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THE CHANGING ROLE OF INTERNATIONAL INVESTMENT IN THE MINING SECTOR – THE CASE OF BOLIVIA*

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ABSTRACT

Nationalization of mining operations was a common practice in a number of Latin American countries during the 1960's and 1970's. There was a feeling that state enterprises could better serve the national interests. However, most of nationalized mining operations have proved to be an economic and technological setback.

At present, administrations of state mining enterprises in Bolivia and elsewhere in Latin America will have to determine what kind of structural changes are required for a better utilization of their mineral resources. They face chronic need of investment funds and modern technology and know-how. Some governments - Bolivia among them - have already started very active privatization programmes. Many loss-making state enterprises are difficult to sell. Those which are currently profitable will be the easiest to dispose of, but governments will be less anxious to do so. Anyhow, developing countries' needs of capital, technology and commercialization channels are far beyond their own capacity.

Although the degree of industrial countries' mineral vulnerability differs markedly, import dependence in the supply of essential minerals and metals will tend to grow in the future. Industrial countries' large mining corporations are, therefore, anxious to have access to mining operations in developing countries.

A coherent mineral resources policy should incorporate the needs and benefits in such a way that cooperation between large mining corporations and the host country's governments may be beneficial to both parties.

KEY WORDS: Mining sector, investments in mining, mineral sector, state mining enterprises, privatization.

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1. INTRODUCTION

In the beginning of this century, when most of the mineral resources of the underdeveloped world had not yet been exploited, the willingness of foreign companies to come to a country and to develop local mineral deposits was seen as a necessary and positive action. These companies, apart from capital, generally brought with them an efficient technology, management and the organization for further processing and marketing of the ores, concentrates and metals.

As the profitability of operations became more apparent and the foreign companies grew increasingly richer and more influential in local politics, frictions with national governments started to develop. In most of the cases, the governments demanded greater participation in the companies' revenues through taxes, royalties, export and import duties and other benefits. This tended to reduce companies' profits and caused a number of conflicts, sometimes violent reactions against foreign capital.

Different measures were adopted by host countries like pure confiscations or nationalizations. Particularly after World War Two nationalization of mineral resources was a common practice in Latin American countries (Bolivia, Peru, Venezuela, Chile). The basic reason for nationalizations was the feeling that state enterprises could better serve the national interests than private foreign enterprise, because the latter pursued only maximization of their profits. The process created the upsurge of the economic nationalism.

During the last fifteen years, the process of nationalization of mineral resources has gradually lost strength. The takeover of the companies has generally proved to be a technological and production setback and the economic nationalism strategy to suit rather poorly to the liberal market oriented model and structured division of labour of today's world. When managed largely by a political rather than technical or economic criteria, state owned mineral enterprises in Latin American countries, showed a tendency to diminishing efficiency and productivity.

This situation results from a number of political, economic and social reasons. Foremost among these is the fact that capital requirements for development of mineral resources are very much beyond the reach of most developing countries. The exploitation, prospection, and preliminary work required to determine the economic possibilities of a deposit before mining can start, demand heavy capital investment. Most prospects can not be fully operated until development work has been undertaken over a number of years and after that they may turn to be unprofitable. Such risky investments are difficult for government in developing countries to justify in the face of numerous development projects competing for scarce funds. The problem may of course be one of appropriate planning of priorities.

A second reason for this situation is that the technological know-how needed to operate large mining projects is lacking in most developing countries. The slow progress in the local development of technological know-how results partly from a traditional attitude of foreign companies to ensure protection against nationalizations. Many developing countries with economies based markedly on mining continue to depend on the transfer of technological knowledge from industrial countries.

Apart from these reasons, there is the factor of international politics. An interruption in the supply of mineral raw materials and fuel could have serious economic and strategic implications for industrial countries. Therefore, they are interested that the sources of these minerals and fuel are under the control of friendly governments. The emergence of a radically nationalistic government in a developing country with important resources may be seen as a threat for the flow of strategic raw materials and create conditions of unrest of world-wide consequence.

It is, then, understandable, that while many developing countries oppose the excessive influence of foreign capital on their economy, they are still very cautious about the structural changes which should be made, because so far nationalization processes have been marked by losses in production and efficiency and above all in tax payments. Economic nationalism in the mineral sector may have a moral justification if it improves the economic condition of a nation. This has not occurred in the Bolivian case.

2. POLITICAL SITUATION

Bolivia is a very large and scarcely populated country. Its area is as large as the combined areas of Finland, Sweden and Norway, with a population of 6.5 millions.

Bolivia is composed of three major geographical regions: the altiplano (highlands), the yungas (valleys and tropical highlands), and the oriente (eastern lowlands). Although most of Bolivian history has been concentrated on the relatively narrow highlands, the eastern lowlands constitute 70 % of the national territory. And, while mining occurs mostly in the highlands, the eastern regions have important reserves of oil, natural gas, gold and wood and present optimal conditions for agriculture and cattle.

Bolivia has one of the most tumultuous histories in Latin America. The result of this has been constant revolts, nearly 160 presidents in 165 years of national independence, and a tendency to rely on the military to rule. (See Annex 1.)

On April, 1952, the MNR[1] led an open revolt against the ruling Junta. The new government implemented some fundamental measures within a short period. Of these, the most important were:

- nationalization of the most important mining properties and creation of a state mining corporation (COMIBOL) to administer them.
- basic agrarian reforms for the altiplano region where two thirds of the population lived.
- universal suffrage rights.
- creation of a national labour federation (COB).

