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An Overview of Forest Products Trade in Latin America and the Caribbean Basin

By

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and Erick T. Anderson

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AN OVERVIEW OF FOREST PRODUCTS TRADE IN LATIN AMERICA AND THE CARIBBEAN BASIN

by

Jan G. Laarman, Gerard F. Schreuder, and Erik T. Anderson

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Forest Resources, Production, and Consumption

The forests of Latin America and the Caribbean Basin are vast in some areas and sparse in others, more or less in inverse relation to population densities. Forest types are many, unevenly distributed, and highly variable in biological complexity. Forest science and forestry practice are respectable and respected in a few countries, and weak or non-existent in most others. Timber-based processors range in size and technology from very small sawmills to highly sophisticated pulp and paper mills. The nearly forty countries vary in size and population from tiny (especially in the Caribbean Basin) to large (e.g., Brazil and Mexico). A wide spectrum of political and socioeconomic organization reflects an equally wide spectrum of historical and cultural antecedents.

For the reasons briefly outlined above, it is usually difficult and generally misleading to summarize the production, consumption, and trade of forest products in Latin America as a single region. The analysis of production and trade will recognize seven subregions (Table 1), modifying slightly from a division proposed by the Inter-American Development Bank (McGaughey and Gregersen 1983). Yet even a seven-part division masks considerable intra-regional variation.

A useful synthetic description of the forest resources and industries of Latin America can be developed by combining observations from Gregersen and Contreras (1975), Erfurth and Rusche (1978), Lanly (1982), McGaughey and Gregersen (1983), Yoho and Gallegos (1984), and Zobel (1987). Here we liberally paraphrase from these sources:

Forest Resources

1. The natural forests of Latin America can be classified in four broad types: coniferous, temperate hardwood, tropical dry hardwood (including wooded savannas), and tropical moist hardwood. Less than three percent of the natural forests are coniferous. The bulk of the forest area comprises mixed tropical hardwoods in wet or moist zones, dominated by the extensive forests of the Amazon Basin. Other areas supporting significant areas of mixed tropical wet or moist hardwoods include parts of southern Mexico, the Atlantic coast of Central America, the Guiana uplands, the Atlantic coast of Brazil, and the Pacific coast of Ecuador and Colombia (Gregersen and Contreras 1975, pp. 11-14; Lanly 1982, Yoho and Gallegos 1984, pp. 46-48).

2. Utilization of the natural forests tends toward two extremes. On the one hand, vast expanses of mixed tropical hardwoods are still considered "unproductive" in the context of current technologies, infrastructure, and markets. On the other, commercially preferred species in accessible areas have been and continue to be "mined," with little chance of near-term replacement (Erfurth and Rusche 1978; McGaughey and Gregersen 1983, pp. 34-35).

3. The relatively limited areas of natural coniferous forests have been heavily overcut. In particular, the araucaria timber of southern Brazil has been largely depleted. The same applies for the natural pine stands of the Caribbean islands. Mexico and parts of northern Central America still retain pine forest, but the future of many of these forests is uncertain in the face of rapid land-use changes. Chile and Argentina possess

limited areas of lesser-known conifers (e.g., alerce and podocarps), but these species do not support a large industrial base (Lanly 1982; Yoho and Gallegos 1984, pp. 46-47).

4. Uncontrolled forest cutting is blamed on a whole series of factors, varying by country, but typically including: inadequate definition of forest ownership and tenure, land competition from agriculture and cattle grazing, political and economic inability to assimilate forest squatters in alternative livelihoods, poorly conceived and impractical forest laws and regulations, weak and underfunded government agencies, and lack of forestry tradition and know-how.

5. In a few subregions (principally Brazil and the Southern Cone) the area of forest planting has been expanding rapidly through the last two decades. Although most of these plantations are on private lands, they have been generously subsidized by government tax, cost-sharing, or credit programs. Various observers regard the plantations as "compensatory plantings" which will increasingly relieve cutting pressure on the natural forests (Zobel 1987).

6. Already plantations provide about one-third of Latin America's total industrial roundwood production, even though they occupy less that one percent of the productive forest area. The Inter-American Development Bank projects that by the year 2000, timber cut from plantations will be almost four times the current level, accounting for one-half of total roundwood production. Plantation harvests will be heavily concentrated in Brazil and the Southern Cone (McGaughey and Gregersen 1983, pp. 37-38).

7. In various parts of South America and especially Brazil, the delivered costs of plantation timber are sufficiently low to compete favorably in world markets. In the leading forest products companies, management and technology have become fairly sophisticated. Research is being conducted and then applied. Several large Brazilian pulp mills are modern and ideally sited. Extensive areas of flat and accessible savannas, pastures, and brushlands remain available for tree planting at relatively low cost. Rotations are short and getting shorter. Silviculture and genetic engineering are producing dramatic increases in the productivity of hardwood plantations (e.g., eucalypts and gmelina). Regarding tropical and subtropical pines, the high proportion of juvenile wood is expected to become less of a utilization problem with the increasing spread of technologies like thermal mechanical pulping, chemi-thermal mechanical pulping, and oriented strandboard (Zobel 1987).

Production and Consumption

8. With approximately eight percent of the world's population, Latin America and the Caribbean Basin account for disproportionately smaller shares of forest-based production (Table 2). Yet while these shares are small in absolute terms, they have been growing rapidly. Between 1974 and 1984 the region's shares of world production expanded as follows: industrial roundwood, 64 percent; sawnwood and sleepers, 46 percent; wood-based panels, 40 percent; wood pulp, 86 percent; and paper and paperboard, 31 percent.

9. At a highly aggregate level, Table 2 also shows regional shares and trends for exports and imports. As with production,

the region's share of world trade is lower than its share of world population. Relative to the rest of the world, there is little trading of unprocessed logs (i.e., industrial roundwood). From very small bases in 1974, export shares have expanded dramatically in all major product groups except sawnwood and sleepers. In comparison, import shares were static or falling in most major product groups. When looking for explanations, it is important to take into account the recent macroeconomic crises affecting most countries of the region (see following section on "Recent Performance of the Forest-Based Industries").

10. Compared with North America, a relatively large share of Latin America's consumption of solidwood products is in the form of reconstituted panels, flooring, and manufactured products like furniture. Regarding pulp and paper products, a relatively large share of the region's consumption is in newsprint, with lesser shares in industrial packaging and paperboard (Yoho and Gallegos 1984, pp. 49-50).

11. Among other factors, low per capita consumption of wood products in Latin America and the Caribbean Basin is customarily ascribed to preferences for masonry over wood in construction, lagging incomes for a significant proportion of the population, and high import barriers erected to protect fledgling forest-based industries (Table 3).

12. Forest products consumption is highly skewed in the direction of three geographically large countries with large national incomes. Brazil, Mexico, and Argentina together account for half or more of the total region's consumption in every major

forest product group. Table 4 shows the consumption shares of these three countries for year 1984.

13. Most individual countries have been and continue to be net importers of wood products on a value basis (Table 5). The two principal exceptions are Brazil and Chile. Paraguay, Honduras, Guyana, and French Guiana also are net exporters, but on a much reduced scale. In 1984 the greatest sectoral trade deficits were recorded by Mexico, Venezuela, Cuba, Argentina, Trinidad and Tobago, and Ecuador--each experiencing deficits exceeding US$100 million.

