

**BEHAVIOUR OF STATE MINING ENTERPRISES AND
NATIONAL ECONOMIC DEVELOPMENT: COUNTRY AND
COMPANY EXPERIENCES**

Chile—the effect and role of state mining enterprises on national economic development, 1960-1986

By Enrique Schlotfeldt

This paper presents a brief overview of the effect and role of state mining enterprises in the Chilean economy.

Parts 1 to 3 describe the general background: the country as traditionally a mining one, the importance of the mining industry in its economy and the impact of the deterioration of the terms of exchange of its principal product, copper.

Part 4 describes the profound changes that affected the role of state enterprises in the mining industry in the last three decades.

Parts 5 and 6, deal with the increasing role of private enterprise in the copper industry and the relationship between the Government and CODELCO and ENAMI.

Finally, parts 7 and 8 attempt to portray the foreseeable future of the Chilean mining industry and the roles that the Government and state and private enterprises will continue to play in the future.

1. A traditional mining country

1.1 Background

Chile exhibits a lasting tradition in mining activities. As far back as early in the century, this country was the main world producer of nitrate. Currently, it is the leading producer of copper and possesses other rich and varied mineral resources some in large amounts and exploited even before the Spaniards arrived in America.

The mining efforts of the Spanish conquerors were directed towards gold and silver, noble metals that were successfully mined during the Spanish colonial period and exported to Europe.

By the middle of the nineteenth century, production of these minerals dropped and this opened the way for nitrate. The production of nitrate was such as to, early in this century, turn Chile into the leading world producer (with approximately 70% of the world total). However, after the end of the First

World War, nitrate output fell noticeably. Yet, this did not cause the shutdown of mining activities in the country since, by then, copper arose as a new source of activity offering interesting possibilities. Although noteworthy already in the eighteenth and nineteenth centuries, copper production rose by the mid-twentieth to such an extent that Chile became one of the leading world producers.

Local deposits hold between 25% and 30% of the world reserves of some minerals such as molybdenum, rhenium and copper. There are considerable deposits of gold, silver and iron. National non-metallic ore reserves are abundant in nitrate, sodium chloride, calcium carbonate, barite, sulphur, iodine and lithium. In energy mining Chile has important coal reserves.

Generally speaking, Chilean deposits of these minerals exhibit good grades in comparison to those in other parts of the world, which confer them comparative advantages. Moreover, the favourable geological conditions of the local ore-bodies facilitate their exploitation.

1.2 An exporter of mining products

As can be seen in Table 1, which shows production and export value of solid mineral products in 1985, Chile is a net exporter of iron, copper, molybdenum, gold, silver, sodium and potassium nitrates and lithium carbonate, listing only those which exceeded 10 MUSD of exports that year. Other mineral products add up to 59.5 MUSD. Total mining exports were 2 325 MUSD, copper representing 1 761 MUSD, 76% of this total in 1985.

The country is basically self-sufficient in mineral products such as iron, nitrate, sodium sulphate, gypsum, barite, sodium chloride, kaolin, pozzolan, calcium carbonate, quartz and coal, listing only those where production exceeded 10 kt in that year.

Total imports of solid mineral products in the same year amounted to 22.2

MUSD. The principal products were metallic sulphur (36%), asbestos (19%), kaolin (8%) and magnesium oxid (8%), the remainder is composed of 33 products representing 25% of total imports (6.5 MUSD).

Table 1 shows the mineral products in which production exceeded 10 kt in 1985 and/or surpassed 10 MUSD of export value.

2. The place of mining exports in the national economy

The Gross Domestic Product of Chile grew from 1960 to 1971 from approximately 8.4 GUSD in 1960 to 13.9 GUSD in 1971, a 64,8% increase in eleven years. Between 1971 and 1975 it decreased to approximately 11.4 GUSD, a drop of 18.2% in four years. From then on, until 1981, it started to raise again, reaching an all-time high since 1960 of

approximately 17.2 GUSD in 1981, a 57.1% increase in six years. It decreased again sharply until 1983, when it reached 14.7 GUSD. Since then, the Gross Domestic Product has recovered steadily, reaching 16.9 GUSD in 1986, a figure still below the peak of 1981.

