Uncertain Partners: South-South Trade between Brazil and Black Africa

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Can South-South trade supplant traditional North-South exchanges? The author, who teaches political science at Elizabethtown College, Pennsylvania, sees a difficult path ahead for this new trend and offers concrete policy options to help smooth growth in this vital area.

Brazil's International Economic Strategy in the South-South Context

A MORE INTENSE economic relationship among developing countries became apparent in the late 1970s as a result of Third World intellectual trends and political and economic complimentarities. Together they made certain kinds of cooperation within the Third World feasible and sometimes even more desirable than cooperation with the West or East. This emerging system of developing-country-to-developing-country interaction was encouraged by United Nations conferences and at meetings of regional organizations under the rubrics of "South-South" relations, "technical cooperation among developing countries" (TCDC), and "economic cooperation among developing countries" (ECDC).

The motivations of the countries involved were as diverse as their ideologies and economic interests. But one main premise of the South-South argument has been that the current characteristics of the international economic system do not suit the interests of the developing countries and in fact work against them. Furthermore the international system is unlikely to be structurally changed by generous concessions from the industrial states. The more radical (and minority) conclusion flowing from this observation is that the South should "de-link" itself from the North to foster the objective of "collective self-reliance" and to end neocolonialist exploitation. The pragmatic majority, on the other hand, view enhanced South-South cooperation as an auxiliary and largely alternative tool for development. It will not be able to supplant the essential links to the markets, capital, and technology of the North, but it will promote a higher level of independence and flexibility.

The middle-income countries, the newly industrializing countries (NICS), and the oil-exporting countries were expected by many analysts to exceed the world average for economic growth during the 1980s. This high rate of growth on the part of these countries would thereby increase the opportunities for closer South-South cooperation in the areas of foodstuffs, manufactures, technology, and finance. As a result of the rapid growth that characterized the previous decade, an increasingly heterogeneous South has in fact been able to meet many of its own product, technology, and service needs. In the most optimistic scenarios, such as those envisioned by Arthur Lewis, the most advanced of the less-developed countries (LDCS) could then serve as potential "new engines of growth" to help other LDCS overcome the problems resulting from the downturns of the North.[1] This would also enable the South to acquire additional countervailing political leverage in North-South negotiations to restructure the international economy.[2]

Despite the facilitating role of international organizations, the multilateral framework sustaining global South-South relations is still incipient at best. The process is advancing sporadically, built up more from successful bilateral cases of matching mutual interests than from multilateral resolutions and an increased system of trade preferences. Third World leaders, for purposes of paper solidarity, have been reluctant to acknowledge the degree of disparity in capabilities, characteristics, and national interests among their nations. These differences will become more troublesome if Southern nations move from rhetorical unity in negotiations with the North to working out concrete steps for broader South-South cooperation. The worldwide recession has further clouded prospects for progress. Yet the typically a priori assumptions behind arguments in favor of intensified South-South economic relations have not received the critical reexamination they deserve in view of the changed circumstances.

The Case of Brazil

BY ANY RECKONING Brazil is one of the principal leaders in South-South transactions. It often proclaims its intention of increasing its bilateral economic cooperation with other Third World nations. Brazilian Foreign Ministry export-promotion officials in particular have emphasized South-South relations as the most dynamic growth dimension in international trade and one in which Brazil could greatly benefit. Its intermediate status as a middle-income, newly industrializing, resource-rich (although oil-poor) country provides it with a wide range of economic complementarities with other developing nations. While Brazil's foreign trade value in exports plus imports grew by 202.6 percent from 1975 to 1980, its trade with oil-exporting developing countries grew by 283 percent and with nonoil developing countries by 302.1 percent. In contrast its trade with Western industrial states grew by only 161.3 percent. Brazil's trade turnover of \$20.3 billion with other LDCS represented 45 percent of its world imports and exports.[3] Among all developing countries, in 1980 only Saudi Arabia and Singapore had a larger value of trade turnover with other Third World states. Brazil was first in trade with oil-exporting LDCs and sixth in trade with nonoil developing countries, after Saudi Arabia, Singapore, Iraq, Hong Kong, and China.

Most analyses of Brazil's international position as the largest NIC have focused on the adjustment effects of that status on Brazil's economic relationships with the Organization for Economic Cooperation and Development (OECD) nations. But Brazil's case can also be used to illustrate both the potentials and the problems which the advanced NICs may have in their partnerships with less-developed economies. Thus, for instance, Brazil has become one of the major LDC exporters of manufactures, technology, and services, to the point that it is now challenging industrial states for LDC markets, a trend which is likely to continue.[4]

The economic relations that Brazil has with Sub-Saharan Africa thus provide a good test for the ability of a diversified LDC with a large industrial sector to provide the kind of products, services, technology, and finance needed by a region which is one of the Third World's poorest. The Brazil-Africa relationship predates the literature on South-South ties and has become somewhat of a theoretical precursor and indicator for cross-continental South-South cooperation.[5] In principle, and in achievements, the economic relationship looked extremely promising as late as 1981 and received largely favorable comments as one of the major cross-continental South-South links.[6]

Yet by 1982 some profound limits to the progress of these relationships were becoming apparent, resulting from largely negative economic trends in Brazil, Africa, and the international system. These trends now appear very long-term and severe and cast grave doubts on many of the hopeful recent assumptions about the potential for South-South relations in general and Brazil-African relations specifically. The intent of this essay is to evaluate the bilateral economic relations between Brazil and Black Africa for the period from 1975 to the present, when Brazil began political and commercial rapprochement with the African continent. After examination of the upward tendencies until 1981 in trade, services, investments, transfer of technology, and finance, some of the setbacks beginning in 1982 will be analyzed as persistent obstacles of dependency hindering closer cooperation among LDCs of different continents.

