

The
FORESTRY
PRIVATE
ENTERPRISE
INIITIATIVE



School of Forest Resources
North Carolina State University



School of Forestry and Environmental Studies
Duke University



Office of International Cooperation and Development
Forest Service, Forestry Support Program and
Southeastern Forest Experiment Station



Supported and funded by
Bureau for Science and Technology
Agency for International Development

Southeastern Center for Forest Economics Research

Box 12254, Research Triangle Park, N.C. 27709 Telephone (919) 541-4221

The Economic Outlook for Forestry in Tropical America: A Hazardous Period for Projections

By

Jan G. Laarman

FPEI Working Paper No. 8

FPEI Working Paper Series

June 1987

The SCFER Institutions

USDA Forest Service Southeastern Forest Experiment Station

North Carolina State University Duke University

Laarman, Jan G. 1986. The Economic Outlook for Forestry in Tropical America: A Hazardous Period for Projections. Southeastern Center for Forest Economics Research, Research Triangle Park, NC. FPEI Working Paper No. 8, 33 pp.

About the Authors

Jan G. Laarman is an Associate Professor in the School of Forest Resources, North Carolina State University, Raleigh, N.C.

About FPEI Working Papers

FPEI working papers are a special series of SCFER working papers issued by the Southeastern Center for Forest Economics Research for the purpose of sharing the research findings of the Forestry Private Enterprise Initiative. These papers are distributed in order to promote the timely release of new theories, data and findings. Working papers represent various levels of research findings and readers are encouraged to contact the author(s) for more information. Some of the papers may be published in modified form elsewhere. An updated list and copies of FPEI Working papers are available from the Center at P. O. Box 12254, Research Triangle Park, NC 27709, (919) 541-4221.

THE FORESTRY PRIVATE ENTERPRISE INITIATIVE

FPEI is a cooperative project executed by the Southeastern Center for Forest Economics Research (SCFER) in collaboration with the USDA Office of International Cooperation and Development (OICD) and the USDA Forestry Support Program (FSP). The primary members of SCFER are the USDA Forest Service Southeastern Forest Experiment Station, North Carolina State University, and Duke University. FPEI is supported and funded by the United States Agency for International Development (AID), Bureau for Science and Technology (S&T) [through its Office of Forestry, Environment, and Natural Resources (FENR)].

THE ECONOMIC OUTLOOK FOR FORESTRY IN TROPICAL AMERICA:
A HAZARDOUS PERIOD FOR PROJECTIONS

by

Jan G. Laarman
Dept. of Forestry, Box 8002
North Carolina State University
Raleigh, North Carolina 27695
U.S.A.

Management of the Forests of Tropical America:
Prospects and Technologies

San Juan, Puerto Rico
September 21-28, 1986

This is Paper No. 10483 of the North Carolina Agricultural
Research Service, Raleigh, NC 27695.

INTRODUCTION

The economies of the Americas are passing through a time of pronounced turbulence, and projecting their future seems quite impossible. Constructing an economic outlook for forestry in tropical America is therefore a risky undertaking. Forestry, like other sectors, is undergoing structural adjustments and approaching critical turning points not yet reported or even clearly visible by 1986.

Specifically, the prospects for forestry in Latin America are clouded by enormous uncertainties regarding the region's "second chance" for economic and social growth (Restrepo 1985, p. 25). The challenge is to combine political will with managerial expertise to restore financial stability after several years of severe depression. To the extent that genuine recovery is achievable, future developments in the forest-based sectors will be determined by world petroleum prices, movements of the United States' dollar and international interest rates, as well as social and economic policies of a large number of new governments.

The falling interest rates, falling value of the dollar, and falling petroleum prices of 1985-1986 signal the probable beginning of partial recovery from the post-1980 depression for some countries. For other countries, unstable petroleum prices exacerbate an already painful and prolonged period of forced adjustments and severe austerity. Hence the majority of forest-based sectors will witness widespread and conceivably profound changes in internal structure, intra-regional competitive position, and strategies for survival and growth. The stage is

set for the possibility of dramatic adjustments and realignments among forest-based industries and across countries. This would parallel far-reaching and rapid changes that have occurred at more aggregate levels of political, economic, and social activity (Iglesias 1984, p. 7).

This paper will not forecast the future so much as attempt to describe the interplay of factors on which it will depend. The next section very briefly reviews the causes and consequences of the economic depression in Latin America. This provides a background against which to describe recent movements in production and trade in Latin America's forest-based industries. The third and main part of the paper concentrates on a few selected themes likely to shape prospects in the forest-based sectors through the next several years.

A BRIEF ACCOUNT OF THE MACROECONOMIC CONTEXT

The cyclical but continuously positive growth which the Latin American economies experienced over the previous thirty years came to an abrupt and distressing end at the beginning of the 1980s. The recent economic depression in Latin America has been the most severe, most widespread, and longest since the bleak years of the Great Depression. The crisis has affected—to different degrees and through different manifestations—practically all of the region's countries and sectors.

