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ANDEAN INTEGRATION: POTENTIALS AND LIMITATIONS

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Introduction

The movement towards regional integration in Latin America, in spite of the present state of suspension of the Latin American Free Trade Association (LAFTA) scheme, appears to be irreversible. New impetus came through the Andean Group Agreement of 1969.1/ At that time, a new integration organization, the Andean Common Market (ANCOM) was launched. The original members were Bolivia, Chile, Colombia, Ecuador, and Peru. Venezuela joined ANCOM in February, 1973.

These six countries have agreed to (1) gradually eliminate all barriers to trade among themselves over a ten-year period; (2) establish a common external tariff; (3) harmonize their economic and social policies; (4) undertake joint, subregional industrial development planning; and (5) limit the scope of foreign investment.2/

I. The Magnitude of ANCOM Trade3/

Intra-ANCOM trade rose from $39.4 million in 1960 to $92.8 million in 1969.4/ Concurrently, the relative importance of intra-regional trade in the total exports of ANCOM countries rose from about 2.5 to 3.2 percent, and that in total imports from 2.7 to 3.7 percent. There are, however, substantial differences in the relative importance of intra-regional trade to individual countries and these have changed considerably over time. Thus, in 1960, ANCOM was most important for Peru and Ecuador as an outlet for exports and for Bolivia, Chile, and Ecuador as a source of imports. By 1969, however, Ecuador and Colombia were

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1/ For an analysis of the evolution and operation of the Latin American integration movement, see U.N., Economic and Social Council, A Contribution to Economic Integration Policy in Latin America. E/CN-12/728, April 1965; and Grunwald, J., Wionczek, M.S., and Carnoy, M., Latin American Economic Integration and U.S. Policy, The Brookings Institution, Washington, D.C., 1972.

2/ An extensive treatment of the problems associated with the harmonization of ANCOM member countries economic policies is given by Morawetz, D., "Harmonization of Economic Policies in Customs Unions: The Andean Group." Harvard University Economic Development Report No. 202, Cambridge, Mass. December 1971.

3/ ANCOM in this and subsequent sections refers to the combined transactions of the original five member countries excluding Venezuela.

4/ It must be recognized, however, that official trade statistics provide an underestimation of actual intra-Andean trade. See, Diaz-Alejandro, C.F., "The Andean Common Market: Gestation and Outlook," Yale University Economic Growth Center Discussion Paper No. 85, New Haven, Conn., May 1970.

the most dependent on the ANCOM for their exports, while Ecuador and to a lesser degree Peru and Chile were buying substantial amounts of their imports from their partners.

II. Analysis of ANCOM Trade Patterns

(a) The Analytical Framework

World trade and intra-Andean trade matrices were constructed to analyze the pattern of overall trade and of selected agricultural commodities important to the countries of the region. A probabilistic aggregate model was used to estimate the no-preference levels of indicated intra- and extra-Andean trade.5/ By dividing the value (or volume) of each trade flow in the matrices by the value (or volume) of total world trade for the year, the fraction can be interpreted as the actual (joint) probability of the trade flow between each pair of trading partners, p(Xij). Likewise, the ratio of country i's total exports to total world exports can be interpreted as the (marginal) probability (or propensity) of the country to export, $p(Xi) = \sum_j p(Xij)$. And the ratio of country j's total imports to the world total can be regarded as the (marginal) probability (or propensity) of the country to import, $p(X_j) = \sum_i p(Xij)$. Statistically speaking, if Xi and X_j were independent, then the hypothesized probable trade between two trade partners could be obtained by multiplying their marginal probabilities, p(Xi) and $p(X_j)$. The assumption of statistical independence implies the absence of political and economic barriers to international trade (such as transport costs, tariffs, quotas, preferential agreements, and the like). Thus, deviations between actual and hypothesized or expected trade flows can be interpreted to be indicative of the presence of political and economic constraints and preferential arrangements. Such quantitative estimates are, of course, subject to many qualifications.