These changes were largely due to the influence of worldwide economic phenomena on the Chilean economy, including the steady erosion of the international prices of basic commodities, copper for instance, and the sharp increase of oil prices.

The total revenue from exports grew faster than the Gross Domestic Product during the period, 173% in 26 years, against 101% of the Gross Domestic Product. This, which occurred in spite of decreasing international prices, was the result of deliberate efforts to develop the export sectors of the economy.

Until 1972, the total exports of mining products represented a and about 90% in 1972. This pattern has been steadily reversed since that date. In 1986, mining exports represented only about 54% of total exports; a tendency that, in spite of the increased value of mining exports in absolute terms, is expected to continue because of the growth of other export sectors of the economy.

3. The place of copper in the national export economy

During these 26 years the revenue from the export of copper closely followed the fate of the Chilean economy. Copper represented 79.8% of the total revenue of the sector in 1960 and still represented 79.4% in 1986. The ratio reached its peak in 1974, when copper amounted to 91.5% of the total mining sector export revenue, a growing tendency that started in 1972.

An analysis of what actually happened to the Chilean copper industry in relation to the value of the total exports of the mining industry and to other exporting sectors of the Chilean economy,

Table 1
Chilean mining production and exports in 1985

	Production (*) Mt	Exports (**) FOB value — MUSD
Copper (fine)	1 349.3	1 761.3
Molybdenum (fine)	18.4	136.0
Iron ore	6 510.0	90.8
Manganese ore	35.6	—
Zinc (fine)	22.3	6.6
Gold (fine)	0.017	141.3
Silver	0.516	73.8
Nitrates (sodium and potassium)	812.0	50.4
Anhydrous Sodium sulfate	54.0	5.3
Sulphur (fine)	78.7	—
Gypsum (mineral)	195.9	—
Barite	54.5	1.7
Sodium chloride	753.4	3.8
Kaolin	48.5	—
Pozzolan	206.0	—
Calcium carbonate	2 470.1	—
Quartz	267.5	—
Coal	1 368.0	1.0
Lithium carbonate	0.5	13.3
Other mining products	59.7	39.5
Total	14 314.9	2 324.8

Source:

(*) National Geology and Mining Services — SERNAGEOMIN — and industry.

(**) Central Bank of Chile.

Figure 1
Total Mining Exports in relation to national economic indicators
(in constant USD of December 1986)

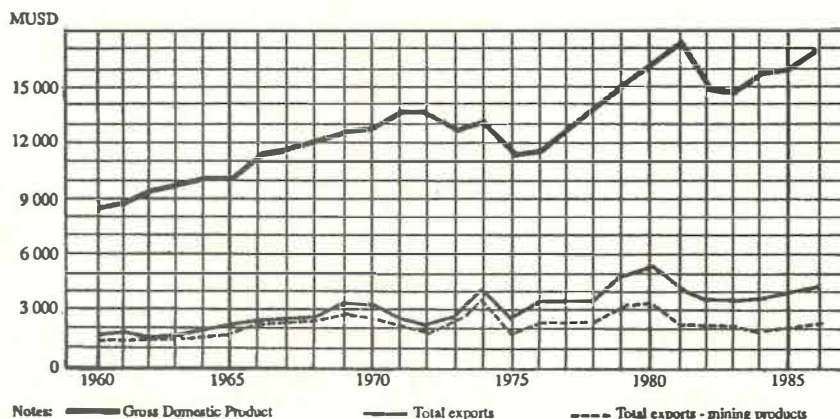


Figure 2
Total copper exports in relation to total mining products exports
(in constant USD of December 1986)