The causes of the problems are many, complex, and interrelated. Most conventional analysts contend that Latin America's extremely high indebtedness is the most important immediate cause of the economic crisis, and that this

indebtedness is in turn explained by a complicated interaction of both domestic and external factors. Deficiencies in domestic economic policies—principally in fiscal and external sectors—fueled heavy spending and consumption throughout most of the 1970s. This rapid expansion of consumption 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 quickly rose; the terms of trade of the Latin American countries deteriorated; and the risks of external 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. 17-31; 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 external sectors were hurt by a rise in exchange rates; a deterioration in terms of trade; a loss of international reserves; and a drastic 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, especially in the external

sectors (IMF 1985, p. 1). But the recovery of economic activity is still inadequate. Increase in economic activity has not necessarily kept pace with population growth, so that GDP per capita has continued to fall in a large number of Latin American countries. Moreover, the initial recovery which began in 1984 has tended to be concentrated in the large and medium-sized economies, contrasting with weaker progress in most of the smaller ones (Iglesias 1985).

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

A few illustrative indicators of the economic slump are summarized in Table 1. Economic projections show that, even under optimistic assumptions, several years would be required to recover welfare levels already attained before the depression began. For example, the United Nations Economic 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.

A crucial determinant of economic recovery is the political element. Economies and governments each depend on the other for their well being. In South America alone six countries in as many years have moved from military to democratic governments (Ecuador in 1979, Peru in 1980; Bolivia in 1982; Argentina in 1983; Uruguay in 1984; and Brazil in 1985). Similar shifts have

TABLE 1. Selected Quantitative Expressions of Economic Deterioration in Latin America through 1984.

National Income

- * Regional GDP was 9% lower in 1984 than in 1980, and was similar to that already achieved in 1976.
- * Only 3 of 20 countries for which data are available showed positive growth in GDP per capita between 1981 and 1984.
- * Between 1981 and 1984 GDP per capita fell by about 25% in Bolivia; 22% in El Salvador; 16% in each of Uruguay, Venezuela, and Guatemala; 14% in Costa Rica; 13% in Peru; 12% in each of Argentina, Haiti, and Honduras; 11% in Chile; and 9% in Brazil.

External Sectors

- * Between 1975 and 1984 Latin America's external debt rose from \$75 billion to \$360 billion.
- * By 1982 loans by the Bank of America to Mexico amounted to about half of the bank's equity and nearly four times its loan loss reserves.
- * The ratio of total interest payments to exports of goods and services increased from 12% in 1977 to more than 35% in 1984.
- * From 1979 to 1983 the flight of capital from Latin America was probably about \$100 billion.
- * Despite a slight recovery in 1984, Latin America's terms of trade fell by 22% between 1980 and 1984. Terms of trade in 1984 remained at one of the lowest levels since 1930.
- * Between 1981 and 1984 the value of Latin America's imports fell by 40%.

Prices and Employment

- * Since 1982 the weighted regional average of consumer price indexes has broken historical records, reaching 130% in 1983 and 165% in 1984. In 1984 inflation was 1,700% in Bolivia; 675% in Argentina; 195% in Brazil; and 106% in Peru.
- * Between 1981 and 1983 open unemployment rose in all Central American countries, in some cases reaching above 20% (unemployment is believed to be even higher in the English-speaking Caribbean, but data are inadequate).

Sources: Iglesias, "The Latin American Economy During 1984: A Preliminary Overview"; IDB, "Economic and Social Progress in Latin America," 1985 Report.

been occurring in Central America and the Caribbean. One hypothesis is that the dismal economic situation has prompted pragmatic and deliberate steps towards democracy. Unclear is whether the new civilian governments will be able to retain control if weak economies do not soon improve. More certain is that some new governments do possess the courage to implement sweeping reforms (e.g., the "shock" wage-price controls initiated by Argentina in June 1985 and by Brazil in February 1986).

RECENT PERFORMANCE OF THE FOREST-BASED INDUSTRIES

The widespread economic turmoil in Latin America has been particularly difficult for manufacturing, construction, and commerce. In many countries the forest-based industries have been impacted severely. Yet in other countries some of the forest-based industries appear to have been expanding.

Changing Levels of Industrial Activity

Table 2 shows the major changes which have been occurring in production throughout the region. The table includes not only the tropical countries, but also the temperate countries due to important intra-regional linkages. The analysis is based on figures and estimates published by FAO for the period 1980-1983. The year 1980 preceded the major difficulties. The year 1983 marked the trough of the depression for most of Latin America. Therefore, Table 2 refers to a four-year period in which there were pronounced downward pressures across most economies.

The countries are ordered alphabetically in two groupings: (i) Mexico, Central America, and the Caribbean; and (ii) South

TABLE 2. The Dynamics of Production in the Forest-Based Industries of Latin America Between 1980 and 1983.