The Structure of Brazilian-African Trade

Continental Distribution

TRADE WITH SUB-SAHARAN AFRICA remains marginal, but promising, in Brazil's global trade picture. The role of exports to Africa grew steadily from 1975 to 1980 but failed to reach 5 percent of Brazil's total. Import value was usually below that of exports each year, reflecting the fact that for the region as a whole Brazil has found it easier to sell than to buy. Yet Africa has been a major component of Brazil's drive to extend its exports to LDCs beyond the Western Hemisphere as well as one of the most dynamic components of Brazil's export growth. The successes that have occurred, however, have been both hard won and tenuous.

The rate of trade growth has been impressive, but the dollar values until 1981 remained under $1 billion each way, a minute amount in world trade terms. The record of 1981 was an unusually good one, with $1.35 billion in exports and $1.33 billion in imports, nearly 6 percent of Brazil's trade turnover for that year. Trade with Africa sagged badly in 1982, however, dropping under 5 percent of Brazil's total value, largely because of problems in trade with Nigeria.

When broken down to the country level, the trade flow is both concentrated and erratic, symptomatic of a partially institutionalized relationship suffering from insufficient resources and conflicting with higher priorities on both sides. Whereas until 1975 South Africa was consistently Brazil's chief partner, by 1980 and 1981 Nigeria clearly occupied first place in two-way trade while Angola, Zaire, and the Congo rose to greater significance. The first time an African country broke into the ranks of Brazil's top ten partners was in 1981, when Nigeria accounted for 3.3 percent of Brazil's total exports and 3.3 percent of total imports, ranking eighth in both categories and surpassing Great Britain as a customer for Brazilian goods. A serious constriction of Nigeria's market prevented a repeat performance in 1982. Trade with other partners has been more sporadic and based on ad hoc exchanges, making balanced trade difficult. The case of Gabon illustrates the problem of a major African petroleum supplier that has not balanced its trade with purchases of Brazilian goods. Even in the successful years of 1980 and 1981, the number of countries carrying on a meaningful level of trade with Brazil was a small fraction of those in the region.

The Brazil-Africa trade flow represents proportionately less for Africa than it does for Brazil. In 1980 Brazil ranked twelfth as a purchaser of African goods and thirteenth as a supplier, up from twenty-first and twenty-fourth in 1975. Since trade with Brazil remained under 2 percent for both the region as a whole as well as for Nigeria, from the African perspective this trade has been a worthwhile opportunity for future diversification rather than representing a change for the present. When it is categorized as a producing LDC, however, Brazil's weight in African trade increases significantly to the largest Southern source of supply and the second largest customer.

In 1980 only seven African states traded with Brazil to the extent of at least 1 percent of either their imports or their exports. The most significant growth, from the African perspective, was Brazil's ranking as a major trading partner with Angola, Mozambique, and the Congo, with the Congo a very recent addition to Brazil's promotional list. (Thanks in part to the criticism leveled by Africans at Brazil for its trade with South Africa, in 1980 Brazil was the market for only 0.66 percent of the Republic's exports and the source of only 0.54 percent of its imports.)

Brazil has been one of the world leaders in growth and diversification of manufactures exports, with Black Africa a significant market for those goods. In 1980, 87.9

percent of Africa's purchases from Brazil were manufactured and semimanufactured goods.[7] Nigeria, Brazil's major African market, took manufactured products as 99 percent of its purchases in the boom year of 1981 (5.4 percent of Brazil's sales) when it became Brazil's second largest market for manufactures, after the United States. (This success is not likely to be repeated soon because of major Nigerian import restrictions adopted in 1982 following the declines in its oil revenues.) Less elaborate types of manufactures have also been significant in trade with Africa, but in decreasing proportions. To date, the only large contemplated purchase of unprocessed Brazilian raw materials by an African country is a Nigerian plan to use Brazilian iron ore in its emerging steel industry. Uncertainties in that industry still make these purchases appear problematical.