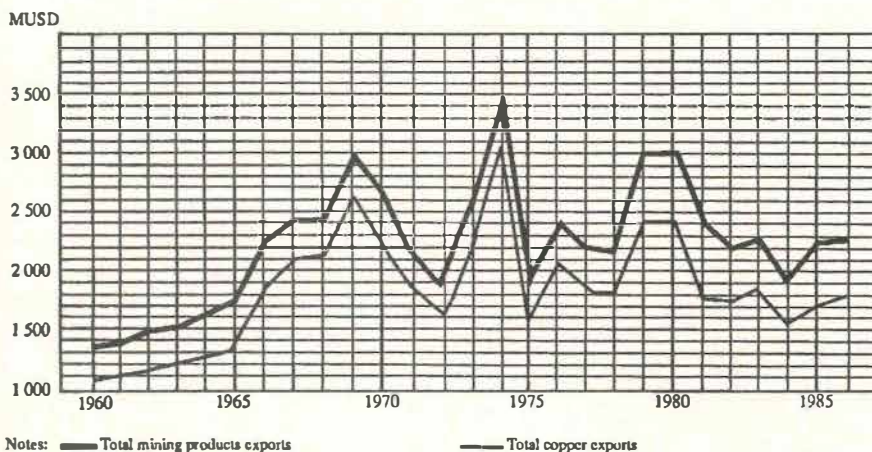
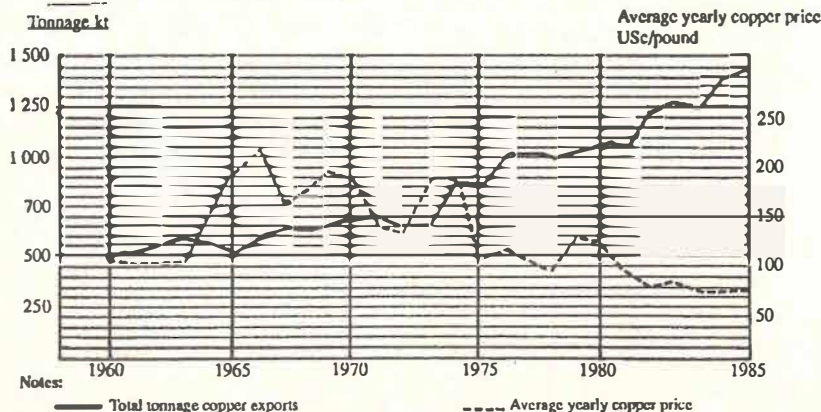


Figure 3
Total tonnage of copper exports and average yearly copper price
(in constant USD of December 1986)



can be only attempted if viewed in conjunction with what occurred with production and with international prices of copper and other basic commodities during the period.

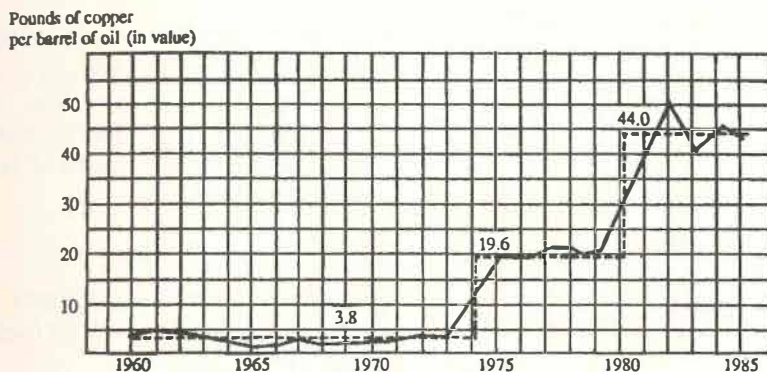
From 1960 to 1986 Chilean production, measured in metric tonnes of fine copper, rose from 513 Mt to 1 376, an increase of 168%. It grew from 513 to 657 Mt between 1960 and 1973, and then climbed afterwards steadily to the present 1 376 kt. This is a reflection of the fact that the large investments started about 1967 and planned to mature in 1970-71 only went on line in the middle of the 1970s.

The revenue from copper exports was largely affected by the average yearly real price of copper rising from 97.2 USc per pound (expressed in constant of December 1986) to over 150 USc per pound in the period of 1964 to 1974. They reached a peak in 1966 equivalent to 208 USc per pound. Relatively high levels were maintained until 1974, when international prices began to decrease continuously, to reach 62.3 USc per pound in 1986. This last figure represents 54% of the real price of copper in 1960 and is, as a matter of fact, the lowest real value attained by copper in the last 40 years.

