THE PRESENT AND FUTURE ROLE OF

U.S. MINING INVESTMENTS IN LATIN AMERICA

By

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The mining investments owned and operated by U.S. mining companies in Latin America have been a major contributor to the world supply of mineral commodities. This thesis examines the role of the mining investments with respect to their effect on the economic development of Latin America. Recent actions which have modified this role are described. The conclusion arrived at is that these investments have been and can continue to be a major contributor to the economic development of this region. However, the future role of the investments will fall far short of its potential if the Latin American countries and the U.S. mining companies cannot reconcile their present differences. Recommended actions for improving the relationship are described.
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INTRODUCTION

To many observers, Latin America has long been an area of unrest and of potential violence. Unfortunately, the events of the past decade have done nothing to mitigate the pessimistic views of this group. In reality, the element of violence in Latin America is greatly overstated. The essence of the problem is that this is a developing area that is finding it difficult to establish its position in the international community.

For most of the nations of Latin America, the road to economic development will be a long one. As of 1969 Venezuela had the highest per capita product, $940, while Ecuador had the lowest, $145. Five of the countries had per capita products of $400 to $700, nine of $200 to $400, and two of less than $200 (U.S. Department of Commerce, 1970, p. 1-24). While the true significance of these figures is difficult to assess, their comparison with a per capita product of $4,650 for the United States in the same year would indicate that there is much room for improvement.
In general terms, a nation's capacity for economic development will depend on the following:

1) The potential of undeveloped and underdeveloped natural resources;

2) The flow of domestic saving available for investment in increasing the stock of physical capital;

3) The ability to generate foreign exchange to pay for capital equipment from abroad;

4) The flow of funds from abroad, both private and public;

5) The supply of people, at the managerial and other levels, who are capable of generating and applying new and more effective methods of production; and

6) The nature of the social and political institutions.

The primary objective in the following chapters will be to determine the economic role of United States mining companies' investments in Latin America. Implicit in this objective is a determination of the effects of mineral resource development and of foreign investment on the economic development process. For this reason, the first two chapters will be devoted to a brief discussion of these two aspects of the subject.

The investments of the U.S. mining companies accounted for approximately 10 percent of the $11.9 billion in U.S. investments in Latin America in 1967. Of the mining total,
$509 million is invested in Chile; $263 million in Peru; $103 million in Mexico; $51 million in Brazil; $19 million in Panama; $8 million in the remaining South American countries; and $35 million in the Central American countries (Higgins, 1968, p. 874). The investments in Chile and Peru are almost exclusively devoted to copper mining and the investment in Brazil to iron mining. The investments in the other countries are reasonably diversified, with those in the mining and processing of lead, zinc, silver, and sulfur predominant. Central America, if Mexico is excluded, cannot yet be considered a mining region, although Nicaragua is the third largest producer of gold in Latin America and Honduras the fourth largest producer of silver (Anderson, 1966, p. 190D).

As one author (Morse, 1964, p. 408) has pointed out, private enterprise is basically neither socially irresponsible nor responsible, but a-responsible, for its basic objectives are economic rather than social. It therefore becomes the obligation of society, through its political institutions, to define and improve the standards of social responsibility that private enterprise must meet. Once a government has established what secondary economic and social benefits it would like to obtain from the mineral resource development process, it must communicate these goals to private enterprise.
What appears to be the case in many Latin American countries is that political considerations have blocked essential intercourse between government and private enterprise. The government, in attempting to use nationalism as a nonrational, unifying force to ease the social transition taking place in many of these countries, has often chosen to use the vilification of foreign enterprise as a diversion from basic social and economic deficiencies.

Chapter three will be devoted to an examination of the relationships between the foreign mining companies and the governments of the Latin American countries. The relationships will be examined with reference to existing political, legal, and fiscal institutions. In this way it will be possible to gain an appreciation of the degree to which existing institutions are fulfilling the potential economic role of the mining companies.

The final chapter will review several current trends which are adversely affecting the relationship between the countries and the mining companies.
ECONOMIC SIGNIFICANCE OF MINERAL RESOURCES

All of the Latin American nations, to a greater or lesser degree, are endowed with mineral resources. Since many of the nations of the world are devoid of these resources, this makes Latin America somewhat unique. For this reason, the influence of mineral resources on the economic development process is of particular interest.

Fund of National Wealth

An attitude prevalent in many nations, and one that has gained currency in the United States from time to time, is that mineral resources represent irreplaceable natural wealth that must to a large extent be reserved for the use of future generations. Associated with this attitude is the thought that, by delaying development, resources will gain in value.
It is understandable that the above attitudes would gain added credence if a nation's mines were operated almost exclusively by foreign companies. Even so, several factors indicate that it may not be in a nation's best interest to set aside substantial portions of its resources for future use.

The steady technological progress being made in the development of substitutes for minerals makes future demand patterns for many minerals uncertain—for example, the degree to which plastics have replaced many materials derived from minerals. A classical example is the effect that the development of the process for the fixation of nitrogen from air had on the nitrate mining industry in Chile. Within a short period of time, the vast nitrate deposits in Chile became largely unmarketable, except for a few specialty uses that remained and for domestic use.

The concept that mineral resources in the ground are gaining in value over time is also subject to doubt. An examination (Kruger, 1968, p. 83) of long-term price trends for metallic minerals shows that these commodities have increased in price proportionally less than other raw materials and finished goods. This trend has occurred at a time when there has been a tremendous increase in demand for minerals.

Insufficient justification for reserving mineral deposits for future generations does not mean that present-
day recovery of minerals should be undertaken without adequate planning and control. It will definitely be to a nation's advantage to ensure that the mining of any given deposit is accomplished with the most efficient and thorough method available. In addition to such a mining program, there should be provisions for encouraging further exploration so that a country can make decisions based on information that is as complete as possible.

Generator of Economic Growth

Latin American countries must import nearly all of the capital equipment they need for development and a large share of the more sophisticated consumer goods that they require. If they are to have the necessary foreign exchange to pay for these goods, they must either generate sufficient export earnings or incur foreign debt.

One of the more direct advantages of a thriving minerals industry in an underdeveloped nation is the production of substantial amounts of export commodities that are readily saleable on international markets. The export earnings derived from the sale of these commodities could then be used to purchase the capital goods which are essential to economic growth. According to Grunwald (1964, p. 320), it is for this reason that pressure has built up in the countries of Latin America to expand production
from traditional natural resources and to locate and develop new ones.

The advantages of high export earnings over the short run are apparent, but what are not so clear are the implications of an export-oriented economy over a long period of time. One tendency is to spend the export earnings when they are earned. A result is that expenditures for imports are made according to the demand for exports on international markets and not according to the demand and need for imports within a nation's economy.

Another important factor resulting from a country's dependence on the production and export of natural-resource products for the generation of foreign exchange is the creation of a special infrastructure. Transportation networks will be developed with a view towards the shortest and most economical routes from the mines to the available deep-water ports. Also energy development and even such purely social institutions as schools and hospitals will be established in accordance with the needs of the export industry and not necessarily to serve the best interests of the developing economy.

Several economists have made extensive studies of the multiplier effect of the extractive industries in developing countries. Among the better known, and one who appears to be quite skeptical about foreign private investment, is H. W. Singer (1950, p. 471-485), whose hypothesis
is that foreign investment in raw materials has often made little contribution to economic growth and development of the host country. Where this investment has resulted in specialization in the export of raw materials, it is his belief that the host country has been deprived of most of the cumulative effects of this investment in that the exporting nation serves only as a raw-materials adjunct of the developed nations.

According to Kindleberger (1964, p. 344), Burenstrom Linder has a somewhat more positive outlook on the subject. He believes that population and capital located in the export sector may expand through natural increase and retained earnings, but due to a lack of markets, training, entrepreneurship, and technology, they will remain in that sector.

One additional condition, which results from the reliance on the production of mineral commodities for export as the primary economic activity in a country and one which also tends to induce distortions in the growth pattern of the developing country, is the locational aspect of mineral resource development. There is obviously no correlation between the location of potential ore deposits and existing population concentrations in a country. In fact, if recent history is any indication, new mines will be relatively remote from existing population centers and will therefore require the construction of new transportation
routes and the transfer of the necessary workers and their families to the newly-opened area.

The contribution of mineral resources to the economic growth process can be summarized in the following manner. The primary value of mineral commodities in a developing country is in their use as export commodities. Their sale on international markets results in the generation of much-needed foreign exchange which can then be used for the purchase of the capital equipment and consumer goods that are not yet or cannot yet be produced within the developing country. Advantages thus derived are offset by the development of an unbalanced infrastructure and misallocations within the economy which result from the intrinsic isolation of a minerals industry.

Instability in Primary-Commodity Markets

Since export earnings can assume a major role in the development process, it follows that substantial fluctuations in the magnitude of these earnings will have a severe impact on the developing countries that produce commodities for export in significant quantities. The magnitude of this problem is indicated by the following figures, which show the average-annual-percentage fluctuations in the
revenues derived from exports by certain Latin American
countries during the 1954 to 1958 period: 26% in Columbia,
25% in Chile, 13% in El Salvador, 18% in Mexico, and 26%
in Venezuela (Grunwald, 1964, p. 312).

The revenues of mining companies will fluctuate much
more widely than operating expenditures as a result of
changes in demands and prices for mineral commodities. The
effect of the fluctuations will therefore be concentrated
in the taxable incomes of the companies. Considering the
high rates of taxation prevalent in Latin America, it
follows that the major share of the impact of changes in
demands and prices for primary mineral commodities will
therefore be transferred to the governments. This situa-
tion is further aggravated by the previously referred to
tendency of governments to spend revenues from exports as
they are accrued. In this instance government expenditures
would increase during the upswing of the export cycle and
then deficits would be incurred when exports decline. Thus,
instability would be directly transferred from the export
sector to the domestic sector through destabilizing govern-
ment fiscal policy.

