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The European Community, Economic Security and the Lomé II Convention

A Thesis in

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by

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Introduction

At a time when natural resources and primary products are becoming less abundant and more expensive and Third World nations are endeavoring to develop their economies, the issues of foreign aid and trade in commodities take on increasing significance. During the colonial period of the 1800s and earlier 1900s the economic relationship between developed and underdeveloped nations was more clearly exploitative; developed nations' policies were more explicit in their efforts to exploit underdeveloped economies. Today, as nations grow more interdependent, and as international banking, finance, and trade and aid institutions become more complex, the gains from transactions become cloudier. Such phenomena as the multinational corporation, tied-aid, producer associations, and Northern domination of economic institutions give rise to concern in the South over who is benefitting most from existing situations. Researchers such as P.T. Bauer assert that poorer nations are actually hurt by what appear to be beneficial relationships.

It is the thesis of this paper that a poor country that trades primary products will receive more aid than one that does not. Economic security considerations will dictate the pattern of aid if other factors (political, military, etc.) are held constant. Aid will be provided to certain nations and to certain economic sectors in order to influence production. Nations with large reserves of strategic minerals and vital commodities may

receive somewhat more aid than a similar nation that lacks such reserves and resources.

This paper will examine one aspect of the aid relationship between two groups of nations, one industrialized, the other under-developed. The first group, European nations, has experienced tremendous economic growth. Many factors contributed to that expansion, not least of which was the colonization of large areas of Africa and Asia. Today, the advanced European economies are characterized by high rates of consumption and demand for inputs of raw materials and energy. Demand for raw materials and primary resources is increasing while those same resources are becoming less abundant and more costly (see E. Frey-Wouters, and A.M. Alting von Geusau). The oil shock of the early 1970s exemplified a condition that will possibly occur with other commodities as finite resources are consumed at ever increasing rates. As more Third World nations realize the economic and political importance of their raw material production as tools for change, they may be less inhibited to use them in the form of cartels and selective embargoes. This situation regarding primary products provides an incentive for richer consuming nations to take steps to achieve and maintain greater control and influence over natural resource production and distribution.

This paper examines the aid relationship between two groups of nations representing 600 million of the world's people; the 10 European nations making up the European Economic Communities (E.C.), and 58 of the poorest African, Caribbean and Pacific

(A.C.P.) states. The formal structure of this specific aid relationship is the Lomé II Convention signed in 1976 providing a variety of different forms of Official Development Assistance (O.D.A.) and a special program for the stabilization of export commodity earnings.

The relationship between the EC and the ACP states is but one relationship between rich and poor nations. Aid under Lomé II represents only a part of all aid going to Third World nations. In 1978 approximately $64,311 million in net private and government capital flows left the developed, industrialized world for all the poorer, Third World nations. Of that amount, $19,676 million was in the form of foreign aid from all sources. $6,770 was from multilateral institutions like the EC. Under Lomé II approximately $4,068 million had been allocated for a five year period, or an average of $813.8 million in each year.[1] Therefore, in 1978 alone, the money originating in the EC in the form of aid under Lome II amounted to just over 1% of all capital flows to the Third World.

EC aid is not spread evenly throughout the world; a handful of ACP nations receive the bulk of Lomé II funds, just as a small group accounts for the bulk of EC-ACP trade. This paper assumes that Europe gets a significant portion of its raw materials from other countries, or will do so in the near future. Commodities are imported primarily from outside the Community; a handful are imported in significant amounts.[2] The EC as a whole relies extensively on imports for its consumption of crude petroleum,

tin, aluminum, copper, uranium and thorium, fertilizers, and iron ore.[3] (see Table I.3, p.13) At least 70% of the consumption of cocoa, cloves and other spices, palm nuts, and tropical fruit is in the form of imports from ACP states.

Imports are only half of the story, secure markets for exports are also important. The less developed countries are important and valuable customers for manufactures from the industrialized world. A stable, profitable trading relationship now will insure continued access in the future. This paper will deal only with ACP exports to Europe and not vice versa.

The ACP nations number 58 of the poorest countries of the world. The majority are former French, Belgian, British, Dutch, and Italian colonies. Forty-two are African, representing the bulk of the ACP population. Per capita GNPs range from $110 in Mali to $3,730 in Gabon. Nigeria has the largest population with 66 million people. The nine Caribbean nations account for only five million people, and tend to have higher per capita GNPs. The seven Pacific nations are all small island states; and, with the exception of Papua-New Guinea, each have populations of less than 700,000.[4]

In order to examine the relationship between these poor nations and the ten of Europe, this paper begins with a discussion of European economic security; demonstrating the EC's precarious situation regarding primary products and the Lome Convention's role in securing those supplies. Chapter 2 briefly outlines the form of ACP-EC relations to illustrate the emergence of

a relationship, and details specific provisions of Lomé II. The substantive part of this paper is Chapter 3, an examination of econometric regressions and a statistical analysis of aid and trade between the two groups of nations.[5]

The Lomé II Convention represents a "revolutionary" aid relationship between North and South, and has drawn much attention. Such researchers as Frey-Wouters and Alting von Geusau have written well-documented and researched studies of the Treaty. But as of yet no one to the author's knowledge has examined the Convention from a perspective of economic security with regard to security of supply for non-fuel minerals and non-food agricultural primary products. This paper examines the EC's situation regarding primary materials production, and how the specific provisions of the Treaty reflect such a concern. Statistical analysis in the final chapter demonstrates that while evidence suggests that raw material provision is a concern in aid allocation, it is not a major or determining consideration.

Notes

[1] Statistical Yearbook 1979/80, (Department of International Economic and Social Affairs, Statistical Office, United Nations, New York, 1982) p.395.

[2] "Significance" is determined by the level of dependence on outside sources and strategic and economic importance of the imported resource.

[3] European Communities, Analysis of Trade between the EEC and ACP States, (Luxembourg, 1979).

[4] "Lomé II Dossier", The Courier, November 1979, p.40.

[5] Repeated reference is made in this thesis to certain terms concerning rich and poor nations, foreign aid, and the European Community. To clarify matters, the terms "Industrialized Countries" (ICs), "First World", "rich", "North", "developed nation", and "metropolitan nation" are considered equivalent terms. The Less Developed Countries (LDCs) will also be refered to as the "Third World", "poor", "South", and "under-developed nations". Official Development Assistance (ODA) will also be called "foreign aid", "aid", and "assistance". The European Economic Community comprised of the ten Western European countries of France, Germany, Belgium, Luxembourg, the Netherlands, Italy, England, Ireland, Denmark, and Greece is variously refered to as the "Common Market" and the "European Community" (EC).

Chapter1 EC Economic Security

This paper presumes that Europe, and specifically the EC, will have difficulty in the future acquiring adequate, stable supplies of raw materials for industrial consumption. Europe's consumption of food, energy, and raw materials is high; in the past the Community relied on dependable sources for its raw material needs--primarily domestic sources, colonies, associated territories, and other industrialized countries. The oil shock of the 1970s demonstrated the high degree of vulnerability of developed nations to restrictions in supplies of vital commodities. As global interdependence increases, and as the less developed countries begin to demand a greater share of their own and the world's resources, the stability of such supplies becomes more important and even more questionable.

As a result of supply shocks (sudden, sharp fluctuations in the supply of a commodity, usually accompanied by a price increase), not only in oil, but also in such commodities as anchovies and copper, economic issues have begun to take on greater importance in the arena of international relations.[1] The rise of Third World political power in the General Assembly of the United Nations and continuing political friction over economic issues in the EC reflect this situation. At stake is no longer simply military security and sovereignty over national boundaries; today issues of economic autonomy and economic sovereignty are more vital.