	<u>Sawnwood & Sleepers</u>	<u>Wood Panels</u>	<u>Wood Pulp</u>	<u>Paper & Paperboard</u>
	-----% Change-----			
A. Major Increases (volume basis)				
Costa Rica				+ 50
Jamaica				+ 80
Panama				+115
Mexico		+ 26		
Argentina	+ 32		+ 54	+ 21
Brazil			+ 16	
Ecuador	+ 8	+ 34		+ 31
B. Major Decreases (volume basis)				
Belize	- 20			
Costa Rica	- 28		- 40	
Guatemala		- 33		- 50
Honduras	- 14			
Mexico	- 23			
Nicaragua	- 45			
Argentina		- 18		
Bolivia	- 56			
Chile	- 26			
Colombia	- 26			
Peru		- 32		
Suriname	- 23			
Uruguay	- 84	- 25		
Venezuela	- 40			- 17

Source: FAO, Yearbook of Forest Products, 1972-1983.

America. Countries are not listed in the table if data do not suggest a clear trend towards either increase or decrease for 1980-1983.

Table 2 indicates that the solidwood industries (sawnwood and wood panels) were considerably more vulnerable to the economic downturn than were the pulp and paper industries. This conforms with usual expectations regarding demand in cyclical vs. steady-growth markets. At one extreme, sawnwood production increased in two countries but contracted in eleven. At the other, paper production increased in five countries but contracted in only two. Pulp production expanded in two large countries, but contracted in only one small one.

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

For Latin America as a whole, the four largest producers of forest-based products are Brazil, Chile, Mexico, and Argentina. Brazil's pulp production expanded modestly during the period in question. Chile's sawnwood industry contracted. In Mexico sawnwood production fell while panel production rose. Argentina registered production gains for sawnwood, pulp, and paper; production losses occurred for wood panels.

On the basis of production levels, therefore, these four major producers did not fare too badly through the period of critical macroeconomic distress. For the four countries together, production of industrial roundwood decreased by roughly

nine percent between 1980 and 1983 (with Chile experiencing the sharpest decline). Of course, not too much can be inferred from this computation because of known deficiencies in the underlying data. For example, the roundwood data for Brazil are strictly estimates.

Values of Exports and Imports

Table 3 summarizes changes in the total value of forest products imports and exports by 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% between 1980 and 1983. During the same period, the drop in f.o.b. unit value for pulp exports from Chile was 37%. Export unit values for both coniferous and non-coniferous sawnwood were rising, but neither country recorded increased sawnwood export volumes. Consequently, export earnings by the region's two largest exporters were disappointing.

Several smaller exporters recorded large gains in export value, while others recorded large losses. The export earnings of a third and somewhat larger group of small exporters remained relatively static. Undoubtedly, some of these changes are explained by short-term aberrations and statistical anomalies. Even if real, many changes do not carry much weight for Latin America's totals or averages, although they may have been keenly

TABLE 3. Shifts in the Total Value of Forest Products Imports and Exports in Latin America Between 1980 and 1983.

	<u>Increased</u>	<u>Relatively Static</u>	<u>Decreased</u>
	----- % Change -----		
A. Exports			
Belize		- 19	
Costa Rica		- 8	
El Salvador	+615		
Guatemala			- 37
Honduras		- 1	
Jamaica	+108		
Mexico	+ 68		
Nicaragua		0	
Panama		- 2	
Trinidad and Tobago			- 51
Argentina			- 32
Bolivia			- 71
Brazil		- 4	
Chile			- 32
Colombia	+ 74		
Ecuador	+ 22		
French Guiana		+ 11	
Guyana		0	
Paraguay		- 2	
Peru		+ 4	
Suriname		- 2	
Uruguay			- 35

TABLE 3 (continued)

	<u>Increased</u>	<u>Relatively Static</u>	<u>Decreased</u>
	-----% Change -----		
B. Imports			
Bahamas		- 5	
Barbados		0	
Belize			- 23
Costa Rica	+ 18		
Cuba		- 13	
Dominican Republic		+ 12	
El Salvador		+ 4	
Guadeloupe	+124		
Guatemala			- 33
Haiti		+ 3	
Honduras		+ 9	
Jamaica	+160		
Martinique	+ 24		
Mexico			- 40
Netherlands Antilles		- 3	
Nicaragua		0	
Panama		- 16	
Trinidad and Tobago	+ 33		
Argentina			- 48
Bolivia		+ 5	
Brazil			- 39
Chile		- 4	
Colombia		- 3	
Ecuador	+ 44		
French Guiana			- 44
Guyana		- 7	
Paraguay			- 32
Peru	+ 78		
Suriname	+ 20		
Uruguay			- 59
Venezuela		+ 17	

Source: FAO, Yearbook of Forest Products 1972-1983.

felt at national and local levels.

Latin America's five largest importers of forest products are Mexico, Venezuela, Argentina, Brazil, and Colombia. 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 general pattern previously noted for the small exporters. The import changes are calculated from a small base, with only minor consequences for regional trade balances. Nevertheless, these changes may have been important within individual small economies.

LOOKING AHEAD

Although the main problems of the Latin American economies are not resolved, the macroeconomic outlook in perhaps the majority of countries is brighter now than it was a few years ago. Beginning in 1984, several Latin American countries have been able to negotiate more favorable conditions for debt rescheduling. Following the joint meeting of the International Monetary Fund and the World Bank in October 1985, the World Bank's commitment of new loans to Latin America for 1986 is the largest ever to be approved in such a short period.