Statistics from the World Bank Market Penetration Study, using a broad definition of manufactures, show that Africa has grown steadily as a market for Brazil's manufactured exports but still plays a relatively minor role in Brazil's global patterns.[8] Brazil's sales of manufactures to Black Africa in the 1970s grew by an average of 47.6 percent yearly, much faster than those to any other region except South Asia (78.4 percent). This was well above the growth rate of 29.9 percent for sales of manufactures to all developing nations (including those of Southern Europe) and 23.3 percent for total foreign sales of manufactures. Most of this growth, however, was attributable to the dynamic performance of the two leading categories—transportation equipment and petroleum derivatives—which grew most significantly toward the end of the decade. In only four major categories—petroleum derivatives, transportation equipment, textiles, and paper—did Africa constitute more than 5 percent of Brazil's world market in 1979. Even with such impressive growth rates, the size and low acquisitive power of the African market limit product placement relative to opportunities in Latin America and the developed countries, which absorbed 20.2 percent and 57.6 percent, respectively, of Brazil's manufactures sales in 1979. The diversity of products sold to Africa was less than the range of products sold to the latter two groupings. From these findings it is possible to conclude that the chances of Africa becoming in the near future a truly major outlet for Brazilian manufactures are relatively small.

Petroleum has become the most important Brazilian import from Africa, making up 61.4 percent of value in 1980 and 88.9 percent in 1981. Other major product imports include orthophosphoric acid, asbestos, lead, and nickel (all from South Africa), graphite (Madagascar), natural rubber (Liberia and Nigeria), copper ingots (South Africa, Zambia, and Zaire), aluminum (South Africa and Ghana), zinc (Zaire), manganese (South Africa and Gabon), and chromite (Mozambique). Large purchases of coking coal from Mozambique are now being negotiated. Trade with Africa is thus essentially an exchange of Brazilian manufactured goods for African raw materials. Under these circumstances the only countries that can carry on significant two-way trade with Brazil are those that have raw materials in which resource-rich Brazil is not self-sufficient. Most African tropical products are also produced in Brazil. Only South Africa has a sufficiently complex economy to be able to send a diversified list of products to Brazil, including manufactures and many types of minerals.

Table 1. Growth rates of imports of nonoil Africa from its major suppliers, 1975–80 (in percent)

Exporter	Growth in imports of nonoil Africa, 1975–80	1980 share of nonoil African imports
All countries	106.8	100.0
BRAZIL	362.8	1.2
Oil exporters	108.2	6.0
Nonoil-exporting LDCs	100.1	13.5
Industrial states	81.6	66.3
USSR and Eastern Europe	60.2	1.5
European Economic Community	87.7	32.9
South Korea	266.0	0.3
Saudia Arabia	240.1	2.7
India	201.1	0.5
Hong Kong	110.9	0.6
China	18.8	0.8
Spain	172.7	1.7
Italy	144.1	5.0
Japan	97.9	6.2
France	92.2	15.2
Netherlands	91.6	2.5
Switzerland	83.7	1.4
Belgium	79.9	2.4
Federal Republic of Germany	74.3	9.4
United States	69.0	9.4
United Kingdom	67.5	9.7
Sweden	51.2	1.1
Soviet Union	64.9	0.6

Brazil's acquisition of petroleum from Africa has been particularly attractive because African countries have been much more willing to purchase Brazilian products in exchange for petroleum than have most Persian Gulf suppliers. Brazil's shift to African petroleum suppliers has been limited, however, by their uncompetitive prices.

Strategic Entry into Markets

In advancing trade with Africa, Brazil has had to contend with the usual problems of breaking into any new and difficult market, such as established customer preferences, low recognition factors for its own products, and competition with traditional suppliers and distribution networks. Beyond these hindrances the relatively underdeveloped nature of South-South relations also imposes additional obstacles. The

African market is dispersed, bureaucratic, low-income, and of uncertain organization. Brazil has had to rely heavily on British, French, and Portuguese information sources because its own market surveys have made substantial progress only in Nigeria, Senegal, and the Ivory Coast (and to a lesser extent in Angola and Mozambique). With the exception of Nigeria, efforts by African commercial and trade representatiaves in Brazil are still weak and slow to take up Brazilian initiatives in these matters. The European Economic Community (EEC) has institutionalized its commercial relationships with Africa through the Lome II Agreement, but Brazil must deal bilaterally with each partner and has no need for most African agricultural products to which the Europeans grant preferences. These preferences make it easier for the Africans to conduct a balanced trade with the EEC than with Brazil. Nor can Brazil extend comparable quantities of concessionary finance.

Transportation between Brazil and Africa was also slow and difficult until direct air and sea routes were established to West Africa, South Africa, Angola, and Mozambique beginning in about 1977. Even so, irregularities and delays in delivery still pose problems. Lack of full return cargoes in freighters makes African shipping lines more expensive to operate, often necessitating financial underwriting by governments. The cost of maintaining offices in West Africa (particularly Nigeria) has forced all but the largest Brazilian companies to sell through intermediaries, with only periodic visits to the field.

Thus, according to government trade promotion officials, Brazilian exporters are much more likely to sell to Latin America than Africa because of proximity, the lower cost of maintaining offices, tradition, and the ease of access to markets. Government efforts between Africa and Brazil have often run well ahead of the commercial response.