Wolgang Hager (European Economic Issues, 1976) described three levels of national economic security analogous to military security.[2] The first and least secure level is characterized by mass physical annihilation, as from a nuclear holocaust. The economic counterpart would be mass starvation through the inability to raise or procure necessary and vital food and medicine stocks. The people of Europe are far from starving, though many African and Asian nations (Chad, Upper Volta, Bangladesh, India) are already at this point. The second level of security can be considered equivalent to conquest. In this case social and economic institutions collapse due to external and internal economic forces. Those institutions (banks, governments, corporations) are seen as exploitative and inadequate to cope with increasing pressures. Characteristic of this level are widespread anarchy and the rise of radical factions.

Europe presently finds itself at the third level of economic insecurity. This level is defined as a loss of autonomy in the areas of domestic and international policy. A nation that derives a large portion of its raw material, energy, food and/or manufactured goods from external sources is in a precarious situation. The nation's economic health could be jeopordized if supplies are cut or prices raised. The present aid situation under Lome demonstrates how nations with great economic power can influence the policies of other nations. If OPEC nations are willing to use their oil as a political weapon, then nations that oppose OPEC policies run the risk of having their oil supplies

cut or squeezed, as was seen in 1973 over the Arab-Israeli war.

To a lesser degree the EC finds itself threatened by dependence on foreign sources of primary products for its industrial consumption. Tremendous economic growth in the past 200 years and even more so in the past 20 years, has lead Europe to a situation where it must look abroad to meet its increasing demand for material inputs.[3]

Since 1960 industrial output has risen 54% overall, and 5% each year in the latter part of the 1970s (see Table I.4, p.14) At the same time domestic production of important commodities and inputs is falling.

While other industrial countries are the major suppliers of raw materials to the EC, the continued flow of commodities is not guaranteed; other ICs are subject to the same supply problems affecting the EC (see Table I.2 p.11). In the first place while some nations (the United States, Canada) export large quantities of semi-finished commodities, the original suppliers are the same ones to whom the EC goes. They are only reselling products previously imported. For example the U.S. produced 5,452.5 thousand metric tons (t.m.t.) of aluminum in 1978 for domestic consumption and export. But it imported 88% of its bauxite and alumina consumption and produced only 1,559 t.m.t. of bauxite domestically.[4]

In the second place, the future of adequate supplies from the four major IC primary product suppliers (U.S., Canada, Australia, South Africa) is not guaranteed. The U.S. is a sub-

Table I.1
EC Domestic Production and Use of 8 Commodities, 1969-78

Commodity	Production			Use		
	1969	1978	% change	1969	1978	% change
	thousand metric tons					
Iron ore*	24,963	12,369	-50	134,743	210,209	+56
Bauxite	2,992	2,002	-34	1,365.4	2,629.2	+92
Copper	10.7	6.3	-41	957.2	1,093.3	+14
Lead	169.5	129.4	-24	1,011.2	1,078.5	+ 6
Manganese**	16.3	2.1	-88	15,890	21,741	+36
Tin**	1,904	2,802	+47	37,766	16,605	-57
Zinc	366.2	369.8	+ 1	1,265.9	1,433.3	+13
Phosphates	112	25	-78	4,688.0	4,329.6	- 8

Notes:
* million metric tons
** metric tons

Source: Statistical Yearbook 1979/80, United Nations, New York, 1981.

Table I.2
Origin of EC Raw Materials, 1980

Origin	$ billions	%
Industrialized Countries	19.11	64.8
Western Europe	14.45	49.0
EC	7.60	25.8
EFTA	6.15	20.9
non-oil LDCs	5.19	17.6
United States	2.69	9.1
Cent. Planned Econ.s	2.40	8.1
Australia, N. Zealand, South Africa	2.11	7.2
Canada	1.84	6.2
OPEC	0.62	2.1
Japan	0.13	0.4
Total	29.47	100.0

Source: Statistical Yearbook 1979/80, United Nations, New York, 1981.

stantial importer. The Canadian and Australian governments, in the 1970s, began passing legislation aimed at keeping extractive industries nationalized, at keeping economic rents within the country, and at regulating further development with an eye on conservation and the ecology, thus discouraging extensive exploitation of their natural resources.[5] The political situation in South Africa makes reliance on sustained production somewhat questionable.

Competition does not end with other ICs; the newly-industrialized countries also pose a threat. Nigeria, Brazil, Singapore, Hong Kong, and South Korea have been demanding greater industrial inputs.[6] These five countries' combined demand for imports of all categories rose from 3.5% of world-wide imports by value in 1960 to 4.6% in 1970 and 5.2% in 1980. Competition from LDCs that are buying more on the international markets and consuming more of their own outputs will increase. As LDC economies develop they will consume more resources, resources that must be diverted from other destinations or that must be produced in greater quantities.

Logically, the first place to look for commodities is in one's own backyard. The EC nations, like many ICs, are finding foreign sources cheaper as domestic supplies of minerals are depleted. While no commodity has truly "disappeared", scarcity and depletion are becoming more frequent.[7] Price acts as an allocational mechanism when a resource becomes scarce. As the cost of technologies needed to extract greater amounts of oil and to

Table I.3
EC Raw Material Imports, $ millions

Origin	1955	1970	1979	% 1955-79
World	10,119	13,076	46,078	+ 55
Industrialized Countries	6,494	8,992	33,134	+410
Developing Mkt. Econ.	2,856	3,202	10,336	+262
Developing Africa	1,312	1,275	3,273	+149
Australia, New Zealand	676	599	1,620	+139
OPEC Nations	526	434	1,203	+128
Developing Oceana	46	57	288	+526

Source: Statistical Yearbook 1979/80, United Nations, New York, 1981.

Table I.4
EC Manufacturing Output, 1975=100

Country	1968	1979
Belgium	78	108
Denmark	83	101
France	73	105
Germany	81	105
Ireland	78	129
Italy	84	111
Luxembourg	93	107
Netherlands	47	158
United Kingdom	94	104

Source: Statistical Yearbook 1979/80, United Nations, New York, 1981.

diversify supplies increased, the price of oil rose and its use became more efficient. The need to extract oil from tar sands and shale in the future will increase costs even more. A commodity may be considered depleted in a certain area when the cost of extraction excedes the cost of importing the goods from other sources.

While industrial output in the EC is rising, production and mining of specific commodities for input is falling, and domestic output has not kept pace with demand. Industrial output as a whole continues to increase, ranging from an annual rate of 2.5% in Denmark, to 8.6% in France, and 16.7% in Ireland (see Table I.4, p.14). The gap in supplies has been filled with imports of raw materials, increasing five-fold since 1965 (see Table I.3, p.13). While part of the increase in raw material imports is due to inflation, the significant portion is an absolute increase in imports. Imports of mineral fuels alone (petroleum, natural gas) jumped in value from $6,476 million in 1965 to $109,932 million in 1979, reflecting two major crude oil price increases by OPEC nations during that period.

Light and heavy manufacturing, food production, clothing, paper and printing, chemicals and refining industries have all shown steady increases in output since the 1960s in the EC. The supply problem is demonstrated by the fact that while output in the extractive sector as a whole has gone up over the past twenty years, it has not kept up with demand. While manufacturing and other industries have experienced growth rates of approximately

20% in the past 20 years, extractive industries in Europe have increased output by only 10% during the same period.[8] These figures are aggregates, but the trend is still unmistakable; domestic output of necessary raw materials has not kept pace with demand.

Failure of domestic production to keep up with demand has resulted in greater dependence on foreign sources. Approximately 80% of all iron ore consumption in the EC is imported; 80% of copper, 60% of aluminum inputs, and 75% of uranium consumption is supplied by imports, see Table I.5.[9] Such minerals as tungsten, vanadium, phosphates, and tin are scarce in Europe. Imports from ACP nations provide varying parts of these imports.