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1. MNR: Revolutionary Nationalist Movement; a coalition of mining workers and progressive middle class.

- implementation of worker's control in COMIBOL mines with a veto power over all decisions.

Soon after those measures, mining production declined as workers encountered massive problems in the administration of an industry which had been recessing for over twenty years without capital input. Severe inflation and general economic disruption resulted from government policy. The cost of living rose from an index of 100 in 1952 to 2 300 only four years later[1]. Because inflation greatly affected the middle classes, they soon broke their alliance with the mining workers.

Since then the battle over political power has been particularly damaging since it has occurred in the context of a secular decline in the earnings of Bolivia's key mining sector. As stressed by J. Sachs[2] the state has played a very large, and apparently successful, role in spurring economic development in Japan, Korea, and Taiwan. What has been distinctive in the Bolivian case, however, has been the fundamental disjunction between the weak capacity of the state on the one hand, and the responsibilities invested in the state, on the other hand.

The result of the political instability has been the inability of the key political actors to agree on a sustained strategy for national economic development, and an inadequate economic environment to long-term investments.

The government of Paz Estenssoro (1985 - 1989) introduced radical structural reforms. The present government has not changed the direction of the economic policy: the market is required to determine exchange and interest rates, prices and wages in the private sector; the peso (Boliviano) remains

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1. Zondag, Cornelius: La economia bolivana, La Paz, 1965.

2. J. Sachs and J. Morales: Bolivia's economic crisis, Working Paper NBER, Cambridge, 1988.

freely convertible and external investors are welcomed and sought. The public sector deficit is beginning to come under control and is being reduced by raising more taxes, privatizing state corporations, restraining wages and salaries and cutting government employment. The private sector is seen as the engine to drive the economy forward and is given support, while the state's role is restricted to protecting the consumer against monopolistic practices. Barriers to international trade have been reduced and export diversification, particularly minerals, encouraged. In return for adopting such an austere economic policy, which has created much new poverty amongst an already poor population, Bolivia has received the support of the International Monetary Fund and other multinational and bilateral sources of official credit, to help restructure the economy[1]. The country is so beholden to the IMF and the goodwill of foreign creditors that she has very little room for independent manoeuvre.

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1. Mining Annual Review, 1990.

3. ECONOMIC SITUATION

After a period of sustained economic growth during the 70's, between 1981 - 1985 Bolivian GDP fell. In August 1985, a new economic policy was implemented by the government to carry out structural changes in order to stabilize the national economy and introduce a tax reform.

In 1987, the government promulgated an economic revival decree that supplemented the measures taken in the two previous years. The decree provided for institutional reform aimed at facilitating the implementation of an ambitious investment programme over 1987 - 1989. It also included provisions designed to strengthen the private and public financial intermediate systems and to facilitate access to credit for small and medium business in the agricultural and mining sectors.

As a result of these economic measures, the government was able to stop an inflationary spiral which had reached an unprecedented annual rate of over 21.000 per cent. Today, Bolivia's rate of inflation is one of the lowest in Latin America (16.5 per cent in 1989).

The successful economic policy of the previous government was later complemented by the new administration headed by Mr. Paz Zamora who was elected president on August 1989. Real GDP rose by 2.4 per cent in 1989, and it is expected to grow about 3.0 % during 1990.

Mining output, including natural gas and petroleum, rose by 16 per cent. Public sector investment was weaker than programmed in 1989 because Argentina postponed payments for natural gas imports from Bolivia. Private sector investment was restrained, partly as a result of the political uncertainty surrounding the general elections. The new administration increased the prices of energy and transport and imposed new taxes soon after taking office in August 1989. Inflation rose and reached 17 per cent during the first months of 1990. However, monthly increases in inflation slowed to about 1 per cent in March.

Since late 1988, traditional exports, particularly minerals, increased significantly raising total exports by 18 per cent. The trade balance registered a small surplus in 1989, the first time in five years. The stock of external debt fell from USD 4.7 billion in 1988, equivalent to nearly 7 times total exports, to USD 4.1 billion, or 5 times total exports, at the end of 1989.

Table 1. Bolivia: economic indicators 1987 - 1991[1]

DOMESTIC ECONOMY	1987	1988	1989e	1990f	1991f
Real GDP % change	2.1	2.8	2.4	3.0	4.0
Real domestic demand % change	4.6	-0.2	-1.4	2.7	4.6
Change in net foreign balance % GDP	-2.3	3.0	3.8	0.5	-0.2
Consumer prices % change	10.7	21.5	16.6	12.0	10.0
EXTERNAL ECONOMY (USD million)					
Trade Balance	-128	-48	10	60	40
Merchandise exports	519	543	640	730	800
Merchandise imports	-646	-591	-630	-670	-760
TERMS OF TRADE (% change)	-4.7	-12.9	-1.1	6.8	-0.6
EXTERNAL DEBT (USD million)					
Total External Debt	4998	4743	4104	4268	4607
% GDP	111.2	98.7	83.1	83.5	84.0
% Exports goods, services & income	750.0	688.3	511.9	476.2	467.1