(b) Actual and Hypothesized Patterns of Total ANCOM Trade

In 1969, total exports and total imports of the ANCOM were equal to, respectively, 1.17 and 1.01 percent of total world trade. Following the analytical framework discussed above, we found that the hypothetical propensity of intra-Andean trade equals slightly more than .01 percent.6/ Actual intra-Andean trade amounted to almost .04 percent of world trade. In spite of the small volume of intra-Andean trade, political and economic barriers to world trade are such that the five countries (excluding Venezuela) trade more with one another than their total world trade propensities would suggest. This is not surprising,

5/ Uribe, P., et al., "The Information Approach to the Prediction of Interregional Trade Flows," Review of Economic Studies, Vol. 33, No. 95 (July 1966), pp. 209-220.

6/ $\hat{p}(Xij) = p(X_{ANCOM\ exports}) \cdot p(X_{ANCOM\ imports}) = (1.17\%)(1.01\%) = 0.0118\%$.

especially given their limited involvement in world trade and their proximity to one another. One of the purposes of the ANCOM is to increase trade among the member states.

Our discussion of the total trade flows between individual ANCOM countries can be greatly simplified by redefining, for purposes of this subsection, the "world" to include only the five Andean countries plus an artificial sixth country called the "rest of the world." Within this new "world," all actual flows between any two of the Andean countries are less than 100 percent of expected trade (Table 1). The magnitude of the percentages for different country combinations can be compared; and over time, and these comparisons are instructive. A value of 0 percent is the lower limit, indicating that no exports take place from country A to country B. The larger the percentage value, the greater the importance of the actual trade flow from country A to country B, given the overall size of A's exports to and B's imports from the "world." For example, in 1969, in relation to the overall value of Colombia's exports and the overall value of Ecuador's imports, exports from Colombia to Ecuador were highly significant (actual trade was 46 percent of expected trade).

The major pattern shown in Table 1 is that in 1969, Colombia's exports to Ecuador and Peru and Ecuador's exports to Chile and Colombia were relatively very significant; also, the importance of every one of these trade flows has increased notably over time. Clearly neighboring Ecuador and Colombia have become solid trading partners. On the other hand, some trade flows that were relatively important in 1960--such as exports from Chile to Bolivia and exports from Peru to Bolivia, Chile, and Ecuador--have all dramatically declined in significance. This is especially true of Peru's exports to its partners.

(c) Actual and Hypothesized ANCOM Trade Patterns in Agricultural Commodities

The analysis encompasses 16 agricultural commodities that are of importance in ANCOM's foreign trade. Among these, ANCOM is a net exporter of coffee, sugar, bananas, cocoa, cotton, tobacco, fish meal, fish oil and oilseed cakes, and meals; it is a net importer of wheat, rice, corn, fresh meat, cattle, and soybean oil.

The results of the analyses are presented in Table 2. A value of -100 percent indicates that although no actual trade occurred between the countries or regions concerned, there is a potential for such trade under no-preference conditions. Conversely, a value of +100 percent indicates that expected trade would be zero.

In livestock and meat products, Colombia is ANCOM's chief supplier. Its live-cattle exports to Peru accounted for more than half of total exports, far exceeding expected levels. No-preference cattle exports to Peru would have amounted to only about 5 percent of actual shipments. Some of the "excess" cattle shipped to Peru could have been diverted to Bolivia and Chile as well as to the "rest of the world," because Colombia's exports to these markets remained below expected levels. Even though Colombia's fresh meat or beef exports to Peru were relatively small, they were also above the expected volumes.

Argentina was ANCOM's major source of cattle and meat imports. Shipments of both items to Chile and Peru were greatly in excess of expected levels, indicating

Table 1. Actual Trade as a Percent of Hypothetical Expected Trade

Exporters \ Importers		Bolivia	Chile	Colombia	Ecuador	Peru
Bolivia	1960		2.6	0.0	0.0	1.3
	1966		4.8	0.0	0.0	8.4
	1967		4.6	0.0	0.0	7.9
	1969		5.5	0.0	0.0	0.6
Chile	1960	15.2		0.0	3.0	5.3
	1966	4.1		2.5	3.5	2.7
	1967	3.5		1.4	3.2	4.1
	1969	2.1		2.0	4.2	3.1
Colombia	1960	0.0	1.1		1.8	5.3
	1966	0.0	1.6		23.9	10.0
	1967	0.0	2.3		21.4	6.7
	1969	2.4	6.2		46.0	19.8
Ecuador	1960	0.0	13.2	16.2		0.9
	1966	3.3	15.6	14.2		13.0
	1967	1.4	17.5	22.3		9.9
	1969	0.0	28.7	25.2		8.4
Peru	1960	29.7	20.5	1.1	16.3	
	1966	5.9	12.2	6.9	3.3	
	1967	5.3	6.0	4.3	2.8	
	1969	7.1	6.3	6.2	5.7	

Derived from data presented in various issues of IMF, Direction of Trade Annual

Table 2. Actual Trade in Selected Agricultural Commodities as a Percent of Expected or Hypothetical Trade, 1969.