Additionally, the intersection of three key extra-regional developments in 1985-1986 can be expected to have major consequences for economic prospects in Latin America: low interest rates, low value of the U.S. dollar against other major currencies, and low world petroleum prices.

A decline of the U.S. dollar in world currency markets began in 1985, just as U.S. and then international interest rates began to decline. Between March and November 1985, the dollar dropped by almost 25 percent on a trade-weighted basis against ten major currencies (Federal Reserve Bank of Chicago 1985). By March 1986 the U.S. dollar had declined against the Japanese yen to a level unknown since the Second World War. The decline of the U.S. dollar has been closely related to U.S. interest rates, which in March 1986 reached their lowest level since August 1978. Thirdly, world prices for crude petroleum dropped by one-half in just the four months from December 1985 to March 1986.

Responses to this macroeconomic upheaval are evolving but still incomplete. These new developments are generally to be welcomed by most forest-based sectors in Latin America, particularly in the region's petroleum-importing countries. Yet there are gainers and losers across a broad spectrum, and the analysis of welfare changes should not be oversimplified. Clearly, the economic outlook for forestry in Latin America will continue to be dominated by macroeconomic events and trends both in the region and outside of it. This will be the first of four themes to be addressed in the remainder of this paper.

The second, third, and fourth themes concern near-term

strategies while Latin America monitors these hopeful signs of macroeconomic improvement. Due to the depth and breadth of the recession, many elements in the forest-based sectors will not be able to avoid several more years of adversity. During these difficult years, public-sector forestry will face increasing pressures to accept "privatization" and market-oriented policies. So long as deep-seated economic problems persist, many governments will be obligated to adopt or retain liberalized policies towards foreign investment. Finally, low petroleum prices will improve the financial outlook for energy-intensive segments of forest-based industries, but will lessen the attractiveness of many recent initiatives to produce wood for energy.

Continued Crucial Role of Macroeconomic Conditions

Because so much human energy is still preoccupied with emergency measures to service external debts and cope with other immediacies, macroeconomic forces will continue to dominate attention for at least several more years. Medium-range and long-range economic programming for particular industries and projects could be expected to hold distinctly secondary importance in national priorities. In moods of crisis the short term takes precedence over the long term; investment activities must show early payoff; the spending of public agencies is severely curtailed; and subsidies and other transfer payments are sharply cut. Each of these tendencies, without exception, is inimical to forest investment and management.

Yet despite huge debt burdens and other serious long-term disequilibria, some of Latin America's economies are capable of remarkable buoyancy in the short term. For example, Brazil's GDP growth in 1985 was eight percent, among the highest growth rates in the world (Germani 1986). Mexico's imports of solidwood products made a dramatic recovery in 1984-1985 from very low levels in 1982-1983 (U.S. Foreign Agricultural Service 1985).

Thus it would seem that at least a few countries are poised to achieve immediate and rapid spurts of growth if only they can avoid unexpected, uncontrollable circumstances. The challenging questions then are: Through what strategies, if any, are these unexpected circumstances avoided? How can spurts of growth be turned into sustained growth? Are growth rebounds for large countries like Brazil also possible for the smaller economies?

As analysts struggle with these questions, they will be closely monitoring the various indicators of economic cycles. In particular, they will be observing the duration and consequences of lower interest rates, lower exchange value of the U.S. dollar, and lower petroleum prices. Table 4 summarizes observed and likely impacts of these three forces, assuming they are not purely temporary.

The path followed by interest rates will have unquestioned importance for the forest-based sectors, particularly those whose products are used in construction (whether domestically or in export markets). At the time of this writing, the prime lending rate for corporate customers of major United States' banks was nine percent, the lowest level since August 1978. The drop to nine percent followed coordinated reductions in discount rates

TABLE 4. Economic Effects of Low Interest Rates, Low Value of the U.S. Dollar, and Low Petroleum Prices.

Low Interest Rates

- * Decreases the carrying cost of Latin American debt denominated in dollars.
- * Stimulates demand in housing markets and construction industries
- * Stimulates demand to buy stocks and bonds rather than interest-bearing certificates, rallying stock markets around the world.

Low U.S. Dollar

- * Makes U.S. imports from Latin America more expensive, and U.S. exports to Latin America and rest of the world cheaper.
- * Helps Latin America contain inflationary impact of importing goods and services priced in dollars.
- * Slows the outflow of dollars from Latin America to the U.S.
- * Helps reduce U.S. trade deficit, thus defusing growing protectionist sentiments in the U.S.
- * Fosters unstable investment climate if currency movements are too steep and too rapid.

Low World Petroleum Prices

- * Creates immediate and severe adjustment problems for Mexico, Venezuela, Ecuador, and other petroleum-producing countries—and the international banks and financial institutions most exposed in these countries.
- * Creates immediate and major welfare increases for Latin America's petroleum-importing countries—and the international banks and financial institutions most exposed in these countries.

and intervention rates by the central banks of each of the United States, Japan, France, F.R. Germany, and the Netherlands. This joint action by the central banks was an unprecedented example of international economic cooperation, implying substantial net savings in debt servicing for debtor countries.

