

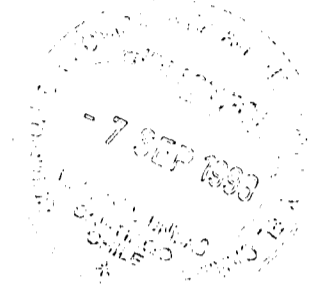
CEPAL (1900)

Division of Economic Development

Joint CEPAL/CTC Unit

Working Paper N° 14

June 1979



FOREIGN PARTICIPATION IN COLOMBIAN DEVELOPMENT:  
THE ROLE OF TNCs \*

by

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## INTRODUCTION

Although it was not planned as such, this study may be viewed as one country-unit in the general examination of the international operations of transnational corporations which was called for twenty years ago by Stephen Hymer.<sup>1/</sup> Then, he stated that,

"To make a proper study of international operations, one would need to know the industrial composition of the national product for each country, the share of industry output in each country for firms of every nationality, the strength of the advantages of firms, and details of the structure of industries and the patterns of international trade."<sup>2/</sup>

Given improved communications, better census data at the country level and freer access to existing corporate information, one can begin to assemble the individual units necessary for a study of the nature which Hymer envisioned. This case study of foreign participation in Colombian development is one, admittedly limited, example of such.

Since Hymer's initiative there has been a virtual explosion in the literature on or about transnational corporations, direct foreign investment or some combination of both. Most of the argumentation has been presented on the basis of aggregate data which cannot be verified or corroborated at the level of individual corporations, or even individual countries in some cases. Mainly for this reason, endless discussions on national/transnational conflict, social/corporate interfaces and the like, continue unabated. Nonetheless, basic questions such as who produces what, where and with what effects remain unanswered. The answers to these questions, as Hymer pointed out, are the prerequisite to conscientious theory-building.

Given this perspective, the object of this investigation was to gather and analyze the maximum amount of relevant information on the topic of foreign participation in Colombian development, presenting it in the most comprehensive manner attainable. For this reason the study consists of

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<sup>1/</sup> Hymer, Stephen Herbert, The International Operations of National Firms: a study of foreign direct investment, The MIT Press, Cambridge, Mass., 1976.

<sup>2/</sup> Ibid.

four basic sections. The first core section presents the most general and aggregate data as 'indicators' of foreign participation in Colombian development. The second and third basic sections drop the level of analysis to that of the sector, in these cases, those of the petroleum and manufacturing sectors. As well, analysis at the level of specific foreign enterprises, product groups and product markets is introduced to reflect the basic realities of foreign participation in these two sectors. The final core section deals with the transnational corporations linked to the ten dominant foreign enterprises in Colombia. The conclusions deriving from this analysis, which pass from the most general to the most specific, are blended together in the Summary and Conclusions. In this manner, many of the answers as to who produces what in Colombia with what effects come to light.

Information collected in Colombia was mainly that of census data, trade statistics, tariff schedules, official publications of various government ministries, company reports and industry studies. Information on transnational corporations, collected in Washington, was primarily that of company annual reports, company form 10-K reports of the United States Securities and Exchange Commission, Moody's Industrial Manual, Who Owns Whom, Fortune, etc., as well as information provided by the United Nations Center on Transnational Corporations. These principal sources of information were supplemented by a myriad of other sources, most of which are listed in the Bibliography. The very important assistance received from the many people involved is greatly appreciated, especially that provided by the Comité de Regalias, the Banco de la República and Planeación Nacional in Colombia, the Library of Congress and the Securities and Exchange Commission in the United States and the United Nations Centre on Transnational Corporations.

Finally, as well as serving as a case study in its own right and as a framework for future studies, it is hoped that this analysis may contribute to the re-evaluation of some of the premises associated with the study of transnational corporations and direct foreign investment, which is usually based on aggregate home country data, by introducing more detailed information from the host country. In this manner, in completion of the

/basic task

basic task of the CEPAL/CTC Joint Unit, this study contributes to the improved understanding of the heterogeneous reality of Latin America through the continuing collection and diffusion of information on the nature of foreign participation in the development of various Latin American countries.

/I. COLOMBIAN

I. COLOMBIAN DEVELOPMENT

As is the case of countries undergoing a process of industrial transformation and economic development, the manufacturing sector is increasing its relative importance within the economy as a whole. During the period 1925-1976, the manufacturing sector almost tripled its relative weight within the economy as a whole and now accounts for almost one-fifth of the total domestic product. The manufacturing sector is becoming the motor of the Colombian economy.

Table 1

COLOMBIA: SECTORAL CHANGE, 1925-1976  
(Billions of constant 1970 pesos and per cent)

| Year                           | Gross domestic product |          | Gross domestic product |               |                  |                        |                      |
|--------------------------------|------------------------|----------|------------------------|---------------|------------------|------------------------|----------------------|
|                                | Billions of 1970 pesos | Per cent | Manufac- turing        | Agri- culture | Mining <u>a/</u> | Govern- ment <u>b/</u> | All others <u>c/</u> |
| 1925                           | 16.4                   | 100      | 6.7                    | 54.6          | 0.8              | 6.3                    | 31.6                 |
| 1940                           | 32.2                   | 100      | 8.3                    | 44.7          | 3.0              | 6.8                    | 37.2                 |
| 1950                           | 46.2                   | 100      | 13.5                   | 37.7          | 2.4              | 6.6                    | 39.8                 |
| 1960                           | 72.3                   | 100      | 16.2                   | 32.7          | 2.7              | 6.7                    | 41.7                 |
| 1965                           | 90.7                   | 100      | 17.0                   | 29.9          | 2.6              | 7.2                    | 43.3                 |
| 1970                           | 119.8                  | 100      | 17.5                   | 28.6          | 2.1              | 6.9                    | 44.9                 |
| 1975                           | 164.4                  | 100      | 18.7                   | 26.9          | 1.4              | 6.8                    | 46.2                 |
| 1976                           | 172.9                  | 100      | 19.1                   | 26.0          | 1.2              | 7.0                    | 46.7                 |
| Compound annual rate of growth |                        | 4.6%     | 6.8%                   | 3.2%          | 5.3%             | 4.8%                   | 5.4%                 |

Source: CEPAL, "Series históricas del crecimiento de América Latina", Cuadernos Estadísticos de la CEPAL, Santiago de Chile, 1978.

a/ Includes petroleum.

b/ Includes all general government services.

c/ Includes commerce, construction, finance, transport, communication, electricity and other services.

/Just as



Just as the process of development has led to a change in the sectoral structure of the Colombian economy as a whole, so too has the composition of the manufacturing sector undergone transformation. The 1953-1974 period has witnessed a significant alteration in the composition of the manufacturing sector, as is indicated by table 2. Two industrial divisions - food, beverages and tobacco (ISIC 31) and textiles, wearing apparel and leather (ISIC 32) - continue to be of much economic significance accounting for about one-half of the value of manufactured production in 1974. Twenty years earlier these two industrial divisions represented over three-quarters of the manufacturing output, indicating a noteworthy relative decline within the manufacturing sector as a whole. On the other hand, three industrial divisions - chemicals and derivatives; metal products, machinery and equipment and the paper industry (including printing) - are of increasing relative significance with regard to their contribution to the formation of the total value of manufactured production. In 1953 these three industrial divisions accounted for around one-tenth of the manufacturing output, whereas their contribution had increased to over 40% by 1974.

In terms of structural change in Colombia, it may be concluded that development has generally followed the path of industrial transformation as was the case for the presently industrialized countries, with the chemical, metalworking and paper industries demonstrating the most dynamic relative growth in the recent period.

/Table 2

Table 2  
 COLOMBIA: COMPOSITION OF THE MANUFACTURING SECTOR, 1953-1974  
 (Percentage)

| ISIC | Industrial division   | 1953         | 1960         | 1965         | 1970         | 1974         | Compound annual growth rate 1953-1974 |
|------|---|--------------|--------------|--------------|--------------|--------------|---------------------------------------|
| 31   | Food, beverages, tobacco  | 55.4         | 39.1         | 39.1         | 33.8         | 31.1         | 3.9                                   |
| 32   | Textiles, wearing apparel, leather                                    | 22.2         | 22.0         | 18.5         | 19.4         | 18.3         | 5.9                                   |
| 33   | Wood industry (incl. furniture)                                       | 2.3          | 1.6          | 1.5          | 1.6          | 1.3          | 4.0                                   |
| 34   | Paper industry (incl. printing)                                       | 2.4          | 4.0          | 4.9          | 5.9          | 6.7          | 13.2                                  |
| 35   | Chemical industry (incl. derivatives)                                 | 8.4          | 15.0         | 16.1         | 16.7         | 20.7         | 12.4                                  |
| 36   | Non-metallic mineral products   | 4.3          | 4.1          | 4.6          | 4.4          | 4.0          | 6.7                                   |
| 37   | Basic metal industries  |              | 4.6          | 3.1          | 3.3          | 3.3          | 15.4                                  |
| 38   | Metal products, machinery, equipment                                  | 4.2          | 7.9          | 10.3         | 13.8         | 13.7         | 15.4                                  |
| 39   | Other manufactures  | 0.7          | 1.7          | 2.0          | 1.0          | 0.9          | 8.6                                   |
|      | <u>Total</u>  | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |                                       |
|      | Value of manufactured production (billion of pesos at current prices) | 4.2          | 12.0         | 27.7         | 59.3         | 169.2        |                                       |
|      | Value of manufactured production (billions of constant 1970 pesos) a/ | 22.1         | 32.4         | 41.3         | 59.3         | 73.6         | 5.6                                   |

Sources: CEPAL, Análisis y proyecciones del desarrollo económico, III El desarrollo de Colombia, E/CN.12/365/Rev.1, Mexico, November 1956.  
 Colombia, DANE, Boletín mensual de estadística, N° 224, March 1970.  
 Colombia, DANE, III Censo Industrial 1970, Bogotá, May 1976.  
 Colombia, DANE, Industria manufacturera 1974, Bogotá, October 1977.

a/ See annex 1.

/II. FOREIGN

## II. FOREIGN PARTICIPATION IN COLOMBIAN DEVELOPMENT: SOME INDICATORS

A comprehensive examination of foreign participation in Colombian development, at the aggregate level, should take into account at least three important forms of this participation: external financing (indebtedness, terms and repayment schedules), direct foreign investment (both stocks and flows) and the transfer of foreign technology (contractual terms). All these measures should be based on a consistent and comprehensive system of official information indicating, at a minimum, the country of origin of the foreign participant and that part of the local economy where such foreign participation takes place. Needless to say, this kind of consistent information is not readily available in Colombia. The purpose of this section is to assemble existing information into some kind of comprehensive package.

(1) Foreign participation in the form of external financing shall be touched upon only due to the lack of comprehensive information, especially from the point of view of information on the individual foreign banks holdings of Colombian external public debt. Furthermore, general indicators and commentaries suggest that this is one area of foreign participation where Colombian policy has proved remarkably successful.

In a region resplendent with examples of heavy, if not extreme, external public indebtedness, Colombia stands as a case of moderation. Table 3 points out that Colombia has managed to keep its external public indebtedness within manageable proportions in the 1960-1975 period, even improving upon it in relative terms during the difficult 1970-1975 period.

Other characteristics of Colombia's external public debt suggest further favourable aspects of the Colombian policy, in the context of the Latin American region. At year-end 1975, the composition of their debt was roughly, three quarters official (40% multilateral and 35% bilateral), and one quarter from private sources, whereas for the region as a whole it was over half from private (mainly foreign banks) sources and less than half from official sources. Only 35% of Colombia's debt is to be amortized over the 1977-1981 period whereas the figure for Latin America is 56%.

/Table 3

Table 3

COLOMBIA: EXTERNAL PUBLIC DEBT,<sup>a/</sup> 1960-1975, IN RELATION TO  
LATIN AMERICA AS A WHOLE

(US\$ millions)

| External Public Debt | 1960  | 1965   | 1970   | 1975   |
|----------------------|-------|--------|--------|--------|
| Colombian            | 377   | 993    | 1 852  | 3 000  |
| Latin American       | 7 205 | 12 153 | 21 139 | 54 213 |
| Col. as % L.A.       | 5.2   | 8.2    | 8.8    | 5.5    |

Source: Interamerican Development Bank, External Public Debt of the Latin American Countries, Washington D.C., April 1978.

a/ Includes both disbursed and undisbursed portions at nominal values.

With regard to interest payments, the figures are 47 and 60% for Colombia and Latin America, respectively. Finally, in 1975, service payments for the external public debt represented 11.3% of the value of exports of goods and services for Colombia whereas they represented 14% for the region as a group. (See annexes 2 to 5.) In this context it may be said that Colombia's external public debt policy has been notably successful in terms of controlling that aspect of foreign participation in Colombian development.

Finally, two other aspects of Colombia's relations with foreign banks merit mention. In 1976 Colombia set a precedent of sorts by altering the traditional rules of the game.

"Colombia stands out in the international bankers' eyes as the country that broke the banks' rule that loans should be under the governing laws of the state with which they are most familiar."<sup>1/</sup>

Colombia had required that new loan agreements be made subject to local law. In the same year Colombia restricted foreign participation in local banks to 49% maximum. These changes in the relation with foreign banks further suggests that Colombia is in full control of this aspect of the foreign participation in Colombian development.

<sup>1/</sup> Richard Ensor, "Colombia: Latin America's prickliest borrower", Euromoney, June 1978.

(2) A good deal of information from various sources is available to demonstrate the situation of direct foreign investment in Colombia. Unfortunately, given the distinct sources, the information is not all that consistent. Nevertheless, it does offer a point of reference by which to approximate the total value of foreign participation via direct foreign investment.

In relation to the other member countries of the Latin American Free Trade Association, Colombia has not been one of the principal recipients of direct foreign investment in the post-war period. Annex 6 (a) indicates that Colombia received a net inflow of foreign direct investment in the order of 696.6 millions of constant 1970 US dollars during the 1946-1976 period. Although this is an appreciable net capital contribution for Colombia, it represents only 3.1% of the total net inflow of direct foreign investment to the LAFTA countries during the period. In the 1967-1976 period it rose to 3.3% of the total flow, but it had dropped off to 2.6% during the 1956-1966 term. All in all Colombia has been among the more minor recipients of direct foreign investment in the region during the post-war era.

Information on the stock of direct foreign investment of the member countries of the Organization of Economic Co-operation and Development in the member countries of LAFTA suggests a similar relationship. Annex 6 (b) points out that Colombia has traditionally accounted for around 5% of such during the 1967-1976 period. According to these data the stock of direct foreign investment of the OECD countries in Colombia decreased from 838 millions to 823 millions of constant 1970 US dollars in that period. Again, although the figure of \$ 1 200 millions has certain economic significance in the context of Colombian development, in the regional context Colombia is among the more minor recipients of direct foreign investment.

Information from the Colombian Central Bank (Banco de la República) is somewhat at odds with the data of the OECD countries. For instance, in 1975 the stock of direct foreign investment of all countries in the Colombian economy was stated to be equivalent to 666.3 millions of constant 1970 US dollars, 20% lower than the figure published by the OECD countries.

/Unfortunately, the

Unfortunately, the Colombian system of data collection usually excludes the petroleum sector, therefore it is not of much use for historical purposes nor for sectoral analysis. Due to these problems table 4 was assembled using several distinct sources of information.

This table suggests several notable characteristics of the stock of direct foreign investment in Colombia. Although direct foreign investment was evident in the petroleum sector some fifty years ago, it was only in the post-war period that it became significant to the Colombian economy as a whole. Furthermore, the stock of direct foreign investment, in real terms, began to decline after 1965. The real compound annual rate of growth was only 0.9% during the 1950-1975 period which is significantly lower than the 5.0% experienced by the Colombian GDP for the same period. This foreign investment is heavily concentrated in the manufacturing and petroleum sectors and since 1940 these two sectors have generally accounted for about three-quarters of this foreign participation. Over the 1950-1975 period the direct foreign investment in the manufacturing sector has grown at a slightly faster rate than that in the petroleum sector, however, in neither cases was the real rate of growth impressive.

Tables 5 and 6 point out other characteristics of the stock of direct foreign investment in Colombia. Table 5, the only published account of the stock of direct foreign investment, by country, for the OECD countries makes clear that in 1967, more or less at the apogee of the stock of direct foreign investment in real terms, over 80% corresponded to just one country - the United States. In the petroleum sector that share was closer to 90%. Table 6, focusing upon US direct foreign investment in Colombia, notes that the compound annual rate of growth of US direct foreign investment in Colombia was 1.3% in the 1950-1975 period. This is slightly higher than that for all countries. It is also evident that the decline, in real terms, of US direct foreign investment is a result of a substantial disinvestment in the petroleum sector before 1975. Over the 1950-1975 period, however, the manufacturing sector has maintained a real annual rate of growth of direct foreign investment of 6.9%. Given this state of affairs it is rather obvious that the key to understanding the participation of direct foreign investment in Colombian development is to be found in the analysis of the role of foreign corporations, especially US-based ones, in the manufacturing and petroleum sectors.

/Table 4

Table 4

COLOMBIA: THE STOCK OF DIRECT FOREIGN INVESTMENT BY  
SECTOR, 1925-1975

(Millions of US dollars and per cent)

| Year                            | Direct foreign investment |                                    |               | Direct foreign investment (percentage) |                 |               |        |                     |
|---------------------------------|---------------------------|------------------------------------|---------------|--|-----------------|---------------|--------|---------------------|
|                                 | Nominal value             | Constant 1970 US dollars <u>c/</u> | Per- cent age | Petro- leum                            | Manufac- turing | Agri- culture | Mining | All other <u>a/</u> |
| 1925                            | 47.5                      | -                                  | 100           | 63.2 <u>b/</u>                         | -               | -             | -      | 36.8                |
| 1940                            | 133.6                     | -                                  | 100           | 56.1 <u>b/</u>                         | 18.1            | -             | 5.5    | 20.2                |
| 1950                            | 314.7                     | 528.9                              | 100           | 35.6 <u>b/</u>                         | 41.9            | -             | 2.4    | 20.2                |
| 1960                            | 547.1                     | 691.7                              | 100           | 42.6 <u>b/</u>                         | 39.4            | 0.2           | 1.3    | 16.5                |
| 1965                            | 659.3                     | 808.0                              | 100           | 40.8 <u>b/</u>                         | 41.7            | 0.3           | 1.2    | 15.9                |
| 1970                            | 791.0                     | 791.0                              | 100           | 42.2 <u>b/</u>                         | 40.1            | 0.5           | 1.1    | 16.0                |
| 1975                            | 965.5                     | 666.3                              | 100           | 34.4                                   | 44.3            | 0.7           | 1.5    | 19.1                |
| compound annual rates of growth | 1950-1975                 | 0.9%                               |               | 0.8%                                   | 1.1%            | -             | -0.9%  | 0.7%                |
|                                 | 1950-1965                 | 2.7%                               |               | 3.6%                                   | 2.7%            | -             | -1.2%  | 1.2%                |
|                                 | 1965-1975                 | -1.7%                              |               | -3.3%                                  | -1.2%           | 6.3%          | -0.4%  | -0.1%               |

Sources: Colombia, DANE, Boletín mensual de estadística, Nº 239, Bogotá, 1971.  
Colombia, Banco de la República, Oficina de Cambios, Registro de inversiones extranjeras en Colombia, 1957-1976, Bogotá, December 1977.  
United States, Department of Commerce, Survey of Current Business, Washington, D.C., various issues.

a/ Commerce, finance, construction and other services.

b/ The figures for the petroleum sector, except 1975, represent the depreciated book values of the stock of US direct foreign investment in the petroleum sector in Colombia. As shall be indicated below, US-based petroleum corporations have traditionally been the dominant foreign participants in both the production and refining of crude petroleum in Colombia before 1974.

c/ See annex 1.

Note: One should not, on the basis of the data presented in this table, conclude that Colombia in this respect represents an abnormal case in the context of Latin America. In fact with regard to the stock of United States direct foreign investment the Colombian example is more positive than other Latin American countries if one excludes the changes in the petroleum sector, as the following data indicate, in terms of real compound annual growth rates:

| Period 1967-1975    | Latin America<br>19 countries | Latin America<br>excluding Brazil<br>and Mexico | Colombia |
|---------------------|-------------------------------|---|----------|
| All sectors         | 3.1%                          | -3.9%   | -5.2%    |
| Excluding petroleum | 1.9%                          | -1.4%   | 1.6%     |

Source: United States. Department of Commerce, Survey of Current Business, various.

Table 5

COLOMBIA: STOCK OF PRIVATE DIRECT INVESTMENT, 1967, ACCORDING  
TO INFORMATION FROM THE OECD COUNTRIES  
(Millions of US dollars and percentage)

| Source countries     | Total      | Per-<br>cent<br>age | Petro<br>leum | Manufac<br>turing | All<br>others |
|----------------------|------------|---------------------|---------------|-------------------|---------------|
| United States        | 627        | 86.1                | 44.5          | 26.4              | 15.2          |
| Other OECD countries | 101        | 13.9                | 5.2           | 6.3               | 2.3           |
| <u>Total</u>         | <u>728</u> | <u>100.0</u>        | <u>49.7</u>   | <u>32.7</u>       | <u>17.6</u>   |

Source: OECD, DAC, Stock of Private Direct Investments by DAC countries  
in Developing Countries, Paris, 1972.

/Table 6



Table 6  
 COLOMBIA: ACCUMULATED US DIRECT FOREIGN INVESTMENT  
 BY SECTOR, 1925-1976  
 (Millions of US dollars and percentage)

| Year                            | US direct foreign investment |  | US direct foreign investment |                |            |      |
|---------------------------------|------------------------------|--|------------------------------|----------------|------------|------|
|                                 | Nominal value                | Millions of constant 1970 US percent dollars <u>b/</u> | Petro leum                   | Manufac turing | All others |      |
| 1925                            | n.d.                         | -  | n.d.                         | n.d.           | n.d.       |      |
| 1940 <u>a/</u>                  | 108                          | -  | 100                          | 55             | 1          | 44   |
| 1950                            | 193                          | 324  | 100                          | 58             | 13         | 29   |
| 1960                            | 424                          | 536  | 100                          | 55             | 22         | 23   |
| 1965                            | 571                          | 700  | 100                          | 49             | 33         | 18   |
| 1970                            | 698                          | 698  | 100                          | 48             | 34         | 18   |
| 1975                            | 648                          | 447  | 100                          | 10             | 59         | 31   |
| 1976                            | 654                          | 431  | 100                          | 9              | 59         | 32   |
| compound annual rates of growth | 1950-1975                    |  | 1.3%                         | -4.5%          | 6.9%       | 2.5% |
|                                 | 1950-1965                    |  | 4.9%                         | 2.5%           | 11.2%      | 0.5% |
|                                 | 1965-1975                    |  | -4.0%                        | -13.5%         | 6.2%       | 5.1% |

Source: United States, Department of Commerce, Survey of Current Business, Washington D.C., various issues.

a/ Figures from 1936.

b/ See annex 1.

(3) Limited available information on the participation of foreign technology in Colombian development suggests a similar conclusion. Again, the information has been assembled from distinct sources. Table 7 indicates that, in 1977, fully 96% of the contracts involving foreign technology corresponded to the manufacturing and petroleum sectors. Furthermore, according to table 8, about two-thirds of those contracts were made with US-based enterprises. Although this measure, number of contracts, is of much less value than the terms of the contracts or their financial implications for the host country, nevertheless, the data do reinforce the conclusion derived from the analysis of direct foreign investment in Colombia. That conclusion is that one should look to the manufacturing and petroleum sectors and especially at US-based enterprises in those sectors to understand the nature of foreign participation in Colombian development.

/Table 7

Table 7

COLOMBIA: NUMBER OF TECHNOLOGY CONTRACTS BY SECTOR, 1977

| Sector        | Type of contract     | Number of contracts | Percentage   |
|---------------|----------------------|---------------------|--------------|
| Petroleum     | all                  | 48                  | 32.2         |
|               | concession           | (23)                | (15.4)       |
|               | association          | (25)                | (16.8)       |
| Manufacturing | all                  | 95                  | 63.8         |
|               | use trademark        | (7)                 | (4.7)        |
|               | technical assistance | (42)                | (28.2)       |
|               | both of the above    | (43)                | (28.9)       |
|               | other                | (3)                 | (2.0)        |
| Other         | all                  | 6                   | 4.0          |
| <u>Total</u>  |                      | <u>149</u>          | <u>100.0</u> |

/Table 8

Table 8

COLOMBIA: NUMBER OF TECHNOLOGY CONTRACTS BY SOURCE  
COUNTRY, 1977

| Sector                  | Total contracts |                     | United States | Other OECD  | Other world |
|-------------------------|-----------------|---------------------|---------------|-------------|-------------|
|                         | Number          | Per-<br>cent<br>age |               |             |             |
| Petroleum               | 48              | 32.2                | 23.5          | 5.4         | 3.4         |
| Manufacturing and other | 101             | 67.8                | 40.9          | 21.5        | 4.5         |
| <u>Total</u>            | <u>149</u>      | <u>100.0</u>        | <u>64.4</u>   | <u>26.9</u> | <u>7.9</u>  |

Sources: Colombia, Ministerio de Minas y Energía, Bases para un plan energético nacional, Bogotá, October 1977. Colombia, Ministerio de Desarrollo Económico, Superintendencia de Industria y Comercio, Secretaría Técnica del Comité de Regalías, Recuento de las labores del Comité de Regalías de Colombia, 1967-1977, Bogotá, 1977.

### III. FOREIGN PARTICIPATION IN THE PETROLEUM SECTOR

Commercially exploitable petroleum reserves were discovered in Colombia in 1916 and Colombian crude entered international commerce about 1926. In 1950, Colombia was the tenth largest producer of crude petroleum accounting for 0.9% of world production. By 1970, Colombia's position had fallen to nineteenth and their share of world crude production had declined to 0.5% (see annex 7). Figure 1 offers a concise overview of the petroleum sector in Colombia during the 1921-1976 period. After fifty years of significant exports of crude petroleum, Colombia has become a net importer since 1976. Given the tenfold increase in international petroleum prices since the so-called OPEC petroleum crisis, this puts severe strains not only on the Colombian balance of payments but also on the recently established petrochemical industry. In this manner the situation of the petroleum sector puts in question the very nature and strategy of Colombian industrialization.

The petroleum sector in Colombia has traditionally been the preserve of foreign companies. The State petroleum company - Ecopetrol - was established in 1943 but did not become independently effective until the 1960s. The principal concession (de Mares), operated since the 1920s by an affiliate of the US-based Exxon group (then Standard Oil of New Jersey), reverted to the State in 1951 to be administrated by Ecopetrol. However, until 1961 Ecopetrol contracted another Exxon subsidiary - Intercol - to operate the existing refinery. Private local capital has played a minor role in the sector. Information assembled for selected years of the 1930-1974 period indicates aspects of the foreign participation in the petroleum sector. Tables 9 to 15 synthesize this collected information.

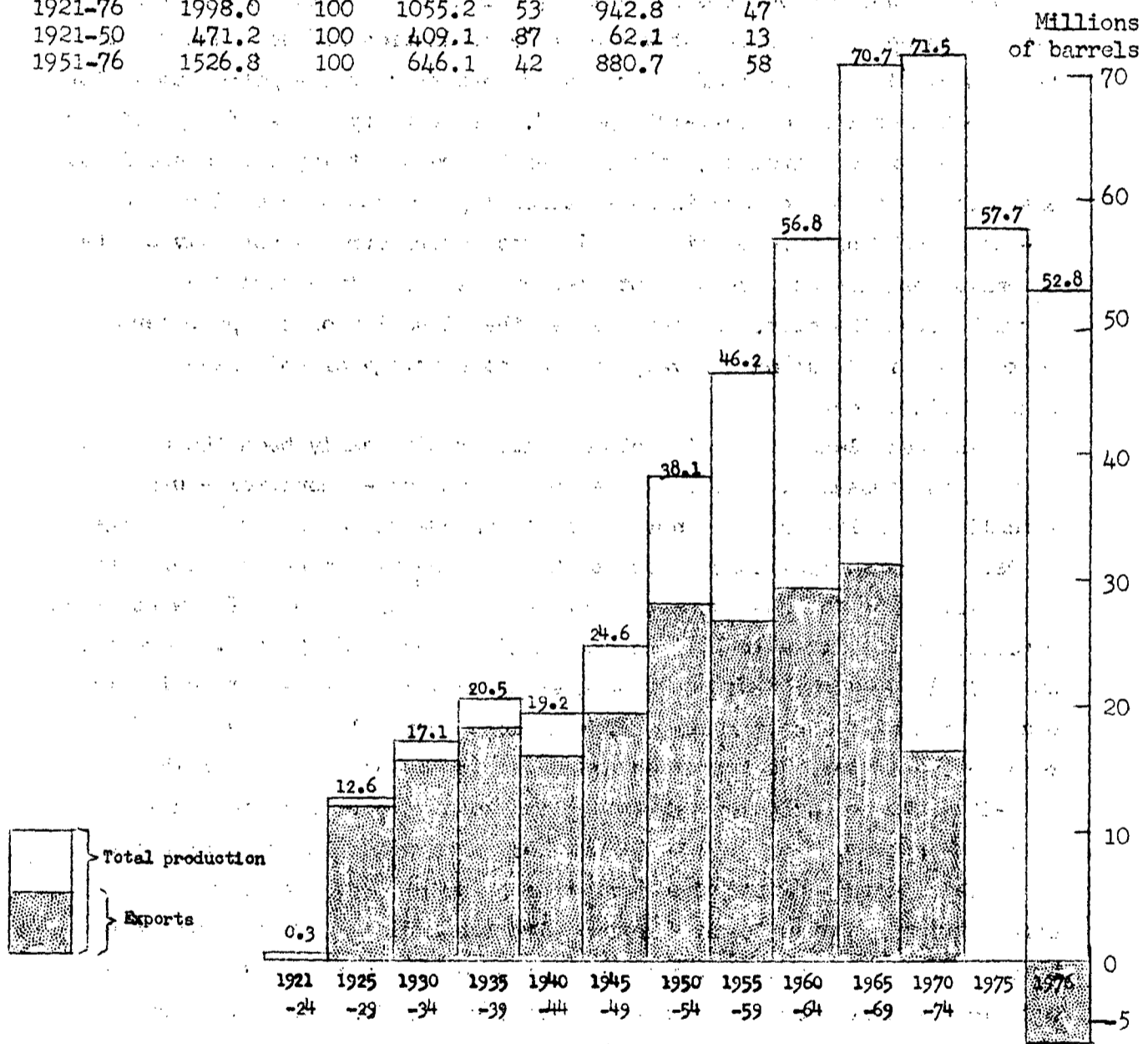
These data indicate that just four principal transnational corporations - Exxon, Texaco, Texaco with Mobil Oil and Royal Dutch Shell - have accounted for the lion's share of the foreign participation in the petroleum sector. By all measures - total concessions for petroleum exploration and exploitation, production and export of crude petroleum, production and export of refined products and production of liquid natural gas - these four transnational corporations are the dominant foreign participants.

/Figure 1

Figure 1

COLOMBIA: PRODUCTION AND EXPORTS OF CRUDE PETROLEUM, 1921-76  
(Annual averages by period and millions of barrels)

| Period  | Production | %   | Exports | %  | Apparent consumption | %  |
|---------|------------|-----|---------|----|----------------------|----|
| 1921-76 | 1998.0     | 100 | 1055.2  | 53 | 942.8                | 47 |
| 1921-50 | 471.2      | 100 | 409.1   | 87 | 62.1                 | 13 |
| 1951-76 | 1526.8     | 100 | 646.1   | 42 | 880.7                | 58 |



Source: Colombia, Ministerio de Minas y Energía, Bases para un plan energético nacional, Bogotá, Octubre de 1977.

Table 9

COLOMBIA: TOTAL CONCESSIONS FOR PETROLEUM EXPLORATION, a/  
BY COMPANY, SELECTED YEARS, 1930-1974

| Year | Total concessions      |                      |             | Exxon<br>group<br>(%) | Texaco<br>group<br>(%) | Texaco-<br>Mobil<br>Oil<br>group<br>(%) | Shell<br>group<br>(%) | All<br>others<br>(%) |
|------|------------------------|----------------------|-------------|-----------------------|------------------------|---|-----------------------|----------------------|
|      | Number of<br>contracts | Millions<br>hectares | Area<br>(%) |                       |                        |   |                       |                      |
| 1930 | n.d.                   | n.d.                 | 100         | n.d.                  | n.d.                   | n.d.                                    | n.d.                  | n.d.                 |
| 1940 | 23                     | 1.6                  | 100         | 31.6                  | -                      | 11.5                                    | 23.7                  | 32.5                 |
| 1951 | 13                     | 1.4                  | 100         | 36.7                  | 15.0                   | 13.4                                    | 9.1                   | 25.8                 |
| 1960 | 60                     | 4.5                  | 100         | 20.7                  | 31.9                   | 8.0                                     | 21.9                  | 17.5                 |
| 1965 | 50                     | 2.3                  | 100         | 17.4                  | 71.9                   | 5.4                                     | -                     | 5.3                  |
| 1971 | 59                     | 2.7                  | 100         | 7.0                   | 32.8                   | 12.3                                    | 5.5                   | 42.4                 |
| 1974 | 43                     | 2.4                  | 100         | 10.2                  | 42.1                   | -                                       | -                     | 47.7                 |

Source: Table 15 lists the sources utilized for tables 9 to 15.

a/ Excluding the operations of ECOPETROL.

Table 10

COLOMBIA: TOTAL CONCESSIONS FOR PETROLEUM EXPLOITATION, BY COMPANY, SELECTED YEARS, 1930-1974.

| Year | Total concessions   |                   |          | Eco-petrol (%) | Exxon group (%) | Texaco group (%) | Texaco Mobil-Oil (%) | Shell group (%) | All others (%) |
|------|---------------------|-------------------|----------|----------------|-----------------|------------------|----------------------|-----------------|----------------|
|      | Number of contracts | Millions hectares | Area (%) |                |                 |                  |                      |                 |                |
| 1930 | n.d.                | n.d.              | n.d.     | -              | n.d.            | n.d.             | n.d.                 | n.d.            | n.d.           |
| 1940 | n.d.                | n.d.              | n.d.     | -              | n.d.            | n.d.             | n.d.                 | n.d.            | n.d.           |
| 1951 | 7                   | 0.9               | 100      | 52.1           | -               | 17.9             | 19.0                 | 9.7             | 1.2            |
| 1960 | 16                  | 1.3               | 100      | 38.5           | 4.5             | 18.2             | 22.0                 | 12.5            | 3.8            |
| 1965 | 25                  | 1.7               | 100      | 30.2           | 17.1            | 16.2             | 16.8                 | 8.7             | 11.0           |
| 1971 | 31                  | 2.0               | 100      | 25.4           | 9.1             | 31.6             | 14.2                 | 7.8             | 11.9           |
| 1974 | 29                  | 1.8               | 100      | 27.7           | 9.9             | 28.1             | 15.5                 | 8.0             | 11.8           |

Source: Table 15 lists the sources utilized for tables 9 to 15.