Recent Performance of the Forest-Based Industries

Macroeconomic Context

At the beginning of the 1980s the cyclical but continuously positive economic growth which most of Latin America had experienced over the previous thirty years came to an abrupt and distressing end. The region's economic depression has been the longest, most widespread, and most severe since the Great Depression. Practically all countries and sectors have been affected, including the forest-based industries. A brief consideration of this macroeconomic distress prefaces an examination of recent trade flows.

Heavy spending and consumption throughout most of the 1970s led to balance-of-payments deficits and rapidly rising prices. Due to unprecedented permissiveness in international financial circles, the inflow of external credit to sustain high consumption was generous and easy (Prebisch 1985). By the end of the 1970s the recession in the industrialized countries grew more

serious. International interest rates rose quickly, prices of Latin America's traditional exports fell, and the risks of lending and borrowing in a recessive context became obvious. By 1982-1983 the inflow of new capital to the region had contracted dramatically (IDB 1985, pp. 17-3[illegible]; Gonzalez 1985).

The highly stressed period 1981-1983 was characterized by a sharp reduction in the formation of gross domestic product (GDP); a dramatic reduction in rates of investment; a marked increase in capital flight; a pronounced intensification of monetary inflation; a disturbing rise in unemployment and underemployment; and a painful reduction in real wages. Additionally, the sectors dependent on international trade were hurt by a deterioration in terms of trade; a loss of foreign exchange reserves; and a marked increase in external debt servicing commitments (Iglesias 1984).

Beginning in 1984, there was a pause and in some cases a reversal of many downward trends (IMF 1985, p. 1). Yet the recovery is still inadequate. Economic projections show that, even under optimistic assumptions, several years will be required to recover welfare levels already attained before the depression began. The United Nations Commission for Latin America and the Caribbean (ECLAC) estimates that growth rates of 5-6 percent annually are needed if average income per capita in 1990 is to reach the level which already prevailed in 1980.

Moreover, the 1984 improvements recorded in some countries have been set back or erased by recent price shifts. The 1985-1986 drop in petroleum prices illustrates the extreme fragility of the recovery process for countries like Mexico, Venezuela, Ecuador, and other petroleum exporters.

Impact on Production Levels

The widespread economic turmoil in Latin America has impacted the forest-based industries of some countries severely. Yet elsewhere within the region the forest-based industries appear to have been expanding. Table 6 reports the major changes in forest-based production for the period 1980-1983. The year 1980 preceded the worst difficulties, while 1983 marked the trough of the depression for most of the region. Therefore, the table refers to a four-year period in which there were pronounced downward pressures across most economies. Countries not individually listed in the table showed neither a clear increase nor clear decrease for 1980-1983.

Table 6 indicates that the solidwood industries were more vulnerable to the economic downturn than were the pulp and paper industries. This is not unexpected in view of the usual demand patterns in cyclical vs. steady-growth markets. At one extreme, sawnwood production increased in two countries but contracted in eleven. In contrast, paper production increased in five countries but contracted in only two. Pulp production expanded in two large countries, and contracted in only one small one.

Several countries posted production gains in some industries and losses in others. Shifts in other countries were more uniform. For example, the forest-based industries of Uruguay realized unambiguous net contraction during the period in question. The opposite appears to have occurred in Ecuador.

For Latin America and the Caribbean Basin as a whole, the four largest producers of forest products are Brazil, Chile, Mexico, and Argentina. Brazil's pulp production expanded

modestly during the period in question. Chile's sawnwood industry contracted. Mexican sawnwood production fell, while Mexican panel production rose. Argentina recorded production gains for sawnwood, pulp, and paper; production declines occurred for wood panels.

Impact on Exports and Imports

Table 7 summarizes changes in the total value of forest products exports and imports by major product group. Although countries like Brazil showed increases in export volumes for each of panels, pulp, and paper, Brazil's net change in export value for 1980-1983 was slightly negative. To the extent that the figures are reliable, they imply a softening of export prices. FAO's tables on unit values indicate that Brazil's f.o.b. unit value for pulp exports fell by approximately 23 percent between 1980 and 1983. During the same period, the drop in f.o.b. unit value for pulp exports from Chile was 37 percent. Export unit values for both coniferous and non-coniferous sawnwood were rising, but neither country increased sawnwood export volumes. Consequently, export earnings (when denominated in dollars) by the region's two largest exporters were flat.

Several smaller exporters recorded large increases in export value, while others showed large decreases. The export earnings of a third and somewhat larger group of small exporters remained relatively static. Many of these changes undoubtedly are explained by short-term aberrations and statistical anomalies (Durst et. al. 1985). Even if real, these changes do not have much significance for regional totals or averages. Yet they may be critical at national and local levels.

Latin America's five largest importers of forest products are Mexico, Venezuela, Cuba, Argentina, and Brazil (see following section). Of these five, only Venezuela registered a modest increase in forest products imports during the four-year period. Reductions in forest products imports of almost one-half occurred in Argentina, Mexico, and Brazil. These three large countries were among those most seriously constrained by pressures to correct balance-of-payments problems.

Among the smaller importers, both large increases and large decreases were observed in roughly equal numbers. A third and slightly larger number of small importers recorded only slight or no change. This distribution is similar to the pattern previously noted for the small exporters. The import changes are calculated from a small base, with only minor consequences for regional trade balances. Yet these changes may have been important within individual small countries.

Leading Exporters and Importers

Table 8 lists the ten leading exporters and importers of all forest products, with ranking based on figures for 1984. The year 1984 was the latest for which complete FAO data are available. Tables 9-13 supplement Table 8 by itemizing the main exporters and importers in each major product group. Average annual growth rates to 1984 are computed for two subperiods, 1974-1980 vs. 1980-1984. The first subperiod corresponds to years of buoyant trade expansion, while the second overlaps the period of recent economic depression.

Referring to Table 8, the pace of export growth in Latin America and the Caribbean Basin exceeded the world average during both subperiods, especially during the first one. The region's import growth paralleled that of the world as a whole until 1980, after which time ensuing import contractions were relatively more severe in Latin America (-5 percent in the region vs. world average of -2 percent).

Top Exporters

Brazil and Chile consistently were the top exporters in each of 1974, 1980, and 1984 (Table 8). Their combined share of regional export earnings was 68 percent in 1974, increasing to 82 percent in 1980 and 1984. These two countries were among the top five exporters in every product group, and the only two exporters of wood pulp (Tables 9-13).

Since 1980 Brazil has shown remarkable earnings growth in exports of paper and paperboard; modest earnings growth in exports of wood-based panels and wood pulp; and negative earnings growth in exports of sawnwood. Between 1980 and 1984, Chile's export earnings from logs and sawnwood dropped substantially; its export earnings in other categories did not increase sufficiently to offset this decline (Tables 9-13).

However, a few qualifications are in order. The figures in Tables 9-13 are expressed in current dollars. Hence they overstate the growth of export purchasing power, particularly since the early 1980s were years of relatively high price inflation in the U.S. Secondly, the tables cannot account for the multiple dollar exchange rates (official, parallel, financial, etc.) in different countries at different times and

for different buyers and sellers of dollars. Consequently, the figures in Tables 8-13 are not necessarily valid indicators of export earnings when considering conversions to local currencies.

FAO's statistics on direction of trade show that Brazil's markets for exports of sawnwood (mainly tropical hardwoods) are the U.S., U.K., and the rest of Europe. The largest export markets for Brazilian veneer and plywood are the U.S. and Europe, respectively. Most exports of fiberboard flow to the U.S. Brazilian wood pulp is exported to a variety of destinations, but principally to the Far East (Japan and China), Europe, and the U.S. brazil's exports of paper and paperboard (chiefly newsprint) likewise reach a large number of different markets (i.e., U.S., Europe, Africa, Far East, and Latin America).