Import dependence for agricultural goods is not quite as great for non-agricultural products, as Europe lies in a temperate zone and uses advanced farming techniques. Almost all tropical products must be imported, although Spain is a major producer.

Little need be said about oil. Except for England's North Sea reserves, the EC has hardly any oil. Alternative sources are being pursued with much hope being placed on nuclear power (plans are to double nuclear capacity every five years till 2000).

The EC will find itself in an increasingly vulnerable position regarding primary product imports if present manufacturing trends are to be maintained. Presently the EC conducts only 15% of its foreign trade with the Third World, most going to the more prosperous newly-industrialized nations. But even poorer,

Table I.5
EC Critical Raw Materials

Material	% import dependent	possibilities of recycling	substitution	supply security
Aluminum	56	26	good	satisfactory
Chrome	100	22	some	risk
Copper	95	35	some	risk
Tin	83	45	some	satisfactory
Iron	80	17	low	sufficient
Manganese	100	low	low	satisfactory
Phosphates	99	minimal	low	risk
Platinum	100	20	low	sufficient
Zinc	75	20	some	risk
Wood	17	24	low	risk
Pulp	40	24	low	risk
Paper	58	n.a.	n.a.	risk

Notes: n.a. not available
Source: A.M. Alting von Geusau, The Lomé Convention and a New International Economic Order, Leyden: A.W. Sijthoff, 1977, p. 173.

smaller nations produce many important commodities. The Lomé Convention is supposedly a step in the direction of increasing development, cooperation, and inter-dependence.

The Convention is a "new model for relations between industrialized and developing countries, a model for cooperation on a basis of complete equality of partnership...recognizing the increasing mutuality of interests," as stated by H. Brenard St. John (Barbados), President of the ACP Council of Ministers in 1979.[10] Refering to ACP aspirations Development Commissioner for the EC, Claude Cheysson, has said that the EC is "aware that it would be hypocrisy or blindness on our [EC's] part if we claimed to foster your industrial and agricultural development without making room for your exports on our markets."[11]

In order to increase production of both raw materials and finished goods the LDCs must develop their economies. Through association, the ACP nations have, to some degree become "semi-client" states of the Common Market. By agreeing to associate their economies together, the ACP nations and the EC countries have placed their future prospects on the growth and success of each others' economies. The relationship is interdependent with the EC providing needed capital and manufactured goods, while the ACP nations will become buyers and suppliers of manufactures.

Notes

[1] Wolfgang Hager, "Europe's Economic Security," (in John Marsh, European Economic Issues, New York: Praeger, 1976.) p.72.

[2] ibid., p.75.

[3] Ellen Frey-Wouters, The European Community and the Third World, (New York: Praeger, 1980.) p.80.

[4] Statistical Yearbook 1979/80. (United Nations, New York, 1981) p.348.

[5] Hager, p.113.

[6] Statistical Yearbook 1979/80, p.440.

[7] The terms "scarce" and "depleted" are economic terms describing the relationship between price and supply and demand. A commodity is depleted when the cost of extracting that resource is greater than any possible use for that resource. The resource is not gone, it is simply too expensive to extract, produce, and/or refine for commercial purposes.

[8] Statistical Yearbook 1979/80, p.175.

[9] European Communities, Analysis of Trade Between the EC and ACP States, (Luxembourg, 1979).

[10] "Lomé II Dossier", The Courier, November 1979, p.4.

[11] ibid., p.9.

Chapter 2 The Lomé II Convention

This chapter briefly describes the events that led to the Lomé II Convention, and the specific provisions of the Treaty. The EC's need for raw material security has been described, and its reliance on Third World producers has been demonstrated. The mechanism for implementing a method of securing those supplies will be described in this chapter. It must be kept in mind that aid is only one aspect of EC-ACP economic interaction; trade, investment, etc., are also quite important in shaping relations.[1]

I. History

The present Lomé II Convention sprang from various treaties of association between the EC and the ACP nations. The first phase began in 1956 when France demanded that association with her former African colonial states be a condition for its membership in the Common Market. The second phase followed independence for most of those French colonies with the signing of the first Yaoundé Convention in 1963. The third phase in the EC-Associated countries relationship began with England's accession to the Community in 1973, leading to talks on the inclusion of the Commonwealth nations in a similar treaty of association. The Commonwealth nations and the Franc zone countries (as the former French associates were called) together made up what is today refered to as the African, Caribbean, and Pacific states, and

have signed two Lomé Conventions with the European Community.

Motivated initially by the special economic, constitutional, and monetary relationship France had with its associated countries and territories, ACP association was a basic part of the very formation of the European Community. Of the original six members, France, Belgium, the Netherlands, and Italy were colonial powers to varying degrees. Only Germany and Luxembourg were not. France could not accept a common external tarriff that would apply to its associated nations.[2] The other EC members would also benefit from association with increased access to markets. Germany along with the Netherlands, led the opposition to association. Their reservations were over a limited regional treaty of association and the effect of preferential treatment on non-associated LDCs. The final agreement (article 131 of the Treaty of Rome) states, "The purpose of association shall be to promote the economic and social development of the countries and territories and to establish close economic relations between them." Association called for the progressive establishment of a free trade area and a European Development Fund to support development efforts.[3]

Shortly after the signing of the Rome Treaty most colonies gained independence. The first LDC associates were 17 French speaking Associated African States and Madagascar (AASM). The first Yaoundé Convention, signed in 1963, basically put Art. 131 into the form of a separate treaty. Both the EC and ACP nations were to remove their trade barriers, and funding under the Euro-

pean Development Fund (EDF) was increased. The second Yaoundé Convention was concluded in 1969 over the objections of many African states, and remained basically the same as the first due to political conflicts within the Community that lead to a stalemate. African goods had trouble competing locally with the tariff-free imported European goods, and the AASM questioned the benefits of reciprocal free trade.[4]

If France's insistence on association was the impetus for a coordinated aid program for the EC in the first place, then the insistance by the Commonwealth nations for a similar arrangement upon England's accession to the Community provided the momentum to revise that relationship. In the period 1973-1975 the number of participants on the European side increased from six to nine as England, Ireland, and Denmark joined the EC. On the LDC side, the numbers jumped from simply French, Dutch, and Belgian associates to include parts of the former British empire and a number of "independent" nations. Many of the newer Commonwealth members were larger and more developed, resulting in greater importance being placed by the EC on the LDC demands.[5] Within the EC, Germany and the Netherlands advocated a position whereby Art. 131 would become a temporary measure until former colonies became independent and self-reliant, at which point they would be treated as any other non-member. France's position prevailed, and the provision became renewable.

Two distinct blocs formed during negotiations between the Yaoundé and Lomé Conventions. The Franc zone nations of Africa

were quite enthusiastic about association, reflecting the strong economic, political, and social ties France established with its colonies, and were not very enthusiastic about sharing the benefits of association with the Commonwealth nations.[6] The Commonwealth nations, being more recently independent, were more wary of the arrangements for association that appeared to be neocolonialist. The Yaoundé Conventions called for reciprocal free trade; at the time such an arrangement seemed only fair. The Commonwealth nations questioned how much good such duty-free trade did the poorer signatories. The United Nations Conference on Trade and Development (UNCTAD) had just concluded talks in the mid-70s that indicated that reciprocal free trade was not necessarily fair or desirable.[7] That declaration along with the increasing significance attached to trade by the ACPs, lead to the dropping of such a clause from the next treaty of association.

Lomé I entered into force on April 1, 1976 between forty-six ACP nations and nine European ones. It included, for the first time in any major foreign aid arrangement, a provision to aid in stabilizing export earnings, Stabex. Instability in export earnings is a major impediment to continuing and smooth development in many LDCs. While Stabex is a small fund covering only a few commodities, it was still the first step in that direction. In addition, Lomé was negotiated between two large blocs of nations on a fairly equal basis.