Table 11

COLOMBIA: PRODUCTION OF CRUDE PETROLEUM, BY COMPANY,  
SELECTED YEARS, 1930-1974  
(Millions of barrels and percentage)

| Year | Total production | Ecopetrol (%)      | Exxon group (%) | Texaco group (%)   | Texaco Mobil Oil (%) | Shell group (%) | All others (%)     |
|------|------------------|--------------------|-----------------|--------------------|----------------------|-----------------|--------------------|
| 1930 | 20.3             | -                  | 100.0           | -                  | -                    | -               | -                  |
| 1940 | 25.6             | -                  | 83.4            | -                  | 16.0                 | -               | 0.6                |
| 1951 | 38.4             | 35.9               | -               | 1.3                | 26.3                 | 35.2            | 1.3                |
| 1960 | 55.8             | 18.1               | ...             | 26.3               | 29.9                 | 25.3            | 0.4                |
| 1965 | 73.2             | 22.6 <sub>a/</sub> | 15.8            | 15.3               | 14.5                 | 14.8            | 17.0 <sub>b/</sub> |
| 1971 | 78.5             | 16.3 <sub>a/</sub> | 10.8            | 43.7               | 7.5                  | 8.4             | 13.3 <sub>b/</sub> |
| 1974 | 60.6             | 19.6 <sub>a/</sub> | 11.6            | 38.3 <sub>c/</sub> | 8.3 <sub>d/</sub>    | 8.4             | 13.8 <sub>b/</sub> |

Source: Table 15 lists the sources utilized for tables 9 to 15.

a/ 9.0, 4.1 and 3.5%, for the years 1965, 1971 and 1974, respectively, was produced by ECOPETROL in association with Cities Service.

b/ 15.4, 11.7 and 9.9%, for the years 1965, 1971 and 1974, respectively, was produced by the Richmond Petroleum Company.

c/ 6.6% corresponds to ECOPETROL through a contract of association.

d/ 4.2% corresponds to ECOPETROL through a contract of association.

Table 12

COLOMBIA: PRODUCTION OF REFINED PETROLEUM PRODUCTS, BY REFINERY,  
SELECTED YEARS, 1930-1974  
(Millions of barrels and percentage)

| Year | Total<br>produc-<br>tion | Ecopetrol<br>(%) | Exxon<br>group<br>(%) | All<br>others<br>(%) |
|------|--------------------------|------------------|-----------------------|----------------------|
| 1930 | 1.2                      | -                | 100.0                 | -                    |
| 1940 | 3.5                      | -                | 100.0                 | -                    |
| 1951 | 9.9                      | 97.0             | -                     | 3.0                  |
| 1960 | 26.5                     | 50.2             | 44.9                  | 4.9                  |
| 1965 | 34.6                     | 48.8             | 44.2                  | 6.9                  |
| 1971 | 55.5                     | 60.9             | 35.9                  | 3.2                  |
| 1974 | 61.7                     | 93.5             | a/                    | 6.5                  |

Source: Table 15 lists the sources utilized for tables 9 to 15.

a/ Included in figure for 'All others'.

Table 13

COLOMBIA: EXPORTS OF CRUDE PETROLEUM, BY COMPANY, SELECTED YEARS, 1930-1974

(Millions of barrels and percentage)

| Year | Total exports |     | Eco-<br>petrol<br>(%) | Exxon<br>group | Texaco<br>group | Texaco<br>Mobil<br>Oil<br>(%) | Shell<br>group | All<br>others |
|------|---------------|-----|-----------------------|----------------|-----------------|-------------------------------|----------------|---------------|
|      | Barrels       | %   |                       |                |                 |                               |                |               |
| 1930 | 19.4          | 100 | -                     | 100.0          | -               | -                             | -              | -             |
| 1940 | 22.8          | 100 | -                     | 100.0          | -               | -                             | -              | -             |
| 1951 | 32.2          | 100 | 27.0                  | -              | -               | 29.5                          | 42.2           | 1.2           |
| 1960 | 31.3          | 100 | -                     | -              | 3.3             | 50.8                          | 45.0           | -             |
| 1965 | 40.7          | 100 | 9.1                   | 10.6           | 14.5            | 19.9                          | 22.1           | 23.6          |
| 1971 | 25.4          | 100 | -                     | -              | 34.6            | 2.8                           | -              | 1.2           |
| 1974 | 0.5           | 100 | -                     | -              | 100.0           | -                             | -              | -             |

Source: Table 15 lists the sources utilized for tables 9 to 15.

Table 14

COLOMBIA: EXPORTS OF REFINED PETROLEUM PRODUCTS, BY REFINERY,  
SELECTED YEARS, 1930-1974

(Millions of barrels, millions of dollars  
and percentage)

| Year | Total exports |       | Ecopetrol           |                     | Exxon group |           |
|------|---------------|-------|---------------------|---------------------|-------------|-----------|
|      | Volume        | Value | Volume (%)          | Value (%)           | Volume (%)  | Value (%) |
| 1930 | -             | -     | -                   | -                   | -           | -         |
| 1940 | -             | -     | -                   | -                   | -           | -         |
| 1951 | 1.5           | n.d.  | 100.0 <sub>a/</sub> | 100.0 <sub>a/</sub> | -           | -         |
| 1960 | 4.1           | 3.3   | 34.1 <sub>a/</sub>  | 38.5 <sub>a/</sub>  | 65.9        | 61.4      |
| 1965 | 5.2           | 3.6   | 65.4                | 58.1                | 34.6        | 41.9      |
| 1971 | 11.7          | 23.4  | 85.5                | 83.3                | 14.5        | 16.7      |
| 1974 | 10.2          | 100.5 | 97.1                | 96.8                | 3.0         | 3.2       |

Source: Table 15 lists the sources utilized for tables 9 to 15.

a/ After 1951 and until 1961 the Exxon (then Standard Oil N.J.) affiliate Intercol handled the exports from Ecopetrol's Barranca refinery, under contract. Intercol had begun exporting from that refinery in 1948 when it was the property of Tropical Oil Co., another affiliate of the Exxon group in Colombia.

Table 15

COLOMBIA: PRODUCTION OF LIQUID NATURAL GAS, BY COMPANY,  
SELECTED YEARS, 1960-1974.

(Millions of gallons and percentage)

| Year | Total production |     | Ecopetrol (%) | Exxon group (%) | Texaco group (%) | All others (%) |
|------|------------------|-----|---------------|-----------------|------------------|----------------|
|      | Gallons          | %   |               |                 |                  |                |
| 1960 | 22.1             | 100 | 67.0          | 8.1             | 24.8             | -              |
| 1965 | 49.5             | 100 | 43.6          | 18.2            | 31.1             | 7.1            |
| 1971 | 110.9            | 100 | 57.6          | 13.4            | 9.7              | 20.1           |
| 1974 | 123.2            | 100 | 60.0          | 14.5            | 9.6              | 15.9           |

Sources: Colombia, Ministerio de Minas y Energía, Memoria, Bogotá, various. United States, Bureau of Mines, Minerals Yearbook, Volume III, Area Reports: International, Washington, D.C., various. United States, Department of Commerce, Investment in Colombia: conditions and outlook for United States investors, Washington, D.C., 1953.

/Excepting Ecopetrol's

Excepting Ecopetrol's role in the later period in the production and export of refined products and to a lesser extent in the production of liquid natural gas, these four transnational corporations have been the dominant participants in the petroleum sector. Furthermore, a close examination of the information presented indicates that the corporations in question demonstrated varying degrees of dominance or sectoral hegemony at distinct times over the 1930-1976 period.

The Exxon affiliate - Tropical Oil Co. - was clearly the leading foreign enterprise in the petroleum sector during the early period, 1921-1951. This enterprise, operating in the de Mares concession before it reverted back to the State in 1951, produced 412.5 millions of barrels of crude petroleum, exporting 343.9 millions of barrels. These quantities represent about 20% of total crude production and 33% of total crude exports during the development of the petroleum sector in Colombia to 1976. Before the Exxon affiliate's refinery was taken over by Ecopetrol in 1951 it had a practical monopoly on crude refining in Colombia. Even after this State action, Exxon adapted by establishing other subsidiaries and affiliates to continue its exploration, production, refining and marketing functions. It had a contractual relationship with Ecopetrol to expand and operate its previously-owned refinery and to provide technical assistance to Ecopetrol in the exploitation of crude petroleum. Exxon maintained its control of its pipelines over the recent period, until 1974, when part of the pipeline system and another refinery were bought out by Ecopetrol at a cost of \$ 35 millions. Although Exxon's role in the petroleum sector has been reduced, its manner of adaptation has created for it two of the principal foreign industrial enterprises in Colombia, as shall be shown in the section on the manufacturing sector.

In the later period of the development of the petroleum sector, after 1951, Texaco Inc. alone and in a joint venture with Mobil Oil has proved to be the dominant foreign enterprise in the petroleum sector of Colombia. With Socony Vacuum Co., the predecessor of Mobil Oil, Texaco Inc. discovered petroleum in the Barco concession in 1933. In 1939 this joint venture established a small refinery at Petrólea. Texaco Inc. went on to make important discoveries in the Cicuco, Violo and other concessions

/(especially in

(especially in the Orito region). Texaco Inc. took full advantage of its private (e.g. not State 1/) property concession in the Guaguaqui-Teran concession. Texaco Inc. established an impressive network of pipelines to service its productive wells as well as developing important forward linkages to the manufacturing sector via the petrochemical industry. When Texaco Inc.'s principal concessions (outside of the Orito region and the private property at Guaguaqui-Teran) reverted to the State, they were left with other ongoing facilities, in both the petroleum and manufacturing sectors, to continue their participation in Colombian development. In spite of the challenge put to it by Ecopetrol in the 1969-1975 period, Texaco Inc. carried on in Colombia in 1972; Ecopetrol bought out Mobil Oil's rights in the major concessions of the Texaco-Mobil Oil joint venture, including part of the pipeline system. In 1973, Ecopetrol bought into the Texaco (50%), Cayman Corp. (25%) venture in Petrolera del Río. In July 1975, the Texaco part of the Texaco-Mobil Oil (50% Ecopetrol since 1972) venture reverted to the State. In spite of these occurrences, the Texaco Inc. affiliate in the petrochemical industry grew to be the eleventh largest industrial enterprise in Colombia, ranked by assets in 1977.

The role of the Royal Dutch Shell group in Colombia is important, although diminished in the face of the tenacious activities of Exxon and Texaco Inc. After years of exploration, the Shell group discovered a major reserve of petroleum at the Yondó concession, in 1941. Further discoveries were made at the Cantagallo, Cristalina and San Pablo concessions. The Shell group neither established a major network of pipelines nor integrated into the industrial sector; thus, when Ecopetrol purchased its principal subsidiary in 1974, the Shell group more or less disappeared from the petroleum sector in Colombia. (See annexes 8 to 11.)

In order to fully appreciate the nature of the foreign participation in the petroleum sector in Colombia it is necessary to clarify some

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1/ In general, subsoil mineral rights in Colombia belong to the State, which may grant concessions for their exploitation. However, in some particular cases, such as the Guaguaqui-Teran property, private rights to subsoil minerals are maintained if a rather rigorous proof of long term historical property rights is allowed by the Colombian courts.

/aspects of

aspects of the role undertaken by Ecopetrol and the situation in the sector in the early 1970s. Ecopetrol was created by Law 165 of 1948 to administrate the de Mares concession which reverted to the State in 1951. Given the political uncertainties surrounding this clash of national and transnational interest, Ecopetrol was created under a cloud of mistrust and non-confidence. Although it was foreseen that local private capital would participate in the Ecopetrol venture it chose not to. In the face of these circumstances and the huge task which it confronted, Ecopetrol undertook a very cautious policy in the petroleum sector, in the 1951-1969 period, with regard to the existing foreign participants.<sup>1/</sup> Rather, Ecopetrol concentrated on managing well the facilities it operated and rationalizing that part of the sector under its control. To do this Ecopetrol contracted the previous owners of the de Mares concession (Exxon) to modernize the refinery and train Ecopetrol personnel. It was only in 1962 that Ecopetrol began to operate independently the refinery. Over the 1951-1969 period, Ecopetrol increased its refining capacity five-fold widening the band of products produced in Colombia. It increased the proven reserves of the de Mares concession by about three-fold by 1961. A new network of pipelines leading to the central zone (and not to the ports) was established. A new gas plant was set up. Finally, the basis for a petrochemical industry was laid over this period.

With regard to the high level of foreign participation in the sector, little was effectively changed during the 1951-1969 period. Ecopetrol entered into some contacts of association with some transnational corporations and individual foreign capitalists but these always represented a small part of the total contracts for exploration. Ecopetrol did manage to have Law 10 of 1961 passed which effectively increased the role played by Ecopetrol in the administration of concessions. These minor changes over the 18 year period indicate the cautious nature of Ecopetrol's policy with regard to foreign participation in the sector.

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<sup>1/</sup> Perhaps the most obvious example of this is the very low levels of payments made by the foreign companies, to the State, for the use of its petroleum. See annexes 12 and 13.



By 1969 Ecopetrol was in a quandry. The level of exploration had been falling precipitously and there had been no major new discoveries since Putumayo in 1963 (see annex 14). In the meantime national consumption was rocketing (see figure 1) and Ecopetrol's control over promising concessions was still very limited. Thus, in 1969, powerful new legislation was introduced to back up Ecopetrol's role in the petroleum sector. New property rules limiting private property were established. Ecopetrol was given the power to declare any area a national reserve to be explored and administrated by Ecopetrol (in association with foreign participants or not). This legislation and the increased role for Ecopetrol began a second period in the development of the petroleum sector in Colombia.

In the 1969-1974 period Ecopetrol showed new confidence in facing a problem it had left for so long. During these five years Ecopetrol purchased Mobil's rights to three concessions in the Texaco-Mobil group's operation; Gulf's rights in the Putumayo concession along with some pipelines; the principal subsidiary of the Royal Dutch Shell group including its rights to five concessions; Exxon's principal refinery and some of its pipeline interests, as well as other pipelines. All this gave Ecopetrol the weight within the petroleum and the effectiveness in the implementation of national petroleum policy which it had lacked in the 1951-1969 period. In addition to these changes, in 1974, Colombia abolished the use of contracts of concession for future petroleum exploration replacing them by contracts of association. By the end of 1974, 68.8% of the area contracted for exploration was via association with Ecopetrol. The general nature of the contract of association with Ecopetrol eventually was that the associate undertook 66.6% of the capital investment in the exploration for crude and if a commercially viable discovery was made the production was split 60-40 between Ecopetrol and the associate. In sum, the petroleum sector was effectively transformed during the 1969-1974 period from that of a foreign preserve to being mainly under national control.

In spite of Ecopetrol's success in imposing itself on the petroleum sector in the face of resistance by the dominant foreign participants, the basic problem affecting the sector - the low level of exploration and the

lack of

lack of significant new finds - worsened. The traditionally low internal prices for petroleum and its derivatives acted as a disincentive for major exploration efforts during the late 1960s. With rapidly rising national consumption of crude petroleum the export possibilities of the principal producers began to decline severely after 1965, meaning that they would have to sell at the internal price levels. Ecopetrol's new assertiveness after 1969 caused a further decline in the number of exploratory wells drilled. Finally, by the time the so-called OPEC petroleum crisis was in full fury the average differential between internal and international petroleum product prices was at 9.3:1, as table 16 points out. A price differential of this magnitude made petroleum exploration in Colombia completely uninteresting for the major transnational corporations. It was shortly after this point in time that Colombia became a net importer of crude petroleum and its whole industrial strategy, especially the petrochemical development, was put in doubt.

Table 16

COLOMBIA: PRICES (AT REFINERY) FOR IMPORTED AND LOCAL PETROLEUM PRODUCTS, AS OF JUNE 1974

(US dollars per barrel and ratio)

| Item                    | Import price<br>(1) | Internal price<br>(2) | Price ratio<br>1:2<br>(3) |
|-------------------------|---------------------|-----------------------|---------------------------|
| Crude petroleum 29° API | 12.59               | 1.18                  | 10.7                      |
| Motor gasoline          | 18.66               | 2.03                  | 9.2                       |
| Extra gasoline          | 20.16               | 2.62                  | 7.7                       |
| Liquid gas              | 19.34               | 0.90                  | 21.5                      |
| White gasoline          | 17.85               | 1.46                  | 12.2                      |
| Kerosene                | 17.29               | 2.62                  | 6.6                       |
| Diesel fuel             | 13.35               | 2.08                  | 6.4                       |
| <u>Average</u>          | <u>17.03</u>        | <u>1.84</u>           | <u>9.3</u>                |

(US\$ 1 = Col. \$ 27.1)

Source: Colombia, Ministerio de Minas y Energía, Memoria 1974, Bogotá, 1975.

/If it

If it is possible to summarize in a paragraph the Colombian experience with foreign participation in the petroleum sector, the following would be included. For the first thirty years, at least, Colombia had a long experience of foreign domination of the sector which was effectively an enclave activity (with pipelines from the fields directly to the ports). During the first period (1951-1969) of the development of the State petroleum enterprise little was done to alter the foreign dominance in the sector, although a more direct relationship was established between petroleum resources and local developmental needs as measured by much increased local consumption of national resources. Over the period of development of the petroleum sector, four transnational corporations - Exxon, Texaco, Mobil and Royal Dutch Shell - dominated, above all else, the production, transport and export of crude petroleum. A substantial proportion (53%) of Colombia's production in the 1921-1976 was exported, mainly to the United States. In the 1969-1975 period, Ecopetrol challenged the foreign domination in the sector. Of the four principal transnational corporations, two (Mobil and Royal Dutch Shell) effectively left Colombia.<sup>1/</sup> The other two (Exxon and Texaco), carried on with a reduced role in the petroleum sector yet maintaining a significant position in the petrochemical industry. The State petroleum enterprise gained effective control of the petroleum sector as reserves ran down, consumption increased and Colombia became a net importer of crude petroleum. At the same time, skyrocketing international oil prices caused havoc for the internal price system for petroleum products in Colombia. Exploration for new crude reserves continued at an extremely low level and with little success. In many ways, because of Ecopetrol's initial over-caution, an inappropriate internal pricing system and transnational corporate resistance; the legacy of foreign participation in the petroleum sector has been that, in more than figurative terms, Ecopetrol has been left holding the (almost empty) barrel.

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<sup>1/</sup> In 1978, through the acquisition of Container Corporation (U.S.), Mobil reappeared in the industrial sector as owner of the largest foreign enterprise in Colombia (1968).

/With regard

With regard to Colombia's net benefits from the development of its petroleum sector by foreign companies, few really 'hard' facts are available. Without doubt, the foreign exchange earnings from this major export were important to the Colombian development effort. Nevertheless, given the low levels of taxation on the foreign companies, their low levels of employment, their increasingly poorer exploration effort, the near-depletion of proven petroleum reserves and the exchange problem created by OPEC-priced petroleum imports, one has the elements by which to question the local benefits derived from fifty years of foreign participation in the Colombian petroleum sector.

PART I

IV. FOREIGN PARTICIPATION IN THE MANUFACTURING SECTOR

As has been noted, the manufacturing sector has been becoming the motor of Colombian development. Its share of the gross domestic product increased from around 8 to over 20% during the 1925-1974 period. It grew at a compound annual rate of almost 7% while the economy as a whole moved along at under 5%. Certain industrial divisions demonstrated remarkable growth during the 1953-1974 period. The basic metals and metalworking industries (15.4%), the paper industry (13.2%) and the chemical industry (12.4%) all increased at impressive compound annual rates of growth. By 1974, these dynamic industries accounted for over 40% of manufactured output. In sum, a few manufacturing industries were at the forefront of the Colombian process of industrialization and development.

At the same time as these notable developments were taking place in the manufacturing sector, important changes in the foreign participation in that sector also occurred. Table 17 illustrates the fact that, although the stock of direct foreign investment in the industrial sector in the 1950-1975 interim grew at the low rate of 1.1% annually (constant values), United States direct investment in the sector increased at a rate roughly six times superior. Over the period, the United States share of the stock of direct foreign investment in manufacturing went from 19% in 1950 to 89.3% in 1975. Effectively, foreign participation in the manufacturing sector had been Americanized.

Over the more recent period, 1967-1976, the stock of direct foreign investment in the sector has been, in real terms, undergoing decline which indicates that the major part of the growth of direct foreign investment took place in the 1950-1966 period. Nevertheless, table 18 points out that, in spite of the real rate of decline (0.7%) of the stock of direct foreign investment in the more recent period, some important changes were occurring. The principal changes were the continued growth of the metalworking sector although at a very low rate and the rapid growth in the stock of foreign investment in the wood industry, starting from a small base. Except for the case of the metalworking industry, foreign capital showed signs of decline in the more dynamic of the manufacturing industries.

/Table 17

Table 17  
 COLOMBIA: THE STOCK OF DIRECT FOREIGN INVESTMENT IN THE  
 MANUFACTURING SECTOR, 1950-1975  
 (Millions of US dollars and percentage)

| Year                                     | Stock of total DFI |                             | Stock of<br>US DFI          | $\frac{3}{2} \times 100$ |
|--|--------------------|-----------------------------|-----------------------------|--------------------------|
|  | Nominal<br>(1)     | Constant<br>(1970)a/<br>(2) | Constant<br>(1970)a/<br>(3) |                          |
| 1950                                     | 131.9              | 221.6                       | 42.1                        | 19.0                     |
| 1960                                     | 215.6              | 272.5                       | 117.9                       | 43.3                     |
| 1965                                     | 274.9              | 336.9                       | 231.0                       | 68.6                     |
| 1970                                     | 317.2              | 317.2                       | 237.3                       | 74.8                     |
| 1975                                     | 427.7              | 295.2                       | 263.7                       | 89.3                     |
| Compound<br>annual<br>rates of<br>growth | 1950-1975          | 1.1%                        | 6.9%                        |                          |
|  | 1950-1965          | 2.7%                        | 11.2%                       |                          |
|  | 1965-1975          | -1.2%                       | 1.2%                        |                          |

Source: Tables 4 and 6.

a/ See annex 1.

Table 18

COLOMBIA: STOCK DIRECT FOREIGN INVESTMENT IN THE MANUFACTURING  
SECTOR, BY INDUSTRIAL DIVISION, 1967-1976  
(Millions of dollars and percentage)

| ISIC | Description                    | Stock of DFI to 1967 |              | Stock of DFI to 1976 |                   | Compound annual growth rate 1967-1976 (%) |             |
|------|--------------------------------|----------------------|--------------|----------------------|-------------------|---|-------------|
|      |                                | Nominal value        | %            | Nominal value        | Constant (1967) % |   |             |
| 31   | Food industry                  | 30.0                 | 9.7          | 43.8                 | 25.4              | 9.6                                       | -1.7        |
| 32   | Textile industry               | 17.7                 | 5.7          | 27.6                 | 16.0              | 6.1                                       | -1.0        |
| 33   | Wood industry                  | 1.1                  | 0.4          | 5.9                  | 3.4               | 1.3                                       | 12.0        |
| 34   | Paper industry                 | 39.8                 | 12.8         | 45.8                 | 26.6              | 10.1                                      | -4.1        |
| 35   | Chemical industry              | 139.6                | 44.9         | 195.6                | 113.4             | 43.1                                      | -2.1        |
| 36   | Non-metallic mineral products  | 23.5                 | 7.6          | 31.2                 | 18.1              | 6.9                                       | -2.6        |
| 37   | Basic metal industries         | 8.0                  | 2.6          | 10.5                 | 6.1               | 2.3                                       | -2.7        |
| 38   | Metalworking industry          | 48.6                 | 15.6         | 89.9                 | 52.1              | 19.8                                      | 0.7         |
| 39   | Other manufacturing industries | 2.6                  | 0.8          | 3.5                  | 2.0               | 0.7                                       | -2.7        |
|      | <b>Total</b>                   | <b>310.8</b>         | <b>100.0</b> | <b>453.9</b>         | <b>263.1</b>      | <b>100.0</b>                              | <b>-1.7</b> |

Source: Colombia, Banco de la República, Oficina de Cambios, Registro de inversiones extranjeras en Colombia, 1967-1976, Bogotá, December 1977.

Several studies by official organizations - Banco de la República, Planeación Nacional and the Comité de Regalías - have been carried out in Colombia, focusing on diverse aspects of the phenomenon of foreign participation in the manufacturing sector (see bibliography). Although each of these studies has its individual value, differences of methodology, coverage of the samples, time periods and basic definitions reduce their comparability and, therefore, overall worth for the purposes of this study. The most comprehensive analysis undertaken has been that of the Banco de la República which, in 1974, covered 421 establishments with foreign capital participation accounting for 95% of the stock of direct foreign investment in the manufacturing sector in that year. The only major shortcoming of this study is the inability to distinguish those enterprises with 100% foreign capital from those with less than 50% (or even 1%). In this sense, it may be said that the data from that study presented in table 19 presents the 'maximal' view of foreign participation in the manufacturing sector of Colombia.

At the most general level, it may be maintained that firms with foreign capital accounted for 43.4% of manufactured production, 50.1% of exports of manufactures (which represented only 6.5% of their production) and 28.3% of jobs in the manufacturing sector in 1974. With regard to industrial divisions, over 70% of the stock of registered foreign capital in the sector is found in the chemical, metalworking and paper industries. These three industrial divisions, similarly, included about 70% of the number of firms with foreign capital. Within the three mentioned industries, firms with foreign capital created 59.9% of the total output, made 71% of the total exports (which represented only 4.8% of their production), and provided 35.2% of the total employment. In other words, the foreign participation in the manufacturing sector is concentrated in those same industries which have shown the greatest relative dynamism in the 1950-1975 period.

/Table 19



Table 19

COLOMBIA: ASPECTS OF THE FOREIGN PARTICIPATION IN THE  
MANUFACTURING SECTOR, 1974

A. Millions of US dollars and percentage

| ISIC  | Description                   | Regis-<br>tered<br>DFI | Firms<br>with<br>DFI | Total production |             |                      |             |                          |
|-------|-------------------------------|------------------------|----------------------|------------------|-------------|----------------------|-------------|--------------------------|
|       |                               |                        |                      | All<br>firms     | %           | Firms<br>with<br>DFI | %           | $\frac{5}{3} \times 100$ |
|       |                               | (1)                    | (2)                  | (3)              | (4)         | (5)                  | (6)         | (7)                      |
| 31    | <u>Food industry, etc.</u>    | <u>35.7</u>            | <u>38</u>            | <u>1 946.2</u>   | <u>31.6</u> | <u>319.9</u>         | <u>12.0</u> | <u>16.4</u>              |
| 311-2 | Food products                 |                        |                      | 1 379.2          | 22.4        | 304.5                | 11.4        | 22.0                     |
| 313   | Beverages                     |                        |                      | 446.5            | 7.2         | 14.1                 | 0.5         | 3.1                      |
| 314   | Tobacco                       |                        |                      | 120.6            | 2.0         | 1.4                  | 0.1         | 1.1                      |
| 32    | <u>Textile industry, etc.</u> | <u>21.9</u>            | <u>23</u>            | <u>1 138.1</u>   | <u>18.5</u> | <u>571.4</u>         | <u>21.4</u> | <u>50.2</u>              |
| 321   | Textiles                      |                        |                      | 865.1            | 14.1        | 535.9                | 20.1        | 61.9                     |
| 322   | Wearing apparel               |                        |                      | 178.0            | 2.9         | 16.7                 | 0.6         | 9.3                      |
| 323   | Leather goods                 |                        |                      | 64.2             | 1.0         | 11.8                 | 0.4         | 18.4                     |
| 324   | Footwear                      |                        |                      | 30.8             | 0.5         | 7.0                  | 0.3         | 22.7                     |
| 33    | <u>Wood industry</u>          | <u>7.6</u>             | <u>9</u>             | <u>81.0</u>      | <u>1.3</u>  | <u>18.8</u>          | <u>0.7</u>  | <u>23.2</u>              |
| 331   | Wood and its products         |                        |                      | 50.6             | 0.8         | 17.0                 | 0.6         | 33.5                     |
| 332   | Furniture, excl. metal        |                        |                      | 30.4             | 0.5         | 1.8                  | 0.1         | 6.0                      |
| 34    | <u>Paper industry</u>         | <u>44.5</u>            | <u>23</u>            | <u>407.1</u>     | <u>6.6</u>  | <u>227.2</u>         | <u>8.5</u>  | <u>55.8</u>              |
| 341   | Paper and its products        |                        |                      | 276.5            | 4.5         | 219.4                | 8.2         | 79.3                     |
| 342   | Printing and publishing       |                        |                      | 130.6            | 2.1         | 7.8                  | 0.3         | 6.0                      |
| 35    | <u>Chemical industry</u>      | <u>182.5</u>           | <u>144</u>           | <u>1 231.9</u>   | <u>20.0</u> | <u>768.8</u>         | <u>28.8</u> | <u>62.4</u>              |
| 351   | Ind. chemical substances      |                        |                      | 407.8            | 6.6         | 324.3                | 12.1        | 79.5                     |
| 352   | Other chemical products       |                        |                      | 395.0            | 6.4         | 238.1                | 8.9         | 60.2                     |
| 353   | Petroleum refineries          |                        |                      | 165.4            | 2.7         | 36.8                 | 1.4         | 22.0                     |
| 354   | Derivatives; petroleum/coal   |                        |                      | 2.2              | 0.0         | 0.2                  | 0.0         | 9.2                      |
| 355   | Rubber products               |                        |                      | 132.8            | 2.2         | 109.0                | 4.1         | 82.0                     |
| 356   | Plastic products              |                        |                      | 128.8            | 2.1         | 60.9                 | 2.2         | 47.2                     |
| 36    | <u>Non-met. mineral prod.</u> | <u>28.7</u>            | <u>18</u>            | <u>246.9</u>     | <u>4.0</u>  | <u>144.3</u>         | <u>5.4</u>  | <u>58.4</u>              |
| 361   | Clay/porcelain products       |                        |                      | 22.0             | 0.4         | 3.7                  | 0.1         | 16.6                     |
| 362   | Glass and its products        |                        |                      | 48.1             | 0.8         | 40.4                 | 1.5         | 84.0                     |
| 369   | Other products                |                        |                      | 176.8            | 2.9         | 100.2                | 3.8         | 56.6                     |

/Table 19 (cont.1)

The relative 'foreignization' of industrial divisions or groups can be demonstrated by the calculation  $\frac{VP\ dfi(x)}{VP(x)} \times 100$ , which indicates the percentage of the total value of the production of industrial division/group x which is produced by firms with foreign capital. This measure corresponds to column 7 of table 19. However, this measure of foreignization, by itself, does not indicate the 'importance' of foreign participation. For example, the glass and its products group (ISIC 362) is highly foreignized yet it represents only a very small part of the total value of manufactured production. On the other hand, the iron and steel group (ISIC 371) is much less foreignized, yet the firms with foreign capital produce twice as much as those firms with foreign capital in the glass and its products group. For this reason it is necessary to 'weight' the foreignization measure in order to get an adequate ranking of the importance of foreign participation in the manufacturing sector. The weight employed here is the calculation  $\frac{VP\ dfi(x)}{VP\ total}$ , which is the measure of the value of the production of firms with foreign capital for industrial division/group x relative to the total value of production of all firms in the manufacturing sector as a whole. The results of these calculations are presented in table 20.

The ranking indicated in table 20 reinforces the previous conclusion that foreign participation in the manufacturing sector is concentrated in the chemical, metalworking and paper industries. The textile industry is also important in this respect, however, statistical difficulties require that one discount, to a degree, the importance of foreign participation in that sector. The more significant aspect of table 20 is that it allows one, at the level of industrial groups, to gain insight into the nature of foreign participation in the manufacturing sector. In this regard, it may be concluded that the more important foreign participation is found in textile products, industrial chemical substances, transportation equipment, paper and its products, other chemical products, rubber products and electric machinery, in that order. In sum, one can lower the level of analysis to that of the industrial group thereby specifying with more accuracy those areas of the manufacturing sector where foreign participation takes on more relative importance.

/Table 20.

Table 20

COLOMBIA: THE IMPORTANCE OF FOREIGN PARTICIPATION IN THE MANUFACTURING SECTOR, A RANKING OF INDUSTRIAL DIVISIONS AND GROUPS FOR 1974.

| ISIC  | Description                           | Foreignization:<br>$\frac{VP\ dfi(x)}{VP\ total} \times 100$ | Weight<br>$\frac{VP\ dfi(x)}{VP(X)}$ | Ranking<br>value |
|-------|---------------------------------------|--|--------------------------------------|------------------|
| 35    | Chemical industry                     | 62.4   | .1249                                | 7.794            |
| 32    | Textile industry a/                   | 50.2   | .0928                                | 4.659            |
| 38    | Metalworking industry                 | 58.2   | .0800                                | 4.656            |
| 34    | Paper industry                        | 55.8   | .0369                                | 2.059            |
| 36    | Non-metallic mineral products         | 58.4   | .0234                                | 1.367            |
| 37    | Basic metals industries               | 54.7   | .0188                                | 1.028            |
| 31    | Food industry, etc.                   | 16.4   | .0519                                | 0.851            |
| 33    | Wood industry                         | 23.2   | .0031                                | 0.072            |
| 39    | Other manufacturing industries        | 23.4   | .0019                                | 0.044            |
| 321   | Textiles a/                           | 61.9   | .0870                                | 5.385            |
| 351   | Industrial chemical substances        | 79.5   | .0527                                | 4.190            |
| 384   | Transportation equipment              | 79.7   | .0372                                | 2.965            |
| 341   | Paper and its products                | 79.3   | .0356                                | 2.823            |
| 352   | Other chemical products               | 60.2   | .0387                                | 2.330            |
| 355   | Rubber products                       | 82.0   | .0177                                | 1.451            |
| 383   | Electric machinery, etc.              | 67.2   | .0185                                | 1.243            |
| 369   | Other non-metallic mineral products   | 56.6   | .0163                                | 0.923            |
| 381   | Metal products                        | 42.7   | .0173                                | 0.739            |
| 371   | Iron and steel                        | 49.8   | .0137                                | 0.682            |
| 362   | Glass and its products                | 84.0   | .0065                                | 0.546            |
| 356   | Plastic products                      | 47.2   | .0099                                | 0.467            |
| 372   | Non-ferrous metal products            | 73.5   | .0051                                | 0.375            |
| 382   | Non-electric machinery                | 29.6   | .0061                                | 0.181            |
| 353   | Petroleum refineries                  | 22.0   | .0060                                | 0.132            |
| 311-2 | Food products                         | 22.0   | .0056                                | 0.123            |
| 331   | Wood and its products                 | 33.5   | .0028                                | 0.094            |
| 313   | Beverages                             | 3.1  | .0022                                | 0.068            |
| 391   | Other manufacturing industry products | 23.4   | .0019                                | 0.044            |
| 323   | Leather goods                         | 18.4   | .0019                                | 0.035            |
| 385   | Scientific and other equipment        | 38.6   | .0008                                | 0.031            |
| 322   | Wearing apparel                       | 9.3  | .0027                                | 0.025            |
| 324   | Footwear                              | 22.7   | .0011                                | 0.025            |
| 361   | Clay and porcelain products           | 16.6   | .0006                                | 0.010            |
| 342   | Printing and publishing               | 6.0  | .0013                                | 0.008            |
| 332   | Furniture (except metal)              | 6.0  | .0013                                | 0.008            |
| 354   | Derivatives: petroleum and coal       | 9.2  | ...                                  | ...              |
| 314   | Tobacco products                      | 1.1  | .0002                                | ...              |

Source: Table 19.

a/ One should be cautioned about the significance of this ranking with regard to the textile industry. One textile firm, one of the biggest enterprises in Colombia, is included in the category of firms with foreign capital even though the foreign capital represents only 1.2% of the total capital of the enterprise. This occurrence effectively overstates the importance of foreign participation in the textile industry, as measured here.

/Information in

Table 21 (conclusion)

| Industrial group | Description                                    | Contracts approved 1967-1977 | %            | Contracts in force 1977 | %            |
|------------------|--|------------------------------|--------------|-------------------------|--------------|
| 38               | <u>Metal products, machinery and equipment</u> | <u>105</u>                   | <u>26.0</u>  | <u>28</u>               | <u>29.5</u>  |
| 381              | Metal products                                 | 28                           | 6.9          | 6                       | 6.3          |
| 382              | Non-electric machinery                         | 32                           | 7.9          | 13                      | 13.7         |
| 383              | Electric machinery, apparatus                  | 23                           | 5.7          | 4                       | 4.2          |
| 384              | Transport equipment                            | 18                           | 4.5          | 5                       | 5.3          |
| 385              | Scientific, photographic equipment             | 4                            | 1.0          | -                       | -            |
| 39               | <u>Other manufacturing industries</u>          | <u>11</u>                    | <u>2.7</u>   | <u>2</u>                | <u>2.1</u>   |
| 391              | Other manufacturing industries                 | 11                           | 2.7          | 2                       | 2.1          |
|                  | <u>Total</u>                                   | <u>404</u>                   | <u>100.0</u> | <u>95</u>               | <u>100.0</u> |

Source: Colombia, Secretaría Técnica del Comité de Regalías, Recuento de las labores del Comité de Regalías de Colombia, 1967-1977, Bogotá, 1977.