The basic causes of fluctuations in demands and prices
for primary mineral commodities differ from the short run to
the long run. Short-run price instability has been attri-
buted to the inelasticity of demand and supply with respect
to price, this partly being a result of a short-run speculative demand for minerals (Kindleberger, 1964, p. 343). These short-run instabilities in turn cause fluctuations over the long run. Productive capacity will expand rapidly during periods of increasing demand and price of mineral commodities. Due to the nature of mining technology, expansion in supply does not come gradually but in large increments. As a result large sources of supply in several different countries will be placed into production at approximately the same time, thus creating an oversupply. The resultant lowering of price will remain in effect until the gradual increase in demand exerts an upward force on the price level.

Another aspect of the demand pattern for mineral commodities is a long-run increase in demand which is proportionally less than the increase in demand for manufactured goods. This difference can be attributed to the tendency for manufactured goods to incorporate more and more labor and machine time per unit of raw-material input.

It is difficult to predict what the future terms of trade for mineral commodities will be. With the continued growth of industry in the developed countries and the diminishing world supplies of many minerals, the terms of trade should turn in favor of the developing nations that are the major exporters of minerals. On the other hand, if consideration is given to the continuing technical
progress in making further economies in the use of raw materials in industrial production and to the increasing innovation and use of synthetics in place of traditional materials, then the conclusion will be that the terms of trade for the developing nations will deteriorate.

Mikesell (1963, p. 78) has proposed three different approaches to the reduction of instability in primary commodity markets. The first is based on a limitation of supply to international markets by the imposition of export quotas within the exporting country that would maintain prices at or near desired levels. There are two potential disadvantages to this approach: (1) if domestic output is maintained at a level in excess of the quota and if above-quota surpluses are purchased by the local government, this unproductive investment in a stock of commodities represents an economically debilitating burden which may have to be dumped in later years at a price well below the original purchase price, and (2) such a system would quite possibly serve to promote investment in the affected primary-commodity industries and as a result encourage the misallocation of investment capital within the economy.

Another of Mikesell's proposed solutions to the problem of instability would use multilateral long-term contracts. An example of such a contract is the one recently negotiated for the supply of Australian iron ore to Japan. The only comment that can be made in regard to
this idea is that, considering the degree of international cooperation that currently exists in the area of trade, the negotiations that would necessarily precede the signing of such agreements would in some instances probably never be successfully prosecuted.

Mikesell's third recommended approach has considerably more merit and in fact has already been successfully implemented for tin. The International Tin Council typifies this approach in that an international buffer stock of the commodity is used to maintain prices within a given range by means of purchases and sales from the buffer stock. In this particular instance a manager representing the Council is allowed to operate the system on the basis of his own informed judgment. On the whole this system has been successful in that it has brought price stability to a commodity that previously went through tremendous price fluctuations, although the desirability of this approach has possibly been marred by the frequently imposed requirement for restraint of production by member nations. It is possible that the Inter-Governmental Council of Copper Producing Countries (CIPEC) will eventually move in this direction, but at the present time its efforts are devoted only to exerting an upward pressure on the price of copper.
Basis for Further Industrialization

The contribution of mineral resources to the generation of export earnings through the sale of mineral export commodities has already been discussed. It was also mentioned that an important use for the export earnings thereby obtained was to provide a source of foreign exchange for the procurement and importation of the capital equipment needed for a country's economic development.

Mineral resource development can aid the industrialization process in other ways. A most obvious first step in this direction is the imposition of the requirement on mineral producers that the refining process for a metal be completed to the greatest degree feasible before the commodity is allowed to leave the country. At the present time copper producers will almost without exception choose to at least process the ore to the concentrate stage because of a minimum 25-to-1 reduction in volume and the resultant substantial savings on transportation costs. However, in the conversion of copper concentrates to blister copper, there is only a 4-to-1 reduction in volume and therefore significantly less monetary incentive to risk the construction of an expensive and complex metallurgical plant in a foreign country. It is interesting in this regard that Southern Peru Copper Corporation recently caved in to
pressure from the Peruvian government and has agreed to construct a $70-million electrolytic copper refinery to process the blister copper produced by the smelter serving the Toquepala mine (Engineering and Mining Journal, 1970, p. 102).

Another way in which mineral resource development can serve to nucleate the industrialization process is in the production of relatively simple mineral products. This may at first amount to the production of cement, plaster, fertilizer, paints, clay products, and simple castings, but it will serve to reduce imports and provide new industrial jobs.

Mexico and Chile have begun to experience yet another effect of mineral resource development on industrialization. The minerals industries of these two countries, as in other countries of Latin America, have long preferred to import nearly all of their operating supplies and capital equipment. Government encouragement, to state it euphemistically, has resulted in the minerals industries of these countries placing greater reliance on local suppliers. It is most probable that this use of local suppliers will serve to support the organization of light manufacturing industries. Such support will be one more step in the economic development of these nations and may ultimately culminate in the existence of a well-balanced capital-goods industry.
The development of a nation's resources can have a very great positive influence on the economic development of that nation. However, it is still possible for a nation to reach a stage of advanced economic development without having benefited from internal sources of supply of mineral commodities. The relationship between the economic development process and capital accumulation is of a different nature. Based upon current economic precepts, capital accumulation is an essential element of economic development.

Capital accumulation is not a narrowly defined concept. In general it is the process whereby a nation's economy generates the investment capital that is required for the financing of the producing sectors of the economy. These in turn make possible the increases in the flow of consumable goods and services. In practice capital accumulation results both from savings generated within an economy and nonreplacement investment funds provided by external sources. The ratio between these two sources is not fixed and will vary from nation to nation. The objective in the
following pages will be to describe the relationship between
economic development and capital accumulation and to show
how foreign private investment can contribute to the eco­

cnomic development of the underdeveloped countries.

Cursory Examination of the Development Process

The subject of economic development has been of inter­
est to economists since the nineteenth century. There have
been many books written on the subject, some of them con­
sidered to be almost classics. The brief comments made
here on the development process are not meant to be compre­
hensive but instead to serve as an introduction for the
reader.

What is economic development?

Latin America provides a particularly good example of
tasks facing the developing nations. As an initial step
roads which extend beyond the present export-oriented trans­
portation networks must be built in order to connect the
major population centers and to open up the interior areas.
At the same time it will be necessary to increase the avail­
ability of social services in the urban areas as the shift
in population to these areas continues. These services will
include the building of new streets, homes, schools, and
hospitals and the expanding of existing utilities.
Myrdal (1956, p. 170) believes that for some of the underdeveloped nations a successful process of economic development and social adjustment, similar to the one the advanced countries have gone through, will be possible. However, he states that for the majority of the underdeveloped nations economic progress and national integration will not be easily obtained. Economic stagnation will not be overcome before the deeply entrenched social impediments to change are removed. The forces for change pressing from outside and within will possibly have only the negative effect of destroying existing social norms and forms without viable new ones taking their places.

The manner in which fiscal and monetary policies are used is a decisive factor influencing the rate of development. An adequate amount of noninflationary funds for public and private investment, together with appropriate amounts of foreign exchange, are essential to rapid economic development. It is of paramount importance that these funds be directed to their most productive uses. If available investment funds are spent on such items as unneeded high-rise apartment buildings, then these funds would have little opportunity to contribute to the development of the country. On the other hand, it is also imperative that the government do all that it can in an effort to maintain a relatively stable price level. Uncontrolled inflation will rapidly erode savings and create severe distortions in the investment process.
It is extremely difficult to measure economic development accurately. National output is not homogeneous but is made up of many different goods and services, all having widely varying capital-output ratios. Countries with lower per capita incomes can have higher overall capital-output ratios than those countries with higher per capita incomes. For example—if a country's total product grows only 0.5 percent per annum, a sustained net capital formation of 3 percent of current product would yield a high capital-output ratio of 6-to-1. Thus, if the magnitude of capital supply per unit of final output is used as a measure of capital intensity, then the result is an unusual situation of an underdeveloped nation being more capital intensive than an economically advanced nation (Kuznets, 1968, p. 33).

An important aspect of economic development is the creation of employment opportunities for the surplus labor that is characteristic of many underdeveloped nations. Such a policy runs counter to the generally assumed need to increase the capital intensity of production in these nations, but it can be argued that as long as substantial portions of the labor force remain idle, social unrest will continue. Associated with the problem of an under-employed labor force is that of high rates of population increase. An obvious disadvantage of a rapidly increasing population is that the
rate of population increase will often exceed the rate of increase in real national income, and the per capita income will decrease.

Rapid population growth affects the development process in several other ways. National savings will be reduced when poor families are burdened with large numbers of children, as all of the income of these families will of necessity be devoted to current consumption. Secondly, the reduced saving which takes place in the economy must be disproportionately invested in social capital such as housing, schools, and hospitals, and little is left over for increasing productive capacity. Rapid population growth also means that there will be a higher proportion of children in the society and therefore a greater portion of the society that must be economically dependent on others.

The factor having the most significant influence on the rate of economic development will be the economic policy of a nation. All of the previously discussed factors such as an abundance of mineral resources, the existence of an adequate infrastructure, population growth, and social stability have an important bearing on the rate of economic development. However, none of these is as significant as the economic policy of the government. This policy will make provisions for the use of export earnings, the design of tax codes to encourage saving and discourage superfluous consumption, fiscal and monetary policies which will reduce
the rate of inflation to a minimum, and the allocation of investment funds to projects which can make a meaningful contribution to the economic growth of the nation.

**Formal growth theories**

There is no single formal theory of economic growth on which economists find themselves in mutual agreement. This lack of agreement is partially a result of the disadvantages of a formal theory and partially a result of the inability to define and quantify many of the factors important to economic development. The vagueness of many of the aspects of this subject has quite possibly prevented the establishment of certain complex relationships which are essential to any acceptable formal theory of economic growth.

The major contributors to economic growth theory, Keynes, Harrod, Dusenberry, and Domar, have all been concerned with the conditions under which an economy might generate sufficient demand so as to permit continued growth. The role of capital accumulation in economic development is considered in the work of all four of these economists. Each arrived at different conclusions as to the significance of capital accumulation, but Keynes went further than the rest when he found capital accumulation to be a potential inhibitor of economic growth (Ackley, 1961, p. 534).
His basis for this finding was that an economy disposed to save a large portion of its income might, through capital accumulation, run out of investment opportunities within a generation.