Negotiations for Lomé II during 1978-80 left the Convention

in much the same condition. Aside from increases in funding and an expansion of the list of products covered by Stabex, Lomé II is virtually identical to Lomé I. The ACP nations were not completely satisfied with the results of Lomé I, but found their own lack of cohesion and agreement and EC stubbornness, to be an insurmountable obstacle to substantive change.

II. The Lomé II Convention

Lomé's effect depends on its structure. At the signing of the first Yaoundé Convention the European Development Fund (EDF) was established for development activities and foreign assistance programs of the EC. The EDF is the major source of funding for Lomé II along with the European Investment Bank (EIB). A sum of $6,272 million was set aside for the five years the Convention is in effect (1980-85). Of the $6,272 million, $911 comes from the EIB. The treaty has five main provisions, the major one being non-reciprocal tariff- and quota-free entry of ACP goods into the EC. Export earnings stabilization and production maintenence is provided by the Stabex and Sysmin (a Stabex-type plan for some minerals) plans. Three other provisions of the Convention concern industrial, agricultural, and technical and financial cooperation and assistance.

The major part of the treaty with the greatest impact on the ACP nations is the provision for barrier-free entry of ACP goods into the EEC. The purpose is to "accelerate the growth" and flow of those exports into the EC. Basically, any product

originating in any one or combination of ACP countries may enter Community markets without tariff or quota restrictions and these conditions need not be reciprocal. There are exceptions and guidelines. The product must meet certain origination and transportation criteria to insure that the goods truly are of ACP origin. Products that are covered by the Community's Common Agricultural Policy (CAP) are not included. The CAP is a price-and quota-fixing scheme within the Community to protect domestic food producers. In addition, under certain circumstances, to be approved by the ACP-EEC Council of Ministers, "safeguard measures" may be taken by individual EC countries. Even under the CAP restriction, though, ACP products are given preference over goods from all other sources. Goods affected by the CAP restriction are beef and veal, fish and fish products, cereals, tobacco, fresh fruits and vegetables grown within the Community, and live plants. Though the free-trade provision is not reciprocal, ACP nations must accord EC countries at least most-favored-nation status, and must not discriminate among EEC countries. This trade cooperation provision, Title I, is the most significant measure in that it involves large flows of trade and yet does not require funds.

This provision has increased trade between the groups of nations. The ACP trade balance with the EC went from -$2.0 billion in 1973 (under the Yaoundé II Convention) to $1.0 billion in 1978 (under the Lomé II Treaty), and trade in general increased an average of 20% in each year during 1973-78.[8]

Trade promotion programs take up $48 million of the resources. Articles include improvement of structures and procedures for advancing trade between the two groups. Money is provided for the training of staffs and personnel for ACP nations and for the participation in international conventions and trade conferences. Market research and study is provided for as well as the establishment of better intra-ACP communication and information systems regarding trade and markets. Infrastructure studies and development falls under this heading. Money is also made available for advertising and assistance for small and medium sized private undertakings.

The most innovative aspect of the Convention is Title II, the scheme for the stabilization of export earnings known as Stabex. Expanded under Lomé II, Stabex takes just over $1,000 million of the budget. The scheme basically insures that earnings from the export of certain commodities do not fall drastically in any year. Stabex covers forty-three agricultural products and iron ore while Sysmin covers minerals and attempts to maintain levels of production, not earnings. As has been mentioned before, trade is a most important source of capital and foreign exchange; and, therefore, production and export of commodities are of vital importance to the LDC. For the Third World, trade is generally in terms of primary products in exchange for industrial goods. Primary products are much more susceptible to price fluctuations and natural catastrophe. Stabex and Sysmin are attempts to overcome these obstacles to growth.

Under Stabex, when a country experiences a drop in export earnings from the "reference level" of 6.5% in a commodity that comprises at least 6.5% of that country's total earnings from exports to the EC, then that country is eligible for a concessionary loan in the amount of the shortfall. Exceptions are made for the least developed and land-locked ACP nations whose dependence threshhold and trigger rate are only 2% of exports and reduction. Their transfers need not be repaid either. The reference level used to determine "normal" earnings is determined by the previous four years' average of earning levels. The products covered basically fall into forty-three categories of agricultural products with minimal processing. For example, wood is covered in rough form, roughly squared, half-squared, or sawn lengthwise, but "not further manufactured". Similar conditions exist for every other product.

The transfers received by the ACP government "must be devoted to maintaining financial flows in the sector in question or, for the purpose of promoting diversification, directed towards other appropriate sectors and used for economic and social development." If approved by the Council of Ministers for the Convention, the recipient may apply funds to other sectors, but in practice this has not been the rule.[9]

Sysmin is new under Lomé II and its emphasis is slightly different from that of Stabex. The object is maintenance of capacity for production and not export earnings. It receives half the funding that Stabex does, covers only nine products, and has

a much more conservative trigger amount and dependence threshold. To be eligible for a forty year loan at 1% interest, the product must make up 15% of earnings from exports and the capacity for production must fall by 10%. Products covered are copper, manganese, tin, cobalt, bauxite, iron pyrites, phosphates, alumina, and iron ore. Sysmin also provides funds for expanding scientific and technological capacities for mining and extraction, for exploration, and for seed capital for mineral and energy projects.

A Sugar Protocol also falls under Title II. The "Special undertakings on sugar" establishes quotas and minimum prices for the importation of white and raw sugar into the EC. The Community agrees to buy, at a negotiated price, a certain quota of sugar that ACP nations are not able to sell on the open market.

Agricultural cooperation under Title VI includes programs for the improvement of the standard of living for rural peoples, the ones who have traditionally been the last to benefit from economic development. The purpose is the "improvement and expansion of agricultural production for domestic consumption and export." Assistance is given for diversifying production and improving the security of ACP food supplies. The Technological Center for Agricultural and Rural Cooperation disseminates scientific and technical information for improving the productivity and methods of the agricultural sectors of economies. Title VII, Financial and technical cooperation of a general nature, consists of capital for projects and exchange of information. Specific

activities that receive funding include rural development, energy, mining, and the "exploitation of natural resources". The development of "dynamic complementarity" in the ACP economies, the establishment of "industrial and trade links" between ACP and EEC, and the "development and diversification" of ACP economies are all purposes of Title V, Industrial Cooperation. In addition, projects aimed specifically at the stimulation of "food and other production activities" and "natural resource-based industries" also receive funds.

The latter "cooperation" provisions of Lomé do not receive specific earmarked resources, but are funded from the general budget from money not earmarked for Stabex, Sysmin, etc. The EDF provides loans or grants for specific projects. The sources of funds for the EDF are annual replenishments from the members based on the size of their economies. Germany and France lead the list of contributors with over $1,200 million annually each, to Ireland with $31 million and Luxembourg with $11 million. Of the almost $7,000 million allocated for Lome, $3,900 million is in the form of grants, $670 million in loans, $350 million in risk capital, $730 million for Stabex, $370 million for Sysmin, and almost $1,000 million from the EIB is in the form of 3% loans.[10]

ACP governments are not the only bodies eligible for funds under Lomé. Regional, inter-governmental bodies may receive money, as may ACP-EC bodies. Within ACP nations public and semi-public development agencies as well as local authorities and pri-

vate organizations may receive money. Funds are in the form of grants, loans, or risk capital. Grants are generally intended for infrastructure projects that are not likely to show a quick return on investment, and least developed nations are favored as recipients. Special loans for other purposes than infrastructure carry a 1% or 0.75% interest rate, a ten year grace period, and a forty year repayment period. Risk capital is intended for increasing the resources of public and private undertakings, for feasability studies and for research. The EIB acts much like the IBRD in that it finances projects that are likely to show a return.