Table 22

COLOMBIA: DOMINANT FOREIGN ENTERPRISES IN THE  
MANUFACTURING SECTOR, 1968

| Production     |                    | Foreign capital as percentage of total capital | Colombian enterprise         | Industrial group: principal activity | Foreign or transnational corporation |
|----------------|--------------------|--|------------------------------|--------------------------------------|--------------------------------------|
| Rank all firms | Rank foreign firms |  |                              |                                      |                                      |
| 8              | 1                  | 66   | Cartón de Colombia; Pulpapel | 341                                  | Container Corp.                      |
| 9              | 2                  | 100  | Intercol; Amocar             | 353-4                                | Exxon                                |
| 10             | 3                  | 81   | Celanese de Colombia         | 321,351                              | Celanese Corp.                       |
| 11             | 4                  | 100  | Propal                       | 341                                  | Int'l Paper, Grace                   |
| 12             | 5                  | 98   | Uniroyal Croydon             | 355                                  | Uniroyal                             |
| 13             | 6                  | 100  | Cicolac; Inpa                | 311                                  | Nestle                               |
| 15             | 7                  | 52   | Peldar; Vidrio Plano         | 362                                  | Owens Illinois                       |
| 17             | 8                  | 52   | Abocol                       | 351                                  | Exxon                                |
| 18             | 9                  | n.d.   | Icollantas                   | 355                                  | B.F. Goodrich                        |
| 21             | 10                 | 100  | Goodyear                     | 355                                  | Goodyear                             |
| 22             | 11                 | 50   | Tejicondor                   | 321                                  | W.R. Grace                           |
| 24             | 12                 | 100  | Colgate-Palmolive            | 352                                  | Colgate Palmolive                    |
| 25             | 13                 | 77   | Colmotores Chrysler          | 384                                  | Chrysler                             |
| 30             | 14                 | 63   | Enka de Colombia             | 321,351                              | Akzo                                 |
| 34             | 15                 | 100  | Union Carbide                | 352                                  | Union Carbide                        |
| 37             | 16                 | 57   | Eternit Colombiana           | 369                                  | Eternit                              |
| 40             | 17                 | n.d.   | Cia. de Empaques             | 341                                  | St.Regis Paper                       |
| 45             | 18                 | 50   | Pantex                       | 322                                  | Burlington Mills                     |
| 48             | 19                 | 99   | Purina                       | 311                                  | Ralston-Purina                       |
| 50             | 20                 | 100  | Philips                      | 383                                  | Philips N.V.                         |
| 58             | 21                 | n.d.   | Pepalfa                      | 322                                  | J.Collins Corp.                      |
| 60             | 22                 | 100  | Maizena                      | 311                                  | Corn Products Co.                    |
| 63             | 23                 | 51   | Aluminio de Colombia         | 372                                  | Reynolds Metals                      |
| 65             | 24                 | 58   | Hilanderías Medellín         | 321                                  | Zoug                                 |
| 67             | 25                 | 100  | Squibb                       | 352                                  | Olin Mathison                        |
| 68             | 26                 | 100  | Productos Quaker             | 311                                  | Quaker Oats                          |
| 77             | 27                 | 50   | Textiles La Esmeralda        | 322                                  | Burlington Mills                     |
| 80             | 28                 | n.d.   | Comestibles La Rosa          | 311                                  | W.R. Grace                           |
| 89             | 29                 | 100  | CEAT/General de Colombia     | 383                                  | Gen.Cable; CEAT                      |
| 93             | 30                 | 100  | Merck Sharp                  | 352                                  | Merck Sharp                          |
| 94             | 31                 | 100  | Sidney Ross Co.              | 352                                  | Sidney Ross Co.                      |
| 95             | 32                 | 100  | Abbott Co.                   | 352                                  | Abbott Laboratories                  |
| 96             | 33                 | 96   | Rhincó                       | 352                                  | Wm & Haas Co.                        |
| 98             | 34                 | 100  | Hoechst Colombiana           | 352                                  | Hoechst                              |
| 100            | 35                 | 36   | Triplex Pizarro              | 331                                  | Boise Cascade                        |

Source: Misas, Gabriel, Contribución al estudio del grado de concentración en la industria colombiana, Ediciones Tiempo Presente, Bogotá, 1975.  
Matter, Konrad, Inversiones extranjeras en la economía colombiana, Ediciones Hombre Nuevo, Medellín, 1977. Silva Colmenares, Julio, Los verdaderos dueños del país, Fondo Editorial Suramérica, Bogotá, 1977. Centro de investigación y educación popular, Controversia: las multinacionales en el mundo y en Colombia, Nº 52-53, 1977.

(characteristics quite

characteristics quite distinct from the group of thirty five as a whole. Nevertheless, it is assumed that an analysis of the principal product markets in which these dominant enterprises operate will throw light on the nature of foreign participation in the manufacturing sector in Colombia.

Excluding the case of Nestlé for lack of detailed information, the nine remaining foreign enterprises are concentrated in the production of seven principal basic goods, as is noted in table 23. Of these seven basic products, four were established before 1950 and the remainder were initiated in the 1960s. Based on the volume of production, it may be said that all of these basic products have witnessed considerable expansion, at variable rates, over the period in question. Since 1968, textile fibres, paper, and tires have undergone a significant expansion of physical production, in particular. The compound annual rates of growth of this production indicated in this table for the 1950-1974 and 1968-1974 periods suggest that the basic product industries included are among the more dynamic in the manufacturing sector of Colombia.

#### Tires

Three of the dominant foreign enterprises are producers of tires and tubes. All of Uniroyal Croydon, Icollantas and Goodyear were established in Colombia during or immediately after the Second World War. Two of the three companies began as ventures with local and foreign capital. Uniroyal Croydon was a mixture of American, Swiss and local capital. Icollantas was a blend of foreign with local public capital, being a project of the Colombian industrial promotion institute (IFI). B.F. Goodrich, the foreign participant, later bought out its state partner. In 1975, 28% of Goodrich's holdings were purchased by local interests.

Annexes 16 through 18 point out various features of the tire and tube industry in Colombia. With regard to the value of production, the real annual rate of growth during the 1958-1974 period was 2.8% and 6.2% for tires and tubes respectively. Local production supplies over 90% of local needs in terms of the final products. Exports, although a small part of local production, are nevertheless among Colombia's more important manufactured exports. Although roughly 90% of the rubber used as primary material is imported, a substantial amount of inputs are now manufactured

/Table 23

Table 23

COLOMBIA; INDICES OF THE PRODUCTION OF THE PRINCIPAL BASIC GOODS  
ASSOCIATED WITH THE LARGEST FOREIGN ENTERPRISES

(1968 = 100)

| Year                   | Tires<br>a/(1) | Paper and<br>cardboard<br>b/(2) | Plate<br>glass<br>c/(3) | Motor<br>gasoline<br>d/(4) | Nitrogenous<br>fertilizers<br>d/(5) | Cellulose<br>fobres<br>e/(5) | Synthetic<br>fibres<br>g/(7) |
|------------------------|----------------|---------------------------------|-------------------------|----------------------------|-------------------------------------|------------------------------|------------------------------|
| 1940                   | -              | -                               | -                       | 6                          | -                                   | 1                            | -                            |
| 1941                   | -              | -                               | -                       | 6                          | -                                   | 4                            | -                            |
| 1942                   | -              | -                               | -                       | 6                          | -                                   | 4                            | -                            |
| 1943                   | n.d.           | -                               | -                       | 6                          | -                                   | 4                            | -                            |
| 1944                   | n.d.           | -                               | -                       | 6                          | -                                   | 4                            | -                            |
| 1945                   | n.d.           | -                               | -                       | 6                          | -                                   | 6                            | -                            |
| 1946                   | n.d.           | -                               | -                       | 7                          | -                                   | 8                            | -                            |
| 1947                   | n.d.           | -                               | -                       | 10                         | -                                   | 8                            | -                            |
| 1948                   | n.d.           | -                               | -                       | 8                          | -                                   | 9                            | -                            |
| 1949                   | n.d.           | n.d.                            | -                       | 11                         | -                                   | 7                            | -                            |
| 1950                   | 35             | 5                               | -                       | 12                         | -                                   | 8                            | -                            |
| 1951                   | 37             | 5                               | -                       | 12                         | -                                   | 12                           | -                            |
| 1952                   | 30             | 6                               | -                       | 13                         | -                                   | 19                           | -                            |
| 1953                   | 40             | 9                               | -                       | 13                         | -                                   | 27                           | -                            |
| 1954                   | 45             | 13                              | -                       | 16                         | -                                   | 33                           | -                            |
| 1955                   | 50             | 17                              | -                       | 28                         | -                                   | 38                           | -                            |
| 1956                   | 62             | 20                              | -                       | 31                         | -                                   | 40                           | -                            |
| 1957                   | 61             | 23                              | -                       | 35                         | -                                   | 45                           | -                            |
| 1958                   | 50             | 25                              | -                       | 50                         | -                                   | 46                           | -                            |
| 1959                   | 55             | 29                              | -                       | 48                         | -                                   | 47                           | -                            |
| 1960                   | 62             | 32                              | -                       | 53                         | -                                   | 45                           | -                            |
| 1961                   | 68             | 37                              | 38                      | 62                         | -                                   | 30                           | 6                            |
| 1962                   | 88             | 55                              | 38                      | 64                         | -                                   | 37                           | 10                           |
| 1963                   | 91             | 66                              | 39                      | 64                         | 16                                  | 39                           | 11                           |
| 1964                   | 76             | 65                              | 37                      | 68                         | n.d.                                | 33                           | 16                           |
| 1965                   | 95             | 72                              | 50                      | 75                         | n.d.                                | 61                           | 38                           |
| 1966                   | 118            | 83                              | 68                      | 84                         | n.d.                                | 70                           | 41                           |
| 1967                   | 104            | 91                              | 66                      | 85                         | n.d.                                | 76                           | 57                           |
| 1968                   | 100            | 100                             | 100                     | 100                        | 100                                 | 100                          | 100                          |
| 1969                   | 115            | 106                             | 99                      | 103                        | 103                                 | 114                          | 132                          |
| 1970                   | 134            | 119                             | 87                      | 113                        | 108                                 | 122                          | 146                          |
| 1971                   | 155            | 135                             | 112                     | 119                        | 116                                 | 126                          | 162                          |
| 1972                   | 175            | 152                             | 110                     | 114                        | 118                                 | 172                          | 260                          |
| 1973                   | 193            | 154                             | 103                     | 134                        | 121                                 | 195                          | 309                          |
| 1974                   | 234            | 166                             | 118                     | 139                        | 150                                 | 195                          | 290                          |
| <u>Growth rate (%)</u> |                |                                 |                         |                            |                                     |                              |                              |
| 1950-1974              | 7.9            | 15.1                            | -                       | 10.3                       | -                                   | 13.6                         | -                            |
| 1968-1974              | 12.9           | 9.9                             | 2.4                     | 4.9                        | 7.1                                 | 6.9                          | 16.6                         |

Source: Annex 15.

a/ Produced by Uniroyal Croydon, Icollantas and Goodyear.

b/ Produced by Carton de Colombia and Propal.

c/ Produced by Peldar/Vidrio Plano.

d/ Produced, among others, by the Exxon group: Intercol and Abocol.

e/ Produced, in part, by Celanese Colombiana.

(Locally Carbon

locally. Carbon black and tire fabrics are supplied locally, by foreign enterprises, as well as becoming relatively significant export items. There has been, then, an almost total substitution of imports in the tire and tube industry.

The tire industry has been subject to increasing nominal tariff protection between 1950 and 1970. Excluding aircraft tires, other items generally were favoured by an ad valorem tariff which rose from 10-15% in 1950 to 50% in 1970. Specific tariffs and previous deposits produced further protection. Imported inputs received significantly lower nominal protection until local production was initiated. In sum, tariff protection has been of increasing importance for the tire industry.

The structure of the tire and tube industry has remained remarkably stable over the 1958-1974 interim. Tires have consistently represented over 90% of the value of tire and tube production. There has been a small relative increase in automobile tires vis-à-vis truck and bus tires. Tubes have increased slightly as well. In 1974, these products represented about half of the value of production of the ISIC industrial group 355 (rubber products). The value of production of this industrial group represented 7% of the chemical industry and 1.4% of total manufactured output in that year. All of the tire producers are also producers of other rubber products. At a minimum, these three foreign enterprises account for 1% of the total value of production of the Colombian manufacturing sector. Sales by enterprise, in 1974, were US\$ 34.9 millions for Uniroyal Croydon, US\$ 27.0 millions for Icollantas and US\$ 17.4 millions for Goodyear. Assets by enterprise, in 1977, were US\$ 23.1 millions, 21.0 millions and 17.3 millions for Uniroyal Croydon, Icollantas and Goodyear, respectively. There are no local competitors of these three tire producers.

#### Paper products

Carton de Colombia, the dominant cardboard producer was established in Colombia in 1944 as a joint venture between the US-based Container Corporation and local interests. At the beginning it was mainly an import operation; however, in 1953 the first Kraft paper machine was installed and in 1957 a pulp-producing subsidiary (Pulpapel) was

/established under



established under the auspices of the state industrial promotion institute (IFI). The latter development held great technological significance as it involved the production of short fibre pulp from tropical hardwoods, greatly reducing the import burden of the paper industry in Colombia. Propal, established in 1960, had a similar impact. Propal was also a joint venture, this time between two transnational corporations: International Paper and W.R. Grace. The Colombian enterprise was set up to apply commercially the technology that Grace had developed in Peru, which consisted of the production of cellulose pulp and paper from sugar cane (bagasse).

Annexes 19 through 21 offer information on the paper products industry in Colombia. Cardboard cartons and bond paper, the principal products of Carton and Propal respectively, both experienced real annual rates of growth of 6% or more in the value of their production. Imports are small in relation to local production and exports are very significant in the case of cardboard cartons. Inputs are almost wholly locally produced. Import substitution has been a central feature of the development of the paper products industry in Colombia. Exports of corrugated cardboard cartons have become a principal manufactured export item.

Tariff protection has been a critical factor in the paper products industry in the 1950-1970 period. Nominal tariff protection for the principal final products has been increasing and there was some prohibition of imports of corrugated cardboard cartons and writing materials during the 1959-1964 interim. The principal inputs have been subject to significant, if lower, levels of tariff protection.

The structure of the paper products industry has witnessed some important changes over the 1958-1974 period. There has been an important specialization in corrugated rather than smooth cardboard, presumably due to the local production of short fibre wood pulp. Secondly, the production of bagasse from sugar cane does not seem to have lived up to original expectations. The eight products listed in annex 21 accounted for 51.7% of the value of production of the ISIC industrial group 341 (paper products) in 1974. In turn, ISIC 341 represents 30% of the paper industry as a whole (including publishing) and 2% of the value of production of the

/manufacturing sector

manufacturing sector altogether. At a minimum, then, these two enterprises account for another 1% of the total value of production of the Colombian manufacturing sector, measured at factory prices.

Between 1968 and 1975, years for which there is information, Carton (55%) and Propal (29%) controlled over 80% of the installed capacity for pulp and paper production in Colombia. Sales by enterprise, in 1974, were US\$ 73.4 millions for Carton and US\$ 40.0 millions for Propal. Assets by enterprise, in 1977, were US\$ 73.0 millions for Carton (including Pulpapel) and US\$ 43.1 millions for Propal. Local competitors consist, in large part, of foreign firms producing tissue paper.

#### Glass products

One producer, Cristalería Peldar/Vidrio Plano, dominates the glass products industry in Colombia. The enterprise Compañía Peldar Ltda. was founded in 1939 by Colombian investors. At an unspecified later date, most likely around 1960, this enterprise was acquired by Owens-Illinois Inc., a US-based transnational corporation. The production of plate glass in Colombia began in 1961. Although not directly related to Peldar as an enterprise, the IFI promotion of a soda ash plant in 1953 was critical to the development of the glass products industry in Colombia.

Annexes 22 through 24 indicate various aspects of the Colombian glass products industry. Both of the principal products have experienced relatively high real annual rates of growth in the value of their production, although plate glass fell off in the 1972-1974 period. Imports make up a small part (less than 3%) of the market. Exports do, however, constitute a significant portion of national production, although their total value is of more minor importance. Imported inputs are a very small part of the total value of glass product production and the industry may be considered one in which import substitution is almost complete.

The glass products industry is one in which tariff protection has played an important role in the development of the industry. Nominal tariff protection for the principal products accelerated from the 10-40% (ad valorem) to the 80-200% range during the 1950-1970 period. The principal inputs as well enjoyed substantial protection.

/During the

During the 1958-1974 period important changes have occurred in the glass products industry. Whereas, in 1958, bottles accounted for virtually all glass products output, by 1974 plate glass (18.3%), assorted works (9.1%) and fibre glass (5.2%) represented about one-third of the value of production of the principal products. Within the category of bottles, those of over one litre capacity were of increasing prominence. Plate glass production witnessed an important relative decline in the 1972-1974 period. The four products noted in annex 24 represented over three-quarters of the value of production of the ISIC industrial group 362 (glass products) in 1974. This industrial group accounted for almost 20% of the production of the non-metallic mineral products industry and 0.8% of the total value of Colombian manufacturing in that year. This one enterprise represents at least 0.6% of the value of production of the manufacturing sector.

As an interesting study by the national planning department indicates,<sup>1/</sup> this enterprise controls 100% of plate glass, 60% of bottle and 65% of assorted glass work production in Colombia. Sales in 1974 totalled US\$ 32.2 millions and assets in 1977 were US\$ 22.7 millions. Price controls were in effect for glass bottle production during the latter period. Local competitors, mainly national, account for a small portion of the value of production of this industry.

#### Petroleum derivatives and compound fertilizers

The petroleum side of the Exxon group in Colombia was dealt with somewhat in the section on the foreign participation in the petroleum sector. There, the dominant role of the Exxon group in the production of crude petroleum during the 1921-1951 period was explained. Similarly the effect on the Exxon group of the reversion to the state of the de Mares concession in 1951 and the state purchase of the principal Exxon refinery in 1974 was indicated. Here, the vertical linkages of the Exxon facilities into the chemical industry will be examined. Intercol was set up in 1951 to co-ordinate the remaining Exxon (then, Standard Oil of New Jersey)

<sup>1/</sup> Unidad de Estudios Industriales, "Industria del vidrio", Revista de planeación y desarrollo, volumen IX, número 1, Departamento de Planeación Nacional, January-March 1977.

/properties, especially

properties, especially the marketing function. Furthermore, it had a contract with Ecopetrol to operate its previous refinery and train Ecopetrol personnel, until 1961. Far from accepting state intervention in its petroleum properties as a constraint on its growth in Colombia, the Exxon group expanded into other fields, in a co-ordinated manner. In 1957 a new refinery was initiated. In 1960 a new venture in the field of nitrogenous and compound fertilizers (Abocol) was launched. In 1963 an ammonia and nitric acid plant (Amocar) was inaugurated to feed the fertilizer firm. In large part, the fertilizer venture was a response to the IFI promotion of an Ecopetrol fertilizer operation dating from 1957 which made difficult continued Intercol importation of such. Decree 987 of 1962 more or less prohibited future imports. In the development of their fertilizer activity the Exxon group chose to bypass the state marketing system and instituted (very successfully) their own. In 1973, IFI established a binational (Colombia-Venezuela) ammonia plant (Nitroven) in Venezuela to export ammonia to the binational (Colombia-Venezuela) caprolactam plant in Colombia which also produces fertilizer (Monomeros). If anything, the prime characteristic of the behaviour of the Exxon group in Colombia is that of tenacity.

Annexes 25 through 27 demonstrate various facets of the petroleum derivatives and compound fertilizer market in Colombia. The principal products of the Exxon group realized divergent real annual rates of growth in the value of their production. Over the 1968-1974 period compound fertilizers grew at 16.4% annually whereas over the longer period 1958-1974, motor gasoline grew at 2.2% annually and fuel and diesel oils actually declined at an annual rate of 1.6%. However, this decline has more to do with the internal pricing system as physical production indicated an increase. Imports are very small in relation to local production. Exports of fuel and diesel oils are, or have been, one of Colombia's major items, although the OPEC-related price increases completely distort relative values. Colombia had supplied its own petroleum (crude) inputs until 1975, when it became a net importer of crude petroleum. This is, perhaps, a good example of the temporary nature of import substitution (or better, import exclusion) when the combination of increased local

/demand and

demand and resource depletion threaten the further development of the industry. With regard to compound fertilizers, the ammonia and nitric acid inputs are produced locally and the Exxon subsidiary has exported substantial quantities of ammonia. In sum, the petroleum derivatives industry has traditionally been based on local (and cheap) inputs, however, that industry must now face up to the fact that Colombia is now a net importer of crude petroleum (at international prices). The compound fertilizer industry is typical of Colombian import-substituting industries.

Given the import exclusion nature of the petroleum derivatives market, tariff protection has not been an important factor in the development of the industry. The internal pricing policy and export possibilities have had much more important effects on that industry. In the case of the compound fertilizer industry, the tariff protection enjoyed was, indeed, an important factor in the development of the industry, following the familiar pattern of increasing protection for local industry during the 1950-1970 period.

Some important changes have taken place in the structure of the petroleum derivatives industry in Colombia over the 1958-1974 interim. Motor gasoline represented an increased share of the total value of production of the principal products, accounting for over one half in 1974. Fuel and diesel oils together fell from over 40% of this value in 1958 to under 20% in 1974. Fuel oil experienced a steep decline in the 1972-1974 period. Jet fuel and parafin increased rapidly although from a small base. All tolled the seven products listed represented almost three-quarters of the total value of production of ISIC 353-4 (petroleum refineries and derivatives of coal and petroleum). ISIC categories 353-4 produced 11.2% of the total value of production of the chemical industry and 2.7% of that of the manufacturing sector as a whole in 1974. The Exxon group share of this figure is impossible to compute given the purchase of its major refinery by Ecopetrol in 1974; however, one supposes that it would not be less than 1% of the total value of manufactured production.

Figures from 1969 indicate that the Exxon group controlled the following portions of the production of the following products: crude petroleum (13.5%), motor gasoline (36.9%), fuel oil (36.9%), diesel

/oil (36.9%),

oil (36.9%), compound fertilizer (20.0%), ammonia (100%) and urea (80.0%). Sales for the major components of the Exxon group in 1974 were: Intercol US\$ 43.2 millions; Abocol US\$ 35.0 millions and Amocar Col\$ n.d.. Assets, by component of the Exxon group were, in 1977, as follows: Intercol US\$ 28.9 millions;<sup>1/</sup> Abocol US\$ 35.8 millions and Amocar US\$ 19.6 millions. Local competitors are primarily the state petroleum company - Ecopetrol - in the petroleum derivatives industry; Fertilcol (Ecopetrol) and Monomeros Colombo-Venezolanos in the compound fertilizer industry and other smaller firms in ammonia,<sup>2/</sup> nitric acid, etc.

#### Textile fibres and other products

The case of Celanese Colombiana, as well as being of considerable interest in itself, demonstrates one of the major problems endemic to the study of foreign participation using traditional sources of information. The International Standard Industrial Classification, by which traditional (e.g. census data) information is organized, bisects enterprises which produce in various industrial groups. Celanese Colombiana produces in three industries (as well as in the mining sector) - textiles, chemicals and paper - covering some four industrial groups. Furthermore, census data is collected at the level of 'establishments' not 'enterprises'. The value of enterprise-level studies, when sufficient information is available, is that the real economic significance of the enterprise is revealed by preserving the wholeness of the productive entity. The case of the Exxon group was somewhat similar.

Celanese Colombiana was founded as a majority-owned subsidiary of the US-based Celanese Corporation in 1950. Its initial purpose was to produce artificial (cellulose acetate) fibres and a few chemical inputs.

<sup>1/</sup> The publication from which this is taken - El Informador ALALC, N° 810, 29 August 1978 - ranks Intercol behind Polimeros Colombianos (\$ 1 012.8) and ahead of Alcalis de Colombia (\$ 999.9). However, the value of assets shown (\$ 59.8) is obviously incorrect. The figure \$ 1 059.8, while more reasonable does not however, fit exactly with the ranking intended. The exact figure presumably lies between \$ 999.9 and \$ 1 059.8 (US\$ 27.2 and US\$ 28.9).

<sup>2/</sup> Imports from the binational firm (Colombia-Venezuela), Nitroven, have become substantial.

In 1958 it purchased one of its principal competitors, Indurayon Consolidada, then partly owned by the US-based W.R. Grace Co., by way of Tejicondor. In 1964, Celanese Colombiana began to produce polyester fibres. In 1965, the production of cigarette tow (acetate tops) was initiated. During 1971 Celanese Colombiana acquired Nylon de Colombia (a former IFI project) with whom it had a previous technology contract. The period 1967-1976 had witnessed a rising tension between Celanese Colombiana and the Colombian authorities. During 1976 the Celanese Corporation share in Celanese Colombiana was reduced to under 50%.

Annexes 28 and 29 throw some light on the Celanese Colombiana operations and their development. Excepting some information to the contrary for artificial fibre yarns during the 1972-1974 period, the principal products of Celanese Colombiana - synthetic fibres yarns and cigarette tow - all experienced impressive annual rates of growth in terms of their total value of production. The growth of synthetic fibre yarns, in association with the Colombian policy of promoting the petrochemical industry during this period (1968-1974), was phenomenal. Celanese Colombiana, as a manufacturer of both artificial and synthetic intermediate products for the textile industry, was a leader in the textile fibres boom taking place. Foreign trade in fibre yarns is minimal, although cigarette tow showed export promise in 1974. One of the principal strengths of the Celanese Colombiana operation seems to be its vertical integration. It manufactures a host of its own inputs: cellulose acetate, viscose, polyester polymer, cellophane and based on its own sulphur mine it produces sulfuric acid, carbon disulphide and manganese sulphate. Celanese Colombiana has been its own import substitution apparatus.

Tariff protection of an increasing nature has been the context of the remarkable development of Celanese Colombiana in the 1950-1970 period. Nominal tariff protection for artificial and synthetic fibres increased four-fold without including the effects of specific tariffs and previous deposits. The other principal products of the enterprise witnessed similar increases in nominal tariff protection although generally from a lower initial tariff rate. Tariff protection was a key factor in the rapid growth of Celanese Colombiana.

/Given the

Given the industrial heterogeneity of this enterprise, it is impossible to indicate with precision what proportion of the total value of production of Colombian manufacturing would correspond to Celanese Colombiana. In the context of the previous cases cited, one would presume that their share in 1974 was around the 1% mark.

Information from 1968 <sup>1/</sup> suggests that for the year Celanese Colombiana had major or important control over the production of certain principal products: continuous artificial fibres (100%); discontinuous artificial fibres (88%); synthetic fibres (15%); cigarette tow (100%); and cellophane (98%). The control over synthetic fibre production presumably increased significantly with the acquisition of Nylon de Colombia in 1971. Sales increased from US\$ 14.7 millions in 1963 to US\$ 37.5 millions in 1974, a real compound annual rate of growth of 4.2%. Assets grew from US\$ 17.9 millions in 1963 to US\$ 42.1 millions in 1976, before declining to US\$ 37.9 millions the following year when it became a minority-owned affiliate. Apparently the only product in which Celanese Colombiana has faced significant local competition has been synthetic fibres, in every other product Celanese Colombiana has traditionally been the dominant enterprise.

The coverage of foreign participation in the manufacturing sector would not be complete without an indication of the role played by the industrial promotion institute (IFI) in Colombian development. IFI was founded in 1940 with a huge task to perform and miniscule budget by which to do it. The main purpose of IFI was probably captured best by the following paragraph of an IFI report in 1946:

"In spite of the increase in our reserves and the internal economic situation we are inclined to believe that it is only with Colombian resources and highly protected ones that we can rid ourselves of speculation and fly-by-night capital which today is not serving a function in the Colombian economy. In this way, in a few years, we could arrive at the real industrial independence that the country needs."<sup>2/</sup>

- <sup>1/</sup> Misas, Gabriel, Contribución al estudio del grado de concentración en la industria colombiana.
- <sup>2/</sup> Colombia, Instituto de Fomento Industrial, Informe del Gerente-1946, Bogotá, 1946.

/The central



The central function of IFI was then to promote national industry in the context of import substitution. Over the period 1940-1975 IFI in fact succeeded in a lot of its aims. Although all the credit should not go to IFI, it is true that import substitution was an important phenomenon for Colombian manufacturing. Annex 30 points out that between 1938 and 1974 the portion of foreign primary materials utilized in Colombian manufacturing fell precipitously for the main industries. All those industries, save rubber products, where the dominant foreign enterprises were encountered are industries where import substitution of foreign primary materials has been most evident. Thus, in general terms, IFI has been quite successful at its principal task - import substitution.

With regard to the promotion of specific enterprises, IFI's record is more mixed. In the early period, with a Herculean task and a miniscule budget, IFI, contrary to the Ecopetrol experience, seems to have overextended itself and it suffered several business failures. However, over the 1950-1975 period it appears that IFI became more selective in its ventures and utilized other less direct means of industrial promotion as well. Nevertheless, it was only after 1969 that resources of real significance were available to IFI as annex 31 suggests. In this context, the IFI experience in the promotion of individual projects and enterprises is very positive.

IFI's effort has been concentrated mainly in the field of chemicals and to a lesser extent in the metalworking sector. In temporal order, the more important IFI projects have been in tires (1940), soda plant (1947), steel (1948), nitrogenous fertilizers (1957), cellulose pulp (1959), forging plant (1961), cast iron (1968), petrochemicals-fertilizers (1973) and ammonia (1973). In 1975, the major participation in industrial companies by IFI were the soda plant (Alcalis), the ammonia plant (Nitroven), the caprolactum-fertilizer plant (Monomeros) and the cast iron operation (Colar). Perhaps the single most important action undertaken by IFI was on the soda plant which laid the basis for the further development of several industries, including glass, textile fibres, chemicals and others.

The position of IFI with regard to foreign investment in the manufacturing sector has become increasingly clearer. Traditionally, IFI has had a cool attitude towards foreign capital. An IFI report from 1944 states:

/"If we

"If we really want to undertake the industrial development of the country, we must open all the doors facilitating foreign capital and technique, giving all kinds of guarantees. ... However, in general terms, it is preferable to make the effort to organize our own capital, without further foreign intervention except technical assistance ..."<sup>1/</sup>

Needless to say, these words were uttered in the early stages of what proved to be a period of accelerated foreign (mainly United States) investment in the manufacturing sector of Colombia. By the mid-1960s, as foreign investment in the manufacturing sector was reaching its nadir (in real terms), the IFI attitude had become more strident:

"Many volumes have been written about the problems of 'capital financing in developing countries', which recommend a generous treatment for foreign investment because it fills the spaces that scarce local capital can not fill. This theory, which has been greatly accepted in the past, has been subject to a re-evaluation in the last few years and a new formula has arisen. This is the theory of industrial development made, not by direct foreign investment, but by foreign loans granted to the national industry in order that it may found the new enterprises. This theory is based on the fact that when the development is carried out by native businessmen the profits produced constitute a national savings fund which slowly increases the internal capital of the country and with time becomes the authentic basis for general wealth.

It is not the same thing with development based on foreign investments, because, as a general rule, these enterprises must send their total profits or a good part of them back to their headquarters, year after year, with the country being left only with the benefits deriving from the salaries or the goods used in production and a little more."<sup>2/</sup>

This sentiment, of course, favours the self interest of IFI, however, it could well indicate some of the ideas that went into the framing of Decree 444 of 1967, which laid out new rules for foreign participation in Colombian development, and the strengthened role that IFI was to play after 1969. In any case, it is clear that IFI, although not antagonistic, was not keen about foreign participation in the manufacturing. Unlike Ecopetrol however, IFI never was in a position to directly challenge the foreign participation that was taking place.

<sup>1/</sup> Colombia, Instituto de Fomento Industrial, Balance e informes, primer semestre, 1944, Bogotá, 1944.

<sup>2/</sup> Colombia, Ministerio de Fomento, Memoria del Ministro de Fomento, 1966-1968, Bogotá, 1968.

This analysis of foreign participation in the manufacturing sector would not be complete without an indication of the significance of the changes which have taken place since 1967. Annex 32 points out that, although foreign investment and technology became the subject of Colombian legislation as long ago as 1935, real changes came about only in 1967 and thereafter. Decree-Law 444 of 1967, which was the Colombian response to a severe balance of payments problem, had several effects on foreign participation in the manufacturing sector. It led to a shift in general development policy from that of import-substitution to export promotion, creating institutions such as INCOMEX (foreign trade institute) and PROEXPO (export promotion fund). It established new regulations for all foreign exchange operations, creating an import licencing committee and a Comité de Regalías (Royalties Committee) among others. Foreign enterprises thus, found their operations to be subject to a considerable amount of government regulations - the net values of direct foreign investments, all technology contracts and external credits were registered and criteria were established for their evaluation and control, imports of components were subject to prior approval and limits were established for capital re-export and profit remittances. The latter were limited to 10% of the net value of the foreign investment for each year. In sum, a balance of payments problem led to the establishment of a system of authorization, registration and control of foreign participation in the manufacturing sector.

In May 1969, Colombia became one of the founding members of the Andean Group. In December 1970, by way of Decision 24 of the Commission of the Cartagena Agreement, a common régime on the treatment of foreign capital, patents, trademarks, licenses and royalties was created. As annex 33 suggests, it had very much in common with the Colombian Decree-Law 444 of 1967. The most notable initiative of Decision 24 was the requirement that all enterprises located in the subregion which enjoy the fruits of the integration scheme must be at least 50% locally owned, meaning that foreign enterprises must submit to a process of transformation to mixed enterprises as established by Decision 24. Further limits were fixed for profit remittances (14%), reinvestment (5%), capital re-export, external credits, access to local credit and foreign technology contracts.

Even though

Even though the limits on profit remittances were appreciably more generous in Decision 24 as compared to Decree-Law 444, the US-based pressure group for transnational corporations with Latin American holdings - the Council of the Americas - initiated a legal action through intermediaries in Colombia. The resolution of this legal action required a decision of the Colombian Supreme Court and the passage of new national legislation clarifying Colombia's adherence to the Andean Group accords, including Decision 24. The principal outcome of this temporary confusion was the clarification of the central elements of what was, in fact, the redefinition of foreign participation in Colombian development, particularly in the manufacturing sector.

Some specific effects of these actions are the following. Resolution 11 of February 1976, created a fund to be used by Colombians for the purchase of shares of foreign enterprises operating in Colombia. Some of the principal foreign enterprises affected by this have been the following: Icollantas, Enka, Polimeros Colombianos, Polimer International Corporation, Organización Farmacéutica Americana and others.<sup>1/</sup> Whether this fund (US\$ 50 millions) is a manifestation of a temporarily favourable balance of payments situation or a major new policy initiative, is yet to be seen. Another significant effect was the 'freezing' (e.g. disallowing capitalization) of profits above the remittance ceiling for foreign enterprises. Only in late-1978 was this altered, and then only to the extent that excess profits could be capitalized only if 50% of that value is invested in the bonds issued by IFI. In effect, excess profits by foreign enterprises are being used to reinforce the state industrial promotion institute, IFI.

In brief, it may be said that the 1967-1976 period witnessed what could be described as the effective redefinition of foreign participation in the manufacturing sector. Although it began as the indirect effect of a severe balance of payments problem, it developed into a more or less integrated policy initiative for the regulation of foreign participation. An interesting aspect of this Colombian experience is that, unlike many of its Andean neighbours, particularly Peru and Chile, this redefinition of foreign participation was relatively non-antagonistic at the

<sup>1/</sup> "Government seeks to channel flow of foreign capital", Latin America Special Report, August 1977.

/intergovernmental level,

intergovernmental level, in terms of the principal investing countries, particularly the United States.