Copper is an actual example of how the fall of international real prices of basic commodities does affect the terms of trade of a developing country. Chile imports about half of its oil requirements, producing the balance from own deposits. Between 1960 and 1973, about 3.3 pounds of copper had to be paid for a barrel of oil. This share rose sharply in the period of 1974 to 1980 to 19.6 pounds of copper per barrel, and again in the period 1981 to 1985 to an average of 44 pounds of copper per barrel of oil.

This is the true challenge of the mining industry everywhere: how to live successfully with decreasing levels of international real prices common to most basic commodities. A trend which, as far as can be judged today, is not

Figure 4
The deterioration of the international terms of trade of basic commodities - copper as an example



likely to improve much. To this has to be added the low growth of copper consumption, the saturation of the markets in developed economies, structural overcapacity of production and the increasing substitution of copper by other and new materials.

4. The role of state enterprises in the Chilean copper industry: an historical review

The last 30 odd years have seen many changes in the Chilean copper industry. These changes affected ownership, the roles of the state and private investors, production, technology, legislation on mining property and foreign investment in the sector.

Several distinctive periods can be identified. One before 1955, when the industry was the property of foreign companies; the legislation of 1955, the so-called "New Deal", which created incentives for investment in the sector; the agreements in 1967 with the foreign owners entering into partnership with the state — the so-called "Chilenization", and the nationalization of the industry in 1971. Later came the creation of the Chilean Copper Corporation, reaffirming the state ownership of the major mining companies, though allowing for

the development of new ore-bodies by private investors. Finally, in 1977 came the promulgation of legislation that regulated foreign investment in the mining and other sectors of the economy and constitutional and legal dispositions that regulated mining property. The following is a brief description of these different periods.

4.1 The "New Deal"

This legislation, promulgated in 1955, had as its objective a structural change in the copper industry, which at that time was largely owned by foreign companies, a state of affairs which inhibited investments. It was mainly concerned with the establishment of a stable and equitable taxing system, designed to foster investment and to improve the competitiveness of Chilean copper in the world market. The effect was an actual increase in production, from 433 kt of fine copper in 1955 to 632 kt in 1967, a raise of 46%.

4.2 The "Chilenization" process

In 1964 the Chilean Government made an agreement with the copper companies. The main objective of this agreement was to raise production substantially — up to 1 200 kt/year — by increasing the refining capacity in the

country, through the participation of the state in the management of companies, through the commercialization of products in the international market, and the integration of the copper industry with the national economy.

The corresponding legislation was promulgated in 1967. As a result, contracts were signed between the Government and Braden Copper Company, owner of the El Teniente mine (1967) and with Anaconda, owner of the Chuquicamata, Potrerillos and El Salvador properties (1969), whereby the Government acquired 51% of the ownership of these companies. The new concerns committed themselves to investing about 400 MUSD in the expansion of production.

Contracts were also signed with Anaconda to develop the Exotica deposit — on a 75% basis for Anaconda and 25% for the Government, and with Cerro Corporation, to develop the Rio Blanco ore body — on a 70% basis for Cerro Corporation and 30% for the Government. The corresponding investments amounted to about 180 MUSD of that time.

Investments were started immediately and were planned to mature in three to four years. Subsequent events caused delays and significant increases in production occurred first in 1974.

4.3 Nationalization

The nationalization of these companies was converted into law in July 1971, an act that required the modification of the State Constitution, since it altered dispositions relating to the constitutional guarantees on property rights. Legislation promulgated in July 1973 created the so-called Collective State Companies (Sociedades Colectivas del Estado), as successors of the nationalized companies.

4.4 Creation of the Chilean Copper Corporation (CODELCO)

Legislation creating the *Chilean Copper*

Corporation (Corporacion del Cobre de Chile) was approved in 1976. The new entity was to operate and administrate the nationalized companies — Chuquicamata (including Exotica), Potrerillos and El Salvador, Andina (ex Rio Blanco) and El Teniente. The law reaffirmed the state ownership of these properties.

About the same time, the Government created the Chilean Copper Commission, as a successor to the Copper Department of 1955, redefining its regulatory and advisory powers over the whole copper industry — independent of producers, the state or private owners. It reports directly to the Government through the Ministry of Mines. In 1986, this authority was extended over the whole mining industry and foreign investment in the sector, excepting energy resources: coal, oil and gas.

