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THE DEVELOPMENT OF THE COPPER INDUSTRY AND TRANSNATIONAL  
CORPORATIONS: THE CHILEAN EXPERIENCE

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The opinions expressed in this document are the exclusive responsibility of the  
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### Introduction

In their desire to take better advantage of their non-renewable natural resources, the governments of Latin America have made substantial changes in the productive structure of the mining industry, by extending State participation in mining activities, pursuing active policies and negotiating with the transnational corporations that had traditionally monopolized the sector.

In the absence of a domestic private sector having the necessary financial, technological and administrative capabilities, the State has been obliged, in some countries, to assume entrepreneurial functions and to set up public enterprises for the exploitation, processing and marketing of minerals. These significant changes in Latin American mining were not sufficient, however, to overcome its dependency on foreign capital and the transnational corporations continued to maintain their supremacy, particularly in the areas of technology and marketing on the world markets.

Nevertheless, this situation changed the bargaining capacity of both sides and, as a result, brought about new types of relationships and contracts with the foreign corporations, thus making it possible for some countries in the region to gain considerable experience in policy design and implementation and in negotiations regarding specific problems.

Through its Joint Unit with the United Nations Centre on Transnational Corporations, CEPAL has been concerned with this subject over the last few years. Along with the Regional Commissions for Africa and for Asia and the Pacific, as well as the United Nations Centre on Transnational Corporations (CTC), it has developed an interregional project on bargaining power and distribution of gains among developing countries and transnational corporations in export-oriented primary commodities.

Under this project, studies are being made of seven commodities in the different countries of the region (bauxite in Jamaica, copper in Chile and Peru, tin in Bolivia, cotton in Mexico, bananas in Honduras and Panama, coffee in Colombia and sugar cane in Brazil), applying a common methodology in order to carry out integrated sectoral studies that will summarize the complex and multifaceted experiences of the countries that produce export commodities in the three developing regions.<sup>1/</sup>

<sup>1/</sup> For more detail, see UNDP, Proyecto de los Gobiernos de Bolivia, Brasil, Colombia, Chile, Honduras, Jamaica, México, Panamá and Perú sobre el "Fortalecimiento del poder de negociación de los Gobiernos Huéspedes en sus tratos con las empresas transnacionales dedicadas a la exportación de productos básicos" (RLA/80/016/A/01/02), "Transnational Corporations in Export Oriented Primary Commodities: A General Conceptual Framework for Case Studies" (CTC/ESCAP/PEC/1) and "Report of the Inter-regional Expert Group Meeting on Transnational Corporations in Primary Export Commodities", Bangkok, 8-15 October 1979 (CTC/ESCAP/PEC/2).

/In addition,

In addition, in its last three ordinary sessions (1975, 1977 and 1979) CEPAL adopted individual resolutions on co-operation among developing countries and among developing regions of different geographical areas.<sup>1/</sup>

The purpose of this study is to examine and evaluate the Chilean experience in the development of the copper industry and the role in this process played by the transnational corporations which for so long controlled this activity in the Chilean economy. In the study an attempt has been made to use the common approach of the interregional project already mentioned above.<sup>2/</sup> In order to fulfil the proposed objectives and also to provide a useful tool of analysis for those interested in the subject, an attempt has been made in the present work simultaneously to provide an analytical description of the historical events and to offer an interpretation and evaluation of the interrelationships between the State and the transnational corporations.

Chapter 1 presents and examines the most significant features of the development of the Chilean copper industry and its relationship to and influence on the Chilean economy. Chapter 2 contains some basic elements related to the international copper market and the dynamic Chilean experience in the area, including some background on the development of the Intergovernmental Council for Copper-Exporting Countries (CIPEC) and its effects at the international level.

In chapter 3 the Chilean case is examined from the point of view of public policies towards large-scale copper mining and its dynamic relationship with the transnational corporations in the period from the beginning of the century until 1970. This part is an attempt to evaluate, for the case of Chile, the bargaining process and the distribution of profits between the national economy and the transnational corporations. The subject of the nationalization of the large-scale copper mining industry, its origins and principal effects, are developed in chapter 4, and chapter 5 finishes with a preliminary view of current policies for incorporating transnational enterprises into the exploitation of Chilean copper. Extensive bibliographical material, as listed in the final appendix, was used for the development of this work.

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<sup>1/</sup> See CEPAL resolutions 363 (XVII) adopted in Guatemala and 387 (XVIII) adopted in La Paz.

<sup>2/</sup> See part "A. General background and methodologies", in chapter 3 of this report.

/The authors

The authors of this study, Juan Eduardo Herrera and Carlos Vignolo, also had the co-operation of Blas Tomic (especially in chapter 4). The study was discussed and revised within the CEPAL/CTC Joint Unit, in co-operation with the CEPAL Division of Natural Resources and presented to the seminar on Alternative Approaches to Negotiating with Foreign Investors and Transnational Corporations in the Copper and Tin Industry, organized by CEPAL in Santiago, Chile, 9-12 December, 1981, with the participation of high-level officials of the public and private sectors and representatives of foreign enterprises from Bolivia, Brazil, Chile and Peru.

Despite the heterogeneous situations and experiences of the four countries and the different interests involved, various common positions were identified with regard to the importance of mining for the future economic development of the region and a need to count on the contributions of the technology, capital and administrative and commercial management of the transnational corporations. In this framework, there are four critical areas:

(a) Focus of mining policies and negotiating with transnational corporations in the framework of global socio-economic development strategies and plans and the use of adequate planning and information to assess the alternatives of mining and metallurgical expansion and the respective ways and means of international marketing and financing.

(b) Strengthening of the existing public sector as a conductor and supervisor of negotiations with foreign investors.

(c) New technological, commercial, administrative, financial and patrimonial relations between the public sector and transnational corporations and foreign investors, and policies and agreements leading to mutual benefits, clarity and stability in the rules of the game between both parties.

(d) Horizontal co-operation among the mining countries of the region and especially in the systematic exchange of important information and common positions with respect to foreign consumer and investor countries.

On this last point the suggestion was made to organize a data bank for the mining countries of the region on important areas of bargaining alternatives with transnational corporations and foreign investors (for example, investment agreements, marketing systems and discounts on metal refining "maquilas", characteristics of the transnational mining corporations, taxation and incentives, national mining

codes, etc.). In addition, it was requested that a specialized workshop should be organized for the negotiators of the mining countries of the region. The Secretariat of the Economic Commission for Latin America and the Centre for Transnational Corporations of the United Nations will consider these initiatives in their programmes of work. Finally, another seminar of this type will be organized during the first half of 1982 in La Paz, Bolivia, at the request of the Ministry of Mines and Metallurgy of that country.



## Chapter 1

### COPPER IN THE CHILEAN ECONOMY

#### A. THE DEVELOPMENT OF LARGE-SCALE COPPER MINING IN CHILE

##### 1. The evolution of production

For a long time, copper mining has been a well-known and practiced economic activity in Chile. In fact, in the mid-nineteenth century, when the world copper industry had not yet reached the degree of development and massive volume which it acquired in the early years of this century, Chile, with a production on the order of 20 000 refined tons per year, contributed one third of the world's total and was the first producer of copper in the world.

The modern development of the copper industry, however, began only in the early years of this century. Important technological advances in the late nineteenth century made possible the economical extraction and treatment of porphyritic copper deposits, in which the metal is found in reduced proportion (1-3%) but which are very large mineral deposits. As a result of this technical progress, the price of copper fell substantially, and it became one of the most important industrial raw materials in the contemporary economy. Thus, whereas in the entire period from 1850 to 1900 the world produced a total of 10 million tons of refined copper, in the following 50 years, that is, from 1900 to 1950, world production reached 75 millions tons of copper.

The development of copper mining in Chile clearly reflects the accelerated world expansion of this industry. The total production of copper in Chile, which in the early 1900s was approximately 30 000 tons annually, had already risen over 100 000 tons by 1918, reached 203 000 tons by 1926, and by 1929 was over 300 000 tons.

The main reason for this explosive growth of the production of this mineral was the incorporation of two large United States mining companies into the exploitation of Chilean copper. Anaconda Copper Company and Kennecott Copper Corporation, which were among the main producers of copper in the United States, bought and developed the Chuquicamata and Potrerillos mines in those years (1915 and 1927 respectively) in the case of Anaconda, and the El Teniente mine (1912) in the case of Kennecott. For a proper understanding of the size and relative

/importance of

importance of these mining projects, it should be recalled that Chuquicamata was and is the largest open pit copper mine in the world, while El Teniente is the largest underground copper mine in the world.

As might be expected, the initial investments by the United States companies in buying these installations already set up, or in developing the mining projects, were considerable. Although it is difficult to specify exactly the amounts involved, on the basis of the available information we estimate that the initial total investment by the two United States companies reached 886.7 million dollars (at 1979 prices), distributed as indicated in table 1.

Table 1  
INITIAL INVESTMENT BY ANACONDA AND KENNECOTT IN CHILE a/  
(In millions of 1979 dollars) b/

	Anaconda	Kennecott
Chuquicamata	453.1	-
El Teniente	-	350.0
Protrrerillos	83.6	-
<u>Total</u>	<u>536.7</u>	<u>350.0</u>

Source: Estimates by the authors derived from data published in "Antecedentes económicos y estadísticos...", Senate of the Republic of Chile and Ignacio Aliaga Ibar, "La economía de Chile y la industria del cobre" (see the bibliographical annex at the end of this report).

a/ Strictly speaking, the amounts mentioned do not correspond exactly to the initial physical investment in the respective projects, since in the case of Chuquicamata and El Teniente these amounts include sums paid by the corporations for the acquisition of firms which were already in operation.

b/ The United States wholesale price index has been used as a deflator in this study in order to calculate the values at constant prices.

/The arrival

The arrival on the domestic mining scene of these large foreign conglomerates and the development of the three mining projects indicated, each one of which exceeded by several times the volume of any domestic mining establishment, drastically altered the profile of the copper industry in Chile. The production of the three vast mining complexes changed the course of the stagnant and relatively weak domestic production of copper and converted Chile into one of the main suppliers of a world copper market in continual expansion.

Already in the five-year period 1920-1924, Chilean copper production (which was entirely intended for export), represented 10.6% of world production, a proportion which continued to increase in the following years.

It is worth pausing briefly to consider the evolution of the production of the large-scale copper mining industry, since from 1915 to 1979 we may distinguish periods of marked contrast.

In the years when the foreign corporations were setting up in Chile and in the decades immediately following, the production of these conglomerates grew at very dynamic rates, which were much greater than the expansion of overall world production. As a result of this, the relative importance of the copper production of large-scale Chilean mining in the world's total grew steadily from 7.7% in the decade 1915-1924 to 16.5% of the world total in 1935-1944. The annual maximum point was reached in 1945 when the contribution of the large Chilean copper mines reached 20.7% of total world supply. The period 1915-1945 is thus defined as the time when Chilean copper dynamically plunged into the world market, conquering a growing portion of it and becoming within a few years the main exporter of copper in the world.

After 1945 (and especially since 1950), the rate of development changed drastically. World production, after dropping in the five-year postwar period 1945-1949, recovered rapidly and maintained annual growth rates of almost 4% annually in the entire period between 1945-1949 and 1975-1979. The production of the large Chilean copper mines, for their part, grew persistently at lower rates than the total world production (except in the final five-year period 1975-1979), and as a result their participation in the world total systematically decreased from 18.4% in the period 1945-1949 to only 8.9% in 1970-1974; this share recovered slightly in the period 1975-1979, when it reached 10.8%.

The corresponding figures are shown in table 2.

Table 2  
PRIMARY COPPER PRODUCTION, 1915-1979

(Thousands of tons of refined  
copper)

Period	A Large-scale mining production	B World production	A/B (percentage)	Annual growth rate A (percentage)	Annual growth rate B (percentage)
1915-1919	264.1	6 298	4.2		
1920-1924	541.3	5 094	10.6	15.6	-3.6
1925-1929	1 124.5	8 094	13.9	15.8	9.6
1930-1934	886.3	5 995	14.8	-4.0	-4.7
1935-1939	1 496.3	9 522	15.7	11.1	9.6
1940-1944	2 188.9	12 757	17.2	7.8	6.0
1945-1949	1 994.2	10 847	18.4	-1.8	-2.9
1950-1954	1 727.2	13 612	12.7	-2.5	4.6
1955-1959	2 185.3	17 296	12.6	4.8	5.0
1960-1964	2 505.6	22 547	11.1	2.7	5.5
1965-1969	2 599.3	26 892	9.7	0.6	3.6
1970-1974	3 082.6	35 088	8.9	3.5	5.5
1975-1979	4 215.3	39 126a/	10.8	6.5	2.2

Source: See Statistical Annex, table 1.

a/ World production for 1979 is estimated on the basis of basic data for three quarters of the year.

Table 3

Table 3 focuses only on the relative growth rates of the production of large-scale Chilean mining in the world total, listed according to the above-mentioned periods.

From the point of view of the productive development of the Chilean copper industry vis-a-vis the supply from a clearly defined international market, there is no doubt that the indicated evolution presents a paradoxical situation. Using a posteriori historical analysis it can be seen that the initial development and the expansion during the first 30 years of this important natural resource turned out to be a correct and very rational decision in the context of an adequate industrial strategy. The comparative analysis of what occurred in the following 20 years with Chilean copper production, and with that of world copper production as well, brings up many questions. The following chapter will analyse in detail the theme of the interrelationship between foreign enterprises and the Chilean State and the effect that this dynamic relationship had on the development of the industry itself. For the moment it is enough to say that, strictly from the industrial point of view, the evolution of copper production in foreign enterprises in Chile between 1945 and 1965 shows a relative stagnation in the framework of a significant development of the international market of the metal. As a natural result of this phenomenon, copper and the Chilean economy lost a significant opportunity for expansion, which meant the partial loss of positions acquired in this market and consequent economic cost in terms of national development.

As additional informative relative to the productive development of large-scale copper mining in recent decades, the following are some basic data on the composition of this total production.

It is well known that the so-called copper mining industry produces and delivers the metal in various stages of preparation and degrees of purity. The most typical marketable products are copper concentrates with a copper content of 25 to 45%, blister copper with an approximate purity of 99.0% to 99.5%, fire-refined copper with 99.90% copper content and, finally, electrolytic copper with a purity of 99.95%.

This is not the place to undertake a profound analysis of the reasons which may exist and the relative convenience of the decision to install a plant to produce one form or the other. Suffice it to say that this is a complex subject influenced by both economic and technical considerations and that there are also

Table 3  
GROWTH RATES OF COPPER PRODUCTION  
(Percentages)

	Large-scale Chilean enterprises	World total
Annual growth rate between 1915/1919 and 1945/1949	7.4	2.3
Annual growth rate between 1945/1949 and 1965/1969	1.3	4.6
Annual growth rate between 1965/1969 and 1975/1979	4.9	3.6

Source: See table 2.

elements of marketing strategy involved. Naturally the sales value of the various forms of copper varies considerably, just as the cost of production and investment is different for the various types of copper. As an indicative guide for the reader, and without any claim to exactness or general validity, we may say that if the price of electrolytic copper (quoted on international markets) is 100, the value of refined copper contained in copper concentrates would be around 80, that of blister copper would be 92 and that of fire-refined copper would be around 99.

The production of large-scale copper mining in Chile has undergone important changes in its composition, deriving firstly from metallurgical variations in the mines and secondly by different investment decisions. The partial depletion of the oxides sector in Chuquicamata and its replacement by the exploitation of sulphides in the 1950s decreased the relative proportion of electrolytic copper, since the new sulphide plant did not contemplate making the required investment to reach an electrolytic refinement of 100% of the blister copper produced.<sup>1/</sup> Only in the second half of the 1960s did the capacity for refining in this plant expand, and this made it possible first to recover and then to surpass the production level of

<sup>1/</sup> The processing of copper into oxidized minerals is a different process and does not require an electrolytic refinery to reach the final copper.

electrolytic copper reached previously. In addition, the development project of the Andina Company (which belonged to Cerro Corporation), in the same period only planned to go as far as the production of copper concentrates, a situation which still exists today.

Table 4 presents the evolution by five-year periods of the composition of large-scale copper production between 1940 and 1979. As an aid to the reader in order to provide a more rapid (but very approximate) overview of the meaning of the variations in this composition from the point of view of the sales value of the production, a last column has been included showing an index of the "average value of production". This index has been calculated by assigning to the different types of copper the relative values indicated previously and weighing them by the respective tonnages.

With a view to completing the domestic view of copper production, it seems useful to include some background material on the evolution of small- and medium-scale copper mining.<sup>1/</sup> Table 5 complements the previous information with the series of total production of copper in Chile and the contribution to it of small- and medium-scale mining.

As may be seen, the evolution of production in this minor and complementary sector of Chilean copper mining shows a very different dynamic from that shown by large-scale mining. Without going into a specific analysis, which is not one of the purposes of this report, we may simply observe that the sector shows a practically stagnant and even decreasing level of production between 1915 and 1949 and then shows a relatively more dynamic growth rate in the following 30 years, with an average annual rate of expansion of almost 8%.

The contrast between the different rates of productive expansion and the appreciable difference between the volumes of production of large-scale mining on the one hand and small- and medium-scale copper mining on the other shows a changing relative contribution of the latter sector in the total copper production of Chile. This proportion shows a persistent decline from the beginning of the period examined up until the last five years of the 1940s, when it reaches its minimal level of 3.8% of the national total, and then increases, also systematically, until the second half of the 1960s and remains at approximately this level until the present time.

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<sup>1/</sup> The concept of small- and medium-scale copper mining in Chile is somewhat arbitrary and usually includes the production of all the copper-producing firms whose production does not exceed 75 000 tons of refined copper per year.

Table 4

LARGE-SCALE MINING: COMPOSITION OF COPPER PRODUCTION, 1940-1979 <sup>a/</sup>  
(Thousands of tons of refined copper)

Period	A Electrolytic (99.99% Cu)	B Fire-refined (99.88% Cu)	C Blister (99.2% Cu)	D Concentrates (25-45% Cu)	E Total	F Average value index
1940-1944	1 222	611	355	-	2 188	98.3
1945-1949	1 136	494	364	-	1 994	98.1
1950-1954	671	606	450	-	1 727	97.3
1955-1959	729	424	1 036	-	2 189	95.6
1960-1964	838	348	1 320	-	2 506	95.1
1965-1969	1 167	347	1 085	-	2 599	96.0
1970-1974	1 375	324	851	533	3 083	93.9
1975-1979	2 036	587	745	847	4 215	94.3

Source: 1940-1972, Corporación del Cobre, El cobre chileno, 1975, (Annex 1, table 3).  
1973-1979, basic data from the Copper Commission.

<sup>a/</sup> This table shows copper production in the form in which it is originally submitted by the different production plants, without considering the measures and processes to which this production is latter submitted.

/Table 5



Table 5

TOTAL PRIMARY PRODUCTION OF COPPER IN CHILE AND PRODUCTION OF SMALL  
AND MEDIUM-SCALE MINING, 1915-1979

(In thousands of metric tons of refined copper)

Period	A Total Chile	B Small and medium- scale mining	B/A
1915-1919	413	149	36.1%
1920-1924	660	119	18.0%
1925-1929	1 247	123	9.9%
1930-1934	967	81	8.4%
1935-1939	1 629	133	8.2%
1940-1944	2 311	122	5.3%
1945-1949	2 073	79	3.8%
1950-1954	1 880	153	8.1%
1955-1959	2 411	226	9.4%
1960-1964	2 889	381	13.2%

Source: CODELCO.

2. The investment flow

In order to have a correct view of the activities of foreign corporations in the development of the Chilean copper mining industry, we must refer to the evolution of the investments made by these conglomerates in this activity.

In the previous section we made reference to the level reached by the initial investments.<sup>1/</sup> Now in examining the evolution through time of later investments, what draws our attention first of all is the low autonomous activity level of these flows. The diversity of the situations faced by the three corporations requires an examination, brief though it may be, of their specific position.

In the case of the corporations belonging to the Anaconda group (Chuquicamata and Potrerillos), the truth is that although between 1930 and 1969 we see periods with significant investments, in all cases these investment processes respond to "required" projects related to the technical characteristics of the respective deposits and which derive from the need for reinvestment and maintenance rather than a dynamic of expansion.

<sup>1/</sup> See table 1. on page 6.

In Chuquicamata, the initial productive installations would correspond to the processing of oxidized copper ores, materials which require a specific process of metallurgical recovery. The partial depletion of this type of ores and their replacement by sulphurated ores at the end of the 1940s made it necessary for the owners to adapt the metallurgical installations, in this specific case adding a new smelting and flotation plant to Chuquicamata for the treatment of sulphurated ores. This investment developed between 1948 and 1953 and did not significantly alter the total production of refined copper, although it did change the composition of the production between blister copper (99.3% pure) and electrolytic copper (99.9% pure).

The other period in which a significant volume of investments was made in this enterprise was during the years 1966-1969, and its development derived from the plans for expansion which were negotiated and practically imposed by the government of that period.<sup>1/</sup>

The case of Potrerillos is similar to the former case. In fact the only period which reflects an active process of investment was during the years 1957-1959; in these years the necessary investments were made to develop the El Salvador ore which replaced the Potrerillos ore, whose gradual depletion culminated in its abandonment in 1959.

The situation of the El Teniente complex owned by Kennecott is different from the previous enterprises. From 1930 to 1965 in this deposit there were neither metallurgical problems nor depletion of the mine. In the same period the investment flow into this deposit was fairly small (on the average it reached around 5 million dollars, at 1979 prices, per year), and its production capacity practically did not change between 1940 and 1965. Only after the purchase by the Chilean Government of 51% of the corporation (and its later nationalization) was the expansion programme carried out which raised its production of refined copper by 60% in 1975-1979 compared with the five-year period 1965-1969.

Table 6 shows the information corresponding to the investment flow and accountable depreciation from 1930 to 1968, including the calculation of the net investment (total investment minus depreciation), for each corporation.

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<sup>1/</sup> For further discussion of this subject, see chapter 4.

Table 6  
INVESTMENTS AND DEPRECIATION IN LARGE-SCALE COPPER MINING, 1930-1968  
(Millions of 1979 dollars)

	Until 1930	1931-1940	1941-1950	1951-1960	1961-1968 <sup>a/</sup>	1931-1968
Chuquibambas						
Investment	564.8	19.3	197.6	376.0	398.4	991.3
Depreciation	90.8	130.1	105.1	136.3	210.6	582.1
Net investment	474.0	-110.8	92.5	239.7	187.8	409.2
Potrerrillos (El Salvador)						
Investment	258.7	4.1	3.8	269.2	110.6	387.7
Depreciation	15.9	46.5	86.5	74.0	193.9	400.9
Net investment	242.8	-42.4	-82.7	195.2	-83.3	-13.2
El Teniente						
Investment	492.8	27.3	26.9	56.5	80.6	191.3
Depreciation	175.9	93.3	34.0	34.7	48.5	210.5
Net investment	316.9	-66.0	-7.1	21.8	32.1	-19.2
Total large-scale mining						
Investment	1 316.3	50.7	228.3	701.7	589.6	1 570.3
Depreciation	282.6	269.9	225.6	245.0	453.0	1 193.5
Net investment	1 033.7	-219.2	2.7	456.7	136.6	376.8

Source: Senate, Office of Information, Economic Information Bulletin No 157, Antecedentes económicos y estadísticos relacionados con la Gran Minería del Cobre, 1969.

<sup>a/</sup> Figures until 1966 in the case of El Teniente.

/The figures

The figures in this table speak for themselves and confirm the above-mentioned observations on the sluggishness of investments during the period 1930-1968, that is, since the setting up of the various operations.

In the case of El Teniente, the reduced amount of gross investment during the entire period resulted in a negative total flow of net investment in comparison with the depreciation deducted during the same period 1931-1968.

For Potrerillos-El Salvador, the situation presents a different panorama. Though the gross investment flow shows sizeable totals in the decade 1951-1960,<sup>1/</sup> the high total of depreciations deducted in 1961-1968 results in a net balance for the whole period 1931-1968 of a net disinvestment of 13.2 million dollars.

In Chuquicamata, the periods in which there was a significant process of investment are the decades 1950-1960 and 1961-1968. In these, as was pointed out earlier, investments were made in the newsulphide plant (from 1949 to 1950 it is estimated that the total cost was 330 million dollars), and investments were begun from 1965 to 1968 in the so-called Chuquicamata expansion plant, in agreement with the Chilean Government, which in the three-year period amounted to 268 million dollars.<sup>2/</sup> The total investment in both reinvestment projects, 598 million dollars, thus represents 60% of the total gross investment made in Chuquicamata from 1939 to 1968.

In addition, if the depreciations of the same period are subtracted from the total gross investments made in this mining complex, it shows a total net investment of 409 million dollars.

From a more global perspective, and taking the whole group of foreign enterprises operating in the large-scale Chilean copper mining industry, it may be seen that the net investment for the whole period since 1930, or since the initial investments were made, only totals 376.8 million dollars, a figure that should be considered fairly small if we take into account the volume of the corporations considered and their profitability. In this respect it should be pointed out that the three "required" investment projects to which we referred earlier (sulphide plant in Chuquicamata, El Salvador mine and Chuquicamata expansion

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<sup>1/</sup> Note that between 1956 and 1959 the investment was made in setting up the new El Salvador mine to replace the Potrerillos mine. The cost of this project is estimated at around 220 million dollars.

<sup>2/</sup> This investment programme includes the development of the Exótica ore.

plan), together come to a "required" investment total of 818 million dollars, that is, the depreciation reserves of the enterprises themselves were enough to finance over 50% of these expenditures.

From another angle, the relatively small size of the net investments of the period is also evident by comparing their total with the flow of net profits of the period. Although it will be necessary to put forth some figures which will be discussed and analysed in later sections of this report, it is worth pointing out in this respect that the global total of net investment represents only 8.9% of the total flow of liquid profits received by foreign corporations between 1938 and 1968.

### 3. Profitability and economic characteristics of copper mining

In order to present a more complete view of the character and conditions of the insertion of foreign companies into the Chilean copper mining industry, it seems appropriate to examine, even if briefly, some of the economic characteristics of the activity and its evolution through time.

We are interested here in providing an economic panorama of the large-scale copper mining industry as a whole, leaving aside for the moment the subject of the distribution of profits between the foreign corporations and the State or the national economy.

The foreign copper corporations operated from the beginning in very different productive conditions from those of the rest of the Chilean economy. They were installed as productive units almost exclusively oriented towards the external market, they used, from the beginning, an advanced technology which was fairly intensive in the use of expensive capital equipment and their scales of operation and production corresponded to unusually high amounts for the national economy. Given the nature of the production techniques used, the employed labour force, although sizeable in total volume and regional impact, did not constitute the main element in the relationship of the large-scale copper mining industry to the national economy.

From the point of view of the cost structure of these enterprises, the available information does not enable us to make a very detailed analysis of these costs from a functional point of view. It is possible, however, to see some general tendencies which provide interesting background.

/If we

If we note, for example, the internal or external origin of direct operating expenditures (excluding depreciation and interest) we see that expenditures abroad (imports of inputs and payments for external factors of production), constitute a high percentage of total costs, although they show a tendency to decline in relative terms during the course of the period examined. In all of the years from 1930 until the 1950s, foreign expenditures constitute between 50 and 60% of total costs, a proportion which later declines gradually to only around 30% in the 1960s (see table 7). It is worth mentioning in passing that in 1978, the last year for which information is available, foreign expenditures represent approximately 28% of total operating costs. The great importance of this heading even now in total costs reflects the type of technology used, which requires a high consumption of imported elements, such as fuel, reagents or parts and spare parts of relatively sophisticated machinery.

Naturally the proportion of direct operating expenditures in Chile evolved in the opposite direction. Representing only 35% of the total in the five year period 1935-1939, their relative weight grew continuously through time until it reached practically 67% in the five year period 1965-1969.<sup>1/</sup>

Perhaps from a strictly economic point of view the examination of the trend of total costs would be of greater interest. As may be seen by the figures in table 7, total operating costs and, more important, costs per unit of production (per pound of copper produced) show a constant upward trend from 1950-1954 onwards. From a direct unit cost of production of 28.6 cents per pound of copper produced in the period 1950-1954, it reached a unit cost of 57.3 cents per pound in the last period 1965-1969.

In other words, in the last fifteen years of foreign ownership of large-scale mining, the unit cost of production grew at an annual rate of 5%.

Clearly the main factor behind the dynamic growth of the costs of production is the behaviour of expenditures made in Chile. This national component of expenditures grew (in terms of cost per unit produced) at an annual rate of 2.7% between 1935-1939 and 1950-1954, and then grew at an annual rate of 7% between 1950-1954 and 1965-1969.

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<sup>1/</sup> In any case, note that not necessarily all of the operating expenditures made in Chile correspond to national factor payments. In all probability, many of these expenditures have a sizeable "imported" component as raw material (special steel), or parts and spare parts.

Table 7  
PRODUCTION COSTS IN LARGE-SCALE COPPER MINING, 1935-1979<sup>a/</sup>  
(Millions of 1979 dollars)

Period	Foreign costs <sup>b/</sup>		Costs in Chile		Depreciation of interest		Total	
	Value	Cents/ pound	Value	Cents/ pound	Value	Cents/ pound	Value	Cents/ pound
1935-1939	461.6	14.0	330.8	10.0	139.7	4.2	932.1	28.2
1940-1944	467.9	9.7	535.3	11.0	147.4	3.1	1 150.6	23.8
1945-1949	471.5	10.7	544.7	12.4	94.8	2.2	1 111.0	25.3
1950-1954	428.0	11.2	561.6	14.8	99.3	2.6	1 088.9	28.6
1955-1959	653.4	13.6	941.7	19.5	232.8	4.8	1 827.9	37.9
1960-1964	700.1	12.7	1 438.3	26.0	320.9	5.8	2 459.3	44.5
1965-1969	741.4	12.9	2 208.2	38.5	336.5	5.9	3 286.1	57.3
1970-1974 <sup>c/</sup>	...	...	...	...	...	...	5 435.0	80.0
1975-1979	...	...	...	...	...	...	5 280.4	56.8

Source: Statistical Annex, table 2.

- <sup>a/</sup> The measurement of the unit cost of production in cents per pound of refined copper produced was obtained by dividing total costs incurred in the period by the total tonnage of refined copper produced, in any form. In other words, it represents an average unit cost of production.
- <sup>b/</sup> Foreign costs include imports of inputs and materials for operation, salaries, fees and commissions paid abroad as well as the cost of refining blister copper abroad.
- <sup>c/</sup> As may be observed in table 2 of the Statistical Annex, the average unit cost for the period 1970-1974 is strongly influenced by the production cost in 1974, which was abnormally high and for which we do not have explanatory information. The unit cost for 1970-1973 was slightly less than 70 cents/pound.

/Unfortunately, the

Unfortunately, the quality of available information on the distribution of the cost figures among its different components does not allow for a valid economic analysis of this phenomenon.

Without claiming to have had the last word on the subject, and more in the desire to add information which might contribute to formulating a logical explanation of this important development, we would venture to suggest two elements which we believe influenced this development. In the first place, it should be taken into account that in the years 1952-1953 the new sulphide plant began its operations in Chuquicamata for treating sulphurated ore; this metallurgical process has a higher cost of operation than the processes of leaching used for oxidized minerals and, as a result, the progressive incorporation of this type of ore meant an increase in the cost of production per pound of copper in Chuquicamata and hence an increase in the average cost of large-scale mining in Chile.

The other element that should be pointed out is related to the evolution of the cost of labour in the period considered. Although we do not have a set of reliable data on wages and salaries which would make an overall analysis possible, there is some partial information which points to a sizeable increase in the overall cost of remunerations in part of this period. In effect, according to information cited by Professor French-Davis, the total cost of labour between the three-year period 1955-1957 and the years 1970-1971 had gone from an annual average of 113 million dollars to 313 million dollars, with an increase of slightly over 50% in the number of workers employed by large-scale mining. The cost of labour, which represented 12 cents per pound of copper in 1955-1959 (29% of the total cost), had risen to 25.5 cents in 1970-1971 (36% of the total cost).<sup>1/</sup> In other words, at least in these 15 years there was a significant process of real improvement in average wages of workers employed in the large-scale copper mining industry. We believe that an important part of this phenomenon should be attributed to the development and strengthening of the labour union organizations of those labour groups which, in turn, were counterbalanced by a relative weakening of the position of power and influence of the foreign companies over domestic affairs.<sup>2/</sup>

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<sup>1/</sup> See "El cobre y el desarrollo nacional", CEPLAN, 1974.