Yet considerable uncertainty exists with respect to the permanence of low interest rates. In some circles the expectation is that renewed economic growth in the industrialized countries will once again fuel inflation and cause interest rates to climb, as well.

Moreover, lower international interest rates may not translate into lower interest rates in the domestic economies of Latin America. Continuing inflation, credit rationing, and other interventions create substantial distortions in domestic capital markets. Thus construction industries in Latin America may or may not be better off with lower international interest rates—the question has to be addressed country by country.

International currency exchange rates have been changing rapidly and dramatically. To the extent that the U.S. dollar remains weaker than it had been prior to 1985, most effects for Latin America's forest-based industries will be favorable (see Table 4). Yet certain export activities may be affected adversely. For example, Brazil's recent penetration of the European market for market pulp and linerboard has been based on undercutting the prices of Nordic and North American competitors (Pearson et al. 1985, p. 59). The fall of the dollar could be expected to restore competitive advantages to North America.

Likewise, the declining dollar raises the prices of parquet blocks, furniture parts, mahogany lumber, etc., for imports into the United States.

A second possible negative impact of the lower dollar is the instability which it causes when changes in exchange rates are highly volatile. In just a few months between late 1985 and early 1986 the U.S. dollar fell 47 percent against the Japanese yen. A fall of 47 percent between two major currencies in such a short time is highly unnerving for foreign trade and investment, especially in view of the hundreds of billions of dollars that make the world's financial systems so liquid. While exchange rates remain volatile, investment and trade decisions risk being flawed with poor intelligence or being postponed until exchange rates stabilize (UNCTAD 1985, pp. 104-107). Neither result is positive for economic recovery in Latin America.

Movements in interest rates and exchange rates are in large part explained by assumptions concerning economic growth in the industrialized countries. A sign of psychological confidence that world growth prospects are good is the recent (i.e., early 1986) major rally in the stock markets of key industrialized countries (e.g., stock markets in London, Tokyo, Paris, Frankfurt, Brussels, Milan, Sydney, Madrid, New York). This psychological confidence rests on the same pillars noted in Table 4: falling interest rates, a weaker dollar, lower petroleum prices, and the favorable effect of the latter in helping to decrease price levels.

Yet there remain many unresolved issues in the world's major industrialized countries that will bear directly on economic

prospects in Latin America. For example, virtually all of Latin America's commercial and industrial sectors—including the forest-based sectors—are bound to be touched directly or indirectly by what the industrialized countries do about their own budget deficits and trade imbalances.

Market-Oriented Policies in Public-Sector Forestry

A main structural cause of fiscal imbalances has been expansion of public budgets beyond the capacity of domestic taxes and revenues to pay for them. Until the post-1980 economic crisis, much of the growth in government expenditures was due to deficit financing and ready availability of external credit. That earlier era of expanding government has given way to present demands for deep policy reforms, pronounced austerity, and fiscal accountability. These themes affect almost all spheres of government.

Proponents of reform argue for reduction of government participation in economic activities, with a corresponding nurturing of policies conducive to the establishment and growth of private enterprise (Krauss 1983; Bauer 1984). Lately those who favor the enterprise orientation are taken seriously in many quarters, perhaps nowhere more so than in the International Monetary Fund, the World Bank, some of the regional development banks, the private international banks, and the United States government. Yet these external institutions face obvious resistance from entrenched government bureaucrats and protected businesses who stand to lose advantages they have long enjoyed under existing arrangements. Thus the transition from big

government to small government--and from state enterprise to private enterprise--cannot take place easily, quickly, or painlessly.

For forestry, the consequences of market-oriented shifts in policy have the potential to be quite profound. Most vulnerable could be public programs which do not generate immediate and positive cash flows. Examples include various efforts in social forestry, watershed management, species preservation, and other activities with largely non-commercial objectives. Foresters and economic analysts will likely struggle more valiantly than ever with the problems of attempting to specify and quantify monetary benefits for non-marketed goods and services.

Within the portfolios of public-sector institutions, it would not be inconsistent to observe an ever larger proportion of forestry funding committed to market-oriented projects and programs. This orientation might be accompanied by plans to transfer certain public-sector assets to the private sector, and to thoroughly reform policies on prices and subsidies.

In forestry a representative package of these proposals might include: (i) attempts to augment current sales of timber and other commodities to generate more near-term revenue; (ii) transfers of government-owned forestland to the private sector (iii) divestiture of government assets such as tree nurseries, accompanied by a shift towards private nurseries and private reforestation contractors; (iv) divestiture of government-owned or government-operated processing plants and logging enterprises; (v) reduction of government participation and regulation in

commodity marketing and exporting; (vi) elimination or reduction of subsidies for forestry investments; (vii) orientation of forestry curricula in the universities and technical schools to include more emphasis of business courses and other training relevant to forest-based industries; and (viii) increases in prices of seedlings, timber, and other public-sector products and services to levels commensurate with costs of production and replacement (Laarman 1985).