4.5 Changes in the legislation on mining property and foreign investment

Various legislative measures followed to define mining property rights and regulate foreign investment. Their ultimate purpose was to create a legal framework that would guarantee a non-discriminatory set of rules for state and private investors — national or foreign; safeguarding at the same time the rights of the state in matters affecting national security and the collective interest.

The main legal provisions governing investment in Chilean mining are contained in the following bodies of law:

- Political Constitution of the state. Regulates the state ownership of mines. Permits private exploration of mining deposits and grants right to these deposits according to exploration or exploitation concessions.
- Constitutional Organic Law No. 18.097 sets forth the particulars of mining concessions. The latter are granted by the courts and not by the administrative au-

thorities. Exploitation concessions are granted for an indefinite period (not so exploration concessions that may only last up to four years). The holder of mining rights cannot be deprived of these rights without prior compensation for resultant damages.

- 1983 Mining Code, which contains all the provisions governing the ownership of mines.
- Decree Law 600, the so-called Foreign Investment Statute.

The terms and conditions governing each investment are established in a special contract between the State of Chile and the investor.

Capital can be brought into the country in the form of foreign currency, capital assets, technology, investment-connected loans and capitalization of credits and/or profit.

The franchises issued to the investor are numerous, these include the:

- Right to remit abroad all profit generated by the investment in Chile.
- Right to remit abroad the investment after a period of three years from its importation into the country.
- Access to the bank market in order to convert foreign currency imported into the country.
- Tax invariability, at the rate of 49.5% as maximum income tax burden. This invariability may be extended over a period of eight to twenty years, the latter in the event of investments exceeding 50 MUSD.
- Invariability of the tariff system and of the sales and services tax system.
- Right to keep accounts in dollars.

- Right to freely export products manufactured according to the legal and regulatory provisions in effect.
- Finally, and in the event of investments exceeding 50 MUSD, the right to establish, with the prior agreement of the Central Bank of Chile, specific methods for the return and liquidation of the proceeds of exports.

5. Copper production from state and private enterprises, 1971-1986

Copper production from state-owned companies has risen since nationalization in 1971: from 581 kt of fine copper to 1 084 kt in 1986, an increase of 87%. As has already been shown, it only started to rise significantly in 1974, when the various investments started in 1967 materialized in additional production. This growth was smaller than that of the national production, which rose from 684 kt in 1971 to 1 376 kt in 1986, an increase of 101%.

This was due to the more rapid growth of privately owned enterprises during the period. Although production from this sector grew little between 1971 and 1975, it produced 292 kt in 1986 against 103 kt in 1971, an increase of 183%, significantly greater than the 8% rise of the state sector.

In 1971 the private sector represented about 15% of total copper production. By 1986, it amounted to 21.2%.

The tendency to increase the share of private enterprise is expected to continue in the future in spite of the planned growth in production of state enterprises, wherever it is economically justified. This is because the Government, by establishing a legal framework of non-discrimination between state and private enterprises, has opened the door to private investors in new mining ventures. Identified and explored large ore bodies are there, ready for development, to the

Figure 5
Copper production from state and private enterprises 1971-1986
kt (metric)

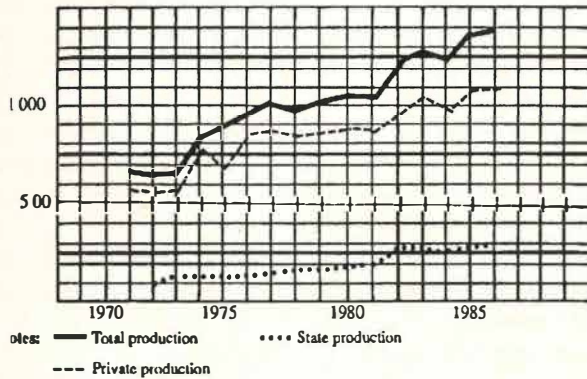
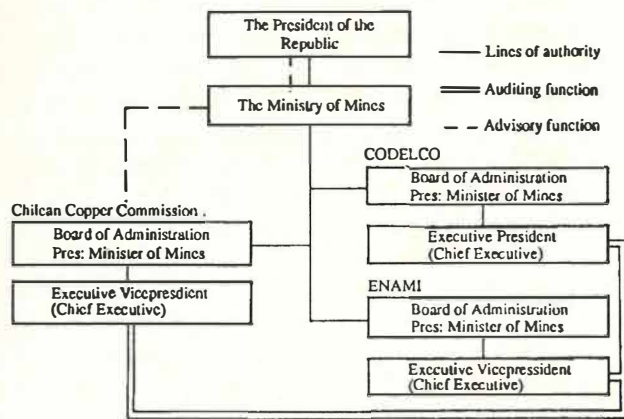