<sup>2/</sup> On this subject, see the more detailed analysis in the following chapter.



Summing up this brief examination of the historical trend of the production costs of large-scale copper mining in Chile, we may say that these costs show a clearly rising tendency during the period examined, especially beginning in the first half of the 1950s. In absolute terms, the production of one pound of copper costs about 25 cents in the 1930s and 1940s, while in the last five year period 1965-1969 this figure had risen to almost 60 cents per pound.

Before going into the subject of the profitability of these enterprises in the period analysed, we must complete the picture with some background on the behaviour of the selling price of copper produced by these conglomerates. The question of the international copper market and its evolution in these years will be examined in some detail in a later section of this report, so we will limit ourselves in this part to providing only the basic information on the subject. We must keep in mind also that in the following discussion of copper prices received by copper producers in Chile we have calculated the average effective prices charged by these corporations. These amounts, although they follow the trend and are similar to the international prices of copper, are not equivalent to them, because of variations in quality and methods of marketing the copper from large-scale mining.

Although there were sizeable annual fluctuations, the real price of copper received by foreign corporations operating in Chile between 1927 and 1970 showed a definite upward trend, especially between the years of the Second World War and the last five-year period 1965-1969. In concrete terms, these corporations received a price which fluctuated between 50 and 55 cents per pound of copper sold in the 1930s and during the Second World War. In the following period this figure rose above 60 and 70 cents, reaching an average of 116.6 cents per pound in the second half of the 1960s.<sup>1/</sup> To complete the picture, however, it should be added that in the 1970s we have seen a marked deterioration in the international prices of this metal, a phenomenon reflected in the average obtained by the Chilean copper companies between 1975-1979 which only reached 73.2 cents per pound of copper.

Having provided the principal information on the amount and evolution of costs and prices, it seems appropriate to concentrate now on what is perhaps the most outstanding characteristics of large-scale copper mining in Chile: its profitability as a business.

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<sup>1/</sup> For a complete list of the prices of copper, see statistical annex and figure 1.

In this part, and referring to the profitability of the copper business, we want to limit ourselves to the economic concept of surplus or profit of the activity, without taking into account taxation or fiscal participation in these earnings. We think that the knowledge of the amount and evolution through time of this economic surplus is indispensable for a proper understanding of the development of the activities of the foreign corporations in Chilean copper and the dynamic of their relations with the State and with the rest of the national economy.

The very arithmetic comparison of the figures we have provided in the previous pages as costs and prices points towards the most relevant element we would like to point out, that is, the very high profitability of this activity. As early as the period of the first years of production, it was possible to see a large difference between the costs of producing copper for these enterprises and the volume of the earnings they received for the sale of their product. Table 8 presents the most important indicators on the economic point of view, following their development from 1927 to 1979.

As can be seen, gross profits from the copper-exploiting activity maintain a truly spectacular total as a proportion of the value of production during the entire period in question. From this point of view, and mainly as a result of the initially decreasing trend in the unit costs of production, this proportion of the surplus, which began at 46.6% in the late 1920s, reached 61.6% in the five year period 1950-1954. The strong upward pressure of the costs of production reduced this ratio slightly in the following years, but even in the final period of exploitation under foreign control gross profits amounted to 52.6% of total sales earnings.

The combination of higher costs and lower prices deteriorated this relationship in the later years, although the absolute total of the surplus grew as a consequence of the increase in copper production.

In addition to this aspect relating to the specific profitability of this business, we think that it is also important to consider the quantitative volume of these flows. Partly as a result of a greater valuation of copper in the international market, and in some measure as a result of higher production, the fact is that both the gross values of production and the flows of surpluses show a sizeable growth in their real monetary value. Thus the sales value of the products generated by the large-scale copper mining activity, which between 1927-1930 represented an average annual value of almost 400 million dollars, had reached an average annual value in the last years, 1975-1979, of over 1 500 million dollars, both amounts in 1979 dollars

Table 8  
VALUE OF PRODUCTION, COSTS AND SURPLUSES GENERATED BY  
THE LARGE-SCALE COPPER MINING INDUSTRY, 1929-1979

(Millions of 1979 dollars)

Period	<u>A</u> Copper production (thousands of tons)	<u>B</u> Value of total production <u>a/</u>	<u>C</u> Total costs	<u>D</u> Unit costs (cents/ pound)	<u>E</u> Selling price <u>b/</u> (cents/ pound)	<u>F</u> Surplus	<u>G</u> F/B (percent age)
1927-1930	970	1 563.1	834.3	39.0	69.2	728.8	46.6
1935-1939 <sup>c/</sup>	1 496	1 870.5	932.1	28.2	55.2	938.4	50.2
1940-1944	2 189	2 618.3	1 150.6	23.8	53.5	1 467.7	56.1
1945-1949	1 995	2 433.8	1 111.0	25.5	56.7	1 322.8	54.4
1950-1954	1 727	2 836.7	1 088.9	28.6	78.9	1 747.8	61.6
1955-1959	2 186	3 855.3	1 827.9	37.9	82.4	2 027.4	52.6
1960-1964	2 505	4 110.0	2 459.3	44.5	74.3	1 650.7	40.2
1965-1969	2 599	6 939.4	3 286.0	57.3	116.6	3 653.4	52.6
1970-1974	3 082	8 344.8	5 435.0	80.0	115.9	2 909.8	34.8
1975-1979	4 215	7 739.9	5 280.4	56.8	73.2	2 459.5	31.8

Sources: Statistical Annex, table 2.

a/ The total value of production corresponds to the selling price of sub-products such as silver, gold and molybdenum, in addition to copper, which in any case is its determining component.

b/ The price for each period corresponds to the arithmetic average of the annual effective prices of the period received by the corporations for sales of copper in various forms.

c/ The crisis years of the 1930s (1931-1933) have been excluded in order to avoid distorting the overall total.

/Looking at

Looking at the same problem but from another angle, we have carried out a small exercise to establish the flows of net earnings generated by the large-scale mining of those years. As net earnings, we have defined the sum of gross profits plus depreciations minus the total investment of the period. The summary of these results is shown in table 9.

Table 9  
NET EARNINGS GENERATED BY THE LARGE-SCALE COPPER MINING  
CORPORATIONS, 1927-1970  
(Millions of 1979 dollars)

Period	A Gross profits	B Deprecia- tion	C Investment	(A+B-C) Net earnings
Up to 1930	728.8	282.6	1 316.3	-304.9
1931-1940	1 286.8	269.9	50.7	1 506.0
1941-1950	2 823.0	225.6	228.3	2 820.3
1951-1960	3 815.6	245.0	701.7	3 358.9
1961-1970	5 739.2	542.3	1 216.4	5 065.1

Source: Columns A and B: Statistical Annex, table 2.

Column C: Senado, Oficina de Informaciones, Bulletin No. 157.

All of the background presented, aside from its possible statistical imperfections and the obvious limitations of a simple comparison through time, seem to clearly show an important fact. For various reasons mainly having to do with the "natural" supply of cupriferous minerals in Chile and with the development of the world copper market, the exploitation of large-scale Chilean copper mining between 1927 and 1970 shows an extraordinary economic profitability, well beyond the normal margins for this type of business. The economic conditions of the activity show that a "return" is generated which is associated with the scarcity of the basic mineral resource, and only in this way is it possible to explain the persistence through time of its abnormal profit rates.

In a later chapter this subject will be dealt with in greater depth from the point of view of the distribution of these earnings between foreign companies and the Chilean State and the relationships between them. In this part we are interested

/in examining

in examining the economic operating conditions of the whole system because we think it is very difficult to understand and explain the dynamics of distribution of these profits without taking into account their special characteristics.

#### B. THE IMPORTANCE OF LARGE-SCALE COPPER MINING IN THE CHILEAN ECONOMY

Any analysis which claims to present an overall or significant view of the development of activities in the large-scale copper mining industry and its inter-relationships with the rest of the national society cannot fail to mention an element of great importance: the enormous relative weight of this activity in the national economy. It might be said that a large part of the interactions of the foreign copper corporations with the rest of Chilean society and, more accurately, most of the reactions of the various elements of this national society to the large-scale copper mining industry, can only be understood by considering its strong influence on some key areas in the Chilean economy.

We will now examine some of these areas in the hope of supporting the previous statements. Before coming to the matter itself, we will make a brief digression which will serve as a general frame of reference.

By the nature of its activities, the relationship of the large-scale copper mining corporations to the rest of the domestic economy cannot be explained on a general level and by a large variety of reciprocal influences. On the contrary, these relationships, although very important, are limited to only a few areas and, in general, these corporations operate somewhat on the margin of the national economy as such. There are three mining corporations of relatively large size, two of which are located in the northern part of the country, in regions with relatively low population, and the third, although located in the central zone (with a higher concentration of population), is in the foothills of the Cordillera, far from the urban centres. From the point of view of their economic and commercial situation, these corporations carry out almost all of their sales in international markets and, because of the nature of their technology, a large part of their purchases of inputs also come from abroad. In brief, the integration of the large mining companies, both forwards and backwards, although it has developed over the years, continues to be relatively weak and also contributes to isolating this sector from the rest of the national productive activities.

/Let us

Let us now examine the influence of the large-scale copper mining industry (LCM) in the national economy in four main areas of interest: employment, fiscal financing, balance of payments, and geographical product.

1. LCM and employment

As may be inferred from our previous remarks on the technical and productive characteristics of these corporations, the labour force employed by large-scale mining, although large in absolute terms, does not have much relative significance in global terms. As can be seen in table 10, the proportion of the labour force employed in this industry compared with the total active population of the country fluctuates around 1% from 1930 to 1970, and shows a tendency to decline.

Table 10

EMPLOYMENT IN LCM AND TOTAL ACTIVE POPULATION, 1930-1979

Period	A Employment LCM	B Active population	A/B
1930	17 164	1 304 000	1.3%
1940	19 789	1 804 000	1.1%
1950	14 871	2 161 000	0.7%
1960	17 517	2 427 000	0.7%
1970	24 156	2 950 000	0.8%

Source: For A: Corporación del Cobre.

For B: Population Census and National Planning Office (ODEPLAN).

The impact of the employment generated by the large-scale copper mining corporations is, however, quite a bit higher if its effect is measured from the regional point of view. Although we do not have a complete historical series, we have made an estimate of the effect of employment in regional terms based on the population census figures of 1952. The results are represented in table 11.

/Table 11

Table 11.

EMPLOYMENT IN LCM AND REGIONAL EMPLOYMENT, 1952

	A	B	A/B
	Employment in corporations	Active population in the province	
Chuquicamata	6 084	67 100 (Antofagasta)	9.1%
Potrerillos	2 861	29 081 (Atacama)	9.8%
El Teniente	7 347	81 527 (O'Higgins)	9.0%
<u>Total</u>	<u>16 292</u>	<u>177 708</u>	<u>9.2%</u>

Source: For A: Corporación del Cobre.  
For B: Population Census.

It is clear, then, although not from the national point of view, that from the regional economic standpoint the labour force employed in the large copper corporations has become an important element. It is nonetheless curious that the relative weight of this activity is fairly similar in the three cases, although these are very different regions and far from one another.<sup>1/</sup>

Before finishing this point, it is worth mentioning that the relatively low significance of the employment variable in LCM clearly reflects the high level of productivity of the labour force in this activity, a level which clearly separates this sector from the rest of the national economy. According to a study by the Economic Institute of the University of Chile, in 1950 the ratio of average national productivity to the same indicator for LCM was 1 to 11.2.

## 2. LCM and fiscal financing

The financial earnings derived by the State from copper have long been a very important part of total fiscal financing. The ways and conditions in which these resources have been obtained have varied considerably from the 1930s to the present.

<sup>1/</sup> In any case, it is worth mentioning that we are referring here only to the direct employment generated by LCM. Undoubtedly, the effect of indirect employment in commerce, services, and supply of inputs is also important, although difficult to quantify.

In a later chapter, we will examine this process and its various stages; for the moment, our only interest is to see what has been the relative importance of the contribution of large-scale copper mining to fiscal earnings. In this section, when we refer to fiscal financing derived from LCM, we mean all the resources which the State has obtained from this activity, whether open or hidden taxes,<sup>1/</sup> participation by the State in price increases or participation by State enterprises in profits.

From the figures we are about to see, it is clear that the copper mining exploited by foreign enterprises has played a crucial role in the financing of State activities. Over the 40 years in which these mining exploitations have been developed under foreign control, they have consistently brought in from one-fifth to one-fourth of all tax revenues. The reader may easily imagine the type of conflict and tensions which a financial dependency of this nature may cause, especially if we recall that in this period the Chilean State was implementing an economic and social development strategy which required the State itself to devote a growing portion of its economic resources to the carrying out of its objectives.

A summary by five-year period of the relevant figures is presented in table 12.

We are not trying to present a coherent explanation here of the evolution of fiscal financing from large-scale mining and its relationship with total tax revenue. The variables determining the final value of this relationship are numerous, and each one has its own behavioural logic. Variables intervene here in a combined way, such as the price of copper, domestic tax policy, towards LCM, LCM operating costs, and trends in the physical production of copper, to mention only the most important. In the relevant chapter some of these elements and their main results will be analysed.

As a general comment, and apart from pointing out the important role this activity has played as a source of income for the State, we would like to call attention to the growing sum, in absolute terms, which LCM has contributed to fiscal financing. This series of fiscal incomes by five-year periods shows its extraordinary growth through the period (from 1940-1944 to 1975-1979 tax revenues grew at a real

<sup>1/</sup> From 1940 to 1955 especially, LCM had to liquidate its foreign currency at a substantially lower exchange rate than that in force for the rest of the economy. This was, in fact, a fiscal tax which we have computed as such. For a detailed description of this subject, see R. French Davis, El cobre en el desarrollo nacional, CEPLAN, 1974.



Table 12  
TAX REVENUE FROM COPPER AND TOTAL FISCAL FINANCING, 1929-1979  
(Millions of 1979 dollars)

Period	A Tax revenue from large-scale copper mining	B Total tax revenue	A/B (Percentage)
1929, 1932, 1935 <u>a/</u>	69.2	1 194.6	5.8
1940-1944	753.5	3 170.7	23.8
1945-1949	822.5	4 098.7	20.1
1950-1954	1 382.2	4 803.5	28.8
1955-1959	1 385.3	5 254.6	26.4
1960-1964	1 127.4	7 244.2	15.6
1965-1969	2 557.2	12 155.9	21.0
1970-1974	2 765.7	14 597.3	18.9
1975-1979	2 459.5	16 128.4	15.2

Source: See Statistical Annex, table 1.

a/ Although we do not have complete data for the 1930s, we have decided to include the information available on these three years as a point of reference for the following years.

annual rate of 6%), undoubtedly a reflection of the expansion in expenditures by a State which assigned itself a central role in the promotion of national development.

The growing and permanent need for fiscal financing during the years examined resulted from a pressure, which was also permanent to obtain increasingly large amounts of the resources generated by the foreign copper corporations. This tension largely explains the nature of the economic relationship, always changing and in constant review, between the foreign firms and the Chilean State. We will return to this subject later; for the moment, and in order to support our statements, we present in table 13 the evolution of tax revenues from copper and their relationship with the total surplus generated in this sector. Setting aside the series of the five-year period 1950-1954, which had very special characteristics, the evolution of the effective rate of obtaining resources on the part of the State showed a clear and constant upward trend, a process which finally resulted, in 1971, in the nationalization of the foreign copper corporations

Table 13

TAX REVENUE FROM COPPER AND GROSS PROFITS OF THE INDUSTRY, 1935-1979  
(Millions of 1979 dollars)

Period	A Price of copper (cents/ pound)	B Gross profits of large-scale copper mining	C Tax revenue from copper	C/B (Percentage)
1935-1939	55.2	938.4	265.5	28.3
1940-1944	53.5	1 472.7	753.5	51.2
1945-1949	56.7	1 310.8	822.5	62.7
1950-1954	78.9	1 747.8	1 382.2	79.1
1955-1959	82.4	2 027.4	1 385.3	68.3
1960-1964	74.3	1 650.7	1 127.4	68.3
1965-1969	116.6	3 653.3	2 557.2	70.0
1970-1974	115.8	2 909.8	2 765.7	95.0
1975-1979	73.2	2 459.5	2 459.5	100.0

Source: Statistical Annex, tables 1 and 2.

3. LCM and the domestic product

The exploitation of the large-scale copper mines has meant an important contribution to the domestic product (GDP) of Chile, substantially higher than its relative size would indicate.

Again, unfortunately, we are faced with a lack of reliable statistical information which limits the possibilities of presenting a more complete analysis of this subject. The available information on wages and salaries (an outstanding component of the total value added generated by this activity), starts in the mid-1950s and ends only a few years later.

In any case it is possible to point out some interesting elements on the basis of the partial data available. Firstly, the contribution of LCM to Chile's GDP has been between 4% and 7% since the mid-1950s. The high range of variation in this level originates in the fluctuations of the level of the price of copper, a variable which determines the volume of gross profits generated.<sup>1/</sup>

<sup>1/</sup> This is only one way of pointing out the way in which the terms of trade influence the GDP level in Chile.

Given the fact that the companies which exploited Chilean copper were foreign property, the distinction between the contribution to the domestic product and to the national product acquires special importance in this case. Obviously, the contribution to the latter will be relatively smaller, reflecting the sizeable total of payments to foreign capital which forms a part of the total value added of the sector. In very approximate terms, we could say that the share of LCM in the national product is from 1% to 2% lower than its contribution to GDP, a difference which represents, also in approximate terms, that part of the national product which is transferred abroad.

In table 14 we present the available information for some representative years of the period 1956-1979.

Although the variation in these figures and the fact that the information is incomplete make the task of indicating a precise trend difficult, we would venture to propose that since the 1960s it is possible to see a growing evolution of the share of LCM in the GDP, and especially in the GNP. This is the result of the higher prices prevailing in recent decades and the relatively better obtention of surpluses on the part of the State.

#### 4. LCM and the balance of payments

We have left until the end the examination of the more directly important relationship between the copper mining industry and the Chilean economy. This is none other than the contribution that this activity makes to the foreign currency income of the national economy.

The general scenario is rather simple: a productive activity generating a product with a relatively high value, with a productivity several times greater than the national average and whose almost exclusive orientation is the export markets. The concrete translation of this scenario is very direct, and it determines an inordinate proportion of the total income from exports originating in the activity of the large scale mining of copper.

The relevant figures speak for themselves. From 1940 (the first year for which comparable data are available) until 1979, the net income of foreign currency generated by the large scale copper mining industry represented 56% of the total income of foreign currency derived from the export of goods. In other words, more than half of the actual capacity to import in the Chilean economy depended, throughout this entire period, on the activities and decisions of two large foreign conglomerates, the Anaconda Company and Kennecott Copper Corporation.

Table 14  
CONTRIBUTION OF LARGE SCALE COPPER MINING TO THE DOMESTIC  
PRODUCT AND NATIONAL PRODUCT  
(Millions of 1979 dollars)

Year	Foreign factor payments			National factor payments							G/H	F/I
	Liquid profits	Depre- ciation	Total	Wages and salaries	Fiscal parti- cipation	Total	Value added (C+F)	Gross national product	Gross domes- tic product a/ (H-C)			
										Percentages		
A	B	C	D	E	F	G	H	I	J	K		
1956	198.3	34.5	232.8	113.9	363.7	477.6	710.4	9 063	8 830	7.8	5.4	
1962	105.2	52.4	157.6	176.7	205.9	382.6	540.2	12 180	12 022	4.4	3.2	
1965	102.3	77.4	179.7	202.1	317.7	519.8	699.5	14 024	13 844	5.0	3.7	
1968	285.6	48.0	333.6	253.4	457.0	710.4	1 044.0	15 833	15 499	6.6	4.6	
1970	144.1	44.0	188.1	318.1	626.9	945.0	1 133.0	16 972	16 784	6.7	5.6	
1979	...	120.0	...	331.1	1 033.4	1 484.5b/	...	20 042	20 042	7.4	7.4	

Source: A, B and E: Statistical Annex, tables 1 and 2.

D, R: French Davis, Integración de la Gran Minería en la economía nacional, p. 221 in CEPLAN, op.cit.

H: CEPAL, Series de crecimiento de América Latina, 1978 and ODEPLAN, 1979.

<sup>a/</sup> Strictly speaking, this column is only an approximation of the gross domestic product, since it results from deducting from the gross national product the foreign factor payments of the Large-Scale Copper Mining Industry, without taking into account other foreign factor payments.

<sup>b/</sup> Include US\$120.0 million in depreciations.

/From a

From a historical point of view, it is worth pointing out the "good fortune" of the external sector of the Chilean economy. From 1880 onwards, exports of saltpetre were the main and very important support of the balance of payments (and indirectly the national budget). From 1900-1914, saltpetre was responsible for 75% of Chile's total exports.<sup>1/</sup> That is, in these years the Chilean economy "lived" on saltpetre. In the 1930s the natural saltpetre industry began to decline, as a result of competition from synthetic saltpetre and its lower prices, and this had a serious impact on Chile's balance of payments. Chilean exports fell by 50% and the crisis of 1932 hit the country's economy with a special violence. Only the development of the large scale copper mining industry in these same years was to alter this picture, and by the end of the 1930s the 1929 level of exports was reestablished. In the new profile of Chilean foreign trade, however, saltpetre now occupied second place and copper was the new export product which contributes the preponderant amount of foreign currency.

To provide a better view of the evolution of the dependency of the Chilean balance of payments on the large scale copper mining industry, we have prepared a series which shows the returned values from the exports generated by LCM and their relationship to total exports (subtracting from this latter value the amounts not returned by LCM) between 1940 and 1979. In other words, we are trying to show the net contribution of LCM to the actual import capacity of the Chilean economy. The information is presented in table 15.

It is not easy to draw conclusions or see significant trends in the evolution shown by both indicators. Both the value returned from copper exports and the total amount of exports are the result of different variables acting in various directions and with changing intensity through time.

In any case, and recognizing beforehand its possible limitations, we would like to make a comment which might be of interest. If we take the figures of the previous table and, based on these, we analyse the growth rate by period of both the amounts returned from copper and from the rest of exports, it is possible to see that there are two different subperiods in respect of the rate of expansion. A first period, between 1940-1944 and 1960-1964, with slower growth in both export components, and a second subperiod from 1960-1964 to 1975-1979, which shows a high growth rate for both elements.

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<sup>1/</sup> See Ignacio Aliaga: La economía de Chile y la industria del cobre (Santiago, 1946), pp. 99-104.

Table 15

"NET" EXPORTS OF COPPER AND TOTAL EXPORTS, 1940-1979

(Millions of dollars)

Period	Price of copper	A	B	A/B Percentage
		Values returned by the Large Scale Copper Mining Industry a/	Total exports of goods b/	
1940-1944	53.5	1 288.0	2 892.2	44.5
1945-1949	56.7	1 367.3	3 549.1	38.5
1950-1954	78.9	1 943.0	4 164.8	46.7
1955-1959	82.4	2 362.2	4 014.9	57.9
1960-1964	74.3	2 566.1	4 590.6	55.9
1965-1969	116.6	4 764.1	8 021.3	59.4
1970-1974	115.8	7 292.7	10 635.9	68.6
1975-1979	73.2	6 965.9	13 140.9	53.0

Sources: Column A: See Statistical Annex, table 2.

Column B: 1940-1952, Economics Institute, University of Chile, El desarrollo económico de Chile, 1940-1956, table A-13. 1952-1970, R. French Davis, Políticas económicas en Chile, 1952-1970, p. 289. 1970-1979, Central Bank of Chile, Monthly Bulletins.

/In the

In the first 20 years, LCM's contribution to import capacity rose at an annual rate of 3.5%, while the rest of exports rose by only 1.1% annually. In the 15 years from 1960-1964 to 1975-1979, the expansion of income from LCM foreign currency developed at a rate of 7% annually, while income from foreign currency generated by other imports grew at a rate equivalent to 8.5% per year.

Returning to the main theme, and to complete these observations, it is worth emphasizing the central conclusion. From almost the very beginning of large scale copper exploitation by foreign capital, the income from foreign currency generated by this activity became the determining factor in Chile's balance of payments. In most recent years, and in spite of the growing dynamic of the other export sectors, this dependency appears to be accentuating, due to the relative rise in the prices of copper in international markets and to the sizeable increases in production registered in the 1970s.

Taking into account the probable prices which this metal might reach in the coming years and the country's wealth in copper ore, it may be assumed that, for good or bad, copper will continue playing a preponderant role in the Chilean economy, especially in its balance of payments.

## Chapter 2

### THE INTERNATIONAL COPPER MARKET AND THE CHILEAN EXPERIENCE

#### A. CHARACTERISTICS OF THE INTERNATIONAL COPPER MARKET

Of all the industrial mineral raw materials, copper has a prominent place, second only to iron in the value of its production and in the value of its international trade. In 1979 prices, the value of production of primary copper annually 1/ is around 16 000 million dollars, and it is estimated that the international trade in copper as a raw material amounts to approximately 6 400 million dollars annually.

In previous sections, we referred to the relative importance of Chilean copper production in the world total. At the present time, and including the production of small- and medium-scale mining, Chilean production represents around 13% of the world supply of primary copper. However, given the structural characteristics of the copper industry and the essentially exportative nature of this activity in Chile, the importance of Chilean exports of primary copper is even greater, and it is estimated that it amounts to about 30% of the annual total exports of the metal.

By primary copper industry we mean those mining and metallurgical activities whose product is various materials containing copper in different proportion according to its degree of processing. The most usual products in international trade are copper concentrates (which contain 20-30% metal) blister copper (with 99% metal) and bars or cathodes of electrolytic copper, which are 99.95% pure. These latter products are the ones which make up the basic input of the processed copper industry which, through a relatively simple industrial process, transforms these materials into processed copper products such as wires, cables, plates, tubes, hoops, etc. These elements, in turn, are one of the raw materials used by the so-called "final consumer industry" which incorporates these materials into the manufacture of final products, including automobiles, telephone cables, printed circuits, household appliances, electric engines and generators, etc.2/

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1/ By primary copper is meant the metal obtained from mining exploitation as opposed to secondary copper, which is obtained from the recovery of scrap metal.

2/ The organization and structure of the copper industry is undoubtedly substantially more complex and varied than is shown by this schematic presentation, but for the sake of brevity we have simplified the explanation for the purpose of showing only the broad outlines of this industrial structure.



Partly for historical reasons, in some measure due to technical and economic factors, and also largely because of the widespread existence of discriminatory tariff barriers,<sup>1/</sup> the properly industrial activities of copper have tended to be located in the industrialized regions and countries. Mining and basic metallurgical activities, naturally, are more often found in the areas which have the basic mineral resource.

In keeping with the previous considerations, the flows of the international copper trade have tended to develop in accordance with geographical distribution, in the areas which are rich in copper ore and the centres of advanced economic development.

Very roughly speaking, the main characteristics of the international copper trade, which have not experienced notable variations in the past 30 years, may be summarized as follows. On the one hand, there are two main regions for production and export, Latin America and Africa, with the later incorporation, to a lesser extent, of Australia in the same category. The other side of the coin would be represented by the consumer-importer areas, among which are, firstly, Western Europe and the United States at a decreasing rate, Asia (Japan mainly), whose need for a foreign supply has grown impressively in the past three decades and, finally, and to a lesser extent, the socialist area.

The productive and geographical realities mentioned above are the basis of the actual flows of imports and exports which, on the whole, tend to follow the logic of proximity and the lower cost of transport. Thus, for example, supplies to the United States largely come from South American producers, Chile and Peru, while Zambia is a traditional provider of copper for Japan. The above should be understood as a generalization which is certainly valid but which in no way rigidly determines the specific outlines of the international copper trade. On the material basis already explained, trade or financial variables or even political considerations are superimposed, which occasionally determine different trade flows from the logically apparent ones.

Table 16 presents the production and consumption figures and respective totals for the main geographical regions.

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<sup>1/</sup> In the majority of countries, copper does not have to pay import duties until the cathode or electrolytic bar stage, nor these duties exist for the entire line of later processing.

Table 16  
PRODUCTION AND CONSUMPTION OF REFINED COPPER BY REGIONS, 1950 AND 1977 a/  
(Thousands of tons)

Region	1950			1977		
	Production	Consumption	Total	Production	Consumption	Total
Western Europe	113.5	780.0	-666.5	737.2	2 725.8	-1 988.6
Asia	92.8	101.5	-8.7	594.8	1 330.3	-735.5
North America	1 064.8	1 227.7	-163.1	2 519.5	2 199.1	+320.4
(United States)	(824.9)	(1 130.7)	(-305.8)	(1 712.9)	(1 979.9)	(-267.0)
Latin America	480.5	55.8	+424.7	1 529.0	393.3	+1 135.7
Africa	519.9	23.3	+496.6	1 471.5	78.9	+1 392.6
Oceania	15.1	33.3	-18.2	432.8	114.6	+318.2
Socialist Area	239.5	309.1	-69.6	2 008.2	2 164.5	-156.3

Sources: Metallgesellschaft, Metal Statistics, 1946-1953 and 1967-1977.

a/ The absolute totals of production and consumption for the two years are not comparable, since the 1977 figures, for both production and consumption, include the refined copper produced on the basis of the recovery of scrap metal. This however does not change the validity of the figures shown as deficit or surplus by regions.

/It is

It is worth pointing out briefly the principal characteristics of the industrial structure of the international copper market.

Firstly, with the exception of the United States' market, in the rest of the world market there is no significant degree of vertical integration which would connect the producers and the users of primary copper. In general, both sectors are clearly distinct and even in the case of the United States the influence of the producers as consumers does not rise above 30% of the copper consumption in this country.

Secondly, in respect of primary copper, the market presents clearly oligopolistic features. Previously as a result of the concentration of mining production in a few large conglomerates operating in different countries, and presently as a result of the process of nationalization and government centralization of these activities in the most important exporting countries, it is characterized by a small number of sellers compared with a much larger variety of buyers. In the years after the Second World War, it is estimated that seven large mining companies controlled about 80% of the copper produced in the Western world.<sup>1/</sup> Presently, the State mining enterprises of four countries, Chile, Zambia, Peru and Zaire, control over 85% of the total exports of primary copper.

We will now briefly examine the ways and means used to determine the prices regulating international copper transactions.

Before going into the matter, we will briefly refer to the price structure for different types of copper. Normally, the price of copper is understood to be the value assigned to electrolytic copper bars (99.95% pure). This is the point of reference in international markets, and the other types of copper normally traded, blister copper and copper concentrates, are directly negotiated between the buyer and the seller on the basis of variable discounts on the price of electrolytic copper. The size of these discounts depends on the prevailing conditions in the respective markets, the quality of the materials offered and the relative power and bargaining strength of the parties.

In the following paragraph, when we refer to the international price of copper we are referring to the price for electrolytic copper.

Since 1930 there have coexisted basically two parallel mechanisms for establishing these prices. On the one hand, the large United States' producers have

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<sup>1/</sup> T. Moran, op.cit.

used and still use unilateral fixing of their selling prices, which govern not only their domestic transactions but also for many years served to establish the selling price of the subsidiaries operating abroad, especially in Chile, Peru and Mexico.

The establishment and modifications of these values were determined by the corporations themselves, taking into account the market conditions, their global interests and, in some cases, the wishes or instructions of the Government of United States itself.

Independently of the prices of the United States producers, for a large part of the past four decades, the other point of reference used was the price established daily in the London Metals Exchange. This price was used directly or indirectly by the large majority of producers and sellers who were not under the control of United States corporations, except in 1939-1953 in which this exchange did not operate. In the second half of 1960, practically all the selling corporations operating outside the United States territory adopted as a price base the quotation of the London Metals Exchange, which even today is the universally accepted reference for international copper transactions.