To administer and oversee the operation of the Convention are three bodies made up of representatives of from both ACP and EC nations. The Council of Ministers is composed of members of the Council of European Communities, members of ACP governments, and a representative from the EIB. The Council establishes the broad outline for work under Lomé, and periodically evaluates progress toward the goals it sets. The Committee of Ambassadors is made up of representativs from the ACP nations, a representative from the EC Commission, and one representative from each EC nation. The Committee of Ambassadors basically serves the Council, carrying out any assigned responsibilities. The EC-ACP Consultative Assembly is comprised of members of the European Parliament and designated representatives from ACP legislatives. This body evaluates larger issues of concern to cooperation between ACP and EC nations.

The Lomé II Convention is a treaty of association between 9 European nations and 58 Third World countries. The Convention is comprehensive, covering various development needs of the ACP nations such as trade and export earnings. It has many antecedent institutions, including colonialism. It represents an effort to negotiate and act collectively, tying the interests of various nations together to benefit all. The next chapter will analyze one aspect of this treaty, comparing aid flows to raw material exports.

Notes:

[1] Various theories on development aid assert that aid fills one of two "gaps" in the recipient's economy. The first is a savings gap created by a lack of production and income that could be defered for future consumption. The other is a foreign exchange gap generated by a lack of exports with which to earn foreign currency to buy imports.

[2] Frans Alting von Geusau, The Lomé Convention and a New International Economic Order, (Leyden: A.W. Sijthoff, 1977) p.16.

[3] Ellen Frey-Wouters, The European Community and the Third World, (New York: Praeger, 1980), p.14.

[4] Alting von Geusau, p.22.

[5] Guy Arnold, Aid in Africa, (New York: Nichols Pub. Co., 1979), p.31.

[6] Alting von Geusau, p.29.

[7] Frey-Wouters, p.17.

[8] Commission of the European Communities, Lomé II, (Brussels, 1980), p.11.

[9] Frey-Wouters, p.255.

[10] Lomé II, p.36.

Chapter 3 Analysis of Statistics and Regressions

I. Statistical Analysis

This chapter analyzes the relationship between raw material production and aid through statistics and econometric regressions. In many cases development needs in the ACP nation are subordinated to the economic security needs of the EC, as the figures will demonstrate. This thesis is tested with 6 regressions, comparing changes in aid levels to various economic and historical factors. While the statistics appear to support the thesis more strongly, the analysis is less thorough and exact than that provided by the regression. The regressions do not provide support for the thesis.

If, as was declared by the Lomé signatories, the aim and purpose of the Convention is to promote development in the ACP nations, it can be assumed that generally those nations that are less developed will receive more aid. It is logical that a poorer nation would need more assistance. Some nations are quite populous (Nigeria, Zaire) and thus will be more likely to receive large absolute amounts of aid. The primary comparison figure used in the statistical analysis is aid per capita. The total number of people in these 35 nations was divided by the total amount of aid going to these nations. The figure of $9.00 means that in these 35 countries the EC gives an average of $9.00 per person. This figure will account for the differences in absolute size. But the aid is not spread evenly, some nations get more

than the average, some less, in fact not one gets exactly the average. Another simplifying assumption is that GNP reflects the general level of economic development. To get a truly accurate picture of the level of development, many aspects of a nation should be taken into account (distribution of wealth, literacy, quality of nutrition, etc.). For simplicity, GNP figures alone will be used. Again, per capita figures are more accurate for comparisons.

The thirty-five top aid recipients under Lomé II account for 34% of all aid allocated. They represent 33% of all ACP trade with the EC.[1] They are generally the more populous and produce most of the ACP's primary products. The average per capita GNP for these thirty-five nations is $410; the average per capita aid is $9. Based on these figures, certain tendencies are apparent (Table III.1, p.35).

In the first place, a number of countries receive substantially more aid than the average, Swaziland $95, Fiji $33. These nations are smaller and therefore the absolute amounts of aid are also smaller. Nigeria is an exceptional nation in that it is the only ACP nation that is also a major oil producer. With a per capita GNP over $1,000 it receives only $1.00 in per capita aid. Another tendency is that the poorest nations, Somalia, Chad, Guinea Bissau, tend to receive more than the average amount of per capita aid. Nigeria and Somalia represent the extremes of rich nations that receive little aid and poor ones that receive more.

Table III.1
35 Top Lomé Aid Recipients

Country	Total Aid ($millions)	Stabex only ($millions)	Per Capita Total Aid ($)	Per Capita GNP ($)
Senegal	178.1	78.1	31.20	450
Sudan	175.4	50.2	9.40	410
Kenya	165.4	0	10.40	420
Tanzania	146.2	24.8	7.80	280
Zaire	145.4	0	4.30	220
Ivory Coast	133.4	18.0	16.10	1,150
Niger	129.2	27.2	24.40	330
Ethiopia	127.6	17.3	4.10	140
Mauritania	117.4	44.4	78.30	440
Cameroon	108.6	4.3	12.90	670
Mali	103.3	11.8	14.80	190
Malawi	102.2	0	16.80	230
Upper Volta	100.8	8.8	16.50	210
Madagascar	94.6	5.5	7.40	350
Zambia	93.9	0	16.20	560
Ghana	90.2	6.2	7.70	420
Rwanda	84.6	0.7	16.30	200
Guinea	83.0	0	15.40	290
Nigeria	81.7	0	1.00	1,010
Togo	77.5	4.3	31.00	410
Somalia	70.9	2.3	18.20	110
Chad	70.2	8.8	15.60	120

Table III.1, continued

Country	Total Aid ($millions)	Stabex only ($millions)	Per Capita Total Aid ($)	Per Capita GNP ($)
Uganda	66.9	24.7	5.30	300
Burundi	65.4	1.8	15.90	200
Benin	63.7	24.5	18.70	310
Central African Republic	56.8	9.4	24.70	300
Fiji	50.2	0.2	83.60	1,220
Liberia	49.4	9.1	26.00	530
Swaziland	48.6	15.8	95.30	580
Congo	45.5	8.9	28.40	900
Botswana	38.0	0	52.20	440
Mauritius	38.0	0	43.20	760
Sierra Leone	37.9	4.8	10.80	280
Guinea Bissau	37.7	13.6	69.80	160
Gambia	26.4	9.0	48.00	200
Average			9.00	410

Sources: Commission Report to the ACP-EEC Council of Ministers, Publ. no. X/45/1982-EN, Brussels, 1982.
Statistical Yearbook 1979/80, United Nations, New York, 1981.

In the middle areas are those nations that represent the average in economic development and receive varying amounts of aid. The Ivory Coast has a per capita GNP above $1,000, yet receives almost twice the average per capita amount of aid. It also produces a number of important agricultural products, some of which make up a substantial amount of the EC's imports (Table III.2, p.38). Fiji also has a per capita GNP over $1,000 and yet receives $33 in per capita aid. It is also a major producer of groundnuts and gold. The Congo has a per capita GNP of $900 and receives four times the average per capita aid. It too, is a producer of many agricultural and mineral products. Cameroon supplies the EC with 10% of its cocoa consumption, and 3-6% of its coffee, palm nuts, and wood imports. It has a per capita GNP of $670, and receives almost $13 per person in Lomé aid.

Kenya, Senegal, Mauritania, and many others have per capita GNPs above the average, and at the same time receive more than the average amount of aid. Many factors determine the amount of aid a nation receives, one of which is absorptive capacity[2], but a general tendency is obvious--some nations that are more developed economically receive more aid.