Chile's main market for exports of logs (pine) has been the Far East. Pine sawnwood is exported to the Middle East and a diversity of countries within the Latin American region. Chile's wood pulp is sold to the Far East and Europe, with the U.S. also taking a small share. Chile's exports of paper and paperboard (mainly newsprint) are sold to Brazil, Venezuela, and other countries within the region.

Among the medium-scale exporters, Paraguay and Colombia showed respectable earnings growth in both subperiods (Table 8). Most of Paraguay's exports are sawnwood and panels (Tables 10 and 11) shipped to Brazil, since much of the Paraguayan forest products industry has Brazilian ownership. Colombia's exports are almost entirely paper and paperboard (Table 13).

Top Importers

The region's top five importers of forest products in 1984 also were the top five importers in 1980 and 1974, but the internal ordering shifted considerably (Table 8). Brazil and Argentina dropped from first and second positions in 1974 to fifth and fourth positions, respectively, by 1984. Brazil's expenditures for imports already were falling in the first subperiod, apparently reflecting ongoing import substitution of paper and paperboard (Table 13).

Meanwhile, Mexico's expenditures for exports more than tripled from 1974 to 1980. A large part of this increase was explained by rapid growth in the import demand for paper and paperboard (Table 13). Even with the sharp reduction in Mexico's imports since 1980, Mexico remained the leading importer of forest products in 1984.

Of the five largest importers in 1984, only Venezuela registered an increase in expenditures since 1980 (also see Table 7, Part B). The three major consumers of forest products--Brazil, Mexico, and Argentina--reduced imports dramatically. Because the import expenditures are expressed in current dollars rather than real dollars, Tables 8-13 understate the loss of purchasing power for exporters to these countries.

Considering the dynamics of individual product groups for the subperiod 1980-1984, imports of sawnwood and sleepers fell sharply (except in Trinidad & Tobago). Regional imports of wood-based panels decreased slightly, but with modest increases posted by Venezuela, Cuba, and Trinidad & Tobago. Wood pulp imports declined for all large importers except Venezuela. Finally,

among the top importers of paper and paperboard, only Ecuador increased import expenditures during the subperiod in question.

Regarding direction of trade, imports of sawnwood (coniferous) are mainly from the U.S. (Mexico and the Caribbean Islands), U.S.S.R. (Cuba), Canada, and Chile. Plywood is imported from Rep. of Korea, Brazil, the U.S., and U.S.S.R. Mexico imports wood pulp mainly from the U.S. and Canada; Venezuela imports wood pulp from the U.S., Canada, Brazil, and Chile. Venezuela imports newsprint chiefly from Canada, while Brazil imports newsprint from Canada and also Chile. Over half of the region's paper and paperboard imports (quantity basis) are from the U.S., with smaller suppliers being Brazil, U.S.S.R., Finland, Canada, and Sweden.

Trade with the U.S.

The U.S. plays a key role in forest products trade with the region. Table 14 shows U.S. exports and imports for 1985, the latest year for which complete data are available. Data in Table 14 may not agree with data in Tables 8-13 because of the difference in years (1984 vs. 1985) and sources (FAO vs. U.S. Dept. of Commerce).

U.S. Exports

In 1985 U.S. exports to the region ($784 million) were almost twice the level of imports from the region ($400 million). The major export market was Mexico, which purchased 41 percent of total U.S. exports. Mexico bought 31 percent of U.S. exports of paper and paperboard; 40 percent of U.S. exports of solidwood products; and 73 percent of U.S. exports of wood pulp.

After Mexico, the other principal markets for U.S. forest products exports are the Andean Zone, the Caribbean Islands, and Central America. In 1985 these three subregions accounted for 20, 18, and 15 percent of total U.S. exports to the region, respectively. Three of the Andean countries (Venezuela, Ecuador, and Colombia) were significant purchasers of U.S. paper and paperboard, as were five countries of Central America (Panama, Costa Rica, Honduras, Guatemala, and El Salvador). Several of the Caribbean Islands have been major purchasers of U.S. solidwood products (Wisdom et. al. 1986); in 1985 this subregion accounted for nearly half of U.S. exports in the solidwood group. Besides Mexico, Venezuela was the only other significant purchaser of U.S. wood pulp.

Only 4 percent of U.S. forest products exports went to Brazil, and only 1 percent went to the Southern Cone. Northern South America was an even smaller market.

U.S. Imports

In 1985 two countries, Brazil and Mexico, were the sources of more than 80 percent of U.S. forest products imports from Latin America and the Caribbean Basin. U.S. imports from Brazil were chiefly solidwood products ($113 million). But the U.S. also purchased substantial quantities of Brazilian pulp ($74 million), and limited quantities of Brazilian paper and paperboard ($19 million). U.S. imports from Mexico were mainly solidwood products ($96 million), with lesser imports of paper and paperboard ($24 million).

Brazil's exports of solidwood to the U.S. included a wide range of products, most important of which were hardwood lumber,

hardboard, hardwood plywood, and hardwood veneer. A high proportion of Mexico's solidwood exports to the U.S. were moldings. U.S. purchases of Brazilian pulp were mainly bleached hardwood (60 percent) vs. bleached softwood and unspecified (40 percent).

Other U.S. imports exceeding $5 million in 1985 included solidwood from Honduras; solidwood from Ecuador; paper and paperboard from Venezuela; solidwood from Chile; and paper and paperboard from Chile. However, none of these flows is particularly significant for the U.S. total of $400 million.

Looking Towards the Future

For several years, the near-term outlook for forest products trade in Latin America and the Caribbean Basin has been highly uncertain (Yoho and Gallegos 1984). Given the seriousness of macroeconomic distress in so many countries, forest-based production and trade are governed by forces above and outside of the sector and region. Several countries will continue to wrestle with high inflation, shrinking government expenditures, low capital inflow, and painful debt servicing (Laarman 1986).

Thus it is both curious and unfortunate that key outlook projections for Latin America's forest products output and trade make almost no reference to the region's recent economic difficulties. Projections to the year 2000 by the Inter-American Development Bank (McGaughey and Gregersen 1983) were made during the most troubled years for the region, yet these projections largely ignore that context. Similarly, more recent projections to the same year by FAO (1986) present a global view with little

qualitative attention to macroeconomic shifts in different regions.

Although the main problems of the Latin American economies are not resolved, the macroeconomic outlook in the majority of countries is brighter than it was through 1983. Beginning in 1984, several countries have been able to negotiate more favorable conditions for debt rescheduling. Beginning in 1985-1986, three exogenous developments having major consequences for economic prospects are: lower international interest rates, lower value of the U.S. dollar against many major currencies, and lower world petroleum prices.

These new developments are generally to be welcomed by most forest products industries in Latin America and the Caribbean Basin, particularly in the region's petroleum-importing countries. Yet there are winners and losers across a broad spectrum, and welfare changes should not be oversimplified. From the standpoint of the U.S., attempts to expand U.S. forest products exports to the region continue to confront a series of obstacles:

1. Critical export markets, or potential export markets, are either soft or closed. The economies of two of the region's largest importers, Mexico and Venezuela, depend on the vagaries of world petroleum prices. Trinidad & Tobago, an important importer of U.S. lumber, likewise depends on petroleum earnings. The same can be said of Ecuador and its imports of U.S. paper and paperboard. Cuba, a large importer of forest products, is supplied within the economic orbit of the U.S.S.R. Brazil, the

largest and wealthiest country of the region, is not a significant buyer of U.S. forest products.