Importers \ Exporters	Colombia	Argentina	Brazil	Rest of World	Colombia	Argentina	Brazil	Rest of World	Colombia	Argentina	Brazil	Rest of World
	-- Cattle --				-- Fresh Meat --				-- Beef --			
Bolivia	- 100.0	- 100.0	+100.0	-100	--	--	--	--	--	--	--	—
Chile	- 100.0	+2319.4	-100.0	- 8.4	--	+633.3	-100.0	- 100.0	--	+ 350.0	- 100.0	-25.0
Peru	+2122.2	+1167.1	-100.0	- 36.8	+ 100.0	+650.0	-100.0	- 100.0	+ 100.0	+ 250.0	- 100.0	-12.0
ANCOM	+ 973.8	+1761.4	-100.0	- 22.1	+ 100.0	+643.5	-100.0	- 100.0	+ 100.0	+ 300.0	- 100.0	-20.0
Rest of World	- 49.7	- 9.1	- 78.6	+ 4.0	- 94.9	- 95.6	+ 0.9	+ 19.3	- 93.3	- 97.0	+ 1.2	+ 0.8

Importers \ Exporters	Colombia	Ecuador	Rest of World	Bolivia	Colombia	Ecuador	Peru	Brazil	Rest of World
	-- Bananas --			-- Sugar, Raw and Refined --					
Chile	- 100.0	+ 386.3	-100.0	-100.0	+3550.0	-100.0	+100.0	+ 568.7	- 38.7
United States	- 25.2	- 81.3	+ 11.4	+366.6	+ 125.0	+263.6	+338.9	+ 174.0	- 84.3
Western Europe	+ 70.2	- 88.6	- 91.3	-100.0	- 100.0	-100.0	-100.0	- 37.5	+ 6.8
Rest of World	- 91.3	+ 11.1	- 97.5	-100.0	- 100.0	- 38.1	- 2.0	- 39.3	+ 5.2

Importers \ Exporters	United States	Argentina	Australia	United States	Argentina	Brazil	United States	Argentina	Colombia
	-- Wheat --			-- Corn --			-- Rice --		
Bolivia	- 70.0	+3700.0	-100.0	--	--	--	--	--	--
Chile	- 67.1	+ 720.0	+253.1	- 99.2	+ 223.6	-100.0	- 66.6	+3400.0	- 100.0
Colombia	+ 157.9	- 100.0	- 78.5	+100.0	--	--	--	--	--
Ecuador	+ 188.8	- 100.0	-100.0	--	--	--	--	--	+ 100.0
Peru	- 37.1	+ 710.8	+178.4	- 33.3	- 100.0	+100.0	-100.0	+2150.0	+ 40.0
ANCOM	- 98.0	+ 577.9	+139.8	- 98.5	+ 215.3	- 50.0	- 38.4	+2900.0	+ 150.0

Importers \ Exporters	United States	Western Europe	Rest of World	Chile	Peru	Rest of World	Colombia	Peru	Rest of World	Ecuador
	-- Soybean Oil --			-- Fish and Meat Meals --			-- Cotton --			-- Cocoa --
Bolivia	- 66.6	- 33.3	+400.0	--	--	--	--	--	--	--
Chile	+ 30.8	- 66.6	-100.0	--	--	--	+150.0	+1328.5	- 61.5	+ 210.0
Colombia	+ 72.4	- 100.0	-100.0	-100.0	+ 100.0	-100.0	--	--	--	+3233.3
Ecuador	- 55.5	+ 100.0	-100.0	--	--	--	+100.0	--	- 100.0	--
Peru	+ 29.6	- 33.3	+100.0	--	--	--	--	--	--	+ 260.0
ANCOM	+ 13.4	- 87.3	- 55.5	-100.0	+ 100.0	-100.0	+500.0	+1328.5	- 57.1	+2675.0
United States	--	--	--	+250.0	+ 17.4	- 56.1	--	--	--	- 82.8
Rest of World	- 99.0	+ 0.9	+ 3.3	- 74.7	- 98.0	+ 4.9	- 99.1	- 89.2	+ 4.2	- 63.4