It is very difficult to try to summarize, in one paragraph, the material which has been presented in this section on foreign participation in the Colombian manufacturing sector. Nevertheless, the following would be included in any such summary. The manufacturing sector has provided a good part of the dynamism of Colombian development in the post-war period, especially the chemical, metalworking and paper industries. Over the same period there has been an Americanization of the foreign participation in that sector. In 1974, firms utilizing foreign capital accounted for 49% of the total value of manufactured production, 50% of the value of manufactured exports and 28% of the total employment, mainly from the chemical, metalworking and paper industries. Foreign technology, measured by the number of contracts were also concentrated in those same industries as well as textiles. A measure of the importance of the foreign participation in specific ISIC industrial groups emphasized the following: textiles, industrial chemical substances, transport equipment, paper, other chemicals and rubber products. Data from 1968 indicated that 35 of the 100 largest industrial enterprises (by value of production) were foreign enterprises and were concentrated in the ISIC industrial groups mentioned. The nine dominant foreign enterprises analysed were concentrated in the production of tires, paper products, plate glass, motor gasoline, nitrogenous fertilizers and textile fibres. The examination of the context of the development of these dominant foreign enterprises in Colombia showed that: (i) they were established during the 1940-1965 period of rapid growth of direct foreign investment in the manufacturing sector, (ii) they fit in well with the Colombian import substitution policy, some receiving the assistance of the industrial promotion institute (IFI), (iii) in the context of this import substitution, formidable vertical integration towards principal primary materials was characteristic of the dominant foreign enterprises, (iv) high and increasing tariff protection shielded the enterprises from foreign competition during the 1950-1970 period, (v) foreign enterprises adapted well to the shift from import substitution to export promotion, (vi) in each and every case the principal

/markets in

markets in which these enterprises were participating were characterized by monopoly, duopoly or oligopoly conditions, (vii) the dominant 9 foreign enterprises accounted for between 5 and 6% of the total value of manufactured production, and almost 13% of that value for firms with foreign capital, in 1974, measured at factory prices, (viii) although the state industrial promotion institute did, in the early period, finance some projects involving foreign enterprises, its policy hardened in the later period, although it was not antagonistic, nevertheless, its effect on foreign participation in the manufacturing sector was not at all like that of Ecopetrol in the petroleum sector in the 1969-1975 period. The effective redefinition of foreign participation in the manufacturing sector was initiated by Decree 444 of 1967; the implementation of Decision 24 of the Andean Group and the establishment of a small fund for the purchase of foreign enterprises. Unlike the experience of other Latin American countries, especially the Andean ones, Colombia has not developed an antagonistic intergovernmental relationship with the principal foreign companies' home government, particularly the United States, indicating that foreign participation in the manufacturing sector can be redefined if handled reasonably.

/V. THE

V. THE DOMINANT TRANSNATIONAL CORPORATIONS IN COLOMBIA

The object of this section is to give some kind of relatively detailed picture of the real nature of the transnational corporations connected to the dominant foreign enterprises in Colombia. Given the plethora of publications on the theme of transnational corporations during the last few years, this might seem redundant, nevertheless, as was stated in the Introduction, the aim of this analysis is to take nothing for granted and present available information in the most comprehensive manner possible, following the example of Hymer. In doing so there are several informational problems which should be clearly understood. This analysis deals essentially with selected years of the 1950-1976 period for lack of complete information. Without doubt the data would be vastly improved by using the annual averages for the five-year periods which make up the 1950-1976 interim. That information was simply not available. Furthermore, although the United States Securities and Exchange Commission offers a great deal of information on the US-based corporations, that information is not fully consistent over the period as a whole with regard to their subsidiaries due to the use (or misuse) of the phrase: "Other subsidiaries are not included because, considered in the aggregate as one subsidiary, they do not constitute a significant subsidiary". This puts a very significant effective limitation on the study of the Latin American or, more specifically, the Colombian, component of these transnational corporations. In spite of these limitations it is possible to capture some of the 'essence' of these transnational corporations, on the basis of existing information, without the necessity to mold this information to fit one or another general theory of transnational corporate activity.

Each of the ten <sup>1/</sup> transnational corporations found among the dominant foreign enterprises in Colombia will be briefly analyzed in this section, concentrating on the dominant characteristics of the corporation and its principal global product market, its growth during the 1950-1976 period, the global organization of its subsidiaries during that period and the relationship of the Latin American and Colombian components of the

<sup>1/</sup> Excluding the case of Nestlé, for which there is little available information. /transnational corporation

transnational corporation in each case. This topic is, perhaps, too big to be dealt with conclusively in a few pages, nevertheless, relying on a host of detailed annexes, the attempt is made.

A. Two petroleum majors: Exxon Corporation and Texaco Inc.

The production, refining and marketing of petroleum and its principal products has traditionally been dominated by seven major petroleum corporations. These seven transnational corporations, the so-called 'Seven Sisters' are the US-based Exxon, Texaco, Mobil, Gulf and Socal corporations and the European-based British Petroleum and Shell corporations. The history and developmental experience of whole regions, particularly the Middle East and Latin America, have been marked by the operations and conflicts (particularly between US-based corporations like Exxon and the European-based petroleum corporations) carried out in their territories. The post-war period has witnessed an alteration in the dominance of the seven majors in the petroleum industry as table 24 notes. During the Development Decades responsible governments in developing countries have realized some of their conscious developmental effort in the direct participation in the development of their natural resources, including petroleum. As a consequence, the share of the major petroleum corporations in the production, refining and marketing of petroleum and petroleum products has been falling, especially since the OPEC actions in 1973. Although much of this OPEC-related action has taken place via those same transnational corporations, the benefits to the producing countries have been immense in terms of the increase in developmental resources.

The case of Latin America has been quite distinct from that of the Middle East. Proven crude petroleum reserves are being exhausted and most Latin American countries are becoming or are net importers of crude, excepting the OPEC members (Venezuela and Ecuador), Trinidad and Tobago and Mexico. (See table 25.) Latin America's share of the world production of crude oil production has fallen from 18.9% in 1950 to 8.2% in 1975. Furthermore, the Latin American republics have, in general, been much more directly involved in the petroleum industry as table 26 suggests. All in all, there have been some tremendous changes in the petroleum industry in Latin America, particularly with regard to the participation of the major transnational corporations in the production end of that industry.

/Table 24



Table 24

WORLD PETROLEUM INDUSTRY (EXCLUDING NORTH AMERICA AND COMMUNIST COUNTRIES): SHARE OF PETROLEUM ACTIVITIES, BY OWNERSHIP, SELECTED YEARS, 1950-1975  
(Percentage)

| Activity-owner                 | 1950 | 1963 | 1972 | 1975 |
|--------------------------------|------|------|------|------|
| <b>I. Crude oil production</b> |      |      |      |      |
| Majors                         | 85   | 82   | 73   | 30   |
| Governments                    | } 15 | 9    | 12   | 62   |
| Other companies                |      | 9    | 15   | 8    |
|                                | 100  | 100  | 100  | 100  |
| <b>II. Refining</b>            |      |      |      |      |
| Majors                         | 72   | 65   | 56   | 47   |
| Governments                    | } 28 | 14   | 17   | 24   |
| Other companies                |      | 21   | 27   | 29   |
|                                | 100  | 100  | 100  | 100  |
| <b>III. Marketing</b>          |      |      |      |      |
| Majors                         | n.d. | 62   | 54   | 45   |
| Governments                    | n.d. | 11   | 15   | 21   |
| Other companies                | n.d. | 27   | 31   | 34   |
|                                | n.d. | 100  | 100  | 100  |

Sources: Penrose, Edith T., The Large Firm in Developing Countries: the international petroleum industry, The MIT Press, Mass., United States, 1968. Chandler, Geoffrey, "The Innocence of the Oil Companies", Foreign Policy, No 27, Summer, 1977.

Table 25

LATIN AMERICA: SHARE OF CRUDE OIL PRODUCTION, BY COUNTRY,  
SELECTED YEARS, 1950-1975  
(Percentage)

| Country  | 1950         | 1960         | 1970         | 1975         |
|--|--------------|--------------|--------------|--------------|
| Argentina <u>a/</u>                              | 3.3          | 4.7          | 7.5          | 9.0          |
| Bolivia  | ...          | 0.3          | ...          | 0.9          |
| Brazil <u>a/</u>                                 | ...          | 2.2          | 3.2          | 3.9          |
| Colombia <u>a/</u>                               | 4.7          | 4.1          | 4.2          | 3.6          |
| Cuba <u>a/</u>                                   | ...          | ...          | ...          | ...          |
| Chile <u>a/</u>                                  | ...          | 0.5          | 0.6          | 0.6          |
| Ecuador  | 0.4          | 0.2          | ...          | 3.7          |
| Mexico <u>b/</u>                                 | 10.3         | 7.9          | 9.3          | 18.3         |
| Peru <u>a/</u>                                   | 2.1          | 1.4          | 1.4          | 1.6          |
| Trinidad and Tobago                              | 2.8          | 3.1          | 2.7          | 4.9          |
| Venezuela  | 76.2         | 75.7         | 70.6         | 53.4         |
|  | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> |
| Latin America as % world<br>crude oil production | 18.9         | 18.1         | 11.7         | 8.2          |

Source: Calculated from Mullen, Joseph W., "Energy in Latin America: the historical record", Cuadernos de la CEPAL, Santiago, Chile, 1978.

a/ Net importers of crude.

b/ Includes natural gas liquids.

Table 26

## LATIN AMERICA: STATE PARTICIPATION IN THE OIL INDUSTRY BY COUNTRY, 1955, 1960, 1970, AND 1977

(Percentages)

| Country  | State enterprise |      |             |      |      |          |      |      |           |           |             |      |     |     |
|--|------------------|------|-------------|------|------|----------|------|------|-----------|-----------|-------------|------|-----|-----|
|  | Production       |      |             |      |      | Refining |      |      | Marketing |           |             |      |     |     |
|  | Petroleum        |      | Natural gas |      |      | 1955     | 1960 | 1970 | 1977      | Petroleum | Natural gas |      |     |     |
|  | 1955             | 1960 | 1970        | 1977 | 1955 | 1960     | 1970 | 1977 | 1972      | 1972      |             |      |     |     |
| Argentina  | 84               | 95   | 99          | 99   | 0    | 95       | 100  | 100  | 66        | 57        | 61          | 62   | 67  | 100 |
| Bolivia  |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Yacimientos Petroliferos Fiscales                                  | 100              | 100  | 100         | 100  | 100  | 100      | 100  | 100  | 100       | 100       | 100         | 100  | 100 | 100 |
| Bolivianos (YPFB)  |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Brazil   | 100              | 100  | 100         | 100  | 100  | 100      | 100  | 100  | 63        | 73        | 69          | 98   | 0   | 0   |
| Petróleo Brasileiro (PETROBRAS)                                    |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Colombia   |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Empresa Colombiana del Petróleo (ECOPETROL)                        | 29               | 18   | 17          | 17   | 29   | 29       | 45   | 0    | 0         | 48        | 56          | 95   | 15  | 10  |
| Cuba   | 0                | 100  | 100         | 100  | 0    | 0        | 0    | 0    | 0         | 100       | 100         | 100  | 0   | 0   |
| Empresa Consolidada del Petróleo                                   |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Chile  | 100              | 100  | 100         | 100  | 100  | 100      | 100  | 100  | 100       | 100       | 100         | 100  | 25  | 100 |
| Empresa Nacional del Petróleo (ENAP)                               |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Ecuador  | 0                | 0    | 0           | 63a/ | 0    | 0        | 0    | 0    | 0         | 0         | 0           | 66a/ | 0   | 0   |
| Corporación Ecuatoriana del Petróleo (CEPE)                        |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Mexico   | 100              | 100  | 100         | 100  | 100  | 100      | 100  | 100  | 100       | 100       | 100         | 100  | 98  | 87  |
| Petróleo Mexicanos (PEMEX)   |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Peru   | 3                | 5    | 40          | 56   | 0    | 0        | 54   | 0    | 0         | 2         | 91          | 100  | 95  | 30  |
| Empresa Petrolera Fiscal (E.P.F.) c/                               |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Uruguay  |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Administración Nacional de Combustibles Alcohol y Portland (ANCAP) |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |
| Venezuela  | 0                | 0    | 1           | 100  | 0    | 0        | 1    | 100  | 0         | 0         | 2           | 100  | 23  | 71  |
| Corporación Venezolana del Petróleo (C.U.P.) d/                    |                  |      |             |      |      |          |      |      |           |           |             |      |     |     |

Source: Mullen, Joseph W., "Energy in Latin America: the historical record", Cuadernos de la CEPAL, Santiago, 1978.

a/ 1978.

b/ Semi-public enterprises.

c/ Now called Petróleos del Perú (PETROPERU).

d/ The oil industry was nationalized in January 1976.

The case of Colombia is somewhat distinct from the general case for Latin America. Its exports of crude declined from 5.6% of the region's total in 1950 to 3.5% in 1970, to zero in 1975. The state participation in the industry was, until the 1970s, slight and two transnational corporations - Exxon and Texaco - were the principal producers, refiners and marketers of this resource. Colombia gained effective control over its petroleum sector as reserves declined, consumption soared and exports (of crude) terminated.

1. Exxon Corporation

The Exxon Corporation is one of the largest organizations to have arisen in the course of human history and is transnational in the full sense of the word. Standard Oil of New Jersey was incorporated in 1882 in the wake of the controversy surrounding the Rockefeller-based Standard Oil Trust which was dissolved in that year. In spite of this initiative, the United States Supreme Court found Standard Oil to be a combination in violation of the Sherman Anti-Trust Law, in 1911. Standard Oil of New Jersey was transformed into primarily a holding company, in 1927, concentrating in its manufacturing and marketing activities. Its huge network of crude petroleum extraction in North and South America was largely established by this period. In spite of the challenges put to it by the United States and foreign governments Standard Oil of New Jersey (after 1973, the Exxon Corporation) was to become one of the largest and most powerful business enterprises in the world.

During the 1950-1976 interim, Exxon saw its operating income grow at a real compound annual rate of 7.1%, rising from \$ 3,134.6 millions in 1950 to \$ 51,626.1 millions in 1976. Over the same period, net income, total assets and the number of employees grew by 3.5, 4.6 and -0.7%, respectively. The 1950-1955 and 1970-1976 were the two periods of faster growth during the 1950-1976 interim. (See annex 34.) This impressive real growth lifted the Exxon Corporation from third position in 1965 to second position in 1970 to first position in 1976 in the Fortune list of the largest industrial corporations based in the United States.

/Unfortunately the

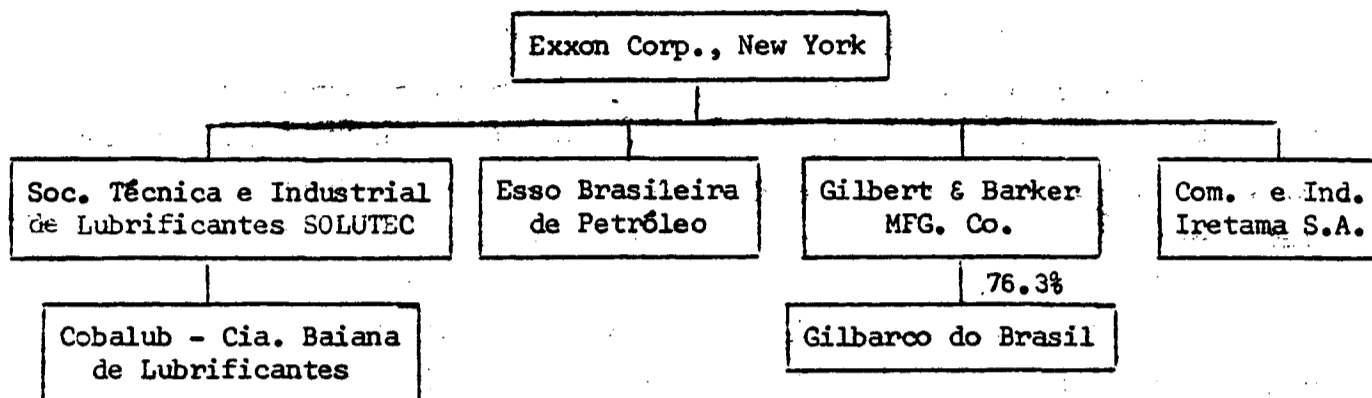
Unfortunately the information presented in annexes 35 to 38 is not directly comparable due to the fact that the information for 1950 lists virtually all subsidiaries whereas the information for 1965, 1970 and 1976 notes only the major subsidiaries of the Exxon Corporation. Nevertheless, with the aid of table 27 and annex 39 it is possible to decipher the information at hand. This information demonstrates that, in terms of the number of subsidiaries and the location of crude petroleum extraction and refining facilities, Latin America has been of declining importance to the Exxon Corporation over the 1950-1976 period, whereas at the beginning of that period Latin America was of considerable importance to the enterprise. In 1950 Latin America provided over 50% of Exxon's crude petroleum and 37% of Exxon's refining capacity. By 1976 Latin America was providing marginal quantities of both. Faced with difficult circumstances in Latin America where several of its operations had been expropriated (Bolivia-1937; Mexico-1938; Colombia-1951 and 1974; Peru-1968 and Venezuela-1975), Exxon had diversified its crude petroleum extraction to the Middle East and its refining to Europe (see table 27). By 1976, Exxon's principal properties in Latin America were the following:

| Subsidiary        | Sales<br>(Millions<br>of dollars) | Rank | Assets<br>(Millions<br>of dollars) |
|-------------------|-----------------------------------|------|------------------------------------|
| Esso of Brazil    | 1 315.3                           | 8    | 263.1                              |
| Esso of Argentina | 140.0                             | 144  | n.d.                               |
| Esso of Chile     | 133.7                             | 157  | 46.6                               |
| Abocol (Colombia) | 25.3                              | 672  | n.d.                               |

Source: Progreso, "Las Primeras 500 Empresas en América Latina",  
January-February 1978.

/Table 27

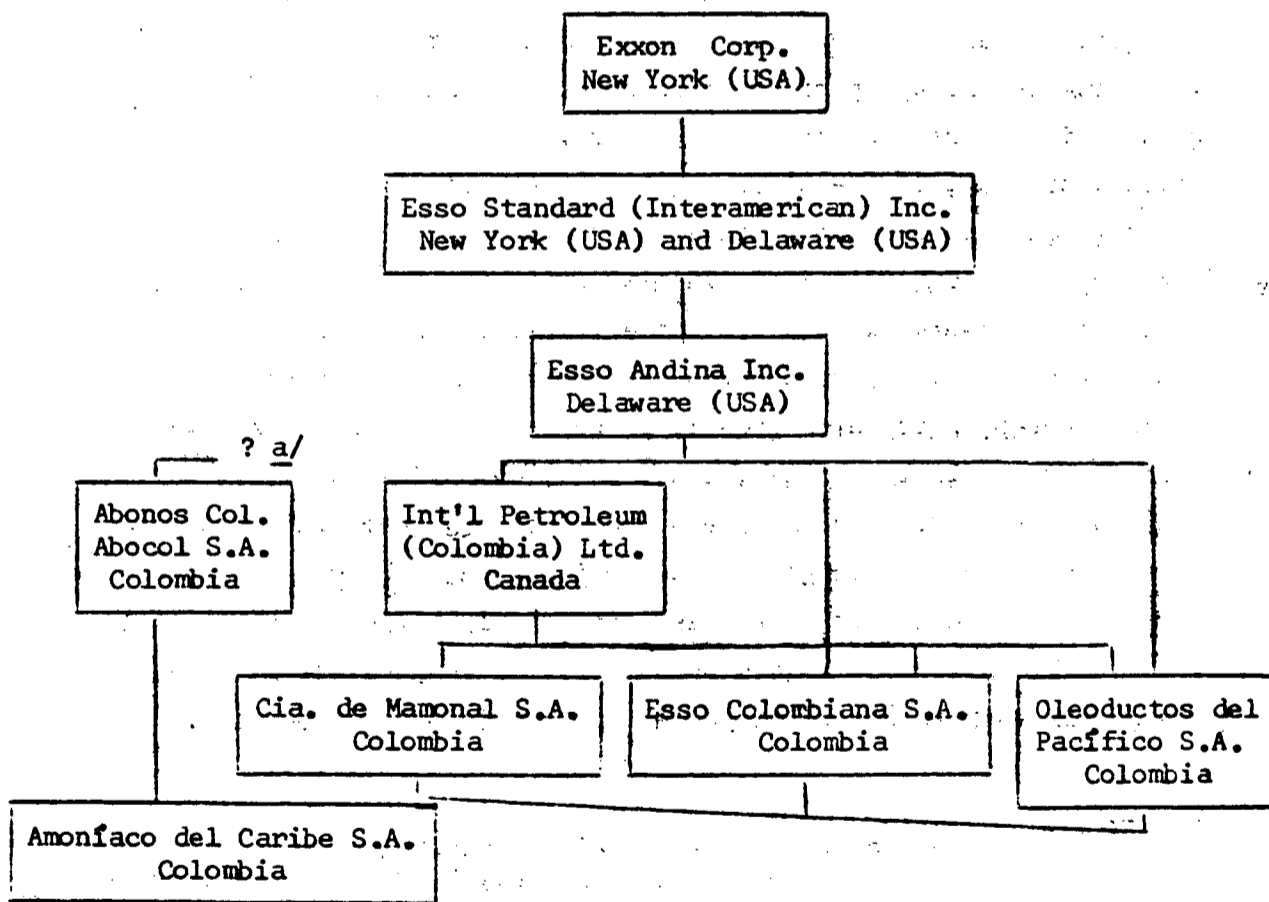
Figure 2



Source: Guia Interinvest: O Brasil e o capital internacional, (1978).

Figure 3

EXXON CORPORATION: SUBSIDIARIES IN COLOMBIA



Sources: Company form 10-K report, company annual report, Bolsa de Bogotá, UN/CTC.

a/ This relationship is not at all clear. Secondary information suggests that this affiliate - Abocol - was sold to local interests in 1974. However, company information does not clarify the relationship one way or the other.  
/It may

It may be said that, to a considerable extent, the Exxon Corporation was built upon Latin American petroleum. Until 1965, at least, Latin America was the principal source of this non-renewable resource for Exxon. In the period which followed, Exxon's role in the region was more than of a seller of petroleum and petroleum products rather than that of a petroleum producer using local resources. Exxon's presence in various countries of the region via its manufacturing subsidiaries has considerably altered the nature of Exxon's participation in local development, as was evident in the case of Colombia.

2. Texaco Inc.

Texaco Inc. is the second of the dominant foreign enterprises found in the petroleum and, later, manufacturing sectors of Colombia. As was mentioned earlier, whereas the subsidiary of Exxon Corporation was the dominant foreign enterprise in the petroleum sector in Colombia over the 1921-1951 period, the subsidiary and affiliate of Texaco Inc. were the dominant foreign enterprises in that sector in the 1951-1975 period.

Texaco Inc. was incorporated in 1926 in the state of Delaware, United States. One of the notable characteristics of Texaco Inc., and presumably an important element in its prolific growth, is its strong propensity to enter into joint ventures with major North American corporations both in the petroleum sector and otherwise. The major joint ventures or associations have included as partners the following major US-based corporations: Socony Vacuum Oil Co. (Mobil Oil), Standard Oil Co. of California, Gulf Oil, Standard Oil of Indiana, Phillips Petroleum, Cities Service and Uniroyal. For Colombia, the Texaco-Mobil joint venture (1936) was of great significance for the development of the petroleum industry. For Texaco, however, the venture with Standard Oil of California (1936) was of much greater importance due to the fact that it led to a consolidation of Texaco's position in the Middle East and Asia where the bulk of Texaco's petroleum supplies were to come from after the OPEC initiative in the early 1970s. This latter joint venture resulted in the creation of the Caltex group of companies which are engaged in the exploration, producing, transportation, refining and marketing of petroleum and petroleum products

/in the

By way of summary, it may be said that Latin American petroleum has played a significant, but not to be exaggerated, role in the growth of Texaco Inc. It played considerably less of a role than was the case of Exxon. However, a similarity that both corporations share is that although Colombian petroleum was not overly important for them, the development of the Colombian petroleum industry was very much dependent on them. In Colombia, as in other Latin American countries, Texaco (as well as Exxon) saw its role as a producer of crude greatly diminished. In Colombia, as in other Latin American countries, it saw its role change from producer of crude to seller of crude and manufacturer of petrochemicals. Its most important subsidiary in Latin America, in Brazil, indicates best this new role of Texaco with regard to its participation in local development.

B. Three tire majors: Goodyear, B.F. Goodrich and Uniroyal

The global tire market has traditionally been dominated by seven transnational corporations, five US-based - Goodyear, B.F. Goodrich, Uniroyal, Firestone and General - and two European-based - Michelin and Dunlop/Pirelli. Data for the principal component of the global tire market - the United States market - indicate that these companies (excluding Dunlop/Pirelli) controlled 84% of passenger-car tire sales in 1977. Goodyear led the way with 28%, followed by Firestone with 23%, in a market worth about \$ 5,600 millions.<sup>1/</sup> The United States tire industry has suffered many lean years during the 1970s and the industry may be described as a slow-growth business in spite of the revolution in tire-making which was brought about by the introduction of radials during this period. Most of the US-based majors, except Goodyear, are increasing their diversification into other activities, particularly chemicals. All of these firms have been sliding down the Fortune List of the largest US-based industrial companies during the 1965-1976 period. It has been predicted that in five to ten years only three domestic (United States) companies will be left making tires in the United States.

<sup>1/</sup> Source: "The Tire Industry: Goodyear's Solo Strategy", Business Week, 28 August 1978.



Each and every of the majors has a Latin American component to its global organization. However, the size and importance to the enterprise of this component varies considerably from corporation to corporation. Three of the US-based transnational corporations have tire-making facilities in Colombia all of which date approximately from the 1940s. The cases of Goodyear, B.F. Goodrich and Uniroyal are the third, fourth and fifth, respectively, examples of transnational corporations linked to the dominant foreign enterprises in Colombia.

3. Goodyear tire and rubber company

Several of the principal characteristics of Goodyear are noteworthy. It is by far the largest of the US-based tire-makers. Second, it is the most concentrated, or least diversified, of the major producers of tires. In 1977, it derived 84% of its operating income from the sale of tires and related products. Firestone, the second most concentrated major, relied on tires and related products for only 64% of its operating income. Goodyear's industrial strategy is to keep investing in tire production even though the market prospects are dim. While other majors diversify increasingly into chemical and plastics Goodyear continues to concentrate on tire and related products. Finally, the nature of Goodyear's global expansion is of interest particularly with regard to Latin America.

Goodyear was incorporated in 1898 in Ohio, United States. In the 1910-1929 period, Goodyear opened tire-making plants in Canada, England and Australia. The 1930-1949 interim saw the expansion of Goodyear primarily into Latin America. Plants were inaugurated in Argentina, Brazil, Colombia, Cuba, Mexico and Peru, as well as in Sweden and South Africa. The 1950-1965 period witnessed the initiation of Goodyear tire manufacturing in Germany (GFR), France, Italy, Luxembourg and Scotland, as well as India, Indonesia, Philippines, Turkey, Jamaica and Venezuela. Finally, between 1966 and 1976, tire plants were established in Greece, Morocco, Zaire, Malaysia and Taiwan. Thus, the global pattern of expansion of its tire manufacturing capacity seems to have been from English-speaking countries to Latin America to Europe to Asia and Africa. Between 1950 and 1976, the number Goodyear tire plants in Latin America increased from 6 to 8, whereas the

/total number

total number over this period rose from 27 to 44. There seems to have been a distinct Latin American phase in the global expansion of this transnational corporation.

The Goodyear Tire and Rubber Company specializes in the production of tires and tubes. It manufactures a complete line of rubber tire and tubes for automobiles, trucks, buses, tractors, farm implements, earth-moving equipment, airplanes, bicycles, motorcycles and industrial uses. Goodyear also manufactures industrial rubber products such as belts, hoses, pipe lining, noise abatement materials, sheet packing and dock fenders. Other manufactures include aviation and aerospace products, engineered products, metal products, chemical products, films and flooring products, shoe products, graphic products and natural rubber, among other things. In 1976, tires and related products, industrial rubber products and other products accounted for 84, 5 and 11%, respectively, of total sales.

During the 1950-1976 period the sales of Goodyear increased at a real compound annual rate of growth of 3.7%. Net income, total assets and the number of employees grew at 1.2, 4.7 and 1.6%, respectively. (See annex 44.) In spite of the fact that Goodyear's sales blossomed from \$ 845.1 millions in 1950 to \$ 5,791.5 millions in 1976, Goodyear was losing ground against the other principal US-based transnational corporations. Between 1965 and 1976, Goodyear fell from twentieth to the twenty-third spot in the Fortune ranking of the largest United States industrial corporations.

In 1976, the Goodyear global organization had the following characteristics:

|                           | United States | Foreign | Total | % foreign |
|---------------------------|---------------|---------|-------|-----------|
| Total plants              | 56            | 46      | 102   | 45        |
| Total retail outlets      | 2 100         | 900     | 3 000 | 30        |
| Employees (000)           | 81            | 70      | 151   | 46        |
| Total sales (\$ millions) | 3 600         | 2 200   | 5 800 | 38        |

/Information on

Information on the Latin American component of the 'foreign' element of the Goodyear organization is not available, however it is possible to indicate the sales for that year of the principal subsidiaries in Latin America, as follows:

| Subsidiary            | Sales<br>(millions<br>of US\$) | Rank | Assets<br>(millions<br>of US\$) |
|-----------------------|--------------------------------|------|---------------------------------|
| Goodyear of Brazil    | 266.7                          | 55   | 189.9                           |
| Goodyear-Oxo (Mexico) | 72.4                           | 336  | 51.0                            |
| Goodyear Argentina    | 54.3                           | 467  | n.d.                            |
| Goodyear Peru         | 16.2a/                         | 788  | n.d.                            |
| Goodyear of Colombia  | 17.4a/                         | -    | n.d.                            |

Sources: Progreso, "Las Primeras 500 Empresas en América Latina", January-February 1978. Various authors, Controversia, las multinacionales en el mundo y en Colombia, CINEP, Bogotá, 1977.

a/ 1975.

On the basis of these data, one may conclude that the principal elements of the Latin American component of Goodyear's global organization account for a little over 7% of total sales. The Colombian subsidiary itself accounts for only 0.3% of Goodyear's total sales. Although this part of the Goodyear Latin American component is small by Goodyear standards, the individual subsidiaries are of much significance for the host countries. Goodyear of Brazil was the fortieth largest enterprise by sales in Brazil in 1975; Goodyear Argentina was the thirty-fourth largest company by sales in Argentina in 1976; and Goodyear of Colombia was the fifty-fifth largest firm by assets in Colombia in 1977. This, again, demonstrates the relativity of the concept of 'importance' of a particular subsidiary when measured in the context of the global organization of the respective transnational corporation or in the context of the industrial structure of the host country.

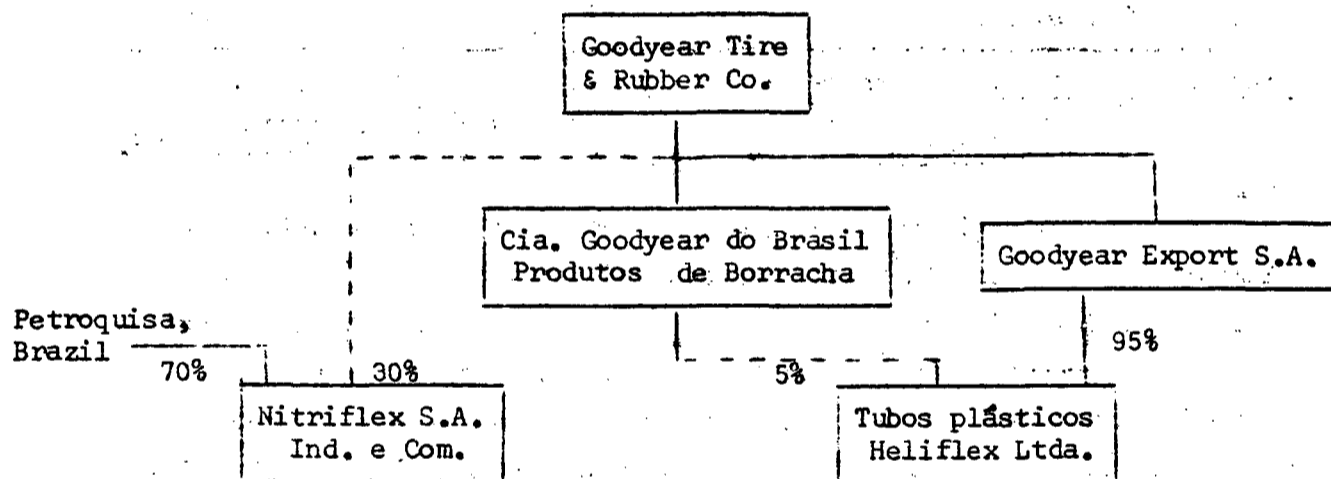
As in previous cases, Goodyear has more subsidiaries in each host country outside of the principal subsidiary. Brazil, again, is the best example. There, Goodyear also has interests in another subsidiary - Tubos Plásticos Heliflex Ltda. - and an associate - Nitroflex S.A. -

/both of

both of which could be important enterprises in the Brazilian setting, however, information on their size and activities was not available. Should this be characteristic of all Latin American host countries, a significant part of the Goodyear organization in the region would be overlooked. From the point of view of the activities in which the subsidiaries are involved, this could be an important factor in demonstrating the real nature of foreign, specifically, transnational participation in local development.

Figure 5

GOODYEAR TIRE AND RUBBER COMPANY: SUBSIDIARIES IN BRAZIL



Source: Guia Interinvest.

4. B.F. Goodrich Company

This tire major has several characteristics distinct from the industry leader, Goodyear. An early policy at Goodrich was to attempt to manufacture as many of their own raw materials as possible. For this reason, Goodrich has a much smaller organization of rubber plantations and is more involved in the chemical industry, particularly the manufacture of synthetic rubber and a wide range of plastics. In 1977, Goodrich relied on the sale of tires and related products for 53% of their operating income. The rest came from

/chemicals and

chemicals and industrial products. The Goodrich pattern development of its global organization was also somewhat distinct. On one hand, the early expansion before 1950 was mainly via association rather than wholly-owned subsidiaries, and it was mainly Europe-oriented (England, France, Sweden, Holland as well as Canada, New Zealand, Japan, Cuba and Colombia). On the other hand, the bulk of the Goodrich expansion occurred in the 1950-1970 period and was increasingly related to the production of chemicals rather than tires. Finally, during the difficult 1970-1977 period for tire manufactures, Goodrich decided to orient its growth more and more toward chemicals, especially vinyl resin for which it already is the leading United States producer. It closed down or sold off tire manufacturing facilities in Australia, the Netherlands and parts of the United States.

The B.F. Goodrich Company was incorporated in 1912 in New York, United States. As has been stated, Goodrich had nine foreign associates or subsidiaries by 1950, mainly in Europe. By 1970, it had expanded into five other European countries, six other Asian countries and nine Latin American/Caribbean nations. Its global organization then consisted of seven principal foreign tire-making plants (Canada, Germany, Netherlands, Australia, Philippines, Brazil and Colombia) and five principal foreign chemicals-producing plants (Canada, Netherlands, Belgium, Australia and New Zealand). In the 1970s, Goodrich closed down two mentioned foreign tire plants and extended chemical operations in Costa Rica and Venezuela. In the context of the Latin American expansion, it may be said that the Goodrich emphasis in the region seemed to be shifting from tires to chemicals, as was the case for the Goodyear corporate strategy.

The B.F. Goodrich Company specializes in three principal lines of business. Most important in terms of sales is the manufacture of tires and related products. The second principal line of business is that of chemicals, plastic materials and synthetic rubber. Goodrich is the oldest and largest United States' producer of polyvinyl chloride resins and compounds and manufactures one of the broadest lines of synthetic rubber. The third line of production includes industrial, transportation and other products, such as industrial hose, belting, and plastic-coated automobile fabrics, etc. In 1976, these three lines of production accounted for 44, 35 and 21%, respectively of the total sales by Goodrich in that year.