On the other hand there are a handful of countries that are quite poor, Tanzania, Uganda, Ethiopia, that receive less than the average amount of aid. These nations are among the major producers and suppliers of critical agricultural and mineral products. Need would indicate that a poor nation would receive more

Table III.2
Commodity Production of Selected ACP Nations, 1978

	Production (t.m.t.)	(% of EC Imports)
A. Zambia		
Copper	765.6	(20.0)
Cobalt	n.a.	(21.0)
Groundnuts	80.0	
Wood	5.3*	
Gold	247.0***	
Lead	15.9	
Silver	33.0**	
Tin	10.0**	
Zinc	50.4	
B. Congo		
Wood	2.0*	(2.0)
Cocoa	4.2	
Coffee	2.7	
Groundnuts	18.2	
Palm Nuts	1.0	
Copper	0.8	
Gold	3.8***	
Lead	2.5	
Zinc	4.8	
C. Botswana		
Copper	14.6	
Groundnuts	7.0	
Wood	0.8*	
Nickel	16,109.0**	
Diamonds	2,799.0****	
D. Ivory Coast		
Wood	11.7*	(29.0)
Coffee	245.0	(14.0)
Copra	n.a.	(1.0)
Palm Nuts	30.0	(8.0)
Cocoa	325.0	(20.0)
Rubber	n.a.	(2.0)
Groundnuts	59.0	
Diamonds	25.0****	

Table III.2, continued

	Production (t.m.t.)	(% of EC Imports)
E. Cameroon		
Coffee	n.a.	(4.2)
Palm Nuts	n.a.	(3.1)
Cocoa	n.a.	(10.0)
Rubber	n.a.	(2.0)
Wood	n.a.	(5.1)
Aluminum	n.a.	(1.0)
F. Mauritania		
Iron Ore	12,899.0	(3.0)
Copper	2.8	
Groundnuts	3.5	
Wood	0.6*	
G. Liberia		
Iron Ore	5,934.0	(16.0)
Wood	4.8*	(4.0)
Cocoa	4.0	
Coffee	11.7	
Groundnuts	2.8	
Palm Nuts	7.0	
Rubber	78.5	
H. Swaziland		
Iron Ore	624.0	
Wood	2.6*	
Tin	4.0***	
I. Senegal		
Groundnuts	500.0	(4.0)
Gum Arabic	n.a.	(4.7)
Phosphates	1,555.0	(4.0)
Palm Nuts	n.a.	(5.0)
Wood	2.8*	

Table III.2, continued

	Production (t.m.t.)	(% of EC Imports)
J. Kenya		
Wood	25.4*	
Paper	48.0	
Pulp	15.0	
Coffee	91.3	(6.5)
Tea	n.a.	(18.0)
Sisal	n.a.	(7.0)
Groundnuts	8.0	
K. Togo		
Phosphates	2,927.0	(9.0)
L. Fiji		
Cocoa	1.0	
Groundnuts	4.0	
Wood	0.2*	
Gold	925.0**	

Notes: * million cubic meters
** metric tons
*** kilograms
**** thousands metric carats

Source: Statistical Yearbook 1979/80, U.N., New York, 1981.

aid while a rich one would receive less. This pattern is true for some ACP nations, but not for all.

In Table III.2 (p.33) the major products for 12 ACP nations are detailed. All twelve receive a higher per capita aid and have high per capita GNPs. Zambia, Mauritania, and the Congo are major mineral producers. They each receive substantially more than the average amount of aid. Togo's single major export is phosphates, it supplies 9% of the EC's imports of this vital commodity, it receives over four times the average amount of per capita aid.

All three major suppliers of iron ore receive more than the average amount of aid. Together they supply almost 20% of the EC's imports of iron ore (Table III.3, p.42). Three major copper producers (Zambia, Botswana, Mauritania) get more than the average amount of aid. Pulp and phosphate producers also receive more aid. Important producers and exporters of these primary products get more than the average amount of aid. Pulp and wood supplies are characterized as "risky" (Table I.5, p.17). Five major suppliers (Kenya, Swaziland, Sudan, Mali, Ivory Coast) receive more than the average amount of aid. Togo suplies 9% of the EC's consumption of phosphates, and, along with Senegal, receives more than the average amount of aid.

There are a number of poorer ACP nations that receive less than the average amount of aid. If these nations are to develop they will need <u>greater</u> amounts of aid, not <u>less</u>. Most of these nations have little to offer in regard to raw materials.

Table III.3
ACP Sources for EC Critical Materials, 1978

	Production thousand metric tons	(% of EC imports)
A. Iron		
Liberia	6,934	(16)
Mauritania	12,899	(3)
Swaziland	624	
B. Copper		
Zaire	472.5	(29)
Papua-N. Guinea	198.6	(15)
Zambia	766.6	
Botswana	14.6	
Mauritania	2.8	
C. Wood (million cubic meters)		
Ivory Coast	11.7	(17)
Gabon	2.3	(10)
Nigeria	93.5	
Sudan	33.4	
Tanzania	33.0	
Mali	28.6	
Kenya	26.4	
Ethiopia	23.8	
Zaire	10.0	
D. Phosphates		
Niger	6,000	(29)
Togo	2,927	(9)
Kiribati	425	
Senegal	1,555	
E. Chrome		
Madagascar	49.5	
Sudan	13.0	
F. Aluminum		
Guinea	12,065	(12)
Guyana	3,475	(4)
Jamaica	11,736	
Sierra Leone	713	
Ghana	252	

Table III.3, continued
ACP Sources for EC Critical Materials, 1978

	Production (% of EC imports) thousand metric tons
G. Pulp	
Swaziland	161
Kenya	15
Madagascar	6
H. Paper	
Kenya	43
Nigeria	13
Madagascar	5
Ethiopia	7
Sudan	2
Zaire	2
I. Uranium (metric tons)	
Niger	3700
Gabon	1100
J. Manganese	
Gabon	941.0
Ghana	128.6

Source: Statistical Yearbook 1979/80, U.N., New York, 1981.

What they produce and export is in small quantities or of commodities that are not vital to the EC. Ethiopia has a per capita GNP of only $140. Its principle exports are coffee and cattle, and it receives only $4.10 per person in aid. Madagascar has a GNP of $350 and its primary exports are cloves, coffee, and vanilla. It receives $7.40 per person under Lomé II. Tanzania has a per capita GNP of $280. It exports coffee, cotton, and cloves and receives less than $3 per person in aid.

These statistics present a varied picture of EC aid. Some nations are rich and still receive a large amount of aid, while some poor ones get little aid. One conclusion is that need alone is not the sole criteria for allocating aid. Some evidence has been presented to demonstrate that a possible criteria is raw material production and export. Again, the results are not uniform. Some large producers get little aid and some small producers get much. It is obvious that raw materials are also not the sole criteria. The next section presents a more rigorous econometric analysis of the aid/primary product relationship, emphasizing the low correlation between the two.

II. Regressions

An econometric regression is an expression of the relationship between one dependent variable and a set of independent or explanatory variables. Basically, the equation demonstrates how much of the variation of the dependent variable is explained by variation in the explanatory variables. In this paper, the re-

gressions formalize the previous discussion and analysis. Various parts of the equation and statistics from the equation provide different sets of information, more will be said about this later.

The central question in this paper is: for a particular country, to what degree does aid from the EC depend on that nation's raw material production and export. Many other factors enter into the decision to provide foreign aid to a nation, and in what amounts. The most important is probably the level of development and need. A poorer country, in most cases, is liable to receive more aid than a richer one. The stated purpose of most aid schemes is to advance the recipient economically. A quantitative value representing the the level of development, and therefore an approximation of need, is the level of industrialization. Poorer nations are also generally more agricultural. The percentage of gross national product (GNP) derived from the industrial sector is a valid measurement of how developed a nation is. Per capita GNP figures do not adequately account for uneven distribution of wealth, while industrial output provides more equally distributed benefits, especially if the products are sold abroad for export credits.