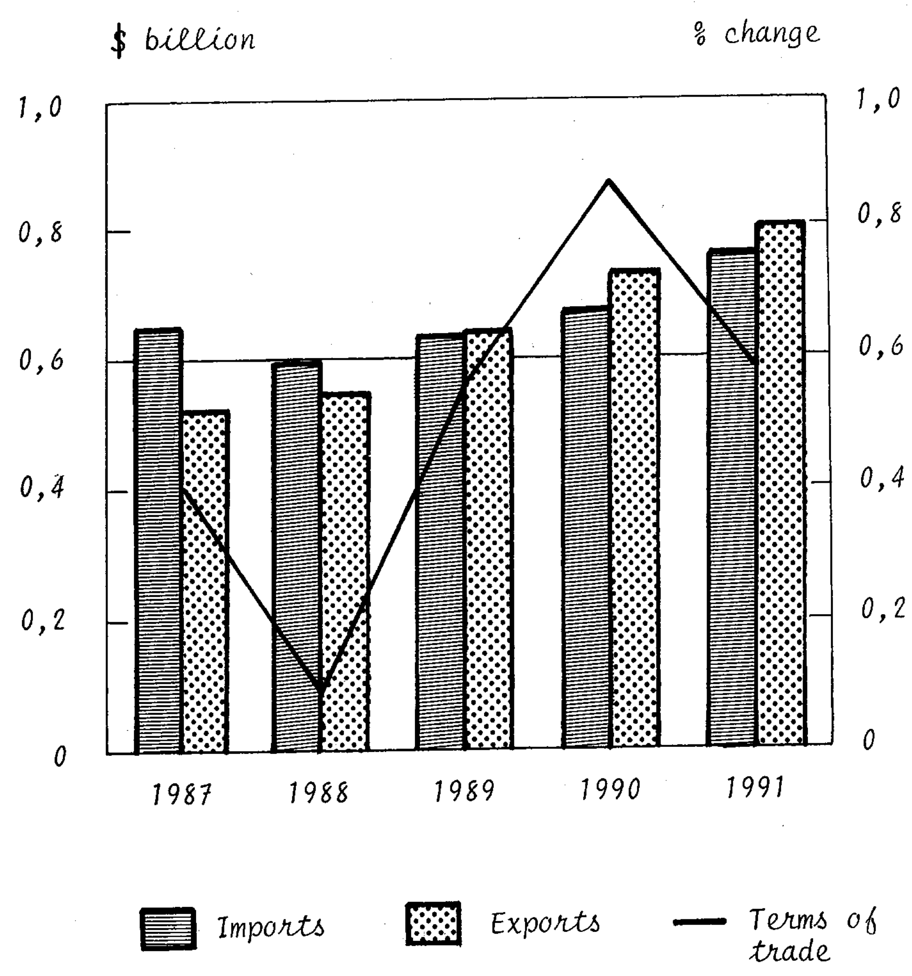
e = estimated
f = forecast

1. International Finance, 1990.

The continuation of the successful price stabilization programme and the economic recovery will depend on the political stability required to implement the measures taken by the government. Basically, these measures are aimed at restoring the financial sector to solvency and ensuring a level of exports that would bring the balance of payments to a more manageable position.

A recovery in domestic demand, particularly investment is expected to lead to faster output growth in 1991. The more stable political and economic environment has rekindled international interest in the mining sector, and the World Bank consultative group for Bolivia envisages $300 million yearly in grants and concessional loans on a net basis over the next three years. Provided that these official funds materialize and enable the financing of the ambitious public investment program without resort to central bank credit, inflation is projected to remain at about 10 per cent per year.

Figure 1. Merchandise Trade



Source: International Finance, 1990.

Driven by consumer and investment demand and the further lowering of tariffs, imports are projected to grow at an average annual rate of nearly 10 per cent in 1991. Nevertheless, a strengthening of mineral prices should lead to higher exports and modest trade surplus. Official transfers are expected to climb as bilateral financing is increasingly provided in the form of grants rather than loans.

With respect to the external debt, in March 1990, the Paris Club agreed to reschedule Bolivian debt to its bilateral creditors along "Toronto terms", allowing for substantial debt and debt service reduction on about one-third of the country's external obligations. The decision made by the Paris Club represents the first time that such concessions have been extended to a country outside Sub-Saharan Africa.

In addition, long-term and low-interest loans are being obtained from bilateral sources. For example, the Rep. of Germany announced a support package of new grants and loans. The loans will have a 0.75 per cent interest rate, with repayment to be spread over 40 years including 10 years grace.

Finally, the restructuring of the Central Bank of Bolivia and other financial institutions that started in 1987 is permitting not only a gradual strengthening of those units, but also a restoration of confidence on the part of savers who have, traditionally, preferred to move their money to foreign banks.

The medium-term prospects of the economy will continue to be tied primarily to progress made in the extractive industries (minerals and hydro-carbons) and agriculture. The amendments made to the Mining Code and the approval of the new Investment Law will facilitate the creation of semi-state and joint venture enterprises that permit foreign investment, both in exploration and production and commercialization. The diversification of mining, with emphasis on the exploitation of complex ores, gold, silver and lithium, together with the expansion of natural gas exports to Brazil, will tend to give these activities greater importance as generators of foreign currency.

4. INVESTMENT POLICY

In 1990, the National Congress and the Bolivian Government approved the New Investment Law and the Export Promotion Law. These laws grant benefits and guarantees to foreign and national private investors and apply to manufacturing, mining, agriculture, renewable natural resources, construction, tourism and services.

