trading partner, although its share of imports and exports has been declining. Other members of the European Community (EC) have increased their share of the trade since 1968, when Madagascar extended to them the same preferences long accorded to France. Trade with the United States, the second-ranking trade partner, has increased but at a slower rate than trade with others (Figure 10). Trade with Japan, though still small, has risen significantly.

2. Balance of payments

Despite perennially large foreign grants, Madagascar's balance of payments in recent years has usually been negative. Large expenditures in Madagascar by foreign governments only occasionally have exceeded net outflows on the services account. Combined deficits on the trade and services account averaged $48 million annually in the period 1967-70 (Figure 11). These were approximately offset by foreign grants and loans over the same period. Increasing positive balances on the capital account reflect increased

FIGURE 9. Exports of principal commodities (U/OU)
(Millions of U.S. dollars)

	1967	1968	1969	1970	1971
Coffee	29.3	31.8	29.9	39.5	39.0
Cloves	3.2	7.0	1.5	16.9	20.6
Vanilla	6.0	9.1	10.9	13.0	12.9
Rice	6.7	11.0	8.8	11.1	7.4
Sugar	7.7	5.7	6.0	5.6	4.0
Sisal	2.7	2.7	3.2	2.7	2.9
Peas	1.2	1.8	1.9	2.6	2.5
Tobacco	2.6	2.1	2.7	2.5	2.5
Chromite	0.0	0.0	0.8	3.1	3.1
Graphite	1.6	1.6	1.8	2.3	2.2
Mica	0.9	1.1	1.4	1.1	0.7
Animals, meat, and meat products	6.6	6.8	8.8	13.8	15.3
Other	24.2	22.6	27.5	31.0	34.2
Total	92.7	103.3	105.2	145.2	147.3

FIGURE 10. Direction of foreign trade (U/OU)
(Millions of U.S. dollars)

	1967	1968	1969	1970	1971
Exports to:					
United States	22.8	23.2	24.9	32.9	32.8
France	34.0	34.6	38.1	50.0	50.3
Other EC countries	4.6	6.9	8.0	9.9	11.3
Other countries	31.3	38.6	34.2	52.4	52.9
Total exports	92.7	103.3	105.2	145.2	147.3
Imports from:					
United States	8.9	7.6	14.3	9.7	10.4
France	83.8	95.3	86.4	93.9	120.5
Other EC countries	14.9	20.2	30.6	35.4	38.1
Other countries	22.0	28.6	35.5	31.9	44.9
Total imports	129.6	151.7	166.8	170.9	213.9

borrowing abroad. More than 80% of foreign aid, however, has been in the form of grants rather than loans (Figure 12).

3. Foreign aid

Foreign aid finances much of Madagascar's development expenditures. France is the largest single provider, but Madagascar's dependence on France is gradually lessening. The French share of foreign aid dropped from 64% in 1964 to 43% in 1970 (Figure 12). The European Development Fund (EDF) of the EC, to which France makes a substantial contribution, is another major source of foreign financing. Of the 18 African nations associated with the EC, Madagascar has benefited most from EDF credits. During the period 1959-70, EDF credit commitments to Madagascar totaled about $100 million. Some 70 EDF-assisted projects, primarily for the development of agriculture and infrastructure (mainly roads), have been completed or are in progress.

Other foreign financial assistance has been committed largely to specialized programs. The United Nations, either through the U.N.D.P. or through the specialized agencies, has furnished funds primarily to promote development of agriculture, forestry, and port facilities. The present U.S. AID program is concentrated on livestock, railroads, and communications. AID self-help funds have averaged about $100,000 annually in recent years. In addition, AID contributes about $500,000 per year in P.L. 480 supplies to school feeding programs operated by Catholic Relief Services, and it participates in other programs operated by Church World Services and the United Nations World Food Program. In December 1972, the World Bank approved a $30 million loan to Madagascar to finance the development of its road network.

FIGURE 11. Balance of payments (U/OU)
(Millions of U.S. dollars)

	1967	1968	1969	1970
Goods and services:				
Exports (f.o.b.)	92.7	103.3	105.2	145.2
Imports (c.i.f.)	-129.5	-151.7	-170.4	-170.9
Trade balance	-36.8	-48.4	-65.2	-25.7
Net services	9.9	-16.0	-1.0	-9.0
Balance on goods and services	-26.9	-64.4	-66.2	-34.7
Unrequited transfers	33.6	49.6	48.2	50.9
Private	-1.4	7.9	8.5	10.1
Government	35.0	41.7	39.7	40.8
Nonmonetary capital:				
Government, net	1.0	5.7	5.1	6.3
Private, net	2.2	1.1	2.7	0.4
Balance on capital account	3.2	6.8	7.8	6.7
Errors and omissions	-15.6	-2.3	4.6	-2.1
Allocation of SDR's	...	...	...	3.1
Net balance of payments	-5.7	-10.3	-5.6	23.9

... Not pertinent.

FIGURE 12. Foreign aid receipts (U/OU)
(Millions of U.S. dollars)

	1967	1968	1969	1970
Grants:				
France	30.8	24.8	20.8	21.1
FAC*	8.0	4.3	2.3	2.4
Budget contribution	6.6	5.8	4.5	3.7
Technical assistance	11.7	9.6	8.7	10.7
Other	4.5	5.1	5.3	4.3
European Development Fund	10.9	10.7	12.6	11.9
United Nations and other	4.4	6.5	6.6	8.5
Total grants	46.1	42.0	40.0	41.5
Loans:				
France	3.2	0.0	1.3	0.0
World Bank Group	0.4	1.6	3.1	6.4
United States	0.0	0.4	1.7	0.9
West Germany	1.0	0.0	1.9	0.6
Israel	0.0	0.0	1.0	0.1
Total loans	4.6	2.0	9.0	8.0
Grand total	50.7	44.0	19.0	49.5

*Fund for Aid and Cooperation.