Part of the weakness of existing economic growth theory is seen in a summary of the assumptions upon which Harrod and Domar based their growth models. Their economy is one of permanent full employment and is devoid of a government sector and of international relations. The volume of investment in any given period is net investment in that it represents a net addition to the capital stock of the economy. No differentiation is made among the types of capital acquired, and no allowance is made for the effect of technological progress on the capital structure. Finally, the growth in the labor force is assumed to be at the rate necessary to serve the net increase in the capital stock.

Without going into detail, the results of the Harrod-Domar model can be described as follows. The model assumes that an economy is functioning on its production-possibility curve. The generation of new capital will shift the curve. The magnitude of this shift will be determined by the saving schedule and the capital-output ratio. The greater the rate of saving, the greater the rate of investment in a given period and therefore the greater the rate of growth of net national product.
Growth theory has in many respects been oriented towards the description of the behavior of advanced economies. Even so, there is little in these theories which will assist in a determination of the relationship between economic development and capital accumulation in either a developed or an underdeveloped economy. This deficiency is primarily a result of the above-mentioned unrealistic assumptions upon which these theories are based. This weakness is compounded by the general inability to quantify many of the more important factors which must enter into a realistic and successful determination of the interrelationships in a developing economy. Economists will be better able to determine the true nature of the growth process in these countries when agencies capable of supplying the data come into existence.

**Industrialization**

Within the normal sequence of economic development, the industrial sector of a country will first develop in the production of consumer goods and will therefore be confined to such things as food processing, textiles, and light manufacturing. This is most likely a result of the relatively straightforward and simple technology associated with this type of manufacturing. Whatever the cause, the outcome is rather fortunate from the viewpoint of the developing countries for several reasons. To begin with,
this type of industry tends to be more labor intensive than the capital-goods industries and requires less initial capital. Secondly, because the markets for consumer goods are relatively well established in developing countries, much of the market-development stage of the industrialization process can be bypassed. Perhaps the most important attribute of this type of industry is that it has a high growth potential because of the possibility for import substitution. The advantage in this instance is that the growth rate of the industry will not be held back by the rate of growth in demand but instead can exceed it as long as there is a remaining possibility for import substitution.

Capital-goods industries will not begin to develop in an underdeveloped nation until a demand is generated for their products by the establishment of the consumer-goods industries. Until this time arrives it will be necessary to satisfy a nation's capital-goods requirements with imports. The extractive industries, as was mentioned earlier, can assist in the industrialization process by contributing to the demand for capital goods.

An impediment to industrialization in Latin America in the past has been the excessive trade barriers which have isolated these countries from world markets (Prebisch, 1967, p. 43). A certain amount of protection is essential for the development of nascent industries, but when it is overdone, these industries are removed from the influence of healthy
foreign competition. Another aspect of excessive protectionism is that the relatively small size of the national markets will often lead to internal restrictive policies which will weaken the incentive for industries to incorporate into their processes available technological improvements with the corresponding increases in productivity.

A problem that was touched upon earlier is the apparent contradiction between the effort to increase the capital intensity of industry in the developing countries and the high proportion of unemployment in these countries. De Vries (1964, p. 425) credits the attempt to substitute capital for labor to the political ambitions of the governments of the developing countries. A possible solution would be the adoption of a general policy to stress the use of labor-intensive techniques wherever possible. The extent to which such a policy would succeed when tempered by the technological requirements of industry remains open to question.

The mismatch between industrial production techniques and the plentifullness of labor in the developing countries can partially be attributed to the design characteristics of the capital equipment imported from the developed countries. One of the prime considerations in the design of much of this equipment has been the conservation of the relatively scarce and expensive labor. This equipment is also too sophisticated in that it is designed to take advantage of the high standards of education and technical
ability among the engineers, foremen, and workers in the developed countries. The solution to this aspect of the total problem will not be simple. An apparent approach to a solution would be for the capital-equipment manufacturers to modify existing designs or to create totally new designs for equipment that was destined for use in the underdeveloped countries. A variation of this idea would be for some of the more advanced of the underdeveloped countries to attempt the manufacture of this specially adapted equipment.

**Contribution of the developed countries**

The economically advanced countries can contribute to the development of the underdeveloped countries in a multitude of ways. The most sought after, but by no means entirely adequate, contribution will be long-term development loans and other forms of investment capital. The ramifications of this form of assistance will be discussed in considerable detail later. Other important ways in which the developed countries can contribute is in the transfer of management skills and of technical knowledge through the use of advanced education and vocational training. Essential raw materials and capital equipment for industrialization can be made available on terms which take into account the low liquidity and shortage of foreign exchange prevalent in the developing countries. Once the
developed countries have primed the development and industrialization processes in the above ways, they must follow through by providing markets for the products that are produced for export.

An important consideration in the extension of all types of assistance to the developing countries is the realization that the people of these nations are proud, sometimes to an unreasonable degree. If assistance is offered with the attitude that it is a handout, then the recipient nations will be resentful rather than grateful. On the other hand, if the same assistance is offered to the developing nations with an understanding of their many problems, then the offering nations will receive the gratitude that they expect.

**National Saving**

In simplified terms, saving can be defined as spending on investment rather than consumption. Together with sources of investment funds external to an economy, national saving will determine the level of investment in an economy. The degree to which each of these sources of investment funds contribute to the economic growth of a particular country is not known, but the sustained rate of increase in the investment level for all underdeveloped countries
has been given as 12 to 15 percent per year, whereas the rate of growth in saving has been only 6 to 8 percent (Chenery and Strout, 1966, p. 682). The purpose here will be to show what effect national saving has on economic development and also how various factors in the developing economy affect national saving.

**Impact on economic development**

In the developed countries, where net saving and depreciation are at relatively high levels, investment capital will most likely be readily available and will therefore have a reduced effect on economic development. In the underdeveloped countries the capital stock will normally be quite small, so there will be little to depreciate. In this circumstance saving will assume a more important role.

Without net saving, and excluding foreign investment from consideration for the present time, improvements in technology can be introduced only when capital is replaced at the end of its economic life. In this instance the replacement capital will have been financed by depreciation payments accrued over the life of the original capital. Under these conditions the rate of ongoing development in an economy would be determined by the increase in productivity attributable to the replacement capital. For example—if the replacement capital is twice as productive as that
which it replaces, productivity will have been doubled without recourse to national saving.

Fortunately, it is not necessary to rely entirely on technology for progress in economic development as both national saving and external investment funds will be available to finance additions to the capital stock. However, these sources of investment funds may be inadequate for the entire task. If the population of an underdeveloped country grows 2 percent per year, its national income must also grow at the same rate if it is to maintain its per capita income at some desired level. If the national objective is to increase the per capita income by 2 percent per year, then it will be necessary to increase the national income by approximately 4 percent per year. If the overall incremental capital-output ratio for this nation's economy is 3-to-1 (that is, an investment of $3 will be required for every $1 increase in national income), the total required annual increase in investment will be 12 percent (Myint, 1967, p. 28).

The effect which saving has on capital formation, and indirectly economic development, will largely be determined by the way in which the saving is channeled into investment. One advantage the advanced countries have is the variety of different financial institutions for collecting and channeled saving into investment opportunities. This problem will be considered in detail below, but it should be noted that
the role of national saving will be considerably enhanced as the financial structure of the underdeveloped countries is improved (Kuznets, 1968, p. 37).

Institutional factors affecting saving

The underlying theme of the discussion of economic development in the previous pages has been the need for the underdeveloped countries to provide the proper institutional framework for the encouragement of development. This is especially true in the case of national savings because almost any fiscal or monetary action a government might take will have an impact on the level of national savings. Accordingly, government policies should be designed to encourage people to save more of their income, to invest it within the country rather than abroad, and in general to put it to those uses which will have the greatest beneficial value for the economy.

A developing country's ability to save will depend not only on the level of its average national income but also on other factors such as the ability of the government to design its tax policies so as to mobilize saving; the rate of inflation; the government's methods for raising revenue; and the degree to which savings are retained within the country. Each of these factors will be discussed in turn.

A persistent problem in the underdeveloped areas of the world is an unequal distribution of income which results
in a wealthy minority and an impoverished majority. It will not be possible to divert any significant portion of the income of the latter group into savings, as their income is generally little more than that required to sustain life. The saving of the upper-income group is seldom channeled into developmental investment but instead goes into short-term, high-rate consumer loans, speculative hoarding of consumer goods, and other similar activities (Higgins, 1968, p. 505).

A huge task for the governments of the underdeveloped countries will be the redesigning of tax policies so that they divert the surplus income of the wealthy into financial institutions where it can be channeled into developmental investment. An appropriate method for accomplishing this purpose is to amend the tax codes so as to give preferential treatment to income which is allotted to investment. A more extreme approach, and perhaps that which will ultimately be resorted to, is the use of an almost confiscatory inheritance tax which will transfer the fortunes of the wealthy elite into developmental investment. In the past these funds have found their way into investment abroad because of the greater security offered (Lauterbach, 1966, p. 74).

The inflation rampant in many countries of Latin America has had an especially detrimental effect on national savings. In addition to the implication of economic
instability, the negative impact of inflation on investment results from a basic unwillingness on the part of savers to commit themselves to saving activities when the rate of interest will fall short of the actual loss in value of money as a result of inflation. The only solution will be the reduction in the rate of inflation which will come to pass when the governments of the affected nations curtail deficit spending and undertake the fiscal and monetary reforms which will correct this problem.