Obviously, these "privatization" issues are highly controversial. They will continue to cause much consternation for public-sector decision makers, many of whom logically will resent being asked to reduce their influence and control. Others will resent the ideological bias of the policies. Moreover, the emphasis on markets and enterprises is particularly troublesome for forestry, since the sector is replete with extra-market goods and services.

Through the present, the privatization philosophy does not seem to be widely accepted in Latin American forestry circles, with the possible exception of certain segments in Chile. One factor impeding its spread is that most traditional forestry agencies have taken a technical-biological approach to forest management, not an economic-investment approach (McGaughey and Gregersen 1983, p. 4). Hence some of these new issues may not be fully understood or appreciated. Still, compelling budgetary and political pressures suggest that public-sector forestry in Latin America cannot long remain isolated from these powerful and pervasive ideas now sweeping through development doctrine.

Liberalized Policies to Attract Investment Capital

If the Latin American economies are to recover and embark on industrial revitalization, they must be able to attract greatly enhanced inflows of investment financing. The worst years of the post-1980 economic depression were accompanied by--and to some extent caused by--a dramatic decline in the net inflow of both public and private capital. Beginning in 1984 the inflow of loans and investments began to recover, but not in sufficient amount to offset outflows of interest and profits. Consequently, Latin America continues to find itself transferring a net flow of resources to the exterior (Iglesias 1985, pp. 27-28; Ferrer 1985, pp. 122-123).

This "de-capitalization" of the region has distressing implications for forestry and the forest-based industries, whose capital requirements are enormous. For the five-year period 1986-1990 the Inter-American Development Bank estimates these requirements at \$3.8 billion for forestry and \$32.4 billion for forest-based industries, not including working capital (McGaughey and Gregersen 1983, pp. 62-68, 101-113). For 1987-1991, another study puts the investment requirements for forestry at \$1.6 billion (World Resources Institute 1985, p. 47). These figures are not particularly meaningful except in relation to existing investment stocks and flows. Unfortunately, data on existing stocks and flows are highly inadequate (McGaughey and Gregersen 1983, p. 66).

The bulk of new investments (as compared with replacements of existing capacity and reinvestments) are expected mainly in the pulp and paper industries (McGaughey and Gregersen 1983, p.

67). Planned expansions in pulp and paper capacity are many and ambitious, especially in Brazil, Chile, Mexico, and Argentina. One recent analysis foresees a doubling of pulp capacity at each of Aracruz Celulose and Cenibra in Brazil, and planned capacity growth by virtually all pulp producers in Chile. Yet start-up times of several new pulp and paper projects throughout the region are being postponed due to lack of funding and government problems (Pearson et al. 1985, p. 59). Thus the prospects that these projects will come to fruition cannot be assessed with any degree of confidence.

More certain is that government efforts to attract the investment capital they need so badly will see the continuation of newly liberalized policies. For example, the strict regulations put on foreign investment in 1969 by the five countries of the Andean Pact recently have been relaxed in an intensive and highly competitive search to attract foreign investment. For ideological and political reasons, some of these countries have been more cautious than others in welcoming foreign investment, but all have moved in that direction. But despite their new openness to foreign investment, the inflow of new capital is not much more than a trickle. Potential foreign investors from the United States and elsewhere perceive that economic and social problems in the Andean countries are still too serious to make investment attractive, particularly in comparison with alternative investment opportunities in places like China, India, Canada, Brazil, and Argentina (Bridges 1986). Thus the example of the Andean Pact illustrates that the struggle

for investment capital will remain long and difficult in a number of Latin American countries.

To date, the Caribbean Basin Initiative (CBI) of the United States government likewise has had no more than a mild stimulus on new investment. Begun in 1983, the CBI was intended to promote U.S. trade and investment in the Caribbean countries through new U.S. import and tax provisions. Yet between 1983 and 1985, U.S. imports from the Caribbean countries decreased by 23 percent (U.S. International Trade Administration 1986, p. 1). Recent surveys suggest that the CBI seems to be having little or no impact on forestry and forest-based industries (Laarman and Muench 1985).

The future of the CBI for forestry must take account of both Canada and Asia. Canada has a strong presence in the Caribbean countries, and recently has started its own equivalent of the CBI (called CARIBCAN). At the same time, companies from Japan, Hong Kong, South Korea, Taiwan, and Singapore are evaluating a number of investment opportunities in the Caribbean to take advantage of the CBI's duty-free access to the North American market. Asian activities in the subregion are far more diversified than just textiles and electronics (Weiss 1986). Hence the highly speculative question for Caribbean forestry is whether at least some Asian investment will find its way to forest-based activities.

Mixed Consequences of Lower Petroleum Prices

In the forest-based industries as elsewhere, each movement in the world price of petroleum causes large economic disruptions

and substantial shifts in cost structure. Yet while world petroleum prices remain unstable, there is very little that can be predicted about long-run impacts. The macroeconomic difficulties encountered within Latin America's petroleum-producing countries outweigh any possible advantages of lower energy prices for forest-based industries in those countries.