Exporters \ Importers	Colombia	United States	Rest of World	Peru	Western Europe	Rest of World	Chile	United States	Rest of World	Chile	Peru	Rest of World
	-- Fish Oil --			-- Oilseed Cake and Meal --			-- Coffee --			-- Tobacco --		
Chile	-100.0	-100.0	+10.3	--	+ 40.0	-100.0						
Colombia	--	--	--	+700.0	- 84.8	+ 15.3	- 20.0	+ 7.1	-96.3	--	--	0
Ecuador	--	--	--	--	0	--	-100.0	+62.2	-62.5	--	--	--
Peru	+316.6	0	-82.1	--	-100.0	+500.0	-100.0	+80.0	-57.1	--	--	--
ANCOM	+276.3	- 86.2	-84.6	+700.0	- 78.3	+ 68.7	- 16.6	+18.3	-90.0	--	--	0
United States	-100.0	--	+ 5.8	-100.0	- 92.4	+ 39.8	--	--	--	+247.2	--	+12.5
Argentina	--	--	--	--	+ 17.3	- 11.3	--	--	--	--	--	--
Brazil	--	--	--	--	- 98.9	+ 9.8	+200.0	--	--	--	--	--
Rest of World	- 12.7	+ 26.6	+ 6.1	-100.0	- 10.3	- 85.8	+ 13.9	-96.3	+ 1.3	0	0	+ 1.4

Source: Owing to limitation of space, it is not possible to present in this paper the actual and hypothetical trade figures underlying the estimates presented in Table 2. These are summarized in a statistical appendix and is available upon request from the authors.

0 Trade magnitudes are identical.

-- No trade.

proximity and traditional trading ties. Brazil has been Bolivia's chief source of cattle imports and its shipments were in excess of no-preference levels. Not surprisingly, then, ANCOM's cattle and fresh meat imports from the "rest of the world" were below expected levels. Banana trade is confined to Ecuador, Colombia, and Chile, the latter being ANCOM's sole importer. Ecuador's exports to Chile were 386.4 percent above the expected level; Colombia's and those of the "rest of the world," below it.

Apart from Chile, the countries of ANCOM are exporters of sugar and coffee. Chile's sugar imports from intra-regional suppliers, Colombia and Peru as well as Brazil, were considerably above no-preference levels. The same holds for United States' coffee and sugar imports supplied by the ANCOM countries. Chile's coffee imports from ANCOM sources have been below expected volumes; and those obtained from Brazil, above them. The intra-Andean cocoa trade is confined to Ecuadorian exports to Colombia and Peru, covering fully their import needs.

Fish meal and fish oil are leading export products for Chile and Peru. Colombia imports both items. Peru's exports of both items to Colombia were above no-preference levels and Chile's below them. All countries of ANCOM but Bolivia are net exporters of oilseed cake and meals, with intra-regional trade confined to Colombia and Peru. This trade, too, has been markedly above expected levels. Intra-ANCOM trade is minimal in cereals and soybean oil. The actual ANCOM imports of wheat, corn, and soybean oil from the U.S. approximated their expected levels, but fell short for rice. Argentine cereal exports, as expected, were in excess of no-preference volumes. Colombia is the only member country with rice and corn surpluses to export. Ecuador and Peru were the leading destinations taking above-expected quantities of rice.

In terms of the 1969 world trade pattern, intra-ANCOM trade has already surpassed expected or hypothetical volumes in all agricultural commodities considered but coffee. Even so, intra-regional trade in the selected commodities may not be above optimal or potential levels.

III. ANCOM Integration: Priorities and Prospects

The transformation and diversification of the industrial base and agriculture has many facets. Above all it requires the formulation and pursuance of common investment policies, the establishment of a financing apparatus with the necessary resources, and a decision mechanism for locating new regional enterprises. The realization of these goals may prove to be difficult. Compounding the integration difficulties are the wide disparities in the level of economic development reached by the member countries. In anticipation of some of these difficulties, Bolivia and Ecuador have been granted special treatment. Difficult geography, inadequate infrastructure, and political divisions both within and between member countries are likely to slow the momentum of the Andean integration process. The success of ANCOM will clearly depend on the effectiveness with which all of the obstacles cited can be overcome. So far, intraregional exports have reached significant levels for Colombia and Ecuador, and their trade with one another has become quite substantial. Bolivia, on the other hand, sells extremely little to its partners. Peru and Chile occupy an intermediate position.