The type of commercial relations between habitual buyers and sellers of copper in the market is fairly standardized and is a set of rules which has not varied much in the past thirty years. The sales contracts are drawn up by annual tonnage or by two to five-year periods in which a calendar of deliveries is established, generally monthly. Each delivery is a separate commercial operation to which the general contractual conditions apply in relation to price, payment and place of delivery. The price of each delivery generally refers to a certain reference base (London Metals Exchange or Producers' Price), and the specific price is determined by applying the reference base at the time of delivery.

Given the oligopolistic characteristics of the copper market, it is not surprising that the contractual global framework corresponds more to the seller's position, leaving the buyer few options apart from acceptance. Naturally the relative rigidity and toughness of the sellers varies with time, depending on the more or less tight conditions of the market.

In different forms through the years, and with varying degrees of formality or informality, in the past decades the most important producers/sellers of copper have co-ordinated and regularly homogenized their commercial posture in order to avoid mutual contractual competition and to present a common front to the buyers. A similar

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attitude has been attempted by the customers/buyers, but without the same success, given the greater number of interested parties and the greater diversity of their individual, national and regional positions.

#### B. THE EVOLUTION OF THE INTERNATIONAL PRICE OF COPPER

It is not easy to attempt to summarize briefly the trends in the price of copper during the past forty years. The behaviour of the price of the metal is very complex and the factors influencing its price are very varied. For this reason, rather than presenting a detailed analysis of its evolution, we will attempt to point out some salient elements of its behaviour with the primary objective of giving the reader a frame of reference to facilitate a better understanding of the development of the copper industry in general and, more specifically, the development of the Chilean experience in this respect.

The following are the most relevant features of copper price trends:

(a) For a large part of the period under analysis there was no single quotation which was valid as an international price. In the years previous to the second half of the 1960s, different prices established by various agents coexisted. In "normal" times, the different prices evidently tend to be very similar, but in important time periods these show appreciable differences which make a proper appreciation of the true "market value" of the metal difficult. Most of these variations originate in the controls over the so-called "American Producers' Price", which governed a large proportion of international trade and practically all Chilean copper sales until 1966.

This producers' quotation not only depends on the individual evaluation by the sellers themselves but has been subject to determination by the Government of the United States, which has fixed it in accordance with the needs and conveniences of that country. In fact, the selling price of copper produced by United States corporations was first frozen between 1940 and 1945 and later between 1950 and 1953.<sup>1/</sup> Since the London Metals Exchange was not in operation in those years either, it is impossible to establish what the market price of the metal was for this period of time.

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<sup>1/</sup> During the Second World War and the Korean War, respectively. On both occasions the fixing of the price was intended to prevent its rising as a result of the greater demand associated with the conflicts.

For the purposes of presenting the basic evidence and taking into account its limitations, a series of prices has been used in our tables and analyses which correspond to the American producers' price between 1935 and 1953 and to the price of the London Metals Exchange (LME) between 1954 and 1979.

(b) Perhaps the most characteristic feature of the indicators of the value of copper in all these years was their great instability. Table 4 of the Statistical Appendix and figures 1 and 2 present the annual price values, measured in 1979 dollars. To support this statement, we must keep in mind that the average of the annual price variations (ignoring the positive or negative signs) between 1935 and 1979 was practically 15%, including the periods of controlled prices.

The basic reason for this changeability lies in the characteristics of the supply and demand of the metal. Both copper production and copper consumption have very low elasticity on the short and medium terms in respect of price variations. This means that changes, although not radical, in the volume of supply or demand generate significant changes in the prices of the transactions.

This element of instability in prices is related to the information given in the other sections of this report referring to the high dependency shown by both foreign exchange earnings and tax revenues in Chile in relation to the selling price of copper. With this relationship of dependency, it is precisely the tax revenues and import capacity which suffer from instability and experience violent fluctuations from year to year.

(c) The wide variations in international prices of copper in the past four decades make it difficult to point out any long-term trend in the real price of this metal. For the purpose of facilitating an overview of this trend, figure 2 presents the evolution of the price of copper between 1935 and 1979.

Beyond the short-term variations, it is possible to see a definite trend towards an increase in the price in the entire period from 1935 to 1969 (the year which shows the highest price), followed by a period of high but very fluctuating prices between 1969 and 1974, culminating in the final five year period 1975-1979 with a sharp decline interrupted by a slight recovery in 1979.

To complete the presentation of relevant information in table 17, we have prepared a series showing the price averages for the five year periods 1935-1979.

Table 17

INTERNATIONAL PRICE OF COPPER: AVERAGES FOR FIVE-YEAR PERIODS 1935-1979  
(In cents per pound, 1979 dollars)

Periods	Price of copper
1935-1939	63.3
1940-1944	60.8
1945-1949	60.3
1950-1954	71.7
1955-1959	88.6
1960-1964	83.1
1965-1969	144.9
1970-1974	123.0
1975-1979	66.2

Source: See table 4 of the Statistical Annex.

To terminate this brief recapitulation, it is worth emphasizing that from the point of view of the period of time relevant to the main purposes of this report, that is, the period when the transnational corporations were active in Chilean copper, the evidence indicates that the real price of copper was growing, with really spectacular rises during the second half of the 1960s.

#### C. MARKETING OF CHILEAN COPPER

From the point of view of control and management of Chilean copper sales abroad, three distinct phases clearly appear in the almost 50 years beginning with the activities of the large copper mining industry until today. These stages are:

(a) Complete autonomy of the foreign corporations, from the beginning of mining exploitation until the beginning of the 1950s,

(b) Growing participation and influence of governmental bodies in the marketing process, from the early 1950s until 1970, and

(c) Nationalization of LCM copper sales, associated with the nationalization of the enterprises which took place in 1971.

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In the first period, the entire commercial responsibility for mining exploitation was completely in the hands of the United States corporations. The whole process of marketing the copper produced was carried out through commercial entities of the foreign corporations. In practice, there were two marketing channels, the Anaconda Sales Office and the Kennecott Sales Office, which made all decisions and took charge of all the operations related to the placement and distribution of LCM copper production. The relevant offices of both corporations were in New York and both the price of transactions and the allocations among various customers were determined there, and the various contractual clauses were established. The Chilean State did not participate at all in the entire marketing process, and was limited to the role of collecting the relevant taxes and selling to the corporations the national money necessary for the operation of the mines and plants in the country.

In 1951, and basically as a reaction to the decision by the Government of the United States to freeze the price of copper at 63 cents per pound (in 1979 dollars), the process of progressive intervention by the Chilean State in the management of international sales of copper began. Between 1951 and 1953 the Government first obtained an increase of almost 8 cents in the selling price to the United States market (entirely as a tax benefit), and also required the producer company to deliver to the Central Bank a quota of its production to be sold by this body.

This body, however, never operated in practice as an enterprise involved in the marketing of copper. In fact, the Government of Chile accepted the use of the commercial enterprises of Kennecott and Anaconda as marketing channels. The Central Bank, in reality, was limited to fixing a minimum selling price to the customer, establishing the frozen price to be supported by the United States production enterprises, receiving this difference entirely for a tax benefit, and formally approving the individual sales contracts.

The measures taken caused a transfer of investments to the European market (where the prevailing prices were higher and therefore the users were more disposed to pay the prices fixed by the Central Bank), resulting in a significant improvement in the average prices obtained but not changing in any important way the marketing systems, which continued to be under the control of the producer companies.

The functions of the Central Bank in respect of copper sales terminated in 1955 with the approval of a new law establishing a new treatment for large foreign



corporations involved in copper mining.<sup>1/</sup> However, this same legal body established a new State agency called the Department of Copper, dependent on the Ministry of Mines, with a great deal of administrative autonomy and with technical and professional support, for the specific purpose of supervising and controlling the financial, technical and commercial operations of the foreign companies of the large-scale copper mining industry.

In the end, the establishment of this body with its possibility of forming and creating a numerous group of specialists in the area of copper policy, and the corresponding spread into other sectors of an emerging "national consciousness" on copper, were very important for the future development of Chilean copper.

In the area of trade, Law 11828 of 1955, already cited, consecrated the principle of State intervention into copper marketing by requiring the producing corporations to obtain the approval of the Department of Copper for their sales and contracting policies in the various markets and by entrusting to this same agency the inspection and control of marketing operations.

A brief look at the responsibilities given to the new public body allows us to form a clear idea of the size and range of functions established.

Law 11828 states that the Department of Copper has the power:

"(a) To intervene in the international copper trade, for the purpose of maintaining and expanding Chilean copper markets and avoiding or counteracting any action which would tend to control or restrict its markets unilaterally.

(b) To investigate both domestically and abroad subjects related to the production and sale of copper.

(c) To control and establish the conditions relative to the production and trade of copper....."

The careful and to a certain extent ambiguous wording of this legal text allows for a relatively "elastic" interpretation and application in accordance with the intention and desire of the Government of the moment.

Although in the beginning these powers and opportunities for action did not translate into a real influence but rather into a merely formal a posteriori approval, the dynamic of the process of apprenticeship and interiorizing was gradually changing the initial situation. Already in 1964, for example, the Department of Copper unilaterally fixed the "Chilean producers' price" as a selling price for all Chilean copper, which was established in October 1964 at 86.80 cents

<sup>1/</sup> Law 11828 of 1955.

(at 1979 prices). After various modifications in this quotation, in August 1966 the same Department of Copper established the current price in the London Metals Exchange as the reference price for all sales of Chilean copper, a policy which it has maintained in force up to the present.

In addition, in the late 1960s the staff of the Department of Copper already participated more actively in the entire process of marketing the metal, approving and evaluating the annual investment policies of the metal and the specific conditions of the various individual contracts. In those years, and previous to the governmental participation in the ownership of the producing enterprises, technicians from the State agency participated in trade meetings and negotiations which the executives of the United States corporations held with the customers for Chilean copper.

The tendency towards the growing participation of the Chilean State in the marketing process culminated in 1971, when, as a result of the nationalization of the large-scale copper mining industry, the responsibility for sales in this activity passed completely into the hands of the State.

The commercial transition, thanks to the preliminary period of training and apprenticeship, developed without problems of any kind. A commercial body was established within the Copper Corporation, head of all the productive enterprises, and this commercial body became the sales agent for all the productive units. The group of professionals from the former governmental institution, a controlling and supervisory body, formed the basis of the technical staff of the new commercial enterprise; basically the same customers and markets were maintained, the contractual conditions did not undergo important changes, especially in the first period, and the new marketing channels operated with at least the same efficiency as the foreign corporations.

For a better understanding of the "nationalization of the copper trade" process and its relative success, it would perhaps be useful to go into some more considerations on this subject.

In the first place, it should be repeated that the national staff which took charge of the tasks of marketing almost entirely were those with several years of experience, gained in the Department of Copper (later called the Copper Corporation), and they had direct knowledge of the markets and main customers.

In the second place, the strategy adopted for commercial management was a process of gradual and marginal changes which at the beginning did not produce any

/sudden alteration

sudden alteration in either commercial procedures or practices, or in the relations with the traditional customers of the United States enterprises. The actual increase in the marketable production during these years made it easier to reorient the growing tonnages towards new customers (China, Japan and the European socialist area, for example), with advantages for Chile without damaging or drastically deteriorating the sales flows to customers established earlier in Europe. As could have been foreseen, deliveries to the United States market were reduced by a sizeable proportion, which also facilitated penetration into new markets.

In the same sense we should point out that the changes initiated by the new commercial organization in general leaned towards achieving a greater commercial utilization of copper sales, whether by selling to new customers on better relative terms or by gradually experimenting with sales to intermediaries, also on better terms, or by initiating subsidies for traditional customers as a compensation for certain advantages granted. These initiatives, in general, tended to extract higher effective prices for the product and thus were not particularly pleasing to habitual consumers. However, and perhaps paradoxically, on this level the policies and strategies adopted by CODELCO as the seller were more "commercial" and more sophisticated than the conservative and more rigid practices of the United States corporations.

Finally, we must bear in mind the specific situation of the international copper market in its seller-buyer relationship. As explained earlier, for a long time the structure of this market has contemplated a reduced number of large-scale producers/sellers and a much greater number of consumers/buyers. The relative position of the large-scale producer/seller is strong, and CODELCO, which represents approximately 30% of world copper exports, is even stronger. In the face of this reality and the possibility of friction or conflict with this provider, for the potential copper customers it was not a sure alternative of a future supply to maintain an ethical and sentimental "loyalty" to the United States companies, which were not, nor are they now, copper exporters to any large degree of their own production in the United States.

Given this state of affairs, and that CODELCO also did not seriously threaten the fundamental bases of commercial exchange, it should not be surprising that the habitual customers of Chilean copper were more than happy to come to an understanding and work harmoniously with their new supplier.

/To finish

To finish off this brief outline of the main aspects of marketing Chilean copper in recent decades, it is worth examining briefly the evolution through time of the exportation markets for this metal.

Table 18 presents the distribution of these markets for several years between 1929 and 1979.

In the first place, it should be pointed out that although the distributive structure of Chilean copper sales in the international markets shows important variations in the entire period examined, these do not seem to respond to a consistent trend. Throughout the entire period in question, it is clear that, from the beginning until the present time, the principal placement for the Chilean copper mining industry has been Western Europe and the United States.

The importance of the United States market shows a clear tendency towards relative decline since the end of the 1950s, and even in absolute terms the actual export totals are lower than the normal tonnages in the 1940s and 1950s.

The European market, on the other hand, seems to have increased its share in the total, especially in the 1960s, and while its proportion as a market has decreased in recent years, this is probably a reflection of the notable increase in total tonnage exported, since the present volume of copper sales in Europe is substantially higher than that of the previous decade.

Perhaps the most interesting development, in this respect, is the growing importance of the "other markets" within global placements. In 1964 and 1969, they represented 10% with a tonnage of approximately 40 000 tons annually, and in 1979 they represented more than one-third of total sales abroad, and their volume rose above 350 000 tons. Undoubtedly, these are the markets which absorbed the bulk of the substantial increase in production and exports of copper from Chile in the 1970s. The specific areas which explain the large growth in sales are Brazil, Japan and China. These three countries, which in 1970 bought approximately 30 000 tons from the large-scale copper mining industries, absorbed altogether approximately 300 000 tons in 1979.

/Table 18

Table 18  
PRINCIPAL EXPORT MARKETS FOR CHILEAN COPPER, 1929-1979  
(Thousands of tons)

	United States	Western Europe	Others	Total
<u>1929</u>				
Thousands of tons	152.6	-	168.4	<u>321.0</u>
Percentage	47.5	-	52.5	
<u>1936</u>				
Thousands of tons	55.7	-	200.3	<u>255.7</u>
Percentage	21.8	-	78.2	
<u>1940</u>				
Thousands of tons	153.1	-	173.6	<u>326.7</u>
Percentage	46.9	-	53.1	
<u>1945</u>				
Thousands of tons	397.4	19.4	14.5	<u>431.2</u>
Percentage	92.2	4.5	3.3	
<u>1946</u>				
Thousands of tons	169.2	176.8	28.0	<u>374.0</u>
Percentage	45.2	42.3	7.5	
<u>1954</u>				
Thousands of tons	213.0	136.0	2.2	<u>351.2</u>
Percentage	60.6	38.7	0.7	
<u>1959</u>				
Thousands of tons	105.9	349.0	1.5	<u>456.4</u>
Percentage	23.2	76.5	0.3	
<u>1964</u>				
Thousands of tons	82.8	331.9	47.0	<u>461.7</u>
Percentage	17.9	71.9	10.2	
<u>1969</u>				
Thousands of tons	95.1	390.6	40.5	<u>526.2</u>
Percentage	18.1	74.2	7.7	
<u>1979</u>				
Thousands of tons	125.0	524.4	354.1	<u>1 003.5</u>
Percentage	12.5	52.3	35.3	

Source: 1929, 1936 and 1940: I. Aligá, La economía de Chile y la industria del cobre, p. 195.  
1945, 1946 and 1954: M. Jaramillo, La economía del cobre, p. 230.  
1959, 1964, and 1969: R. French Davis, La importancia del cobre, p. 31.  
1979: CODELCO.

#### D. FORMATION OF CIPEC AND ITS EFFECT ON THE INTERNATIONAL RELATIONS OF THE COPPER INDUSTRY

In June 1977 the Intergovernmental Council of Copper Exporting Countries, CIPEC, was formed as an association for consultation and harmonization of decisions among countries which fulfilled two main prerequisites: they must be exporters of large amounts of copper, and must belong to the group of developing countries.

The initiative responded to the progressive national consciousness of the role that the exploitation of their principal raw material played in the development of these countries. Its principal proponents were President Kaunda of Zambia and President Frei of Chile, who shared aspirations about the changes that should occur in the structures of ownership and control of copper exploiting enterprises in their respective countries. The organization was completed with the participation of Peru and Zaire, whose basic characteristics fully fulfilled the above criteria.<sup>1/</sup>

The initial objectives stated by the new organization were deliberately vague and generally referred to the exchange of information on the copper industry among member countries, the joint strengthening of knowledge of the industry and the copper markets and the affirmation of the important role which copper exploitation should play in the development process of the various countries. In fact, the possibility was left open that the new body might set goals and objectives to the extent that the necessary consensus and agreement were reached and that the circumstances permitted.

The establishment of CIPEC was looked upon with suspicion and hostility on the part of the transnational corporations and also by the traditional buying customers in the various markets. Both perceived the new organization as one more manifestation of the nationalist tendencies which threatened to interrupt and break down the existing relations and structures which were functioning to their entire satisfaction. This opposition did not have many apparent channels of action and lacked the influence necessary within the respective governments to combat the idea itself. Perhaps the only exception to this was the role played in the earlier years by the Société Générale des Minerais (SGM) within CIPEC. Due to the existing structure of the industry in Zaire, normally the delegations from this country were made up of one or two high-ranking members belonging to the State apparatus and the rest of the technical support team were staff members from the Belgian enterprise which

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<sup>1/</sup> Later, Indonesia was incorporated as a full member, as were Australia, Papua New Guinea and Yugoslavia as associated members.

administered and operated the copper mines in the country. Given their specific knowledge of the subject, the influence they exercised was preponderant, and usually this influence was used in the sense of restricting new initiatives, delaying and extending the pertinent decisions and, in general, slowing down and making more difficult the possible organic development of the institution.

It is not the purpose of this report, and it would be pretentious on our part, to make an overall evaluation of the evolution and the behaviour of CIPEC in its 13 years of existence. But we venture to say that the expectations and aspirations which were hoped for by some and feared by others at the beginning have not come to pass in fact.

CIPEC has not played a significant role in the world copper industry, nor in the field of international market prices and the relations between producers and consumers (in the style of OPEC), nor has it been a determining influence in the changing ownership structures of the copper industry in the member countries.

To say the above does not mean that the organization has not played any role in international circles or within the countries. At least two areas may be cited in which the contribution of CIPEC has been useful for participant countries.

In the first place there is no doubt that the process of national takeover of control of the copper industry of each of the four countries has been stimulated to some extent by the common experiences of the others, in addition to the political and moral support which the organization has afforded to the nationalization processes.

In the second place, in CIPEC, the participant countries have already been dedicating themselves for some years to the analysis of the international copper market and especially to the mechanisms of price formation and the long-term trends of these prices.

The decline in copper prices, first in 1970 and 1971 and later in 1975, which so directly affected the economy of the four countries, provoked a common reaction which pointed to the need to face the problem collectively and take measures to solve it. For various reasons, the concrete measures taken and the strategies designed have been neither very radical nor very successful. On the occasion of the price drop in 1970-1971, the internal deliberations of CIPEC led to the approval of a detailed scheme of intervention in the London Metals Exchange for which a complex system of bank financing was contemplated as well as operative machinery for co-ordination and complementary measures of production regulation. The lack of political decision at the last minute by some of the participant countries eventually prevented this plan from being carried out.

/Later, in

Later, in the crisis of 1974-1975, the subject came up again, and after prolonged discussions direct intervention in the Metals Exchange was suggested; instead, however, a reduction in sales by 10% was first approved (in November 1974) which was afterwards replaced by a reduction in production of 15% (in April 1975).<sup>1/</sup>

It is difficult to evaluate the relative success of the policies followed. The real price of copper in 1976 grew by almost 10% with respect to 1975, while in 1977 it experienced a drop of about 15% compared to 1976. To a certain degree the measures adopted and their later suspension were reflected in the price variations. What is impossible to establish and what is essential for the proper evaluation of the period is what would have happened if the above-mentioned actions had not been taken.

In any case what was interesting here was not to calculate a posteriori the advantages or disadvantages of the policies carried out or not. Rather, the interest lay in bringing out the role by CIPEC in these areas and the development of the organization itself.

In conclusion, one comment, although relatively obvious, is worth making more explicit. CIPEC, like all international bodies, is no more than the sum of its component countries. The field and effectiveness of its action ultimately depend on the consensus within it on objectives, policies and methods. A realistic examination of the history of the body reveals that to a large extent CIPEC's possibilities for action have been limited and obstructed by the ideological and political differences among the member countries. To cite only two areas in which this limit is shown, there is the subject of foreign investment in copper exploitation and the problem of international prices.

The different concepts and positions of the member countries on these areas make it very difficult to achieve substantive consensus, and this is inevitably reflected in the insignificant performance and projection by CIPEC in these areas.

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<sup>1/</sup> Measure which was maintained until 10 June 1976.



### Chapter 3

#### PUBLIC POLICIES AND TRANSNATIONAL CORPORATIONS IN CHILEAN COPPER 1900-1970: BARGAINING POSITION, BARGAINING PROCESS AND DISTRIBUTION OF PROFITS

##### A. GENERAL AND METHODOLOGICAL BACKGROUND

##### 1. Objectives and conceptual framework

The purpose of this chapter is to analyse copper policies 1/ in Chile and their effects, on the one hand, on the action of transnational corporations (TNCs) involved and, on the other, on the distribution of profits which the exploitation of Chilean copper produced through the presence of foreign corporations during more than half a century, until 1970.

The methodological approach and presentation of this analysis have been designed by taking into consideration: firstly, that its ultimate objective is to explain the Chilean experience in respect of negotiations with TNCs to other developing countries which export raw materials, and secondly, that on this subject numerous and exhaustive academic research has been done. Taken as a whole, both facts indicated the convenience not of going more deeply into the subject but rather of systematizing, completing and presenting schematically and didactically the central elements and main lessons of the Chilean experience.

The convenience of this approach is, moreover, reinforced by noting the little attention that has been paid to the lessons of the past by Chile itself in the taking of decisions. This is not so much due to the fact that the "past" of copper policies has not been studied sufficiently, but rather that the results of this study have not managed to cross the borders of the academic world. It is not surprising that this is so, among other things because a large part of the research on Chilean copper has been done by foreign academics. Besides, the little serious work on that subject carried out by nationals generally has not been developed or promoted by the public copper institutions in Chile but rather by groups of university researchers.2/

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1/ Further on, the term "copper policy" is understood in the sense of the set of actions, decisions and norms established by the Chilean State, in the framework of which its relations with the TNCs operating in the large-scale copper mining industry (LCM) are inserted and understood.

2/ Among the work developed by Chilean researchers, we might point out that by the CEPLAN (today CEIPLAN) group, especially by Ricardo Ffrench-Davis and Ernesto Tironi. Some of the more important works of this group and other Chilean specialists is found in R. Ffrench-Davis, E. Tironi, "El cobre en el desarrollo nacional", CEPLAN, Ediciones Nueva Universidad, 1974.

/Finally the

Finally the "errors" of the past have been detected and studied but not incorporated into the taking of decisions.

If the assimilation of the experiences themselves is not easy -and Chile is certainly not the only case in this respect- the assimilation of foreign experiences is even less so. To improve in both senses, it seems important, first of all, to attempt to achieve a certain standardization in the analyses of different national experiences and, secondly, to seek schematic and simple ways to present the results.

In this spirit, and as established in the general introduction to this document, this chapter is structured by taking as a basis the common conceptual framework of the interregional project on transnational corporations (CEPAL/CET/ESCAP/ECA), which is undoubtedly an interesting advance in response to the requirements for standardization and systematization proposed earlier.

The approach in question distinguishes three main elements in the negotiation between developing countries and the TNCs: the bargaining position, the bargaining process and the distribution of the resulting profits. In turn, the bargaining position is composed of four types of factors: factors relative to the host country, factors relative to the transnational corporation, factors relative to the nature of the basic product in question and factors relative to the international environment in which the negotiation takes place.

Taking into consideration some aspects of the Chilean case with respect to copper, in some operational restrictions of the described model, the exposition has been arranged in the following modified form.

In an initial section, some general and defining elements of the bargaining situation between Chile and the copper corporations are described and analysed. This section establishes, first of all, the factors relative to the nature of the specific raw material in question, putting emphasis on some aspects peculiar to the market and the international copper industry. Secondly, some historical and general economic background is described for the Chilean case which, in some measure, distinguishes it from other cases, and which is a key element in the understanding of the relationship between the country and the TNCs in the entire period analysed. In the following sections, copper policies in Chile are analysed by periods, studying for each one the international situation, the domestic situation of the country and the public policies carried out, the local and

/international situation

international situation of the TNCs and its relationship to public policies and, finally, the results of the policies in terms of the distribution of profits (in a general sense).

In establishing the periods, we do not intend to make history but only to evaluate the results of the different types of policies in various circumstances, and to investigate the causal factors determining these results.

In total agreement with the conceptual framework of the overall project, the main thesis to be proved in the study of the Chilean experience is that the understanding of the relationships between developing countries and TNCs cannot be achieved in the context of the simplified neoclassical model of the firm and the markets.

The transnational corporation clearly does not behave like the atomistic firm operating in a perfectly competitive market. Nor does it respond to the economic conditions and public policies in the countries in which it operates in the way in which domestic firms do.<sup>1/</sup> The transnational corporation operates by optimizing its operations globally, and this conditions the effects of public policies on the behaviour of these enterprises, especially in some underdeveloped countries. In addition, the large international firm reacts not only to economic factors but also to political ones. Obviously, the public policies are evaluated by these enterprises not only in terms of theoretical attractiveness, in a static way, but also in terms of the political credibility and the consequent permanence of these policies in the long run.

Moreover, the actions of the TNCs are not separable, at least in the long run, from the evolution of the international system as a whole, and from the situation, within this process, of the central countries where the hub of these respective expansion processes is located.

In addition, the public policies in the peripheral countries cannot be understood except in relationship to the overall political and economic processes in these countries, their relationship with the evolution of the international system as a whole, and the dynamic relationship between the host State and the TNCs operating in the country.

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<sup>1/</sup> Theodore Moran, Multinational Corporations and the Politics of Dependence: Copper in Chile, Princeton University Press, 1974, pp. 5-6.

Finally, we should bear in mind that the TNC frequently ceases to be a purely economic entity, especially in the peripheral countries, becoming instead an important actor in the political life of these countries.

All the above is seen in the examination of copper policies in Chile, their effects on the behaviour of the TNCs and the results in terms of the distribution of profits between the companies and the countries.

In this sense, the case of Chilean copper is a clear validation of the dynamic negotiation model, with the historical and structural components which we have added in this document.<sup>1/</sup>

To terminate this methodological introduction, two deficiencies in the analysis should be mentioned. Firstly, it excludes the study of the domestic distribution of the returns which the country obtains from its negotiation with TNCs in the copper sector. Secondly, the relationship between public policies and the evolution of social conflicts within the country is established only partially. In both cases the reason is simply that if these topics were included, the work would necessarily be converted into an interpretation of the evolution of Chilean society as a whole in this century, inter alia, for the central role which copper has played in the national economy and politics since the appearance of the foreign corporations in Chilean copper at the beginning of the century.

## 2. General characterization of the bargaining position

We will briefly describe in this section some general, defining elements of the situation and the process of negotiation between the Chilean State and the TNCs in copper. These characteristic factors are general in the sense that their impact on the relationship between the State and the corporations is felt on all periods and policies reviewed.

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<sup>1/</sup> The incorporation of historical and structural components into the dynamic negotiation model is intended to adopt the critique and proposal as formulated in: Carlos Fortín, "The State, MNCs and Natural Resources in Latin America", in IDS Bulletin, July 1977, vol. 9, No. 1. Fortín holds that the "weakness (of the bargaining model) lies in its failure to relate the abstract power and learning processes it describes to the concrete contemporary development of the world capitalist system and its implications for the natural resource industries. It does not place the relations between foreign investors and host governments within the context of the changing relations between the centre and the periphery of the capitalist system, and their 'internal' expression in the latter" (p. 49).

Although the majority of these factors are widely known, it seems important to state them here for the purpose of clarifying the specific details, first in the case of copper and secondly in the case of Chile. In the general spirit of the work, this should aid in distinguishing between what is applicable and what is not applicable to the experiences of other raw materials and of other countries.

(a) Factors relative to the nature of the product, its market and the production process

(i) Copper as a strategic product. The first factor of this type which plays a crucial role, in the entire history of the relationship between the State and foreign enterprises in Chilean copper, is the strategic nature of this metal. Although the percentage of world consumption of copper directly attributable to the defence industry is very low (less than 4%), the security of supply in times of war is of fundamental importance for the superpowers. This means, first of all, that the international market is very sensitive to situations of this nature. Secondly, this explains in large measure the stimulus which in various periods the positions of the central countries have provided to the search for new and safe sources of supply. Thirdly, the strategic nature of copper has meant that the Government of the United States has generally intervened in the copper markets during the periods in which it has directly participated in conflicts. This fact is crucially important in understanding the evolution of the relationship between the State and transnational corporations in Chile and, especially, the development of the concept of economic dependence within the Chilean society.

(ii) The existence of a competitive market of reference. An important characteristic in the case of copper, which to varying degrees is true also in the case of other minerals, is that at the world level there are two markets: the market of United States producers, highly oligopolized, and the free market, represented -despite its marginal character- by the London Metals Exchange (LME). This fact has also been crucial for the evolution of the bargaining position and process in Chile, inter alia because it has made it possible to evaluate the effects -in terms of loss of earnings- of the fact that Chilean copper was integrated into the oligopolistic structure of the United States market.

In addition, in connexion with the loss of power of the cartel of United States producers after the Second World War, the so-called free market has become increasingly important at the world level. If we add to this the fact that in

/the international

the international copper industry, excluding the United States, there is little vertical integration in the refined copper market, we see a market scenario which is fairly competitive and thus favourable to the processes of growing national control over the marketing function of this metal.

(iii) The nature of investment projects in copper mining. Another element of vital importance to an understanding of the processes of negotiation in the exploitation of copper in peripheral countries is the size, character and useful life of the investments involved. In general, these are projects which imply large influxes of initial capital, which have a long maturation period for the investments and a generally very extensive useful life and which, for various reasons, tend to take the form of foreign enclaves. To this might be added, mainly in the initial stages of the project -exploration and prospecting- that there is a considerable degree of uncertainty in respect of the quality and quantity of the reserves.

(b) Factors relative to the specific conditions in which the relationship between foreign enterprises and the Chilean State began

Here we will point out only three aspects of the Chilean situation which place a distinctive mark, although not necessarily exclusive, on the appearance of TNCs in Chilean copper. These three aspects were undoubtedly determining factors in the history of the relationship between the State and the corporations up to now.

(i) The two foreign corporations which took control and stimulated the development of the large copper mines in Chile in the first three decades of the century -Anaconda and Kennecott- were in turn the two largest firms in the international copper industry, and were among the largest in the world.