To overcome these disadvantages the government and commercial interests in Brazil have mounted a costly marketing plan to distinguish themselves from established industrial powers and to present themselves as a worthwhile option in Africa's efforts to diversify its trade. (Language and cultural ties are also used in relations with Angola and Mozambique.) Brazil also presents itself as an economic model to which African states can realistically aspire. It is willing to share its tropical industrialization process and appropriate intermediate technology and techniques. In contrast to Northern industrial powers, Brazil specializes in sturdy, simple, and less expensive products and projects with rugged application in less sophisticated markets. Heavy-frame plows, kerosene refrigerators, black-and-white television sets, and Volkswagen Beetle automobiles are some examples.

Government and commercial promotions, supplier credits, and tax subsidies have also been crucial in making African ventures succeed. Large numbers of African officials have visited Brazil at government invitation over the last five years, and a deliberate but subdued South-South theme pervades the tone of these official visits. Brazil's membership in the Group of 77 at the United Nations and the Non-Aligned Movement, its willingness to do business with Marxist governments, and its tradition of noninterference in the internal affairs of its trading partners have also distinguished it from the established Northern suppliers.

Brazil's commercial relationships with Africa are indicative of its other ties with the countries of the South. Government agencies promoting exports have established a comprehensive bilateral framework through treaties regulating trade, scientific and technical cooperation, transportation, cultural affairs, and educational exchanges. In the more dynamic instances, binational commissions have been set up to discover areas of complementarity and to promote more intense interchange. These commissions usually meet annually, but execution falls well behind conceptualization. Brazil currently has such joint commissions with Angola, Cape Verde, the Congo, Gabon, Guinea Bissau, the Ivory Coast, Mozambique, Nigeria, Senegal, and Zaire. Participation in continental trade fairs, such as the annual Maputo Fair, was significant in the past, but the frequency of Brazilian attendance has dropped in recent years due to the global recession.

Brazil has tried to negotiate package agreements to facilitate and finance sales of certain goods and services in exchange for raw materials, especially petroleum. To secure long-term relationships with more African suppliers, the state oil company, Petrobras, has begun exploration to produce crude through its subsidiary Braspetro in joint ventures in the Congo and in Angola. Similar relationships are under discussion with Gabon, Ghana, the Ivory Coast, Mali, Nigeria, Togo, and Zaire. The typical Braspetro package involves a joint venture with other multinationals, production rights, payment in oil for service, and training of local personnel. Such arrangements are likely to expand in the future, increasing Africa's role as petroleum supplier to Brazil and as a customer for its refined petroleum products.

The large Brazilian trading companies that maintain offices in Africa account for most of Brazil's trade with the continent, particularly Nigeria. Interbras, the trading arm of Petrobras, has the most influence because it is the largest and can procure easily for other state firms and readily negotiate sales in exchange for oil commitments (the main thrust of the African commercial initiatives). For several years Interbras used the trademark "Tama" as a common brand for a number of different types of household appliances produced by different Brazilian manufacturers and marketed in Nigeria. Pele, the world-famous soccer star, was used to promote the line in an advertising campaign costing over half a million dollars. The purpose was to provide product recognition and a clear Brazilian connection for the more than twenty smaller "Tama" companies previously unknown in West Africa. The venture was thwarted after initial early success because of errors in marketing, choice of Nigerian partners, and the way the failure of a small number of products detracted from the image of the line as a whole. "Tama" was also unable to adapt to the pressure to manufacture locally as import substitution policies were adopted in Nigeria stemming from the oil slump.

Brazilian subsidiaries of foreign multinationals are important in sales to Africa as part of Brazil's policy to promote the export of products resulting from foreign investment. Volkswagen do Brasil is the major supplier of unassembled vehicles to the Nigerian assembly plant. Mercedes-Benz and Saab-Scania send regular shipments of trucks and buses to Africa from Brazil, and Ford plans to make the Escort "world car" in Brazil for the African market. Massey Ferguson, Caterpillar, and

General Electric of Brazil all sell in Africa. A very substantial amount of the flow of Brazilian manufactures to Africa is a function of foreign investment in Brazil and serves as a channel for indirect Northern multinationals to sell to Africa at a lower price than if they produced in Northern plants.

Brazil's sharp gains in the ranking of countries exporting to nonoil Africa from 1975 to 1980 attest to its competitiveness—it rose from twenty-fourth to thirteenth in rank. (According to Brazilian statistics, however, its exports to nonoil Africa as defined by the International Monetary Fund [IMF] decreased by 3.5 percent between 1980 and 1981, probably as a result of the global slump and high interest rates. At this writing, IMF data on 1981 African aggregate imports are too incomplete to allow accurate comparison of the effect this decline will have on Brazil's overall position.)

To date, Brazil has specialized in products and services in which industrial countries show reduced interest and in which it has comparative advantage. To remain competitive Brazilian authorities must improve national marketing knowledge about Africa and gain an organized follow-up capability to hold on to or expand market shares in sectors in which its products have done well. In smaller markets such as Zaire, the Congo, and Angola, Brazil has had relatively little competition. But to remain competitive in the more sophisticated Nigerian market, an increased technological component will be necessary, combined with more innovative financing mechanisms, since Nigeria has development objectives that extend well beyond Brazil's "tropical technology." Price reduction through subsidization alone will be insufficient to attract those Nigerian buyers now becoming accustomed to higher performance American, Japanese, and European goods and to continue Brazil's rapid expansion into this important market.