There are no restrictions to foreign investment in Bolivia. Free remittance of funds is allowed. Furthermore, there is no discrimination against foreign private investment, and there are no foreign currency exchange controls. The current law allows 100 per cent foreign ownership. There are no restrictions on imports and it is not necessary to request prior authorization or import permits.

Recently the Government announced a plan designed to provide exporters with a 10 per cent reduction in export customs duty (Certificado de Reintegro Arancelario - CRA), and consideration is being given to lowering duties on imported industrial raw materials. Another incentive for international investors derives from Decree N° 21660, whereby the Bolivian Central Bank has been authorized to implement a debt/equity swap system, rewarding investors with a 50 % premium.

The Overseas Private Investment Corporation (OPIC) has signed an investment insurance agreement with the Bolivian Government. This agreement provides eligible investors with OPIC's complete program package. OPIC's programs are available for new business enterprises or expansions, including political risk insurance, direct loans to small business and cooperatives, a variety of pre-investment programs, and other types of financing assistance through direct loans and loan guarantees by private U.S. financial institutions for U.S. investors in Bolivia.

Bolivia has also signed bilateral investment guarantee agreements with the Federal Republic of Germany, Switzerland and Great Britain. In the near future, Bolivia will also become a beneficiary of investment guarantees deriving from MIGA-2 Agreement with the World Bank. The participation of Bolivia in this multilateral Investment Guarantee Agreement with the World Bank will guarantee investments deriving from member countries of the World Bank.

Basically, the New Investment Law includes regulations on the following aspects:

- Capital may enter and leave the country without any restrictions or any type of taxation.

- Profits remitted to beneficiaries overseas, such as dividends, interests, royalties and other may be transferred without any restrictions paying only a 10 % tax on the amount remitted.

- Investment restrictions in all economic sectors are non-existent, with the exception of the exploitation of hydrocarbons which requires legal operating contracts with the National Petroleum State Entity (Yacimientos Petrolíferos Fiscales Bolivianos - Y.P.F.B.).

- There are no restrictions on imports and it is not necessary to apply for import permits. Import duties are fixed, 5 % for capital goods for a term of 2 years starting on January 11, 1990 and 17 % for any other goods.

- There is only one exchange rate, with unrestricted freedom to buy and sell hard currency.

- Interest rates are not fixed or administratively regulated.

- There is no discrimination against foreign companies and foreign investments are subject to equal treatment as nationals. Investing in Bolivia does not require being associated with national enterprises.

- Companies are levied with a fixed tax rate, equivalent to 3 % on their net worth, payable annually 120 days after the end of the year.

- The Customs Duty Refund (Certificado de Reintegro Arancelario - CRA), constitutes a strong incentive for exporters, through which the government refunds the exporter 10 % on the full F.O.B. export value, after cost deductions in foreign currency[1].

1. Source: Confederación de Empresarios Privados de Bolivia, and Ministerio de Industria y Comercio, 1990.

5. MINING SECTOR

Mining has been the most dynamic sector in Bolivian economy and it has also been the only alternative for internal formation of capital for many years. Its significance, however, can not be evaluated from the point of view of its direct contribution to the GDP.

Table 2. Bolivia: Contribution of Mining to the GDP

	1980 - 1989 Mining Sector, %
1980	10.3
1981	9.8
1982	8.9
1983	8.7
1984	7.7
1985	6.4
1986	4.6
1987	4.0
1988	6.5
1989	8.9

Source: Central Bank of Bolivia.

The contribution of mining to Bolivia's GDP in 1988 rose for the first time in a decade, although it still remained small by historical standards. Between 1980 and 1983 mining's contribution to the economy averaged 10 %; in 1987 it was only 4 %. Preliminary figures for 1989 suggest that the value of mineral production increased by a third compared with 1988 and that its share of the GDP rose from 6.5 % to 8.9 %.

The contribution of the mining sector to employment, just as its contribution to the GDP, is very small compared with its significance in the formation of aggregate demand, government income, and the generation of foreign exchange. Employment created by the mining activity reached 52 000 persons in 1989, which represents 3.1 % of total employment. In 1980, mining employment represented 6.0 % of total employment. This is due to the high intensity of capital to labor. The share of mining employment in total employment, however, would increase markedly if the high level of under-employment and marginal employment were excluded from total employment.

The significance of the mining sector for the Bolivian economy becomes much clearer when considering its contribution to foreign trade. Mineral production has been traditionally more than 50 % of the total exports, occasionally around 90 % of the exports. Tin alone still accounts for almost 25 % of exports, in spite of a drastic reduction in production.

Table 3. Bolivia: Relative Share of Minerals in Total Exports

	Mineral exports (millions USD)	As % of total exports
1970	204.7	89.5
1980	641.1	61.9
1981	556.0	55.9
1982	419.4	46.7
1983	347.3	42.5
1984	364.0	46.5
1985	263.8	39.2
1986	196.6	30.9
1987	207.2	32.3
1988	276.0	n.a
1989	379.0	n.a

Sources: Central Bank of Bolivia and Mining Annual Review.

5.1. Mineral Reserves

Bolivia has important mineral resources also on a global scale. In the western part of the country some of the biggest metallogenic deposits of the Central Andes have been discovered during the last two decades. There are vein-type deposits of tin, zinc, lead-silver, bismuth, lead-zinc, gold and antimony. Recent studies show that Cerro Rico mountain in Potosi - famous world wide in colonial times - constitutes one of the most attractive prospects for exploitation of silver and tin, with proven reserves of 633 million tons, with a grade of 3 to 7 ounces/ton of silver and 0.3 % of tin.