(a) Industrial Integration

Recognizing that import-substitution within narrow national markets is far too costly, the Cartagena Agreement calls for planned industrialization and more effective import-substitution along regional lines. Experts in economic integration generally agree that it is impossible to predict whether integration schemes in Latin America, given the high tariff levels of countries generally, will in the short run create more trade or have more trade-diverting effects for manufactured products.7/ Instead, the case for integration rests mainly on longer-run considerations of development, specifically on the importance of larger markets for a more effective policy of industrialization. Short-run difficulties cannot be ignored, however, and experience thus far has shown that one of the major obstacles has been the problems encountered by the less-developed countries within a regional group. The definition of who is the less-developed and disadvantaged partner in a union is not altogether clear-cut. Based on the present trade structure as well as on other considerations (such as per capita GDP and the level of industrial development), it would appear that Bolivia is clearly at a disadvantage, while Colombia and Chile are definitely the more developed countries of ANCOM. The case of Ecuador and Peru, however, is less clear.

Over the past few years Peru has not managed to increase its exports to ANCOM, but its imports from the area have grown rapidly. Given its high total import coefficient and the still relatively low proportion of its imports that originate in ANCOM (while its present tariff level is not especially high), substantial trade diversion is likely to occur. If the past experience is indicative of the immediate future, little will be gained in terms of additional exports. Ecuador, though, has a low import coefficient, and buys already a sizable proportion of its imports from ANCOM, and thus would appear to be less subjected to potential trade diversion. At the same time, Ecuador's exports to ANCOM have increased rapidly over the last few years. In fact, given Ecuador's proximity to Colombia and the already active and growing trade between these two countries, the growth in trade between Colombia and Ecuador may be one of the most immediate effects of the integration movement.

(b) Agricultural Integration

Agriculture still plays a major role in the economies of ANCOM countries. In 1969, except for Chile, agriculture employed between 42 to 55 percent of the labor force, produced between 18 and 32 percent of the gross domestic product, and accounted for 35 percent of the total export earnings of the region.8/Agricultural products made up only about 17 percent of the region's total imports.

Agriculture apparently will continue to have a single-country focus. Key factors inhibiting the formulation of regionally coordinated agricultural policies and establishment of common markets are similar to those encountered in relation to industry, but with the difference that they seem almost insuperable. These

7/ Balassa, B., Economic Development and Integration, Centro de Estudios Monetarios Latinoamericanos, Mexico, 1965; and Bell, H.H., Tariff Profiles in Latin America, Praeger, New York, 1971, p. 119.

8/ The Chilean economy is basically industrial; farming provided work for only 22 percent of Chile's population and contributed about 10 percent of GDP. See UN, ECLA, Economic Survey of Latin America, 1970, New York, 1972, p. 54.

inhibitions are rooted in (1) wide inter-country differences in production efficiencies, costs and farm prices; and (2) the reluctance of member countries to accept a divestiture of national sovereignty over domestic agriculture. Agricultural interests figured prominently in the postponement of the LAFTA time table for free trade and in the suspension of the Common List.

Based on existing trade and production, expanded intra-regional trade in agricultural products is primarily limited to cotton, cattle, beef, sugar, tobacco, fruits, and vegetables. Indications are that increased agricultural production is of high priority for ANCOM governments, especially Bolivia, Chile, and Colombia. It remains to be seen whether the Andean countries will follow national import-substitution policies or embark on agricultural diversification based on regional comparative advantages.

Epilogue

Although the Andean region has the human and material resources to make substantial progress during the next few years, some basic factors will tend to limit its growth possibilities. The present size of the market (in other words) is still limited. Therefore, ANCOM should be looked on primarily as a step towards eventual integration in a wider Latin American market. Whats more, political factors are likely to retard progress toward harmonization of economic policies (investment, monetary, fiscal and agricultural), despite the recognized desirability of this. National self-interests and national sovereignty considerations will probably continue to take precedence over regional interests. In agricultural economic policies, whatever harmonization may come about will emerge more as a joint response to common problems, rather than as a deliberate action.