Brazilian Services and Investment Expansion into Africa

THE PROVISION OF TECHNICAL assistance services by Brazil to Africa is relatively new in comparison with more exchange, but it offers considerable promise for future growth. While Brazil does not possess sufficient capital to carry on major foreign investment per se, its largely tropical climate and income level make its own innovations and those absorbed from technology exporters quite relevant to African development needs. Brazil benefits greatly from its economic status between First and Third Worlds and can pass on to other developing countries technology adapted to tropical developing-country social and environmental conditions. It is particularly competitive in (but not limited to) labor-intensive projects using local raw materials, operating under close cost constraints, and presenting opportunities for relatively uncomplicated solutions.

Along with provision of services goes the sale of Brazilian capital and durable consumer goods. The firms involved are almost all private and operating in the fields of general consulting, project design, agricultural development, mining, and civil construction. A sample of some recent activities is presented in Table 2. Other areas that are in progress or negotiation include biomass conversion, fuel-alcohol technology, flood control systems, forestry, public health, sanitation, fisheries, and veterinary medicine.

Table 2. Recent Brazilian services projects in Africa

Company	Type of service	Location
Andrade-Gutierrez	Construction of 208-km road	Congo
Companhi de Pesquisas de Recursos Minerais	Evaluation of coking coal reserves and their commercialization	Mucanha-Vuzi, Mozambique
	Mineral and water prospecting, mapping, training of personnel	Guinea
	Mineral prospecting	Somalia
Concremat	Project design for a 270-km highway	Morogoro to Dodoma, Tanzania
Consulbras	Paving and earthmoving	Nigeria
Cooperativa Agropecuria de Campinas	Establishment of soybean cultivation	Ivory Coast
Cotia	Technical assistance in reconstructing war-damaged farms (10,000 hectares)	Kuanza-Sul, Angola
	Farm and ranch management consulting	Nigeria
Ecisa	Construction of a 270-km highway	Morogoro to Dodoma, Tanzania
Encol	Design and construction of a small residential community with associated urban infrastructure	Abua New Town, Nigeria
Femecap	Production of soybeans, rice, and corn seeds	Ivory Coast
Geotecnica	60-m high irrigation and hydroelectric Bue Maria dam, design and construction	Pungue River, Mozambique

Because of convenience and African regulations, a joint venture format with local firms is often adopted, with an emphasis on training local workers and technicians. A few government-related operations have begun similar undertakings, the foremost of which are Braspetro and Novacap, the government agency responsible for the planning and coordinating of Brasilia. Novacap was contracted to provide consulting services in the planning of Abuja, Nigeria's new federal capital, but it was unable to develop a larger role in the actual construction. In a coal-prospecting and commercialization study in Mozambique, three parastatal corporations were involved in the initial phase: CPRM, a branch of the Ministry of Mines and Energy; GEIPOT, part of the government transportation planning agency; and COBRAP, an industrial research agency. The Brazilian National Science Foundation is also working on expanding scientific and technological exchanges with countries in Africa.

The role of the government of Brazil in services trade is thus to create receptivity and credibility for Brazilian companies and to prepare a legal framework within which private enterprise can operate.

According to a government sample of Brazilian firms taken in 1981, most contacts in Africa (including the Maghreb) from 1976 to 1980 were in the low-outlay phase of studies and projects rather than in building and construction, which was found to a much greater extent in Latin America. African contracts accounted for 21.2 percent of the total monetary value registered for the period, with Latin America at 73.4 percent and the Middle East at 5.4 percent. Relative African participation yearly in the foreign services contracts of the sampled firms varied greatly from year to year, which can be attributed to the novelty of the idea of services exports; 70 percent of the firms surveyed had never sold services abroad.[10] A preliminary compilation by the Brazilian Industrial Engineering Association based on all available information revealed that 16.6 percent of foreign service contracts of Brazilian engineering firms from 1975 to early 1982 were in Sub-Saharan Africa, compared with 59.5 percent in South America, 9.3 percent in Central America, and 8.3 percent in the Middle East and North Africa.[11] A survey done for the period 1966–80 by the Inter-American Development Bank found that by number of contracts, 13 percent of Brazil's civil infrastructure projects and 14 percent of its industrial projects sold abroad were in Africa, in contrast to 68 and 60 percent respectively in Latin America.[12]

From these sources it would appear that the regional direction of Brazil's services exports by value and by number of contracts leans heavily toward Latin America, with Africa a distant second. Within Africa most projects have been carried out, in chronological order, first in West Africa (principally Nigeria and Mauritania), then in Angola and Mozambique. There has been little progress in winning contracts in French-speaking West Africa because of the strength of French influence. An expansion to the Congo, Tanzania, and Kenya did seem likely as the Brazilian presence became more widespread, but it was placed in doubt by adverse economic circumstances.

The drive to export services, particularly in the construction sector, derived from the need for foreign exchange and petroleum imports and from the decreased pace of domestic infrastructural projects. Operations abroad have now become a substantial form of growth and have augmented the technological capacity of many firms. Although two of the firms, Hidroservice and Mendes Junior, rank among the largest in their field outside the United States, between 1976 and 1980 about 120 different Brazilian companies of many sizes participated in services exports.[13] Promotion of such exports has become an official priority, with several sources of finance. Export of services helps to balance the national services account, which is strained by payments for debt service and for royalties and acquisition of technology.