The methods used by the governments of the underdeveloped countries to raise revenue has a direct bearing on both the aforementioned problem of inflation and the saving process. If all of the government loans come from the central bank, then obviously the result will be highly inflationary. It will be even more inflationary if the legal reserves of the commercial banks are held in notes or deposits from the central bank as this policy will have permitted credit expansion by the commercial banks. The selling of securities by the government is a way of both minimizing inflation and avoiding adverse effects on national savings. The objective with securities is to sell them in such a manner that they are purchased with funds that would otherwise go for consumption. If their purchase merely diverts funds from savings accounts, then this policy will be detrimental to developmental investment.
A factor which has had a very great impact on savings in the Latin American countries is the flight of domestic income to Europe and North America. It has been estimated (DeVries, 1964, p. 424) that the total of this transfer of savings since World War II is somewhere in the range of $25 billion to $30 billion. The bulk of this transfer has been made in violation of existing currency regulations and as a result has been hidden in export and import transactions. The basic motivation for this transfer, as mentioned previously, has been to ensure the security of these funds. Because of the illicit nature of this activity, the imposition of additional exchange controls will probably have little or no effect. As with the majority of the problems of this region, the only true solution will be the reduction of political and economic uncertainty.

**Foreign Investment as Opposed to Foreign Aid**

It has been shown that the availability of investment funds has a direct effect on the economic development process. These funds can be either supplied from within the economy as a result of national saving or made available from external sources. With particular reference to the Latin American countries, it is apparent that at the present time there are many limitations on national savings
as a source of investment funds. The question that remains to be answered is: can external sources satisfy the remaining requirement for investment funds in the Latin American countries? Associated with this question is the determination of the best single source or combination of sources for these funds.

**Factors influencing the use of external funds**

Even though external investment funds may potentially expedite the economic development process, their use in a developing nation is often severely hampered by a number of factors. Among these are the economic considerations which will determine the maximum amount of external funds that can be effectively used in an economy at any given point in time. However, in reality political and social factors often have a much greater impact than the economic factors.

The flow of foreign investment funds and foreign aid into a nation can almost be unlimited, but there are limits to the portion of these funds which can be applied to capital formation. This limitation on the ability to use investment funds effectively, known as absorptive capacity, depends on such factors as the existence of skilled labor, competent administrators, and markets, as well as the existence of basic transportation, communication, and power facilities. If the flow of investment funds into capital
formation exceeds the bounds established by the above factors, quite likely a portion of these funds will spill over into consumption. It should be noted that a country's absorptive capacity can only be increased slowly.

Several of the Latin American countries have in recent years begun to tout the desirability of investing in their respective countries. In most instances this overt solicitation of private investment appears to be an attempt to overcome a reputation gained during some period in their recent history. Colombia, which in the two decades following World War II was torn by political warfare that resulted in the deaths of hundreds of thousands, has organized five separate government agencies and has lined up 28 banks in the country to assist the foreign private investor (Anderson, 1966, p. 190B). Argentina, which made some expensive errors of judgment in the nationalization of its petroleum industry in the early 1960's, and Peru, which created quite a political storm with its takeover of the International Petroleum Company in 1968, have both undertaken action to improve their image before foreign private investors (Engineering and Mining Journal, 1970, p. 102).

The above countries appear to recognize the need for foreign funds in their economic growth, but there is still much resistance to foreign investment in Latin America. This ambivalence seems to arise from a desire to have the investment funds without the involvement of foreign com-
pany subsidiaries. A possible factor here is the greater tolerance for socialism in these countries. This thought is partially substantiated by the significantly greater preference for foreign loans rather than foreign investment in Latin America (U.S. Congress, 1962, p. 52).

Supply of foreign investment funds

The concept of foreign investment as discussed in the following pages does not include portfolio investment. This form of investment is quite significant in some areas of the world, for example U.S. investment in Europe, but at the present time does not constitute an appreciable portion of the U.S. investments in Latin America. If portfolio investment is excluded from the definition, then foreign investment means the commitment of capital and personnel to an operation for generating profit. The monetary capital of such an investment can only be controlled before it becomes buildings and machinery or, in the case of the mining industry, mine workings. Once the investment is made, its profit potential is virtually fixed.

A substantial advantage of foreign investment over other external sources of funds is that there is a much greater probability that it will result in a net increase in the real capital situated within a country's borders. With foreign loans there is some incentive to ensure that the funds are not diverted from their intended purpose in
that earnings can be used to satisfy interest and amortization requirements later on. When foreign grants are used to finance capital projects, even this incentive does not exist. Grants can readily be diverted to consumption with no other inconvenience than a prejudicing of the source.

Other advantages associated with foreign investment arise not just from an addition to the capital stock of a country, but also from the manner in which it provides the energizing force of new enterprise. This force is derived from such qualities as managerial knowhow, new technology, skills in marketing, and contacts with foreign markets. These all will prove helpful in the mobilization of local manpower, raw materials, and other resources which might have otherwise remained idle or have been utilized less productively.

The determining factor in the investment process from the viewpoint of the investor is risk. A measure of risk used by many corporations is the length of the payback period. Present practice in the evaluation of domestic mining ventures calls for the use of a 5-year payback period, so it is plausible that a shorter period is used as the criterion for international ventures.

Raymond (1964, p. 40) has given the average rate of return on foreign mining investments as being 6 to 8 percent. He qualifies this further by saying that, in those countries where the investment climate is less favorable,
the return is likely to be less than 6 percent. It is highly doubtful that the actual figures are this low, but 6 to 8 percent is probably closer to the mark than the 30 to 40 percent return that is often assumed.

Inflation has the same detrimental effect on foreign private investment as it has on the other aspects of economic development. It is a very substantial contributor to the risk discussed above. It has the additional unfavorable effects of eroding the value of any investments held in a liquid or working capital form and of distorting the investment process by driving investment capital in search of inflation shelters rather than in search of productivity. One of the more important aspects of the investment process will be subverted if the foreign private investor decides to borrow in the local economy and avoid the loss of invested value of hard currencies like the U.S. dollar.

Foreign private investment does not compete with foreign loans and grants but instead complements them. During the 3-year period of 1966 to 1968 flows of private investment capital made up 32 percent of the $5.4 billion in U.S. resources flowing to developing countries and multilateral development agencies annually. Two-thirds of this flow was in the form of direct investment, of which $1.2 billion or 34 percent was provided by reinvested earnings (Committee for Economic Development, 1969, p. 23).
Multilateral loan agencies

A number of multilateral loan agencies have been organized strictly for the purpose of making development-oriented loans to the governments and private firms in the developing countries. Generally speaking there is a shortage of loan funds available to these agencies, and many countries and firms will simply seek other sources of financing rather than subject themselves to the stiff competition for the funds that are available. One possible cause for the insufficiency of loan funds is the extremely long repayment schedules allowed by many of these agencies. Repayment periods of 40 to 50 years, which are not uncommon, result in an unusually slow turnover in the available funds.

The Agency for International Development, the International Development Association, and the International Bank for Reconstruction and Development (World Bank) all make long-term, low-interest loans. The Inter-American Development Bank makes shorter term loans in the range of 6 to 20 years. The International Finance Corporation, an agency of the World Bank, is the only one of these agencies that makes loans exclusively to private companies. However, like the others it is limited to development-oriented loans (Kolde, 1968, p. 364-367).

Although the interest rates charged by nearly all of the above agencies are quite low, for example the three-quarter percent rate charged on many loans made by the
Agency for International Development, debt-servicing requirements have been imposing an increasing burden on the developing countries. In the 1956-1967 period, their annual debt service grew from $0.8 billion to approximately $4.7 billion, of which $3.1 billion were amortization payments and $1.6 billion interest (Committee for Economic Development, 1969, p. 16).

Before this discussion of the subject of economic development is concluded, brief mention should be made of the Alliance for Progress. The Alliance, as set up at Punta del Este, Uruguay in 1961, involved a general commitment to social and economic reform by the Latin American countries. It was agreed that over a 10-year period the countries involved would contribute $80 billion to their own development, and the United States and other developed nations would provide $20 billion (Gordon, 1965, p. 207). The U.S. Government was to provide 55 percent of the $20 billion and U.S. private investors, the multilateral loan agencies, and the European countries 15 percent each. There was considerable controversy over the Alliance during its active life, so much that it was terminated prematurely in 1969.
THE MINING FIRM AND THE HOST COUNTRY

It is interesting to observe how the relative bargaining positions of a given country and of a foreign company operating within this country change with time. During the initial stage of their relationship, the company has essentially all of the advantages. The country will have the natural resources, but for all practical purposes they are worthless, as the country has no means for developing them. The company will have managers, technology, and capital in addition to several different investment opportunities to which they can be applied.

With the passage of time, the company will accumulate a large fixed investment within the country. The technical personnel hired from the local area will have become proficient at their jobs, and various government personnel will have acquired a considerable amount of knowledge and insight about the industry. When it comes time to renegotiate the original agreement, all of these factors will ensure that the new agreement is much more favorable to the country.
The evolution of the relationship will continue until the company is willing to accept marginal profits purely for the sake of retaining its investment, or if the returns are too low, the company will withdraw from the country. On occasion political or other factors will cause the country to interrupt the evolutionary process by the expropriation or nationalization of the company's assets.

The purpose of this chapter will be to examine the many aspects of the evolving relationship between the mining firm and the host country. The reader will be able to gain an appreciation of the degree to which the potentialities of foreign investment in mineral resource development, as discussed in the preceding chapters, are being fulfilled. Those aspects of the relationship which are proving the most troublesome will be given added emphasis.

National Mineral Policies

The advantages of a competently formulated and codified national mineral policy are manifold. Most importantly, the existence of such a policy will go a long way towards ensuring that both government and private industry understand their respective prerogatives and obligations. The nation will be forced into the evaluation of its priorities and of the means for accomplishing them, so the effort
devoted to the drafting of a mineral policy will in itself be of great value to the developing nation. If the government has been honest and forthright in the drafting, the policy will even serve as an indication of the degree to which the foreign private investor is welcome in the country.

Objectives

The primary objective of a national mineral policy for an underdeveloped nation should be promotion of economic growth. Specifically, this policy should take into consideration all of the previously discussed aspects of economic development. If foreign investment is the chosen vehicle for development, and in most instances this will be the choice, then the mineral policy must be structured so as to encourage foreign investment.