Figure 6
The relationship between the Government as such and CODELCO and ENAMI



commercialize these products; perform and develop activities related to the mining activity, and render specialized services to the sector.

In summary, CODELCO is a primary producer and transformer of copper and its by-products, whereby ENAMI has the role of promoting the development of third party mining in the country and transforming their output into commercial products, either by buying it or on a toll basis.

The relationship of both companies with the Government is the same. The Chief Executives are nominated by the President of the Republic and report to a Board of Administration presided over by the Minister for Mines. The Boards are composed of representatives of the Executive Power and of various Ministries and Public Authorities related to the mining, financial and planning sectors. In the case of ENAMI, the private mining industry has two representatives on the Board.

CODELCO and ENAMI are subject to the audit of the Chilean Copper Commission. This is an autonomous institution, its Chief Executive is nominated in the same way, its Board of Administration has a similar composition and it has a corresponding dependency on the Government through the Ministry of Mines. These relationships are shown in Figure 6.

CODELCO and ENAMI present yearly 5-year capital investment programs. Each project is evaluated from a technical and economic point of view by the Chilean Copper Commission and the National Planning Bureau and the results, favourable or favourable, passed on to the Ministries of Mines and Finance and to the companies concerned.

The Chilean Copper Commission also makes yearly audits of all projects in progress and "post mortem" audits of projects (after one year in operation) which exceed an investment value of 1 MUSD. The results of these audits are

extent that market and price conditions justify it and the necessary capital raised.

6. The relationship of the government with CODELCO and ENAMI

The state enterprises CODELCO and ENAMI have by statute different objectives.

CODELCO, created in 1976, has as main objective the exertion of the rights that the State had acquired over the mining properties nationalized in 1971, that

is to continue the exploitation of these properties; explore for non-ferrous metals; mine, concentrate, smelt and refine products and by-products resulting from the exploitation of copper deposits — own or from third parties; manufacture or semimanufacture these products and by-products; commercialize them, and carry out other activities when related to its main objectives.

ENAMI, created in 1960, has as main objective the promotion of the exploitation and development of mining resources in the country; to concentrate, smelt, refine and industrialize them,

reported to the Ministry of Mines and to the companies concerned.

Each year CODELCO and ENAMI present to the Ministries of Mines and Finance their proposed Operational, Capital Investment and Credit budgets, they are reviewed and approved by this body with the participation of the Chilean Copper Commission.

The object of this review is to balance the interests of the companies with those of the Government — national accounts and investments in other sectors of the economy.

The approved *Operational Budget* reflects the maximization of the use of resources generated by the companies themselves and ensures their efficient operation.

The approved *Investment Budget*, which includes the projects already positively reviewed by the National Planning Bureau and the Chilean Copper Commission, is designed to allow the companies make the necessary investments to ensure their efficient operation, to compensate for lower headgrades and increase production through marginal investments of high profitability.

The *Credit Budget* represents the authorized debt program from private banks, public and international financing institutions and/or suppliers credits, and reflects the total of the loans which have been approved, after the favourable report of each credit operation by the Central Bank of Chile.

The definition of taxable income is the same for CODELCO, ENAMI and private corporations. It is the earnings before taxes plus and minus certain adjustments established by the tax legislation. This taxable income is subject to a 10% tax, of which certain deductions can be made representing other taxes paid: for instance real estate taxes.

From here on, some differences in tax treatment exist between CODELCO, ENAMI and private corporations, these are described below.

The legislation stipulates that the taxable income generated by CODELCO and ENAMI, in addition to the 10% tax, distributed or not to the owners, is subject to an additional 40% tax.