On the other hand, forest-based industries in the petroleum-importing countries stand to reap substantial cost savings, but only to the extent that lower petroleum prices are more than just a temporary phenomenon. The risk presented by low energy prices in 1985-1986 is to recreate the conditions for another energy shock should petroleum supplies once again become restricted.

Within the forest-based industries, the largest potential beneficiaries from lower petroleum prices are wood transport operations and energy-intensive processing. In the developing countries paper production is generally 2-3 times as energy-intensive as it is in the industrialized countries (Ewing 1985). A drop in petroleum prices therefore could be expected to have a dramatic cost-savings effect in the former.

Yet Brazil, the region's largest pulp and paper producer, already has a fairly modern industry in which purchased energy input has been reduced substantially since 1977. These reductions have been brought about by new energy-efficient technologies and increased extraction of logging wastes used as wood fuel in the mills. As a result, purchased energy input in Brazilian pulp and paper industries is now comparable to levels prevailing in North America and Europe (Ewing 1985, pp. 19-20). Somewhat ironically, then, it is the region's older and less

energy-efficient pulp and paper mills which now stand to realize the greatest relative benefits if petroleum prices stabilize at comparatively low levels.

Another consequence of recent events in the petroleum market is possible difficulty in sustaining the wood-for-energy theme. This theme has figured prominently in recent forestry development strategies, such as those to expand investment in domestic fuelwood and industrial charcoal (McGaughey and Gregersen 1983, pp. 121-125, 136-137).

Because the main energy substitute for industrial charcoal (e.g., in Brazil's iron and steel industry) is coke and not petroleum, downward movements in petroleum prices may have few adverse consequences for Latin America's principal industrial fuelwood operations. On the contrary, falling petroleum prices could tend to improve charcoal economics, given the very long distances charcoal is transported from its sources to the iron and steel plants (Nogueira 1980).

More threatened by lowered petroleum prices are existing and potential projects to produce wood-derived alcohol, establish fuelwood plantations for rural communities, and improve fuelwood-using technologies (e.g., household wood-burning stoves). Many of these efforts, some of which only recently found favor in rural development projects, could be slowed or even cancelled if relatively low petroleum prices persist.

Other wood-energy projects clearly will go forward if only because of past momentum. Still others will proceed on the premise that fossil fuels will continue to be prohibitive (even

at bargain prices) in very poor households because of the inability of these households to invest in stoves and other fixed capital. A third reason for pushing ahead with wood-energy initiatives might be the assumption that higher petroleum prices will soon return. Hence the future scenario for wood-energy activities is a complicated one, particularly in light of constraints posed by diminishing public-sector budgets.

SUMMARY

The economic outlook for forestry requires synthesis of events and trends at three levels. The first level refers to international and national macroeconomic forces; the second to national priorities and policies; and the third to local markets, technologies, and institutions.

The various themes advanced in this paper have concentrated on the first level. Given the seriousness of past and ongoing macroeconomic distress in so many countries, it has been assumed that the economic performance of forestry in tropical America will continue to be governed by forces above and outside of the sector and region. Forestry planners and analysts in each country and subregion must then incorporate their own scenarios regarding forecasts for sectoral organization, infrastructure, production systems, and priorities.

Viewed from the macroeconomic conditions above, the economic perspective for forestry in tropical America can be summarized as follows:

First and most obviously, economic and social growth in most countries of the region has been severely retarded by the

widespread post-1980 economic recession. Forest-based sectors—like other sectors--have had to contend with a chaotic economic environment of high inflation, falling export prices, reduced capital inflow, and shrinking government expenditures.

Second, although partial economic recovery began in some countries in 1984, improvements have not been evenly distributed across the region. Moreover, the recovery process is fragile and highly vulnerable to reversals. This is dramatically illustrated by the new and difficult adjustment problems in the region's principal petroleum-exporting countries.

Third, during the worst years of the economic recession the forest-based industries exhibited widely varying performance across countries and among industries. Contractions in output were most pronounced in the solidwood industries and least apparent in pulp and paper. However, experiences across countries were not at all uniform.

Fourth, the economic recession profoundly affected Latin America's trade in forest products. Large importers like Argentina, Mexico, and Brazil reduced their forest products imports by almost one-half. Brazil and Chile, large forest products exporters, found their export earnings eroded by falling unit values for key export products like pulp.

Fifth, the macroeconomic outlook in the majority of Latin American countries is now better than it had been in the years immediately preceding 1985-1986. International financial institutions are engaged in earnest efforts to resolve the region's debt problems, and central banks of major industrialized countries have been cooperating to decrease the value of the U.S.

dollar. The 1985-1986 decline in value of the dollar is coincident with declining international interest rates, and both coincide with a precipitous fall in petroleum prices.