2. Looking back to predictions made a few years ago, some U.S. exporters had been optimistic about expanding sales to certain markets, e.g., U.S. lumber exports to the Caribbean Basin (Robinson 1984). To date those expectations have not been realized. Annual U.S. solidwood exports to Mexico, the Caribbean Islands, and Central America have remained more or less flat (in current dollars) since 1980 (NFPA 1985). With respect to promoting trade in forest products, the early years of the Caribbean Basin Initiative have been disappointing (Laarman and Muench 1985).

3. Within the region, and also outside of it, the U.S. can expect increasing export competition from Brazil and Chile. The era of the strong dollar prior to 1985 allowed Brazil to undercut the prices of North American competitors in the European market for market pulp and linerboard (Pearson et. al. 1985). Over the last ten years, Brazil's world share of chemical pulp capacity has increased from virtually zero to more than 5 percent (Slinn 1986). Noticeable quantities of Brazilian pulp are arriving directly in the U.S. and Canada (Zobel 1987).

4. Yet the arrival of Brazilian pulp in North America may be a red herring. The U.S. loses jobs and income in primary forestry and pulp manufacture as the direct result of Brazilian imports. But the U.S. also competes with rapidly increasing Brazilian exports of pulp, paper, and paperboard to the rest of the world. Conceivably, income losses to the U.S. industry are greater for the second reason (loss of export markets, pulp and

paper) than for the first one (loss of home markets, pulp). Yet the second impact is less visible, not as easily documented, and much more difficult to measure and evaluate.

5. The ability of Brazil and Chile to compete for exports depends critically on the rapid and dramatic realignments taking place in currency exchange rates. Among pulp traders whose currencies fell against the U.S. dollar, Brazil and Chile headed the list in 1984-1985, with depreciations of 65 percent and almost 50 percent, respectively (Slinn 1985). More generally, almost all major forest products traders with the U.S. (both exporters and importers) have seen their currencies depreciate against the dollar. Figure 1 shows exchange rates (ER) as a percentage of the exchange rates which prevailed about ten years ago. In the absence of intervention by central banks to provide a special exchange rate different from the market rate, this has meant that imports from the U.S. have become increasingly costly, while exports to the U.S. have become increasingly cheaper. Of course, the issue of cost advantage in a world context is complicated by the realignments of Latin American currencies with currencies other than the U.S. dollar. In a number of countries it is further complicated by hyperinflation and currency instability.

In conclusion, the next few years of forest products trade with Latin America and the Caribbean Basin are likely to be twisted and turned by any number of unpredictable events. Responses to recent political, social, and economic upheavals are still evolving. The very imaginative, and the very naive,

clearly see tomorrow's round of developments. All others humbly await new adjustments day by day.

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Table 1. Countries of Latin America and the Caribbean Basin Classified by Subregion.

Subregion	Countries	
Mexico		
Central America	Belize Costa Rica El Salvador Guatemala	Honduras Nicaragua Panama
Caribbean Islands	Bahamas Barbados Bermuda Cayman Cuba Dominica Dominican Rep. Guadeloupe	Haiti Jamaica Leeward & Windward I. Martinique Neth. Antilles St. Vincent Trinidad & Tobago Turks & Caicos I.
Northern S. America	French Guiana Guyana	Suriname
Brazil		
Andean Zone	Bolivia Colombia Ecuador	Peru Venezuela
Southern Cone	Argentina Chile	Paraquay Uruguay

Note: A few small Caribbean countries are not included in this study.

Table 2. The Share of Latin America and the Caribbean Basin in World Production, Exports, and Imports of Forest Products (1974, 1980, 1984).

Product Group	Year 1974	1980	1984
	(percent of world total, quantity basis)		
Industrial Roundwood			
Production	3.9	6.8	6.4
Exports	0.4	1.0	1.0
Imports	0.2	0.2	0.2
Sawnwood and Sleepers			
Production	3.9	5.7	5.7
Exports	3.2	3.6	2.5
Imports	3.2	4.0	2.7
Wood-Based Panels			
Production	3.0	4.2	4.2
Exports	2.0	3.8	3.6
Imports	1.3	3.0	2.4
Wood Pulp			
Production	2.2	3.8	4.1
Exports	1.6	6.2	6.9
Imports	4.7	3.8	3.3
Paper and Paperboard			
Production	3.5	4.5	4.6
Exports	0.8	1.2	2.5
Imports	7.4	7.1	5.1

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 3. Non-Weighted Average Tariff Rates on Forest Products in Selected Countries of Latin America and the Caribbean Basin (1970s).

Country	Roundwood	Primary Products	Secondary Products
Mexico (1979)	13.0	14.2	34.7
Caribbean Islands			
Bahamas (1977)	24.1	29.8	31.5
Jamaica (1976)	13.7	25.4	33.6
Northern S. America			
Suriname (1971)	23.7	27.7	NA
Brazil (1977)	43.0	56.4	65.3
Andean Zone			
Bolivia (1977)	11.1	33.3	36.2
Colombia (1977)	13.9	40.2	52.1
Ecuador (1977)	20.0	46.4	58.0
Peru (1977)	NA	NA	60.0
Venezuela (1977)	20.0	81.0	81.2
Southern Cone			
Argentina (1979)	15.5	18.4	29.1
Paraguay (1978)	28.9	25.7	25.3

Note: NA = Not available.

Source: UNIDO, Tariff and Non-Tariff Measures in the World Trade of Wood and Wood Products, 1983.

Table 4. Apparent Consumption (Production + Imports - Exports) of Forest Products in Brazil, Mexico, and Argentina in Relation to Totals for All of Latin America and the Caribbean Basin (1984).

Product Group	Country		
	Brazil	Mexico	Argentina
Industrial Roundwood			
1,000 CUM	57,675	7,287	4,977
% of Regional Total	62.6	7.9	6.2
Sawnwood and Sleepers			
1,000 CUM	15,656	2,000	1,558
% of Regional Total	60.3	7.7	6.0
Wood-Based Panels			
1,000 CUM	2,132	760	378
% of Regional Total	49.8	17.8	8.8
Wood Pulp			
1,000 MT	2,478	703	630
% of Regional Total	32.2	9.1	8.2
Paper and Paperboard			
1,000 MT	3,281	2,476	1,031
% of Regional Total	33.7	25.5	10.6

Source: FAO, Yearbook of Forest Products, 1973-1984.

Table 5. Trade Balances in All Forest Products (Exports - Imports), Latin America and the Caribbean Basin, by Subregion and Country (1974, 1980, 1984).