(ii) The two largest investments of these corporations in Chile founded the two largest mines in the world -each one of its type- a situation which is still true today. Chuquicamata is the largest open pit copper mine in the world, and El Teniente is the largest underground mine in the world. At the same time, the standards of fineness of these mines are even today much higher than the world average, and especially than those of the biggest producer in the world: the United States. In 1978, the Standard of fineness of the extracted ore was 2.1% for Chuquicamata and 1.5% for El Teniente, while in the United States many mines have today dropped to 0.5%. Finally, the reserves of these mines were and still are enormous. El Teniente, with estimated reserves in 1977 (proven and probable)

at 43.9 million tons of copper content with an average standard of fineness of 1.07%, accounts for about 10% of total world reserves. The Chuquicamata reserves the same year reached 18.1 million tons of copper content, with an average standard of fineness of 1.18%.<sup>1/</sup>

As a result of this set of characteristics -size and richness of reserves and scale of production- the profitability of these projects in the initial and later stages was spectacular, and they are still today -more than 50 years later- extraordinarily profitable businesses with a long life ahead of them. This privileged situation has undoubtedly been, throughout the period examined, a highly positive factor for the bargaining power of the State of Chile.

(iii) The foreign capital investments involved in the opening of the Chilean copper mines were also spectacular for the historical period in which they were made. This is clearly reflected in the fact that, as a result of these investments, Chile came to account for about 30% of the value of all United States foreign investment in Latin America, with a value of per capita investment twice that of Venezuela, 4 times that of Argentina and 20 times that of Brazil.<sup>2/</sup>

The first fact mentioned brings out the hierarchy of the "counterpart" with which the Chilean State and the Chilean society as a whole had to negotiate.

The second fact gives an indication of the size of the negotiation and the potential for conflict involved in it.

The third makes it clear that the United States Government would necessarily play an important role in the dynamic of the relationship between the State and transnational corporations in Chilean copper.

There is a series of other factors of a general nature and of vital importance in the history of Chilean copper policies, which refer to the crucial importance of copper for the Chilean economy. These have not been mentioned here, since they have been analysed in detail in the previous chapter.

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<sup>1/</sup> The size of a mine refers to its installed production capacity and not to the amount of ore reserves, although obviously there is some correlation between the two indicators.

<sup>2/</sup> Data obtained from the US Department of Commerce, "Investment in Chile", p. 12.

B. COPPER POLICIES IN CHILE AND THEIR EFFECTS: ANALYSIS  
BY PERIODS

Introduction

For the purposes of this work, the history of copper in Chile began in the first decades of the present century, for two very interconnected reasons: firstly, because only in this century did copper mining in Chile reach the category of 'large-scale mining' and, secondly, because the transnational corporations appeared in Chile beginning in 1900.

The history of copper in Chile between 1900 and 1970 can be separated into two large periods which are, however, difficult to separate precisely. The first is the period of denationalization of copper mining, that of the appearance and expansion of the activities of the transnational corporations. The second could be defined as the long and gradual process of increase in national control over the surpluses and major decisions in the Chilean copper sector.

The first period has also been defined as that of laissez-faire, which is in no way surprising if we consider the state of development of the political, social and economic structures in the peripheral countries in the first three decades of the century. In any case, from the point of view of this work, this period is not of major direct interest. In fact, it is difficult to speak of copper policy during this phase of Chile's development.

However, the analysis of this period is important because during this time the initial conditions of the relationship between the Chilean State and the TNCs were defined.

Various authors have fixed the end of this period at different years. Strictly speaking, the differences should be understood instead in relationship to the beginning of the following period. For some, the year of separation is 1925, for others 1934. For reasons which will be explained later in this work, the year 1939 was chosen to separate the period of denationalization and laissez-faire from the period of progressive nationalization.

This second period, from which lessons may be drawn in alternative policies, should in turn be separated into subperiods. This subdivision also has precise limits accepted by consensus. The first of these goes from 1939 to 1955, the year in which a temporary reversal occurred in the trend towards greater national control; the second period goes from 1955 to 1964, the year in which the

/Chileanization process



Chileanization process began; the third goes from 1964 to 1970, or until the stage of total nationalization of the copper mining industry.

In the following sections we will analyse all the periods and subperiods described according to the outline proposed in the methodological introduction, that is, characterizing for each period the domestic situation and the public policy, the situation of the transnationals involved and their reactions to the policies and the international environment. All of this is with the final objective of evaluating the results of the policies carried out and interpreting them.

1. The period of denationalization and 'laissez-faire': 1900-1939

(a) The world economic and political context 1/

The beginning of the twentieth century marked the accelerated expansion of United States investments abroad. In Latin America, and particularly in Chile, the expansion of the activities of the United States transnationals happened at the same time that British capital lost its relative power.

Some authors feel that during this period the central economies, especially that of the United States, experienced a situation of 'capital surplus', which forced the expansion of the investment process outside its borders. The controversy on this subject is well-known and complex. The concrete fact, however, is that during this period an expansion of the financial market took place in the central countries which made it relatively easy to finance -in specific transnationals- the initiation of productive activities abroad. In addition, the expansion process of the TNCs in this period was mainly oriented towards the raw materials sector (basically minerals and fuels) and the periphery of the capitalist system: firstly, because the process of exploitation of natural resources in the centre made the average quality of the reserves of these countries deteriorate, and secondly, because during this period in the industrialized nations the concern arose for the future supply of raw materials to feed their dynamic industrial machinery.2/

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1/ The analysis of the world economic and political contexts in the three subperiods analysed in this chapter is largely based on the information and proposals contained in: Carlos Fortín, "Nationalism and Dependence in Natural Resources", preliminary version of chapter 1 of the book "The International Politics of Nationalization: The Case of Chilean Copper" (forthcoming).

2/ See C. Fortín, "Nationalism and Dependence in Natural Resources", op.cit., pp. 6-10 and Joint CEPAL/CTC Unit, TNCs in Export Oriented..., op.cit., p. 21.

A quotation from the period illustrates this part of the rationality of expansion towards the outside, in the case of copper: "In early 1914, John D. Ryan, President of Amalgamated Copper Co., said to the Committee on Legal Affairs of the United States House of Representatives that of all the copper resources known it would appear that copper in this country will be depleted in 15 years".1/

In these conditions, not only did the United States corporations feel a strong impetus to find new sources of supply, but also the United States Government openly encouraged this process.2/

All of the above explains why in 1897 the percentage of United States foreign investment in mining and oil was 31%, whereas this percentage reached 52% in 1914.3/

Finally, the international copper industry continued its strong expansion during this period, which began in the last two decades of the nineteenth century, basically as a result of the massive incorporation of electricity into the advanced industrial systems.4/ This process was accompanied by a revolution in the technological processes for extracting copper. Large-scale technologies appeared which made it possible to profitably exploit mines with standards of refinement which were much lower, for example, than those characterizing the exploitation in Chile, in the hands of national businessmen, of small and medium-sized mines in the second half of the nineteenth century.

These technologies on the one hand, brought with them a monopolistic power for the large corporations originating or controlling them, and on the other, involved heavy initial influxes of capital.

(b) The domestic situation in Chile and related factors

As anticipated when the periods were established, the first decades of the century may be characterized as a typical laissez-faire period, not at all

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1/ M. Wilkins, The Emergence of Multinational Enterprise: American Business Abroad from the Colonial Era to 1914 (Harvard University Press, 1970, p. 110). Cited in C. Fortín, "Nationalism and Dependence in Natural Resources", op.cit., p. 8.

2/ C. Fortín, "Nationalism and Dependence in Natural Resources", op.cit., table 1, p. 5.

3/ C. Fortín, "Nationalism...", op.cit., p. 8.

4/ See N. Girvan, "Copper in Chile: A Study in Conflict between Corporate and National Economy", Institute of Social and Economic Research, University of West Indies, Jamaica, 1972, pp. 9-10.

surprising at a time when the majority of the countries of the periphery were inserting themselves into the international capitalistic system in a still colonial or neocolonial framework. Strictly speaking, Chile was very advanced in comparison with most peripheral countries in the development of its political, social and economic structures. This development was already reflected in this same period, but much more clearly so in the following period.

The 1920s in Chile brought the first indications of the emergence of the middle sectors and popular movement on the political scene.<sup>1/</sup> This had an impact, although only superficially, on the discussion and design of copper policies until 1939, when a visible change occurred in the historical dynamic of Chilean society.

Strictly speaking, the period of perfect laissez-faire -in the perspective of transnational corporations- lasted only until 1925. Until that year the payment of taxes by these corporations was equal to general payments of taxes by Chilean corporations: a scant 6% on profits.<sup>2/</sup> There were no restrictions of any type on profit remittances, imports of inputs, strategic decisions, etc.

The degree of governmental control over the corporations was extremely low, even in the area of accounting information. The way in which the annual reports of the companies were presented makes it difficult even today to adequately assess the progress of these companies during those years. Only after 1924, with the establishment of the Superintendency of Corporations, were companies required to standardize their annual reports and submit them to Chilean accounting methods.

The global concept of the problem of foreign investment which dominated the governing group in those years postulated that any input of foreign capital is beneficial to the country. Treating it as a non-renewable natural resource with comparative advantages did not make a great deal of difference, except, as illustrated in the case of saltpetre and the later evolution of the case of copper, when it was visibly reflected in the companies' profits.<sup>3/</sup>

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<sup>1/</sup> E. Lahera, "Public Policies and Foreign Investment in Latin America: The Cases of Argentina and Chile" (Ph. D. Thesis, Princeton University, 1979).

<sup>2/</sup> To this should be added a series of indirect, minor taxes such as the inheritance tax, mining tax and others. As a whole, however, the taxes represented a small percentage of the direct tax.

<sup>3/</sup> At the same time that the copper corporations received an extraordinary favourable treatment, with 6% taxation, the saltpetre corporations had to pay 50% taxes on profits, C. Fortín, "Nationalism and Dependence...", op.cit., p. 7.

In this context it is not surprising that until 1945 the foreign copper corporations operating in Chile included in their balances reserves for "depletion allowance", a concept drawn from United States mining legislation which allows a tax deduction of a determined amount for the depletion of deposits.

Strickly speaking, it is difficult to discern whether in Chile the copper corporations made this deduction before or after calculating taxes. It would appear that, at least since 1925, the "depletion allowance" was not used as a way of decreasing the payment of taxes but only as a way of making it appear that there were fewer profits in their balances.

This pressure began in 1925, with the imposition of an additional tax of 6% on the profits of the large copper corporations. This tax, the first special tax on copper mining, was initiated at the time when the Government established the Social Reform in Chile.<sup>1/</sup>

A second increase by another 6% in the tax rate occurred in 1934, bringing the total rates to 18% on profits. This same year a special exchange treatment was established for copper mining, which required the corporations to exchange foreign currency at a fixed exchange rate in order to finance domestic operating expenditures and which made the effective tax rate rise considerably.<sup>2/</sup> To the extent that the balance-of-payments problems produced a devaluation in the national currency, this exchange mechanism became a real exchange tax with a considerable and growing impact on the tax earnings until 1955.

The tax and exchange measures of 1934 are, more than the expression of the domestic social and political evolution, the result of the strong impact of the world depression on the Chilean economy beginning in 1931. The drop in the value of copper exports was answered by the government in the form of an increase in taxation. We should bear in mind in this respect that in 1932 for the first time copper exports rose above those of saltpetre.<sup>3/</sup> From this time on, copper replaced saltpetre as the main source of foreign currency in the

<sup>1/</sup> Under the Government of A. Alessandri. For a more detailed analysis of this period and the way in which the Government decided on this special tax, see: C.W. Reynolds, Development Problems of an Export Economy, in: M. Marmalakis, C.W. Reynolds, "Essays on the Chilean Economy", The Economic Growth Center, Yale University, IRWIN, 1965.

<sup>2/</sup> In the period 1935-1939, the effective tax rate reached 29.1% which, compared to the theoretical tax rate of 18%, shows the importance of the exchange tax (see table 3 of the Statistical Annex).

<sup>3/</sup> E. Lahera, op.cit., p. 62.

critically deficit balance-of-payments situation. Copper moved to the top, and with it the discussion on the policies affecting it.

(c) The position and strategy of the transnationals 1/

With the appearance of the transnationals in Chilean copper, the above-mentioned three central elements in the expansion of the capitalist system into Third World mining at the turn of the century were combined: the search for differential profits, the access to new sources of supply and the position of over-supply in the financial markets of the central countries.

The relative importance of these factors also depends on the specific situation and the forms of behaviour -also specific- of each of the transnationals. For this reason a separate analysis is made for each case.

Anaconda Copper Company

The appearance of Anaconda in the Chilean copper mining industry occurred in 1916, during the period of accelerated expansion of its world activities, which went on until the middle of the following decade. In 1916 Anaconda bought from William Braden, whom this corporation had commissioned to explore for copper in Chile, the Potrerillos mine and established the Andes Copper Mining Co. With a total investment of almost 55 million dollars in the following 11 years, the corporation began to produce only in 1927.<sup>2/</sup>

In addition, in 1923, Anaconda bought from the Guggenheims 51% of the capital of the Chile Exploration Co. (CHILEX), which was exploiting the Chuquicamata deposit. To pay the 77 million dollars which Chuquicamata cost Anaconda, credits were obtained in the United States financial market of 150 million dollars, in one of the largest transactions of its time.<sup>3/</sup>

In both cases -Potrerillos and Chuquicamata- Anaconda appears to have been motivated more by elements of security of supply and expansion of corporate activities than by the search for direct profit. This is at least very clear in the second case: Anaconda bought American Brass Co. in 1922 as a way of integrating

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1/ The analysis of the position and strategy of the TNCs in this and the following periods is essentially based on N. Girvan, op.cit.

2/ All the data in respect of the amounts of investment in each one of the cases analysed is only rough estimate of the real values of the physical investment of which there is no sufficient information.

3/ N. Girvan, op.cit., p. 43.

itself vertically forward, assuring the market for copper produced by its mines in United States.<sup>1/</sup> However, this acquisition left Anaconda with an excess capacity for manufacturing in relation to its production of mined copper.

This led Anaconda to try to buy Utah Copper Co., owner of one of the best copper mines in the United States.<sup>2/</sup> This attempt failed, which motivated the purchase of Chuquicamata at a price which reflected the value which Anaconda assigned to maintaining a vertically balanced and integrated structure among its different parts.

Anaconda carried out a large part of its operations during this period on the basis of a high indebtedness, which meant that the firm's debt reached 40% of its total assets in 1924. At this time, Anaconda initiated its period of consolidation which was to last until the first half of the 1940s.

#### Kennecott Copper Co.

Unlike the case of Anaconda, the appearance of Kennecott in Chilean mining basically responded to the search for direct and immediate profits. This is consistent with the operating procedure of the Guggenheims, who consolidated their operations in Chile and the United States in 1915 through Kennecott Copper Co.

The Guggenheims took control of Braden Copper Co. in 1909, owner of the El Teniente mine, at the time when William Braden -who in turn had bought holdings in 1904- had, on the one hand, made substantial progress in the development of the mine and, on the other, was heavily indebted to the Guggenheims. The profits obtained by Kennecott during the long period 1914-1969 show that the Guggenheims were not wrong to choose the El Teniente mine to accumulate differential profits.

In 1912 the Guggenheims took control of Chuquicamata, also in the hands of a private United States owner who had consolidated numerous small mining deposits into one large holding. It is again clear in this case that the basic interest of the Guggenheims was to obtain high direct profits from the operations, which they undoubtedly achieved in this case until 1923, the date when Chuquicamata was transferred to Anaconda, also making a spectacular capital gain.

With the funds obtained from the sale of Chuquicamata the Guggenheims embarked upon what was to eventually be its great failure in Chile: the saltpetre industry.

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<sup>1/</sup> Ibid., p. 43.

<sup>2/</sup> C. Fortin, op.cit., p. 9.

(d) The results of the "policies": the distribution of profits

The period of denationalization of the copper mining industry and of gradually eroding laissez-faire had as a first and crucial result a considerable flow of United States investment in Chile, a spectacular increase in copper production in this country and, along with the latter, a recovery of the importance of the Chilean copper mining industry in the international market.

In the entire period (1900-1939) investment reached a figure of almost 1 000 million dollars (1979 dollars), the greater part of which was made before 1925.<sup>1/</sup>

The production of copper by the three large mines in the hands of transnationals shows a growth rate above 15% annually in the entire period 1915-1930. Chile grew from having a negligible impact on the world copper industry at the beginning of the century to representing about 15% of world production at the end of the 1930s (see tables 19-21 for all the data analysed in this section).

As might have been expected, however, this accelerated development of the Chilean copper mining industry did not have a spectacular effect on the process of national economic development. Of the total value of production in the periods 1925-1929 and 1935-1939, only slightly over 30% remained in Chile, through wages and salaries, national purchases, tax revenue, etc.<sup>2/</sup> The effective tax rate was only 16.6% in the five-year period 1925-1929, rising to 29% in the second half of the following decade (see table 19). At the same time, the foreign companies made spectacular gains compared with the average rates of world profitability. In CHILEX (Chuquicamata) and Braden (El Teniente) the ratio of profitability to book value rose above 35% in the periods 1925-1929 and 1935-1939 (see tables 19 and 20).<sup>3/</sup>

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<sup>1/</sup> This amount, as mentioned earlier, is only a rough estimate and probably overestimates the real value. The latter would include not only the investments as such but also the purchase of the holdings.

<sup>2/</sup> The period 1930-1934 has been excluded from the analysis since it is a recessive period and thus has distortions which might lead to erroneous conclusions.

<sup>3/</sup> Andes always had a lower profitability, but this, far from drawing away from the previous figures, reinforces them. In effect, the fact that Anaconda continued to exploit and reinvest in this mine, although after 1930 the average profitability was very low (see table 20), is an indicator of how extraordinarily profitable the other two large mines were.

Table 19

## EVOLUTION AND DISTRIBUTION OF PROFITS IN THE LARGE-SCALE COPPER MINING INDUSTRY IN CHILE

	1912- 1914	1915- 1919	1920- 1924	1925- 1929	1930- 1934	1935- 1939	1940- 1944	1945- 1949	1950 1954	1955- 1959	1960- 1964	1965- 1969
Average annual production (thousands of tons)	8.5	152.8	110.0	224.9	178.0	229.5	438.4	398.9	345.6	432.9	501.1	519.9
Large Scale Copper Mining production's share in world production												
Percentage		4.2	10.6	13.9	14.8	15.7	17.2	18.4	12.7	12.6	11.1	9.7
Annual growth rate of production			15.6	15.8	-4.0	11.1	7.8	-1.8	-2.5	4.8	2.7	0.6
Average annual returned value (millions of 1979 dollars)				131.1a/	81.5	119.3	257.6	273.5	388.6	465.2	513.2	952.8
Average annual returned value at constant copper prices b/ (millions of 1979 dollars)				133.5a/	119.8	152.5	339.8	340.6	347.7	398.8	487.6	577.4
Percentage of value returned				31.1a/	42.3	31.5	49.0	56.1	68.1	59.9	62.5	68.2
Effective tax rate (percentage)				16.6	29.0c/	29.1	51.0	62.8	78.6	67.2	68.1	70.0
Percentage of expenditures made in Chile d/				50.0	49.0	41.8	53.4	58.4	56.8	59.0	67.3	74.9
Degree of processing of copper (percentage)												
Refined							83.8	81.7	73.9	52.6	47.3	52.3
Blister							16.2	18.3	26.1	47.4	52.7	41.7
Employment in thousands of persons e/ (annual average)									16 077	17 094	18 242	20 664

Source: Statistical Annex, various tables.

a/ 1927-1929.

b/ Calculated by dividing the returned value by the quotient between the price of the corresponding period and the average price of the period 1927-1969.

c/ Excluding 1932 and 1933, when the corporations suffered losses.

d/ Excluding depreciation and interest payments.

e/ Constructed on the basis of figures from French Davis, *op. cit.*, p. 221.



Table 20

## ANACONDA AND THE CHILEAN COPPER INDUSTRY

	1920- 1924	1925- 1929	1930- 1934	1935- 1939	1940- 1944	1945- 1949	1955- 1959	1960- 1964	1965- 1969	1925- 1968
<u>Chilex (Chuquibambilla mine)</u>										
Gross investment for period (thousands of dollars)	466.6	91.3	13.2	10.1	17.5	88.5	130.3	102.3	321.1a/	
Profitability (percentage)										
On depreciation value of investment	-	15.0	-0.3	15.2	21.7	18.0	11.2	10.2	20.0a/	13.2
On book value	-	58.0	2.1	44.6	41.1	38.2	22.2	14.2	24.0a/	29.2
Investment over profits plus depreciation	331.6	22.0	18.4	2.6	10.1	25.8	27.5	21.9	42.4a/	
<u>Andes (Potrerrillos and El Salvador mines)</u>										
Gross investment for period (thousands of dollars)	83.6b/	213.4	10.1	2.9	4.4	0.6	261.5	34.5	33.8a/	
Profitability (percentage)										
On depreciation value of investment		13.2	-0.2	5.0	6.6	3.3	1.3	1.4	11.1a/	
On book value						2.4	1.3	2.2	12.6a/	
Investment over profits plus depreciation	-	265.4	73.7	3.1	3.4	0.8	675.7	21.0	42.5a/	
Total Anaconda profitability (percentage)		4.7		5.0		5.8c/	6.1		9.2a/	5.7
Subsidiary Chilean contributions to Anaconda's net income (percentage)	-	75.0		61.0		50.0c/	56.0		73.0	61.0
Percentage of Anaconda's total investment in Chile		11.0		3.0		22.0c/	25.0		24.0	19.0
Investment over profits plus depreciation Chilex plus Andes		69.1d/		6.1		62.6c/	46.3		46.4	

Source: Senate of Chile, Antecedentes económicos y estadísticos relacionados con la Gran Minería del Cobre (Economic information bulletin, No 157, Santiago, 1969); Girvan N., Copper in Chile (Institute of social and economic research, Jamaica, 1972).

a/ 1965-1968.

b/ 1913-1924.

c/ 1945-1954.

d/ 1922-1934.

Table 21

## KENNECOTT AND THE COPPER INDUSTRY IN CHILE

	1915- 1919	1920- 1924	1925- 1929 <sup>a/</sup>	1930- 1934	1935- 1939	1940- 1944	1945- 1949	1950- 1954	1955- 1959	1960- 1964	1965- 1968	Average for period
Gross investment		475.4 <sup>b/</sup>	16.1	17.3	19.1	9.1	14.1	23.4	32.5	68.0	292.4	
Profitability												
On depreciation value			17.9	4.4	21.7	18.8	12.3	11.7	19.2	10.8	27.0	
On book value			35.1	7.2	35.5	32.4	28.3	25.5	38.1	19.0	30.2 <sup>c/</sup>	
Total Kennecott profitability			— 6.9 <sup>d/</sup> —		— 10.2 —		— 13.4 —		— 10.7 —		12.0	10.4
Investment over profits plus depreciation		196.0	5.7	13.9	5.7	3.4	8.4	14.4	11.9	36.2	115.6	
Braden contribution to Kennecott net income	— 14.0 —		— 37.0 —		— 28.0 —		— 15.0 —		— 20.0 —		13.0 <sup>e/</sup>	
Percentage of total Kennecott investment in Chile					— 8.6 —		— 10.9 —		— 11.5 —			

Source: Senate of Chile, Antecedentes económicos y estadísticos relacionados con la Gran Minería del Cobre (Boletín de información económica No. 157, Santiago, 1969); Girvan, N., Copper in Chile (Institute of Social and Economic Research, Jamaica, 1972).

a/ 1926-1929.

b/ Figure estimated for the period 1915-1924 by adding to the 1915 purchase price (350 million) an investment estimated for the period 1915-1924 as equal to the depreciation during the period (125.4 million).

c/ 1965-1967 (to eliminate El Teniente revaluation).

d/ 1925-1934.

e/ 1965-1966.

/In addition,

In addition, the employment generated is low in relation to the amounts of investment and value of production. It is estimated that around 1930 total employment in large-scale mining was approximately 20 000 persons.

In brief, the incursion of United States corporations into Chilean copper meant in practice the establishment of three foreign enclaves within the national economy. Although this industry was not capable of acting as a centre for stimulating the economic growth of the country, it began to have increasing importance in relation to the balance of payments and tax revenue beginning in the early 1930s.

It is beyond the scope of this work to enter into a discussion on the causes of the process of denationalization, as well as the effects that a "nationalized" mine would have had on Chilean development. The concrete fact is that until at least the second half of the 1920s, the relationship between the Chilean State and the foreign companies must be seen as a clear unilateral advantage for the latter.

The corporations were making high profits but at the same time were making large investments in transferring technology to the country, and whereas the contribution to the tax coffers and to the balance of payments was small in relation to the value of production, it was significant in relation to the total value of these accounts. Undoubtedly, since there was not the same growth as had occurred in the copper mining industry in 1910-1930, the end of the saltpetre era might have had greater consequences for the Chilean economy than those which it actually had.

The State-corporations relationship changed in character after the 1930s, after which the State and the Chilean society began to feel the effects, on the one hand, of the fact that the decisions on Chilean copper were being taken by foreign corporations in the context of optimizing their world operations and, on the other hand, that this type of insertion into the world economy made the country dependent, economically and politically, on the United States.

The first type of effect is exemplified most clearly in the very low rate of reinvestment in Chilean copper since the 1930s (see tables 20 and 21). The economic and political dependency on the United States was reflected, not in this period but in the following one, inter alia, in the unilateral fixing of the price of copper in the war periods and the difficulties faced by the Chilean State when it tried to increase its degree of control over the decision-making and surpluses of copper (particularly in the 1950s).

/The change

The change in character in the relationship between the State and corporations had already begun in the first half of the 1930s, particularly after 1934 with the increase in the tax rate for large-scale copper mining and with the imposition of the exchange tax. For this reason, other authors situate the change in so-called copper policies in this five-year period.

The two basic arguments for having chosen the year 1939 in this work as the year for the change in policies are: firstly, what happened up until 1936 was very much influenced by the effects of the world depression and, secondly, it was in the year 1939 that for the first time, in explicit form, copper policies were thought of in terms of the contribution of this sector to the total economic development of the country.<sup>1/</sup>

2. Growing national control and the change in the character of the relationship between the State and the corporations: 1939-1955

The period 1939-1955 is the one in which the relationship between the Chilean State and copper companies operating in the country became gradually more conflictive. This is the result both of the evolution of the political and economic situation within the country and of the conduct of the transnationals, all of this in the framework of a new phase in the expansion of the international capitalist system and in the context, moreover, of the conflicts in which the United States was involved.

(a) The world economic and political context

Of vital importance, in general, for the political and economic evolution of the international system as a whole and in particular for the evolution of the relationship between the State and transnational copper corporations in Chile, is the Second World War, which covers the first six years of the period analysed.

Specifically, this world situation meant, for Chile, that it had to accept a fixing of the price of copper lower than the prices of the level in the free market. It is estimated that the fixing of a ceiling price of copper at 11.775 cents per pound for the entire period meant losses for the Chilean economy of about 500 million dollars.<sup>2/</sup> This excessive 'contribution' by Chile to the

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1/ See C.W. Reynolds, op. cit., p. 238.

2/ Obviously, the amount of the loss resulting from the fixing of the price depends on the prices at which the Chilean production could have been sold in the free market. The figure of 500 million dollars is calculated based on a free price of about 24 cents per pound (see T. Moran, op. cit., p. 61).

financing of the war was a basic reason for the increase in the feeling of economic and political dependency which took shape in the political structures of Chilean society. The universal fixing of the price of copper on the part of the United States Government at the beginning of the Korean war in 1950 reinforced this feeling and set off a series of actions defining the economic policy for copper between 1950 and 1955.

Apart from these specific impacts on the Chilean situation caused by the world events during the period, we must also bear in mind, in order to understand the dynamic of the situation, the fact that in the 1940s a change occurred (or was accentuated) in the nature of the expansion process of the capitalist system towards the periphery.<sup>1/</sup> The hub of this expansion gradually changed from activities of the primary-extractive type, basically mining, to activities of the secondary-manufacturing type. Two facts are associated with this: firstly, in the process of world accumulation, the mining sector lost importance and, secondly, of investments in the mining sector, an increasingly small percentage was placed in the peripheral countries.

In respect of this second fact, one might venture to say that one of the determining factors was precisely a concern in the central countries for their dependency on the mining resources in the periphery. This hypothesis is endorsed by the effort made by the Government of the United States -through post-war subsidies- to expand mining production in the country.<sup>2/</sup> Also pointing in the same direction is the effort made to develop technologies for exploiting ores with a low standard of fineness, and to develop synthetic products to replace mining products.

The above does not mean certain abandonment of the mining industry in the developing countries. Very much on the contrary, at the same time that there is an effort to decrease the degree of dependency, there is also an effort to consolidate the already existing positions in the exterior as well as to win new positions when the conditions are favourable.

It is in this context that the relations between the State and copper corporations in Chile began to include a third actor of vital importance during

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<sup>1/</sup> For an analysis in depth of this phenomenon, see C. Fortin, op.cit., pp. 20 et seq.

<sup>2/</sup> See T. Moran, op.cit., p. 33.

this period: the United States Government. It is also in this context that the loss of relative participation of Chilean copper in the world industry should be understood.

(b) The domestic situation of Chile and related factors

As mentioned previously, the 1930s in Chile marked a strong acceleration in the development of political and social structures. This process, which had already developed considerably by the 1920s, was strongly activated by the effects of the world depression on the Chilean society as a whole. The different actors in the domestic reality felt the weight of depending so crucially on the changes in the international economy, especially when the country's insertion in it depended to a large degree on the exportation of a raw material such as copper.<sup>1/</sup>

It was in this period that the nationalized feeling began which had a strong impact on the development strategy as a whole and on copper policies. The increase in nationalized feeling and the idea of dependency was accompanied, on the one hand, by qualitative and quantitative change in the role of the State and, on the other, by a considerable increase in the political participation of the middle-income and popular sectors which culminated in 1938 with the triumph of the centre-left coalition (Popular Front) in the presidential elections.

In 1939 the Corporation for National Development and Reconstruction was established, an institution designed to promote and guide national economic development. This institution was financed by an increase by 15% in copper taxes, with which the existing tax rate until that time almost doubled (18%). More important than the tax rate itself is the fact that, for the first time, explicitly, larger surpluses of copper were extracted to finance Chilean economic development.<sup>2/</sup> From this time on, the copper policies remained linked to the total evolution of the development strategy, that is, the substitutive industrialization of imports.

To the extent that this development strategy needed growing inflows of capital, the pressures on the surpluses generated by the large-scale copper mining industry increased.<sup>3/</sup> At the same time, to the extent that import-substitutive

<sup>1/</sup> For an analysis in depth of the evolution of the feeling of "dependence" in Chile, see T. Moran, *op.cit.*, especially chapter 3.

<sup>2/</sup> See C.W. Reynolds, *op.cit.*, p. 238.

<sup>3/</sup> For an analysis of the relationship between the political evolution of Chilean society, the advance of import-substitutive industrialization and the development of the copper industry, see B. Tomic, "Condiciones históricas del régimen militar", *Revista Mensaje*, Santiago, No. 287, March-April 1980.

industrialization was accompanied by a relative degree of political consensus, at least until this strategy began to deteriorate, the power of successive Chilean governments vis-à-vis the transnationals grew significantly. The fixing of prices in periods of conflict and the consequent economic losses for Chile tended to reinforce this relative political consensus on the treatment of copper and its surpluses.

We should make it clear that when we speak of relative political consensus in respect of copper policies, we are not denying the serious ideological and political differences which the various political currents in Chile held at that time on the problem of economic development in general and on foreign investment in particular. What we are saying is that, while the positions of each group are independent, all tend to agree, for very pragmatic reasons, on the need for the country to take over, as far as possible, the copper surpluses.

The nationalist sentiment and the idea of dependence received additional reinforcement, first of all from the negative effects on the Chilean economy of the 1949 depression in the United States and, secondly, from the unilateral fixing of the price of copper on the part of the United States Government in 1950.

In 1951 a Chilean mission in Washington obtained an increase in the price of copper of 3 cents per pound from the United States Government -above the fixed price of 24.5 cents- to be paid entirely into the Chilean tax coffers, and it also obtained the right of the Chilean State to sell 20% of its copper independently on the free market.<sup>1/</sup> In 1952 the quantity of surpluses obtained from the sale of 20% of the copper production of large-scale mining, in some cases at prices more than twice the fixed price of 24.5 cents,<sup>2/</sup> and the expiration of the Washington Agreement led the Government of the period to establish a government monopoly on copper sales.<sup>3/</sup>

<sup>1/</sup> Freedom to sell on the free market was strictly limited by the prohibition of selling Chilean copper to "countries which are enemies of democracy". A detailed analysis of the agreement in question is found in: R. Tomic, "Primeros pasos hacia la recuperación del cobre: El convenio de Washington de 1951", in R. Ffrench-Davis and E. Tironi (eds.), El cobre en el desarrollo nacional, op.cit.