Sixth, not all components of the forest-based sectors stand to gain from the general stimulus noted in the point immediately preceding. A low value of the U.S. dollar implies that Latin American exporters of forest products lose competitiveness against U.S. producers and exporters of competing products. Producers of forest products in Mexico, Venezuela, and other petroleum-exporting countries find themselves caught in the general economic disarray caused by depressed petroleum prices. Investment and trade decisions everywhere in the region will be flawed or postponed if international movements in exchange rates and interest rates are too volatile.

Seventh, forest-sector analysts need to define and focus on special critical issues during the current transition from recession to plausible recovery. To what extent will government agencies with programs in the forest-based sectors increasingly turn to market-oriented policies and "privatization" strategies? How and where can liberalized policies to attract investment capital be made effective? What consequences do low petroleum prices have for wood-for-energy projects and for the cost structure of forest-based industries?

In conclusion, the economic outlook for forestry in tropical America is both troublesome and optimistic at the same time. The troublesome aspects refer to the enormous adjustments still ahead of many elements in the forest-based sectors before economic

stabilization returns. The optimism stems from hopeful signs that much of Latin America will be propelled forward by the economic strengthening in the world economy. This current critical juncture between past problems and future prospects therefore presents many challenging questions for debate and policy.

REFERENCES

- Bauer, P.T. 1984. Reality and Rhetoric: Studies in the Economics of Development. Harvard University Press, Cambridge, Massachusetts.
- Bridges, Tyler. 1986. "Five Latin American Trade Allies Now Say, 'Yanqui Come Back,'" The Christian Science Monitor, February 21:19-20.
- Ewing, Andrew J. 1985. Energy Efficiency in the Pulp and Paper Industry with Emphasis on Developing Countries, World Bank Technical Paper No. 34. Washington, D.C.
- FAO (Food and Agriculture Organization of the United Nations). 1983. Yearbook of Forest Products, 1972-1983. Rome.
- Federal Reserve Bank of Chicago. 1985. "Bringing Down the Value of the U.S. Dollar," International Letter No. 552:1-4.
- Ferrer, Aldo. 1985. "From the Debt Crisis to Financial Viability," Journal of Development Planning 16:121-131.
- Germani, Clara. 1986. "Brazil's Economic 'Shock Plan': Risk for Sarney," The Christian Science Monitor, March 7:12.
- Gonzalez, Heliodoro. 1985. "The Latin American Debt Crisis: The Bailout of the Banks," Inter-American Economic Affairs 39(3):55-70.
- Iglesias, Enrique V. 1984. "Latin America: Crisis and Development Options," CEPAL Review 23:7-28.
- Iglesias, Enrique V. 1985. "The Latin American Economy During 1984: A Preliminary Overview," CEPAL Review 25:7-44.
- IDB (Inter-American Development Bank). 1985. Economic and Social Progress in Latin America. Washington, D.C.
- IMF (International Monetary Fund). 1985. World Economic Outlook, April 1985. Washington, D.C.
- Krauss, Melvyn B. 1983. Development Without Aid: Growth, Poverty, and Government. McGraw-Hill Book Company, New York.
- Laarman, Jan G. 1985. "A Perspective on Private Enterprise and Development Aid for Forestry," manuscript submitted to Commonwealth Forestry Review.
- Laarman, Jan G., and John Muench, Jr. 1985. "The Caribbean Basin Initiative: What Does It Mean for Forestry?" Symposium on Sustainable Development of Natural Resources in the Third World, The Ohio State University, Columbus, September 4-6.

- McGaughey, Stephen E., and Hans M. Gregersen. 1983. Forest-Based Development in Latin America. Inter-American Development Bank, Washington, D.C.
- Nogueira, Uziel Batista. 1980. "Charcoal Production from Eucalyptus in Southern Bahia for Iron and Steel Manufacture in Minas Gerais, Brazil," unpublished Ph.D dissertation, Michigan State University, East Lansing.
- Pearson, John, Peter Sutton, and Hugh O'Brian. 1985. "World Review, Latin America," Pulp and Paper 59(8):59.
- Prebisch, Raúl. 1985. "International Monetary Indiscipline and the Debt Problem," Journal of Development Planning 16:173-176.
- Restrepo, José Luis. 1985. "Latin America: An Assessment of the Past and A Search for the Future," Inter-American Economic Affairs 39(3):3-26.
- UNCTAD (United Nations Conference on Trade and Development). 1985. Trade and Development Report, 1984. United Nations, New York.
- U.S. Foreign Agricultural Service. 1985. "Mexico," Wood Products Foreign Agriculture Circular WP 4-85:16. U.S. Department of Agriculture, Washington, D.C.
- U.S. International Trade Administration. 1986. "CBI Oversight Hearing in U.S. Congress," CBI Business Bulletin 3(3):1. U.S. Department of Commerce, Washington, D.C.
- Weiss, Julian M. 1986. "Asian Investors Scout the Caribbean for Manufacturing Sites," The Christian Science Monitor, March 5:19-20.
- World Resources Institute. 1985. Tropical Forests: A Call for Action (Part I). Report of an international task force convened by the World Resources Institute, The World Bank, and the United Nations Development Program. Washington, D.C.