The mineral policy should not encroach upon the establishment of government fiscal policy, and its provisions must certainly be in consonance with those of the fiscal policy. The same thing is true with other areas of government responsibility. The mineral policy may in itself be a perfectly composed document, but if it is in disagreement with other government policies, its effectiveness will be severely weakened.

A comprehensive mineral policy will provide for the efficient and orderly development of mineral resources. This means that regardless of who develops the mineral
resources, the development will be accomplished within the limitations of accepted standards of conservation and good engineering practice. Orebodies will not always be developed and mined simply because their location is known and because it has been proven economical to mine them. The country must also be able to establish objectively that it is in its own best interests to mine them at a given point in time. If the market price or demand for a particular commodity has been depressed for some reason, then the country should delay development of the orebody until there are indications that the market conditions will improve. Generally speaking, the influence of political considerations upon mineral policy should be kept at a minimum.

**Prevailing concepts**

Certain concepts are a traditional part of the mineral laws in many Latin American countries. One of these, the regalian theory, was brought to Latin America by the Spanish and can be traced to Roman Law (Skelding, 1967, p. 34). The regalian theory separates the subsurface rights of all land from the surface rights and vests the subsurface rights in the government. In practice, the right to develop and mine minerals is granted in the form of a concession by the state.
Associated with the regalian theory is the recent practice of reserving several classes of minerals for development by the state. This reservation of minerals is for the most part limited to petroleum and the radioactive minerals. The motivation for the setasides seems to arise from a vaguely defined concept of national security, although nationalism is certainly a factor.

The Calvo Clause originally appeared as a part of the Mexican Constitution of 1917. It has since been adopted by a number of other Latin American countries. As it appeared in the Mexican Constitution, it read (Gordon, 1965, p. 235):

The State may grant the same right (to acquire ownership in lands) to foreigners, provided they agree before the Ministry of Foreign Affairs to consider themselves as nationals in respect to such property, and bind themselves not to invoke the protection of their governments in matters relating thereto; under penalty, in case of noncompliance, of forfeiture to the nation of property so acquired.

The Clause as used by the Latin American nations is primarily designed to reduce the influence of foreign nations in internal affairs.

A review of the summary of Latin American mining laws prepared by Ely (1961, p. 21-69) reveals a large number of other traits common among the laws of these countries. As mentioned above, the ownership of the minerals resides in the state with the right to mine granted by concession. It is also common in this region that the mining company be
required to obtain an exploration concession from the government. A mining concession is obtained only if the orebody appears to be economically minable. It is interesting that nearly all of the Latin American mineral codes specifically provide for the development of mineral resources by foreigners. Another provision of the mining laws of many of the countries is a time limit on the exploration and development of an orebody. If production has not commenced within a given time period, then the concession reverts to the government.

Existing mining codes

A definite dichotomy is developing among the countries of Latin America with respect to their relations with the foreign mining companies. The first group of countries, noticeably more independent in their behavior, includes only Chile, Peru, and Mexico at the present time. The second group includes the other Latin American countries. The existence of the dichotomy is in keeping with the evolution of the relationships between the governments and the mining companies. The foreign mining investments in Chile, Peru, and Mexico have reached the stage where the governments of these countries are no longer apprehensive of actions taken by the companies.

The terms Mexicanization and Chileanization represent comparable goals, but the methods being used to obtain these
goals are different. Mexicanization as defined by the Mexican Government (Dowis, 1969, p. 50) is the ownership of 51 percent of the stock of the foreign mining companies by the Mexican public. The Government has not overtly forced this policy on the mining companies but has resorted to the ingenious ploy of granting a 50-percent reduction in export and production taxes of the Mexicanized companies. Chileanization also has the majority ownership of the mining industry as its goal, but the approach is somewhat different in that the Chilean Government buys the 51-percent interest at a price determined by the Government.

With the exception of the erratic behavior of Bolivia, the Latin American countries have apparently been amicable in their dealings with the foreign mining companies. Their mining codes and behavior appear to be almost solicitous in their approach to the companies. Legislation recently enacted in Peru is representative of what has been occurring in countries as diverse as Argentina, Brazil, and Columbia. The Peruvian legislation grants a number of benefits and guarantees to a mine. These provisions are applicable from startup to the end of the period required to recoup the initial investment (not to exceed 10 years) and include: reduced profit taxes; accelerated rates of depreciation; investment guarantees to foreign companies; the availability of foreign exchange; guarantees of the free sales of mining
products once the needs of the domestic market have been satisfied; and the right to deduct from taxable income any losses suffered in the previous 5 years (Mining Journal, 1969, p. 350).

Brazil, although not generally considered to be a mining-oriented country, has also enacted legislation in this area. It has drafted a new mining code and has already had an opportunity to implement the code when it reviewed and then approved a large iron-ore project (Mining Annual Review, 1969, p. 255). The Brazilian Government has also organized GEIMI (Executive Group of the Mining Industry) to coordinate and support the mineral development of the country.

There is little likelihood that the relationship between the U.S. mining companies and the governments of the Latin American countries will ever become static. As the mineral industry of each country becomes relatively developed, that country will feel confident enough to separate itself from the influence of the mining companies. Mexico and Chile are now reaching this stage of development. The Central American nations have not yet begun the journey.
Political and Legal Relations

Many of the factors discussed in the above paragraphs are elements of the vaguely defined concept of investment climate. Even more important to this concept is the nature of the political and legal institutions in existence in a country. This particular factor not only will determine the profitability of an investment but will have a large bearing on the security of the lives and property committed by the investor. The following discussion of the political and legal aspects of investment climate will be brief, but it will serve to highlight the salient points of this important topic.

Political instability

Judging by the news from Latin America it often seems as if the politics of this region consists of nothing but a continuing internecine struggle between the generals and the bureaucrats. The average North American or European observer does not realize that the coup d'état and other seemingly violent political actions represent a valid element of the political process in Latin America. The coup d'état of this region can in many respects be compared to a parliamentary crisis in a European nation. Both of these political institutions are beneficial in that they allow for adjustments in the governmental process.
A disadvantage of the Latin American form of political change is that continuity is discouraged in the legal and contractual obligations of a government. A traditional aspect of the coup d'etat is that the incoming government disclaims many of the obligations of the outgoing government. This makes life rather precarious for the foreign investor as he has little or no recourse if the government chooses to nullify his concession or contract.

Another way in which politics can affect the foreign mining company is illustrated by a political controversy which developed in Guatemala in May 1969 (Engineering and Mining Journal, 1969, p. 59). A few weeks prior to the presidential elections, the opposition party charged that various officials in the government were receiving illicit gain from negotiations with a joint venture of International Nickel Company and Hanna Mining Company. These charges successfully stalled a pending $180 million nickel-laterite mining venture on which the companies had already spent $15 million for geologic, feasibility, and engineering studies. The only basis for the charges was an attempt to embarrass the party in power.

The above is illustrative of one of the major deficiencies in the current thinking on the economic development process. The problems of development are often viewed without consideration of the political aspects. As a result capital accumulation, technology, and increased
industrialization are given as the solutions to the problems of the underdeveloped countries when in fact the real problem is a basic weakness in the social and political institutions of these countries.

Resentment of foreign ownership

Many factors contribute to the resentment of foreign ownership in the underdeveloped countries. For the most part these factors are political in origin, although there is a valid economic basis in some instances. The problems deriving from this resentment often become acute for the large foreign-owned or operated corporations.

Colonialism has had a major influence on all of the Latin American countries. Most of these countries gained their political independence from the colonial powers at an early point in their histories relative to the other underdeveloped regions of the world. However, economic colonialism has in some instances prevailed until the present time. To many of the nationals of the Latin American countries there is little distinction between the past practice of coercing these countries into exporting raw materials and the present practice of encouraging the export of raw materials for the sake of the various economic advantages to be obtained. The distinction is further obscured when foreign-owned corporations are used as a means for developing and producing the raw materials that are to be exported.
Anti-colonialism is only one aspect of the problem. The nationalism which thrives in all of the developing countries of the world has had and will continue to have a great impact on foreign ownership. It is understandable that the nationals of the developing countries would resent the pervasive presence of foreign companies at a time when they are striving to establish national identities.

Closely related to nationalism in its effect upon foreign ownership is the change in social structure that is taking place in Latin America. The oligarchies of these countries are being challenged by a middle class that is growing in size and in political power. The middle-class suspicion of foreign companies has been reinforced by past irregularities in the relationship between the ruling classes and the companies. Rather than seek to confine or eliminate these irregularities, they would prefer to get rid of the companies.

Expropriation and nationalization

The terms nationalization and expropriation are often incorrectly taken to be synonymous. Expropriation is the right to take private property for public use or public benefit, providing the owner is compensated. Nationalization, common in Latin America, is based on legal provisions which allow property to be brought under the control of the government with or without compensation.
According to Higgins (1968, p. 562), Martin Brofenbrenner has formulated an argument for expropriation and nationalization that is based on the high cost of servicing foreign private indebtedness. Brofenbrenner's approach was to build an economic model which showed that economic growth could be accelerated by expropriation in countries where a large share of the foreign investment earnings were not plowed back into economic development. It would be difficult to prove or disprove his argument as much of the required data are not available.

In nearly all of the more recent expropriations and nationalizations in Latin America, political expediency has obviously been the motivation. The Latin American politician under pressure, like his brethren everywhere, will take the course of least resistance. It is possible that nationalistic and socialistic influences have created a few altruistic individuals who see as their mission in life the elimination of foreign ownership in their native countries, but the evidence that is available does not indicate it.

The recent takeover of Anaconda's properties by the Chilean Government provides a good example of the politically motivated nationalization. Since the election of Eduardo Frei as the President of Chile in 1964, there had been an increasing clamor in the country for greater local participation in the copper-mining industry. The pressure
on President Frei had risen to such a high level that in his state-of-the-union address in May 1969 he announced that the Government was undertaking the nationalization of Anaconda's mines (Engineering and Mining Journal, 1969, p. 60). There were indications that Anaconda had been privately urged to take the same route that Kennecott had taken when it voluntarily sold 51 percent of its wholly-owned Braden Copper Company to the Chilean Government. Anaconda rejected this alternative and thereby forced the Government to openly nationalize its holdings. Anaconda was given the option of retaining a 49-percent interest, as had also been the case with Kennecott, but turned it down.