/Over the

Over the 1950-1976 period, Goodrich grew by a real compound annual rate of only 1.6%. Net income, total assets and the number of employees increased by -6.1, 2.7 and 0.2%, respectively. (See annex 48.) Although Goodrich's sales increased from \$ 514.6 millions to \$ 1,996.0 during 1950-1976, it saw its rank in the Fortune list of the largest industrial enterprises in the United States tumble considerably. In 1965 Goodrich ranked sixty-fourth on the Fortune list, by 1976 it occupied the 112th spot.

The Goodrich global organization had the following characteristics in 1976:

|                              | United States | Foreign | Total              | % foreign |
|------------------------------|---------------|---------|--------------------|-----------|
| Total number plants          | 21            | 33.0    | 54.0 <sup>a/</sup> | 61        |
| Total number employees (000) | 32            | 7.2     | 39.2               | 18        |
| Total assets (\$ millions)   | 1 251.9       | 315.9   | 1 567.8            | 20        |
| Total sales (\$ millions)    | 1 497.0       | 499.0   | 1 996.0            | 25        |

<sup>a/</sup> Nine of these are of minority interests.

The Goodrich Company report for that year indicates that the Latin American component of the 'foreign' element of the Goodrich organization accounted for 17% of the foreign sales, or \$ 84.8 millions. Presumably, this was distributed, more or less, as is indicated below:

| Subsidiary              | Sales              | Goodrich share | Goodrich sales | Goodrich's Latin American distribution |
|-------------------------|--------------------|----------------|----------------|--|
| Icollantas (Colombia)   | 40.8               | 98.6           | 40.2           | 47.4                                   |
| Lima Caucho (Peru)      | 19.5 <sup>a/</sup> | 28.3           | 5.5            | 6.5                                    |
| B.F. Goodrich do Brasil | 38.4 <sup>a/</sup> | 100.0          | 38.4           | 45.2                                   |
| Others                  | n.d.               | n.d.           | 0.7            | 0.8                                    |
| <u>Total</u>            |                    |                | <u>84.8</u>    | <u>100.0</u>                           |

Sources: Progreso, "Las primeras 500 empresas en América Latina", January-February 1978. Visao, "Quem e quem na economia brasileira", 31 August 1976.

<sup>a/</sup> From 1975.

/This suggests

This suggests that the Latin American component of the Goodrich global organization realizes about 4.2% of total sales. The Colombian subsidiary, the most important element in the Latin American component of the Goodrich organization, takes care of 2% of total sales. Thus, while the Latin American component is small with regard to the organization as a whole, nevertheless, the Colombian subsidiary is one of the more significant elements of the Goodrich global organization.

5. Uniroyal Inc.

Like the other mentioned major tire manufacturers, Uniroyal has several distinguishing characteristics. Uniroyal derives much less of its operating income from tires and related products (52% in 1977) than does Goodyear but it derives more from chemicals (39% in 1977) than does Goodrich. Uniroyal also seems to have a propensity like Texaco to get involved in large-scale joint ventures with other major transnational corporations, in this case, with Texaco itself, Borden and Imperial Chemical Industries in order to produce SBR rubber, vinyl chloride monomer and aniline/diphenylam, respectively. Finally, Uniroyal's pattern of global expansion was somewhat distinct from that of the other two majors mentioned. By 1950, Uniroyal was operating in fourteen countries outside of the United States, mainly in Europe and Latin America. Most of the Latin American operations were affiliates rather than subsidiaries as was the case for Goodrich in Europe. In the 1950-1965 period, Uniroyal expanded into thirteen other countries, mainly European. In the period which followed, it seems that Uniroyal entered no new countries, however, it did alter its existing global organization through diversification.

Over the 1950-1975 period only two new Latin American (Brazil and Puerto Rico) countries were incorporated via manufacturing facilities into the Uniroyal global organization. By 1976, Uniroyal had eleven principal foreign plants for the manufacture of tires and related products of which three were located in Latin America (Mexico, Brazil and Colombia). However, over this period there was a considerable increase in Uniroyal's chemical facilities in the region. Thus, the diversification of Uniroyal in the United States has affected its global organization, specifically that part of it located in Latin America.

/Uniroyal Inc.

Uniroyal Inc. has four principal lines of business, these are tires and related products; chemicals, rubbers and plastics; leisure, sport and other products and industrial products. The principal products of the chemicals, rubber and plastics line are rubber chemicals, latex compounds, blowing agents and industrial organic chemicals. Under leisure, sport and other products, Uniroyal produces shoes and sandals for leisure wear as well as boots, sportswear jackets and golf balls and clubs. In the category of industrial products, coated fabrics for specialty uses, belting, hoses, packing, industrial adhesives and plastic parts for the automobile industry are produced. In 1976, these four lines of business corresponded to 57, 14, 13 and 15% of sales, respectively, and 50, 29, 4 and 18% of profits, respectively.

During the 1950-1976 period, Uniroyal grew at the not very impressive real compound annual rate of 1.0% (for sales). Over the same period, net income and total employment declined by real rates of -4.2 and -0.1%, respectively. Total assets grew by 2.0% annually between 1950 and 1976. As was noted earlier, for some major tire producers the 1970-1976 interim has been particularly difficult. Between 1965 and 1976, Uniroyal fell from 49th to 95th position in the Fortune ranking of the largest industrial companies in the United States.

In 1976, Uniroyal's global organization, for which there is not a lot of information, had the following characteristics:

|                                      | United States | Foreign | Total   | % foreign |
|--------------------------------------|---------------|---------|---------|-----------|
| Total plants                         | 38.0          | 36.0    | 74.0    | 49        |
| Total number employees (000)         | n.d.          | n.d.    | n.d.    | n.d.      |
| Total assets (\$ millions) <u>a/</u> | 975.5         | 530.5   | 1 506.0 | 35        |
| Total sales (\$ millions)            | 1 516.4       | 829.1   | 2 314.8 | 36        |

a/ Identifiable.

Detailed information on the Latin American component of the 'foreign' element of the Uniroyal organization is not readily available because it is mixed in with Canada in the Uniroyal company report. According to this

/information, 'other



information, 'other North and South America' (excluding the United States) accounted for 15.1, 14.5 and 8.3% of total sales, assets and operating profits, respectively. The principal Latin American subsidiaries seem to be the following:

| Subsidiary                  | Sales (\$MM) | Rank | Assets (\$MM) |
|-----------------------------|--------------|------|---------------|
| Uniroyal Croydon (Colombia) | 40.8         | 584  | 23.3a/        |
| Uniroyal Pigmentos (Brazil) | 18.0b/       | -    | 4.0b/         |

Sources: Progreso; Visao.

a/ 1977.

b/ 1975.

These data suggest that the identifiable Latin American component to the Uniroyal organization contribute around 2.6% of total sales and 1.5% of total assets. The Colombian subsidiary, itself, accounted for 1.8 and 1.3% of each, suggesting that, as in the case of Goodrich, although the Latin American component is small in terms of the organization as a whole, the Colombian operation has a certain importance in terms of that component, of the global organization of which it is part. Measured by assets, the Colombian subsidiary was also the 37th largest enterprise in Colombia in 1977. The Colombian operation has a certain importance in both the Colombian and Uniroyal contexts.

C. Two paper products majors (Container Corp. and International Paper) and the special case of W.R. Grace & Co.

Unlike the previous examples of the global petroleum market with its seven sisters and the global tire market with its seven majors, the paper products industry is much more heterogeneous and specific product markets are more difficult to identify and define. In the United States for example, the Fortune list of the largest industrial companies lumps together into one category (26) all producers of paper, fibrous and wood products. These thirty one companies of the five hundred largest account for only 3.7% of the total sales (1976) of the list, suggesting a lack of /concentration and

concentration and few elements of dominance. The problem is that the category includes a range of producers from timber on one end to fine papers on the other. In order to fully understand the nature of corporate dominance in this industry it is necessary to 'unpackage' the specific product markets of major interest. (e.g. corrugated cartons, writing materials, etc.). This has not been possible for the purposes of this study, however, the company reports for the corporations under study do give an indication of the nature of the dominance of each in particular fields within the paper products industry.

Container Corp. is described as the largest United States producer of fabricated paperboard products. International Paper Co. is characterized as the leading producer of pulp, paper and paperboard and as a major manufacturer of packaging products. W.R. Grace & Co. which, in general, has little to do with the paper products industry is the owner of patented technology for producing pulp from sugar cane (bagasse), which it licenses to other companies. Thus, each company does possess a specialty of some nature and although it is presently impossible to pinpoint global market influence for these specialities, it is certain that each is among the leading companies in their particular and principal product markets in the paper products industry. Aside from its links to the paper products market, the case of W.R. Grace & Co. will prove to be particularly interesting as an example of a US-based transnational corporation with clearly identifiable Latin American roots.

These three transnational corporations all have manufacturing facilities in Colombia in the paper products industry. The local enterprises in question are among the dominant foreign enterprises in Colombia and for this reason Container Corporation, International Paper Co. and W.R. Grace & Co. constitute the sixth, seventh and eighth examples of the dominant transnational corporations in Colombia.

6. Container Corporation

As was the case for other transnational corporations studied in this section, Container Corporation has several notable characteristics. First, it has been the subject of two successful merger/take-overs. In 1968, Container was merged with a major United States retail chain - Montgomery Ward & Co. - to form Marcor Inc., the sixth largest retail company in the United States. In 1976, Marcor Inc. was gobbled up by Mobil Oil, to become part of the newly formed holding company Mobil Corporation, the fifth largest industrial corporation in the United States during that year. Secondly, Container Corporation is a very specialized company producing shipping containers, folding cartons and other packaging as well as providing most of its own inputs (especially paperboard). Thirdly, Container Corporation is concentrated in a small number (six) of countries outside of the United States. Four of these countries of concentration (Colombia, Mexico, Venezuela and Puerto Rico) are located in Latin America. Thus, the three principal characteristics of Container Corporation are the merger/take-overs it has been subject to, the specialized nature of its production and its concentration in just six countries outside of the United States, most of which are in Latin America.

Container Corporation was incorporated in the State of Delaware in 1926. Today, Container is the largest US-based manufacturer of fabricated paperboard products. It produces a tightly knit group of related products such as corrugated and solid fiber shipping containers, paperboard cartons, fiber drums, composite cans, plastic packaging and paperboard. In 1976, shipping containers, folding cartons and other packaging and paperboard and miscellaneous products represented 47, 34 and 19% of total sales, respectively. In general, Container Corporation is a very specialized and largely self-sufficient operation.

Over the 1950-1976 interim, Container's total sales increased at a real compound annual rate of 3.5%. Net income, total assets and the number of employees grew at rates of 2.1, 6.5 and 9.8% respectively. (See annex 56.) Between 1950 and 1975 Container's physical production of paperboard grew at a compound annual rate of 4.8%. Although Container Corporation went

/from the

from the 168th position on the Fortune list of 1965 to the fifth position in 1976, this was a result of its acquisition by Mobil Oil rather than a reflection of its growth of sales.<sup>1/</sup>

Container Corporation's global expansion has its own particularities, as well. By 1950, Container had just two foreign associates, one in Colombia and the other in Mexico. By 1965, Container had other facilities in Germany (GFR), Italy, Holland and Venezuela. Austria, Spain and Puerto Rico were added by 1975. Only six of these foreign operations are those of concentration. It seems that, in general terms, Container's global expansion has consisted of two phases, a Latin American phase from 1940 to 1960 and a European phase from 1960 on. The emphasis of the geographic location continues, however, to lie in Latin America. The concentration in certain countries undoubtedly is closely related to the disposable natural resource base encountered.

Because Container Corporation is now part of Mobil Corporation there is little detailed information about the specifically Container Corporation foreign operations (e.g. employees, sales and assets outside of the United States). It is known that 58 of Container's 150 plants are located outside of the United States, and that approximately 26% of its total sales are foreign sales. On this basis it could be assumed that the foreign element of the Container Corporation global organization represents between 26 and 39% of such. It should be remembered that the whole of the Container global organization is part of the much larger Mobil Corporation organization, as is indicated in annex 60. The Latin American component of the Container (not Mobil) global organization seems to be based upon Colombia and Mexico, as the following information (1976) suggests:

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<sup>1/</sup> On its own Container would have fallen to 237th spot in the Fortune list.

/Subsidiary or

| Subsidiary or associate      | Sales <u>a/</u> | Container share | Container sales | % container organization |
|------------------------------|-----------------|-----------------|-----------------|--------------------------|
| Cartón de Colombia S.A.      | 81.1            | 66.8            | 54.2            | 5.4                      |
| Cartón y Papel S.A. (Mexico) | 47.9            | 100.0           | 47.9            | 4.8                      |

Source: Progreso.

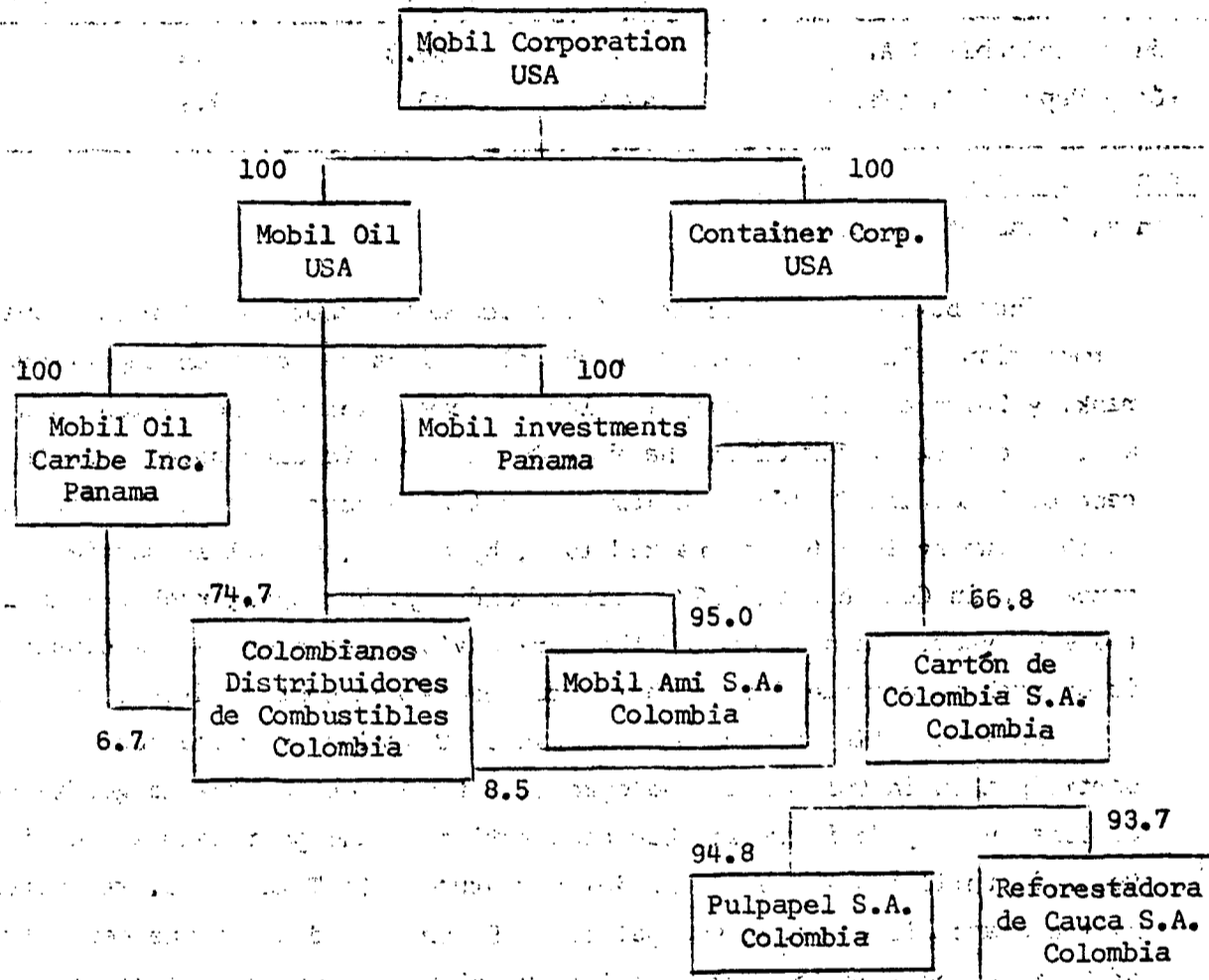
a/ In millions of US dollars.

Thus both enterprises are of considerable importance for the Container Corporation. In Latin America, both enterprises are of much importance, ranking 287th and 530th among the largest companies of the region as a whole and account for almost half of Container's foreign sales. In the case of Colombia, Cartón de Colombia was the largest foreign enterprise in the country in 1968 and ranked 10th, by assets, of all industrial companies in Colombia in 1977. Its subsidiary, Pulpapel, ranked 75th in the same year. This is one of the more obvious cases where the subsidiary is of much importance from both the corporate and host country perspective.

An interesting aspect of the case of Container Corporation's participation in Colombian development is the effect of the merger/take-over of Container by Mobil (which had been active in the petroleum sector in Colombia until its share of the joint venture with Texaco Inc. was purchased by the state oil company, (Ecopetrol). Figure 6 indicates the new nature of Mobil Corporation's participation in Colombian development as of 1 January 1978, when Container became a wholly-owned subsidiary of the Mobil Corporation. Seemingly unrelated foreign enterprises in Colombia suddenly became brethren.

/Figure 6

Figure 6



Source: United States, Securities and Exchange Commission, Company Form 10-K Report, 1978.

/7. International

7. International Paper Co.

One of the principal characteristics of International Paper Co. is distinct from the principal transnational corporations examined thus far. This characteristic is that International Paper's global organization is very much concentrated in just one country outside of the United States and that country is Canada. The Canadian subsidiary developed a strong appetite for Canadian enterprises and between 1954 and 1965 it ate up seven companies not including the five subsidiaries of those. By 1975-1978, International Paper's Canadian subsidiary was the 39th largest non-financial company in Canada, ordered by sales.<sup>1/</sup> Given the importance of this element of the International Paper Co. global organization, it could be said that in this regard International Paper Co. is not a very transnational corporation. A second principal characteristic of International Paper is that, in its foreign operations, at least, it is prone to involve itself in joint ventures such as those that it has in Canada, Colombia, Israel and Venezuela. These are, however, of minor interest when compared to the International Paper global organization as a whole. The third principal characteristic of International Paper is that in the midst of the so-called OPEC crisis it decided to diversify itself by purchasing (for US\$ 489 millions) a petroleum company - General Crude Oil Co. - with operations in the United States, Canada and Barbados. Thus, the three principal characteristics of International Paper Co. are its concentration in Canada, its tendency to use joint ventures for its foreign operations and its recent diversification into petroleum production.

International Paper Co. was incorporated in 1941 in the state of New York under the name of International Paper & Power Co., which itself was a trust established in 1928 to hold, among other things, 99% of the stocks of the original International Paper Co. which was incorporated in 1898. The Company describes itself as follows:

<sup>1/</sup> Government of Canada, Report of the Royal Commission on Corporate Concentration, Supply and Services, Canada, March 1978.

"International Paper Co. is one of the world's largest natural resource management companies, with extensive tree farms and mineral rights. IP is engaged in the exploration and development of crude oil, natural gas and mineral properties. The Co. is the foremost manager of renewable wood fiber resources and produces solid wood products, including plywood, lumber, poles and cabinets. The Co. is the leading producer of pulp, paper and paperboard and is a major manufacturer of packaging products."<sup>1/</sup>

International Paper Co. is also the world's leading supplier of printing and writing papers. The four principal lines of business - pulp/paper, packaging products, wood products and oil/gas/minerals - accounted for 37, 40, 14 and 4% respectively, of total sales in 1976, and 40, 34, 15 and 8% respectively, of the operating margin in the same year. The principal pulp and paper product groups are printing and writing papers, bristols, newsprint, paper pulp and chemical cellulose and specialty pulps. The principal packaging product groups are containerboard, bleached packaging board, industrial papers and industrial and consumer packaging. The main wood product groups are plywood and lumber. Finally, there is crude oil and natural gas.

During the 1950-1976 period, International Paper's sales grew at a real compound annual rate of 3.8%. Net income, total assets and the total number of employees increased by rates of 1.5, 4.7 and 2.1%, respectively. (See annex 61.) Physical production of paper products rose at a compound annual rate of 2.7%. Even in view of this real growth, International Paper Co. fell from 43rd position to 52nd position between 1965 and 1976, in the Fortune list of the largest industrial companies in the United States.

International Paper Co. is one of those transnational companies which discloses least about its global organization, specifically, its foreign affiliates and subsidiaries. Annexes 62 to 64 present information for various sources on the International Paper organization in 1950 and 1976. In terms of the number of foreign operations, it is very clear that Canada, with 90% of its operations outside of the United States located there in 1950 and 50% in 1976 is the principal host country. However, aside from

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<sup>1/</sup> International Paper Company 1977 Annual Report.

/this concentration



this concentration in Canada, there was an appreciable global expansion of the International Paper organization. In 1950, International Paper operated in three countries - Canada, United Kingdom and France - outside of the United States. In 1976, International Paper operated in sixteen countries outside of the United States, seven in Europe and seven in Latin America (including the French West Indies and the Netherlands Antilles). Thus, the 1950-1976 period witnessed the expansion of the International Paper global organization into Europe and Latin America. It was in 1967, that International Paper, in joint venture with W.R. Grace & Co., began operations in Colombia.

In 1977, 78, 18 and 4% of International Paper's net sales corresponded to the United States, Canada and 'other' countries, respectively. In the same year, 81, 15 and 4% of total assets were found in the United States, Canada and 'other' countries, respectively. From this it is evident that, in spite of International Paper's global expansion in the 1950-1976 period, it is still very much concentrated in only two countries - United States and Canada - and is, in this sense, not very transnational. Little is known of the Latin American component of the International Paper global organization as none of the subsidiaries appear in the list of the largest companies in Latin America. In the case of Colombia, International Paper's half interest in Propal S.A. corresponded to 0.6% of International Paper's net sales in 1975 and 0.6% of International Paper's total assets in 1977. Although the Colombian associate seems to be of marginal interest for International Paper, in the context of its global organization, Propal S.A. was the fifteenth largest industrial enterprise in Colombia, in 1977, ranked by assets. This indicates that the enterprise is very significant for the host country. Although in general terms the Colombian associate is of marginal importance to International Paper, its success in Colombia earned it an important new investment, from International Paper and W.R. Grace, in the order of \$ 24 millions between 1972 and 1977, according to the International Paper company report. Thus, as has been demonstrated previously, the concept of 'importance' is very relative.

/s/ W.R. Grace

& Co., its growth over the 1950-1976 period lifted it from 59th position in 1965 to 50th position in 1976 in the Fortune List of the largest industrial corporations in the United States.

The global expansion of W.R. Grace & Co. is distinct from all those transnational corporations studied thus far. Given Grace's beginnings as the Peruvian-based enterprise of a British subject, it was, in fact, foreign before it became North American in 1899. However, in the United States context, it is evident from annex 66 that W.R. Grace & Co. had its major foreign interests in Chile, Peru, Colombia and Bolivia. By 1965, it had entered thirty five other countries - 15 in Europe, 11 in Latin America and 9 in other countries. By 1974, W.R. Grace & Co. was operating in only twenty eight countries outside of the United States - 10 in Europe, 12 in Latin America and 6 in other countries. The diversity of the operations in Colombia is noteworthy. In the main, Grace's global expansion in the 1950-1975 period demonstrated the twin effects of the transformation which it was undergoing and the effect of the divestment programme.

In 1976, the global organization of the W.R. Grace & Co. had the following characteristics:

|                                 | United States | Europe | Other foreign | Total   | % other foreign |
|---------------------------------|---------------|--------|---------------|---------|-----------------|
| Total number of employees (000) | 41.2          | 14.1   | 10.9          | 59.9    | 18.2            |
| Identifiable assets (\$MM)      | 1 715.0       | 541.0  | 270.0         | 2 526.0 | 10.7            |
| Net sales (\$MM)                | 2 471.0       | 849.0  | 308.0         | 3 628.0 | 8.5             |

Source: Grace '77, Annual Report.

Along with Canada, Asia and Africa, Latin America is found in the 'other' foreign category. The principal elements of Grace's Latin American operations in 1976, presumably are those listed below:

/Subsidiary or

| Subsidiary or affiliate | Total sales <u>a/</u> | Grace's share | Grace's sales | % Grace organization |
|-------------------------|-----------------------|---------------|---------------|----------------------|
| Tejicondor (Colombia)   | 27.3                  | 50            | 13.7          | 0.4                  |
| Grace y Cia. (Bolivia)  | 24.2                  | 100           | 24.2          | 0.7                  |
| Propal (Colombia)       | 18.7                  | 50            | 9.4           | 0.3                  |
| Grace y Cia. (Chile)    | 12.6 <b>b/</b>        | 100           | 12.6          | 0.3                  |

Source: Progreso; others.

a/ US\$ millions.

b/ 1977.

This suggests, as did the aggregate figures, that the Latin American component of the W.R. Grace & Co. is of relatively marginal importance in the corporate context. Nevertheless, in the case of Colombia, Propal and Tejicondor ranked 15th and 22nd, respectively, in the list of the largest industrial enterprises in Colombia, in 1977. Thus, in the context of the transnational corporation, Grace's Colombian holdings are of small importance, however, with regard to the host country, the two noted enterprises are among the largest industrial companies in Colombia.

Finally, an interesting aspect of the W.R. Grace & Co. presence in Colombia is the diversity it displays. Figure 7 indicates the Colombian component of the Grace Co. in 1974. As in previous cases, there is a significant subsidiary or associate structure above and beyond the principal company. Whether this is the case in other Latin American countries where W.R. Grace has interests is not known. In any case, the Colombian holdings of W.R. Grace & Co. are a curious blend of the old and the new in terms of the principal activities of the transnational corporation under analysis. Three of the subsidiaries/associates listed were on the list of the thirty five dominant foreign enterprises in 1968. (See table 22.) W.R. Grace & Co., perhaps more than other transnational corporations being examined (except, perhaps, Exxon and Celanese), has had a significant effect on the Colombian industrial structure.

/Figure 7

10. Celanese Corporation

The global market for fibers consists of several components. Fibers are divided into natural (e.g. wool, cotton, etc.) and man-made. Man-made fibers are further subdivided into cellulose (rayon, acetate, triacetate) and non-cellulose (nylon, polyester, acrylic, etc.). In the field of man-made fibers, Celanese is the leading United States producer of cellulose such as acetate filament yarn, triacetate filament yarn and acetate cigarette filter tow, and non-cellulose such as polyester industrial filament yarn. It is the second largest producer of non-cellulose such as polyester textile filament yarn and polyester staple, in the United States. Within this speciality, Celanese is one of the world leaders in the global fibers market. Within the man-made fibers component, there are other dominant producers such as the US-based E.I. du Pont de Nemours and European-based transnational corporations such as Akzo, Hoescht, Imperial Chemical Industries, Courtaulds, etc. Although Celanese is not the largest of these transnational corporations, it is a world leader in the production of the cellulose mentioned for which it controls the requisite technology. Furthermore, it has established a strong market position for itself in the acids/aldehydes, alcohols, glycols, polyols and monomers segment of the chemical industry.

Three characteristics of Celanese Corporation are of interest for the purposes of this study. First, one of the reasons for Celanese's early growth was undoubtedly its firm control over the appropriate technology for the production of cellulose fibers. Celanese protects this technology by way of more than one hundred patents and the use of many trademarks such as Arnel, Celanar, Celanese, Celanex, Celcon, Celgard, Celion, etc. Celanese learned early the power of controlled technology. Secondly, the 'style' of Celanese's development in the 1950-1976 period is of much interest. Guarding its dominant position in the production of cellulose fibers, Celanese met the challenge from non-cellulose fibers by producing such through a joint venture with Imperial Chemical In. diversifying more heavily into chemicals, plastics and polymers as well as spending a small fortune in the acquisition of the necessary technology. This gave the company a

/strong, vertically-

strong, vertically-integrated base for its fiber production as well as a medium for the continued expansion into the chemical and petrochemical industries and allowing for divestment where necessary. Thirdly, Celanese ran into trouble in Colombia, where the local subsidiary has traditionally been one of the more 'visible' foreign enterprises. With Decree-Law 444 of 1967, external payments for technical services, interest, royalties and profits came under regulation. A dispute arose between the local subsidiary and the newly established Royalties Committee. Decision 24 of the Andean Group, which prohibited payments for royalties between a local subsidiary and its head office, compounded the problem. Celanese Corporation, for whatever reasons (perhaps because the legality of Decision 24 was being questioned in the Colombian Supreme Court), decided to fight against this prohibition as well as others (such as the need for conversion). Celanese Corporation picked the wrong moment to dig in its feet. In the quiet Colombian manner, Celanese came to be in the manufacturing sector the test case Exxon had been in the petroleum sector. By 1976, Celanese Colombiana S.A. was more than 50% locally-owned and otherwise in tune with the local and subregional legislation. In sum, three of the principal characteristics of Celanese Corporation have been its careful control of its fiber technology, its mode of diversification in the context of vertical integration and ill-fated activities undertaken in Colombia.

Celanese Corporation was established in 1927 on the base of The American Cellulose & Chemical Manufacturing Co. Ltd., which was incorporated in the State of Delaware in 1918. Today, Celanese Corporation is a leading producer of man-made fibres and their related chemicals. Celanese's fibres are used in clothing, draperies, upholstery, carpets, automobile tires, sewing thread, industrial coated fabrics and cigarette filters, among others. In the chemical industry, Celanese produces over 40 petrochemicals and is a technology leader in the field of direct oxidation of hydrocarbons for the production of oxygenated aliphatic chemicals. The Celanese line of plastic products includes polyester film, pipe-fittings, valves and pumps as well as a host of plastic resins. Finally, Celanese manufactures a line of coatings, resins and water-soluble polymers. These four lines of business - fibers; chemical; plastics and polymer specialities - accounted for

57, 22, 9 and 12% of sales and 7, 84, 4 and 5% of income per share in 1976. Although over one-half of Celanese's production relates to fibers, in 1976 at least, their money was being made in chemicals.

Celanese's pattern of global expansion has a lot in common with other transnational corporations studied in this section. By 1950, Celanese had established operations in neighbouring countries, such as Canada, Mexico, Panama (holding) and Colombia (1951). By 1965, it had spread to Europe (Netherlands, United Kingdom, Belgium and Germany), Japan and two other Latin American countries, Brazil and Venezuela. By 1976, it spread mainly to other parts - Pakistan, India, Korea and South Africa as well as Switzerland, Portugal and Peru. In general terms, Celanese seems to have followed the familiar Canada-Latin America-Europe-other pattern of expansion of its global organization. Most of the Latin American operations are minority participations by Celanese. (See annexes 73 to 75.)

Over the 1950-1976 period, Celanese Corporation's sales have risen at a real compound annual rate of growth of 4.8%. Net income, total assets and the number of employees have increased at rates of -1.5, 3.8 and 2.2%, respectively. During the 1950-1960 interim Celanese seems to have been, more or less, becalmed and this no doubt encouraged the move toward diversification. In spite of these new industrial overtures, Celanese slipped from 78th in the Fortune list of 1965 to 114th in the list of 1970, climbing back up to 106th in 1976.

The principal characteristics of the Celanese global organization, in 1976, are indicated in table 28. As is evident, for the most part, Celanese's foreign fiber plants are located in Canada and Latin America. The foreign chemical operations are limited to Canada and Mexico and foreign plastics plants are solely in Germany. The foreign element of Celanese's global organization represented 41% of the total number of plants, 55% of the total number of employees, and 21% of total sales in 1976. Foreign operations are, then, an important part of the Celanese Corporation.

Table 28

CELANESE CORPORATION: SUMMARY OF FOREIGN MANUFACTURING OPERATIONS, 1976 a/

| Company<br>(Country)                                     | Employees | Manufacturing activity   |
|--|-----------|--|
| <b>1. Fibres group</b>                                   |           |  |
| Amcel Europe<br>(Belgium)                                | 400       | Acetate and triacetate filament, cigarette tow   |
| Celanese Canada Ltd.<br>(Canada)                         | b/        | Acetate, triacetate and polypropylene, filament and staple, cigarette tow, acetate flake, fabrics, carpets   |
| Millhaven Fibers Ltd.<br>(Canada)                        | b/        | Polyester filament, staple and industrial yarn   |
| Celanese do Brasil,<br>Fibras Químicas Ltda.<br>(Brazil) | 1 100     | Nylon textile filament and carpet yarn, polyester filament and staple  |
| Celanese Mexicana S.A.<br>(Mexico)                       | 7 200     | Acetate filament, cigarette tow, rayon filament and staple, polyester filament, staple and industrial yarn, nylon filament, staple and industrial yarn, acrylic staple, tow and top, acetate flake, cellophane and purified cotton linters |
| Celanese Colombiana S.A.<br>(Colombia)                   | 2 000     | Acetate filament, cigarette tow, polyester filament and staple, nylon filament, cellophane, sulphuric acid, carbon disulphide and manganese sulphate   |
| Celanese Venezolana S.A.<br>(Venezuela)                  | 1 100     | Acetate filament and cigarette tow, nylon filament, polyester filament and staple  |
| Rayón y Celanese<br>Peruana S.A.<br>(Peru)               | 1 100     | Acetate and rayon filament, polyester filament and staple, nylon staple, fishnets and ropes  |
| Punyang Industrial<br>Co. Ltd.<br>(Korea)                | -         | Beamed yarn and woven fabrics  |

/Table 28 (cont.1)

Table 28 (cont.1)

| Company<br>(Country)                   | Employees | Manufacturing activity  |
|--|-----------|---|
| <b>2. Chemicals group</b>              |           |   |
| Celanese Canada Ltd.<br>(Canada)       | b/        | Acetic anhydride, acetic acid, methanol, pentaerythritol, formaldehyde  |
| Celanese Mexicana S.A.<br>(Mexico)     | See above | Phthalic anhydride, acetic acid, acetic anhydride, alcohols, esters, ketones, vinyl acetate, acrylates, cellulose acetate film and sheet, plasticizers and compound acetal resins |
| <b>3. Plastics group</b>               |           |   |
| Ticona Polymer Werke GmbH<br>(Germany) | -         | Acetal copolymer  |
| Poly Plastics Co.<br>(Germany)         | -         | Acetal copolymer  |
| <b>4. Polymer specialities group</b>   |           |   |
| Meypro B.V.<br>(Netherlands)           | -         | Process guar gums   |
| Vanius B.V.<br>(Netherlands)           | -         | Process guar gums   |
| Hager & Kassner GmbH<br>(Germany)      | -         | Polyurethane specialties  |
| Mayhall Chemical A.G.<br>(Switzerland) | -         | Natural guar gum specialties  |
| Meypro A.G.<br>(Switzerland)           | -         | Natural guar gum specialties  |
| Plast Labor S.A.<br>(Switzerland)      | -         | Polyethylene specialties  |
| Indal-Industries<br>(Portugal)         | -         | Locust bean gum   |
| Almetex Ltd.<br>(Canada)               | b/        | Paints and coats  |
| Stein-Hall Ltd.<br>(Canada)            | b/        | Resin emulsions and solvent adhesives   |

/Table 28 (conclusion)



Table 28 (conclusion)

| Company<br>(Country)              | Employees | Manufacturing activity       |
|-----------------------------------|-----------|------------------------------|
| Stein Hall S.A.<br>(South Africa) | -         | Natural guar gums            |
| Hindustan Gum<br>(India)          | -         | Natural guar gums, guar meal |
| Pakistan Gum<br>(Pakistan)        | -         | Natural guar gums, guar meal |

Source: Company report.

a/ For capital shares of Celanese in each company, see annex 75.

b/ Total Celanese employees in Canada is 4,700.