In the Bolivian highlands, large volcanic sulphur deposits have been detected, particularly in the western range of the Andes. These geological occurrences are rich in gold, tin, tungsten, lead, silver, zinc, manganese dioxide and antimony.

The salt lake of Uyuni in the south-west of the country contains a high concentration of lithium, as well as significant volumes of potassium, boron, and manganese salts and other evaporitic minerals. It has been estimated that more than 50 % of the world's lithium reserves are contained in the Uyuni salt lake.

Table 4. Bolivia: Mineral Reserves (1000 tons of metal content)

	Tons	% of world reserves	Value in situ (million USD)
Tin	395	12.1	2 692.7
Tungsten	75	2.1	331.1
Antimony	105	6.4	201.5
Zinc	555	0.2	428.1
Lead	110	0.1	53.8
Silver	6.6	7.2	1 258.8
Bismuth	5	5.3	33.8
Gold (tons)	220	n.a	3 126.0
Sulphur[1]	100	n.a	..
Lithium[1]	5 400	63	..
Total Value			8 125.8

Sources: US Bureau of Mines. Mineral Commodity Summaries, 1988 and Mineral Facts and Problems, 1985.

1. Potential resources.

In the eastern region there are extensive out-croppings of the Brazilian pre-cambrian shield, similar to those mineral deposits being exploited in Brazil. There are gold deposits associated with green-stone belt-type rocks, tin and alluvial gold, precious and semi-precious stones and lead-silver-zinc deposits in addition to large iron and manganese resources.

5.2. Production of Minerals

The Bolivian mining industry is beginning to lift itself out of the deep recession of the mid 1980's. In 1988 - 1989, production rose, the spectrum of minerals produced became more balanced, and the sources from which that production was drawn were more varied. The industry is now more responsive to market forces and it is less dependent upon a single metal price (tin) than in the past. Figures for 1989 show that production of tin, zinc, silver and gold have increased compared with 1988.

Table 5. Bolivia: Mineral Production (thousand tons)

	1979	1988	1989
Tin	27.7	10.5	15.8
Zinc	50.2	57.0	74.8
Silver (tons)	178	232	295.0
Lead	15.4	12.5	15.7
Antimony	13.0	9.9	9.2
Bismuth (tons)	307	18	n.a
Tungsten	3.4	1.0	1.2
Gold (tons)	0.9	4.9	6.5

Sources: Boletin Estadistico. Ministry of Mines, various issues.

The reconstruction of the state sector of the mining industry continues and the economic prospects of Comibol (the Mining Corp. of Bolivia) look less gloomy than in any of the last dozen or so years. The Corporation continues to employ between 6.000 and 7.000 men[1]. Basic wages and benefits in kind have been significantly reduced in real terms and the

1. Mining Annual Review, 1989.

cost structure of the Corporation brought almost in line with reasonable earnings expectations.

A number of Comibol's former tin mines have been partly modernized and have switched production to associated metals, notably silver and zinc. The discovery of a rich silver-tin vein in a cross cut at the Cerro Rico brought a surge of hope to the mines of Bolivia's oldest and possibly poorest mining region.

Work continues on analyzing the complex silver ores of Bolivar mine. Full development would cost in the order of $86 million of external funding and a further $30 million from Comibol. Reserves are likely to be adequate and the expectation is that the mine would produce annually 3.900 tons high grade lead-silver concentrates over a 10-year period, together with some zinc concentrates. The major difficulty will be resolving the complex metallurgical problems the ore poses. Outokumpu has shown interest to develop the Bolivar project, particularly with respect to the technological transfer.

The Lithium Corp. of America (Lithco) signed a draft agreement with the Bolivian Government to work some 600 km^2 of the Salar de Uyuní for lithium carbonate: the Salar has the largest reserves (5·5 Mt) of lithium in the world, plus an estimated 110 Mt of potassium and 3·2 Mt of boron. The project demands an investment of $40 million[1]. The contract has to be ratified by Congress and has run into some opposition: in particular, regional interest groups are arguing for more substantial local benefits.

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1. Mining Annual Review, 1990.

6. MINING POLICY

The lack of any coherent and adequate mining policy was keenly felt during the period 1980 - 1985. Capital was being diverted and invested in non-productive sectors of the economy. The archaic tax system and fiscal options[1] put a brake on expansion of the Bolivian mining sector. Despite the exceptionally high market prices for tin during the first half of the 80's, production remained low compared to levels between 1975 - 1980.

One of the main reasons for the decline was a taxation system without any integrated planning for the sector. The Bolivian Mining Corporation was able to defer payment of taxes while the private sector had to pay them on time. Moreover, fiscal options covered a third of the country, paralysing any possible development as far as geological exploration was concerned.

In the face of this situation emphasis has been laid on the necessity for a radical change in the mining taxation system. New regulations under the new Mining Code were made in August 1990. The fundamental elements of these measures embody a new tax structure and incentives for establishing joint-ventures with State participation or companies fully owned by foreign capital. The new regulations recognize the right to transfer capital and to remit profits. Authorization by the government has been granted for foreign investment in all activities related to the mining industry: exploration, extract mining, metallurgy and commercialization.

There is a growing hope in Bolivia for improved efficiency and productivity at the state mining corporation and for greater international confidence in the country's mining industry as a whole, under the present government.