Within Africa Brazilian firms with successful experience tend to expand their activities to other countries as their own interest rises and their work becomes known. Even with Africa's financial problems, the kinds of projects for which Brazilians offer tenders are those so basic to social development needs that they are less affected by changing priorities than are projects sought by companies from developed countries. The recent African emphasis on agriculture and food distribution in fact favors the kinds of services Brazil is most prepared to offer.

The entry cost for companies in services markets is very high. Most Brazilian firms do not have the range of prerequisites to make a successful entry into Africa. One of the common strategies is to seek partnership in division of labor with other countries making inroads into the African market by virtue of complementarities and track record. Firms from Great Britain, France, Portugal, and Japan are unlikely candidates because of operating style and concern about competition from Brazil. Canada has shown some interest in African joint ventures with Brazil. In early 1982 Mendes Junior signed an agreement with the China Civil Engineering Construction Corporation to submit joint bids for projects in Africa and the Middle East. One interesting joint venture involves Brazil's Norberto Odebrecht and the Soviet firm Tekhnopromeksport in the construction of a hydroelectric project on the Kuanza River at Kapanda in Angola. This was made possible by a 1981 Brazilian-Soviet agreement allowing joint ventures in Angola, Mozambique, and Ethiopia. In this project Odebrecht is constructing the dam, the central hydroelectric plants, and part of the transmission lines and furnishing some equipment. The Soviet partner is furnishing turbines, some components, and a number of technicians. At first the Brazilian government was to have financed the Brazilian side of the project and to have received part of its payment in petroleum. At this writing, however, the final form of the agreement had not been decided.

South-South Transfer of Technology through Joint Ventures

BRAZIL PLAYS A LARGE role in South-South skills transfer, particularly in the transfer of unpatented technical processes and training programs. Varig, for example, conducts a program to train Angolan and Nigerian airline personnel, and TV Globo carries out a literacy program in Angola. A growing number of Africans go to Brazil for training as a result of treaties on scientific and technological cooperation signed with a number of countries and now just entering the stage of implementation. But the need to master Portuguese still remains the biggest disincentive for those from English- and French-speaking African countries. About 300 African scholarship holders are currently studying in Brazilian universities and technical centers.[14] A smaller number of Brazilian professors and technical specialists have gone to Africa.

Brazil does not make a practice of substantial donative development assistance. However, a number of government corporations and ministries have engaged in free transfer of know-how in a variety of sectors. The government has shown a readiness to consider extending bilateral technical assistance in important human resources areas that would entail relatively small costs. Most technical cooperation is carried out with Latin America, with Africa taking up the remainder. No central registry is kept; but according to estimates of those working in the area, technical cooperation worth probably millions of dollars has already been carried on with Africa, especially the Lusophone countries, underwritten by agencies of the Brazilian government.[15] Such information-sharing and training, many believe, has created a greater receptivity for Brazil in the commercial sphere and is a way to groom future leadership cadres. Yet because of Brazilian budget cutbacks for technical assistance, less such governmental technical cooperation with Africa can be expected in the near future, even though interest is intensifying on both sides.

Brazil as a Model of South-South Finance

BRAZIL HAS SHOWN the ability to intensify its economic relations with Africa; but finance, more than any other factor, is blocking further progress. With each partner financing has to be painstakingly arranged because of Africa's payment problems. With some smaller partners, such as Ghana or Senegal, purchases of Brazilian products come only as new financial packages are made available. The nearly universal mechanism is supplier's credit extended by the Bank of Brazil's Foreign Trade Office (CACEX) at terms below the normal commercial rates. A line of credit in millions of dollars is opened to a country for the purchase of manufactured products or services. Much of CACEX's African credit portfolio has been utilized to create important longer-term trade relationships. Brazil was the first country to extend commercial credit for products and services to Angola and Mozambique at concessionary levels. There have been risks on Brazil's part and stretchouts on a few loans, but the willingness and ability to take risks have been central to Brazil's commercial competitiveness relative to American and European suppliers.

The Bank of Brazil has a branch in Abidjan and representative offices in Lagos, Libreville, and Dakar, with plans to establish an office in Maputo. (Although there was discussion during 1981 of opening more offices, the degree of expansion was delayed.) Their principal tasks are overseeing finance, gathering information, and conducting commerical promotion. In no case have they become major financial institutions in the cities in which they operate, partly because the Bank of Brazil has not chosen to become fully established under African law by sharing equity locally. Since 1977 the Bank of Brazil has owned a minority interest in the French International Bank for West Africa (BIAO), which has offices throughout the region. A small share, however, does not entail power of decision or discourage the BIAO from favoring French interests. The BIAO-Brazilian connection figures in only a very small part of the African trade.