The Latin American element of the Celanese global organization accounted for 3.6% of total sales and 4.4% of total assets in 1976, according to the company report. The principal enterprises involved were the associates in Mexico and Colombia as the following suggests:

| Associate                | Sales a/ | Celanese |       | % Celanese organization |
|--------------------------|----------|----------|-------|-------------------------|
|                          |          | Share    | Sales |                         |
| Celanese Mexicana S.A.   | 171.2    | 40.0     | 68.5  | 3.2                     |
| Celanese Colombiana S.A. | 36.5     | 49.2     | 18.0  | 0.8                     |

Source: Progreso.

a/ Millions of US dollars.

In the context of Latin America, these enterprises ranked 109th and 603rd, respectively, in the Progreso list of the largest enterprises in the region. In Colombia, Celanese Colombiana S.A. ranked 18th in the list of the largest industrial enterprises, ordered by assets, in 1977. Thus, it would seem that the local enterprise is of much greater significance to the host country than it is to the corporate organization of which it is a part.

As was noted earlier, Celanese Colombiana S.A. is involved in several other enterprises in Colombia such as Nylon de Colombia S.A., Química Internacional S.A. and Industria Purace S.A. which includes a sulphur mining operation. It is not known if this is the case for the other Latin American affiliates.

Again, it is a difficult task to consolidate the information discussed in this section into a few summary paragraphs. The ten dominant transnational corporations encountered in Colombia have many similarities and many differences and that, without doubt, is the principal conclusion one draws from the study of these corporations. That is, it seems that transnational corporations are not a homogeneous group of identical enterprises with common characteristics, rather they are a group of large and very large heterogeneous enterprises with some common characteristics (which should be subject to further study).

/In the

In the case of the ten dominant transnational corporations found in Colombia there are several similarities among them. Excepting the case of W.R. Grace & Co., all are 'majors' in the field of activity they undertake in Colombia: petroleum and its derivatives, tires, paper products, glass products and textile fibres. Excepting the example of Container Corporation, all are quite diversified producers. Although seven of the ten corporations saw their ranking according to Fortune deteriorate over the 1965-1976 period, for the most part all demonstrated impressive real compound annual rates of growth of net sales during the 1950-1976 period. At least six of the ten corporations followed a Canada-Latin America-Europe-other pattern in the global expansion. Several utilized joint ventures as an important medium by which to conduct their global expansion. All, except International Paper Company, have impressive global organizations spanning at least three continents. At least six of these transnational corporations had local subsidiary networks (e.g. Brazil and Colombia) which did not normally appear in the usual sources of corporate information. In sum, the ten dominant transnational corporations found in Colombia have several significant similarities.

These ten transnational corporations also display notable differences. Although each (except W.R. Grace & Co.) is among the 'majors' in their field, there is still significant differentiation in each field, as the cases of the petroleum and tire producers indicated. The three principal characteristics of each of the ten transnational corporations the differences of structure, organization, corporate strategy, even 'style', between the companies. In terms of size, although all were among the top 106 US-based industrial corporations, in 1975, they ranged from first to 106th (or 237th if one considers Container Corporation outside of the Mobil Corporation context). They differed appreciably in terms of their diversification, ranging from the examples of Goodyear or Container Corp. on one hand to the case of W.R. Grace & Co. at the other extreme. Real compound annual rates of growth of net sales during 1950-1976, although impressive in almost every situation, ranged from 1% in the case of Uniroyal Inc., to 8.2% for Texaco Inc. The pattern, timing and geographic concentration of the global expansion of these ten transnational

/corporations varied

corporations varied considerably. The importance of the 'foreign' component of each global organization varied between 21 and 61% depending on the corporation and the measure (plants, employees, assets or sales). The importance of the Latin American component ranged from about 2% in the case of W.R. Grace & Co. to 17% in the case of Goodrich. The importance of the Colombian component ranged from 0.3% for Texaco and Goodyear to 5.4% in the case of Container Corp. (before its acquisition by Mobil). In other words, these ten transnational corporations with operations in Colombia also demonstrate significant differences between them.

Furthermore, a significant conclusion which derives from this analysis of the ten dominant transnational corporations in Colombia deals with the very concept of 'importance' in its corporate and host country context. By definition the foreign enterprises in Colombia associated with the ten dominant transnational corporations are of much importance to Colombia, given that they were selected precisely for that reason. In the case of the global organization of the ten transnational corporations it is not so easy to define the importance of their Colombian holdings. In terms of sales and assets, the Colombian holdings were, for the most part, in the 0-2% range, which would seem to indicate that they were of relatively marginal importance. Importance, like beauty, seems to be in the eye of the beholder.

Finally, several of the transnational corporations under study proved to have rather elaborate local subsidiary networks in various Latin American countries which did not appear in traditional (including the United States Securities and Exchange Commission) sources of corporate information. This suggests that the role of individual transnational corporations in specific Latin American countries could be, to a degree, understated. Only further study at the enterprise-level and improved corporate disclosure can clear up this possible distortion in the analysis of the role of transnational corporations in the local development of host countries.

## VI. SUMMARY AND CONCLUSIONS

Colombian development has, in general, followed the traditional industrial paradigm. Over the 1925-1976 period the gross domestic product of the manufacturing sector increased at a compound annual rate of 6.8% whereas the total gross domestic product grew by only 4.6%. In percentage terms, the gross domestic product of the manufacturing sector rose from 6.7 to 19.1% of the total gross domestic product between 1925 and 1974. Within the manufacturing sector, another typical structural change was taking place. Over the 1953-1974 period, for which there is detailed information, three industries - metalworking, paper and chemicals - witnessed far more dynamism than other industries, displaying compound annual rates of growth of between 12 and 16%, and by 1974 accounted for over 40% of total manufactured output. In other words, the manufacturing sector has established the beachhead of Colombian development with the metalworking, paper and chemical industries leading the way.

General indicators suggest that foreign participation in Colombian development is moderate in relation to other countries in the Latin American region. External public indebtedness, in the 1960-1975 period, has been kept within manageable proportions, even improved upon in the difficult 1970-1975 interim. The composition, terms and repayment periods are appreciably better than the average for the region as a whole. Colombia even set a precedent of sorts by requiring that new loan agreements be subject to local law. With regard to the operation of foreign banks in Colombia, new legislation was introduced in 1976 requiring that foreign participation in local banks be reduced to 49% maximum of equity. This suggests that, with regard to the general financial aspects of Colombian development and, specifically, the role of foreign banks, the Colombian government has developed and implemented a consistent policy to control foreign participation.

In terms of direct foreign investment, Colombia has not been one of the major recipients in the region during the post-war period. Net inflows in the 1945-1975 period reached US\$ 676.7 millions and the accumulated stock ranged /between US\$ 965.5

between US\$ 965.5 millions and US\$ 1,200 millions in 1975, depending on the source of information utilized. Traditionally, during the post-war interim, three-quarters of this stock of direct foreign investment has been concentrated in just two sectors - petroleum and manufacturing. In real terms, the total value of the stock of direct foreign investment began to decline after 1965. At about that time, fully 86.1% of that stock corresponded to direct foreign investment from just one country - United States - which, in the manufacturing sector, at least, had realized an impressive real compound annual rate of growth of almost 12% between 1950 and 1965. Thus, although the level of direct foreign investment was moderate, it was heavily concentrated in just two sectors and it came, for the most part, from just one country, the United States.

Limited available information on the participation of foreign technology in Colombian development suggests that it also is concentrated in the petroleum and manufacturing sectors and two-thirds of it come from the United States. Thus, foreign technology seems to be similarly concentrated in terms of sectors and the source country:

The general or aggregate indicators, then, suggest that foreign participation in Colombian development has been moderate and increasingly so, although it is heavily concentrated in just two sectors and has come increasingly, and almost exclusively, from the United States.

The general characteristics of the Colombian petroleum sector are that petroleum began being produced early this century; by 1950 Colombia was the tenth largest producer of crude petroleum in the world; by 1970 it has fallen to nineteenth position; by 1976 Colombia was a net importer of crude petroleum. Over the 1921-1976 period, over 50% of the crude petroleum produced in Colombia was exported, mainly to the United States. Between 1921 and 1969, especially during the 1921-1951 interim, the petroleum sector in Colombia was essentially a foreign enclave dominated by just four transnational corporations - Exxon, Texaco, Texaco with Mobil and Shell. These four transnational corporations between them controlled most of the concessions for exploration and exploitation of crude petroleum, most of the production /and export

and export of crude petroleum and a good part of the production and export of refined petroleum products and the production of liquid natural gas. Above all else, Exxon (then Standard Oil of New Jersey) dominated the sector in the 1921-1951 period and was dominant foreign enterprise in the refining of crude petroleum in Colombia in the period which followed, and Texaco (alone and with Mobil) dominated the sector in the 1960-1974 period.

Ecopetrol, the state oil company, was created in 1948 in the midst of a political crisis surrounding the reversion to the state of the Standard Oil properties. Ecopetrol developed its activities in two distinguishable phases. Between 1951 and 1969, Ecopetrol concentrated in the technical task of producing petroleum, building pipelines from the fields to the central region and directing more of the petroleum resources to local use, all of this without altering radically the foreign domination of the sector. During the 1969-1975 period, Ecopetrol became more aggressive about the foreign domination of petroleum production and, based on new national legislation, took direct action to gain increased national control over this vital sector. In gist, it purchased Mobil's rights to three concessions of the Texaco-Mobil group's operation, Gulf's rights as well as some pipelines to that major concession, the principal subsidiary of the Royal Dutch Shell group including its rights to five concessions, Exxon's principal refinery and some of its pipeline interests, as well as other pipelines. Furthermore, it abolished the use of contracts of concession replacing them with contracts of association with Ecopetrol itself.

In spite of these changes, the story of the petroleum sector in Colombia has an unhappy ending from the point of view of disposable resources for continued development. By 1976, given rocketing local demand, declining reserves, a lack of major new finds and an inappropriate internal pricing system, Colombia became a net importer of crude petroleum at OPEC prices. Thus, due to Ecopetrol's initial over-caution, resistance of the transnational corporations to the new rules in the petroleum sector and an inappropriate internal pricing system, the net result of the foreign participation in the

/petroleum sector

petroleum sector has been a severe foreign exchange imbalance for the sector, serious difficulties for the local petroleum industry and lingering doubts about the benefits of foreign participation in Colombian development.

As has been stated, the manufacturing sector has been, in many ways, the leading edge of Colombian development, especially in the 1950-1975 period. Several characteristics of the foreign participation in the manufacturing sector stand out from the rest. Across the 1950-1975 period, United States direct foreign investment grew at a real compound annual rate of almost 7% whereas the total stock of foreign direct investment moved along at only 1.1%. This had the effect that, although United States direct foreign investment represented only 19% of the total stock of such in 1950, by 1975 it corresponded to 89.3% of the total stock of direct foreign investment in the Colombian manufacturing sector. Foreign participation in the manufacturing sector has been Americanized. The direct foreign investment in this sector was heavily concentrated in the most dynamic industries of the sector - chemical, metalworking and paper - which accounted for almost three-quarters of the total stock. Foreign technology was utilized mainly in just three industries - chemical, metalworking and textile. Based on a quite detailed study of foreign investment in the manufacturing sector in 1974, it was found that, through the use of a weighted ranking variable based on the value of production of enterprises with foreign capital, the foreign participation in the sector was mainly encountered in just six industrial (ISIC) groups. These groups are textiles,<sup>1/</sup> industrial chemical substances, transport equipment, paper and its products, other chemical products and rubber and its products. All tolled, enterprises with foreign capital accounted for over 43% of total manufactured production, 50% of total manufactured exports (representing only 6% of their production) and 28% of the total number of jobs in the sector, in 1974.

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<sup>1/</sup> See footnote, page 27.



At the level of individual enterprises, information from 1968 (at, more or less, the apogee of the stock of direct foreign investment in the manufacturing sector, in real terms) indicated that fully 35 of the 100 largest industrial enterprises in Colombia were foreign enterprises. The ten largest foreign enterprises were linked to ten large transnational corporations, nine United States-based and one European-based. The dominant foreign enterprises (excluding the Nestle subsidiaries for lack of detailed information) had many characteristics in common. Each was a dominant producer or among the dominant producers of a clearly definable product or product group (e.g. tires, paper products, plate glass, motor gasoline, nitrogenous fertilizer and textile fibers). All were established in the 1940-1965 period of rapid growth of United States direct foreign investment in the manufacturing sector. In the period before 1970, all fit well into the import substitution policy being implemented by the Colombian government. Some received assistance from the industrial promotion institute (IFI) in this context. During this period formidable vertical linkages towards the principal primary materials used were constructed by these dominant foreign enterprises. High and increasing nominal tariff protection shielded these enterprises from foreign competition during the 1950-1970 period. In each and every case, the principal markets in which these firms were participating were characterized by monopoly, duopoly or oligopoly conditions. In general, for their principal products, the dominant foreign enterprises did not have local competitors. For the most part, these enterprises adapted easily and skillfully to the shift in Colombian policy from import substitution to export promotion which became fully effective after 1970. All tolled the dominant nine foreign corporations directly accounted for between 5 and 6% of the total value of manufactured production in 1974. Thus, unlike the case of the petroleum sector, the dominant foreign enterprises in the manufacturing sector were well integrated into the sector and over 90% of local production was destined for local consumption. Furthermore, in several cases valuable new technologies were introduced into Colombian development. In sum, although one should be /preoccupied with

preoccupied with the costs of foreign participation in terms of foreign exchange, industrial concentration and the position of local competitors, it may be said that in the manufacturing sector the Colombian experience was, at a minimum, more positive than that of the petroleum sector.

The role of the principal state agency in charge of overseeing the development of the manufacturing sector (IFI) was significantly different from that of Ecopetrol in the petroleum sector, as well. Although they both began as small entities with few resources, they implemented distinct strategies. Whereas Ecopetrol was very cautious during its first years, it seems that IFI was less so and over-extended itself and suffering several business failures in its projects. Later, when its resources were supplemented in the order of the task it faced, it was more successful. Furthermore, unlike Ecopetrol, IFI never was an element of direct conflict with foreign enterprises, if anything it promoted it actively. Thus, the role of the state was considerably different in the development of each sector, especially with regard to the foreign participation in such.

As was noted in the text, the nature of foreign participation in Colombian development was effectively redefined in the 1967-1976 period. Beginning with Decree-Law 444 of 1967, which was a response to the technical problem of an imbalance of payments, the foreign participation in Colombian development became more openly questioned as a result of the resistance of interested foreign parties to the implementation of Decision 24 of the Andean integration scheme in Colombia. The issue went to the Colombian Supreme Court and required new Colombian legislation. Although the issue of foreign participation in Colombian development did not reach the same political heights nor level of acrimony which characterized the experience of other Andean nations, it did create difficulties for the major foreign enterprises in Colombia. One such difficulty was the creation of a fund for the purpose of purchasing shares, by Colombians, of foreign enterprises in Colombia. Further difficulties were created for foreign enterprises by the ban on the capitalization of profits, in excess of the profit remittance /ceiling, accumulated

ceiling, accumulated by foreign enterprises. All in all, it may be said that Colombia's experience with foreign participation has not (excluding the petroleum sector) been antagonistic and the effective redefinition of this foreign participation was carried out without too many problems in the 1967-1976 period.

The ten transnational corporations linked to the dominant foreign enterprises in Colombia had many similar characteristics. They were all United States-based transnational corporations (the case of Nestle had been excluded). In the main, they are all 'majors' in the field of activity they undertake in Colombia. They are quite diversified. They have witnessed impressive real rates of growth in their net sales over the 1950-1976 period. Many had a Canada-Latin America-Europe-Other pattern to their global expansion. Several utilized joint ventures as the principal medium for their global expansion. With one exception they all had global organizations spanning at least three continents. These, along with other characteristics, indicate that the ten transnational corporations linked to the dominant foreign enterprises in Colombia had a lot in common.

In the context of these general similarities, these ten transnational corporations had notable differences. Although all were among the 'majors' of their field, there were appreciable grades of 'major-ness' (e.g., in petroleum, between Exxon and Texaco; in tires, between Goodyear, Goodrich and Uniroyal). There were significant differences in organization, structure, corporate strategy, even style, among these ten transnational corporations. Although all were huge enterprises, they ranged from 1st to 106th in the Fortune list of the largest industrial corporations in the United States. There were important distinctions to be made in the range or reach of their diversification. Although all enjoyed substantial real rates of growth of net sales over the 1950-1976 period, these rates ranged from 1% in the case of Uniroyal to 8.2% in the case of Texaco. There was considerable variation in the timing and geographic concentration of their patterns of global expansion. The importance of the 'foreign' component of their global organizations varied between 21 and 61% depending on the corporation and the measure (number of plants, number of employees, total assets or net sales) utilized. The importance  
/of the

of the Latin American component ranged from around 2% in the case of W.R. Grace & Co. to 17% in the case of Goodrich. The importance of the Colombian component of these ten transnational corporations ranged between 0.3% for Texaco and Goodyear and 5.4% for Container Corporation (before its acquisition by Mobil Corporation). In other words, in spite of the general similarities among these ten transnational corporations, there are appreciable differences between corporations in terms of these general similarities.

It may be said that the Colombian holdings of these ten transnational corporations are of small importance to the general global organization of each (generally representing less than 2% of net sales). Nevertheless, from the perspective of the host country, Colombia, the ten foreign enterprises were the largest foreign enterprises and within the twenty one largest industrial companies in the country. This clearly indicates the relative nature of the concept of importance, and is undoubtedly a key misconception intrinsic to the unending debates about the influence and effects of transnational corporations.

One interesting feature of this examination of the ten dominant transnational corporations in Colombia was the fact that several of these had subsidiary networks in various countries of the region which did not appear in the usual sources of corporate information. This suggests that the role of individual transnational corporations in specific Latin American countries could, to a degree, be understated. Further study of the occurrence is called for.

This analysis has provided available answers to some of the questions about who produces what where and with what effects with regard to foreign participation in Colombian development. It, of course, does not supply all the answers nor go beyond the example of Colombia. Presumably, if studies of this nature are carried out for other countries, the comparative aspects could lay the basis for a more general theory of transnational corporations and direct foreign investment utilizing, to a greater degree, information from the host countries. Outside of its use as a case study and a sourcebook for future possible studies on the topic, this study does not lend itself to generalization beyond the particular example of Colombia.

PART II

VII. STATISTICAL AND OTHER ANNEXES

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Annex 1

PRICE INDICES UTILIZED

| Year | Colombia <u>a/</u> | United States <u>b/</u> |
|------|--------------------|-------------------------|
| 1950 | 17                 | 59.5                    |
| 1951 | 18                 | 64.5                    |
| 1952 | 18                 | 65.6                    |
| 1953 | 19                 | 66.8                    |
| 1954 | 20                 | 67.3                    |
| 1955 | 21                 | 68.6                    |
| 1956 | 22                 | 73.4                    |
| 1957 | 28                 | 77.4                    |
| 1958 | 32                 | 77.3                    |
| 1959 | 35                 | 78.9                    |
| 1960 | 37                 | 79.1                    |
| 1961 | 39                 | 78.6                    |
| 1962 | 41                 | 79.2                    |
| 1963 | 51                 | 79.8                    |
| 1964 | 60                 | 80.6                    |
| 1965 | 65                 | 81.6                    |
| 1966 | 77                 | 84.1                    |
| 1967 | 82                 | 86.9                    |
| 1968 | 87                 | 90.5                    |
| 1969 | 93                 | 94.9                    |
| 1970 | 100                | 100.0                   |
| 1971 | 112                | 105.6                   |
| 1972 | 132                | 109.5                   |
| 1973 | 169                | 113.7                   |
| 1974 | 230                | 126.3                   |
| 1975 | 288                | 144.9                   |
| 1976 | 354                | 151.9                   |
| 1977 | -                  | 158.7                   |

Sources: United Nations, Statistical Yearbook, various issues. United States, Economic Report of the President, U.S. Government Printing Office, Washington D.C., 1978.

a/ Wholesale price index.

b/ GDP price deflator for non-residential fixed investment.

Annex 2

LATIN AMERICA: COMPOSITION OF THE EXTERNAL PUBLIC DEBT, AS OF DECEMBER 31, 1975  
(Millions of dollars)

| Country             | Emission of bonds |     |       | Private credits |        |       |     |        | (3) + (8) |        |        | Official |        |         | Total debt |
|---------------------|-------------------|-----|-------|-----------------|--------|-------|-----|--------|-----------|--------|--------|----------|--------|---------|------------|
|                     | 1                 | 2   | 3     | 4               | 5      | 6     | 7   | 8      | 9         | 10     | 11     | 12       | 13     |         |            |
|                     |                   |     |       |                 |        |       |     |        |           |        |        |          |        | Private |            |
| Argentina           | 93                | 640 | 733   | 1 363           | 972    | 35    | 16  | 2 386  | 3 119     | 886    | 980    | 1 866    | 4 985  |         |            |
| Bahamas             | -                 | -   | -     | 9               | 23     | 6     | -   | 38     | 38        | -      | 21     | 21       | 59     |         |            |
| Barbados            | -                 | 3   | 3     | 2               | 16     | -     | -   | 18     | 21        | 9      | 18     | 27       | 48     |         |            |
| Bolivia             | 58                | -   | 58    | 103             | 164    | 28    | 49  | 344    | 402       | 270    | 535    | 805      | 1 207  |         |            |
| Brazil              | 162               | 3   | 165   | 1 349           | 6 425  | 89    | 168 | 8 031  | 8 196     | 3 083  | 2 864  | 5 947    | 14 143 |         |            |
| Colombia            | 27                | 25  | 52    | 247             | 419    | 21    | 16  | 703    | 755       | 1 195  | 1 050  | 2 245    | 3 000  |         |            |
| Costa Rica          | b/                | -   | b/    | 34              | 163    | 1     | 7   | 205    | 205       | 356    | 137    | 493      | 698    |         |            |
| Chile               | 24                | -   | 24    | 760             | 425    | 64    | 435 | 1 684  | 1 708     | 392    | 2 187  | 2 579    | 4 287  |         |            |
| Ecuador             | 2                 | -   | 2     | 86              | 162    | 18    | -   | 266    | 268       | 310    | 201    | 511      | 779    |         |            |
| El Salvador         | 1                 | 5   | 6     | -               | 87     | -     | -   | 87     | 93        | 205    | 97     | 302      | 395    |         |            |
| Guatemala           | -                 | 1   | 1     | 6               | 8      | -     | -   | 14     | 15        | 162    | 104    | 266      | 281    |         |            |
| Guyana              | 4                 | -   | 4     | 7               | 66     | -     | 58  | 131    | 135       | 53     | 193    | 246      | 381    |         |            |
| Haiti               | -                 | 4   | 4     | 5               | -      | -     | -   | 5      | 9         | 80     | 46     | 126      | 135    |         |            |
| Honduras            | -                 | -   | -     | 12              | 13     | -     | -   | 25     | 25        | 301    | 125    | 426      | 451    |         |            |
| Jamaica             | 29                | 16  | 45    | 22              | 415    | 12    | -   | 449    | 494       | 157    | 165    | 322      | 816    |         |            |
| Mexico              | 581               | 74  | 655   | 481             | 7 551  | 1 135 | -   | 9 167  | 9 822     | 2 585  | 1 065  | 3 650    | 13 472 |         |            |
| Nicaragua           | -                 | 10  | 10    | 18              | 235    | 89    | -   | 342    | 352       | 233    | 207    | 440      | 792    |         |            |
| Panama              | 12                | 14  | 26    | 46              | 534    | 20    | -   | 600    | 626       | 256    | 204    | 460      | 1 086  |         |            |
| Paraguay            | -                 | -   | -     | 38              | 43     | -     | b/  | 81     | 81        | 127    | 161    | 288      | 369    |         |            |
| Peru                | 2                 | -   | 2     | 428             | 1 554  | 104   | -   | 2 086  | 2 088     | 307    | 1 073  | 1 380    | 3 468  |         |            |
| Dominican Republic  | -                 | -   | -     | 9               | 170    | 29    | -   | 208    | 208       | 165    | 349    | 514      | 722    |         |            |
| Trinidad and Tobago | 5                 | 2   | 7     | 7               | 57     | -     | -   | 64     | 71        | 90     | 46     | 136      | 207    |         |            |
| Uruguay             | 279               | -   | 279   | 37              | 219    | b/    | -   | 256    | 535       | 258    | 235    | 493      | 1 028  |         |            |
| Venezuela           | 48                | 24  | 72    | 261             | 315    | 8     | 102 | 686    | 758       | 393    | 253    | 646      | 1 404  |         |            |
| Latin America       | 1 327             | 821 | 2 148 | 5 390           | 20 036 | 1 659 | 851 | 27 876 | 30 024    | 11 873 | 12 316 | 24 189   | 54 213 |         |            |

Source: Interamerican Development Bank, External Public Debt of the Latin American Countries, Washington, D.C., April, 1978.

a/ Debt with an original maturity of one year or more, repayable in foreign currency.

b/ Less than \$500 000.



## Annex 3

LATIN AMERICA: PROJECTION BY FIVE-YEAR PERIOD OF FUTURE AMORTIZATION PAYMENTS ON THE EXTERNAL DEBTS/ AS OF END-1976

| Country              | Amount of debt Computed b/ | 1-5 years        |             | 5-10 years       |             | 10-15 years      |            | 15-20 years      |            | More than 20 years |            |
|----------------------|----------------------------|------------------|-------------|------------------|-------------|------------------|------------|------------------|------------|--------------------|------------|
|                      |                            | Millions of US\$ | Percentage  | Millions of US\$ | Percentage  | Millions of US\$ | Percentage | Millions of US\$ | Percentage | Millions of US\$   | Percentage |
| Argentina            | 6 010                      | 3 794            | 63.1        | 1 320            | 22.0        | 631              | 10.5       | 236              | 3.9        | 29                 | 0.5        |
| Bahamas              | 58                         | 46               | 79.3        | 6                | 10.4        | 5                | 8.6        | 1                | 1.7        | -                  | -          |
| Barbados             | 53                         | 18               | 34.0        | 6                | 11.3        | 9                | 17.0       | 5                | 9.4        | 15                 | 28.3       |
| Bolivia              | 1 561                      | 595              | 38.1        | 304              | 19.5        | 206              | 13.2       | 171              | 11.0       | 285                | 18.2       |
| Brazil               | 18 070                     | 9 574            | 53.0        | 4 718            | 26.1        | 1 950            | 10.8       | 1 078            | 6.0        | 750                | 4.1        |
| Colombia             | 3 314                      | 1 163            | 35.1        | 822              | 24.8        | 499              | 15.1       | 346              | 10.4       | 484                | 14.6       |
| Costa Rica           | 933                        | 360              | 38.6        | 181              | 19.4        | 147              | 15.7       | 110              | 11.8       | 135                | 14.5       |
| Chile                | 4 171                      | 2 356            | 56.5        | 1 031            | 24.7        | 320              | 7.7        | 214              | 5.1        | 250                | 6.0        |
| Ecuador              | 1 015                      | 434              | 42.8        | 249              | 24.5        | 125              | 12.3       | 82               | 8.1        | 125                | 12.3       |
| El Salvador          | 461                        | 113              | 24.5        | 102              | 22.1        | 73               | 15.9       | 60               | 13.0       | 113                | 24.5       |
| Guatemala            | 551                        | 95               | 17.2        | 108              | 19.6        | 103              | 18.7       | 75               | 13.6       | 170                | 30.9       |
| Guyana               | 407                        | 180              | 44.2        | 80               | 19.7        | 62               | 15.2       | 29               | 7.1        | 56                 | 13.8       |
| Haiti                | 180                        | 22               | 12.2        | 11               | 6.1         | 25               | 13.9       | 21               | 11.7       | 101                | 56.1       |
| Honduras             | 580                        | 131              | 22.6        | 123              | 21.2        | 109              | 18.8       | 70               | 12.1       | 147                | 25.3       |
| Jamaica              | 1 024                      | 529              | 51.7        | 262              | 25.6        | 87               | 8.5        | 62               | 6.0        | 84                 | 8.2        |
| Mexico               | 17 356                     | 11 758           | 67.8        | 3 670            | 21.1        | 1 098            | 6.3        | 581              | 3.4        | 249                | 1.4        |
| Nicaragua            | 936                        | 356              | 38.0        | 232              | 24.8        | 103              | 11.0       | 86               | 9.2        | 199                | 17.0       |
| Panama               | 1 409                      | 733              | 52.0        | 348              | 24.7        | 129              | 9.2        | 86               | 6.1        | 113                | 8.0        |
| Paraguay             | 381                        | 120              | 31.5        | 83               | 21.8        | 50               | 13.1       | 42               | 11.0       | 86                 | 22.6       |
| Peru                 | 4 393                      | 2 545            | 58.1        | 1 142            | 26.0        | 389              | 8.9        | 199              | 3.6        | 148                | 3.4        |
| Dominican Republic   | 867                        | 343              | 39.6        | 162              | 18.7        | 113              | 13.0       | 62               | 7.1        | 187                | 21.6       |
| Trinidad and Tobago  | 150                        | 49               | 32.7        | 41               | 27.3        | 34               | 22.7       | 17               | 11.3       | 9                  | 6.0        |
| Uruguay              | 1 006                      | 542              | 53.9        | 283              | 28.1        | 93               | 9.2        | 53               | 5.3        | 35                 | 4.5        |
| Venezuela            | 3 078                      | 2 269            | 73.7        | 735              | 23.9        | 60               | 2.0        | 10               | 0.3        | 4                  | 0.1        |
| <b>Latin America</b> | <b>67 954</b>              | <b>38 125</b>    | <b>56.1</b> | <b>16 019</b>    | <b>23.6</b> | <b>6 420</b>     | <b>9.4</b> | <b>3 656</b>     | <b>5.4</b> | <b>3 734</b>       | <b>5.5</b> |

Source: Ibid.

a/ Debt with an original maturity of one year or more, repayable in foreign currency.

b/ Excludes debts for which repayment terms are unknown.

## Annex 4

LATIN AMERICA: TWENTY-YEAR PROJECTION OF INTEREST PAYMENTS ON THE EXTERNAL PUBLIC DEBTS<sup>a/</sup> AS OF END-1976

| Country             | Total debt<br>Computed b/<br>Millions<br>of US\$ | 1977-1981           |            | 1982-1986           |            | 1987-1991           |            | 1992-1996           |            | Total 1977-1996     |            |
|---------------------|--|---------------------|------------|---------------------|------------|---------------------|------------|---------------------|------------|---------------------|------------|
|                     |  | Millions<br>of US\$ | Percentage | Millions<br>of US\$ | Percentage | Millions<br>of US\$ | Percentage | Millions<br>of US\$ | Percentage | Millions<br>of US\$ | Percentage |
| Argentina           | 6 010  | 1 248               | 62.3       | 524                 | 26.1       | 193                 | 9.6        | 40                  | 2.0        | 2 005               | 100.0      |
| Bahamas             | 58   | 14                  | 82.4       | 3                   | 17.6       | c/                  | -          | c/                  | -          | 17                  | 100.0      |
| Barbados            | 53   | 8                   | 34.8       | 5                   | 21.7       | 5                   | 21.7       | 5                   | 21.7       | 23                  | 100.0      |
| Bolivia             | 1 561  | 250                 | 46.3       | 147                 | 27.2       | 91                  | 16.9       | 52                  | 9.6        | 540                 | 100.0      |
| Brazil              | 18 070   | 4 250               | 57.9       | 1 956               | 26.7       | 818                 | 11.1       | 313                 | 4.3        | 7 337               | 100.0      |
| Colombia            | 3 314  | 711                 | 47.0       | 432                 | 28.5       | 243                 | 16.1       | 128                 | 8.4        | 1 514               | 100.0      |
| Costa Rica          | 933  | 206                 | 41.7       | 144                 | 29.2       | 92                  | 18.6       | 52                  | 10.5       | 494                 | 100.0      |
| Chile               | 4 171  | 788                 | 62.2       | 202                 | 23.8       | 118                 | 9.3        | 60                  | 4.7        | 1 268               | 100.0      |
| Ecuador             | 1 015  | 185                 | 50.7       | 103                 | 28.2       | 51                  | 14.0       | 26                  | 7.1        | 365                 | 100.0      |
| El Salvador         | 461  | 69                  | 40.5       | 62                  | 28.2       | 43                  | 19.5       | 26                  | 11.8       | 220                 | 100.0      |
| Guatemala           | 551  | 95                  | 34.7       | 83                  | 30.3       | 60                  | 21.9       | 36                  | 13.1       | 274                 | 100.0      |
| Guyana              | 407  | 70                  | 52.2       | 36                  | 26.9       | 19                  | 14.2       | 9                   | 6.7        | 134                 | 100.0      |
| Haiti               | 180  | 10                  | 24.4       | 11                  | 26.8       | 10                  | 24.4       | 10                  | 24.4       | 41                  | 100.0      |
| Honduras            | 580  | 100                 | 36.8       | 87                  | 32.0       | 55                  | 22.2       | 30                  | 11.0       | 272                 | 100.0      |
| Jamaica             | 1 024  | 248                 | 57.7       | 106                 | 24.6       | 49                  | 11.4       | 27                  | 6.3        | 430                 | 100.0      |
| Mexico              | 17 356   | 4 231               | 67.8       | 1 296               | 20.8       | 505                 | 8.1        | 208                 | 3.3        | 6 240               | 100.0      |
| Nicaragua           | 936  | 199                 | 51.7       | 98                  | 25.5       | 57                  | 14.8       | 31                  | 8.0        | 385                 | 100.0      |
| Panama              | 1 409  | 291                 | 61.1       | 107                 | 22.5       | 54                  | 11.4       | 24                  | 5.0        | 476                 | 100.0      |
| Paraguay            | 381  | 57                  | 43.2       | 37                  | 28.0       | 24                  | 18.2       | 14                  | 10.6       | 132                 | 100.0      |
| Peru                | 4 383  | 1 143               | 67.0       | 386                 | 22.6       | 126                 | 7.4        | 51                  | 3.0        | 1 706               | 100.0      |
| Dominican Republic  | 867  | 141                 | 47.3       | 81                  | 27.2       | 46                  | 15.4       | 30                  | 10.1       | 298                 | 100.0      |
| Trinidad and Tobago | 150  | 35                  | 47.9       | 24                  | 32.9       | 11                  | 15.1       | 3                   | 4.1        | 73                  | 100.0      |
| Uruguay             | 1 006  | 273                 | 63.1       | 111                 | 25.6       | 38                  | 8.8        | 11                  | 2.5        | 433                 | 100.0      |
| Venezuela           | 3 078  | 599                 | 84.6       | 100                 | 14.1       | 9                   | 1.3        | c/                  | -          | 708                 | 100.0      |
| Latin America       | 67 954   | 15 241              | 60.0       | 6 241               | 24.6       | 2 717               | 10.7       | 1 186               | 4.7        | 25 385              | 100.0      |

Sources: Ibid.

a/ Debt with an original maturity of one year or more, repayable in foreign currency.

b/ Excludes debts for which repayment terms are not known.

c/ Less than \$500 000.