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1. Fiscal option is an area where exploration and mining activities are permitted to the state corporations only.

The government's mining policy for the 1990's centres around two basic strategies: creating a more attractive investment climate for national and foreign companies, and ensuring greater efficiency and continuity at the state owned enterprise, Comibol. There are plans to develop Comibol as a sort of decentralized corporation with specific responsibilities for identifying and promoting new metals and minerals projects, and carrying them in a way that they become operational. The various operating companies which function under the central organization will conduct their own project identification, engineering work, promotion and marketing.

With less than 5 % of Bolivian mineral resources currently being exploited, there is certainly plenty of scope for Comibol as far as project development is concerned, and an improvement in the investment climate will no doubt help in this task.

The new mining policy is aiming at various investment incentives including a single exchange rate for all exporting sectors. In the past, the distortion between official and unofficial exchange rates hit mining companies very hard. In addition, a reduction in import-export tariffs and taxation rates has been approved to improve productivity at existing operations as well as encouraging new investments. There have been also changes in the tax laws easing restrictions on the repatriation of capital, and incentives to promote reinvestment of profits in the national economy. The mining industry is also hoping to attract joint venture interest from the private sector both at home and overseas. Such joint ventures are still few. However, international financial confidence in the country is continuously growing and being restored.

Overseas interest in Bolivia's mining industry is vital if it is to attract the capital, technology and expertise to exploit the mineral resources which have been inactive in recent years. The expansion plans of the government anticipate some $600 million investments in mining during the next five years of which $450 million would come from private overseas investors. Both the government and the industry see one of the keys for opening the door to overseas capital as changes in the mining code and a liberalization of the investment laws.

In January 1990 the President promised to present to Congress within 90 days the framework of a new mining code. The new code is expected to abrogate the article 235 of the Constitution which reserves to the state the rights to work minerals within 50 km of a frontier. These areas are expected to be opened to others, including foreigners, to exploit. The right to own these deposits by the foreigners is not necessarily permitted (see annex 3).

Perhaps over half of the foreign interest in Bolivia's mining potential is focused on the existing state reserves. Comibol is moving a producing company towards a holding company. Comibol's main assets are not its working mines, economically marginal and with limited reserves, but its 800 or so unexploited holdings whose potential is only hazily known and whose development is beyond the strained resources of the Corporation.

As an example of the new investment policy the Australian-US company Minproc Resources has decided to invest $70 m in the Bolivian mine of Colquiri, situated 240 km south of La Paz[1]. The deal is the largest ever to be signed between the state mining corporation Comibol and a private firm.

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1. Metal Bulletin, November 5, 1990.

7. STRUCTURAL CHANGES OF INTERNATIONAL INVESTMENT IN THE MINING SECTOR

In several Latin American countries - Bolivia among them - the growing role of the state in the national economy was a common strategy during the 1950's and 1960's. Scientists and planners of this region associated market economies with neo-colonial status involving an intensive foreign power. In contrast the role of the state had considerable sentimental appeal. In addition most of the emerging political leaders were intellectuals suspicious of the market forces who tended to have exaggerated confidence in the powers of governmental administration.

A significant feature of recent economic policy in a number of Latin American countries has been the privatization policies by previously central planning oriented governments. Mexico, Peru, Argentina, Brazil and Bolivia have put state-owned enterprises up for sale. Where outright sales of nationalized enterprises are rejected the state's role in the economy is reduced by closures of loss-making activities, cuts in employment in overstaffed areas and the introduction of private sector funding through share (an example is Bolivia's Comibol) or bond issues.

However, many loss-making state enterprises will be difficult to sell. Those which are currently profitable will be the easiest to dispose of, but governments will be less anxious to do so, particularly where they may effectively be monopolies. The most likely outcome is a sale to a handful of rich domestic investors - often closely related to the ruling politicians, and thus laying the government open to accusations of corruption.

Another possibility is an influx of foreign capital, but even if it is forthcoming in adequate quantities, governments are likely to be wary of this. However, there may be opportunities for joint ventures, perhaps with the domestic government retaining a majority or even minority shareholding. Such operations would have the extra benefits of giving access to outside technologies and stimulating more export-oriented attitudes.

The consumption of metals per unit of output in industrial economies probably will not decline as fast as anticipated a few years ago. According to latest prospects[1], metals demand is expected to grow at significantly higher rates during the 1990's than those contemplated during the early 1980's, even though this will still only be at a moderate level.

Further, the mining industries in industrial countries have not responded to the latest price boom with their characteristic expansion of capacity.

Mining investment in industrial countries does not seem to show many attractive possibilities in the near future. Rapid depletion of commercial mineral deposits; energy costs as well as increasing opposition to nuclear energy policies in Europe, and environmental constraints, have deferred mining projects in most of the principal mineral producing OECD countries. Although the degree of industrial countries' mineral vulnerability differs markedly, import dependence from developing countries in the supply of essential minerals and metals tends to grow.

Industrial countries' governments and large mining corporations are, therefore, anxious to have access to mining operations in developing countries. On the other hand, developing countries' needs of capital, technology and commercialization changes are far beyond their own capacity. A sound mineral resources policy should therefore incorporate planned exploitation in such a way that cooperation between large mining corporations and the host country's government

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1. World Bank: Structural change in Metals Consumption, Washington, 1989.

or private local companies may be beneficial to both parties. The needs and expected benefits, as well as what can be offered, for a foreign investor intending to develop and operate a large mining project in a developing country, should be the following:[1]

Foreign Investor - Mining Firm:

Needs/Wants from Host Country

- Stable supply of raw materials of high-grade quality
- Cheap labor
- A minimal economic infrastructure
- Stable investment environment - politics, social, and taxation
- Protected local markets for products
- Acceptable after tax return on investment; ability to ship profits abroad
- Complete control over operations and corporate policies
- Incentives for development, (depletion allowance, accelerated depreciation).