Brazil is a contributor (about $15 million) to the capital of the African Development Fund (ADF) and is joining the African Development Bank (ADB), which was recently opened to non-African members. This membership opens ADB financing to Brazilian exporters. The Brazilian National Bank of Social and Economic Development (BNDES) has contracted for consulting services in training and project planning and evaluation to the ADF and ADB. Private banks have been much less involved in African affairs, but the Banco Real does have offices in Abidjan and Libreville.

Because of its own severe financial limitations, Brazil must consider more carefully the longer-term ability of each of its partners to pay. Future arrangements are likely to be more frequently a mix of suppliers' credits, third-party finance (private or international financial institutions), local counterparts, association with other countries (in services), and countertrade. The type of countertrade arrangement suitable to Brazil, and for which its bid was requested by Zambia in mid-1982, is characterized by a $1-1.5 billion plan to build a 5,000-kilometer railroad and highway connection from the Atlantic Ocean to the Indian Ocean across Angola, Zambia, and Mozambique to improve ports at both ends. There are also prospects for the sale of heavy equipment, supplies, and railroad stock. Payment is to be made in petroleum and minerals which Brazil imports. Numerous long-term trading opportunities would open to Brazil if its tender is accepted and the project goes forward. Another model is suggested by the 1982 OPEC Development Fund financing of two Brazilian projects: a coal-prospecting viability study in Mozambique and the installation of a telephone system in Cape Verde.

Conclusions

AFTER A GRADUAL progression over several years and remarkable intensification in 1980 and 1981, in 1982 Brazil-Black Africa economic relations fell upon difficulties that will persist for at least a number of years. Progress has been blocked by the onset of more serious economic difficulties on both sides, mounting debts, international recession, and lower commodity prices. For example, Nigeria's oil prosperity and its development ambitions as the leading regional power have fallen into disarray since the world oil market collapse due to oversupply. Both socialist and capitalist economies throughout Africa are experiencing economic stagnation, decline, and a curtailment of credit.

Most of the political and financial impetus in the relationship between Africa and Brazil was initiated by Brazil under the assumption that Africa represented a long-run growth market worth the high short-run costs and efforts. During 1982 the further utility of a South-South trade strategy was put into question as Brazil's four key partners—Mexico, Nigeria, Iraq, and Argentina—greatly restricted their markets to foreign goods in response to a decline in oil revenues, massive foreign debt, and two wars. Third World markets proved fragile, more prone to quick negative change, and less worthy of long-term confidence than had been forecast only a few years earlier. The notion of using the growth rate of key Third World economies to spur Brazil's own rate of growth was valid only as long as those economies continued expanding. At the same time, in Brazil's own policymaking, longer-run economic planning, South-South symbolism, and solidarity gave way to more concrete concerns. Managing the huge national debt emerged as a top priority; and Black Africa, with its deflated economies and political instabilities, could be of very little help in this task.

Tactical flexibility in political and economic relations is characteristic of Brazil's international conduct. In the current reassessment of its development strategy, accelerated as a result of the debt crisis, strengthening relations with Africa may well be postponed in favor of initiatives with more certain and immediate benefits. Business with Africa will be the object of even closer scrutiny regarding ability to pay, and the level of activity can be expected to decline.

Brazil and Africa are now far less attractive to each other in light of the current circumstances. As early as 1982 the pace of exchange of missions had slackened greatly, few new initiatives had appeared, trade had fallen off badly. Because of its own credit shortages and the poor African economic prospects, Brazil will now be even less willing than previously to take risks and less able to make competitive offers. Opportunities for third-party finance are also much less favorable, especially since OPEC members are now preoccupied with their own cash flows in a more competitive oil market.

Nevertheless, accomplishments by 1982 proved that Brazil does have the potential to be a significant option for certain countries of Black Africa, although some enthusiasts of the relationship tended to underestimate the tenacity of the obstacles and to confuse style and substance. The long-run complementarity remains, but the time frame has been lengthened. The limits already experienced will be more restrictive in the short to middle terms, and progress will be more costly. The successes of 1981 are not indicative of what will happen again soon. And the trade that does survive will have to do so with less stimulation of promotional marketing and cheap credit. In the winnowing out, the key partners will remain essentially the same—Nigeria, Gabon, Angola, South Africa, the Congo, and perhaps Mozambique—but economic relations with East Africa and some former minor partners like Ghana and Senegal hold out meager prospects as Brazil exercises more selectivity. A small number of countries, such as the Ivory Coast, Togo, and Zaire, present an intermediate level of interest depending on their economic health and the results of further explorations for oil.

The decline in oil prices, although welcome to Brazil as a major importer, will limit the capability of its suppliers to purchase its manufactures. The demand for services will also be affected by the slowdown in African infrastructural growth. The most promising approaches include countertrade package deals (raw materials for manufactures and services) and joint ventures in the assembly of manufactures, both of which will require compromise and flexibility in negotiation as the relationship adapts to a quite different international economic environment.

The case of Brazil-Africa shows some of the possibilities of bilateral cross-continental South-South relations, but it also clearly demonstrates their limitations. The concept is long on political inspiration, short on means, and very vulnerable to negative international economic trends. The faltering of the largest newly industrialized countries now limits the potential of that group to serve as a "new engine of growth." Moreover, Arab OPEC aid, always conservatively distributed, can no longer be counted on to stimulate LDC joint ventures.