<sup>2/</sup> Moran mentions Chilean copper sales on the European free market at prices as high as 55 cents per pound, T. Moran, op.cit., p. 87.

<sup>3/</sup> Under the Government of G. González Videla, "the copper monopoly" was created, establishing that all the production of the large-scale mining industry would be marketed directed by the Chilean State. The copper companies also had to sell copper to the State at a price fixed at 24.5 cents per pound, at a time when the price of copper for external sales was fixed at 35.5 cents per pound, R. Tomic, op.cit., p. 153.

In late 1952 a new Government 1/ came to power in Chile, governing two of the most "interventionist" years of copper policies in Chile (1952-1954) and one of the most liberal periods in their history (1955-1958).

At the same time that the bargaining power of the Chilean State was increasing in this period, because of the relative internal cohesion behind this barrier of public policies, there was an obvious improvement in the curve of apprenticeship on the part of Chilean technicians and a greater public interest in general. To the extent that copper was consolidated as the principal contributor to the balance of payments and as a crucial supplier of fiscal revenues, research increased on the subject, information on the companies was improved, Congress became seriously interested in the subject, etc.

In spite of this, the negotiations carried out in the period -especially those between 1950 and 1955- made it clear that there was still a very unequal capacity between the national institutions and the transnational corporations to obtain, process and analyse information, to learn from past experiences, to adapt to the changing conditions of the international political and economic systems, to understand the objectives, power and limitations of the other party, etc.2/

(c) The position and strategy of the transnationals

What occurred with Chilean copper in the period analysed (1939-1955) and in the following periods may easily be misinterpreted if we do not take into account the position and strategy of the transnationals involved in the context of the world economic and political situation.

As might have been expected, the corporations operating in Chilean copper reflected the changes which took place in the transnationalization of the world economy as a whole in their conduct during this period. Anaconda and Kennecott were highly dependent on their copper activities, and within this, highly dependent on their operations in Chile. It was reasonable to expect, then, that both would assign a relatively low priority to investment in Chile, preferring to diversify, with the fundamental motivation of ensuring access to the ore rather than seeking direct and immediate profits.

In addition, Anaconda and Kennecott, the largest North American producers, suffered during the Second World War, and especially after it, a considerable loss

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1/ Of C. Ibáñez del Campo.

2/ See. R. Tomic, op.cit., pp. 154-157.



in their oligopolistic power. On the one hand, the antimonopolistic action of the United States Government tending to stimulate the development of copper mining in that country, causing the degree of concentration of the industry to diminish. On the other hand, aluminium was becoming a threatening substitute for copper.

Both facts forced the cartel of producers to adopt the strategy of low prices as a way of holding back the process of replacement by aluminium and the entrance of new producers into copper mining.<sup>1/</sup> At the same time, the large copper corporations were inevitably forced into the aluminium industry, following the patterns of diversification which characterize TNCs, especially after the Second World War.

Another fact is important for understanding the actions of Anaconda and Kennecott in Chile during this period: the investments made by these companies between 1910 and 1930 in Chile and other countries generated a large installed capacity for copper production, which remained largely unused during the depression and for a long period after it. This is shown by the fact that the peak of demand in the war years was met with investments which were only marginal compared with those made during the first years of their operations in Chile.

In addition, these same large investments were ensuring Anaconda and Kennecott of considerable year-to-year profits, which, it would appear, diminished the aggressiveness of both corporations. The truth is that the strong dynamism which characterized them in the decades from 1910 to 1930 became instead a serious inertia from the 1930s onward. In this respect, however, there were other differences between the two corporations.

In the case of Anaconda, one of the factors of this investment inertia was that since 1925 it was concentrating on consolidating its financial situation through the payment of large, long-term debts contracted during the years when it bought American Brass Co. and Chuquicamata.<sup>2/</sup> This process lasted until 1945, when Anaconda had a very high liquidity. In these same years, Anaconda was faced with the unavoidable need to make a large investment in Chuquicamata, due to the gradual deflation of the oxidized ore and the need to initiate the exploitation of sulphurated minerals, which involved a technological change in the productive

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<sup>1/</sup> For an analysis of the evolution of the international copper industry, see T. Moran, op.cit., chapter 2.

<sup>2/</sup> N. Girvan, op.cit., p. 39.

process. This investment was necessary to keep ensuring the supply of copper to the vertically integrated structure of this corporation. After 1950, Anaconda began its incursion into aluminium, and with this Chilean copper largely lost its priority in the overall strategy of this corporation.

The situation of Kennecott was similar to that of Anaconda in the amount of profits they were obtaining from their operations in Chile, the liquidity with which they emerged from the Second World War, and their interest in diversifying into aluminium and other minerals after 1945 and in the low priority of Chilean copper in the framework of their overall planning strategy. But, in addition, Kennecott had always been known for its assigning of a low priority to the reinvestment of profits. Thus, between 1925 and 1947 the net value of their fixed assets remained practically constant, while the distribution of dividends exceeded, on the average, 70% of the high profits obtained.<sup>1/</sup> The rest of the profits were basically used for increasing the liquidity of the company. In 1945 the liquid assets of Kennecott rose above 50% of total assets. This is a clear demonstration of how conservative the overall strategy of this corporation was during this period.

In 1949, Kennecott began its diversification into aluminium, at the same time that it went into oil, platinum and other minerals. Another noteworthy fact is that, in general, these incursions had very little success.

(d) The results of the policies: the distribution of profits

Bearing in mind the above-mentioned internal situation in Chile, it may be maintained that the position and policies of copper in the successive governments of the period centred on increasing, by various methods, the tax revenue coming from this sector. We will analyse the effects of this policy here in terms of the value and distribution of the profits of the sector.

In quantitative terms, the main effects to be noted are (see tables 19, 20 and 21):

(i) There was a strong increase in the percentage of returned value. While in the five-year period 1935-1939 this percentage was only 31%, in the period 1950-1954 it reached 68%.

(ii) Along with the above, the effective tax rate rose from 29% in the 1930s to the historical maximum of the period before nationalization of 78.6% in the period 1950-1954.

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<sup>1/</sup> Ibid., p. 52.

/(iii) The

(iii) The total returned value (in constant copper prices), although it rose considerably during 1940-1944 compared with 1935-1939, remained constant in the two following five-year periods until the end of the period.<sup>1/</sup>

(iv) Production, which experienced an average annual increase of 7.8% in 1940-1944, fell by 1.8% on the average annually in the following five-year period and again fell by 2.5% annual average in the period 1950-1954. This meant that in the latter five-year period the Chilean copper mining industry became less important on the world scene. From 17.2% of world production in 1940-1944, it rose to 18.4% in 1945-1949 (showing that the fall in production in Chile was lower than that of world production) to then fell to 12.7% in the same period of the following decade.<sup>2/</sup>

The drop in production is the factor explaining why the returned value (at constant copper prices) remained unchanged during the entire period despite the large increase in the effective tax rate.

Looked at superficially, the interpretation of these results might seem simple: the rise in pressure by successive governments on the companies' profits had decreased the attraction of Chilean copper for these corporations, which had meant a reduction in investment and then in production. This is, however, a very simplistic and risky analysis, as shown by the defeat of the policies followed after 1955, based on this type of analysis.

Above all, we must keep in mind that even when the effective tax rate in the period 1950-1954 reached the historical maximum for the pre-nationalization period of 78.6%, the profitability obtained by Kennecott and Anaconda in the El Teniente and Chuquicamata mines, respectively, continue to be much higher than the profitability of these enterprises at the world level (see tables 20 and 21).

Secondly, the analysis of the position and strategy of Anaconda and Kennecott in the framework of the changes taking place in the centre of the international capitalist system clearly show that Chilean copper was not one of the first priorities of the strategies of these companies. It is not absolutely unthinkable to state that even if the treatment granted to them had been more favourable, the transnationals would not have invested more in Chilean copper than the little which they effectively did invest.

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<sup>1/</sup> See note b/ in table 19.

<sup>2/</sup> See table 2 in chapter 1.

Both Anaconda and Kennecott, already very dependent on Chile, were beginning to diversify into aluminium and were losing power in the context of the international copper industry. Moreover, Anaconda and Kennecott had lost the thrust which had characterized them in the first decade of the century. Both companies aspired only to maintain control and the size of their operations in Chile, in the best tax conditions possible, for which they asked the United States Government to support them in their negotiations with the Chilean State.

Thirdly, the drop in Chilean copper production after the Second World War, when the tax conditions were already difficult, was less sharp than that of the rest of the world, as mentioned above. Moreover, Chilean production had almost recovered the 1945 amounts when the United States economic depression of 1949 made the latter nation feel its economic dependency to a large extent. The fall in the production of copper in Chile (by 17% in 1949 compared to 1948) was much greater than that of the rest of the world (which meant that Chilean participation in the world market dropped from 18.3% in 1948 to 15.5% in 1949, see Statistical Annex, table 1). But this was certainly not due to the fact that the Chilean mines had lost competitiveness; rather it was probably due to a strategy of reprisals against the Chilean Government for its tax treatment. We might venture to state that in the five-year period 1950-1954 the corporations continued to use this procedure to force a change in the rules of the game. In this sense it would be true that the increase in the pressure on the corporations' profits would have brought on the decrease in production. But this would not be for reasons of a loss of relative competitiveness but rather because the corporations, with the support of the United States Government, used this strategy as a way of pressuring the Chilean Government.<sup>1/</sup> All of the above makes it clear that it is simplistic to hold that a more favourable treatment would have radically changed things, especially in respect of investment.

What is true is that the specific form taken by the extraction of copper surpluses did not favour the integration of the copper mining industry into the national economy. It should be recalled that after 1934 the influx of foreign currency which the companies had to bring about in order to finance their

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<sup>1/</sup> For an analysis of the economic and political pressures exercised by the United States Government and the copper companies see T. Moran, *op.cit.*, especially pages 175 on.

expenditures in national money, given the system of partial return, received discriminatory treatment. The copper corporations had to change this foreign currency at a fixed exchange rate which was lower than the market exchange rate, even at the beginning of this system. With time, domestic inflation and the resulting devaluation of the dollar determined that the difference between both exchange rates -which in practice meant an exchange tax- would grow considerably. In the period 1952-1954, more than 60% of tax revenues from large scale copper mining were extracted in this way.<sup>1/</sup>

From the point of view of the companies, the exchange tax is a duty on expenditures in national money. It is thus a disincentive to purchases in the country and to the contracting of labour. For both reasons this mechanism tends to reinforce the characteristics of an enclave in the large-scale copper mining industry. While it is probable that the relative intensity in the use of capital did not react significantly to the disincentive to the contraction of labour, given the already very high intensity in the use of capital, national purchases did suffer a deterioration, if not in absolute terms, at least in terms of what was the hoped-for trend, given the development of the national manufacturing industry.<sup>2/</sup>

The fact is that while in 1925-1929 50% of the total expenditures were expenditures in Chile, in 1935-1939 this percentage reached only 41.8%. This percentage was recovered in the following five-year period with the war "boom", to reach a figure of 56.8% in 1950-1954, only 10% above that of 1925-1929. (See table 19.)

The advantages of this mechanism are even more clear if we bear in mind that, in the context of the system of partial return, this not only meant encouraging imports and discouraging national purchases but also, since the substitution of one for the other has its limits, this mechanism also meant a tax on production.<sup>3/</sup>

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1/ See Statistical Annex, table 3.

2/ For an in-depth analysis of this point, see R. Ffrench-Davis, "Integración de la Gran Minería a la Economía Nacional: El rol de las políticas económicas", in R. Ffrench-Davis, E. Tironi, El cobre en el desarrollo nacional, op.cit.

3/ See R. Ffrench-Davis, op.cit., p. 228.

/In addition,

In addition, we should keep in mind that the exchange tax increased the cost of production and thus decreased the taxable income of the corporations. This means that if this tax did not exist, a large part of the amount obtained through this concept would have also been appropriated by the tax office through taxes on profits.

The exchange tax had an additional disadvantage: everything that the corporations paid into the tax office for this purpose was not, speaking in terms of accounts, a tax payment and hence these could not be deducted as expenditures from their tax payments to the United States, in accordance with the "Foreign Tax Credit" operating in that country. It would thus have been feasible to have improved the situation of the corporations or of the Chilean State, or of both, at a cost to the United States tax coffers.<sup>1/</sup> In summary, there was an important lesson to be drawn: not all the forms of extraction of surpluses are equivalent in their long-term effects, even if in the short run they generate the same income.

The period in question taught another good lesson: referring to what happened between 1950 and 1955. The incursion of Chilean technicians into the marketing of copper after 1951 shows what may happen when there is a political will to defend national interests. But this experience also shows that political will is a necessary but insufficient condition. Without a good technical staff and adequate organization, political will remains just this, simply voluntary action. The failure and end of this experience -with the return of control of marketing to the companies- also illustrates very clearly the restrictions operating in the periphery and dependent countries, as a result of the specific ways in which they are inserted economically and politically into the international system.

It is true that the failure of the copper monopoly and the accumulation of copper surpluses in Chile at the end of the Korean war was due in large part to the inexperience of the Chilean technicians. But it is also true that even more important in this failure were, firstly, the fact that the North American market had been almost the only market for Chilean copper until then, and secondly, the block imposed on Chile by the capitalist centre countries on selling copper to the socialist countries.

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<sup>1/</sup> T. Moran, op.cit., p. 94.

3. The reversion of interventionism and the reappearance of laissez-faire: 1955-1965

The gradual process of increasing governmental intervention in the large-scale copper mining industry, which had already begun in the 1920s, suffered a significant -although short- reversion after 1955.

The failure of the copper monopoly, a mistaken interpretation of the stagnation of production in the past 15 years, an oversimplified idea of the behaviour of the transnational corporations and, finally, the search for a new form of re-insertion into the world economy on the part of the Government, led it to pass a liberal legislation which was very favourable to foreign corporations. The analysis of the failure of this policy in terms of its explicit objective of stimulating an accelerated expansion in the copper mining industry is a good validation of the approach of negotiation which we have used in this work.

(a) The world economic and political situation

In terms of the international environment, the period in question (1955-1965) may be characterized as an extension of the trends which began after the end of the Second World War in the centre and periphery of the capitalist world.

On the one hand, the nationalist movement and the ideology of sovereignty over national resources in the Third World continued to advance, in the context of the political independence of many periphery countries.<sup>1/</sup> Along with this grew the threat of nationalization of the subsidiaries of transnational corporations operating in these countries in the mining, agricultural, agricultural-industrial and other sectors related to natural resources.

In respect of this process taking place in the periphery of the system, the central countries (especially the United States) reacted, on the one hand, by seeking to decrease the dependency of their economies on the raw materials produced in "insecure areas" and, on the other hand, developing a strategy which would make it possible to calm the growing tensions in the international system.

At the same time that the percentage of direct American investment in mining in developing countries continued to drop (from 54.5% in 1955 to 46.24% in 1965),<sup>2/</sup> the transnationals sought new ways of extracting differential profits from the countries where they operated which did not require total ownership of these

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1/ See C. Fortin, op.cit., pp. 41 et seq.

2/ Ibid., table V, p. 29.

operations. Thus administration contracts, mixed corporations and other forms of association appeared which allowed the corporations to cede the ownership or part of it without proportionally losing their control over big decisions and profits.<sup>1/</sup>

In the system as a whole, the search for a decrease in tensions between peripheral countries and central countries became concrete on the American continent in 1960 with the Alliance for Progress, whose establishment and later development is one more explanatory variable of the development of State-transnational corporations relations in Chilean copper.

(b) Domestic situation in Chile and related factors

The change in sign of the copper policies in Chile, which materialized in the Law of the New Deal (Nuevo Trato) of 1955, occurred in a period when the feeling of failure which the interventionist experience of 1952-1953 had left, in addition to the expected depletion of one of the three large-scale copper mines (Potrerillos), produced an effective turnabout in the bargaining power in favour of the companies.<sup>2/</sup>

This contributed to the joining of political forces behind the idea that it was necessary to renegotiate with the companies. A turnabout towards a more liberal scheme thus took place in these years, which in the area of foreign investment was made concrete in 1954 with a very favourable statute towards foreign investors, and in the following year with the Law of the New Deal to Copper Companies.

The philosophy behind this was simple. It was proposed that the stagnation of investment and production of copper in the previous periods was the result of an excessive State intervention in this sector. If the desire was to achieve an effective expansion of the copper industry it was thus necessary to decrease this intervention, generating an automatic stimulus to the companies to make new investments.

It is undeniable that behind this liberal posture there was an erroneous interpretation of what had happened in the Chilean copper industry in the previous three five-year periods and a misunderstanding of the forms of action of the transnational corporations. But this is not all. The social groups which were exerting pressure for this new approach to foreign investments saw in it also a

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<sup>1/</sup> Ibid., p. 68.

<sup>2/</sup> T. Moran, op.cit., p. 191.



useful way to reverse a trend in the Chilean economic system as a whole which was acting against its long-term interests; that is, the growing participation of the State in the national economic development process.<sup>1/</sup> The 1950s already showed the first symptoms of the exhaustion of import-substitutive industrialization and the political arrangement -implicit more than explicit- which sustained it. The national business community sought a new form of insertion in the world economy and this led it to seek an alliance with transnational capital. This fact, added to the naivete and certain lack of ability of the proponents of the Law of the New Deal, explains this reversal in copper policies.

The principal elements of the Law of the New Deal are:

(i) A change in the tax system. The large set of taxes on large-scale mining which had been growing since 1925 was replaced by a single tax composed of a fixed tax rate of 50% on profits and an additional variable tax of up to 25% inversely related to the scale of production. The objective of the variable rate was to serve as an incentive to increase production. For this purpose a basic production was determined by enterprise, corresponding to nearly 95% of the average production for the period 1948-1953. For this production the tax rate was fixed at 75%. As production rose, the tax rate fell by 0.125% for each 1% increase in production, until the increase reached 50% of basic production. Increases above this production involved a decrease in the tax rate of 0.375% for each 1% increase in production, until doubling the production base, at which time the variable tax rate of 25% became zero.

(ii) The special exchange tax for companies was eliminated, and along with it the exchange tax.

(iii) Accelerated depreciation was established for new investment.

(iv) Presidential authority to fix export percentages for blister and refined copper was eliminated.

(v) The Department of Copper was created, under the Ministry of Mining, in the spirit of establishing a specialized agency which would control the companies in the area of copper marketing and which would force them to increase to the maximum their local purchases of inputs.

The establishment of the Department of Copper, thus defined, appears as highly contradictory to the economic philosophy which inspired the creation of a

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<sup>1/</sup> See T. Moran, op.cit., pp. 192 et seq.

"good climate for investment". In truth, the incorporation of this latter and crucial aspect of the legislation was an achievement of the opponents of this policy, especially in Congress.<sup>1/</sup> As we will analyse in more detail below, with the exception of those objectives assigned to the Department of Copper, the New Deal policy did not produce the expected effects nor did it satisfy, therefore, the expectations of the Government of the period. It caused a new change in the bargaining position. The conservative groups rapidly saw the hopes they had put in this new accumulation model dashed, and reaction increased against the companies. Even under the conservative Government of Jorge Alessandri, the North American transnationals involved in copper completely lost their basis of political support in Chile.

The Alliance for Progress and the crisis in the balance of payments of the early 1960s consolidated this situation. The tax rate was raised, first by 8% and then by an additional 5%. Also reintroduced were the differential exchange rate for copper companies. Even well-known conservative figures proposed that the only viable alternative for Chilean copper was total nationalization.<sup>2/</sup>

(c) The position and strategy of the transnationals

In the period 1955-1965, Anaconda and Kennecott continued with the geographical and horizontal diversifications strategies which began after the Second World War. Both fully entered the markets of aluminium and other minerals, which required considerable capital resources. This is one of the reasons they began to press for a decrease in taxes on their profits obtained in Chile, since the 1920s a source of a significant percentage of their net income (see tables 20 and 21). It was a question of obtaining better terms for increasing the profits of the operations already existing in Chile and increasing the profitability of the inevitable reinvestments. In those years, Anaconda was faced with the need to open the El Salvador mine to replace the depreciated mine at Potrerillos. The investment made for this purpose (260 million dollars at 1979 prices) cannot be

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<sup>1/</sup> T. Moran, op.cit., p. 124.

<sup>2/</sup> Moran cites the following highlights of an editorial in the newspaper El Diario Ilustrado, 2 July 1961, written by the then Senator of the Conservative Party: "There is no need for social change in Chile ... What the country needs are enormous investments in copper production. The New Deal has been a failure ... For this reason, if the companies cannot undertake an enormous programme (of investment) ... the Government must nationalize them". T. Moran, op.cit., p. 200.

understood, however, as evidence that Anaconda assigned any priority to investment in Chile and/or was reacting to the Law of the New Deal. The reinvestment was necessary to maintain the supply of copper of Anaconda's integrated world structure and it was extremely advantageous because the concentration, smelting and refining installations of the depreciated mine could be used to process the ore from the new mine (which was located a short distance away).

Anaconda and Kennecott did not assign priority to investment in Chile, and the long-term credibility of the New Deal was not too clear to them. However, when the reaction of the social groups which had encouraged the "good climate for investment", faced with the non-response of the companies, left them without domestic political support, the corporative strategies began to change direction. Strictly speaking, this is true only for Kennecott, since Anaconda recently resigned itself, in 1969, to the already irreversible change in the balance of power.

Kennecott, on the contrary, began in the early 1960s to behave more flexibly than the more dynamic transnationals in the phase of post-war capitalist expansion. Thus, Kennecott tried to decrease domestic pressures by making investments in the country. But the risk was high, and Kennecott thus conditioned this strategy on obtaining a guarantee that the treatment granted for 20 years would not change. But at that point this was too much to ask, even of the conservative Government of the era. At that time Kennecott clearly saw the need for an actual change in the way in which it related to the Chilean State, and began to study the possibilities of entering into a mixed corporation with the latter, reserving for itself -through an administration contract- a considerable degree of power over the decisions and profits generated.

(d) The results of the policies: distribution of profits

The Law of the New Deal was a failure in terms of its main objective: to encourage new investment by foreign corporations in the Chilean copper mining industry. The investment continued to be a very low percentage of profits plus depreciation. In the case of Chuquibambilla (Anaconda) this percentage, in 1955-1959, was only slightly higher than that of 1945-1949. In addition, the percentage of total investment by Anaconda in Chile went from 22% in 1945-1954 to 25% in the following decade. But this brought with it an increase also in Chile's contribution to the net income of Anaconda, from 50 to 56% in the same periods (see table 20).

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In the case of El Teniente (Kennecott), investment over utilities plus depreciation fell from 14.4% in 1950-1954 to 11.9% in the following period (see table 21). Finally, in the case of Andes (Anaconda) investment was considerable but, as has already been discussed, it would be wrong to consider this investment a result of the Law of the New Deal. It is probably more correct to establish the inverse causality: the need to reinvest in Andes as an important causal factor in the pressures to improve conditions for investors through the law in question.

Despite the low net investment, in the first five years of the period there was an appreciable rise in production. In fact, the average annual production in the five-year period 1955-1959 was 26% higher than that of the previous five-year period. It cannot be denied that at least in this sense the New Deal was relatively successful. The problem is that it was an unnecessarily burdensome success for the country. This was because the increase in production brought with it a decrease in the effective tax rate (from 78.6% in 1950-1954 to 67.2% in 1955-1959) and in the percentage of the returned value (from 68.1% to 59.9% in the same periods) (see table 19).

It could be argued that, in any case, the returned value in absolute terms rose by 15% (between the same periods) and continued rising in the five-year period 1960-1964. This is true. But it is also true that it was extremely easy for the companies to achieve the increases in production and consequent tax decreases, since the production base was established in a depressive period of production, which enabled the companies almost to double the production base with the existing installed capacity without making new investments.

For the companies, the tax incentives were very suitable in the framework of their strategies for maximizing profits in Chile in order to finance their world expansion outside of Chile. The profitability rate of both corporations rose compared to previous periods (see tables 20 and 21). But the increase in the profitability of operations in Chile did not produce an influx of capital into the Chilean mining industry; on the contrary, there was a considerable outflow of copper surpluses which were invested by the companies in aluminium and other minerals and in other parts of the world. This unnecessary flight of copper surpluses may be seen as the price of an incorrect policy, but, as a noted study on the subject holds, it should also be seen as the economic compensation paid by the Government of the period to put the country back into the world economy in those years.

The Law of the New Deal, or rather that part of it introduced by its opponents, that is, the creation of the Department of Copper, under the Ministry of Mining, had an important positive impact in the increasing of the degree of integration of large-scale mining with the rest of the national economy, and in substantially increasing the knowledge and negotiating skills of the national specialists. The controlling role of the Department of Copper over imports which were replaceable by national inputs made it possible to increase the share of the latter in the total purchases from 39.9% in 1955-1957 to 60.5% in the period 1961-1963 and to 67.5% in 1967-1969.<sup>1/</sup> The work of controlling sales also produced a strong upward thrust in the apprenticeship process, which was to bear fruit in the second half of the 1960s and, basically, in the stage following total nationalization.

It is important to note, as an additional debt to the proponents of the New Deal, that the Department of Copper was not only established against the will of the latter but was also violently opposed by them during the entire period until 1964.

#### 4. Chileanization: 1964-1970

The failure of the Law of the New Deal, insofar as producing an accelerated expansion of the production capacity of large-scale copper mining, set up the bases for a new change in copper policies. In the 1964 presidential campaign, the positions fluctuated between Total Nationalization and "Chileanization" <sup>2/</sup> of large-scale mining. The new Government of Chile <sup>3/</sup> introduced its Chileanization project in 1964 at a time when Chilean society was faced with worsening domestic political conflicts.

##### (a) The world economic and political context

Three events of worldwide significance had an important impact on what occurred in Chile and on copper policies in this period: the Cuban Revolution, the Alliance for Progress and the Vietnam war.

The first two were certainly interrelated and had a contrary effect on Chilean political life: the Cuban Revolution increased the strength of the socialist

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<sup>1/</sup> See R. French-Davis, op.cit., table 3, p. 223 and table 7 in chapter 1 of this report.

<sup>2/</sup> See the explanation of this term below in section (d).

<sup>3/</sup> Of E. Frei Montalva.

movement in Chile, the Alliance for Progress placed the United States behind the "developmentism" of the Government of the period. Against this background, the copper companies operating in Chile saw in the triumph of this second posture an alternative for reconciliation with Chilean society.

The institutions of the central countries, especially the United States, supported the transnationals in the field of raw materials in the periphery in the search for new forms of association with Third World nations. Joint corporations with the national states, service contracts and other forms of association were supported, for example by EXIMBANK, from the financial standpoint. The increase in the rates of indebtedness and the participation of banking consortia in mining investments in the periphery tended to diminish the risks derived from the trend towards nationalization in Third World countries.

The third event mentioned above, the Vietnam war, influenced the Chilean bargaining position in copper by revealing a deficiency (more operational than strategic) in Chileanization. The Vietnam war produced a sharp increase in the price of copper and, since the Chileanization agreements did not contain a tax on price rises, this meant a spectacular increase in the companies' profits.

Despite its being caused by a variable outside the companies, this new flight of capital gave new strength to the position of total nationalization, even within the party of the Government which was carrying Chileanization forward.

(b) The domestic situation in Chile and the policies followed 1/

The "Revolution in Freedom" and the "negotiated progress" of the Government of the period -which coincides with the period analysed- were an attempt to achieve an accelerated social and economic development in the context of a capitalistic framework.

In the development model thus defined, copper was the "main beam", for its role of generating foreign currency and its crucial contribution to the tax coffers. It was thus a question of achieving an accelerated expansion of copper mining activities in Chile, which required a large influx of capital to the sector. In this the transnationals could play a major role, whether as direct contributors of capital or as a channel for access to funds from international credit. Taking the lessons from the previous periods, the Government's proposal emphasized, however, the need for governmental participation in ownership and in the marketing

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1/ The most specific aspects of the copper policies and agreements reached in 1964-1970 are analysed in section (d) below.

process. In compensation, in order to generate a stimulus for companies to become involved with an expansion plan, it was deemed necessary to carry out a drastic reduction in taxes and a freezing of the tax system under which the foreign companies would operate.

Bearing in mind the political philosophy of the Government and the desired method of insertion into the world economic and political system, Chileanization was a coherent strategy proposal. The fact that, as the later analysis will illustrate, Chileanization was to become unnecessarily advantageous for the foreign corporations, and thus unnecessarily costly for the country, was not so much the result of strategic decisions but rather of errors on the tactical and operative level.

The political scene in which Chileanization occurred had peculiar characteristics.<sup>1/</sup> The only viable political path for the foreign copper companies in Chile was to arrive at an agreement with the Government of that time. The opposition to the Government of the entire Chilean political spectrum was openly opposed to TNCs. In this sense, it is somewhat interesting to note that even the conservative groups came to favour the total nationalization of copper mining (see the quotation of the conservative Senator mentioned above). This played an important role in the progress towards total nationalization, which took place in 1971.

Although it is paradoxical that the conservative sectors of the Chilean society viewed nationalization of the large-scale copper mining industry favourably, it can be explained by the social and political dynamics of the period. The social and economic reforms proposed by the Alliance for Progress were strongly resisted by these sectors, which in turn brandished the threat of expropriation of the United States companies as a popular flag which served as a warning to the United States Government itself.

In this same spirit, the right wing was opposed to the 20-year inviolability which the Chileanization project proposed, arguing that it was not admissible to ensure the right of ownership to foreign corporations, while the Agrarian Reform denied this same right to Chilean farm owners.

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<sup>1/</sup> For an extensive and documented analysis of the scenario and political dynamic of the era, see T. Moran, op.cit., chapters 5 and 6.

The political scene was certainly adverse to Chileanization despite the political strength of the Government. This explains why the corresponding law was approved by Congress only in 1967, or half way through the presidential term. The arduous debates of the period also produced a split in the Government party itself. When the high prices of copper generated a spectacular rise in corporate profits beginning in 1967, and when the suspicion spread that one of the corporations might be trying to avoid the entrance of other firms into Chilean copper, the opposition of the Government turned towards a harsher treatment of the corporations.<sup>1/</sup> Investments in expansion plans were already well advanced, and thus the bargaining power had come to fluctuate in favour of the country. The foreign corporations had to resign themselves to a change in the rules of the game on the part of the Government itself, which would establish them in 1969 (see sections (c) and (d)).

(c) The position and strategy of the transnationals

The period analysed appears to coincide with a temporary recovery in mining of the Third World as a host for foreign investment, at least by the United States.

In accordance with this change in global trends, Anaconda and Kennecott also appeared, in this period of revolution in copper, to be assigning greater priority to investment in Chile.<sup>2/</sup> To this was added the above-mentioned fact that both firms realized that the only way of increasing their chances of survival in Chile was through making new investments in Chilean copper.

There were, however, differences between both transnationals in their assessment of the urgency of reacting and in the concrete forms of action. Anaconda closed itself to the possibility of entering into mixed corporations with the Chilean State and placed its hopes in carrying forward a process of expansion of production. Kennecott, on the other hand, conscious that its image in Chilean society was worse than that of Anaconda -as a result of having made almost no reinvestment in Chilean mining since the 1920s- sought more radical solutions to the problem. This led it to propose -even before the presidential election- an expansion plan which included the transfer of 51% of the ownership of El Teniente to the Chilean State. Kennecott's position is an excellent example of a brilliant

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<sup>1/</sup> This suspicion was based on the accusation that Anaconda had claimed mining holdings in an 80 000-hectare area in the north of Chile.