In the past, the Latin American countries have performed involved rituals prior to nationalizing foreign-owned investments in an attempt to make these actions appear legal. There is some doubt as to the basis for the concern demonstrated by these countries. It is possible that the governments are sensitive to world opinion and are therefore attempting to allay any suspicions of a lack of economic and legal sophistication.

Where nationalization has affected investments in which there is majority ownership by U.S. nationals, a possible motive for the pseudo-legality is the fear of U.S. Government reprisals. A basis for such reprisals is provided by the now well-known Hickenlooper amendment. This amendment
requires that the President of the United States suspend government assistance to any country which has nationalized or expropriated property owned by any U.S. citizen or corporation. The amendment also extends to actions where a foreign government has nullified or reputiated a contract or has imposed fiscal restrictions which have the effect of expropriating or nationalizing a property (U.S. Congress, 1964a, p. 112).

The most recent declaration by the U.S. Government of its intent to implement the provisions of the Hickenlooper amendment was in the case of the seizure of the assets of the International Petroleum Company by the Peruvian Government. The position of the U.S. Government was that Peru must make provisions to allow the company legal recourse. If Peru did not comply with the U.S. demands, it stood to lose $15 million in economic aid, $6 million in military aid, and $45 million in sugar purchases as provided for in the U.S. Sugar Act (Mining Journal, 1969c, p. 322). A few days before the U.S. Government's deadline, it was announced that the company would be allowed to fight the action through the Peruvian Ministry of Energy and Mines.

In general, the use of expropriation or nationalization proceedings to satisfy political or nationalistic goals is of dubious economic value. Such actions may have to be held in check if the economic goals of Latin America are to be realized. The seizure of title to existing assets
adds nothing to the capital stock of a nation. The disrup­tion incurred by such seizure will often interfere with the economic development of the country. The adverse effects are magnified if nationals of the country are incapable of efficiently operating the acquired assets.

Legal aspects of foreign investment

The free interpretation of laws by the authorities of less-developed regions, such as Latin America, is not as prevalent as is often assumed. The countries of these regions have fully developed legal systems which in many instances are based on constitutions more extensive than that of the United States. As a result of comity, foreigners doing business or residing in the country will normally have the same rights under the local laws as do the citizens of the country. However, in certain instances special laws have been enacted to cover the activities of foreign persons and companies.

The laws of a country will reflect the social heritage of that country. A citizen of the United States, by virtue of his upbringing, will be more appreciative of the advantages of free enterprise than will the citizens of most other countries. It is not easy for this person to accept a legal system which is greatly oriented towards socialism and government participation in commerce. However, when a U.S. firm extends its activities into a foreign nation,
it must be prepared to regulate itself in accordance with the laws and legal customs of that nation. A rejection of these laws on the basis of their inefficiency or any other motive will not be acceptable.

A particularly sensitive aspect of the existence of foreign companies within a country is the relationship between the host government and the home government of a company. In the past, the latter has often looked upon its international firms as extensions of itself and therefore available for the furtherance of its international goals. A recent example of this practice was the curtailment of foreign investment by U.S. firms in an attempt by the United States to reduce its balance-of-payments deficit. The host governments of the international subsidiaries of such firms are rightfully resentful of these practices.

**Government Fiscal Policies**

The two elements of government fiscal policy which have the greatest impact on U.S. mining companies in Latin America are taxation and foreign-exchange control. Government taxation policies will not only effect the initial decision to invest in a country but will also be a major factor in determining the profitability of the investment and ultimately in the decision as to whether the investment should be retained. The potential of foreign exchange
controls to affect foreign investments is not as great as that of taxation, but in certain instances their impact will be just as decisive. The objective in this section will be to describe the status quo in the fiscal relationships between the Latin American governments and the U.S. mining companies.

**Generation of revenue**

The primary purpose of a tax, with limited exception, is to generate revenue for a government. By this definition the Latin American governments have not been remiss in using the minerals industry of that region as a source of revenue. An operating mine can expect to be liable for most, probably not all, of the following taxes: royalty on its mining concession; a severance tax on the value of the minerals produced; corporate tax; income tax; surtax; excess profits tax; stamp taxes; export taxes; education taxes; housing taxes; and a variety of special taxes that are imposed from time to time.

Foreign companies operating in Latin America have historically paid a disproportionately large share of the taxes. According to Baklanoff (1968, p. 241), a recent study by the U.S. Department of Commerce showed that subsidiaries of U.S. companies in Latin America produced approximately 10 percent of the area's gross product and paid one-fifth of all taxes and one-third of all income.
taxes. This disproportionate distribution of tax liability can for the most part be attributed to the negligible political power of the foreign-owned companies.

The inequity in the national tax structures in Latin America has been reduced in recent years. Generally, the problem has been solved not by the levying of new taxes but by the more thorough collection of existing taxes. Middle groups, indigenous businesses, and the large landowners have managed to evade a substantial part of their respective tax burdens. Although it is doubtful that this change will result in much of a reduction in the tax liabilities of the U.S. mining companies, which in Chile have averaged 85 percent of gross profits (Skelding, 1967, p. 38), it is reasonable to expect that taxes will not rise much above current levels.

Another source of revenue for the Latin American governments has been the manipulation of foreign-exchange rates. By adjusting the exchange rates to levels substantially different from those prevailing on international monetary markets, the governments have been able to obtain dollars from the foreign companies at bargain prices. It is more than likely that the governments have seen this device as just another means for increasing their share of the profits. A major disadvantage of this practice, from the point of view of the host government, is that it serves as a deterrent
to the employment of local labor and to the local purchase of equipment and materials. It is therefore questionable as to whether the revenue gained justifies the adverse effect on economic development.

Retention of foreign-investment earnings

It was shown in the initial chapters that the retention of foreign-investment earnings is an important factor in determining the degree to which foreign investment contributes to the economic development of an underdeveloped nation. Raymond (1964, p. 40) has calculated that an average of 81 percent of the gross income from mineral investments is retained within the country in Latin America. Although he does not give the rate of retention for the individual countries, it can be expected that there is considerable variation among the countries and that in most instances the variation is proportional to the countries' use of fiscal controls to encourage retention.

Brazil's solution to the problem of retaining earnings within the country is the imposition of a higher tax rate on dividend withdrawals (Smith, 1966, p. 98). This policy encourages the local reinvestment of earnings because the lower rate of return on the local use of funds becomes attractive if an additional tax must be paid before the funds can be reinvested outside of the country. The approach that Peru uses is somewhat different from Brazil's, but it
has the same effect. In Peru the foreign mining companies that remit profits will pay a maximum rate of 68.5 percent on income whereas those mining companies that do not remit profits will pay only 55 percent (Engineering and Mining Journal, 1970, p. 102).

At one time, it was common practice among mining companies to undervalue their mineral exports from Latin America. This practice had the dual advantage of avoiding foreign exchange controls and of reducing the burden of export tariffs. The countries have since caught on to this device and have put an end to it by establishing official export prices for commonly traded commodities. In most instances the countries have been fair and have adopted the prevailing market price as the official export price. The setting of these prices at arbitrarily high levels would have the effect of increasing the government's tax yield.

As mentioned previously, some of the Latin American countries have in the past adjusted their foreign-exchange rates for the simple expediency of obtaining additional revenue from the foreign companies operating within these countries. The elimination of the discriminatory exchange rate in Chile created an important market for national industry and indirectly brought about the retention of funds which had previously been expended outside the country for the procurement of supplies and equipment. The Kennecott
Corporation, for example, found it to its advantage to assist local manufacturers in the production of goods which had previously been imported. As a result, Chilean sources for supplies and materials have risen from 40 percent of the total purchased by Kennecott in the fifties to 70 percent in the mid-sixties (Baklanoff, 1968, p. 246).

Encouragement of foreign investment

Government fiscal policy will be decisive in determining the willingness of a foreign company to invest within a country. A company can operate under and survive many of the adverse conditions prevailing in the underdeveloped countries, but these companies know that an adverse government fiscal policy will rapidly destroy the profitability of an investment. The multitude of different taxes, the excessively high income tax rates, and the discriminatory foreign-exchange controls referred to in the preceding pages are all indications that many of the Latin American countries have lost sight of the doctrine of fairness in their fiscal relations with the foreign companies.

The drafting of a successful tax code is an extremely difficult task. A major complication is that taxation has evolved beyond the stage of serving only as a means for generating revenue. Taxation in modern society is often legislated with a view more towards the encouragement of social and political objectives than the governmental income
to be gained. Any particular objective desired by the government, in this instance the encouragement of foreign investment, does not have to be given greater emphasis than the other objectives of the tax code but merely enough emphasis to make it obtainable.

There are many ways in which a tax code can encourage new investment without sacrificing significant amounts of governmental income or having the result of making these investments excessively profitable in their later years. A tax provision used with great success by the Canadian Government is the granting of a tax holiday during the initial years of an investment. The length of the period for which the company is freed from the obligation to pay taxes, Canada allows three years, should be compatible with local conditions. Considering the small amount of revenue that is lost to the government, this provision can be the most desirable of those available for the encouragement of investment.

Considerable confusion exists on the subjects of depletion and depreciation and their effect on the taxes paid by a firm. The intended effect of depreciation and depletion deductions is the reduction of the taxable income of the firm. The rationale for depreciation is that it grants the entrepreneur an allowance for physical assets consumed in the production process. The standard method for computing depreciation is to divide the acquisition
cost of an asset by the number of years it can be used. The resultant value is the depreciation deduction allowed for a single year on that asset. There are other accepted methods of computation which allow for accelerated depreciation deductions. The advantage of these methods is that the tax bill of the firm will be reduced in the first few years of an operation when the cash flows are at a minimum.