Annex 5

LATIN AMERICA: SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT AS PERCENTAGE OF EXPORTS OF GOODS<sup>a/</sup> AND SERVICES<sup>b/</sup>, 1960-1976

(Percentage)

| Country             | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Argentina           | 20.5 | 22.3 | 20.3 | 18.3 | 24.6 | 20.5 | 25.5 | 26.6 | 29.2 | 24.8 | 21.7 | 20.4 | 20.4 | 17.9 | 17.0 | 21.7 | 18.3 |
| Bahamas             | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | 1.3  | 0.7  | 0.6  | 0.5  |
| Barbados            | ...  | ...  | ...  | ...  | 1.7  | 1.6  | 1.4  | 1.4  | 1.3  | 1.2  | 1.0  | 0.9  | 0.8  | 0.7  | 2.6  | 1.8  | 1.4  |
| Bolivia             | 27.6 | 23.5 | 7.1  | 6.2  | 12.8 | 12.7 | 4.9  | 5.9  | 6.5  | 6.8  | 11.0 | 12.1 | 17.8 | 15.5 | 10.8 | 15.2 | 16.7 |
| Brazil              | 38.7 | 29.3 | 33.2 | 30.1 | 26.4 | 28.9 | 30.6 | 15.7 | 15.3 | 16.3 | 14.3 | 16.3 | 16.4 | 13.2 | 13.0 | 15.1 | 15.2 |
| Colombia            | 13.9 | 12.8 | 13.1 | 15.1 | 12.8 | 14.4 | 16.4 | 14.2 | 13.2 | 11.7 | 11.8 | 14.3 | 12.6 | 13.4 | 16.5 | 11.3 | 9.5  |
| Costa Rica          | 4.8  | 4.9  | 8.0  | 8.7  | 7.4  | 10.2 | 12.3 | 12.1 | 12.1 | 10.6 | 10.0 | 10.2 | 9.8  | 10.3 | 9.4  | 10.6 | 9.4  |
| Chile               | 14.2 | 22.6 | 22.2 | 17.7 | 17.9 | 12.0 | 10.5 | 12.7 | 19.8 | 15.9 | 18.7 | 21.4 | 10.0 | 10.9 | 11.7 | 28.7 | 33.0 |
| Ecuador             | 7.1  | 8.5  | 9.4  | 8.5  | 6.7  | 6.1  | 6.4  | 6.4  | 8.4  | 9.8  | 8.9  | 12.5 | 10.1 | 7.3  | 7.2  | 4.5  | 5.8  |
| El Salvador         | 2.6  | 2.3  | 2.6  | 2.4  | 4.2  | 3.8  | 2.9  | 2.6  | 2.6  | 2.7  | 3.5  | 6.0  | 3.3  | 5.3  | 4.9  | 9.2  | 4.2  |
| Guatemala           | 1.5  | 3.1  | 11.1 | 4.4  | 6.5  | 5.3  | 5.7  | 7.3  | 7.9  | 7.9  | 7.4  | 8.0  | 10.4 | 3.6  | 3.8  | 1.7  | 1.9  |
| Guyana              | ...  | ...  | 3.6  | 3.6  | 4.5  | 4.2  | 5.6  | 5.0  | 6.1  | 3.5  | 3.4  | 3.0  | 5.5  | 5.7  | 5.1  | 4.8  | 10.4 |
| Haiti               | 3.6  | 6.7  | 3.7  | 5.7  | 2.2  | 2.2  | -    | 2.4  | -    | 2.0  | 7.5  | 7.8  | 6.3  | 6.4  | 6.5  | 5.7  | 8.6  |
| Honduras            | 2.8  | 3.8  | 2.3  | 3.3  | 2.9  | 2.2  | 1.9  | 1.8  | 2.0  | 2.1  | 3.0  | 3.3  | 3.4  | 3.7  | 3.6  | 4.7  | 6.3  |
| Jamaica             | ...  | ...  | ...  | 1.9  | 1.8  | 2.0  | 1.8  | 2.3  | 3.1  | 2.8  | 3.1  | 4.1  | 5.0  | 5.4  | 6.2  | 7.0  | 11.3 |
| Mexico              | 15.5 | 14.3 | 15.4 | 16.1 | 23.9 | 24.6 | 20.9 | 22.9 | 25.3 | 21.0 | 24.1 | 23.3 | 22.8 | 24.3 | 19.2 | 25.4 | 33.2 |
| Nicaragua           | 3.8  | 5.9  | 3.8  | 4.7  | 4.1  | 4.1  | 5.2  | 6.6  | 7.8  | 9.9  | 10.6 | 13.3 | 9.4  | 19.1 | 10.6 | 11.4 | 12.3 |
| Panama              | 1.6  | 1.4  | 1.7  | 1.6  | 2.5  | 2.6  | 2.8  | 2.7  | 3.1  | 3.4  | 7.6  | 8.8  | 11.4 | 16.8 | 18.0 | 8.6  | 12.2 |
| Paraguay            | 6.8  | 6.0  | 6.5  | 8.9  | 7.8  | 6.1  | 7.8  | 8.1  | 10.3 | 9.0  | 11.2 | 13.5 | 13.3 | 10.0 | 7.7  | 10.0 | 9.0  |
| Peru                | 10.5 | 6.7  | 6.4  | 7.7  | 5.8  | 6.7  | 9.8  | 11.1 | 14.6 | 11.9 | 13.7 | 19.6 | 18.5 | 32.3 | 24.4 | 23.8 | 21.6 |
| Dominican Republic  | ...  | 0.7  | 1.1  | 0.5  | 2.5  | 18.9 | 12.5 | 7.6  | 7.5  | 8.8  | 5.1  | 6.9  | 4.6  | 5.5  | 5.8  | 6.1  | 6.1  |
| Trinidad and Tobago | ...  | ...  | ...  | ...  | 3.5  | 2.0  | 1.9  | 2.0  | 1.4  | 2.2  | 2.0  | 1.6  | 1.5  | 1.8  | 2.3  | 1.2  | 2.7  |
| Uruguay             | 5.8  | 5.0  | 6.1  | 9.1  | 10.4 | 6.7  | 12.5 | 17.0 | 19.0 | 20.0 | 21.7 | 22.6 | 34.4 | 22.9 | 32.8 | 45.9 | 29.5 |
| Venezuela           | 4.4  | 4.9  | 3.3  | 2.8  | 2.8  | 1.8  | 2.7  | 1.8  | 1.8  | 1.9  | 2.9  | 3.8  | 6.2  | 6.1  | 4.3  | 5.7  | 4.1  |
| Latin America       | 15.1 | 13.8 | 13.3 | 12.7 | 13.6 | 13.4 | 14.3 | 12.5 | 13.9 | 13.0 | 13.4 | 14.1 | 14.1 | 14.0 | 11.4 | 14.0 | 14.7 |

Source: Ibid.

a/ Exports valued at FOB prices.  
b/ Excluding "investment income".

## Annex 6(a)

LAFTA COUNTRIES: NET FLOWS OF DIRECT FOREIGN INVESTMENT, 1946-1976, ACCORDING TO BALANCE OF PAYMENTS  
(Millions of constant 1970 US dollars)

| Country      | 1946-1955         |              | 1956-1966         |              | 1967-1976         |              | Structure of net DFI flows |                 |              |              |
|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|----------------------------|-----------------|--------------|--------------|
|              | Annual<br>average | %            | Annual<br>average | %            | Annual<br>average | %            | Accumulated flows:         |                 | Percentage:  |              |
|              |                   |              |                   |              |                   |              | To 1967                    | To 1976         | To 1967      | To 1976      |
| Argentina    | -10.9             | -2.4         | 80.8              | 11.0         | 7.9               | 0.7          | 791.9                      | 859.6           | 6.2          | 3.8          |
| Brazil       | 83.4              | 18.6         | 173.6             | 23.6         | 579.4             | 57.1         | 2 876.3                    | 8 537.5         | 22.5         | 38.0         |
| Mexico       | 92.8              | 20.8         | 151.3             | 20.6         | 337.4             | 33.3         | 2 741.5                    | 5 966.2         | 21.5         | 26.5         |
| Bolivia      | ...               | ...          | 11.7              | 1.6          | 0.1               | ...          | 135.1                      | 136.4           | 1.1          | 0.6          |
| COLOMBIA     | 15.1              | 3.4          | 19.1              | 2.6          | 33.5              | 3.3          | 409.6                      | 696.6           | 3.2          | 3.1          |
| Chile        | 19.9              | 4.4          | 22.1              | 3.0          | -29.4             | -2.9         | 445.9                      | 148.9           | 3.5          | 0.7          |
| Ecuador      | 6.6               | 1.5          | 9.8               | 1.3          | 56.7              | 5.6          | 192.4                      | 740.8           | 1.5          | 3.3          |
| Peru         | 28.4              | 6.3          | 32.0              | 4.4          | 29.7              | 2.9          | 615.9                      | 933.9           | 4.8          | 4.2          |
| Venezuela    | 193.8             | 43.3         | 225.4             | 30.7         | -6.2              | -0.6         | 4 509.4                    | 4 355.2         | 35.3         | 19.4         |
| Paraguay     | 1.5               | 0.3          | 3.0               | 0.4          | 5.2               | 0.5          | 51.3                       | 99.7            | 0.4          | 0.4          |
| Uruguay      | 16.0              | 3.6          | n.d.              | n.d.         | n.d.              | n.d.         | n.d.                       | n.d.            | n.d.         | n.d.         |
| <u>Total</u> | <u>447.2</u>      | <u>100.0</u> | <u>734.1</u>      | <u>100.0</u> | <u>1 014.4</u>    | <u>100.0</u> | <u>12 769.3</u>            | <u>22 473.5</u> | <u>100.0</u> | <u>100.0</u> |

Source: CEPAL on the basis of IMF Balance of Payments information.

Annex 6(b)

LAFTA COUNTRIES: STOCK OF DIRECT FOREIGN INVESTMENT, 1967-1976,  
ACCORDING TO INFORMATION FROM THE OECD COUNTRIES

(Millions of constant 1970 US dollars)

| Country      | Value of stock of DFI |               |               | Structure of stock DFI (%) |              |              |
|--------------|-----------------------|---------------|---------------|----------------------------|--------------|--------------|
|              | 1967                  | 1971          | 1976          | 1967                       | 1971         | 1976         |
| Argentina    | 2 096                 | 2 121         | 1 481         | 13.4                       | 13.5         | 9.6          |
| Brazil       | 4 290                 | 4 830         | 5 991         | 27.4                       | 30.8         | 39.0         |
| Mexico       | 2 056                 | 2 320         | 3 061         | 13.1                       | 14.8         | 19.9         |
| Bolivia      | 166                   | 66            | 72            | 1.1                        | 0.4          | 0.5          |
| COLOMBIA     | 838                   | 852           | 823           | 5.3                        | 5.4          | 5.4          |
| Chile        | 1 108                 | 805           | 270           | 7.1                        | 5.1          | 1.8          |
| Ecuador      | 94                    | 284           | 349           | 0.6                        | 1.8          | 2.3          |
| Peru         | 900                   | 805           | 1 185         | 5.7                        | 5.1          | 7.7          |
| Venezuela    | 4 022                 | 3 504         | 1 909         | 25.7                       | 22.3         | 12.4         |
| Paraguay     | 40                    | 43            | 53            | 0.3                        | 0.3          | 0.3          |
| Uruguay      | 69                    | 76            | 171           | 0.4                        | 0.5          | 1.1          |
| <u>Total</u> | <u>15 679</u>         | <u>15 705</u> | <u>15 365</u> | <u>100.0</u>               | <u>100.0</u> | <u>100.0</u> |

Source: CEPAL/CET, Tendencias y cambios en la inversión de las empresas internacionales en los países en desarrollo y particularmente en América Latina, Work Document N°12, Santiago, Chile, September 1978.

Annex 7

WORLD PRODUCTION OF CRUDE PETROLEUM,<sup>a/</sup> BY COUNTRY, 1950 AND 1970  
(Millions of long tons and percentage)

| Rank |      | Country       | Volume       |                | Percentage   |              |
|------|------|---------------|--------------|----------------|--------------|--------------|
| 1950 | 1970 |               | 1950         | 1970           | 1950         | 1970         |
| 1    | 1    | United States | 270.1        | 469.0          | 51.9         | 21.6         |
| 2    | 3    | Venezuela     | 78.6         | 191.2          | 15.1         | 8.8          |
| 3    | 2    | U.S.S.R.      | 37.0         | 349.0          | 7.1          | 16.1         |
| 4    | 5    | Iran          | 31.8         | 172.4          | 6.1          | 8.0          |
| 5    | 4    | Saudi Arabia  | 26.2         | 174.1          | 5.0          | 8.0          |
| 6    | 7    | Kuwait        | 17.0         | 135.2          | 3.3          | 6.2          |
| 7    | 14   | Mexico        | 10.2         | 22.3           | 2.0          | 1.0          |
| 8    | 8    | Iraq          | 6.5          | 75.2           | 1.2          | 3.5          |
| 9    | 12   | Indonesia     | 6.3          | 41.7           | 1.2          | 1.9          |
| 10   | 19   | Colombia      | 4.8          | 11.3           | 0.9          | 0.5          |
|      |      | All others    | 32.0         | 526.6          | 6.1          | 24.3         |
|      |      | <u>Total</u>  | <u>520.5</u> | <u>2 167.0</u> | <u>100.0</u> | <u>100.0</u> |

Source: Great Britain, Natural Environment Research Council, Institute of Geological Sciences, Mineral Resources Division, Statistical Summary of the Mineral Industry, 1944-1950 and 1967-1971, London, 1952 and 1973.

a/ Excludes natural gasoline.

Annex 8

COLOMBIA: PETROLEUM EXPLOITATION CONTRACTS OF CONCESSION a/ IN FORCE AS OF 30 JUNE 1977

| Location         | Name of concession  | Area (hectares) | Concessionaire (group) |
|------------------|---------------------|-----------------|------------------------|
| Lower Magdalena  | El Difícil          | 45 932          | Texaco (Antex)         |
|                  | Jobo                | 50 000          | Exxon                  |
|                  | Sampues             | 39 718          | Exxon                  |
| Middle Magdalena | El Limón            | 11 783          | Exxon                  |
|                  | El Roble            | 39 128          | Exxon                  |
|                  | El Conchal          | 39 896          | Exxon                  |
|                  | Totumal             | 5 000           | Texaco                 |
|                  | Tetuan              | 24 685          | Texaco                 |
|                  | Ermitaño            | 24 918          | Texaco                 |
|                  | Río Negro           | 24 340          | Texaco                 |
|                  | Palagua             | 21 000          | Texaco                 |
|                  | Cocorna             | 49 702          | Texaco                 |
| Higher Magdalena | Neiva               | 49 000          | Colbras                |
|                  | Tello               | 24 999          | Colbras                |
|                  | Carnicerías         | 9 769           | Colbras                |
| Maracaibo        | Zulia               | 49 516          | Chevron                |
| Llanos           | Yalea               | 72 438          | Aquitane               |
| Putumayo         | Orito Norte         | 28 622          | Texaco                 |
|                  | Orito Sur           | 39 660          | Texaco                 |
|                  | Acae Sur            | 48 810          | Texaco                 |
|                  | Acae Norte          | 49 742          | Texaco                 |
|                  | Río San Miguel      | 13 763          | Texaco                 |
|                  | Churuyaco           | 23 596          | Texaco                 |
| <u>Total</u>     | <u>23 contracts</u> | <u>796 269</u>  | <u>5 companies</u>     |

Source: Colombia, Ministerio de Minas y Energía, Bases para un plan energético nacional, Bogotá, October 1977.

a/ Private property not included in total (e.g. Guaguaqui-Terán property worked by Texaco).

Annex 9

COLOMBIA: PETROLEUM EXPLORATION CONTRACTS OF ASSOCIATION IN  
FORCE AS OF 30 JUNE 1977

| Name of contract    | Area             | Associates:<br>Ecopetrol plus |
|---------------------|------------------|-------------------------------|
| San Miguel          | 80 000           | Texaco (Antex)                |
| Carare              | 78 576           | Aquitane                      |
| Magdalena S-25      | 90 000           | Aquitane                      |
| Magdalena S-27      | 90 000           | Aquitane                      |
| Llanos              | 148 399          | Aquitane                      |
| Santiago            | 214 000          | Aquitane                      |
| Girardot            | 251 700          | Aquitane                      |
| Cubarral            | 97 451           | Chevron                       |
| Santa Marta         | 185 758          | Chevron                       |
| El Retiro           | 319 801          | Chevron                       |
| Las Monas           | 16 000           | Cities Service                |
| Huila               | 596 600          | Colbras                       |
| Yarf                | 2 230 403        | Colbras                       |
| Putumayo            | 234 553          | Farmland                      |
| San Jorge           | 280 000          | Exxon                         |
| Lebrija             | 423 529          | Exxon                         |
| Uribe               | 424 527          | Exxon                         |
| Arauca              | 474 456          | Exxon                         |
| Simiti              | 48 281           | North Central                 |
| Sogamoso            | 96 357           | Occidental                    |
| San Fernando        | 172 683          | Occidental                    |
| Meta-III            | 395 070          | Phillips                      |
| Cartagena           | 573 616          | Texaco                        |
| Guajira             | 1 369 193        | Texaco                        |
| Opón                | 73 440           | Webb                          |
| <u>25 contracts</u> | <u>8 964 393</u> | <u>11 companies</u>           |

Source: Colombia, Ministerio de Minas y Energía, Bases para un plan energético nacional, Bogotá, October 1977.



Annex 10

COLOMBIA: MAJOR CONCESSIONS WHICH HAVE REVERTED TO THE STATE (NOW ADMINISTERED BY ECOPELROL) AS OF 30 JUNE 1977

| Location         | Name of concession   | Area (hectares) | Previous concessionaire |
|------------------|----------------------|-----------------|-------------------------|
| Lower Magdalena  | Cicuco               | 49 995          | Texaco-Mobil Oil        |
|                  | Violo                | 49 656          | Texaco-Mobil Oil        |
| Middle Magdalena | de Mares             | 445 000         | Exxon                   |
|                  | Cantagallo           | 21 190          | Royal Dutch Shell       |
|                  | Cristalina           | 29 501          | Royal Dutch Shell       |
|                  | San Pablo            | 49 949          | Royal Dutch Shell       |
|                  | Yondo                | 46 880          | Royal Dutch Shell       |
| Maracaibo        | Barco                | 186 806         | Texaco-Mobil Oil        |
| <u>Total</u>     | <u>8 concessions</u> | <u>878 977</u>  | <u>3 companies</u>      |

Source: Colombia, Ministerio de Minas y Energía, Bases para un plan energético nacional, Bogotá, October 1977.

Annex 11

COLOMBIA: THE TEN PRINCIPAL PIPELINES FOR THE TRANSPORT OF PETROLEUM AND NATURAL GAS, BY COMPANY, 1973

| Class   | Owner            | Nominal length (km) | Nominal diameter (in.) | Pumping stations | Capacity (bbl/day)   |
|---------|------------------|---------------------|------------------------|------------------|----------------------|
| Oil     | Exxon            | 511.4               | 10-12                  | 15               | 76 000               |
| Oil     | Chevron          | 498.4               | 10                     | 2                | 35 000               |
| Oil     | Texaco           | 409.1               | 10-12                  | 4                | 38 000               |
| Oil     | Texaco           | 305.6               | 10-18                  | 4                | 100 000              |
| Gas     | Texaco           | 228.5               | 10                     | 1                | 45 000 <sup>a/</sup> |
| Oil/Gas | Odeca            | 210.0               | 6-8                    | 4                | 20 000               |
| Gas     | San Andrés Dept. | 200.0               | 10                     | -                | 50 000 <sup>a/</sup> |
| Oil     | Chevron          | 190.0               | 8                      | -                | 35 000               |
| Oil     | Texaco           | 181.3               | 12                     | 2                | 42 000               |
| Oil/Gas | Dept. Antioquia  | 180.8               | 6                      | 2                | 8 300                |
|         | All others       | 1 885.6             |                        |                  |                      |
|         | <u>Total</u>     | <u>4 800.7</u>      |                        |                  |                      |

Source: Colombia, Ministerio de Minas y Energía, Memoria 1974, Bogotá, 1975.  
<sup>a/</sup> Thousands of cubic feet (gas).

Annex 12

COLOMBIA: PAYMENTS MADE BY FOREIGN PARTICIPANTS IN THE PETROLEUM SECTOR, BY TYPE OF PAYMENT, SELECTED YEARS, 1960-1974

(Millions of dollars)

| Year | Exploration fees | Royalties | Transport tax | Total payments |
|------|------------------|-----------|---------------|----------------|
| 1960 | 0.7              | 8.4       | 0.6           | 9.7            |
| 1965 | 0.5              | 11.5      | 0.9           | 12.9           |
| 1971 | 0.9              | 14.9      | 0.7           | 16.5           |
| 1974 | 0.9              | 10.9      | 0.4           | 12.2           |

Source: Colombia, Ministerio de Minas y Energía, Memoria, Bogotá, various.

Annex 13

COLOMBIA: PAYMENTS MADE BY FOREIGN PARTICIPANTS IN THE PETROLEUM SECTOR, BY COMPANY, SELECTED YEARS, 1960-1974

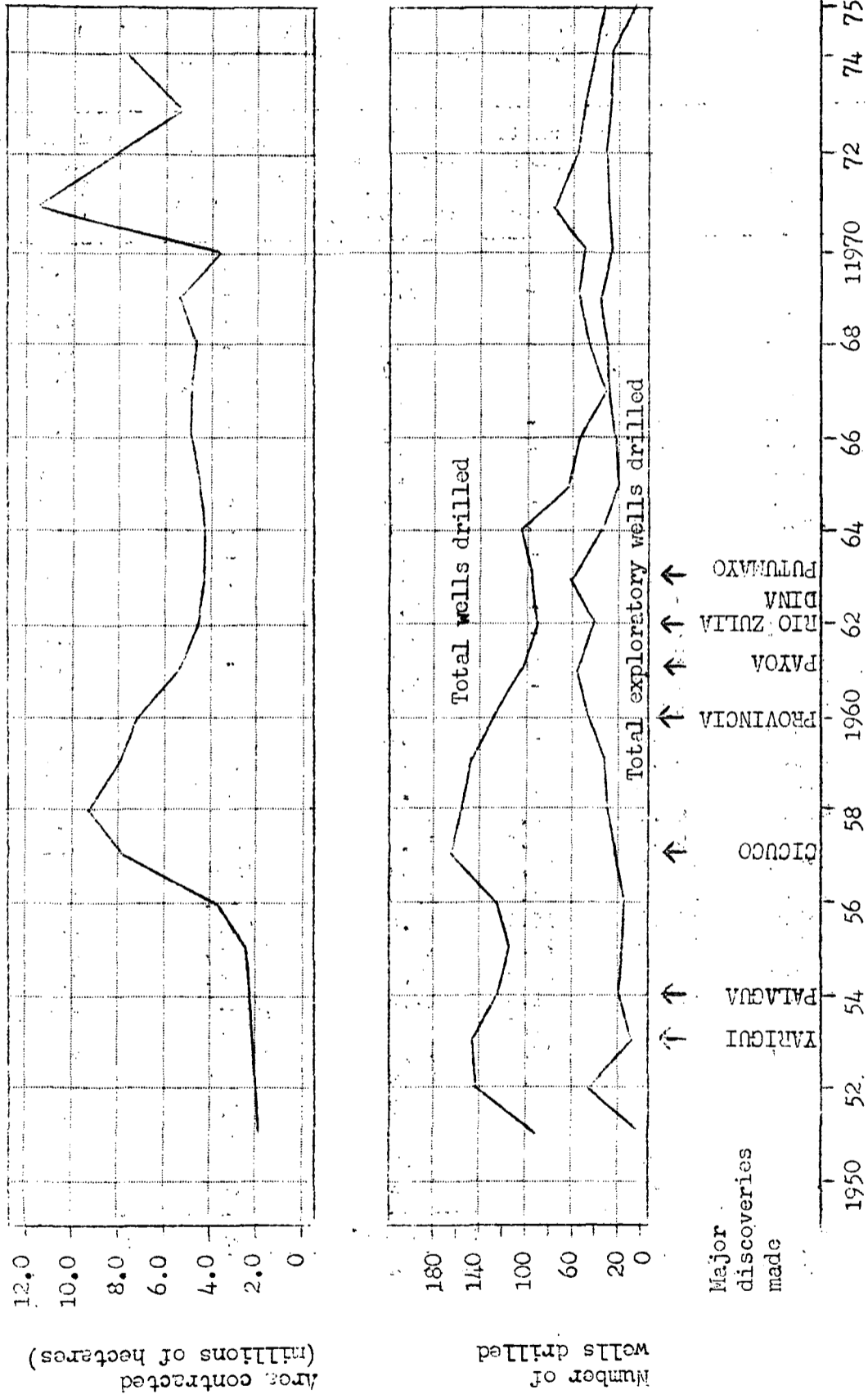
(Percentage)

| Year | Total payments | Exxon group | Texaco group | Texaco-Mobil group | Shell group | All others |
|------|----------------|-------------|--------------|--------------------|-------------|------------|
| 1960 | 100            | ...         | 10.7         | 63.0               | 26.2        | ...        |
| 1965 | 100            | 25.2        | 7.0          | 22.6               | 14.8        | 30.4       |
| 1971 | 100            | 11.5        | 49.0         | 7.3                | 7.3         | 24.8       |
| 1974 | 100            | 21.3        | 41.0         | 9.0                | 8.1         | 20.5       |

Source: Colombia, Ministerio de Minas y Energía, Memoria, Bogotá, various.

Annex 14

COLOMBIA: AREA CONTRACTED, NUMBER OF WELLS DRILLED AND EXPLORATORY EFFORT



Source: Colombia, Ministerio de Minas y Energia, Memoria, Bogota, various.

Annex 15

COLOMBIA: PRODUCTION OF THE PRINCIPAL BASIC GOODS ASSOCIATED WITH  
THE LARGEST FOREIGN ENTERPRISES

| Year | Tires<br>(units<br>(000)) | Paper and<br>cardboard<br>(tons<br>(000)) | Plate<br>glass<br>(tons<br>(000)) | Motor<br>gasoline<br>(bbl<br>(000 000)) | Nitrogenous<br>fertilizers<br>(tons (000)) | Cellulose<br>fibres<br>(tons<br>(000)) | Synthetic<br>fibres<br>(tons<br>(000)) |
|------|---------------------------|---|-----------------------------------|---|--|--|--|
| 1940 | -                         | -   | -                                 | 1.0                                     | -  | 0.1                                    | -                                      |
| 1941 | -                         | -   | -                                 | 1.1                                     | -  | 0.8                                    | -                                      |
| 1942 | -                         | -   | -                                 | 1.0                                     | -  | 0.7                                    | -                                      |
| 1943 | n.d.                      | -   | -                                 | 1.0                                     | -  | 0.8                                    | -                                      |
| 1944 | n.d.                      | -   | -                                 | 1.1                                     | -  | 0.7                                    | -                                      |
| 1945 | n.d.                      | -   | -                                 | 1.1                                     | -  | 1.2                                    | -                                      |
| 1946 | n.d.                      | -   | -                                 | 1.2                                     | -  | 1.5                                    | -                                      |
| 1947 | n.d.                      | -   | -                                 | 1.7                                     | -  | 1.6                                    | -                                      |
| 1948 | n.d.                      | -   | -                                 | 1.4                                     | -  | 1.7                                    | -                                      |
| 1949 | n.d.                      | n.d.                                      | -                                 | 1.9                                     | -  | 1.3                                    | -                                      |
| 1950 | 245.8                     | 8.2                                       | -                                 | 2.0                                     | -  | 1.6                                    | -                                      |
| 1951 | 254.8                     | 8.9                                       | -                                 | 2.1                                     | -  | 2.4                                    | -                                      |
| 1952 | 211.6                     | 10.5                                      | -                                 | 2.3                                     | -  | 3.7                                    | -                                      |
| 1953 | 279.0                     | 16.2                                      | -                                 | 2.2                                     | -  | 5.3                                    | -                                      |
| 1954 | 315.1                     | 22.2                                      | -                                 | 2.8                                     | -  | 6.3                                    | -                                      |
| 1955 | 347.6                     | 29.2                                      | -                                 | 4.9                                     | -  | 7.3                                    | -                                      |
| 1956 | 428.0                     | 35.3                                      | -                                 | 5.4                                     | -  | 7.8                                    | -                                      |
| 1957 | 423.5                     | 40.0                                      | -                                 | 6.0                                     | -  | 8.6                                    | -                                      |
| 1958 | 347.2                     | 43.1                                      | -                                 | 7.8                                     | -  | 8.8                                    | -                                      |
| 1959 | 385.7                     | 50.9                                      | -                                 | 8.3                                     | -  | 9.0                                    | -                                      |
| 1960 | 429.4                     | 55.3                                      | -                                 | 9.2                                     | -  | 8.6                                    | -                                      |
| 1961 | 472.7                     | 64.5                                      | 12.0                              | 10.7                                    | -  | 5.7                                    | 0.5                                    |
| 1962 | 610.0                     | 96.4                                      | 12.0                              | 11.0                                    | -  | 7.1                                    | 0.8                                    |
| 1963 | 630.0                     | 115.0                                     | 12.3                              | 11.1                                    | 59.0                                       | 7.6                                    | 0.9                                    |
| 1964 | 530.0                     | 114.0                                     | 11.7                              | 11.7                                    | n.d.                                       | 6.3                                    | 1.3                                    |
| 1965 | 660.0                     | 126.7                                     | 15.7                              | 13.0                                    | n.d.                                       | 11.8                                   | 3.1                                    |
| 1966 | 820.0                     | 145.0                                     | 21.4                              | 14.5                                    | n.d.                                       | 13.6                                   | 3.4                                    |
| 1967 | 720.0                     | 160.0                                     | 20.7                              | 14.7                                    | n.d.                                       | 14.6                                   | 4.7                                    |
| 1968 | 695.0                     | 174.9                                     | 31.5                              | 17.3                                    | 372.4                                      | 19.3                                   | 8.2                                    |
| 1969 | 800.0                     | 185.0                                     | 31.2                              | 17.9                                    | 385.4                                      | 22.0                                   | 10.8                                   |
| 1970 | 931.0                     | 208.5                                     | 27.3                              | 19.6                                    | 401.1                                      | 23.6                                   | 12.0                                   |
| 1971 | 1 074.0                   | 236.5                                     | 35.4                              | 20.6                                    | 433.7                                      | 24.4                                   | 13.3                                   |
| 1972 | 1 219.0                   | 266.0                                     | 34.7                              | 19.8                                    | 441.0                                      | 33.2                                   | 21.3                                   |
| 1973 | 1 339.0                   | 270.0                                     | 32.6                              | 23.1                                    | 449.0                                      | 37.7                                   | 25.3                                   |
| 1974 | 1 623.0                   | 290.0                                     | 37.2                              | 24.0                                    | 558.2                                      | 37.7                                   | 23.8                                   |
| 1975 | n.d.                      | n.d.                                      | n.d.                              | 16.1                                    | n.d.                                       | n.d.                                   | n.d.                                   |

Source: Poveda Ramos, Gabriel, Políticas económicas, desarrollo industrial y tecnología en Colombia, Colciencias, Bogotá, 1976.

Annex 16

COLOMBIA: ASPECTS OF THE TIRE AND TUBE MARKET, 1950-1974  
(Millions of pesos and percentage)

| Year            | Production    |                 | Imports       |              | Exports       |              |
|-----------------|---------------|-----------------|---------------|--------------|---------------|--------------|
|                 | Current value | Constant (1970) | Current value | % production | Current value | % production |
| <b>1. Tires</b> |               |                 |               |              |               |              |
| 1950            | n.d.          | n.d.            | 4.3           | n.d.         | 0.1           | n.d.         |
| 1958            | 98.1          | 306.6           | 8.2           | 8.4          | -             | -            |
| 1964            | 218.8         | 364.7           | 6.9           | 3.2          | 11.1          | 5.1          |
| 1968            | 408.7         | 469.8           | 11.5          | 2.8          | 17.1          | 4.2          |
| 1972            | 843.8         | 639.2           | 29.3          | 3.5          | 27.4          | 3.2          |
| 1974            | 1 485.1       | 645.7           | 61.2          | 4.1          | 70.9          | 4.8          |
| <b>2. Tubes</b> |               |                 |               |              |               |              |
| 1950            | n.d.          | n.d.            | 0.1           | n.d.         | -             | -            |
| 1958            | 3.9           | 12.2            | 1.0           | 25.6         | -             | -            |
| 1964            | n.d.          | n.d.            | 0.7           | n.d.         | 0.5           | n.d.         |
| 1968            | 10.9          | 12.5            | 0.6           | 5.5          | 1.3           | 11.9         |
| 1972            | 60.4          | 45.8            | 1.8           | 3.0          | 0.9           | 1.5          |
| 1974            | 142.5         | 62.0            | 3.2           | 2.2          | 1.9           | 1.3          |

Sources: Colombia, DANE, Industria manufacturera, 1958, 1968, 1972, 1974, Bogotá, 1961, 1970, 1975, 1977. Colombia, DANE, Anuario de comercio exterior, 1950, 1958, 1964, 1968, 1972, 1974, Bogotá, 1952, 1960, 1966, 1970, 1974, 1976. Colombia, DANE, "La industria del caucho en Colombia", Boletín mensual de estadística, N° 272, Bogotá, March 1974.

- = zero or less than 0.1.

n.d. = no data.

Annex 17

COLOMBIA: NOMINAL TARIFF PROTECTION FOR PRINCIPAL TIRE AND TUBE PRODUCTS AND THEIR MAIN INPUTS, 1950-1975

(Ad valorem and deposit = percentage, specific = peso/kg.)

| Item                         | Date pro-duction began | 1950                     |          | 1959                     |          | 1964                     |         | 1970b/                   |         |
|------------------------------|------------------------|--------------------------|----------|--------------------------|----------|--------------------------|---------|--------------------------|---------|
|                              |                        | Ad valorem (Decree 2218) | Specific | Ad valorem (Decree 1345) | Specific | Ad valorem (Decree 3168) | Deposit | Ad valorem (Decree 3168) | Deposit |
| <b>1. Principal products</b> |                        |                          |          |                          |          |                          |         |                          |         |
| <b>(a) Tires</b>             |                        |                          |          |                          |          |                          |         |                          |         |
| (1) solid                    | n.d.                   | 15                       | 1.00     | 30                       | 3.00a/   | 50                       | 30      | 50                       | 30      |
| (2) for aircraft             | n.d.                   | -                        | -        | -                        | -        | 1                        | 30      | 1                        | 30      |
| (3) for tractors             | n.d.                   | -                        | -        | 20                       | b/       | 20                       | 30      | 20                       | 30      |
| (4) for industrial           | n.d.                   | -                        | -        | 30                       | 3.00b/   | 30                       | 30      | 50                       | 30      |
| (5) less than 9 kgs.         | 1944                   | 10                       | 0.30     | 30                       | 1.00b/   | 50                       | 30      | 50                       | 1       |
| (6) 9-70 kgs.                | 1944                   | 10                       | 1.00     | 40                       | 3.00b/   | 50                       | 30      | 50                       | 1       |
| (7) more than 70 kgs.        | 1944                   | 10                       | 0.30     | 30                       | 1.00b/   | 50                       | 30      | 50                       | 1       |
| (b) Tubes                    | 1944                   | 15                       | 1.50     | 30                       | 3.00b/   | 50                       | 30      | 50                       | 30      |
| <b>2. Principal inputs</b>   |                        |                          |          |                          |          |                          |         |                          |         |
| <b>(a) Rubber</b>            |                        |                          |          |                          |          |                          |         |                          |         |
| (1) natural (latex)          | n.d.                   | 10                       | 0.15     | 20                       | 0.15b/   | 20                       | 1       | 20                       | 1       |
| (2) synthetic (latex)        | n.d.                   | 10                       | 0.15     | 10                       | b/       | 10                       | 1       | 10                       | 1       |
| (3) regenerated              | n.d.                   | 10                       | 0.10     | 20                       | 0.15     | 25                       | 1       | 25                       | 1       |
| (b) Carbon black             | 1965                   | 6                        | 0.01     | 5                        | 0.05     | 5                        | 1       | 5                        | 1c/     |
| (c) Tire cords               | 1955                   | 10                       | 0.10     | 30-40                    | -        | 40                       | 1       | 30                       | 1       |

Sources: Colombia, Ministerio de Hacienda y Crédito Público, Arancel de Aduanas (Decreto 2218 de 1950), official edition. Colombia, Arancel de Aduanas (Decreto 1345 de 1959), Librería Voluntad Ltda, Bogotá, 1959. Colombia, Arancel Aduanero 1965, Bogotá, s.d. Colombia, Arancel de Aduanas, Edición Permanente de la Dfa, Bogotá, 1970.