The owners of private corporations are subject to a sliding scale personal income tax on profits withdrawn from the company, the maximum rate being 56%. They have the right to deduct from this tax the corresponding part of the 10% previously paid by the corporation.

Thus, in synthesis, CODELCO, ENAMI and private corporations have a comparable tax treatment, when considering the maximum possible tax burden to which a private investor is subject who withdraws all his profits from the corporation. On the other hand, private investors who reinvest part or the total of their profits will pay a corresponding lower rate. In the event that all profits are reinvested, total taxation will be limited to 10%. This is a consequence of a deliberate policy to encourage internal saving and capitalization. In addition, Codelco is subject by special legislation to an additional tax. Its application resulted in 1986 in a total tax burden, including the taxes mentioned above, amounting to about 69% of its earnings before taxes.

It has to be remembered that these tax systems differ from the one on foreign investments enforced under the Foreign Investment Statute, which can opt for an invariable maximum tax rate of 49.5%.

Between 1976 and 1986, CODELCO and ENAMI generated a total of 2 338 and 117 MUSD, respectively, in net income after taxes, expressed as the cumulative sum of dollars during each year. During the period, CODELCO was allowed to retain earnings to the amount of 123 MUSD for capitalization purposes, against none by ENAMI. This, together with legislation promulgated in 1981, which allowed a one-off revaluation of their fixed assets, reflects the Government policy to have the companies' assets realistically valued

and to generate depreciation for the investments required to maintain their levels of efficiency and profitability. Earnings for a total of 2 332 MUSD, not including taxes paid, were transferred from CODELCO and ENAMI to the Government, against 123 MUSD retained by CODELCO. Thus no Government subsidies were paid to the companies during the entire period: explicitly or implicitly. On the contrary, profits from CODELCO and ENAMI represented a very important net flow of foreign currency to the Government.

7. The development of the mining industry in the future

The future of the Chilean mining industry has to be viewed in the perspective of the overall economic policy of the Government, which is to foster an export-oriented economy. To this end many measures have already been taken: the definition of basic policies in the fields of tariffs, custom procedures, exchange rates, taxes, labour, transport, etc; the incorporation of advanced technology and production know-how, and the opening and consolidation of external markets. All this without neglecting the human, technical, commercial and political factors involved.

These policies lead to the strengthening of private initiative, the reduction of public expense, the encouragement of internal saving and investment, the promotion of local products worldwide and the encouragement of foreign investment in the country.

As a result of this policy, Chile has already turned from a mono-exporter towards a diversified composition of exports, a trend that is expected to be accentuated in the future.

Of the total national export of 1986, mining products represented 54.4% and copper 42%. Agricultural and meat products amounted to 16.2% and industrial products to 29.4%. Of the latter, lumber, pulp and paper represented 9.7% and

fish-meal 7.5%.

Within this framework, the mining sector has a role to play, but, although it will grow in absolute terms, it is fated to play a smaller relative role in the country's export economy. The agricultural, forestry (lumber, pulp and paper), fishery and manufacturing sectors have been growing fast and will have expanded greatly by the end of the century, conquering increasing portions of the export market.

Opportunities for growth in the mining sector exist in many fields. In copper, the state-owned companies, which have to make large investments to continue operating and compensate decreasing headgrades, can increase production with marginal investments. Large and rich copper deposits, identified and explored, can be developed, adding production that by the year 2000 could increase national production to 2 Mt per year. Gold, salts and other mineral deposits are known and are already being developed or will shortly be so. Chile is an importer of phosphate-based fertilizers; deposits of phosphoric rock have been detected and the country will be soon producing large amounts of sulfuric acid, a product of the environmental control measures that are under way in the mining operations.

8. The continuing role of government, state and private-owned enterprises in the mining industry

The general policy described above requires the joint action of the Government and of state and private enterprises.

The Government is primarily responsible for creating and maintaining the legal framework that will ensure that state and private enterprises (national or foreign) can live within a permanent and non-discriminatory set of rules governing all aspects, social and economic. The Government also bears responsibility for maintaining a presence in the external

world, defending the interests of the country and the community. Additionally, the Government should further and direct national efforts in the development of all sectors of the national economy and the necessary infrastructure, education, public health, research and other related aspects of its main responsibility.