Can Offer to Host Country

- Capital investment for exploration and development
- Technical and managerial know-how and expertise
- Established marketing channels
- Training and educational programs
- Injection of new income sources to the host country - local currency and foreign currency
- Opportunity for linkages
- Assistance in expanding the economic infrastructure.

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1. Rudamsky, O.: Mineral Economics, Colorado School of Mines, 1986.
United Nations, Economic and Social Council: Mineral Resources, Salient Trends and Issues, New York, 1985.

Host Country

Needs/Wants from Investor

- Capital inflow for development; employment opportunities
- Maximize present value of revenue inflow to the economy
- Opportunities for training in modern technology and management practices
- Inflow of foreign currency
- Due Diligence in development and operations; some say on policies
- As much intensification of processing locally as possible
- Priority for serving the local markets
- At least partial ownership
- Minimize potential adverse effects on the environment.

Can Offer to Investor

- High-grade ore deposits; large hydrocarbon reserves
- Cheap labor
- Secured local markets for the output
- Some infrastructure; potential for linkages
- The possibility of partial low-interest debt financing of the investment through loans from international financial institutions (e.g. World Bank, IMF, Consortium of international banks).

A liberal attitude may be necessary from both sides, but this is not necessarily opposed to the policy of participation and maximization of income earlier described. There is no danger in such policy as long as the developing countries have clear vision of their long term objectives and needs.

Obviously, the answer to the direction of economic policy is not found in blind reliance on the market process. But countries must now re-examine the economic functions of government and rebalance the public and private sectors in a way that will more thoroughly exploit the potential private enterprise and competitive markets.

ANNEX 1

Brief Political Chronology, 1952 - 1990

1952	Bolivian Revolution, carried out by Nationalist Revolutionary Movement (MNR), under leadership of Victor Paz Estenssoro.
1952-1956	Presidency of Paz Estenssoro; sharp rise in inflation, to 180 % in 1956.
1956-1960	Presidency of Siles Zuazo (MNR); economic stabilization under U.S.A. and IMF supervision and finance.
1960-1964	Second presidency of Paz Estenssoro.
1964	Third presidency of Paz Estenssoro; Paz Estenssoro deposed in military coup led by Barrientos Ortuno.
1964-1966	Co-presidency of Ovando Candia and Barrientos Ortuno.
1966-1969	Civilian presidency of Barrientos (dies in plane crash, April 1969).
1969	Vice President Siles Salinas becomes president, removed in coup by Ovando Candia.
1970	Ovando Candia deposed by Gen. Miranda. Miranda removed by Gen. Juan Jose Torres.
1971	Torres rules left-wing radical government. Deposed in coup, jointly sponsored military, and MNR.
1971-1973	General Hugo Banzer Suarez rules with MNR support.
1974-1978	Banzer presidency under military rule; MNR withdrawal from government in 1974.
1979	Pereda becomes president in election marked by accusation of fraud. Pereda deposed by Padilla, who calls for 1979 election.
1979	Election results in stalemate (no majority); Senate President Walter Guevara Arze serves as interim president. Guevara deposed by Col. Natusch Busch; Busch resigns in 15 days. President of Chamber of Deputies, Lidia Gueiler, becomes interim president.

1980	Electoral stalemate. Gueiler deposed in coup by Maj. Gen. Luis Garcia Meza.
1981	Garcia Meza forced to resign in favour of Gen. Bernal. Gen. Bernal resigns in favour of Gen. Torrelio.
1982	Gen. Torrelio deposed in coup by Gen. Vildoso Calderon. Congress reconvenes; names Siles Suazo as president.
1985	Siles Suazo announces early elections. Paz Estenssoro becomes president. New economic policy (NEP) declared on August 29, 1985.
1989	General election in May. Since no candidate won an outright majority, Banzer withdrew from the race and gave his support to Jaime Paz. A coalition government was formed. The new government's policy is essentially a continuation of the NEP of its predecessor.

Sources: J. Sachs and J. Morales; and Bolivian newspapers.

ANNEX 2

Corporacion Minera de Bolivia - Comibol

Comibol is the national mining company responsible for the exploitation and administration of the mineral resources of the Bolivian State since 1952.

Administratively, it is autonomous and has a holding-type decentralized administration. It is made up of 5 Mining Subsidiaries: La Paz, Oruro, Potosi, Quechisla and Oriente, and 2 Metallurgic Subsidiaries: Vinto and Karachipampa. The production structure of the mining Subsidiaries is as follows:

Empresa Subsidiaria Oruro:
Huanuni Mining Centre (Sn)
San Jose Mining Centre (Pb-Ag)
Santa Fe Mining Centre (Pb-Ag-Zn)
Poopo-Machacamarca Mining Centre (Pb-Ag-Zn)
Bolivar Mining Centre (Pb-Ag-Zn-Sn)
Oruro Metallurgic Company (Sn)

Empresa Subsidiaria La Paz:
Colquiri Mining Centre (Sn-Zn)
Caracoles Mining Centre (Sn)
Viloco Mining Centre (Sn)