Subregion	1974	1980	1984
	---(million US$)---		
Mexico	-181.2	-598.4	-364.6
Central America	-74.5	-180.0	-156.5
Belize	1.5	-1.5	-1.0
Costa Rica	-45.0	-38.6	-49.6
El Salvador	-12.5	-28.9	-24.5
Guatemala	-5.9	-71.7	-45.9
Honduras	14.7	3.0	10.2
Nicaragua	-4.2	-9.1	-9.8
Panama	-23.1	-33.2	-35.9
Caribbean Islands	-188.0	-469.2	-502.0
Bahamas	-3.1	-7.5	-7.8
Barbados	-7.0	-24.3	-19.7
Cuba	-77.0	-200.9	-188.9
Dominica	--	--	-0.9
Dominican Republic	-23.0	-71.4	-58.8
Guadeloupe	-3.0	-6.3	-14.2
Haiti	-2.3	-4.8	-5.0
Jamaica	-28.6	-34.1	-47.9
Martinique	-5.2	-11.3	-14.1
Netherlands Antilles	-9.9	-9.2	-9.6
St. Vincent	--	-0.5	-3.0
Trinidad and Tobago	-28.9	-98.9	-132.1
Northern South America	-0.8	3.0	-0.1
French Guiana	0.5	2.3	1.1
Guyana	-2.4	-0.2	0.3
Suriname	1.1	0.9	-1.5
Brazil	-113.1	590.4	853.9
Andean Zone	-201.0	-401.8	-498.4
Bolivia	7.5	8.6	-6.5
Colombia	-57.7	-92.4	-64.8
Ecuador	-30.0	-66.6	-101.1
Peru	-35.4	-31.0	-40.3
Venezuela	-85.4	-220.4	-285.7
Southern Cone	-115.7	50.6	226.2
Argentina	-244.4	-395.2	-168.5
Chile	124.5	413.7	321.9
Paraguay	18.5	54.9	79.8
Uruguay	-14.3	-22.8	-7.0
Total, All Countries	-874.5	-1,005.4	-441.5

Source: FAO, Yearbook of Forest Products, 1973-1984.

Table 6. Production Shifts in the Forest-Based Industries of Latin America and the Caribbean Basin Between 1980 and 1983.

	Product Group			
	Sawnwood & Sleepers	Wood Panels	Wood Pulp	Paper & Paperboard
	(percent change, quantity basis)			
A. Major Increases				
Mexico		+ 26		
Jamaica				+ 80
Costa Rica				+ 50
Panama				+115
Brazil			+ 16	
Ecuador		+ 34		+ 31
Argentina	+ 32		+ 54	+ 21
B. Major Decreases				
Mexico	- 23			
Belize	- 20			
Costa Rica	- 28		- 40	
Guatemala		- 33		- 50
Honduras	- 14			
Nicaragua	- 45			
Suriname	- 23			
Bolivia	- 56			
Colombia	- 26			
Peru		- 32		
Venezuela	- 40			
Argentina		- 18		
Chile	- 26			
Uruguay	- 84	- 25		- 17

Note: "Major" increase or decrease equals 10% or more.

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 7. Shifts in Total Value of Forest Products Imports and Exports in Latin America and the Caribbean Basin Between 1980 and 1983.

	Increased	Relatively Static	Decreased
	(percent change)		
A. Exports			
Mexico	+ 68		
Central America			
Belize		- 19	
Costa Rica		- 8	
El Salvador	+615		
Guatemala			- 37
Honduras		- 1	
Nicaragua		0	
Panama		- 2	
Caribbean Islands			
Jamaica	+108		
Trinidad/Tobago			- 51
Northern S. America			
French Guiana		+ 11	
Guyana		0	
Suriname		- 2	
Brazil		- 4	
Andean Zone			
Bolivia			- 71
Colombia	+ 74		
Ecuador	+ 22		
Peru		+ 4	
Southern Cone			
Argentina			- 32
Chile			- 32
Paraguay		- 2	
Uruguay			- 35

(continued)

Table 7. (continuation)

	Increased	Relatively Static	Decreased
	(percent change)		
B. Imports			
Mexico			- 40
Central America			
Belize			- 23
Costa Rica	+ 28		
El Salvador		+ 4	
Guatemala			- 33
Honduras		+ 9	
Nicaragua		0	
Panama		- 16	
Caribbean Islands			
Bahamas		- 5	
Barbados		0	
Cuba		- 13	
Dominican Republic		+ 12	
Guadeloupe	+124		
Haiti		+ 3	
Jamaica	+160		
Martinique	+ 24		
Neth. Antilles		- 3	
Trinidad/Tobago	+ 33		
Northern S. America			
French Guiana			- 44
Guyana		- 7	
Suriname	+ 20		
Brazil			- 39
Andean Zone			
Bolivia		+ 5	
Columbia		- 3	
Ecuador	+ 44		
Peru	+ 78		
Venezuela		+ 17	
Southern Cone			
Argentina			- 48
Chile		- 4	
Paraguay			- 32
Uruguay			- 59

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 8. Top Ten Exporters and Importers of All Forest Products, Latin America and the Caribbean Basin, by Country (1974, 1980, 1984).

	Year 1974	1980	1984	Ave. Annual Growth 1974-80	1980-84
	—(million US$)—			—(simple %)—	
A. Top Exporters					
1. Brazil	236	864	1029	44	5
2. Chile	131	459	371	42	- 5
3. Paraguay	23	66	87	31	8
4. Colombia	7	27	49	48	20
5. Honduras	44	31	31	- 5	0
6. Costa Rica	3	21	23	100	2
7. Ecuador	7	27	19	48	- 7
8. Mexico	3	11	18	44	16
9. Suriname	7	12	12	12	0
10. Guatemala	12	22	10	14	-14
Total	473	1540	1649	37	2
All Latin America and Caribbean	537	1615	1699	33	1
World	29168	55883	50682	15	- 2
B. Top Importers					
1. Mexico	184	609	383	38	- 9
2. Venezuela	85	220	286	26	8
3. Cuba	77	201	189	27	- 1
4. Argentina	273	412	177	8	-14
5. Brazil	349	274	175	- 4	- 9
6. Trinidad & Tobago	29	99	132	40	8
7. Ecuador	37	94	120	26	7
8. Colombia	65	119	115	14	1
9. Costa Rica	48	60	72	4	5
10. Dominican Rep.	23	71	59	35	- 4
Total	1170	2159	1708	14	- 5
All Latin America and Caribbean	1411	2620	2142	14	- 5
World	33054	62252	55797	15	- 2

Note: Trade values were rounded to nearest million dollars after growth rates were calculated and columns added.

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 9. Top Five Exporters and Importers of Industrial Roundwood, Latin America and the Caribbean Basin, by Country (1974, 1980, 1984).

	Year 1974	Year 1980	Year 1984	Ave. Annual Growth 1974-80	Ave. Annual Growth 1980-84
	—(million US$)—			—(simple %)—	
A. Top Exporters					
1. Chile	—	57	30	—	-12
2. Guyana	1	3	3	23	0
3. Brazil	7	1	2	-13	9
4. Suriname	1	2	1	17	- 9
5. Honduras	1	4	1	48	-21
Total	10	67	37	95	-11
All Latin America and Caribbean	15	73	38	64	-12
World	4469	8690	5901	16	-12
B. Top Importers					
1. Venezuela	—	2	16	—	141
2. Brazil	5	7	8	7	4
3. Dominican Republic	—	10	7	—	- 8
4. Mexico	1	16	4	270	-19
5. Trinidad & Tobago	—	—	2	—	—
Total	6	35	36	80	<1
All Latin America and Caribbean	16	48	41	33	4
World	6345	12315	7775	16	4

Note: Trade values were rounded to nearest million dollars after growth rates were calculated and columns added.

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 10. Top Five Exporters and Importers of Sawnwood and Sleepers, Latin America and the Caribbean Basin, by Country (1974, 1980, 1984).

	Year 1974	1980	1984	Ave. Annual Growth 1974-80	1980-84
	—(million US$)—			—(simple %)—	
A. Top Exporters					
1. Brazil	127	211	145	11	- 8
2. Chile	12	149	74	186	-13
3. Paraguay	21	52	62	24	5
4. Honduras	39	20	30	- 8	12
5. Ecuador	7	4	16	- 6	72
Total	206	437	327	18	- 6
All Latin America and Caribbean	240	475	354	16	- 6
World	6258	12339	10646	16	- 3
B. Top Importers					
1. Trinidad & Tobago	5	41	74	108	20
2. Cuba	51	88	70	12	- 5
3. Mexico	13	67	62	68	- 2
4. Argentina	84	139	51	11	-16
5. Venezuela	1	31	28	395	- 2
Total	155	367	286	23	- 6
All Latin America and Caribbean	205	464	360	21	- 5
World	7076	13966	11487	16	- 4

Note: Trade values were rounded to nearest million dollars after growth rates were calculated and columns added.