<sup>2/</sup> See N. Girvan, "Las Corporaciones Multinacionales del Cobre en Chile" in R. French-Davis, E. Tironi, op.cit., pp. 122 and 125.



corporate strategy, as was shown by the fact that this corporation came out of total nationalization in 1971 on a much better footing than Anaconda, although its relative position a decade back was weaker.

Kennecott sought a gradual withdrawal from Chilean copper under profitable conditions, ensuring this strategy through domestic political and external support. To achieve the latter, Kennecott involved a large group of public and private United States, European and Japanese groups in the proposed expansion plan. This became crystal clear in the statement at the time by the Vice-president of Kennecott in Chile: "The aim of these arrangements is to make sure that nobody expropriates Kennecott without upsetting relations to customers, creditors and governments on three continents".<sup>1/</sup>

Anaconda insisted on the idea of total ownership of its operations in Chile until 1969, when it had to yield to the change in the power relationship. The Government at that time was pressuring for the Chileanization of Anaconda under the terms agreed upon in previous years with Kennecott. Anaconda felt, however, that at that point the only viable alternative was total nationalization over a period which would permit it to readapt its global operations. This is what was called Contracted Nationalization (see next section (d)).

There was an additional aspect to the strategy of both transnationals at this time which illustrates very well how, even in the process of gradual withdrawal from the Chilean scene, the latter adopted positions and decisions at the local level which protected its global interests. It was a question of how Anaconda and Kennecott played against each other to maintain and achieve control -or at least the right to veto- over strategic decisions within Chilean operations. Even with 49% control of ownership, these corporations managed to keep these decisions in line with their structures and international interests, with the resulting negative effects on the national economy.

(d) The results of the policies: the distribution of profits

The strategy of Chileanization marked the return of copper policies in Chile to the path of growing national control over the basic, principal wealth of the country. This strategy was, at the same time, a new attempt to reconcile the national interest with the interests of the transnational corporations operating

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<sup>1/</sup> Cited in T. Moran, op.cit., p. 136.

in Chilean copper. This attempt was in agreement with the economic and political philosophy of the Government at the time (1964-1970) and is also in agreement with the new strategies of the transnationals involved.

Chileanization was an attempt to achieve a significant increase in copper production. This implied an influx of foreign capital which, in turn, supposedly required making it attractive for transnationals to invest in Chile. In this area, Chileanization was not really different from the philosophy which inspired the New Deal a decade previously. The basic difference between both schemes is that Chileanization learned from the defeat of the New Deal policy about the inefficacy of "automatic stimuli". In other words, Chileanization was not a passive attempt to achieve greater investments but corresponded to what has been defined as joint corporations, with a detailed and explicit proposal of commitments and expectations.<sup>1/</sup> The Government was prepared to make concessions to the copper corporations but in exchange for concrete commitments of investment and a greater participation by the Chilean State in the management of the corporations.

Concretely speaking, the main elements of Chileanization were: (i) majority ownership by the Chilean State (51%); (ii) governmental control over copper marketing; (iii) reduction of the tax rate; (iv) freezing of the agreement with the companies for 20 years; and (v) an expansion programme which was to augment production by about 75% in six years.

Seen as a whole, the strategy of Chileanization was coherent and consistent with the philosophy which inspired the Government which stimulated it. Undoubtedly, this strategy was also an advance with respect to the policy followed in the previous period. But Chileanization also suffered from serious deficiencies, which, on the one hand, reinforced the thesis with respect to relations between the State and the TNCs developed in this work and, on the other hand, made it possible to draw valuable lessons for the future.

The critical evaluation of Chileanization may take two different paths: one judging the strategy as a whole and the other, on the tactical, operative level, accepting the global strategic framework of Chileanization.

The first approach would lead to a comparative analysis of the desirability and feasibility, both economic and political, of the strategy of Chileanization

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<sup>1/</sup> See R.B. Mc Kern, "Transnational Corporations in the Copper Industry of Southeast Asia" (CTC/ESCAP/PEC10), 1979.

versus the strategy of total nationalization, proposed at the time by most of the opposition. This approach is interesting but theoretical. In effect, to make an evaluation of the strategy of total nationalization in 1964 implies in a certain sense altering the history of Chile from that time on. In this sense, this approach appears inadequate, given the objective and scope of this study.

The second approach accepts the strategic framework of Chileanization and evaluates in this context the specific forms of action adopted, the concrete agreements arrived at and the final results of the policy. To adopt this approach means to evaluate the carrying out of the proposed objective, also evaluating the cost involved in achieving this objective.

Chileanization had its first great success in respect of investment and production capacity. From 1965 on, sizeable investments were made in the three large-scale mining deposits, which were to be determining factors in the production increase during the 1970s. In 1965-1968 alone, gross investment reached 697 million dollars in 1979 dollars (see tables 20 and 21).

Chileanization was also a substantial step forward in the field of national control over the marketing process of Chilean copper. The governmental control of the process beginning in 1966 not only avoided the loss of returns which, as in the cases of previous conflicts, might result from the Vietnam war, but also the experience obtained in this field by national technicians was a crucial importance in the difficult period of post-nationalization. Chileanization also marked a considerable advance in the incorporation of local staff into the hierarchies in the area of production in the mining corporations, which was also a determinant factor in post-nationalization.

It was also an important achievement of the policies of the period to increase the percentage of expenditures made in Chile, even though this largely corresponded to the trend which begun with the establishment of the Department of Copper in 1955. In any case, while in 1960-1964 67.3% of total expenditures were made in Chile, in 1965-1969 this percentage reached 74.9% and in 1970 rose to 80% (see table 19 and Statistical Annex, table 2).

At the same time all of the above occurred, the returned value showed a spectacular increase, going from an annual 513 million in 1960-1964 to an annual average of 953 million dollars in the next five-year period, or an increase of 90% (see table 19). This latter, however, was not an achievement of the policies

/carried out

carried out as a result of the spectacular increase in the price of copper in the period.<sup>1/</sup> Paradoxically, this providential increase in the price of copper revealed one of the main deficiencies of the agreements signed with the corporations, that is, the tax system, and especially the absence of a surtax.

In effect, the sharp increases in price also meant a large increase in profits for the corporations (see tables 20 and 21). The profits of 1966-1969 are higher than the total value of investment in the area of expansion. The favourable side of this situation for the corporations should be evaluated by taking into account also that only a minor portion of the investment was their own capital; the rest corresponded to credits and governmental contributions. This situation, which moreover implied a change of policies in 1969, is what allows us to affirm that although Chileanization achieved its main objectives of increasing production capacity considerably, it did this at a cost which could have been considerably lower.

A more detailed examination of the agreements signed makes it possible to support this thesis, investigate the causes motivating the specific decisions and draw the corresponding conclusions.

The first salient fact is that the specific forms taken by Chileanization appeared to have been highly determined by the unexpected offer of Kennecott to yield 51% of the ownership of El Teniente to the Chilean State. This meant that it was Kennecott which had the advantage in taking the initiative in the bargaining process. This was, moreover, a surprising initiative in that Kennecott appeared to be making, at first sight, a very advantageous offer for the Chilean State. In effect, Kennecott offered to sell 51% of El Teniente, obtain financing for a significant expansion programme for the mine and take charge of administering and carrying out this expansion plan.

Undoubtedly this was a tempting offer for the newly-elected Government, especially because, even before taking office, it appeared clear that the Export-Import Bank would contribute the bulk of the financing for the expansion of the activities of the Joint Corporation to be formed between the Chilean State and Kennecott. The initial euphoria of the Government when this providential offer

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<sup>1/</sup> In effect, the increase in returned value at constant copper prices rose only 18.4% (see table 19).

came from Kennecott surely was a determining factor in the mistaken evaluation, on the part of the Chilean negotiators, of the cost of the offer.

Kennecott offered an attractive alternative, but at the same it required a series of conditions which were certainly disproportionate to what had up to then been its bargaining power in Chile, a power which Kennecott attempted and managed to increase considerably with the offer of selling and expanding the El Teniente mine. In the first place, Kennecott offered to sell 51% of El Teniente, but with a prior revaluation of assets which Kennecott estimated should bring book value from 66 million dollars to 200 million dollars in "real" value. In the second place, Kennecott required a substantial tax reduction. In the third place, the offer required an inviolability for 20 years of the agreements reached. In the fourth place, the Kennecott offer required that the EXIMBANK credits should be guaranteed by the Chilean State and subject to the laws of the State of New York. Finally, Kennecott required that it should maintain control of the new joint corporation through an administration contract, this being one of the conditions of the EXIMBANK credit.

Kennecott managed to have included in the final agreement, almost without exception, all the imposed conditions. The bargaining on the revaluation of assets brought the book value of El Teniente to 160 million dollars, for which the Chilean State promised to pay 81.5 million dollars (in 5 years and at 4.5% annual interest) to buy 51% of the capital of the new Joint Corporation. The financing of the expansion plan agreed upon (230 million dollars) was the following: Kennecott would contribute 92.7, EXIMBANK 110.1 and the Chilean State 27.5 million dollars. It was estimated that 90% of the Kennecott contribution would come from the payment which the Chilean State would make for 51% of the corporation. Thus, Kennecott was not in practice contributing new capital to the corporation.

However, Kennecott obtained as compensation for its "contribution" to the expansion plan a spectacular tax reduction, which meant that the percentage of total surpluses which Kennecott obtained for its 49% of the Corporation was superior to that obtained previously by controlling 100% of it. In effect, with Chileanization the initial joint corporations paid only 20% in taxes on profits, plus 30% on the dividends corresponding to Kennecott's 49%. This meant that Kennecott obtained 27% of the total profits, a figure higher than the 21% it obtained before Chileanization.

/The extraordinarily

The extraordinarily favourable nature of this treatment is clearly illustrated in the words of a Kennecott representative: "The good thing about the agreement is that the Chileans are happy and Kennecott is obtaining a bigger piece of the cake without any great flow of money from the United States".<sup>1/</sup>

Under normal price conditions, such as the projections used during the negotiations (29 cents per pound), the agreement reached by Kennecott was already an emphatic success for its corporate strategy of controlled and profitable withdrawal from Chile. The sharp rise in the price of copper beginning in 1965 transformed this agreement into a spectacular business for Kennecott and a very costly arrangement for the Chilean State. This was so costly that, with the benefit of hindsight, and leaving aside the temporary structure of financial flows, it is possible to show that the country would have gained more in the period analysed with total nationalization and the investment plan financed with national capital.

The questions which arise in this respect are: Was it possible to predict this result? If so, what are the reasons which prevented the negotiators from doing so? The purpose of formulating and answering these questions is certainly not to determine the responsible parties. It is simply a question of learning from these experiences.

Obviously, it is absurd to propose that a rise in the price of copper as actually occurred was predictable. But is also obvious that, in the context of a market which has historically so volatile and fluctuating, as is the case of the international copper market, copper policies should always take into account taxes or other mechanisms which make it possible to increase the percentage of fiscal share in the surpluses generated in periods of price booms.

In addition, it is clear today and should have been so also at the time of the negotiations that Kennecott was, in those years in Chile, in a position of extreme weakness. Under these circumstances, it is very probable that this corporation would have accepted entering into the Joint Corporation with a much less favourable tax treatment than that which was actually given.

Finally, an adequate interpretation of the Kennecott strategy and of the transnationals in general would have shown the advisability of decreasing the degree of control of the foreign enterprise over the management of the Joint Corporation being formed.

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<sup>1/</sup> Cited in Business Week, 7 December 1968.

All these criticisms were strongly argued by the opponents of Chileanization. However, the negotiations did not internalize these criticisms. Probably this was partly the result of the polarization which occurred around the discussion of copper policies at the time. In part it would appear to have also been due to the entreaties of the proponents and negotiators of Chileanization and their oversimplified interpretation of the behaviour of the transnationals. It also appears to have been due to the fact that the Government had a premature feeling of success in regard to the "main beam" of the global strategy, as a result of the Kennecott offer. Finally, the deficiencies in the final agreements seem also to be partly the result of bad bargaining tactics. In particular, it would seem that the Government had prematurely tied its own hands by reaching a verbal agreement with the companies before the domestic debate had been raised in Chile on the strategy of Chileanization. Thus, although the negotiators had shared some of the criticisms of the opponents, the fact of having arrived at a previous agreement with the companies deprived them of a certain degree of freedom in the bargaining process. In addition, since the rules of the game had been changed, as a result of incorporating the criticisms, they would have lost credibility with Kennecott, EXIMBANK and probably with the United States Government.

Strictly speaking, all of the above basically refers to the case of Kennecott, since Anaconda, following its rather conservative strategy, resisted forming a joint corporation with the Chilean State until 1969. Despite this, it is true that Anaconda also obtained benefits from the propitious climate towards copper corporations in 1965-1968 and the price bonanza of the period. In effect, Anaconda received, in exchange for its own investment plan, a tax reduction from 62% to 52% on profits.

The investment plan consisted of an expansion of its installed capacity of about 200 000 tons of copper per year, at a total estimated cost of almost 200 million dollars. The financing of this investment came -unlike the case of Kennecott- mainly from the funds of the corporation itself (75%). The remaining 25% came from an EXIMBANK credit, endorsed by Anaconda and not by the Chilean Government.

Anaconda, like Kennecott, obtained spectacular gains in 1966-1968 as a result of the price increase and the reduction in taxes, this first element being the most important in the case of Anaconda. Unlike Kennecott, however, Anaconda was

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at this time committing considerable resources of its own. Even so, it was Anaconda which received the greater part of the growing animosity against the foreign enterprises, the result of the spectacular financial gains in these years. Both companies had to accept that, despite the 20-year inviolability of the agreements signed earlier, a surcharge had been imposed upon them which gradually eroded the profits from copper prices of more than 40 cents per pound.

Anaconda also had to yield to the pressure to transfer 51% of its holdings to the Chilean State. But Anaconda felt at this point that its days in Chile were numbered and thus asked to be nationalized and duly compensated. The Government acceded to this and finally agreed upon an immediate transfer of 51% of the book value, payable in six years, with the transfer of the remaining 49% to be carried out between 1973 and 1982 at market prices.

The big difference between the strategies of Anaconda and Kennecott and between the agreements reached may be fully observed in the very different position of the two companies after total nationalization in 1971. The relatively better footing on which Kennecott found itself after being nationalized, although a decade earlier its bargaining power was much less than that of Anaconda, is to some extent an illustration of the brilliant corporate strategy of Kennecott and the above-mentioned errors in the bargaining strategy of the Chilean Government.



Chapter 4

THE NATIONALIZATION OF LARGE-SCALE COPPER MINING

A. "NATIONAL" AND "FOREIGN"

In interpreting the circumstances surrounding the act of nationalization, it is especially necessary to bear in mind that what our analytical framework calls a bargaining position does not intend to reduce the problem to a simple dichotomy between "national" and "foreign". In a bargaining situation there are also internal factors operating within the host country for transnational investment, internal factors in the transnational corporation itself and, finally, factors relating to the international scene in which the negotiation (or conflict) takes place. In the particular case of the nationalization of Chilean copper, the way and conditions in which this process took place were also influenced by the conflicts of forces and perspectives which presented themselves within each one of the realities included in "national" and "foreign".

In the current stage of development of the world's economy, there is a large group of economic activities which, although physically located in a particular country, in practice belong to an economic sphere of action which is basically international. The economic process now goes beyond, on some levels, the idea of "country", and problem areas arise which are not completely covered by the concept of "nation-State" nor even less by that of "national interest".<sup>1/</sup> When, as happened with the enormous transnational corporations, the process of production and accumulation crosses geographic and political boundaries, the economic conflict inherent in this process does so also, as does the political problem of ensuring the conditions external to it. But this happens without the reality of the nation-State disappearing or the different interests which fall objectively within it.<sup>2/</sup> On the contrary, the new international dimension of the contemporary economy is in permanent contact and even in conflict with the previous reality, which constitutes what we call the nation. The "loyalties" which characterize the different actors are not, in this context, purely "nationalistic" and they even sometimes produce paradoxical

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<sup>1/</sup> Murray, Robin, "The Internationalization of Capital and the Nation-State", New Left Review, No. 67, 1971.

<sup>2/</sup> Sunkel, Osvaldo, "Transnational Capital and National Disintegration in Latin America", Social and Economic Studies, Vol. 22, No. 1, 1973.

combinations. This is, for example, the case of workers employed by foreign companies which, because of the relatively high wages received or other analogous benefits, occasionally identify more with the interests of the company rather than those of their own country. A similar situation may be seen in the case of some large transnational corporations nominally based in the industrialized countries but whose particular interests benefit much more, in determined economic situations, by policies of countries in which they are guests than by the close co-ordination of their actions with the policies of the governments of their respective industrialized countries.

Now in spite of these paradoxical situations, the most general case is that when actors enter into contact, at the international level, from nation-States which have very different economic development realities, the relations which are established tend to be unilateral and unequal: the more powerful State influences the weaker one; the economic agent coming from the former appropriates a considerable part of the economic surpluses of the latter; the economic agent from the developed country has powerful influences within the weaker State; the productive structure of the stronger one conditions the productive structure of the other; the metropolitan State is closely associated with the economic interests of the agent which seeks its protection, etc.

In summary, then, when we are studying a process such as that of the nationalization of large-scale copper mining in Chile, which involves an activity which was historically incorporated into the international sphere of the economy and which was controlled by large transnational consortia, the analysis cannot be limited to using such simple categories as "national interest" or "foreign interest", nor to comparing "Chile" with "the United States companies" or "imperialism". The real actors involved are others: the different forces and social groups which exercise influence in Chile on the actions of the State; the government officials; the copper workers; the transnational corporations which were the object of nationalization; the United States Government and the international legal and political institutional system.

## B. THE EVENTS OF NATIONALIZATION

### 1. Nationalization: a process and an act

The exploitation and marketing of Chilean copper has always been an excellent business, so it is not enough to refer to this reality to explain nationalization. If the only determining factor in the matter had been "national interest", understood as the aspiration to increase the wealth available within the Chilean society, the nationalization of copper would have taken place much earlier.

But this did not occur, not because there was no one who noticed the potential benefit of nationalizing, but because the joining of the interests and relative strengths of the actors involved always resulted in an unfavourable situation for such a measure. Using the same logic, we may affirm that when the nationalization of large-scale mining was finally decreed, it did not happen as a consequence of a temporary impulsiveness, nor was it the result of the brilliant inspiration of a few. It is in this sense that we speak of the nationalization of Chilean copper as truly being a process. The roots of the act of nationalization itself fed upon the entire long history of economic exploitation of the mineral and the relationships between the Chilean Government and the United States companies. In other words, the specific form assumed by nationalization was not out of line with the situations which preceded it (which have been studied in detail in previous chapters), although these situations at the time were unfavourable to the adoption of this important step.

### 2. Nationalization of copper: why?

On 16 July 1971 the Reform of the Political Constitution of the State was published in the Official Journal of the Republic of Chile, by which nationalization of large-scale copper mining was made official. In this way an important aspiration of wide sectors of Chilean society, whose struggle to achieve this objective had lasted several decades, was fulfilled. The broad support which the process of nationalization had within the national community was evident not only because nationalization of large-scale mining was an explicit platform of two of the three candidates in the 1970 presidential election (who together obtained more than two-thirds of the popular vote), but also because the respective law was approved unanimously by the National Parliament.

/Often the

Often the speech of political actors is a display of self-interest. But in the quotation which is transcribed below, this is not the case. On the contrary, in our opinion, it is a faithful testimony of the social progress which objectively created the conditions for total nationalization of Chilean copper. The quotation comes from the Executive Message to the Full Congress, the procedure which began the discussion of the Constitutional Reform modifying article No. 10 of the Political Constitution of the State, by which nationalization was carried out. For its historical value and for its highly instructive content, we justify quoting it here extensively. In its introductory part, this initial Message says: "It is not only, then, a question of carrying out a Government programme offered to the people during the last presidential election. Nor is it a question of taking an orthodox path of determined political or socioeconomic principles. Even less is it a question of the result of an improvisation... In truth, for many years it has been only the popular political parties who have studied the need to adapt a harmonious set of political, economic and social measures to open the way for building a new type of society..., but the ideas for which they have been fighting gradually opened the way both because of the constant clarification of these principles and because these facts of national life were inexorably pointing out the justice of their proposals. The day has now come when they are shared by a large majority of Chileans".<sup>1/</sup>

### 3. Preparing the way for nationalization

#### (a) The specific case of Chile

It is not a simple task to nationalize an economic activity of the size and importance of large-scale copper mining, with a very long history of negotiations behind it, and of strategic importance for the different parties involved. In other words, the specific terms of the nationalizing act were part of a much more complex problem than the mere legal formality of how to decree a nationalization.

What we must never lose sight of in interpreting the events of the nationalization of Chilean copper, both referring to the measure itself and referring to its sequel, is that it was carried out in the context of a truly revolutionary social process and that, even more, it was conceived as a cornerstone of this process.

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<sup>1/</sup> Novoa, Eduardo, La batalla por el cobre, pp. 403-404, Santiago, Quimantú, 1972.

This implied that some of the reactions to this step reported in the different sectors were determined more by their attitude to the process of change as such than by the concrete fact of nationalization itself. We will have the opportunity to verify this in the following section, when we examine the behaviour of those who in practice were "opponents of nationalization". But for now we must take this into account, since the specific form which the act of nationalization took -the Reform of the Political Constitution of the State and its contents- implicitly reflected the situation mentioned. It will not go unnoticed that a conclusion can also be drawn from the above which is important for the comparative analysis: some of the distinctive features of the nationalization of Chilean copper can be explained only in relation to the peculiar socio-political and historical, national and international context in which they occurred. Certainly, this did not imply that the profound nature of the "process" and the "bargaining position" were, in the case of Chile, different from that which generally characterizes the relationship between transnational corporations and underdeveloped countries. On the contrary, precisely because the nature of this relationship is the same in almost all cases, concepts such as the New International Economic Order, the center-periphery theoretical scheme and efforts at comparative analysis such as this report have their justification. In any case, there have always been particular features in a given situation which cannot be generalized for all cases.

(b) Why a Constitutional Reform?

In the first place, we must explain why a Constitutional Reform was chosen as a way to carry out nationalization. At the same time, this will allow us to clarify the actual content of the measure.

The concept of nationalization has appeared relatively recently in the field of modern law.<sup>1/</sup> Until recently, the norm was that Constitutions would only deal with the problem of "expropriation", which in the last instance recognizes the primacy of the general interest, nominally represented by the State, over the particular interest. The Chilean Constitution was no exception in this sense. Instead, when it explicitly establishes the priority of the collective interest over the particular, this means that the latter can actually even be sacrificed for the benefit of the former. In concrete terms, this means the possibility of not paying

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<sup>1/</sup> Ibid., p. 152.

the affected party an equivalent value to that of the nationalized property, a possibility which necessarily had to be taken into account in the case of figures of the size involved in large-scale copper mining.

Another reason given for carrying out nationalization by a Constitutional Reform was that, as seen in the previous chapter, the previous Government had made agreements with the United States copper companies on Chileanization and nationalization by pact, which were, in practice, constitutive contracts of joint corporations with the Chilean State, with legal hierarchy. Since these contract-laws, around which a consensus had been forming that they were damaging to the national interest, could not legally be modified without the agreement of the parties, it was necessary to try to repeal them with a legal norm higher in the hierarchy than these contract-laws -which could be none other than the Constitutional norm.

One of the main concepts of nationalization to be implemented was the deduction of the so-called "excessive profits" obtained by United States companies for many years by exploiting copper (a point to which we will return further on). But such a deduction was also impossible in accordance with the laws in force, and this was an additional reason for having to modify the Constitution in order to allow it.

For the Chief Executive to encourage a Constitutional Reform there was still one final consideration, which was a clear indication of the domestic political connotations surrounding this governmental measure. The then President of the Defence Council of the State wrote: "An act as important as the nationalization of copper cannot be exposed to the interminable legal discussions before the Ordinary Tribunals of Justice by high-level judges; in addition, a legal subject as new as nationalization, so different from the ideas inculcated in the majority of Chilean magistrates, must be analysed by a Special Tribunal, composed of persons capable of understanding and, especially, capturing its specific purpose of protecting the collective interests, even when these are opposed to private interests.

"To establish this Special Tribunal and to exclude from its acts the intervention of the Supreme Court, principal supporter of extremely individualistic legal acts and not recognizing the prevalence of the social interest over the private, it was indispensable to have a Constitutional amendment."<sup>1/</sup>

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<sup>1/</sup> Ibid., p. 156.

There were also other tactical reasons for endorsing the process of a Constitutional Reform. With respect to incorporating the institution of nationalization, for the first time in Chilean legislation, it was desirable that it should be included in the Political Constitution, to emphasize the close connexion of the measure about to be adopted with the national sovereignty and feelings, and to grant it a legal hierarchy which would give it maximum prestige in international public opinion and institutions.

The final consideration which led to choosing the path of a Constitutional Reform was that there existed a provision in the Chilean Constitution which established that when, in the area of constitutional reforms, a serious disagreement arose between the Executive Branch and the Congress, the former could resort to a popular plebiscite to settle this conflict. In the case of copper nationalization, there is no doubt that, if the Executive's attempts in Congress had been seriously blocked, the enormous majority of the people would have supported the Government in its proposals.

(c) Bases of the nationalizing act (and of the deduction of "excessive profits")

As we know, the Reform of the Political Constitution of the State of Chile was finally promulgated by the favourable vote of a unanimous Congress, in July 1971. Although the original Executive bill underwent some modifications, it remained substantially unchanged. Let us examine, therefore, the fundamental provisions of the approved reform.

1. It established that "the State had absolute, exclusive, inalienable and imprescriptible control over all the mines", which could only be delivered in concession for their exploitation by private bodies. This provision prevents anyone from claiming compensation for the value of the mineral deposit, which will never be the object of private ownership.

2. It declared that "in the national interest and in the exercise of the sovereign and inalienable right of the State freely to dispose of its wealth and natural resources" the assets of the corporations which constitute the large-scale copper mining industry and the Andina Mining Company (a medium-sized corporation, but with plans to grow) were being nationalized and incorporated into the full and exclusive ownership of the nation. It is interesting to note that this provision, which contains the profound spirit of nationalization, implicitly refers to the United Nations General Assembly resolution which reaffirmed the permanent sovereignty

of States over natural resources located on their territory. We will see later, when the legal battles occurred with the affected United States companies, the Chilean Government always brought up in its own defence this resolution which had so much significance for international law.

3. With great daring and novelty, the Constitutional Reform pointed out that "the time of compensation ... shall be determined on the basis of the original cost of these assets, minus amortization, depreciation, penalties and devaluations for obsolescence. Also deducted from the amount of compensation shall be all or part of the excessive profits which the nationalized corporations have obtained". It was established that the determination of this last quantity would be an exclusive power of the President of the Republic, for whom a decisive element of judgement would be the normal profitability of the nationalized enterprises in the whole of their international operations.

It is worth going somewhat further into this aspects of nationalization, which is perhaps the one which most drew the attention of national and international public opinion.

The Constitutional Reform decreed that the compensation to be paid would have a maximum ceiling of the "book value" of the nationalized assets, and that from this latter figure would be deducted two different quantities corresponding to two also different concepts and regulated by equally different machinery. The size of the first deduction to take place, in respect of the book value, would be determined by the Controller General of the Republic, who would take into account for this purpose the amortizations, depreciations, etc., mentioned above. This deduction could be appealed by the companies before the Special Tribunal mentioned above. The second possible deduction, on the other hand, corresponding to the "excessive profit" was fixed by the President of the Republic and was unappealable. These specifications are important for two reasons: (a) to the extent that the principle of private property was safeguarded in some way, the political sectors which represented business interests were willing to support (although with some reticence) the measure in the Chilean Congress; (b) this is how the United States companies and the United States Government itself justified the virulence of their reaction to the debatable fact that Chile had denied "the right to a just compensation" to Anaconda and Kennecott.

/What actually



What actually occurred was the following. As a first step, the Controller General of the Republic, after making the deductions according to the above-mentioned concepts, established that the different nationalized companies were due a compensation of about 220 million dollars for Chuquicamata, 62 million dollars for El Salvador and 99 million dollars for El Teniente. The President of the Republic, for his part, making full use of his constitutional powers and after verifying that both Anaconda and Kennecott in their Chilean operations had a profitability rate of almost 6 times that of their international operations, fixed the corresponding deduction for excessive profits at sums which were in each case (except in relation to the Andina mining company) greater than the compensations to which the companies had a right.<sup>1/</sup> In this way, neither Anaconda nor Kennecott ended up with favourable credit balances, which in no case meant a denial of their initial right to a just compensation.

4. The Constitutional Reform gave the State the necessary means to prevent the nationalized companies from undertaking questionable operations from the national point of view while they were in the legal process of nationalization. Besides pointing out that any damage caused by intentionally wrong exploitation of the deposit or installations during this period would be charged against any possible compensations due to the companies, the State reserved the right to tax all the actions, documents and accounting of the companies during the period of transition. It was also stated that the refusal to supply any technical information necessary for the normal future operation of the nationalized installations would be sufficient cause to suspend the compensation payments.

#### C. SOME ACHIEVEMENTS AND DIFFICULTIES IN THE PERIOD IMMEDIATELY FOLLOWING NATIONALIZATION

##### 1. The most visible result

To what point is it relevant to wonder whether or not the nationalization of Chilean copper was a success? What the act of nationalization changed was not, nor

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<sup>1/</sup> As explained by the Chilean Chancellery at that time, the President of the Republic, based on the exclusive powers granted to him by the Constitutional Reform, decided to consider as "excessive profitability" anything above 12% annually after 1975. Finally, as a result, the President of the Republic proclaimed that the compensations initially granted to the nationalized enterprises would be reduced by 300 million dollars in the case of Chuquicamata, 64 million dollars in that of El Salvador and 410 million dollars in that of El Teniente.

could it be, at least immediately, the type of problems involved in the Chilean copper situation, but its outlook and its relative importance.<sup>1/</sup> No one could claim that, with the legal process of transferring the ownership of the corporations' assets, the problems relative to exploitation, processing and marketing of copper would end, nor that the Chilean economy would immediately overcome the structural bottlenecks in which it was trapped.

In what terms, then, can we measure the success or failure of a measure as significant as the nationalization of the principal basic wealth of a country? Today, several years after nationalization, the large-scale copper mining industry is operating normally, with efficiency in the different stages of the process of production and with a demonstrated local capacity to deal with all the tasks associated with it, including marketing of the final products on the world market. While the average production of large-scale copper mining in Chile during the five years previous to nationalization (1966-1970) was almost 530 thousand metric tons, the corresponding figure for the five following years (1972-1976) was somewhat more than 700 thousand metric tons and still higher than any annual production figure for the period 1927-1970. The trend has remained unchanged since then. Another very significant comparison is that of the ratio of the total value of production of copper (costs plus surpluses) retained by Chile before nationalization and after. In effect, in the period 1966-1970, the proportion of the total value of the annual production of copper which was effectively returned to Chile was on the average 70%. The available information indicates that after nationalization, this proportion reached approximately 90% (the other 10% corresponds to imported inputs and services). In other words in millions of 1979 dollars, the growth in the proportion of the returned value which nationalization brought with it meant that the country, despite a sharp decrease in the real price of copper, received between 1972 and 1976 an average amount higher than 325 million dollars annually which, if nationalization had not taken place in 1971, would have been appropriated by foreign interests. These 325 million dollars annually are, of course, in addition to the value traditionally returned to the country before nationalization.

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<sup>1/</sup> Tironi, Ernesto, "Planificación económica en las empresas del cobre nacionalizadas", Documento CEPLAN, No. 24, 1973.

## 2. A domestic difficulty and a foreign battle

Logically, neither the circumstances surrounding nationalization nor their most permanent effects are only economic ones. We must remember that the total nationalization of the copper corporations was conceived as a measure forming part of the Government plan designed to produce radical changes in the Chilean social process. It might be thought that in the context of a process which in any case would be complicated, it was daring to open such a sensitive flank as that created by profoundly affecting the powerful interests connected with Chilean copper; but on the other hand, it could be held equally as well that without a profound will for change it was not very probable that any government would have dared to take the risky plunge into nationalization. The fact is, in any case, that the prevailing economic situation in Chile and in the world during the Government of the Unidad Popular is in a certain sense inseparable from the nationalization of Chilean copper. Undoubtedly, on this level, the two aspects which stand out most clearly in the later development of the act of nationalization are, firstly, the problem of the productivity of labour in the deposits of the large-scale mining industry and, secondly, the confrontation and later agreement between the Chilean State and United States interests (the companies and the Government of the United States).