The Government should lead and support efforts to penetrate and consolidate foreign markets, promoting and furthering the production and consumption of national goods and safeguard the legitimate interests of all concerned within the established legal framework.

The state enterprises are responsible for operating and administering the resources in their charge at the highest standards. They should be an example in management, efficiency, technology and production techniques, as well as in human relations, labour policy, training and safety. The results of their administration should be public and as, or more, transparent than in any other sector.

Private enterprises should respect the existing legal framework and act according to established ethical, technical and managerial principles.

Appendix 1**Chile — General economic indicators (*) 1960-1986**

Year	Gross Domestic Product (**)		Total Exports		Total Exports Mining Products	
	MUSD	Index	MUSD	Index	MUSD	Index
1960	8 402	100	1 548	100	1 349	100
1961	8 804	105	1 837	119	1 381	102
1962	9 221	110	1 680	106	1 478	110
1963	9 804	117	1 714	111	1 511	112
1964	10 022	119	1 974	128	1 627	121
1965	10 103	120	2 131	138	1 738	129
1966	11 230	134	2 638	170	2 227	165
1967	11 595	138	2 737	177	2 413	179
1968	12 010	143	2 747	177	2 405	178
1969	12 456	148	3 292	213	2 924	217
1970	12 713	151	3 017	195	2 577	191
1971	13 851	165	2 530	163	2 138	158
1972	13 683	163	2 104	136	1 850	137
1973	12 922	154	2 777	179	2 519	187
1974	13 047	155	4 028	260	3 381	251
1975	11 363	135	2 658	172	1 841	136
1976	11 763	140	3 410	220	2 364	175
1977	12 923	154	3 382	218	2 167	161
1978	13 984	166	3 547	229	2 136	158
1979	15 143	180	4 056	320	3 036	225
1980	16 321	194	5 208	336	3 091	229
1981	17 244	205	4 039	261	2 358	175
1982	14 797	176	3 716	140	2 160	160
1983	14 692	175	3 795	245	2 273	168
1984	15 624	186	3 533	228	1 916	142
1985	15 999	190	3 710	240	2 259	167
1986	16 911	201	4 222	273	2 229	165

Notes:

(*) All values are expressed in constant of December 1986.

(**) Source: Economic Commission for Latin America. For all other indicators, the source is the Chilean Copper Commission.

Appendix 2
Chile — Economic indicators: copper 1960-1986

Index	Total copper exports		Total tonnage of copper exports		Average yearly copper price	
	MUSD	Index	kt	Index	USc/lb	Index
100						
102						
110	Year					
112	1960	1 077	100	513	100	97.2
121	1961	1 102	102	542	106	91.1
129	1962	1 143	106	563	110	92.5
165	1963	1 197	111	586	114	93.0
179	1964	1 254	116	558	109	139.5
178	1965	1 338	124	519	101	182.1
217	1966	1 834	170	583	114	208.1
191	1967	2 071	192	632	123	153.2
158	1968	2 084	194	636	124	1640
137	1968	2 084	194	636	124	1640
187	1969	2 598	241	656	128	186.7
251	1970	2 279	212	669	130	174.0
136	1971	1 843	171	684	133	129.6
175	1972	1 656	154	631	123	122.1
161	1973	2 283	212	657	128	179.8
158	1974	3 094	287	858	167	174.4
225	1975	1 524	142	788	154	95.8
229	1975	1 524	142	788	154	95.8
175	1976	2 042	190	982	191	104.1
160	1977	1 833	170	1 008	196	91.6
168	1978	1 819	169	978	191	88.6
142	1979	2 417	224	1 010	197	114.4
167	1980	2 401	223	1 045	204	110.6
165	1981	1 753	163	1 038	202	80.7
	1982	1 735	161	1 211	236	67.2
	1983	1 816	169	1 251	244	71.4
1.	1984	1 533	142	1 220	238	60.4
	1985	1 709	159	1 356	264	62.4
	1986	1 771	164	1 376	268	62.3

Source:

Chilean Copper Commission. All values are expressed in constant of December 1986.