We can therefore see that South-South bilateral ties are based not only on collective Southern interests but also on considerations of national advantage and complementarity that often hinge on the position of the Southern partners relative to their Northern ties. In the present circumstances, even as the major developed economies become less autonomous and less unified, the opportunities for the developing countries to form a self-reliant network of interrelationships to insulate themselves from the disruptions emanating from the industrialized countries have become severely limited.

NOTES

1. Arthur Lewis, "The Slowing Down of the Engine of Growth," *American Economic Review, 40*, 4 (September 1980), 562.
2. Mahbub Ul Haq, "Beyond the Slogan of South-South Cooperation," *World Development VIII* (1980), 743-44.
3. International Monetary Fund, *Direction of Trade Statistics Yearbook, 1982* (Washington, D.C.: IMF, 1982), p. 95. The IMF's classification of "oil-exporting" LDCs and "nonoil" LDCs is somewhat misleading because listed among "nonoils" are such oil exporters to Brazil as Mexico, Angola, Gabon, the Congo, and Zaire.
4. William G. Tyler, "Advanced Developing Countries as Export Competitors in Third World Markets: The Brazilian Experience," in Georgetown University Center for Strategic and International Studies, ed., *World Trade Competition: Western Countries and Third World Markets* (New York: Praeger, 1981), 331-408.
5. Political aspects of this relationship are covered in Wayne A. Selcher, "Brazil-Africa Relations: Third World Alternatives for African Development and Security," in Bruce E. Arlinghaus, ed., *African Security Issues: Sovereignty, Stability, and Solidarity* (Boulder, Colo.: Westview Press, forthcoming 1983).
6. See, for example, Pierre Gaillard, "Afrique/Bresil: Une Cooperation Sud-Sud Prometteuse," *Construction Afrique*, 30 (September 1982), 36-40.
7. Statistics from unpublished studies of the Commercial Promotion Operations Division, Brazilian Foreign Ministry. In these particular aggregate figures, Morocco, Libya, Algeria, and Tunisia are included, as per the standard Foreign Ministry nomenclature of African countries.
8. Unpublished chart, "Exports by Industrial Origin and Regional Group of Brazil," Market Penetration Study, World Bank, June 26, 1981.
9. Statistics from unpublished studies of the Commercial Promotion Operations Division, Brazilian Foreign Ministry.
10. Fundacao Centro de Estudos do Comercio Exterior, *Estudo sobre a Exportacao de Servicos, Relatorio Basico (Primeira Parte, Versao Preliminar)* (Rio de Janeiro: Mimeographed, March 1982), 59-76.
11. Associacao Brasileira de Engenharia Industrial, *Exportacao de Servicos de Engenharia-Levantamento Preliminar* (Rio de Janeiro: Mimeographed, May 1982).
12. Inter-American Development Bank, *Economic and Social Progress in Latin America: The External Sector. 1982 Report* (Washington, D.C.: Inter-American Development Bank, 1982), 149-51.
13. "Como ganhar 100 bilhoes de dolares," *Comercio Exterior* (November-December 1981), 23.
14. Jose Maria Nunes Pereira, "Relaciones Brasil-Africa: Problemas y Perspectivas," *Nueva Sociedad, 60* (May-June 1982), 87.

15. Information from the African Affairs Division, Brazilian Foreign Ministry. According to information from the Secretariat for International Economic and Technical Cooperation of the Ministry of Planning, in 1982 Brazil provided technical cooperation to the following African countries: Cape Verde, Senegal, Guinea-Bissau, Sierra Leone, Ivory Coast, Ghana, Togo, Nigeria, Cameroons, Congo, Zaire, Angola, and Mozambique. In the first half of 1982, 171 African technicians were involved.

The Information Engine

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The information sector can propel development, according to this article, which provides a hypothesis for the formulation of economic and social development policies. The author is Chairman of the Information Economy Co., Inc., Silver Spring, Maryland, and a consultant to the Venezuelan government on information policy. The data compiled by his company on the information sector worldwide are available on request.

Introduction

AN INFORMATION SECTOR has always existed as a component of the economy. What has been missing is the recognition, analysis, and understanding of the key role played by the information sector in economic and social transformation.

The field of information is complex and often apears too ambiguous for comprehensive analysis. Nonetheless, its importance has invited analysis from several points of view, including political, technological, legal, sociological, ethical and moral, philosophical, occupational, managerial, and cultural. Each approach provides a fundamental understanding of aspects of the information phenomenon, yet no one approach describes it completely. An integration of several perspectives is required for a complete understanding of this phenomenon and for the formulation of comprehensive information policies and strategies.

In this article the information phenomenon is filtered through an economic lens, which is, among the different lenses that might be used, one of the more technical and least subjective. The economic approach stresses the conversion of general concepts about information into statistical data that can be used as a basis for formulating policies and defining strategies.

As the field of information economics grows, the criteria for defining and measuring the information sector improve and gain acceptance. A body of knowledge is being produced which appears to have profound implications for policymakers and development planners. Several studies have demonstrated that it is possible to