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 11. Top Five Exporters and Importers of Wood-Based Panels, Latin America and the Caribbean Basin, by Country (1974, 1980, 1984).

	Year 1974	1980	1984	Ave. Annual Growth 1974-80	1980-84
	—(million US$)—			—(simple %)—	
A. Top Exporters					
1. Brazil	49	125	140	26	3
2. Paraguay	2	14	25	97	19
3. Mexico	—	7	9	—	6
4. Chile	—	7	9	—	6
5. Costa Rica	2	8	6	47	- 5
Total	53	161	189	34	4
All Latin America and Caribbean	66	204	207	35	<1
World	2422	5157	4639	19	- 2
B. Top Importers					
1. Venezuela	2	22	32	173	10
2. Cuba	4	14	24	50	17
3. Trinidad & Tobago	2	15	21	140	11
4. Mexico	6	21	9	45	-15
5. Brazil	1	14	7	193	-13
Total	14	86	92	88	2
All Latin America and Caribbean	31	133	126	54	- 1
World	2595	5234	4706	17	- 2

Note: Trade values were rounded to nearest million dollars after growth rates were calculated and columns added.

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 12. Top Two Exporters and Top Five Importers of Wood Pulp, Latin America and the Caribbean Basin, by Country (1974, 1980, 1984).

	Year 1974	1980	1984	Ave. Annual Growth 1974-80	1980-84
	—(million US$)—			—(simple %)—	
A. Top Exporters					
1. Brazil	37	364	396	148	2
2. Chile	78	197	200	25	<1
Total	115	561	596	65	2
All Latin America and Caribbean	115	561	596	65	2
World	5459	9543	8974	12	- 1
B. Top Importers					
1. Mexico	85	107	81	4	- 6
2. Venezuela	21	59	77	31	8
3. Argentina	71	68	31	- 1	-14
4. Colombia	26	30	25	2	- 4
5. Cuba	6	23	18	12	- 6
Total	209	287	232	6	- 5
All Latin America and Caribbean	326	373	279	2	- 6
World	5801	9781	9318	11	- 1

Note: Trade values were rounded to nearest million dollars after growth rates were calculated and columns added.

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 13. Top Five Exporters and Importers of Paper and Paperboard, Latin America and the Caribbean Basin, by Country (1974, 1980, 1984).

	Year 1974	1980	1984	Ave. Annual Growth 1974-80	1980-84
	—(million US$)—			—(simple %)—	
A. Top Exporters					
1. Brazil	17	161	346	140	29
2. Chile	41	49	58	3	5
3. Colombia	1	24	49	327	27
4. Costa Rica	1	13	15	272	4
5. Guatemala	7	18	9	24	-13
Total	67	264	477	49	20
All Latin America and Caribbean	102	299	503	32	17
World	10485	20058	20452	15	<1
B. Top Importers					
1. Mexico	79	399	227	68	-11
2. Brazil	250	191	138	- 4	- 7
3. Ecuador	37	89	109	24	6
4. Argentina	115	183	88	10	-13
5. Colombia	38	82	82	19	0
Total	518	944	646	14	- 8
All Latin America and Caribbean	831	1602	1335	15	- 4
World	11173	20835	22413	14	2

Note: Trade values were rounded to nearest million dollars after growth rates were calculated and columns added.

Source: FAO, Yearbook of Forest Products 1973-1984.

Table 14. U.S. Exports (X) and Imports (M) in Forest Products Trade with Latin America and the Caribbean Basin (1985).

Subregion	Solidwood Products X	Solidwood Products M	Wood Pulp X	Wood Pulp M	Paper and Paperboard X	Paper and Paperboard M
	(million US$)					
Mexico	76.0	96.4	108.5	---	138.1	23.6
Central America	6.6	17.3	3.8	---	106.3	0.5
Belize	0.4	0.1	---	---	0.2	0.2
Costa Rica	0.5	4.1	0.1	---	25.6	0.3
El Salvador	0.9	0.1	0.4	---	11.8	---
Guatemala	0.8	2.6	---	---	17.0	---
Honduras	0.2	8.8	---	---	24.3	---
Nicaragua	0.1	---	---	---	0.2	---
Panama	3.7	1.6	0.6	---	27.2	---
Caribbean Islands	87.8	1.8	0.4	---	55.9	0.2
Bahamas	18.4	---	---	---	1.3	---
Barbados	3.8	---	---	---	2.0	---
Bermuda	3.8	---	---	---	1.1	---
Cayman	4.0	---	---	---	0.1	---
Dominican Republic	13.2	0.1	---	---	17.7	0.2
Guadelouope/Martinique	0.5	---	---	---	2.8	---
Haiti	4.4	1.5	---	---	3.3	---
Jamaica	10.7	0.1	0.1	---	11.5	---
Leeward/Windward I.	8.5	---	---	---	5.4	---
Netherlands Antilles	8.0	---	---	---	1.8	---
Trinidad & Tobago	11.9	0.1	0.3	---	8.9	---
Turks & Caicos I.	0.6	---	---	---	---	---
Northern South America	0.3	1.7	---	---	2.4	---
French Guiana	0.1	0.2	---	---	---	---
Guyana	0.1	1.1	---	---	0.4	---
Suriname	0.1	0.4	---	---	2.0	---
Brazil	7.4	112.6	0.6	74.0	24.3	19.0
Andean Zone	8.8	14.6	34.0	---	112.3	5.5
Bolivia	0.1	---	---	---	---	---
Colombia	1.8	2.4	3.8	---	23.7	0.2
Ecuador	0.1	9.5	0.5	---	34.1	---
Peru	1.7	2.6	1.2	---	2.5	0.2
Venezuela	5.1	0.1	28.5	---	52.0	5.1

(continued)