### (a) Labour problems

With regard to the first of these aspects, the available information (see table 2, Statistical Annex) shows that in the years 1971 and 1972 the unit costs of production of copper were among the highest recorded in supposedly normal years of operation. Unfortunately, there are no reliable data which would make it possible to have a definite idea of the structure of costs (and not only the total unit cost) of the production of copper during the Government of the time. Determining this is always a difficult objective to achieve, partly because this information is a business secret, and partly because the problem becomes exceedingly complicated when we begin to consider the variations in the rates of change of the determining factors in these costs. It is known, however, that two distinct phenomena had a negative impact on the productivity of the deposits: a serious problem of labour absenteeism and the occurrence of a large number of labour conflicts which frequently meant the partial paralyzation of work and which, on one occasion, led to a serious national political crisis.

/At first

At first glance, this situation would appear incongruent, because the majority of the copper miners were supporters of the Government coalition. It must be pointed out, to begin with, that in this area the domestic political reality of the country played a preponderant role. Thus, no one in Chile denies that the workers in the large-scale copper mining industry have traditionally been a privileged sector, with exemptions and advantages which placed them materially far above the standards of living of the rest of Chilean workers. Such a situation, moreover, is nothing new in relation to the typical effects of the presence of transnational corporations on the economies of underdeveloped countries. The analysis of experiences in various relatively less developed countries indicates that, as a result of the fact that the cost of labour in these countries is significantly lower than in the industrialized centres, the transnational corporations are in a position to pay higher wages than the current average in the host countries, without thereby damaging their international competitiveness. By this means they create, frequently intentionally, an "élite" of workers potentially allied with the interests of the transnational company, against the "nationalist" pressures which sometimes emanate from the State and from the host community. Paradoxically, the organizations of workers working under these conditions became additionally strengthened by the support they generally received, in their struggles to assert their claims, from those same "nationalistic" groups which saw foreign capital as their main enemy.

It was precisely through these mechanisms that the trade unions of the copper workers in Chile acquired an extraordinary capacity and bargaining strength. In effect, through the years these organizations had demonstrated in Chile that they knew how to use their power and that they were, in fact, influential in the progress of the economy and policies of the nation. On the other hand, it was objectively clear that the interests of the workers in the sector were in a certain sense opposed to those represented by the Chilean State, since the latter was interested in increasing to the maximum the proportion of economic surplus which could be transferred by it, as intermediary, from the enclave to the national economy. This explains, also, why practically all the recent governments of Chile, independently of their political orientation, have had to confront serious labour conflicts in the large-scale copper mining industry at some time.

/Thus, knowing

Thus, knowing this situation, and foreseeing the intense political battle which would precede the process of change, all the sectors sought formulas to gain the sympathy of the copper workers.° It was thus that, although everyone knew about the privileges gained by this sector during the United States administration of the copper deposits, it was constitutionally guaranteed that "in any case, the economic, social, trade union or any other type of benefits presently enjoyed by workers in the large-scale copper mining industry may be annulled, decreased or suspended".<sup>1/</sup>

Against this background of guarantees valid for all copper workers, the fact should be added that among the copper workers themselves there were three very differentiated states: the "workers", the "employees" and the "supervisors". The factor distinguishing them was basically the degree of manual labour and skill of the work carried out and, in accordance with this, the scale of wages and salaries. The "supervisors", in particular, received their salary in United States dollars until nationalization, which in an economy such as the Chilean one, which traditionally had overvalued its money, was a considerable privilege. The three states, in any case, had in common that during the years in which the enterprises were the property of or were controlled by Anaconda and Kennecott, they developed a sharp "demand consciousness", along with which each one constructed its own powerful trade union.

Once nationalization had occurred, the conflict of economic interests between copper workers and the enterprises ceased to be a conflict with foreign capital (the wages and salaries were, after all, a way of returning part of the value of production of copper to the Chilean economy) and became a confrontation with the Chilean State. In this new framework, and since one of the first measures of the Government after nationalization was to eliminate dollar payments, it is not very strange that the supervisors, who formally were on close terms with the United States companies, chose head-on confrontation with the new administration. At a given moment, they even managed to paralyze the Chuquibambilla copper mine by supporting the demand that they be permitted to exercise a veto over the designation by the Government of the new executives of the nationalized enterprises. In this way they received the total support of the political sectors which opposed the process of

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<sup>1/</sup> Ibid., p. 433.

change in general, since the latter knew that preventing the proper functioning of the nationalized large-scale mining industry was vital in order to block the way for this process.<sup>1/</sup>

As for the copper miners, they demonstrated that their previous political affinities were not accompanied by the corresponding "political conscience". Thus, while all over Chile nationalization of copper was celebrated as a historic event, in the large copper mines the workers scarcely changed their daily routines. A survey taken in those years indicated that "nationalization was considered by the workers as a means to substantially increase their standard of living and not as a basic stimulus for national development".<sup>2/</sup>

Finally, it is still paradoxical that the labour problems in large-scale mining (and their impact on the decrease in productivity) were a constant under the same Government which carried out nationalization with the overwhelming support of national public opinion. From the above we could perhaps extract some important lessons. The most obvious of these is that the new act of nationalization could not abruptly modify the nature of the problems historically associated with the operation of the economic activity affected by this measure. The "national conscience", and the conscience of the copper workers before nationalization, will undoubtedly be a factor, without major immediate alterations, after nationalization.<sup>3/</sup>

Now productivity and discipline in work do not depend only on the conscience of the workers. A factor which undoubtedly played an important role in this, despite that the highest authorities of the Government of that time put special emphasis on attempting to avoid it, was the fact that the contingent political struggle was forcibly transferred inside the mining deposits. This provoked a serious deterioration in the human environment of the copper activity, giving rise to excesses such as political sectarianism, "prorating" of technical and administrative charges and a consequent drop in the quality of certain leadership groups in minerals, including physical violence between opposing fractions.

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<sup>1/</sup> El Mercurio, p. 1, Santiago, 13 August 1971.

<sup>2/</sup> Petras, James, "Nacionalización, cambio socioeconómico y participación popular bajo el Gobierno de la Unidad Popular en Chile", Estudios Andinos, No. 9, 1973.

<sup>3/</sup> Wilhelm, Ricardo, "Realidad de Chuquicamata", El Mercurio, p. 2, 19 October 1971.

It is thought, moreover, that another reason for what happened was the low degree of participation by the workers in the management of the corporations, a factor which, if it had been changed, would have been consistent with the postulates of the Government of that time. But it is also true that the problem did not end here, as shown by the experience under the following Government, in the present period, in which the participation of workers is practically null and the unit costs of operations of the enterprises have been reduced. According to an official publication 1/ the increase in productivity has partly been due to the substantial increase in total production -which has made the fixed costs relatively less burdensome- and has also influenced the closing of the Exótica mine, whose production was very difficult to process. But it is also due to a large extent to the restrictive wage policy and labour relations which the Government has forcibly implemented.

(b). Nationalization and United States interests

The large-scale copper mining industry in Chile has always been an excellent business. At the same time, as an economic activity, it has a strategic importance with respect to the Chilean economy and the Western economy in general, particularly that of the United States.2/

It may be said that these few phrases contain the key to explaining the behaviour of all the parties involved in the process of nationalization, both before and after the nationalizing act. In other words, given that the large-scale economic and political projection for the exploitation and marketing of Chilean copper is the constant in this problem for each one of the parties, the modification of the behaviour of one of these parties (i.e., the nationalizing act of the Chilean Government) required the other to react in accordance with the importance of whatever was at stake. It is not, then, nationalization in the abstract which provoked a whole set of reactions, but the concrete and specific fact of nationalization of a basic strategic resource.

This reflection is important because it allows us to understand two different phenomena which occupied an important place in the months following nationalization: firstly, the close association which became manifest between those who embodied the

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1/ CRU, Copper Studies, 7 July 1978.

2/ Brown, Lester, "The Global Politics of Resource Scarcity", Overseas Development Council, Development Paper, No. 17, 1974.

economic and political interests of the United States party and the Chilean party, respectively; secondly, that the legal battle between the Chilean State and the United States companies had a background which was far from being legal in nature.

The point of departure in this analysis is, of course, that in July 1971 the Chilean State took full possession of the large-scale copper mining corporations, which up to that time had been subject to a system of joint ownership with the United States companies. Moreover, by presidential option, it was decided to deduct from the massive value of the compensations awarded to the companies an even greater amount corresponding to the "excessive profits" obtained by the companies in their last 15 years of operation. It followed from this last measure that the Chilean State was no longer obliged to make any payment to the United States companies, except in the case of the Cerro Pasco Corporation because of its participation in the Andina Mining Company.

In order to take these decisions, the Chilean State sought from the beginning to adapt to the "generally accepted norms of international law" (which, of course, are not a homogeneous body nor are they clearly defined). The norm most appealed to was the above-mentioned United Nations General Assembly resolution 1803 which establishes the right of peoples and nations to permanent sovereignty over their wealth and natural resources. In one part, this resolution points out that "nationalization, expropriation or requisitioning shall be based on grounds or reasons of public utility, security or the national interest which are recognized as overriding purely individual or private interests, both domestic and foreign. In such cases the owner shall be paid appropriate compensation, in accordance with the rules in force in the State taking such measures in the exercise of its sovereignty and in accordance with international law. In any case where the question of compensation gives rise to a controversy, the national jurisdiction of the State taking such measures shall be exhausted".<sup>1/</sup> This was the juridical-legal area of confrontation provoked by nationalization which developed in Chile and abroad.

It is impossible to spend time in this study carefully reviewing the allegation made by each party against the different tribunals under whose jurisdiction this problem was aired.<sup>2/</sup> But the discussion can be substantially reduced -following

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<sup>1/</sup> See Novoa, Eduardo, *op. cit.*

<sup>2/</sup> See Orrego, Francisco, "Some International Law Problems Posed by the Nationalization of the Copper Industry by Chile", in Orrego, F., ed., *Chile: The Balanced View*, Santiago, Universidad de Chile, 1975.



the order in which the postulates of the cited United Nations resolution were written- to the following points.

The Chilean State maintained that:

(a) The nationalization of large-scale copper mining was clearly based on motives of national interest.

(b) The priority of the national interest over private interest meant that the State was not necessarily obliged to pay a prompt compensation which was exactly equivalent to the value of the nationalized assets, but that it might act with greater flexibility in this area. This is the difference between "nationalization" and "expropriation".

(c) The Chilean State recognized the right of the former owner to receive a compensation and thus was prepared to pay the amount of the value of the nationalized assets as determined on the basis of their book value.

(d) But by the unanimous approval by the National Congress of the Constitutional Reform which decreed the nationalization of copper, it became a "rule in force" in the State which adopted the measure -Chile- that the President was empowered to deduct from the amount of the compensations a quantity equivalent to the "excessive profits" obtained by the former owner in the operation of the copper corporations.

(e) The justice of this rule lay in the fact that on the various occasions in which, between 1955 and 1970, it contracted with the United States companies the terms in which they could exploit Chilean copper deposits, the Chilean State could not foresee that the resulting benefits for the other party -as a result of the rising price of copper- would be disproportionate and far above that contemplated. In conformity with law, a signed contract in a context of this type had no legal value and could legitimately be modified.

(f) The constitutional hierarchy of the nationalizing act clearly indicated that it was the sovereign will of the people and the Government of Chile which explained the decision to nationalize. All the States and foreign interest groups had the obligation to respect the sovereignty of another State in its internal affairs.

(g) The procedure followed in the nationalization of the large-scale copper mining industry was scrupulously adapted to the generally accepted norms of international law and, specifically, to the provisions of United Nations General Assembly resolution 1803 of 14 December 1962.

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(h) The national jurisdiction of the Chilean State contained all the norms necessary to resolve the litigation resulting from the question of compensation, since no other State nor tribunal outside the Chilean jurisdiction had any reason to intervene in any aspect of copper nationalization.

The United States companies, for their part, in suits filed in Italy, France, Germany, Holland and Sweden, alleged the following:<sup>1/</sup>

(a) The priority of the national interest over private interest only means that it is legitimate for the State to decide, as a function of the former, to nationalize a determined activity or asset. But in no case was this a reason to weaken the right of the former owner to receive a prompt and equitable compensation for the value of the nationalized assets.

(b) The way in which the Chilean State calculated the value of the nationalized assets underestimated their real value, and thus damaged the right of the companies to receive a just and equivalent compensation.

(c) Most of the provisions found in the Constitutional Reform which nationalized the large-scale copper mining companies had a retroactive character, which was contrary to law and justice. This was particularly clear in relation to the idea of "excessive profits".

(d) The generally accepted norms of international law were not limited only to General Assembly resolution 1803, as the resolution itself implicitly stated. International jurisprudence, for its part, was incompatible with the terms of the nationalization of large-scale copper mining on the part of the Chilean State.

(e) Since all the possible paths had been exhausted in the Chilean legal system in order to resolve, in accordance with international law, the litigation originating in the question of compensation, the companies obtained the right to recourse to the protection of other States and to submit the litigation to the jurisdiction of tribunals other than Chilean ones.

In practice, however, the legal battle between the Chilean State and the United States companies had little direct effect on the progress of the nationalized companies. Although at the beginning Kennecott achieved some success by seizing the sales of Chilean copper in Europe coming from the El Teniente mine (there were only a few boats whose shipments were embargoed, but the event provoked temporary

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<sup>1/</sup> Kennecott Copper Corporation, Confiscation of El Teniente, Supplement (1971), Supplement No. 2 (1972), Supplement No. 3 (1972), Supplement No. 4 (1973).

uncertainty in the buyers and in Chile itself) and for a short time the deposits of CODELCO and another large Chilean Government enterprise in the State of New York were frozen, it is true that the marketing of Chilean copper was carried out without major difficulties with the traditional CODELCO customers. But this legal battle was necessary in order to justify the other side of the same coin: the intervention of the United States Government in the litigation.

We must immediately leave aside the simplistic temptation to identify automatically the private interest of any United States transnational corporation with the interests of the United States Government itself.<sup>1/</sup> The distinction between the two derives from one of the principal postulates of the theory of the State, which is that the latter's primary function is a political one, whose specific purpose is to guarantee the long-range stability of conditions outside the economic process. Naturally, this function is not contradictory to the private interests of the private agents who control the economic power -the transnational corporations in this case- and hence the security and stability of the economic process are inseparable from the private interests which dominate this process. However, as we saw at the beginning of this chapter, the case is not unthinkable that the economic interest of some private individual, in particular, might be in contradiction with the long-range political interest which the State is protecting. The case of improper payments made by United States firms abroad and the legal sentence they have received in their own country is a good example of what we are saying. We do not claim, therefore, to make the erroneous analytical simplification referred to.

However, looking at the events which followed nationalization, we discover that, in effect, the United States Government unconditionally came to the defence of the affected companies. In October 1971, the United States Secretary of State, William Rogers, declared the following: "The Government of the United States is deeply disappointed and disturbed by this serious break with the accepted patterns of international law. Under the established principles of international law, expropriation should be accompanied by a reasonable provision for the payment of just compensation. The United States had notified the Government of Chile of its hope that a solution could be found on a reasonable and pragmatic basis consistent with international law..." "... the unprecedented retroactive application of the

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<sup>1/</sup> Petras, James, "Estados Unidos y el Nuevo Equilibrio en América Latina", Estudios Internacionales, Año 2, No. 4 (1969).

concept of excessive profits ... is particularly alarming..." "The United States hopes that the Government of Chile, in accordance with its obligations under international law, will carefully consider this problem".1/

Even before, just after the promulgation of the Constitutional Reform, the State Department had given instructions to Eximbank to withhold the concession of a loan to Chile, requested for the purpose of buying jet planes for the national airline, "until the Government of that country clarifies its economic policy in relation to foreign investments".2/ Finally, the investigations of the United States Senate revealed that the then President Richard Nixon and his advisers, under the direct influence of some United States companies whose operations in Chile had been nationalized, decided behind closed doors that their policy towards Chile would be to create difficulties for the economy of this country, for the purpose of neutralizing the danger which the events developing in it entailed for the more permanent interests of the United States.

What were these interests? Not precisely the exact amount of compensation (which was in the interest of Anaconda and Kennecott), but basically safeguarding the principle of compensation in the case of nationalization. In this principle lies the long-term interest of the industrialized countries, because it is an important guarantee of security and stability of the international economic system, within which the transnationals are a predominant element. The Government of the United States could not allow the establishment of a "doctrine" of nationalization without compensation of any United States investment in any American or world country.

Undoubtedly the United States Government's attitude was also influenced by its general position with respect to the Government of Chile at that time, considering it a danger for its zone of influence in Latin America. We might wonder what difference a serious attempt to find a pragmatic solution to the problem of compensation would have made. But since the United States Government believed it saw in the case of Chile a serious threat for its hemispheric strategy, perhaps this difference would not have been very great.

The chapter on nationalization concluded with the agreement, reached by the new Government of Chile in May 1974, of compensation for Anaconda: 65 million dollars, as a first cash payment and 188 million dollars in promissory notes. In November of this same year, Kennecott announced that the Chilean Government had agreed to pay it a compensation of 54 million dollars, payable in 19 semi-annual payments.

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1/ El Mercurio, p. 1, 13 August 1971.

2/ Ibid.

## Chapter 5

### COPPER POLICIES IN THE "OPENNESS" ECONOMIC MODEL SINCE 1973

#### Introduction

The coming to power of the new Government of Chile in 1973 <sup>1/</sup> marked a new milestone in copper policies, meaning a structural reversion from the nationalizing trend of these policies, although with fluctuations, since the 1930s. This reversion has not yet, however, affected the nationalized copper sector.

In effect, while on the one hand a policy of broad possibilities for foreign investment was proclaimed, on the other governmental control was maintained over the five largest copper mines in the country.

It is beyond the reach of this work to enter into an analysis of this contradiction, its causes and its prospects of resolution. What is clear, in any case, is that its existence requires us to look at the period since 1973 from a dual perspective: on the one hand, what has been the governmental management of copper mining in Chile in this same period and, on the other, what are the policies towards foreign investment since 1973, the character of the relationship between the State and transnational corporations, the visible results of policies and the foreseeable results of the same.

The first perspective is undoubtedly interesting and its analysis should make it possible to learn useful lessons for the design of policies in the future, in Chile and in other countries. Three reasons, however, explain why this is not the central perspective of our analysis: firstly, this work is basically oriented towards the study of the relationship with TNCs and the policies of how they are treated, more than to the analysis of the management of nationalized mining sectors and companies; secondly, there are serious gaps in the information needed to make a deep analysis in this area; thirdly, some of the most important aspects of this problem in the period 1973 onwards are the same as in the previous period 1970-1973, which was analysed carefully in chapter 4 of this work. Despite this, in the following we will attempt to provide some elements for additional judgement on the management of the nationalized copper sector in this last period of copper policies in Chile.

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<sup>1/</sup> Of General A. Pinochet Ugarte.

In the development of the analysis of copper policies and foreign investment after 1973 in this chapter, we will use the same methodological scheme used in the previous chapters. This means situating these policies in the international and national economic and political context, and evaluating the results of these in terms of their benefits and costs for the country. Although with the limitations implied in evaluating a period and policy still in progress, we will try to show that the relationship between the State and TNCs in Chile after 1973 must be understood in the context of certain basic changes at the national political and economic level, which in turn are not independent of the also profound changes operating at the international level.

#### A. WORLD ECONOMIC AND POLITICAL CONTEXT

Unquestionably, the capitalist system as a whole went through a serious crisis in the 1970s. Without entering into a discussion of whether the oil crisis was the basic cause, a mere catalyst or, even more, an effect of the global crisis of the system, the concrete fact is that after 1970 the central countries of the system went through more difficult economic times than they had since the 1930s.

The interpretation of the crisis and its causes are many and varied; one of the most important being, on the economic policy level, that which locates the heart of the problem in the intervention by governments in the economic processes in national and international areas. Economic neo-liberalism recovered its forces by defending and gaining ground in respect of the elimination of barriers to international trade, the application of fiscal and monetary remedial measures, the reduction in the State's role as a benefactor, the decrease in governmental intervention in the productive processes, etc. In summary, this was a plea to reinstate the conditions for an unrestricted and dynamic process of accumulation on a world scale. This economic neo-liberalism saw in the nation-State, and in particular in nationalistic approaches, an obstacle to the process of accumulation which was increasingly controlled by large transnational economic units.

In Latin American countries, the projection of the global crisis of the system was superimposed on the economic and political crises of these countries themselves, associated, among other things, with the depletion of import-substitutive industrialization. Two large paradigms arise from the heart of the particular crisis of Latin American nations; the paradigm of regional integration and the

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paradigm of openness. While one group of countries seeks the solution to its problems by broadening regional markets, fixing common tariffs, according common treatment towards foreign investment, joint industrial planning, etc., others see in openness and in liberalization of the economy the formula to overcome economic stagnation. The clearest exponents of the integrationist movement are the member countries of the Andean Pact, while the most representative of the openness policy are the countries of the Southern Cone. 0

Until 1973, Chile was one of the most active promoters of integration, but after that year it changed into one of the most extreme examples of the liberal openness strategy. What is important, taking into consideration what was said previously, is that what occurred in Chile after 1973 has a direct relationship with the crisis in the capitalist system as a whole and the changes in the world economy.

## B. CHILE'S DOMESTIC SITUATION AND RELATED FACTORS

### 1. General aspects

The structural change experienced by Chilean society in the economic and political fields after 1973 is partly a reflection of the above-mentioned processes at the international level and in large part a reflection of the specific processes which took place at the national level.

The specific factors of the Chilean situation are what determined that these structural changes acquired an extraordinary profound and accelerated nature. In brief, it is precisely the stage of economic and political socialization which Chile had reached that determined the depth of the actual structural change. This does not deny, of course, the role played by the political and economic crisis of the period 1971-1973 in the creation of the new model.

In the first place, the new economic model considers governmental intervention and economic planning to be an obstacle to the process of accumulation, and thus gives the market and private capital the role of allocating resources and activating the process of accumulation respectively. This has involved a heavy privatization of what up until 1973 was the powerful area of governmental ownership, along with an almost total elimination of governmental controls over the economic activity of the country.

In the second place, the economic model includes a total liberalization of the external commercial and financial flows. On the one hand, its proponents saw

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in the principle of comparative advantage the fundamental norm -and basically the only norm- which should determine the productive specialization of the national economy, and the trade flows which derive from this specialization. On the other hand, the model assigned crucial importance in economic growth to the flow of external capital -financial and direct investment- and, to the extent that the concept of economic dependence does not appear at all in its conceptual framework, neither limits<sup>1/</sup> nor special conditions are set for this flow of capital.

## 2. Policy dealing with foreign investment in the copper sector

The present policy for the non-governmental copper sector could be interpreted as a direct result of the application of three operational principles of the economic model: the principle of sectoral non-discrimination, the principle of non-discrimination between foreign and domestic investors and the supposed intrinsic inefficiency of governmental enterprises.

The principle of sectoral non-discrimination means that there are no special policies for the copper sector, which could be seen as a negation of the principle of comparative advantages itself.<sup>1/</sup> The principle of non-discrimination against foreign investors is the basic reason why the Statute on Foreign Investment currently in force in Chile is extremely favourable to foreign investment. Finally, the argument that the State is intrinsically inefficient eliminates the possibility that the latter might deal with the exploitation of new deposits of copper in Chile.

In summary, in the present economic model the mining sector, with the exception of the mines nationalized in 1971, is seen as a natural receptor of direct foreign investment. The treatment granted to this foreign investment does not differ from the treatment granted to other sectors (for example manufacturers) and is thus basically defined by the Statute on Foreign Investment.<sup>2/</sup>

For the sake of the principle of non-discrimination, the Statute offers foreign investors the same tax treatment it gives to national firms, currently represented by a total tax of about 48.5% of accountable profits. Even further, the Statute

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<sup>1/</sup> For an analysis in greater detail of certain aspects of current policies which could be seen as results of the inadequacy of the theoretical model supporting them, see: Carlos Vignolo, "Inversión Extranjera en la Minería Chilena" in Revista Análisis, No. 8, October 1978.

<sup>2/</sup> Decree Law No. 600 of 1974, amended by Decree Law No. 1748 of 1977.



offers a tax alternative to foreign investment. This consists of a single rate of 49.5%, but unchangeable for a period of 10 years, with the option of converting once to the normal tax system. This alternative is in practice a discrimination in favour of foreign investors.

The Statute does not impose any restriction on the remittance of profits and, referring to repatriation of capital, only stipulates that this cannot be done until three years from its entrance. The Statute is also very favourable to foreign investors because, in practice, it leaves open an ample margin for the use of transfer prices. Finally, in accordance with the general philosophy of the model, neither the Statute nor the specific agreements signed give any importance whatever to the objective of maximizing returned value through employment, forward and reverse effects, technological dissemination, etc.

It is really illustrative of the spirit of the Statute in question that it is extraordinarily brief, and that the establishment of the principle of non-discrimination and the stipulation of the legal ways in which the companies may take advantage of this right occupy a disproportionately large part of the text, since these points appear as more developed and precise.

This same spirit is clearly reflected in the words of Business International Co., itself, in this regard: "Chile has extended its welcome rug to foreign investors with a new Law, DL 1748, which is even more generous than DL 600 of 1974 which it replaces. DL 1748 opens a series of almost irresistible temptations and guarantees for foreign investment". The clauses of the new Statute which received the best reception by the Business International Company are those referring to tax status and the complete freedom for remittance of profits and return from capital invested.

If we add to this that in the specific agreements on foreign investment in copper signed after 1977 there were other additional advantages for foreign investment, it is clear that Chile has placed itself, with these policies, among the most liberal countries in the world in respect of the treatment of foreign investment. These additional advantages are basically three in number: accelerated depreciation, which reduces to less than one third the normal period of depreciation, deduction of past losses from up to five previous fiscal years and extension of the tax invariability from 10 to 30 years.

3. The situation in the nationalized copper sector in the period since 1973

As mentioned earlier, there is a marked contradiction between the policy dealing with foreign investors in copper and governmental management of the nationalized mines. In effect, since September 1973 the organization of the governmental copper sector has remained almost unchanged. The current Government also inherited from the past the huge investment programme planned for 1967-1973 and which, in practice, yielded a good part of its fruits from 1974 on, explaining to a large extent the considerable increase in production of large-scale copper mining from 590 thousand tons on the average annually in the period 1971-1973 to 870 thousand tons in the period 1977-1979, an increase of 47.5% in five years. It should be pointed out in this respect that since 1974 the investments made in the large-scale copper mining industry have basically been reinvestments.

The other important factor which explains the growth in production of governmental copper mining is the absence of strikes and the increase in the discipline and intensity of work. This factor has also coincided with a decrease in real salaries and, hence, a decrease in the costs of production. Unit costs have decreased, moreover, as a result of the increase in production (which causes the incidence of fixed costs to drop), the real rise in the exchange rate (which decreases average costs in foreign money), and as a result of the significant increase in earnings by sub-producers, motivated by the spectacular increase in prices of the main sub-producer, molybdenum.

As a whole, all these factors have meant that, despite the low prices of copper in the past five years, large-scale copper mining in Chile has generated large surpluses which reached almost 1 000 million dollars in 1979.<sup>1/</sup>

We should also add that some actions undertaken by CODELCO illustrate other benefits of governmental control over Chile's main natural resource. We refer in particular to the joint corporation by which CODELCO, since 1976, has made incursions into the cable industry -with a plant in Germany- as a form of vertical integration which enables it to decrease market risks, in the event of an oligopolistic trend developing in the semi-manufactures industry.<sup>2/</sup> Although the

1/ In this respect we should mention the fact that Fortune (April 1979) has named CODELCO as the most efficient non-oil governmental enterprise in the world. Quoted in El Mercurio, 3 September 1979.

2/ This trend is a possible result of the spread of the use of the technique of continued washing, characterized by large economies of scale.

details and concrete results of this initiative are not known, it is possible to see it as an action in the right direction, in the framework of what should be an aggressive strategy of integration into the world metal markets.

### C. POSITION AND STRATEGY OF THE TRANSNATIONALS

Unlike the analyses made in the previous chapters, we are not dealing here with the particular situation of the TNCs operating in the country, but rather with global processes in the international copper industry which condition the reaction of the TNCs to the current policy towards foreign investment in Chile. Also unlike the previous periods, we must analyse in this case a reality still in progress, which obviously makes the proposals which follow somewhat relative.

Bearing these things in mind, it is possible, then, to maintain that the oil crisis appears to have reactivated the concern of the central economies for access to natural resources in the periphery. This concern is the basis of the impulse to seek once again a conciliation of interests in the North-South economic struggle over the New International Economic Order. Although it is true that, in practice, the central countries manage to control the growing pressure of the Third World countries in this way without making any important concessions, it is also true that the more long-term concern still exists.

In the case of copper this long-term interest appears to be being confirmed by the incursion of the large oil companies into the world metal industry. In this respect it might simply be mentioned that, as we will see below, the three largest copper investment projects authorized in Chile have been proposed directly by large oil transnationals or their subsidiaries.

In summary, it would appear that, as a result of the oil crisis, and even in spite of the depressive situation in the world copper market in recent years, investment in this industry is important in the medium and long-term plans of the large TNCs. This would mean an increase in the bargaining power of countries like Chile which possess a high and privileged percentage of world reserves.

### /D. RESULTS

#### D. RESULTS OF POLICIES AND DISTRIBUTION OF PROFITS

Unlike the previous chapters, we do not have the advantage here of being able to evaluate policies and draw conclusions on the basis of the observable results of the application of these policies. Nevertheless, and precisely on the basis of the experiences of the past, it is possible to propose the expected results of these policies and evaluate them on this basis. This evaluation is made, as earlier, in terms of the objective of maximizing returned value. In the following we attempt, while centering attention on a "value returned" assessment, to evaluate also the success of the model in terms of its own objectives.

##### 1. The flow of foreign investment in the period 1974-1979

The Statute on Foreign Investments, since its reformulation in 1977, has had an undeniable impact on the TNCs' interest in exploring investment possibilities in Chile. This impact is reflected in the fact that as of 30 June 1979 authorized foreign investment had risen by 4 159 million dollars. However, no more than 15% of these authorizations had actually been made concrete as of the end of 1979, and a large part of them, moreover, corresponded to purchases of assets rather than new investments.

An examination of applications for foreign investment shows one definite fact: the major attraction of Chile for the TNCs is copper mining. In effect, 90% of the value of the authorizations is found in the mining sector, basically copper. As shown in table 22, the bulk of authorizations corresponds to a few large-scale copper projects, among which are the Exxon and Anaconda proposals to exploit the Disputada de Las Condes and Los Pelambres deposits, respectively.

In the first of these cases, Exxon bought 87% of the stock in the Compañía Minera Disputada de Las Condes from the Chilean State for a total of 107 million dollars, at the same time offering to recover the remaining 13% of the stock in the hands of private parties. With this purchase Exxon became owner of two mining deposits (Disputada de Las Condes and El Soldado) with reserves estimated at 6 million tons of refined copper with a standard of nearly 1%, its respective flotation plants and a smelting plant, for a total book value in capital and reserves of 53 million dollars.

Table 22  
PRINCIPAL AUTHORIZED MINING PROJECTS, 1974-1979

Company	Country of origin	Authorized investment (millions of dollars)	Deposit
Anaconda (Atlantic Richfield)	US	1 500	Los Pelambres (copper)
Exxon	US	1 200	Disputada de Las Condes (copper)
Falconbridge (The Superior Oil)	US/ Canada	500	Quebrada Blanca (copper)
Noranda	US	350	Andacollo (copper)
Saint Joe	US	100	El Indio (gold-silver-copper)

Source: Committee on Foreign Investment.