The depletion deduction is unique to the natural-resource industries. In theory, the resource is considered to be a capital asset and the depletion deduction a method whereby the owner is partially reimbursed for the consumption of an asset. The depletion deduction is computed either on the basis of the rate of consumption of the resource or a fixed percentage of the gross revenue derived from the operation. The overall effect of this deduction is to improve the profitability of a natural-resource venture.

The rate at which income is taxed will have an influence not only on new investment but on replacement investment as well. A company which is allowed to keep only 15 to 20 percent of its gross income as net income after taxes has no incentive to set any of this residue aside for future investment. A more realistic approach on the part of the countries would be the adoption of an excess-profits tax. Those mining companies with abnormally high-grade
deposits or low operating costs would bear the brunt of such a tax. The remainder of the companies, those deriving normal profits, would be taxed at a more reasonable rate of 50 or 60 percent.

The tax agreement between the Chilean Government and Compania Minera Andina provides an excellent example of the potential of government fiscal policy when used to encourage foreign investment. Compania Minera Andina is a joint venture which has been organized to develop and operate the Rio Blanco mine, a large underground copper mine remotely located in the Chilean Andes. The capital investment in the project is in excess of $150 million, with $56.4 million of the total being received as a loan from the Export-Import Bank, $43.3 million provided by the Cerro Corporation, $32.1 million provided by a group of Japanese companies headed by Sumitomo Metal Mining Company, and $18.6 million in loans and stock purchases by the Chilean Government. In a decree effective as of January 1967, the Government granted a 25-year franchise with a 15-percent tax rate on Andina's profits, a 30-percent withholding tax on dividends and interest payments due Cerro, a 6.67-percent annual depreciation rate (15-year write-off), and a guarantee against new and discriminatory taxation. The decree also gives the company freedom to export and retain the sales proceeds from abroad and to sell foreign currency in Chile at nondiscriminatory rates (Beall, 1969, p. 87).
Due to the inherent uncertainty of a mining project, considerable time must elapse before the effects of changes in fiscal policy can be known. New policies designed to stimulate economic development will of necessity require a longer time interval in the mining industry than in the case of manufacturing. Although favorable government actions will result in gradual changes, adverse actions may bring sharp declines in mineral production. For these reasons, government policy changes should be well thought out and then implemented with care.

**Employment**

Latin American countries have become increasingly adamant in their attitudes regarding the employment policies of the foreign companies. Up until a few years ago, the companies were allowed to bring in large numbers of technical and managerial personnel to man and supervise their operations. All that is allowed now, in most instances, is a handful of managers. Some of the countries have gone one step further and are now requiring that the foreign companies certify that a national of the country is being trained for each of the top-level management positions. The time is near in the more advanced countries, such as Chile, Mexico, and Brazil, when the local operations of the U.S. mining companies will be staffed entirely with nationals.
Part of the firmness in the governments' positions can be attributed to the political nature of labor relations. Another factor is the continuing struggle by these nations to divest themselves of all institutions reminiscent of their colonial status. A few of the factors which influence the labor policies of the Latin American governments are discussed below.

**Labor relations**

Instability in the relationship between management and labor is found in all areas of the world. This relationship often seems to be more violent in Latin America but in fact is no more violent than the labor disputes in Europe and North America prior to World War II. The only significant difference between the labor unrest now prevalent in Latin America and that which has existed in all of the developed countries at one time or another is that in Latin America management and labor are often nationals of different countries. For this reason it is difficult to distinguish labor disputes from displays of nationalism.

Unionism would be the anticipated focal point for the workers dissatisfaction with the labor policies of the mining companies. This is often not the case in Latin America as the unions do not have the organizational strength of their counterparts in the developed countries (Kolde, 1968, p. 577). This problem does not arise from a shortage of unions but can instead be attributed to the apathy of
the union members. An inability of the unions to collect dues from irregular and inconsistent membership further reduces their effectiveness.

The lack of effective unionism places an additional responsibility on the local governments. As a result, mining companies which are conditioned to the give and take of management-union bargaining in the United States find that their adversary in Latin America is the government. These governments have laws which typically provide for special labor courts or arbitration boards to settle labor conflicts. If the collective bargaining and arbitration proceedings specified in the labor codes are not adequate in a given dispute, then permission must be obtained from the government for a strike. If a strike is called, then it is not unusual that a company will be held liable for the payment of wages during the strike (Skelding, 1967, p. 38).

There does not appear to be any simple solution to the labor problems of the U.S. mining companies in Latin America. The companies are not only faced with the usual demands for greater wages and fringe benefits but must also contend with the cultural and political problems which further complicate the situation. A direct attack on the unions will only result in a confrontation with government. The only hope of management will be to arrive at an understanding with labor, which takes into consideration the cultural di-
parities between the two. Management must be prepared to assist labor in making the social transitions which are an intrinsic part of the industrialization process.

Training of indigenous employees

The Latin American governments are well aware of the advantages to be gained from having a source of technically qualified nationals. They also realize that on-the-job training will not be adequate for the education of engineers and other professionals. Schools capable of training and educating these people are not available in sufficient numbers in Latin America, so it has been necessary to send them to universities in Europe and the United States.

The training of operations and maintenance personnel is a different matter. On-the-job training will be adequate for less-skilled jobs. The training of the maintenance staff and the different technicians which are required will be more difficult. The jobs assigned to these personnel are often quite complex; therefore, the men filling these jobs must be reasonably intelligent. It will be the task of the mining companies to further educate these personnel through the use of formal training programs. International organizations such as the United Nations will also help alleviate this problem.

The primary advantage to be gained from the employment and training of indigenous personnel is that it will make
the foreign company more a part of the society. The opportunities for politicians and rabble rousers to appeal to nationalism in their attacks on foreign enterprise are thereby reduced. A disadvantage of a highly trained and efficient indigenous labor force is that it makes it much easier for a government to successfully nationalize the foreign holdings. The companies are aware of this disadvantage but are no longer able to resist the demands of government for the increased employment of nationals.
CURRENT TRENDS

Several factors affecting the relationship between the Latin American governments and the U.S. mining companies have developed definite trends during the past decade. In view of the potential of foreign-mining investment as a contributor to economic development, these trends can be considered as adverse. The only basis for optimism at the present time is the fact that some of these trends have changed radically at different times in the past.

Drift Towards Socialism

Essentially all of the Latin American countries can be classified as socialistic. These countries are socialistic not only in the sense that there has been an increase in the amount of services provided by the governments, this phenomenon also being present in the United States, but more significantly by state ownership of the factors of production.
State ownership in Chile is 78.0 percent, in Venezuela 74.0 percent, in Argentina 61.3 percent, and in Brazil 59.1 percent (Raymond, 1970, p. 93).

Recent news releases indicate that state ownership in two of the major Latin American nations will now begin to move towards the 100-percent level. The Peruvian Government has announced that it will buy control of all basic industries in that country (Business Week, 1970, p. 47). The state will gradually take over basic industries such as iron and steel, chemicals, cement, and pulp and paper. Private companies in these industries, both local- and foreign-owned, will be allowed six months to prepare and sign contracts stating the conditions and timetables for takeover. The takeover law, as presently drafted, will not apply to foreign-owned petroleum and mining companies.

The Peruvian Government has allowed itself 10 years to complete the acquisition of two-thirds control of the companies in the above industries. Present owners will be allowed to recover their capital investments and a reasonable profit over the agreed-upon period. In other industries, foreign owners will be required to sell 51 percent of the ownership to Peruvians over a relatively short period (unspecified at the present time). Eventually, foreign ownership in this second group of industries will be reduced to 25 percent.

The recent election of Salvador Allende to a six-year presidential term in Chile is even more ominous for the
future of private enterprise in Latin America. Allende, an avowed Marxist, said in a post-election press conference that his government would be "....anti-imperialist, patriotic, and national...." (Gallardo, 1970, p. 7). The main goal, he added, would be "....to recover for Chile the basic riches that are now in the hands of foreign capital, and to nationalize industrial and service monopolies that control the economy." The president-elect's intentions are made even clearer by a campaign statement in which he said that his administration "....will open the door to the establishment of socialism in Chile."

**Increased Pressure on Mining Companies**

The U.S. mining companies have been subjected to increasing pressure by the Latin American governments. The actions of the governments have fallen short of outright nationalization in most instances, but the profits of the companies have been severely affected. The objectives of the governments appear to be an increase in their control over the companies and a larger share of the revenues.

The eventual outcome of the Chilean Government's actions against the mining companies seems now to be determined. It is difficult to believe that the Government has been following any sort of long-term plan over the past several years.
However, events could not have been much more favorable to the Government if they had been planned. During the mid-1960's the U.S. mining companies were coerced into investing approximately $210 million in the improvement of existing mines and the opening of new properties (Mining Journal, 1969d, p. 441). In 1969, as previously mentioned, the Government managed to acquire a large share of the U.S. mining investments when it nationalized Anaconda's holdings. In 1970 the Government announced its intentions to acquire the remainder of the investments. The only bright spot has been the handling of the development of the Rio Blanco mine. However, it is probable that the franchise for this mine will also be nullified and all of the physical assets nationalized.

Mexico has apparently been aboveboard in the modification of the structure of its mining industry, but its recent dealings with Gulf Resources and Chemical Corporation makes even this country's actions questionable. In an attempt at compliance with the Mexicanization laws, Gulf Resources signed an agreement with a group of Mexican investors for the sale of 66 percent of the company's sulfur division for $24 million. The company claims that implementation of the agreement is now being held up by Mexican government officials who sit on the board of directors of Azufrera Panamericana, a Mexicanized affiliate of Pan American Sulphur Company. In the meantime the Mexican
Government has cut the 1969 annual sulfur-export quota of Gulf Resources from 416,000 tons to 250,000 tons. The subsequent loss in profits has reduced the potential value of the sulfur division. Company officials believe that the entire scenario is an attempt by Azufrera Panamericana to acquire the division at a bargain price (Business Week, 1969, p. 81).