A second factor that affects the amount of aid a nation receives is the degree of "openness" of the economy. A more open economy will receive less aid because such an economy is most likely to be more developed. It must have achieved a point where it has the capacity to buy and sell goods on the world markets,

and thus must be able to both produce those goods and acquire the foreign exchange with which to purchase imports. A more open economy is more inter-dependent with other economies, it buys foreign goods with the earnings from its own exports. The ratio of exports to GNP is a quantifiable expression of openness.

A particular factor characteristic only to European aid flows is whether the recipient is or was a French colony. France, unlike other imperialist nations, sought to integrate its colonies into a French way of life as much as possible. This meant exporting not only language and government, but also certain political rights and monetary conditions. In many cases a native citizen of a French colony could move to France and enjoy all the rights and privileges of a native French citizen. Monetary policy between France and its colonies was also coordinated, resulting in a "Franc Zone" in Africa of French colonies. Even after independence and the formation of the EC, former French colonies have tended to be treated somewhat more generously than former English, Belgian, and Dutch colonies.[3] This factor is accounted for in the regressions by the use of a dummy variable.

Another factor determining aid flows is how long the recipient has been independent. All ties between colonized and colonizer do not end when a nation gains independence. Usually advisors, corporations, and possibly military personnel, remain in the country. These and other political and economic ties are loosened over time as the nation "grows" in its independence. of years of independence. Therefore, this variable would be 1

Table III.4
Regressions*

Variables:

Dependent var. is ratio of Lomé aid to GNP

A Constant
B % of GNP from the Industrial Sector
C Ratio of exports to GNP (openness)
D % of Exports comprised of Strategic Materials
E Dummy variable for former French colonies
F Reciprocal of years independent
G Degrees of freedom

Equation	A	B	C	D	E	F	G	R-sq.
I.	9.06	- .035	- .032	- .023	+ .019	+ .108	48	.089
(t-statistic)		(0.32)	(0.51)	(0.59)	(0.94)	(0.41)		
II.[a]	5.96	- .002	+ .033	-.00005	+.019	+ .045	47	.173
		(0.02)	(0.59)	(2.85)	(1.01)	(0.18)		
III.[b]	7.70	- .019	+ .048	-.00004	+.019	+ .008	47	.228
		(0.19)	(0.88)	(3.95)	(1.06)	(0.03)		
IV.[c]	4.39	+ .046	+ .043	- .639	+ .045	- .084	28	.340
		(0.47)	(0.57)	(2.19)	(2.56)	(0.23)		
V.[d]	108.61	-58.73	-20.31	+ 3.40	+14.87	-557.46	48	.409
		(1.12)	(0.74)	(0.17)	(1.43)	(4.78)		
VI.[e]	39.41	-47.63	-19.79	+15.17	+ 5.20	-224.01	48	.346
		(1.65)	(1.53)	(1.58)	(1.06)	(3.45)		

Notes: [a] Absolute strategic exports substituted for percentage, Data on Nigeria omitted.
[b] Absolute total exports substituted for percentage of strategic exports, Data on Nigeria omitted.
[c] Absolute strategic exports substituted for percentage, Data on following 20 nations omitted: Guinea, Swaziland, Botswana, Guinea Bissau, Gambia, Equitorial Guinea, Lesotho, Cape Verde, Commoros, Sao Tome and Principe, Djibuti, Seychelles, Dominica, Grenada, St. Lucia, Kiribati, Trinidad and Tobago, Gabon, Suriname, and Nigeria.
[d] Dependent variable is absolute total Lomé aid.
[e] Dependent variable is absolute Stabex aid only.

*see also Appendix, p.56

for a nation only 1 year old, and .045 for one 22 years old. The change over time is exponential, representing an increasing rate of decline in ties of association.

Finally, the factor of most concern is the amount of strategic raw materials produced and exported by the nation. "Raw materials" in this case are all non-fuel minerals and non-food agricultural products (e.g., metals, minerals, fibers, etc.). The most pertinant expression of this factor is the absolute amount of such exports, but the percentage of raw material exports of all exports is also important. The first expresses the importance of a nation's raw material exports to that of other nations. The second expresses the relative importance of such exports in terms of total exports.

Together these five variables determine, for the most part, the amount of aid a nation receives. The variable being explained is aid; more specifically Lomé II aid allocated as of 1980. Simply using absolute values would not take the size of the recipient's population and economy into account. Zaire and Nigeria receive large sums of aid, but compared to their populations and economies, the per capita figures are rather small. Therefore, in some of the equations a ratio of aid to GNP is the dependent variable. This relation is simply an expression of the amount of aid given for every dollar of output. Lomé aid comes in different forms, Stabex goes specifically for certain raw materials production; and equation VI uses Stabex aid as its dependent variable.

In particular cases one factor may dominate the others, or some other factor not included here may be the determining factor. The five explanatory variables (or a variation of them, as explained in the notes to Table III.4) are used throughout the six equations. The data in equations I, V, and VI is for 53 of the 56 ACP nations. Data on Tonga, Tuvalu, and the Solomon Islands is omitted primarily because statistics on those nations are unavailable or insignificant and unreliable. In equation IV data on 32 of the ACP nations is used. The excluded nations are 19 of the smallest ACP raw material producers and exporters, the equation expresses a nations. Data on Nigeria is excluded from equations II, III, and IV. These equations use absolute figures for export data, and Nigeria is such a major African producer (it exports 7 times the value of its nearest African competitor, Gabon), that including it would have skewed the results.

The data is a cross-section as opposed to time series. GNP and export data is from 1978 or 1979, depending on availability and reliability. Aid data is aid allocated under Lome II by 1980. A cross-section study is primarily a less complex and exhaustive approach than a time series study. A cross-section also allows for greater variation in the data studied--53 individual nations rather than 20 different years with the same country. In addition, Lomé II has been in effect only since 1978, rendering a time series comparison irrelevent.

The important statistical information to look at in each equation is the R-squared, the t-statistic, and the sign of the

individual coefficients. The R-squared indicates how much of the variation of the dependent variable is explained by variation in all the explanatory variables--how well the actual equation "fits" the expected one. The t-statistic indicates the significance of the individual variables. A higher t-statistic indicates with more certainty that the variable is not statistically equal to 0. The sign indicates positive or negative correlation with the dependent variable. It would be expected that the variables representing the proportion of GNP from industry and the reciprocal of the length of independence would be negative; while the remaining three (openness, exports, and dummy variable) would be positive.

The regressions shown in Table III.4 do not support the thesis, but nor do they refute it. The main problem with the equations is that the t-statistics indicate that most of the variables are statistically no different from 0. Therefore, they explain very little about the levels of aid. The R-squares indicate that only two equations (V and VI) explain any significant amount of variation in aid levels. In addition, the signs change for a specific variable from equation to equation.

The variables for raw material exports (D) are statistically significant in Equations II, III, and IV, but II and III have coefficients that indicate the effect from such exports on aid flows is minimal. Variable D in Equation IV is quite large, signalling that there may be some influence on aid flows, but the correlation is negative. Only in Equations V and VI is the cor-

relation positive, and then the t-statistic indicates they are significant with 0% (V) and 50% (VI) certainty.

Equation I has no significant variables, the t-statistics indicate that none of them are statistically any different from 0. It also has a very low R-squared indicating that it explains very little of the variation in aid levels. The correlation of three variables is not as expected. Openness and level of raw material exports are negatively correlated with aid levels; in other words, the more open an economy is, and the more strategic raw materials it exports--the less aid it receives. This equation clearly shows nothing.