For its part, Anaconda reappeared on the Chilean mining scene with the purchase of the Los Pelambres deposit for 20 million dollars, in the hands of a group of private businessmen who were pressured -according to a representative of this group- by the rise in mining patents and the "disinterest" of the Chilean Government. This same representative admitted that "the ore is worth much more, but we have no other alternative".<sup>1/</sup> Preliminary studies of Los Pelambres show that this mine has great potential. Its estimated reserves -which are undoubtedly considerably underestimated- total 428 million tons of copper ore with an average standard of fineness of 0.78%.

In the cases of Quebrada Blanca and Andacollo, the State has formed a joint corporation with the foreign companies (Falconbridge and Noranda), reserving 49% of the corporate ownership. The estimated reserves and standards of fineness of these mines are also high. In the case of Quebrada Blanca it is certain that there are more than 150 million tons of enriched ore with a standard of nearly 1.5%, which would be enough to produce 90 000 tons per year of copper content for a period of

<sup>1/</sup> El Mercurio, 2 October 1979.

11 years. The primary ore, with a standard of fineness lower than 1.0% and higher than 0.4%, exceeds 350 million tons. In the Andacollo deposit, it is estimated that at the present time there is a total reserve of 300 million tons with an average standard of fineness of 0.7%.

From the above it appears that the potential for receiving foreign investment and for production of Chilean copper mining is very high. This is also reflected in the large number of investment authorizations. However, to date these projects are still only authorizations and not materializations of investment. In evaluating to what extent this is a reflection of the will to postpone investments on the part of the TNCs -for example, for reasons of political stability- we are confronted with the fact that copper investments have always had a long period of maturation. Moreover, the little information available on the progress of the projects is insufficient to draw conclusions with respect to the comparative speed of progress of the latter.

Even so, one fact appears clear: progress has been slower in the cases of joint corporations, which, to some degree, is the result of problems inherent in this type of arrangement. To some degree also, however, this would appear to be due to delaying tactics on the part of the foreign partners.<sup>1/</sup> Exxon and Anaconda, on the contrary, appear to have decided to carry forward their respective investments. At least, the speed imposed on the exploration and assessment stages of the project lead to this impression. In the particular case of Exxon it appears clear that the strategy adopted is that of the "good citizen", which is impressing the national community with an ambitious project of investment and with a disposition to renegotiate when the circumstances make it advisable.<sup>2/</sup> We should bear in mind that for Exxon its investments in Chile, on the one hand, mark its entry into the copper industry and, on the other, are part of the long-term strategy of the largest transnational corporation in the world.

In summary, the opening of the copper mining industry to foreign investors stirred up the interest of the latter but, six years after the proclamation of the Statute on Foreign Investment (DL 600) and three years after its later revision

<sup>1/</sup> In this respect, see, for example, Latin American Commodities Report, 7 September 1979, vol. III, No. 35, "Financing Doubts Hang Over Chilean Copper Project".

<sup>2/</sup> In this respect we should mention that Exxon is characterized as being an "image-conscious enterprise", in Business Latin America, 11 January 1978.

(DL 1748), no investments of any significance had yet been made which would imply an increase in the copper-producing capacity of the country. Even assuming that the projects still in the stage of evaluation will materialize, it is improbable that this will mean new production before the middle of the decade. Without ignoring either the above-mentioned long maturation time for investments, or the depressive situation of the copper market in recent years, we might wonder to what extent the very favourable nature of the Statute on Foreign Investment has been offset by a possibly unfavourable assessment on the part of the latter of the long-term credibility of this Statute. In this respect, it is a well known fact that the large TNCs know that extraordinarily favourable treatments are not always those which offer the greatest stability in the long run.

## 2. Expected distribution of profits

Assuming that the investments discussed above materialize, we might wonder about the distribution of the profits this would involve. We have seen above that the Statute on Foreign Investment contains extraordinarily favourable clauses. This means that the expected distribution of economic surpluses is strongly biased towards foreign investors.

In the first place, the clauses on accelerated depreciation and deduction of past losses are as a whole, in practice, a tax exemption for five, eight or more years, depending on the real profitability of the project and the degree to which the accountable profits really represent this profitability. In this respect, the margin of manoeuvre which the Statute leaves to the TNCs seems fundamental for the management of transfer prices, particularly for over-valuing the initial investment. An illustration of this possibility is the fact that the investment applications are made in figures which are clearly higher than those which are estimated to be actually implied by these projects. For example, Anaconda applied for authorization to invest almost 1.500 million dollars in circumstances in which they are considering opening a mine of no more than 100 000 tons of annual production of copper content. This implies a cost of 15 000 dollars per ton of installed capacity, a figure which is approximately double that which would be normal in Chile and in the international copper industry.

/If the

If the TNCs effectively made an overvaluation of the capital investment, the period of tax exemption (for accelerated depreciation) could exceed the ten-year period. This amounts to the possibility that the State might obtain tax revenues from these investors on a date around or later than the mid 1990s. In any case, even if the overvaluation mentioned were avoided, it is highly improbable that the tax coffers would receive the 49.5% of the profits which supposedly belong to the State before 10 years from the date.

In addition, if we take into consideration that from 1950 on the effective tax rate of TNCs in Chilean copper was around 70%, it is clear that a single rate of 49.5% is excessively low. This is certainly harmful to national interests, especially since this rate has been guaranteed, by signed conventions, for 30 years. To establish a single and fixed tax rate also ignores the convenience and feasibility of extracting higher proportions of the surplus in periods of boom in the world metal market.

From the economic point of view, the possibility that the TNCs might become owners of the deposits opens the theoretical possibility that these companies might make an accountable discount for the depletion of the mine ("depletion allowance"). By this method, which involves depreciating the ore also, the accountable profit could be substantially reduced.

In summary, the prospects that the State might obtain all the short- or medium-term tax revenues from the possible materialization of investments on the part of the TNCs in copper appear to be meagre and remote. In terms of the idea of "returned value" the policies in force appear to be unsatisfactory alternatives. This conclusion is especially valid for projects which are 100% controlled by TNCs, but it is also essentially valid in the case of projects in which the State has entered into a corporation with a TNC, reserving 49% of the corporate capital. In these cases, in practice, the described machinery of the flight of surplus capital continues to operate in the same way and hence, to the extent that there is an attempt to hide profits, the State will lose both as a tax collector and as a member of the corporation. Moreover, given the hegemony of the laissez-faire policy, in practice it would also appear improbable that the State, in its role as partner, would be able to increase its control over the important decisions and over the process of transfer of surpluses abroad.

/The lack



The lack of willingness to negotiate with the TNCs seems to be reflected also in the way in which the deposits were transferred from the State to the TNCs or to the joint corporations. In the case of the sale of Disputada de Las Condes to Exxon, it is obvious, formally speaking, that the State did not accept the request made by other TNCs to postpone the date of closing of the bidding at a time when only Exxon had made an offer.

One basic problem, among others, is the enormous difference between the reserve figures officially dealt with before the bidding (almost 700 thousand tons of refined copper) and the figures which Exxon published after the bidding (around 6 million tons of refined copper).<sup>1/</sup> This is important for the way in which the deposit is evaluated, which is the method by which the State materializes its contribution to the corporation. The procedure followed is the following: the amount of the investment required is estimated, a certain arbitrary ratio of indebtedness to equity capital is assumed, and in accordance with this the equity capital is obtained from the corporation. The mining deposit is then evaluated at 49% of this amount and with this the State covers its contribution to the corporation. Obviously, the value of the deposit results from the combination of certain components which do not necessarily have anything to do with the actual economic value of the deposit. For example, the Quebrada Blanca mine is valued by this procedure at 24.5 million dollars, for a ratio of indebtedness to equity capital of 9:1. By using, as in the case of Andacollo, a ratio of 4:1, the mine contributed by the State would have been valued at exactly double.

### 3. Anticipated non-tax revenue

We have anticipated that the Statute in general, and the signed agreements in particular, will pay no attention into the returns from foreign investment, beyond tax revenues. Given this fact, it is improbable to think that these mining deposits will have a stimulating impact on the rest of the Chilean productive system, and even less in the context of an openness model which has brought tariffs to a general percentage of almost 10%.

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<sup>1/</sup> For a detailed analysis of the sale of Disputada to Exxon, see the article by Ernesto Tironi and Jorge Barría in Revista Mensaje, August 1978.

The anticipated impact on employment is also small, because of the inherent characteristics of this type of exploitation. As an example, the investment which Anaconda is studying in the Los Pelambres mine, which could amount to approximately 800 million dollars, would generate only about 1 000 jobs directly.<sup>1/</sup> Foreign investments in Chilean copper cannot be seen either as a way of training local staff nor as a way of transferring technology. Very much the contrary, to the extent to which companies such as Exxon recruit a large part of their highly trained technical staff from among CODELCO executives, the effect is exactly the opposite of that maintained by the theory of foreign investment.

Finally, the most important effects which under current policies could be expected from these investments are the direct and indirect temporary effects on the materialization stages of the investments.

Ultimately, it is obvious that Chile does not require the TNCs to gain access to international copper markets or to improve its marketing systems. On the contrary, CODELCO's market power could be affected to some extent by the possible competition of Chilean copper controlled and marketed by TNCs. This does not deny that under certain conditions foreign investment could contribute to the economic growth of countries such as Chile. It simply means that these conditions are not so clear in the case of copper in Chile, and that the price which is being paid in order to have foreign investment would appear excessively and unnecessarily high.

This is mainly due not only to the fact that Chile is not lacking technical and administrative know-how but that, very much on the contrary, the TNCs see in the existence of technical experience and capacity in the country a reason to come to Chile. In addition, in conditions of world financial overliquidity and the country's financial openness, the contribution of capital is today a relative contribution, which is reflected in the high rates of indebtedness included in some of the projects analysed.

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<sup>1/</sup> It should also be remembered that some of these deposits are now being exploited by small or medium-sized firms which are considerably more labour-intensive than the projects currently being evaluated by the TNCs. This could mean that the net effect on employment could even be negative. See El Mercurio, 22 June 1979.

## STATISTICAL ANNEX



Table 1  
PRODUCTION OF PRIMARY COPPER, 1928-1979: LARGE-SCALE MINING AND WORLD TOTAL  
(Thousands of tons)

Year	Large-scale mining A	World B	Percent- age A/B	Year	Large-scale mining A	World B	Percent age A/B
1928	266.5	1 659.0	16.0	1954	323.0	2 857.0	11.3
1929	290.1	1 853.0	15.6	1955	391.1	3 126.0	12.5
1930	196.7	1 537.0	12.8	1956	443.6	3 469.0	12.8
1931	209.4	1 343.0	15.6	1957	434.9	3 558.0	12.2
1932	92.4	870.0	10.6	1958	418.6	3 451.0	12.1
1933	151.0	998.0	15.1	1959	497.1	3 692.0	13.5
1934	236.8	1 247.0	19.0	1960	479.2	4 238.0	10.9
1935	247.8	1 453.0	17.0	1961	481.2	4 382.0	11.0
1936	231.9	1 673.0	13.9	1962	510.2	4 503.0	11.3
1937	381.0	2 280.0	16.7	1963	507.4	4 608.0	11.0
1938	322.6	2 010.1	16.0	1964	527.6	4 816.0	11.0
1939	313.0	2 106.0	14.9	1965	478.5	5 080.0	9.4
1940	333.4	2 365.0	14.1	1966	524.9	5 326.0	9.9
1941	443.0	2 500.0	17.7	1967	536.4	5 064.0	10.6
1942	463.6	2 661.0	17.4	1968	519.3	5 473.0	9.5
1943	473.9	2 698.0	17.6	1969	540.2	5 949.0	9.1
1944	475.0	2 533.0	18.7	1970	540.6	6 370.0	8.5
1945	451.1	2 181.0	20.7	1971	571.2	6 464.0	8.8
1946	358.5	1 848.0	19.4	1972	592.6	7 060.0	8.4
1947	408.3	2 229.0	18.3	1973	615.3	7 529.0	8.2
1948	424.8	2 322.0	18.3	1974	762.9	7 665.0	10.0
1949	351.5	2 267.0	15.5	1975	682.3	7 344.0	9.3
1950	344.9	2 525.0	13.7	1976	846.8	7 874.0	10.7
1951	360.1	2 662.0	13.5	1977	896.2	8 029.0	11.1
1952	373.8	2 765.0	13.5	1978	876.0	7 929.0	11.0
1953	325.4	2 803.0	11.6	1979	914.0	7 950.0*	11.5

Sources: CODELCO, El cobre chileno, 1975.

- Statistical Yearbook, United Nations, 1948.

- Metal statistics, Metallgesellschaft, 1938-1953.

- Metal statistics, Metallgesellschaft, 1977.

Table 2  
VALUE OF COPPER PRODUCTION OF LARGE-SCALE MINING, ACCORDING TO COMPONENTS, 1927-1979  
(Millions of 1979 dollars)

Year	Foreign expendi- tures	Expendi- tures in Chile	Inter- est	Deprecia- tion	Total costs (A+B+C)	Corporate liquid profits	Tax revenue	Total surplus (F+G)	Annual sales (E+H)	Annual produc- tion (thou- sands of tons)	Price received (cents per pound)	Unit cost (cents per pound)
	A	B	C	D	E	F	G	H	I	J	K	L
1927	77.5	78.6	...	23.5	179.6	105.9	24.9	130.8	310.4	216	58.9	37.7
1928	30.4	91.3	...	25.1	196.8	201.0	40.7	241.7	438.5	267	65.7	35.4
1929	136.0	123.5	...	25.8	285.3	208.9	34.3	243.2	528.5	290	33.5	44.6
1930	22.9	123.7	...	26.7	175.3	92.9	17.5	110.4	285.7	197	68.5	40.4
1931	62.5	90.1	...	23.8	176.4	11.3	3.1	14.4	190.8	209	43.8	38.3
1932	86.4	38.9	...	24.8	150.1	(-45.3)	8.5	(-38.5)	113.3	92	39.6	74.0
1933	78.4	24.3	...	25.0	127.7	(-13.2)	29.9	16.7	144.4	151	43.0	38.3
1934	70.3	30.6	...	25.7	126.6	39.8	39.2	79.0	205.6	237	45.3	24.2
1935	95.7	39.0	...	29.2	163.9	60.7	26.4	37.1	231.0	248	41.8	30.0
1936	66.4	46.5	...	23.2	136.1	73.1	27.8	100.9	237.0	232	50.5	26.6
1937	92.3	73.3	...	29.2	194.8	255.9	30.2	336.1	530.9	381	66.4	23.2
1938	101.3	36.2	...	30.3	218.3	156.6	36.5	215.1	431.4	322	56.5	30.8
1939	105.4	33.8	...	27.8	219.0	126.6	74.6	201.2	420.2	313	61.0	31.7
1940	103.6	93.7	...	29.7	227.0	171.8	96.7	268.5	495.5	333	65.2	30.9
1941	100.9	37.4	...	33.1	223.4	165.3	140.2	305.5	528.9	443	52.3	22.9
1942	39.4	102.7	...	28.2	220.3	150.0	173.1	323.1	543.4	464	50.9	21.5
1943	73.5	123.8	...	24.9	227.2	120.3	170.9	291.2	518.4	474	49.3	21.7
1944	95.5	127.7	...	29.5	252.7	111.8	172.6	284.4	537.1	475	50.0	24.1
1945	34.2	122.1	...	25.9	232.2	31.1	147.1	228.2	460.4	451	49.6	23.4
1946	83.4	35.5	...	21.1	200.0	31.5	119.6	201.1	413.6	359	49.8	25.3
1947	95.7	34.5	...	17.2	207.4	107.7	177.8	285.5	492.9	408	61.8	23.1
1948	103.3	116.5	...	16.5	236.3	138.7	220.3	359.0	595.8	425	62.3	25.3
1949	104.4	116.1	...	14.1	234.6	79.3	157.7	237.0	471.6	352	60.1	30.2
1950	71.2	98.2	...	13.0	182.4	87.0	208.0	295.0	477.4	345	60.5	24.0
1951	98.4	103.4	...	11.1	212.9	101.3	209.4	310.7	523.6	360	69.5	26.8
1952	96.6	114.9	...	14.1	225.6	94.0	394.0	488.0	713.6	374	90.8	27.4
1953	84.7	123.8	6.9	21.7	237.1	34.0	284.0	318.0	555.1	325	93.5	33.1
1954	77.1	121.3	7.5	25.0	230.9	49.7	286.4	336.1	567.0	323	80.4	32.4
1955	95.9	130.6	6.0	27.4	259.9	143.0	482.4	625.4	885.3	391	104.0	30.2
1956	109.7	172.4	5.1	34.5	321.7	198.3	363.3	561.6	883.3	444	104.7	32.9
1957	143.7	201.1	5.7	40.7	391.2	93.0	185.4	278.4	669.6	435	68.7	40.8
1958	135.7	187.2	3.5	42.7	369.1	67.8	135.0	202.8	571.9	419	60.7	40.0
1959	162.4	250.4	6.2	61.0	486.0	140.0	219.2	359.2	845.2	497	73.8	44.4
1960	155.9	287.3	9.1	65.2	518.0	118.0	217.7	335.7	853.7	479	75.3	49.1
1961	125.1	284.5	8.0	36.9	454.5	90.4	184.1	274.5	729.0	481	71.5	42.9
1962	132.2	306.8	6.4	52.4	497.8	105.2	205.9	311.1	808.9	510	73.8	44.3
1963	139.9	273.6	4.6	68.5	486.6	95.0	226.5	321.5	808.1	507	72.9	43.5
1964	147.0	285.6	3.5	66.3	502.4	114.7	293.2	407.9	910.3	528	78.2	43.2
1965	140.4	336.8	2.9	77.4	557.5	102.3	316.9	419.2	976.7	479	91.5	52.8
1966	138.0	379.0	3.3	78.5	598.8	186.3	513.4	699.7	1 298.5	525	112.8	51.7
1967	142.2	418.7	3.3	44.9	609.1	280.5	479.1	759.6	1 368.7	536	115.1	51.6
1968	158.7	494.6	8.6	47.5	709.4	285.6	457.0	742.6	1 452.0	519	118.9	62.0
1969	162.1	579.1	24.3	45.8	811.3	241.4	790.8	1 032.2	1 343.5	540	144.5	68.2
1970	147.2	616.4	46.0	43.8	853.1	144.1	626.8	770.9	1 624.0	541	128.5	71.5
1971	...	...	...	...	894.1a/	-	481.5	481.5	1 375.6	571	99.0	71.0
1972	...	...	...	...	931.0a/	-	273.4	273.4	1 204.4	592	93.3	71.3
1973	...	...	...	...	891.5a/	-	877.4	877.4	1 768.9	615	129.3	65.7
1974	...	...	...	...	1 865.5	-	506.6	506.6	2 371.9	763	129.3	105.3
1975	...	...	...	110.5	1 011.0	-	171.5	171.5	1 182.5	682	71.6	67.2
1976	...	...	...	134.9	1 141.4	-	489.2	489.2	1 630.6	854	76.2	60.9
1977	...	...	...	131.6	1 088.4	-	345.6	345.6	1 434.0	893	67.2	55.3
1978	...	...	...	142.0	1 002.4	-	419.4	419.4	1 421.8	876	66.8	51.8
1979	...	...	...	...	1 037.2	-	1 033.8	1 033.8	2 071.0	910	84.2	51.7

Source: The basic data were obtained from the following publications: *Balanza de pagos del Banco Central*, *Boletín de información económica sobre el cobre*, No. 157, Senate, 1969, *El cobre en el desarrollo nacional*, CEPLAN, 1974, *Memorias anuales 1975-1979*, Corporación del Cobre and *El cobre chileno*, Corporación del Cobre, 1975.

a/ For the years 1971, 1972 and 1973, the accountable figures for costs had to be corrected in order to eliminate the distortion arising from the application of an unrealistic exchange rate which overvalued the peso and thus artificially inflated the level of costs measured in dollars. For this correction, an estimate has been used which was made by CODELCO in 1975 and which recalculated some basic figures, taking into account the effective devaluation of the peso. See the prices of copper, *El cobre chileno*, 1975, chapter IX.

Table 3  
FISCAL FINANCING AND INCOME FROM COPPER  
(Millions of 1979 dollars)

Year	Tax revenues	Tax revenues excluding copper taxes	Exchange taxes	Copper surpluses	Total fiscal income (including copper) (A+B+C+D)	Fiscal income from copper (F)	Percentage (F/E)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1929	513.2				513.2	513.2	6.7
1932	211.4				211.4	211.4	4.0
1935	452.2		17.8		470.0	26.4	5.6
1940	567.4		27.4		594.8	96.7	16.3
1941	593.0		49.2		642.2	140.2	21.8
1942	529.6		56.0		585.6	173.1	29.6
1943	601.3		69.4		670.7	170.9	25.5
1944	605.7		71.9		677.4	172.6	25.5
1945	685.7		69.0		754.7	147.1	19.5
1946	656.4		53.6		710.0	119.6	16.8
1947	715.7		62.8		778.5	177.8	22.8
1948	885.0		81.9		966.9	220.3	22.8
1949	809.0		79.6		888.6	157.7	17.7
1950	728.4		86.4		814.8	208.0	25.5
1951	881.0		78.1		959.1	209.4	21.8
1952	920.8		112.9		1 033.7	394.4	38.2
1953	900.1		104.3		1 004.4	284.0	28.3
1954	902.4		69.1		971.5	286.4	28.9
1955	969.8		61.4		1 031.2	432.4	46.9
1956	1 019.1		29.6		1 048.7	363.3	34.6
1957	1 034.9		-		1 034.9	135.4	17.9
1958	1 018.2		-		1 018.2	135.0	13.3
1959	1 121.6		-		1 121.6	219.2	19.5
1960	1 286.1		-		1 286.1	217.7	16.9
1961	1 422.9		-		1 422.9	184.1	12.9
1962	1 534.6		-		1 534.6	205.9	13.4
1963	1 466.6		16.1		1 482.7	226.5	15.3
1964	1 471.3		46.6		1 517.9	293.2	19.3
1965	1 862.4		24.8		1 887.2	316.9	16.8
1966	2 277.5		10.8		2 288.3	513.4	22.4
1967	2 474.2				2 474.2	479.1	19.4
1968	2 640.9				2 640.9	457.0	17.3
1969	2 865.3				2 865.3	790.8	27.6
1970	3 243.5				3 243.5	626.8	19.3
1971		2 463.0		481.5	2 944.5	481.5	16.4
1972		2 198.5		273.4	2 471.9	273.4	11.1
1973		2 292.6		877.4	3 170.0	877.4	27.7
1974		2 403.1		506.6	2 914.7	506.6	17.4

Table 4  
INTERNATIONAL PRICES OF COPPER, 1935-1979  
(Cents per pound)

Year	International price in dollars of each year	Price in 1979 dollars
1935	8.6	49.3
1936	9.5	53.9
1937	13.2	70.1
1938	10.0	58.3
1939	11.0	65.1
1940	11.3	66.8
1941	11.8	61.7
1942	11.8	54.6
1943	11.8	52.2
1944	11.8	51.7
1945	11.8	50.9
1946	13.8	52.1
1947	21.0	64.6
1948	22.0	62.5
1949	19.2	57.4
1950	21.2	61.1
1951	24.2	62.5
1952	24.2	64.2
1953	28.8	77.6
1954	31.3	84.1
1955	43.9	117.6
1956	41.1	106.7
1957	27.4	69.2
1958	24.8	61.7
1959	29.8	74.0
1960	30.9	76.6
1961	28.7	71.4
1962	29.4	73.0
1963	29.3	72.9
1964	44.0	109.3
1965	58.7	143.2
1966	69.1	163.0
1967	51.2	120.5
1968	55.9	128.5
1969	66.3	146.5
1970	63.0	134.3
1971	49.2	101.7
1972	48.5	95.8
1973	80.8	141.1
1974	93.1	137.0
1975	56.1	75.5
1976	64.1	82.4
1977	59.4	72.0
1978	61.8	69.5
1979	90.0	90.0

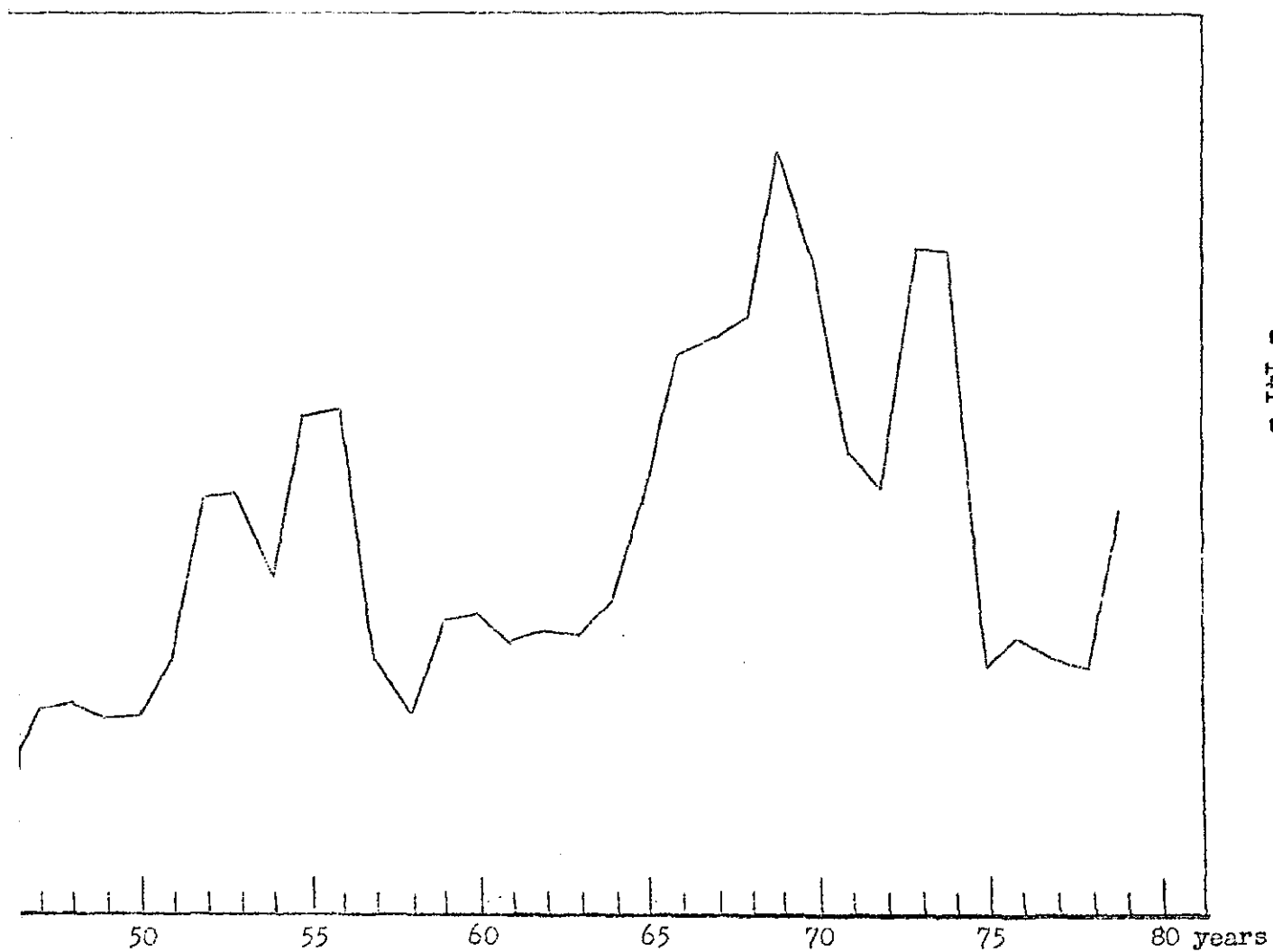
Notes: The series of international prices corresponds to the "American Producers" prices between 1935 and 1953 and the "settlement" price of the London Metals Exchange between 1954 and 1979.



Figure 1

( THE LARGE-SCALE COPPER MINING INDUSTRY IN CHILE, 1927-1979

In cents per pound, 1979 dollars)



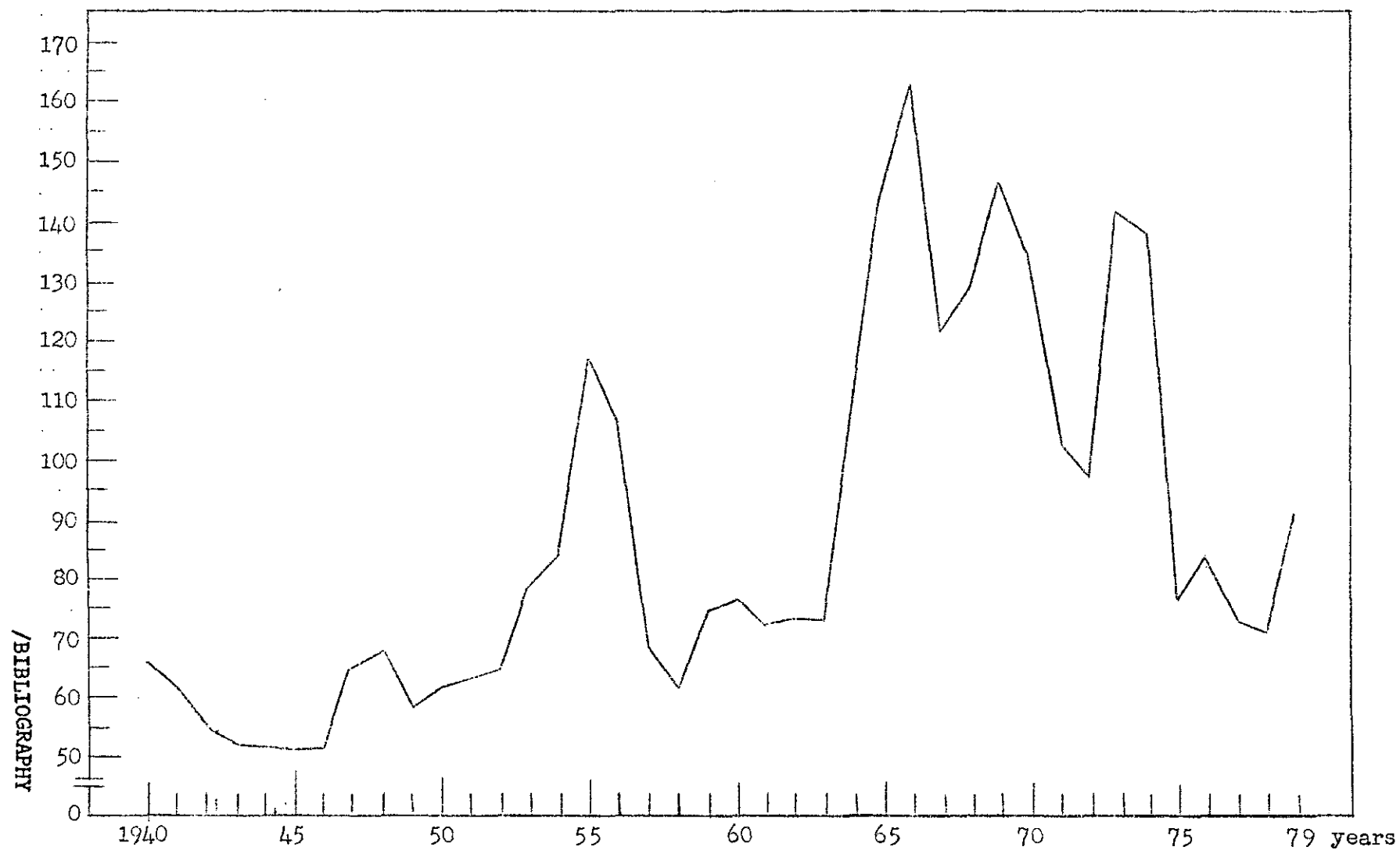
Graph 2

INTERNATIONAL PRICES OF COPPER, 1940-1979

(In cents per pound, 1979 dollars)

Base, 1940-1953: American Producers' price

1959-1979: Settlement price, London Metals Exchange



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