Empresa Subsidiaria Quechisla:
San Vicente Mining Centre (Zn-Ag)
Tatasi Mining Centre (Pb-Ag-Zn)
Chorolque Mining Centre (Sn)
Bismuth Foundry (Bi-Ag-Au)
Telamayu (Support Services)

Empresa Minera del Oriente:
Mutun Mining Centre (Fe)

Industrial Plants:
Pulacayo Industrial Plant
(Parts Manufacturing)
Rio Yura Hydroelectric Plant
Oruro Industrial Plant
(Parts Manufacturing)

1. San Jose Mining Centre

San Jose Mining Centre is located in the Cercado Province of the Department of Oruro, at 3.800 mts. altitude above sea level. It is a polymetallic deposit; filonian of hydrothermal origin. Its present productive capacity is 400 tons per day (TPD). It produces silver, lead, antimony and tin minerals. Its reserves reach 5.5 years of life. It has been projected to increase its productive capacity to 600 TPD. This increase will be executed through the introduction of a new system of exploiting larger volumes and through new technology on drilling and transportation equipment. This mining center has achieved success in the concentration process through the introduction of Columnar flotation Cells.

2. Colquiri Mining Centre

The Colquiri Mining Centre is located in the Inquisivi Province of the Department of La Paz. It produces Tin and Zinc minerals.

The recently rehabilitated Colquiri concentration plant, treats 1.000 tons per day, 26.000 tons per month.

The Andean cordillera, holds most of the tin deposits of the country. In the Tres Crudes and Santa Vera Cruz areas, and in the surrounding 105 square kilometers, 140 mines with wolfram, tin, copper, lead, silver, antimony, and gold minerals have been registered. The tin-zinc deposits of Colquiri are located 40 kilometers southeast of the Santa

Vera Cruz Range.

3. Unificada Mining Centre

The Unificada Mining Centre is located in the city of Potosi (Cerro Rico) at 4.794 of altitude. The "Cerro Rico" is a hidrothermal silver-tin deposit which has been exploited before Colonial times. It is one of the few places in the world where the structure of a dacitic stock can be observed. The present production of Unificada is tin, zinc and silver minerals. Its production capacity reaches 270 TPD.

Positive and probable reserves, existence in finished and active levels, reach 7 years of life. Future planned activities for this center include diamond drillings to cut off veins at different levels. The concentration system for the treatment of complex mineral is selective flotation, the sole production being zinc-silver concentrate.

4. San Vicente Mining Centre

The San Vicente Mining Centre is a polymetallic deposit; located in the Department of Potosi, it produces silver and lead. Production capacity is 400 tons per day.

Reserves of solid mineral reach 1 million tonnes, with 3.97 DM Ag, and 8.42 % Zn; a useful life of eight years is assured. The implementation of adequate exploitation and extraction systems is being studied, aiming at the updating of the present practices to reduce the production costs. The exploitation of dumps, estimated at 37.000 tonnes, is also under consideration.

5. Tatasi Mining Centre

The Tatasi Mining Centre is 35 kilometers southeast of Telamayu at 4.500 meters above sea level. Minerals produced are zinc, silver, and lead; its production capacity is 300 tonnes per day. Research, development of reserves, and deepening of the mine are activities planned for the future.

Tatasi is a deposit with veins of varied lengths, embedded in volcanic rocks, many of which go deep into levels that have not been developed. The reserves of solid ore amount to 90.000 tons, with 4.83 DM Ag, 3.65 % Pb and 5.69 % Zn.

6. Chorolque Mining Centre

The Chorolque Mining Centre is located in the Department of Potosi, 25 kilometers from Telamayu, at 5.662 meters above sea level. Tin ore is distributed in more than 300 veins and branches within a dacitic stock.

Productive capacity is 250 tons per day, and attainable reserves of solid ore are 500.000 tons, with 1.96 % tin content.

ANNEX 3

Supreme Decree 22408

WHEREAS:

Under the present mining policy of the Government of Bolivia, the scope of action, the objectives and the policies of the state-owned mining companies should be legally established, so as they can meet the challenge of reactivating the Bolivian mining Industry with responsibility.

In this sense, it is urgent to adopt legal provisions that establish more clearly the attributions and faculties of COMIBOL, in matters related to the administration of its mining patrimony.

Through Supreme Decree dated today, the Government has established the regulations that allow for executing joint ventures.

The Council of Ministers:

DECREES:

ARTICLE 1. The mining activities of the Corporacion Minera de Bolivia will be carried out by direct management, through the establishment of joint ventures and the subscription of services, temporary associations, shared-risk, simple operation and other that are legally allowed.

For the implementation, contributions, organization and development of the joint ventures, only willingness of the parties involved and the approval of the Government are necessary.

ARTICLE 2. The Corporacion Minera de Bolivia can lease its concessions and those it manages, as per Supreme Decree 3223 of October, 31, 1952, enacted on October 29, 1956, at the request of the interested party or through invitation or bidding.

ARTICLE 3. The contracts of temporary association and/or joint ventures subscribed by the Corporacion Minera de Bolivia, will be executed through public document before the Mining Notary. The associates or contracting parties will not be held individually liable nor will they have limited liability.

The Minister of Mining and Metallurgy is in charge of the execution and accomplishment of this Decree.

Issued in the Government Palace of the La Paz city on this the eleventh day of January, 1990.

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