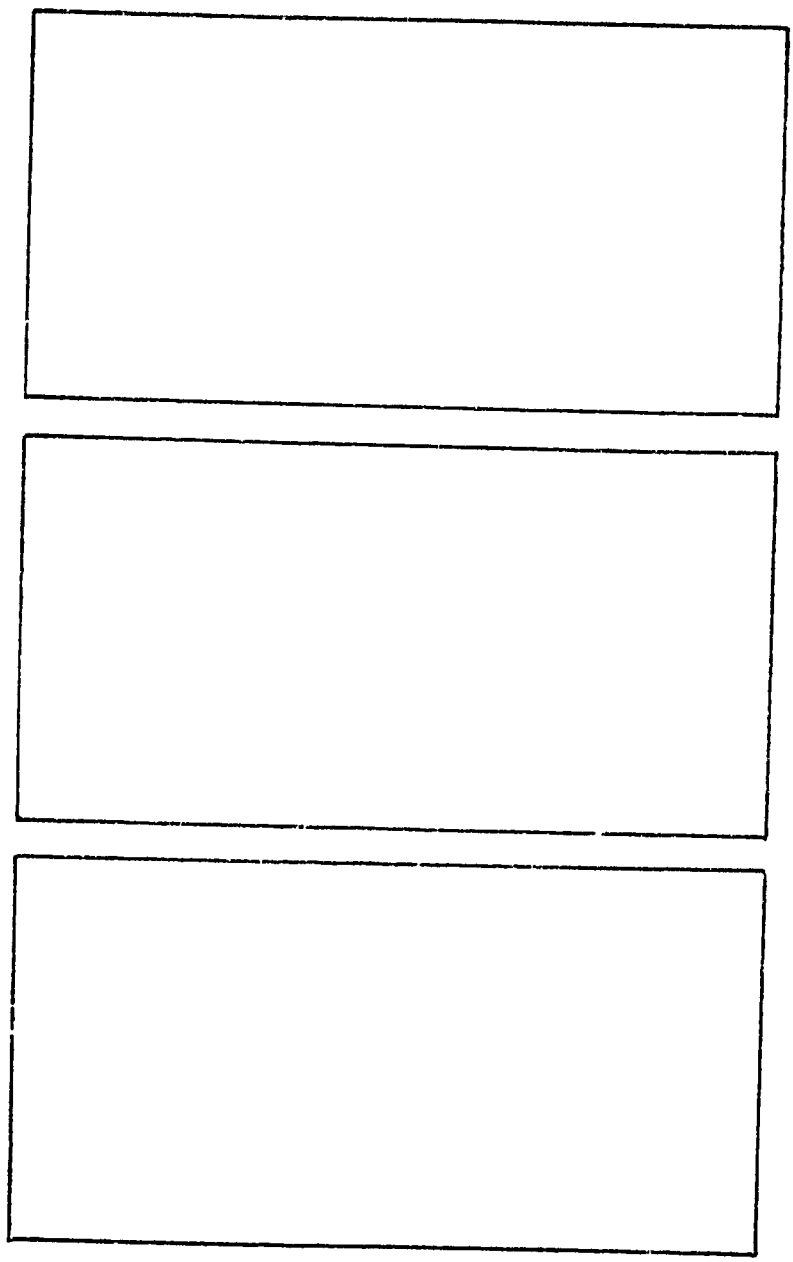
Table 14. (continuation)

Subregion	Solidwood Products X	Solidwood Products M	Wood Pulp X	Wood Pulp M	Paper and Paperboard X	Paper and Paperboard M
	(million US$)					
Southern Cone	2.1	15.3	1.2	4.5	7.4	13.1
Argentina	1.2	2.8	1.0	---	3.5	4.8
Chile	0.8	11.6	0.2	4.5	3.5	8.3
Paraguay	---	0.9	---	---	0.2	---
Uruguay	0.1	---	---	---	0.2	---
All Countries	189.0	259.7	148.6	78.5	446.7	61.9

Note: Solidwood products include all those defined in NFPA series cited below. Paper and paperboard exclude paper bags, boxes, stationery, and other manufactured products.

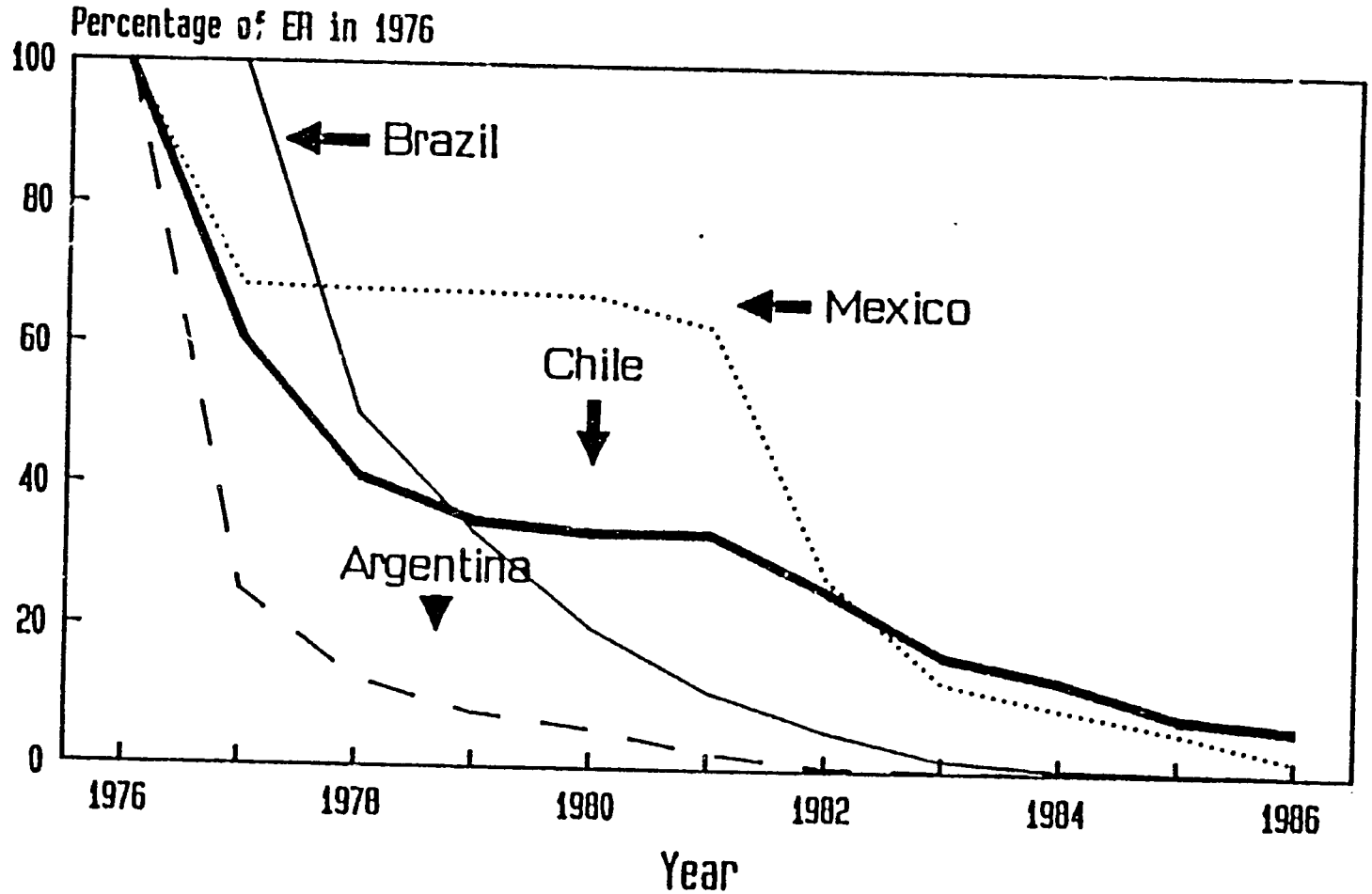
Sources: U.S. Bureau of the Census, Foreign Trade Statistics, Schedule A (imports) and Schedule E (exports); National Forest Products Association, Wood Products International Trade Statistics (Vol. II), 1985.

Figure 1. Movement of Selected Currencies Against the U.S. Dollar.