Peru's mining code appears to be quite favorable to foreign-mining investments. In practice, however, those companies already operating in the country and even those planning operations have been subjected to governmental harassment. Southern Peru Copper Corporation has been pressured into agreements to build a $70 million copper refinery and to develop a 600 million ton copper deposit at Cuajone at a cost of $355 million (Engineering and Mining Journal, 1970, p. 102). The company is not anxious to expedite either one of these projects and has in fact moved at the minimum rate required by the Government. Southern Peru Copper's greatest concern now is the extraction and exportation of copper from its current deposit at the fastest rate practicable.

A four-company consortium, consisting of Charter Consolidated, Grangesburg, Pechiney, and Sumitomo, has withdrawn its support of the development of several major copper properties in Peru by Cerro Corporation (Mining Journal, 1970, p. 199). The withdrawal of the consortium seems
primarily to stem from the Government's imposition of a time limitation on concessionaries to show sufficient proof of financing for projects. The companies have indicated that another problem has been the behavior of government officials. The mining companies have been told that some clauses of the mining code are either negotiable or do not apply, but have been unable to get these assertions documented.

The recent behavior of the Latin American governments, as discussed earlier, is a result of a perceived weakening in their need for foreign investors. As this sentiment spreads, there will be increasing pressure brought to bear on the mining companies. However, the governments would be prudent if they paused long enough to decide what their ultimate objectives are going to be.

The mining companies will not be willing to take much more of a cut in their profits. The current drive on the part of the governments, which has increased their average share of the profits to 70 percent, has been offset from the companies point of view by an increase in production and rising metal prices. Future changes in the relative shares will possibly be unacceptable to the companies. For example—a reduction in the companies' share of the profits from 30 to 20 percent would require a 50-percent increase in revenues if the companies' profits are to remain at
current levels. To expect a 50-percent increase in revenues as a result of increased sales and prices is not very realistic. The alternative left to the companies is to withdraw from Latin America.

Weakening of Metal Prices

A definite factor in the change in attitude of the Latin American nations towards the U.S. mining companies was the sharp rise in copper prices during the 1960's. In the last seven years of that decade the world-market price and the U.S. domestic price of copper nearly doubled. During this period the operating costs of the companies remained relatively constant. As a result, the companies enjoyed a very favorable change in the rate of return on their investments. Unfortunately for the companies, this period of increasing profitability coincided with a period of emerging nationalism in this region.

It is reasonable to assume that the actions taken against the copper-mining companies by the local governments were in part motivated by thoughts of world-copper prices remaining at high levels. The governments realized that there would be repercussions from their unfair treatment or outright expropriation of the mining companies, but rationalized that the potential gains justified the risk.
It is possible that the countries went so far as to consider the reduced efficiency of nationalized operations and the increased difficulty of marketing the copper. Their reasoning on these points would have been that a few cents reduction in the spread between a production cost of approximately 20 cents per pound and a selling price of 75 cents per pound would not be that significant.

The anticipated outcome of a long period of increasing prices is now beginning to appear. Several large copper mines, all producing in the range of 60,000 to 100,000 short tons of copper per year, have come into production in a period of less than 12 months. The impact of this increase in production is better appreciated when it is realized that the annual production of copper in the United States in 1969 was approximately 1.2 million short tons.

The increase in copper supply has dropped the world-market price from a high of nearly 80 cents per pound to less than 60 cents. The London Metals Exchange warehouse stocks of copper have increased to a post-World War II high of over 40,000 metric tons (Mining Journal, 1970, p. 212). There is no way of knowing how low the price will go, but even the present decline may have a moderating effect on the Latin American governments.

Prices of other mineral commodities produced in Latin America have been remaining relatively firm. The decline in sulfur prices has affected Mexico only to a limited
extent, as the mineral production of that country is quite diversified. There has been a slight weakening in the price of lead but not so much as to have a noticeable effect on the producing countries. Tin prices have remained firm as a result of the continued successful operation of the international-price-stabilization efforts of the International Tin Council.
The role of U.S. mining investments in Latin America has evolved considerably during the twentieth century. The century began with the era of the "robber barons", when the executives of the natural-resource industries actually dictated the internal and foreign policies of the countries in which their companies operated. The relationship between the governments and the mining companies has gradually changed as circumstances have shifted more in favor of the governments.

Any discussion of the economics of mining investments in Latin America is limited by a lack of reliable data. Many authors have attempted to determine the value of the U.S. investments or the amount of earnings from these investments which are returned to the United States. The answers they have obtained are in most instances questionable. The lack of success experienced by these authors is not surprising if one considers the traditional secretiveness of the mining industry in regard to financial data.
This problem is compounded by the absence of local govern­
ment agencies capable of gathering and publishing this
 type of information.

Investment by U.S. mining companies can do much to
accelerate the economic development of Latin America. The
most direct contribution will be the location and develop­
ment of the mineral resources of this region. The immediate
benefit of production from these resources will be to pro­
vide a source of foreign exchange for the Latin American
countries. A certain amount of foreign exchange must be
available if these countries are to purchase the imports
essential to their continued existence as economic societies.

It is difficult to imagine what the present position of
the Latin American governments would be if the flow of rev­
enue from the mining companies over the past several decades
had not been available. It is ironic in this respect that
the foreign-mining companies have financed a substantial
share of the development of the socialistic societies which
now demand their demise. If the U.S. mining companies are
driven from Latin America, the revenue from their relin­
guished investments will continue to be available to the
governments. It is, however, probable that there would be
some reduction in revenue due to a loss of efficiency in
the operations.

The multiplier effect of mining investments in Latin
America is different from that of a typical manufacturing
industry of that region. During the era when the mining companies exported minerals in the form of ores or concentrates and imported essentially all of their operating supplies, the multiplier effect of the industry was nominal. As the companies began to employ more indigenous labor, to purchase an increasing proportion of their supplies in local markets, and to export more-refined products, the multiplier effect of mining and domestic processing operations became more significant. Without considering the impact of the mining industry as a nucleator of new industry, it is probable that the capital intensiveness of mining operations will continue to result in a lower multiplier effect relative to other forms of industry.

To summarize, there has been and will continue to be, circumstances permitting, an economic role for U.S. mining investments in Latin America. The significance of this role is indicated by the companies' past contributions to this region. The mining companies have:

1) Served as a major source of government revenues;
2) Provided a continuing supply of foreign exchange through the sale of mineral commodities abroad;
3) Brought large amounts of investment capital into the region;
4) Served as a nucleus for new industry;
5) Assisted in the training and education of nationals;
6) Increased, through the operation of the multiplier effect, the income level on both a regional and local basis; and

7) Participated in the development of the social infrastructure of the region.

Without doubt, the mining companies have also benefited from their investments in Latin America. The individual rates of return on the investments have probably ranged from the marginal to the spectacular; but in most instances the investments have been at least as profitable as the companies' investments in the United States. Another important benefit of the Latin American investments has been to provide the companies with an expanding supply of mineral commodities. This has enabled the companies to expand their markets at times in the past when ore reserves were not available in the developed countries. The technology, along with the favorable price structure, required to exploit the low-grade mineral deposits characteristic of the developed countries have only recently become available.

No one can say how much longer the opportunity will exist for salvaging the relationship between the Latin American governments and the U.S. mining companies. It appears that a substantial amount of irreparable damage has already been done. Both sides have sacrificed economic gain merely for the sake of emotional satisfaction. Therefore,
the problem remains of finding ways to reach an equitable accommodation between the governments and the mining companies. The number of variables involved precludes the existence of any single solution, but the following recommended actions will provide an approach to a solution.

The goal of the various countries should be the sufficient reorganization of social and political institutions so as to achieve the desired rate of economic growth. Implicit in any policy of this nature is the forbearance from political actions which may gain a few extra votes at a given time, but which in the long run will have adverse repercussions on economic development. A specific example of this is the use of the "Yanqui" as a scapegoat for problems which are generated internally.

The reorganization of social and political institutions, as described above, is the most important action to be taken by the governments. Also essential to the continued existence of foreign investors in Latin America is the governments' acceptance of properlynegotiated contracts as binding obligations. Such acceptance would be indicative of a desire to move towards a more advanced form of economic society.

The Latin American countries should realize that their future lies with the developed countries of the Western hemisphere. Overtures have been made by the Communist nations, but these have obviously been politically motivated.
It should be noted that countries such as the Soviet Union and Communist China are poor in investment capital and rich in their own internal supplies of minerals. This combination does not offer much for Latin America in the foreseeable future. The Western nations can offer both investment capital and markets for the mineral commodities which are produced.

The countries now have the upper hand in their relationship with the mining companies. This does not mean that the companies will have to adopt a subservient role if they want the relationship to continue. On the contrary, the recommended strategy for the mining companies is to drive a harder bargain with the countries. This would include provisions for the rapid payback of the initial investment; greater financial participation in the risk of a mining venture by the local governments; increasing the production rate so as to reduce the length of a company's stay in a country after payback has been achieved; and a refusal to provide many of the social services now expected of the companies. The essence of the above conditions is that it would allow the mining companies to return to mining as a business.

The mining companies should not fail to emphasize the advantages that lie on their side. The marketing of metals in the developed countries is still done under the auspices of the mining industry. For example, 80 percent of the
Copper fabricating in the United States is done by the major producers. An equally important advantage is the access that the major mining companies have to private-investment capital, not to mention equity capital. The institutional lenders will not often invest in a mining venture that is not sponsored by a major mining company. In this regard, it does not appear that the multilateral loan agencies will be able to take the place of the private lenders for many years to come.

An opportunity for considerable mutual gain exists if the countries and the mining companies can preserve and then improve their present relationship. It is doubtful that either party will be able to match their current gains if the relationship is terminated. Termination of the relationship would reduce the profitability of the companies, but the effect on the countries would in the long run assume much greater proportions. In the final analysis, the companies will have lost a few mines and the countries will have lost their stake in a greater economic future.


47. Mining Engineering, 1966, Institutional factors affecting investment in Latin America: Mining Engineering, v. 18, no. 7, p. 188-190A.