A more accurate determinate of aid levels is absolute exports of raw materials, as used in Equation II, instead of a percentage of total exports (data on Nigeria is omitted in this regression). The t-statistics of all but variable D (percent of strategic raw materials) are unacceptable, and the coefficient for D is minute. The sign also indicates that exports of raw materials is negatively correlated with aid levels, contrary to the thesis of this paper. The R-squared also indicates little of the variation is explained by this equation.

Even considering all exports, not just strategic materials, the correlation is negative as in Equation III, and still the t-statistics are unacceptable. Only the D variable again is acceptable, and the coefficient remains very small. The R-squared is also too low to be acceptable. Data on Nigeria is omitted in this equation.

Omitting data for 19 of the most insignificant ACP nations also indicates a negative correlation between exports and aid levels. The countries left out have the smallest economies and generally produce very little. Equation IV therefore shows the relationship between the different variables for the more important ACP trading partners with the EC. T-statistics for only strategic exports and the dummy variable are acceptable, and in this case the coefficient for raw material exports is not quite so small. But it is negatively correlated as is industrialization.

Equations V and VI use absolute values for aid data, include data on all ACP states, and indicate correlations that correspond with those expected in this paper. But the t-statistics are too low to accept, the variables could all be equal to 0. In both equations industrialization is negatively correlated as expected. Openness, too is negatively correlated, though it is expected that it would be positive. Raw material exports and the dummy variable are both positively correlated. The R-squares are more acceptable than for any other Equations. But in both equations, only independence is statistically different from 0.

These regressions indicate little about the relationship between the five variables and aid levels. The t-statistics for the most part are much too low to be acceptable, and when they are, the coefficient is so small as to indicate little relationship to varying aid flows. Additionally, the correlation between raw material exports and aid levels is negative in 4 out of 6

cases. Other variables are correlated negatively also when it would be expected that and would be positive. These results do not refute the thesis of this paper, they do not indicate that raw material production and export is not a consideration by the EC. But they in no way support it.

Notes:

[1] European Communities. Office of Official Publications. Analysis of Trade Between the EC and ACP States. Luxembourg: 1979.

[2] Absorptive capacity is an economy's ability to effectively used capital. A poor nation that lacks skilled personnel and infrastructure might not be able to effectively utilize large sums, no matter how poor it is.

[3] Frans A.M. Alting von Geusau. The Lomé Convention and a New International Economic Order. Leyden: A.W. Sijthoff, 1977. p.170.

Conclusion

Raw material exports is not a major consideration of the EC in determining aid flows to ACP nations. This paper has argued that the EC is in a precarious position regarding its economic security of supply for many primary commodities, yet the motive is not strong enough to significantly affect aid flows. Domestic supplies of certain materials continue to dwindle, forcing the ten nations of the EC to import increasing amounts from all sources. The less developed nations of the world are playing a greater role in the supply of these materials than are the more industrialized nations.

The statistical data is not supportive of the assertion that consideration of raw materials is important. Economic security may play a part, but they by no means play a major part. At best the evidence is circumstantial. These conclusions are drawn on data and regressions that are, as all data is, limited in their ability to reflect reality. How well can a figure (per capita GNP) reflect a person's standard of living? Data is often inaccurate in portraying a certain picture at best, or misleading at worst. In this paper an attempt is made to look into the minds of government officials by examining the results of their collective actions. In addition, aid and exports are not the only ties between the sets of nations examined. The EC has private investment in most ACP nations, and the hosts in turn also serve as markets for EC goods. Relying totally on aid and raw material data does not necessarily portray an accurate picture of

a complex relationship.

The support for the motivation of using aid as a means of securing raw material supplies is there, as is the mechanism to do so (Lomé II), but the evidence does not support the existence of such behavior.

The security of raw materials supplies may not be important for a number of reasons. Given that the EC is dependent on foreign sources for raw materials, how important are those commodities in the first place? Europe is not as important a producer of major durable goods (ones that require large inputs of materials) that it used to be. Taiwan, Korea, Brazil, and Nigeria are only a handful of nations that are supplying the world's cars, refrigerators, and other industrial goods in an increasing rate. Such production takes advantage of conditions in the newly-industrialized countries where labor is cheap and abundant, and where a need for major export-earning goods exists. The participants in the first industrial revolution are finding that they can compete better in high-technology and service industries. Computers require expertise and skill more than they require physical inputs. Service industries like transportation, information, and consulting also require few physical inputs, yet utilize the vast knowledge and skill being put out by schools and businesses in the industrialized nations. The demand for raw material inputs in the EC is not as important as it has been in the past.

Despite occasional scares over the scarcity of a commodity,

there has yet to be a case of any major metal "disappearing". Long before physical existence of a commodity is threatened, economic forces will have intervened to ration a good's use to the most effective purposes and to provide incentive for recycling and substitution. In addition, the chances of a nation effectively using raw materials as an economic weapon are quite variable. The Arab oil embargo is one successful example, but the OPEC nations controlled a large part of the market. Still the oil found its way to embargoed markets. South Africa has been under a rather sustained oil embargo by OPEC, but has little trouble finding a seller at some price.

The EC may give aid to the ACP nations for a number of reasons. Other economic considerations, along with political, and military reasons play a part, as does simple need on the part of the ACP nation. Some of the considerations can be examined quantifiably, and some cannot. Awareness of the Third World's plight of poverty and inequality has grown considerably in the industrialized world in the past decade. The rise of the Group of 77 in the United Nations has been tremendous, providing vocal, if not real, impetus toward more equitable North/South relations. Need alone may be a major reason aid is given to the ACP nations. Many poor nations have nothing substantial to offer the EC in return for aid, and yet the flows continue.

Other economic considerations include EC investment in the ACP nations, trade between the two, and energy issues. Belgian, French, English investment in Africa particularly is quite large.

The specific multinational firms have ample reason and opportunity to influence their home governments on aid flows. Infrastructure development benefits a firm just as much as it does the recipient nation. Aid can be used directly or indirectly to help out these multinational firms. As recent events in the news have indicated, trade issues are becoming increasingly important. With a downturn in the world economy, nations are learning the interdependent nature of trade. No nation can hope to only sell, and not buy, on the world market. Only through a balance of buying foreign goods and selling domestic ones abroad can all nations hope to remain economically healthy. Aid enables a nation to both purchase exports and develop the industry needed to earn foreign exchange. Energy is also a concern to industrialized nations, especially the EC. Aid may be provided to ACP nations that have actual or potential reserves of oil, natural gas, coal, and uranium. Aid develops those sources and insures the continued production of existing operations.

Other considerations in aid flows are political. A nation may see its interests threatened by the existence of hostile governments or influences. Aid can be designed to bolster both an established government against revolutionary forces and vice-versa. Aid strengthens a government against hostile external forces and fortifies it against internal threats.

Appendix

At the completion of this paper one final regression was examined. It is significant, and indicates a negative correlation between aid and raw material exports. The dependent variable is total aid under Lomé II; the explanatory variables are population, exports of raw materials in absolute terms, and Gross Domestic Product.

		R-squared
I.	$47.52 + \underset{(5.45)}{2.52}(pop) - \underset{(2.35)}{0.025}(exp) + \underset{(2.15)}{0.007}(GDP)$	.401

The regression compares variations in GDP, population, and raw material exports to variations in aid flows. The t-statistics indicates that all the variables are significant, and the R-squared shows that 40% of the variation in aid levels is explained by this set of factors. As population and GDP rise so too does aid. But when exports of raw materials go up, aid falls--contrary to what was expected. While the coefficient is quite small, it still indicates conclusively that exports of primary products and aid levels as measured, are negatively correlated.

This final regression lends even greater weight to the conclusion that a nation that exports raw materials will not receive more aid than one that does not export raw materials. A nation that exports primary products may even get less aid. One possibility is that exports are correlated with GDP and a higher level of economic development.

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