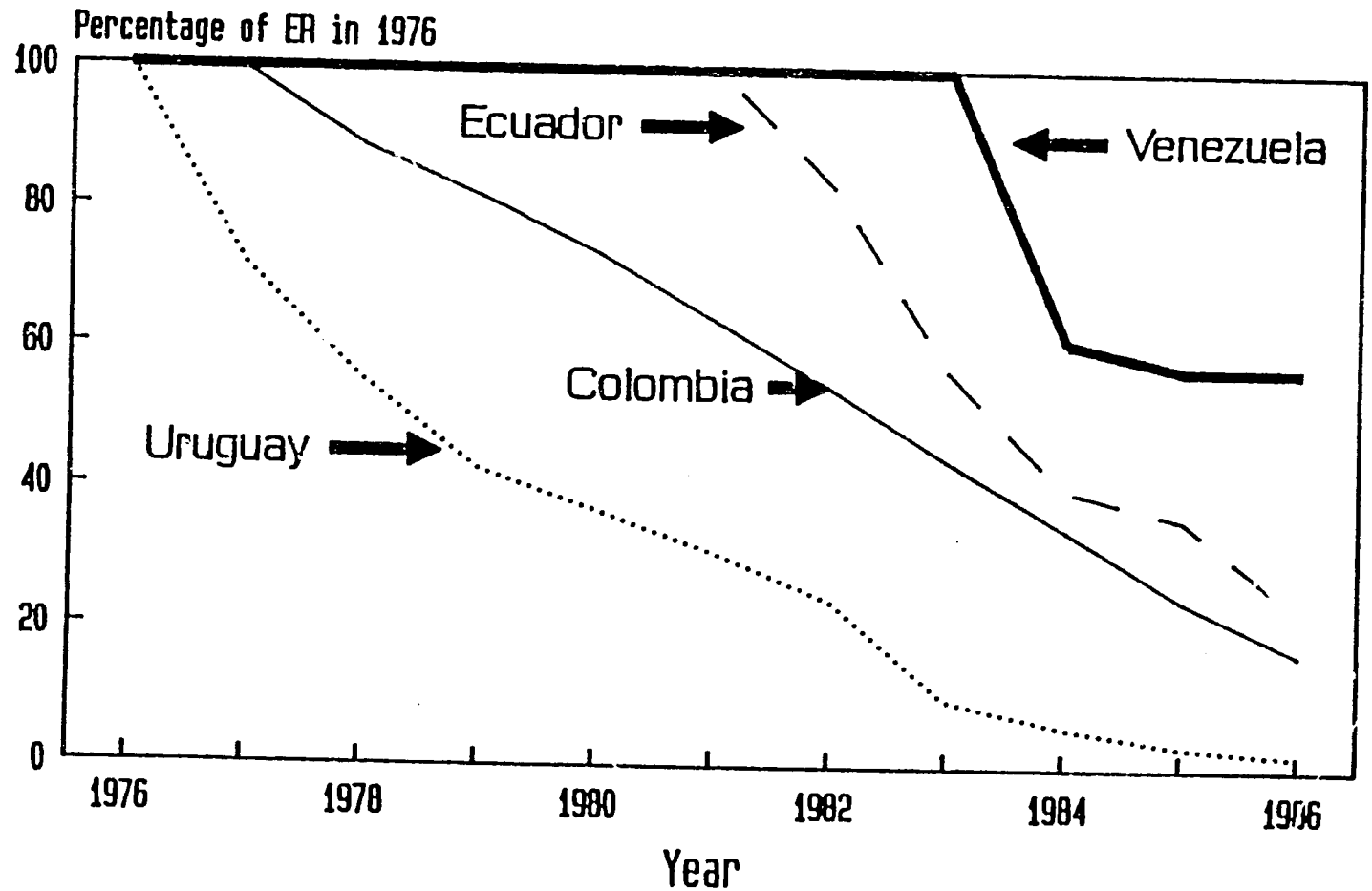
Source: Data published by the International Monetary Fund.

Movement of Selected Currencies Against the U.S. Dollar



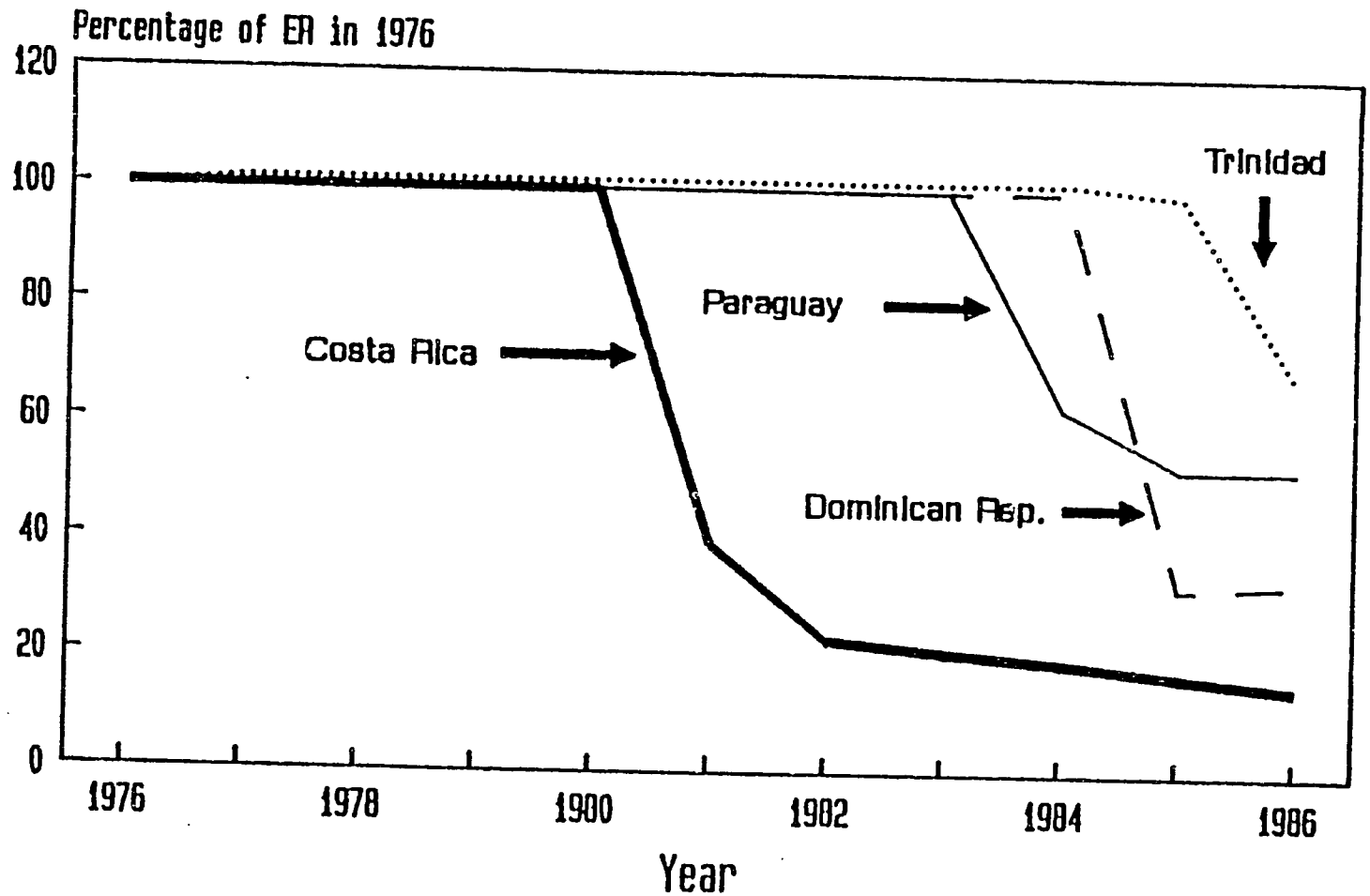
1906: spot rate for October

Movement of Selected Currencies Against the U.S. Dollar



1986: spot rate for October

Movement of Selected Currencies Against the U.S. Dollar



1986: spot rate for October