- a/ Importation prohibited.
- b/ Previous import licence required.
- c/ Subject to the margin of preference for Complementarity Agreement No 6 of the Latin American Free Trade Assoc.

## Annex 18

COLOMBIA: PROFILE OF THE TIRE AND TUBE INDUSTRY, 1958, 1968 AND 1974  
 (Thousands of units, values at factory prices in millions of pesos)

| Item             | 1958     |       |        | 1968     |       |        | 1974     |         |        |
|------------------|----------|-------|--------|----------|-------|--------|----------|---------|--------|
|                  | Quantity | Value | %      | Quantity | Value | %      | Quantity | Value   | %      |
| <u>Tires a/</u>  |          |       |        |          |       |        |          |         |        |
| - automobiles    | 168.3    | 21.6  | 18.5   | 379.2    | 92.8  | 18.8   | 935.8    | 396.6   | 22.3   |
| - bus and truck  | 171.6    | 72.5  | 62.4   | 323.7    | 281.8 | 57.1   | 638.1    | 967.7   | 54.3   |
| - bicycle        | 64.7     | 2.0   | 1.7    | 220.4    | 5.0   | 1.0    | 548.8    | 24.5    | 1.4    |
| - machinery      | 7.3      | 2.0   | 1.7    | 29.2     | 29.2  | 5.9    | 53.9     | 123.3   | 6.9    |
| - retreads       | 197.8    | 14.2  | 12.2   | 290.3    | 49.6  | 10.1   | 496.4    | 177.3   | 10.0   |
| <u> Tubes a/</u> |          |       |        |          |       |        |          |         |        |
| - automobiles    | n.d.     | n.d.  | n.d.   | 519.3    | 28.9  | 5.9    | 466.8    | 36.9    | 2.1    |
| - bus and truck  | 164.6    | 3.9   | 3.4    | 52.1     | 4.0   | 0.8    | 843.9    | 70.5    | 4.0    |
| - bicycle        | n.d.     | n.d.  | n.d.   | 186.7    | 2.1   | 0.4    | 702.8    | 12.1    | 0.6    |
| Subtotal         |          | 116.2 | 100.0  |          | 493.6 | 100.0  |          | 1 781.5 | 100.0  |
| Total ISIC 355   |          | 187.9 | (61.8) |          | 952.5 | (51.8) |          | 3 602.4 | (49.5) |

Source: Colombia, DANE, Industria manufacturera 1958, 1968 and 1974, Bogotá, 1961, 1970 and 1977.

a/ Producers: Uniroyal Croydon, Icollantas and Goodyear.

Annex 19

COLOMBIA: ASPECTS OF THE CARDBOARD AND PAPER MARKET, 1950-1974  
(Millions of pesos and percentage)

| Year                        | Production    |                 | Imports       |              | Exports             |              |
|-----------------------------|---------------|-----------------|---------------|--------------|---------------------|--------------|
|                             | Current value | Constant (1970) | Current value | % production | Current value       | % production |
| <u>1. Cardboard cartons</u> |               |                 |               |              |                     |              |
| 1950                        | n.d.          | n.d.            | 79.2          | n.d.         | -                   | -            |
| 1958                        | 34.5          | 107.8           | -             | -            | -                   | -            |
| 1964                        | n.d.          | n.d.            | 0.2           | n.d.         | 0.1                 | n.d.         |
| 1968                        | 229.3         | 263.6           | n.d.          | n.d.         | 98.0 <sub>a/</sub>  | 42.7         |
| 1972                        | 606.9         | 459.8           | n.d.          | n.d.         | 114.3 <sub>a/</sub> | 18.8         |
| 1974                        | 1 210.6       | 526.3           | 0.5           | ...          | 322.9 <sub>a/</sub> | 26.7         |
| <u>2. Bond paper</u>        |               |                 |               |              |                     |              |
| 1950                        | -             | -               | 5.2           | n.d.         | -                   | -            |
| 1958                        | -             | -               | 0.8           | n.d.         | -                   | -            |
| 1964                        | -             | -               | 2.0           | n.d.         | -                   | -            |
| 1968                        | 127.2         | 146.2           | 8.0           | 6.2          | 16.3                | 12.8         |
| 1972                        | 235.5         | 178.4           | 14.2          | 6.0          | 29.5                | 12.5         |
| 1974                        | 560.6         | 243.7           | 15.1          | 2.7          | 11.9                | 2.1          |

Source: Same as annex 16.

a/ Figures taken from PROEXPO, Fondo de Promoción de exportaciones, 1967-1977, Puerta Central de Información, Bogotá, 1977.



## Annex 20

## COLOMBIA: NOMINAL TARIFF PROTECTION FOR PRINCIPAL PAPER PRODUCTS AND THEIR MAIN INPUTS, 1950-1970

(Ad valorem and deposit = percentage, specific = pesos/kg)

| Item                              | Date pro-<br>duc-<br>tion<br>began | 1950                              |                              | 1959                              |                              | 1964                              |                  | 1970a/                            |                  |
|-----------------------------------|------------------------------------|-----------------------------------|------------------------------|-----------------------------------|------------------------------|-----------------------------------|------------------|-----------------------------------|------------------|
|                                   |                                    | Ad<br>valorem<br>(Decree<br>2218) | Specific<br>(Decree<br>1345) | Ad<br>valorem<br>(Decree<br>1345) | Specific<br>(Decree<br>1345) | Ad<br>valorem<br>(Decree<br>3168) | Deposit<br>3168) | Ad<br>valorem<br>(Decree<br>3168) | Deposit<br>3168) |
| <b>1. Principal products</b>      |                                    |                                   |                              |                                   |                              |                                   |                  |                                   |                  |
| Kraft paper                       | 1950                               | 6                                 | 0.10                         | 30                                | 0.20a/                       | 60                                | 120              | 60                                | 130              |
| Writing material<br>(paper, env.) | 1950                               | 10                                | 2.00                         | 50                                | 5.00b/                       | 120                               | 120              | 120                               | 130              |
| Kraft cardboard                   | 1950                               | 6                                 | 0.10                         | 30                                | 0.20a/                       | 60                                | 120              | 60                                | 130              |
| Corrugated cardboard              | 1950                               | 6                                 | 0.18                         | 30                                | 0.30                         | 70                                | 65               | 70                                | 70               |
| Corrugated cardboard<br>cartons   | 1950                               | 25                                | 1.50                         | 50                                | 5.00b/                       | 120                               | 120              | 120                               | 130              |
| <b>2. Principal inputs</b>        |                                    |                                   |                              |                                   |                              |                                   |                  |                                   |                  |
| Chemical wood pulp<br>(cellulose) | 1967                               | 6                                 | 0.02                         | 15                                | 0.10                         | 20                                | 65               | 20                                | 70               |
| Chemical sugar cane<br>pulp       | 1961                               | -                                 | -                            | -                                 | -                            | 20                                | 120              | 20                                | 70               |
| Regenerated cellulose             | n.d.                               | -                                 | -                            | -                                 | -                            | 20-40                             | 120              | 30                                | 130              |
| Unworked paper                    | 1950                               | 6                                 | 0.10-0.20                    | 20                                | 0.15-0.30                    | 25                                | 65               | 25-60                             | 10-130           |
| Unworked cardboard                | 1950                               | 6                                 | 0.03-0.15                    | 30                                | 0.10-0.20a/                  | 60                                | 120              | 25-60                             | 10-130           |
| Waste paper and<br>cardboard      | n.d.                               | 6                                 | 0.01                         | 10                                | 0.02                         | 10                                | 120              | 25                                | 70               |

Source: See Annex 17.

a/ Previous import licence required.

b/ Importation prohibited.

## Annex 21

COLOMBIA: PROFILE OF THE PRINCIPAL ELEMENTS OF THE PAPER PRODUCTS INDUSTRY, 1958, 1968 AND 1974  
(Thousands of tons, values at factory prices in millions of pesos)

| Item                             | 1958     |       |        | 1968     |         |        | 1974     |         |        |
|----------------------------------|----------|-------|--------|----------|---------|--------|----------|---------|--------|
|                                  | Quantity | Value | %      | Quantity | Value   | %      | Quantity | Value   | %      |
| Cardboard cartons: <sup>a/</sup> |          |       |        |          |         |        |          |         |        |
| corrugated                       | 8.4      | 19.5  | 28.3   | 32.4     | 157.5   | 17.8   | 81.9     | 1 079.4 | 26.6   |
| smooth                           | 4.6      | 14.9  | 21.6   | 8.5      | 71.9    | 8.1    | 7.4      | 131.2   | 3.2    |
| lithographed                     | n.d.     | n.d.  | n.d.   | 0.3      | 57.2    | 6.5    | 0.6      | 291.7   | 7.2    |
| Kraft cardboard: <sup>a/</sup>   |          |       |        |          |         |        |          |         |        |
| corrugated                       | n.d.     | n.d.  | n.d.   | 6.8      | 35.2    | 4.0    | 31.7     | 270.7   | 6.7    |
| smooth                           | 1.4      | 1.4   | 2.0    | 32.6     | 97.3    | 11.0   | 2.4      | 25.1    | 0.6    |
| n.e.s.                           | 5.2      | 5.8   | 8.4    | 6.7      | 20.9    | 2.4    | 47.3     | 583.8   | 14.4   |
| Kraft paper <sup>a/</sup>        | 14.3     | 23.4  | 34.0   | 25.9     | 127.5   | 14.4   | 25.3     | 229.9   | 5.7    |
| Bond paper <sup>b/</sup>         | -        | -     | -      | 26.0     | 109.4   | 12.4   | 41.0     | 560.9   | 13.9   |
| Bristol board <sup>b/</sup>      | -        | -     | -      | 4.8      | 23.3    | 2.6    | 48.1     | 140.8   | 3.5    |
| Cellophane paper <sup>c/</sup>   | 0.1      | 3.9   | 5.7    | 3.2      | 82.2    | 9.3    | 4.2      | 239.6   | 5.9    |
| Chemical wood pulp <sup>a/</sup> | n.d.     | n.d.  | n.d.   | 39.7     | 96.5    | 10.9   | 89.8     | 479.1   | 11.8   |
| Bagasse <sup>b/</sup>            | -        | -     | -      | 2.5      | 6.6     | 0.7    | 1.2      | 16.1    | 0.4    |
| Subtotal                         |          | 68.9  | 100.0  |          | 885.7   | 100.0  |          | 4 048.3 | 100.0  |
| Total ISIC 341                   |          | 141.2 | (48.9) |          | 1 415.7 | (62.6) |          | 7 825.9 | (51.7) |

Source: See Annex 18.

<sup>a/</sup> Principal producer: Cartón de Colombia (incl. Pulpapel).<sup>b/</sup> Principal producer: Propal S.A.<sup>c/</sup> Principal producer: Celanese Colombiana S.A.

Annex 22

COLOMBIA: ASPECTS OF THE GLASS PRODUCTS MARKET, 1950-1974  
(Millions of pesos and percentage)

| Year                           | Production    |                 | Imports       |              | Exports       |              |
|--------------------------------|---------------|-----------------|---------------|--------------|---------------|--------------|
|                                | Current value | Constant (1970) | Current value | % production | Current value | % production |
| <b>1. <u>Glass bottles</u></b> |               |                 |               |              |               |              |
| 1950                           | n.d.          | n.d.            | 2.4           | n.d.         | -             | -            |
| 1958                           | 24.0          | 75.0            | 1.2           | 4.6          | -             | -            |
| 1964                           | n.d.          | n.d.            | 1.5           | n.d.         | 0.3           | n.d.         |
| 1968                           | 139.6         | 150.5           | 1.3           | 0.9          | 17.3          | 12.4         |
| 1972                           | 351.2         | 266.1           | 1.9           | 0.5          | 43.2          | 12.3         |
| 1974                           | 665.6         | 289.4           | 7.8           | 1.1          | 86.4          | 13.0         |
| <b>2. <u>Plate glass</u></b>   |               |                 |               |              |               |              |
| 1950                           | -             | -               | 3.0           | -            | -             | -            |
| 1958                           | -             | -               | -             | -            | -             | -            |
| 1964                           | n.d.          | n.d.            | -             | -            | 1.9           | n.d.         |
| 1968                           | 75.0          | 86.2            | 0.6           | 0.8          | 16.1          | 21.5         |
| 1972                           | 141.0         | 106.8           | 3.0           | 2.1          | 22.9          | 16.2         |
| 1974                           | 180.3         | 78.4            | 4.2           | 2.3          | 35.5          | 19.7         |

Source: See annex 16.

Annex 23

COLOMBIA: NOMINAL TARIFF PROTECTION FOR PRINCIPAL GLASS PRODUCTS  
AND THEIR MAIN INPUTS, 1950-1970

(Ad valorem and deposit = percent, specific = pesos/kg.)

| Item                               | Date<br>pro-<br>duc-<br>tion<br>began | 1950                           |                     | 1959                           |                     | 1964                           |                     | 1970a/                         |         |
|------------------------------------|---------------------------------------|--------------------------------|---------------------|--------------------------------|---------------------|--------------------------------|---------------------|--------------------------------|---------|
|                                    |                                       | Ad<br>valorem<br>(Decree 2218) | Specific<br>valorem | Ad<br>valorem<br>(Decree 1345) | Specific<br>valorem | Ad<br>valorem<br>(Decree 3168) | Specific<br>valorem | Ad<br>valorem<br>(Decree 3168) | Deposit |
| <u>1. Principal products</u>       |                                       |                                |                     |                                |                     |                                |                     |                                |         |
| (a) Bottles                        | n.d.                                  | 25                             | 0.20                | 30                             | 0.20                | 80                             | 0.20                | 80                             | 120     |
| (b) Plate glass                    | n.d.                                  | 10                             | 0.05                | 20                             | 0.20                | 80                             | 0.20                | 80                             | 120     |
| (c) Assorted works                 | n.d.                                  | 40                             | 2.50                | 80                             | 10.00a/             | 200                            | 10.00a/             | 200                            | 120     |
| <u>2. Principal inputs</u>         |                                       |                                |                     |                                |                     |                                |                     |                                |         |
| (a) Sodium carbonate<br>(soda ash) | n.d.                                  | 8                              | 0.03                | 30                             | 0.10b/              | 20                             | 0.10b/              | 20                             | 120     |
| (b) Waste glass                    | n.d.                                  |                                |                     |                                |                     |                                |                     |                                |         |

No entry in tariff schedules was found for this item.

Source: See annex 17.

a/ Previous import licence required.

b/ Importation prohibited.

Annex 24

COLOMBIA: PROFILE OF THE PRINCIPAL ELEMENTS OF THE GLASS PRODUCTS INDUSTRY,  
1958, 1968 AND 1974

(Value at factory prices in millions of pesos)

| Item                                 | 1958     |       |        | 1968     |       |        | 1974     |         |        |
|--------------------------------------|----------|-------|--------|----------|-------|--------|----------|---------|--------|
|                                      | Quantity | Value | %      | Quantity | Value | %      | Quantity | Value   | %      |
| Glass bottles a/ (millions)          |          |       |        |          |       |        |          |         |        |
| - small (perfume, etc.)              | 42.9     | 5.1   | 21.4   | 44.4     | 10.6  | 4.4    | 319.5    | 200.3   | 20.3   |
| - non-alcoholic bev.                 | 8.5      | 2.4   | 10.1   | 56.4     | 30.7  | 12.7   | 136.1    | 95.9    | 9.7    |
| - less than 1 litre                  | 78.8     | 15.0  | 63.0   | 201.8    | 91.1  | 37.8   | 257.0    | 232.9   | 23.6   |
| - 1 or more litres                   | -        | -     | -      | 8.6      | 6.5   | 2.7    | 98.8     | 136.6   | 13.8   |
| Plate glass a/ (millions sq. meters) | -        | 0.6   | 2.5    | 4.3      | 75.0  | 31.1   | 4.8      | 180.3   | 18.3   |
| Assorted works (millions)            | 0.2      | 0.7   | 2.9    | 27.6     | 22.6  | 9.4    | 40.0     | 90.2    | 9.1    |
| Fibre glass (thousands of tons)      | -        | -     | -      | 0.5      | 4.6   | 1.9    | 1.7      | 51.7    | 5.2    |
| Subtotal                             |          | 23.8  | 100.0  |          | 241.1 | 100.0  |          | 987.9   | 100.0  |
| Total ISIC 362                       |          | 53.0  | (44.9) |          | 352.1 | (68.5) |          | 1 303.0 | (75.8) |

Source: See annex 18.

a/ Principal producer: Cristalería Peldar/Vidrio Plano.

Annex 25

COLOMBIA: ASPECTS OF THE PETROLEUM DERIVATIVES AND MIXED  
FERTILIZERS MARKETS, 1950-1974

(Millions of pesos and percentage)

| Year                                   | Production    |                 | Imports       |              | Exports       |              |
|--|---------------|-----------------|---------------|--------------|---------------|--------------|
|  | Current value | Constant (1970) | Current value | % production | Current value | % production |
| <u>1. Motor gasoline</u>               |               |                 |               |              |               |              |
| 1950                                   | n.d.          | n.d.            | 10.7          | n.d.         | -             | -            |
| 1958                                   | 178.6         | 558.1           | 10.9          | 6.1          | -             | -            |
| 1964                                   | n.d.          | n.d.            | 0.2           | n.d.         | 4.9           | n.d.         |
| 1968                                   | 496.3         | 570.5           | -             | -            | 3.8           | 0.8          |
| 1972                                   | 1 232.7       | 933.9           | 23.9          | 1.9          | -             | -            |
| 1974                                   | 2 290.8       | 996.0           | -             | -            | 0.1           | -            |
| <u>2. Fuel and diesel oil</u>          |               |                 |               |              |               |              |
| 1950                                   | n.d.          | n.d.            | 0.7           | n.d.         | -             | -            |
| 1958                                   | 185.9         | 580.9           | 0.3           | 0.1          | 60.9          | 32.8         |
| 1964                                   | n.d.          | n.d.            | 0.1           | n.d.         | 75.3          | n.d.         |
| 1968                                   | 584.7         | 672.1           | -             | -            | 216.7         | 37.1         |
| 1972                                   | 625.3         | 473.7           | -             | -            | 476.2         | a/           |
| 1974                                   | 867.4         | 377.1           | -             | -            | 2 698.6       | a/           |
| <u>3. Mixed or compound fertilizer</u> |               |                 |               |              |               |              |
| 1950                                   | -             | -               | n.d.          | -            | -             | -            |
| 1958                                   | -             | -               | 27.7          | -            | -             | -            |
| 1964                                   | n.d.          | n.d.            | -             | -            | -             | -            |
| 1968                                   | 226.7         | 260.6           | 0.1           | -            | -             | -            |
| 1972                                   | 129.4         | 98.0            | 18.0          | 13.9         | 4.9           | 3.8          |
| 1974                                   | 1 730.6       | 752.4           | 146.5         | 8.5          | 40.0          | 2.3          |

Source: See annex 16.

a/ Differences in the internal price system and international prices make this calculation impossible. See table 16.

Annex 26

COLOMBIA: NOMINAL TARIFF PROTECTION FOR THE PRINCIPAL PETROLEUM PRODUCTS, 1950-1970  
(Ad valorem and deposit = percentage, specific = pesos/litre)

| Item                         | Date pro-<br>duc-<br>tion<br>began | 1950                           |                           | 1959                           |                           | 1964                           |                           | 1970a/                         |                           |
|------------------------------|------------------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|
|                              |                                    | Ad<br>valorem<br>(Decree 2218) | Specific<br>(Decree 2218) | Ad<br>valorem<br>(Decree 1345) | Specific<br>(Decree 1345) | Ad<br>valorem<br>(Decree 3169) | Specific<br>(Decree 3169) | Ad<br>valorem<br>(Decree 3168) | Specific<br>(Decree 3168) |
| <b>1. Principal products</b> |                                    |                                |                           |                                |                           |                                |                           |                                |                           |
| (a) motor gasoline           | n.d.                               | -                              | 0.02                      | tariff free                    |                           | 2                              | 120                       | 2                              | 1                         |
| (b) kerosene                 | n.d.                               | -                              | 0.05                      | tariff free                    |                           | 2                              | 120                       | 2                              | 1                         |
| (c) fuel oil A.C.P.C.        | n.d.                               | 6                              | 0.01                      | tariff free                    |                           | 2                              | 120                       | 2                              | 130                       |
| (d) diesel oil A.C.P.M.      | n.d.                               | 6                              | 0.01                      | tariff free                    |                           | 2                              | 120                       | 2                              | 130                       |
| (e) turbo fuel               | n.d.                               | 6                              | 0.01                      | tariff free                    |                           | 2                              | 120                       | 2                              | 1                         |
| (f) lubricating oils         | n.d.                               | 6                              | 0.06                      | 10                             | -                         | 10                             | 65                        | 10                             | 1                         |
| (g) parafin                  | n.d.                               | 6                              | 0.05                      | 10                             | -                         | 20                             | 120                       | 30                             | 5                         |
| (h) compound fertilizers     | n.d.                               | 6                              | 0.02                      | tariff free                    |                           | n.d.                           | n.d.                      | 10                             | 30                        |
| <b>2. Principal input</b>    |                                    |                                |                           |                                |                           |                                |                           |                                |                           |
| (a) crude petroleum          | 1921                               | tariff free                    |                           | tariff free                    |                           | 1                              | 120                       | 1                              | 130                       |
| (b) ammonia                  | n.d.                               | 10                             | 0.03                      | 10                             | 0.15                      | n.d.                           | n.d.                      | n.d.                           | n.d.                      |

Source: See annex 17.

a/ Previous import licence required.

## Annex 27

## COLOMBIA: PROFILE OF THE PRINCIPAL ELEMENTS OF THE PETROLEUM PRODUCTS INDUSTRY, 1958, 1968 AND 1974

(Units in millions of gallons, values at factory prices in millions of pesos)

| Product                       | 1958     |       |        | 1968     |         |        | 1974     |         |        |
|-------------------------------|----------|-------|--------|----------|---------|--------|----------|---------|--------|
|                               | Quantity | Value | %      | Quantity | Value   | %      | Quantity | Value   | %      |
| Motor gasoline <u>a/</u>      | 275.5    | 178.6 | 44.1   | 558.5    | 496.3   | 38.0   | 798.5    | 2 290.8 | 51.2   |
| Kerosene <u>a/</u>            | 61.8     | 35.6  | 8.8    | 121.7    | 107.1   | 8.2    | 140.3    | 255.0   | 5.7    |
| Fuel oil A.C.P.C.a/           | 400.3    | 120.7 | 29.8   | 668.5    | 339.9   | 26.0   | 317.4    | 306.4   | 6.8    |
| Diesel oil A.C.P.M. <u>a/</u> | 115.7    | 65.2  | 16.1   | 281.9    | 244.7   | 18.7   | 348.3    | 561.1   | 12.5   |
| Turbo fuel <u>a/</u>          | n.d.     | n.d.  | n.d.   | 34.8     | 43.0    | 3.3    | 91.8     | 504.9   | 11.3   |
| Lubricating oils <u>a/</u>    | 2.3      | 5.1   | 1.3    | 16.2     | 76.6    | 5.9    | 12.3     | 268.4   | 6.0    |
| Parafin <u>a/</u>             | n.d.     | n.d.  | n.d.   | n.d.     | n.d.    | n.d.   | 33.2     | 286.9   | 6.4    |
| Subtotal                      |          | 405.2 | 100.0  |          | 1 307.6 | 100.0  |          | 4 473.5 | 100.0  |
| Total ISIC 353-4              |          | 506.3 | (80.0) |          | 1 757.2 | (74.4) |          | 6 408.8 | (70.5) |

Source: See annex 18.

a/ Principal producers: Intercol and Ecopetrol.



Annex 28

COLOMBIA: ASPECTS OF THE TEXTILE FIBRES MARKET, 1950-1974  
(Millions of pesos and percentage)

| Year                                 | Production    |                 | Imports       |              | Exports       |              |
|--------------------------------------|---------------|-----------------|---------------|--------------|---------------|--------------|
|                                      | Current value | Constant (1970) | Current value | % production | Current value | % production |
| <b>1. Artificial fibres yarns a/</b> |               |                 |               |              |               |              |
| 1950                                 | n.d.          | n.d.            | -             | n.d.         | -             | -            |
| 1958                                 | 17.3          | 54.1            | -             | -            | -             | -            |
| 1964                                 | n.d.          | n.d.            | -             | -            | 9.2           | n.d.         |
| 1968                                 | 32.6          | 37.5            | -             | -            | 0.6           | 1.8          |
| 1972                                 | 406.6         | 308.0           | -             | -            | 8.4           | 2.1          |
| 1974                                 | 107.8         | 46.9            | -             | -            | 1.8           | 1.7          |
| <b>2. Synthetic fibres yarns b/</b>  |               |                 |               |              |               |              |
| 1950                                 | -             | -               | 0.4           | n.d.         | -             | -            |
| 1958                                 | -             | -               | -             | -            | -             | -            |
| 1964                                 | n.d.          | n.d.            | 14.2          | n.d.         | 1.3           | n.d.         |
| 1968                                 | 50.5          | 58.0            | -             | -            | 0.3           | 0.1          |
| 1972                                 | 854.1         | 647.0           | 0.3           | -            | 1.2           | 0.1          |
| 1974                                 | 1 824.7       | 793.3           | 15.6          | 0.1          | 37.4          | 0.2          |
| <b>3. Cigarette filters a/</b>       |               |                 |               |              |               |              |
| 1950                                 | -             | -               | -             | -            | -             | -            |
| 1958                                 | -             | -               | -             | -            | -             | -            |
| 1964                                 | -             | -               | -             | -            | -             | -            |
| 1968                                 | 26.2          | 30.1            | -             | -            | -             | -            |
| 1972                                 | 47.3          | 35.8            | -             | -            | -             | -            |
| 1974                                 | 90.2          | 39.2            | 0.9           | 0.1          | 49.4          | 54.8         |

Source: See annex 16.

a/ Principal producer: Celanese Colombiana S.A.

b/ Principal producers: Celanese Colombiana S.A., ENKA, Polimeros Colombianos S.A.

## Annex 29

COLOMBIA: NOMINAL TARIFF PROTECTION FOR THE PRINCIPAL PRODUCTS MANUFACTURED BY  
CELANESE, COLOMBIANA, 1950-1970

(Ad valorem and deposit = percentage, specific = pesos/kg.)

| Item  | Date pro-<br>duc-<br>tion<br>began | 1950                           |                                      | 1959                           |                                      | 1964                           |                                      | 1970a/                         |         |
|---|------------------------------------|--------------------------------|--------------------------------------|--------------------------------|--------------------------------------|--------------------------------|--------------------------------------|--------------------------------|---------|
|   |                                    | Ad<br>valorem<br>(Decree 2218) | Specific<br>valorem<br>(Decree 1345) | Ad<br>valorem<br>(Decree 1345) | Specific<br>valorem<br>(Decree 3168) | Ad<br>valorem<br>(Decree 3168) | Specific<br>valorem<br>(Decree 3168) | Ad<br>valorem<br>(Decree 3168) | Deposit |
| <b>1. Synthetic &amp; artificial fibres</b> |                                    |                                |                                      |                                |                                      |                                |                                      |                                |         |
| (a) monofilaments                           | 1958                               | 15                             | 7.00                                 | 50                             | 25.00b/                              | 35                             | 120                                  | 35                             | 130     |
| (b) continuous spun fibres                  |                                    |                                |                                      |                                |                                      |                                |                                      |                                |         |
| - synthetic                                 | 1964                               | 10                             | 2.50                                 | 20                             | 2.50a/                               | 50                             | 120                                  | 50                             | 130     |
| - artificial                                | 1945                               | 10                             | 4.50                                 | 20                             | 4.00a/                               | 50                             | 120                                  | 50                             | 130     |
| (c) non-continuous<br>unprepared fibres     |                                    |                                |                                      |                                |                                      |                                |                                      |                                |         |
| - synthetic                                 | 1964                               | 10                             | 1.00                                 | 30                             | 4.00a/                               | 30                             | 120                                  | 35                             | 130     |
| - artificial                                | 1950                               | 10                             | 1.00                                 | 30                             | 5.00a/                               | 30                             | 120                                  | 35                             | 130     |
| (d) non-continuous<br>prepared fibres       |                                    |                                |                                      |                                |                                      |                                |                                      |                                |         |
| - synthetic                                 | 1964                               | 10                             | 1.50                                 | 30                             | 4.00a/                               | 40                             | 120                                  | 40                             | 130     |
| - artificial                                | 1950                               | 10                             | 1.50                                 | 30                             | 5.00a/                               | 40                             | 120                                  | 40                             | 130     |
| 2. Cigarette tow                            | 1965                               | n.d.                           | n.d.                                 | n.d.                           | n.d.                                 | n.d.                           | n.d.                                 | n.d.                           | n.d.    |
| 3. Cellophane                               | n.d.                               | 6                              | 0.40                                 | 30                             | 0.30                                 | 70                             | 120                                  | 40-70                          | 130     |
| 4. Sulfuric acid                            | n.d.                               | 8                              | 0.02                                 | 30                             | 0.10a/                               | 30                             | 120                                  | 30                             | 130     |
| 5. Carbon disulphide                        | n.d.                               | 6                              | 0.02                                 | 10                             | 0.08                                 | 20                             | 130                                  | 20                             | 130     |
| 6. Manganese sulphate                       | n.d.                               | 6                              | 0.01                                 | 10                             | 0.05                                 | 35                             | 30                                   | 35                             | 30      |

Source: See annex 17.

a/ Previous import licence required.

b/ Importation prohibited.

Annex 30

COLOMBIA: AN INDICATION OF THE DEGREE OF IMPORT SUBSTITUTION IN  
MAJOR INDUSTRIES, 1938 AND 1974

(Percentage foreign primary materials)

| ISIC  | Industrial group         | 1938 | 1974 |
|-------|--------------------------|------|------|
| 321   | Textiles                 | 77.8 | 14.5 |
| 341   | Paper products           | 98.4 | 22.0 |
| 351-2 | Chemical/pharmaceuticals | 60.4 | 51.9 |
| 355   | Rubber products          | 39.8 | 50.1 |
| 362   | Glass products           | 79.4 | 16.1 |

Sources: Colombia, Instituto de Fomento Industrial, Balance e informes,  
primer semestre 1944, Bogotá, 1944. Colombia, DANE, Industria  
manufacturera 1974, Bogotá, 1977.

Annex 31

COLOMBIA: INDICATORS OF THE INDUSTRIAL PROMOTION INSTITUTE  
(IFI), 1950-1975

(Millions of pesos and percentage)

| Year                        | Current values |                     |            | Constant (1970) values |                     |            | Shares in companies as % total assets |
|-----------------------------|----------------|---------------------|------------|------------------------|---------------------|------------|---------------------------------------|
|                             | Total assets   | Shares in companies | Net profit | Total assets           | Shares in companies | Net profit |                                       |
| 1950                        | 15.8           | 9.9                 | 0.4        | 92.9                   | 53.2                | 2.4        | 62.6                                  |
| 1960                        | 38.1           | 24.3                | 0.9        | 102.9                  | 65.7                | 2.4        | 63.8                                  |
| 1965                        | n.d.           | n.d.                | n.d.       | n.d.                   | n.d.                | n.d.       | n.d.                                  |
| 1970                        | 4 097.5        | 1 027.0             | 68.1       | 4 097.5                | 1 027.0             | 68.1       | 25.1                                  |
| 1975                        | 9 551.4        | 2 134.1             | 79.2       | 3 316.5                | 741.0               | 27.5       | 22.3                                  |
| Compound annual growth rate |                |                     |            |                        |                     |            |                                       |
| 1950-1975                   | 29.2%          | 23.9%               | 23.6%      | 14.7%                  | 10.3%               | 9.8%       |                                       |

Source: Colombia, Instituto de Fomento Industrial, Balance e informes, Bogotá, various years.

## SUMMARY OF PERTINENT LEGISLATION IN COLOMBIA RELATING TO FOREIGN INVESTMENT AND TECHNOLOGY

| Year | Legislation  | Summary of main aspects of legislation  |
|------|--|---|
| 1935 | Resolution of Junta Consultiva de la Oficina de Control de Cambios y Exportaciones | Declaration that imports of capital is comprehended in "non-prohibited imports" of Article 5 of DL 2092 of 1934 and thus the Oficina de Cambio grants permission for external remittances for imported capital as well as interest and dividends corresponding to new capital.  |
| 1935 | Decree 289   | Approval of foregoing resolution and the establishment of the rule that persons or entities importing new capital must sell 15 per cent of that capital to the Banco de la República.   |
| 1938 | Decree 326   | Established that all operations in foreign capital require the permission of the Oficina de Control.  |
| 1946 | Decree 568   | Without dismissing any of the previous legislation, established that all operations implying the departure of capital would be treated equally and without restriction, as long as the Treasury did not require limitation or suspension of such for economic or other reasons.   |
| 1947 | Resolution 175   | Established several specific rules for foreign capital. 1. Capital could be imported in the following forms: a) Foreign money or representative titles of such a acceptable to the Banco de la República, b) Industrial, agricultural or mining machinery, or c) Goods susceptible to common commercial transactions. 2. The rights conceded to importers of capital were the following: a) Re-exportation, and b) Profit remittances. These rights exist after the importer of capital has sold such foreign money or titles to the Banco de la República or another authorized bank and the value of such has been registered in the Oficina de Cambio within 3 months of such importation. These rights do not apply to the goods of 1. 0, thus primary materials, technical services nor intangible contributions were registered.  |
| 1948 | Decree 1949  | Established that all foreign money and remittances of such must be exchanged in the Banco de la República for representative titles when the owners of such capital wish to reserve for the future the right to export their capital or dividends at the official exchange rate. Also, it was established that the importation of new capital for industrial or other profit-making activities could take two forms: a) Nationalization of capital by way of sale of exchange to the Banco de la República at the official rate. Any pursuant export of this capital would take place by the purchase of foreign exchange at the Banco de la República at the then official rate. b) Nationalization of the capital by way of Exchange Certificates in which the export of such capital would take place according to the market value of these Certificates. The first alternative entails the right of registration, the second does not. |
| 1948 | Law 90   | Established that all imported foreign currency must be exchanged at the Banco de la República if it is to be considered as capital, except for the case of Exchange Certificates found in Article 2 of Decree 1949.   |
| 1951 | Decree 637   | Established the unification of the exchange market, requiring that all movements of foreign currency take place by way of the Banco de la República.  |

SUMMARY OF PERTINENT ... (continued 1)

| Year | Legislation   | Summary of main aspects of legislation  |
|------|---|---|
| 1951 | Decree 545  | Required all capital imported before 1951, regardless of its form of entry, to be registered as investment at the Treasury. Such capital as was not registered by April 30th lost all right of external remission.  |
| 1951 | Decree 1625   | Required that all importation of foreign capital must take one of the two following forms if it was to have the right of registration: a) In foreign currency or representative titles acceptable by the Banco de la República, or b) Industrial, agricultural or mining machinery.   |
| 1952 | Law 8A  | Ratified Decree 1625 of 1951 adding that industrial, agricultural and mining machinery and equipment would be registered once only, when they were installed and in full operation.   |
| 1957 | Decree 107  | Stipulated that all capital imported after this date could be exported only on the basis of the free market rate of exchange. Capital imported before this date, which was registered, could depart by way of Exchange Certificates.  |
| 1959 | Law 1A  | Stated that capital that remained unregistered according to Decree 545 of 1951 could be exported by way of the free market rate of exchange.  |
| 1965 | Decree 2322   | Conceded the right of remittance to capital not registered in 1951. In other words Law 1A of 1959 and Decree 2322 of 1965 reversed Decree 545 of 1951.  |
| 1967 | Decree 444<br>Modified by Decree 688 of the same year | This regimen on foreign exchange and foreign trade established the norms for foreign investment and technology contracts in Colombia. The Departamento de Planeación Nacional was made responsible for approving or not approving all foreign investment of US\$ 100 000 or more. The Banco de la República was made responsible for all foreign currency transactions involved, thus terminating the free market in foreign exchange. A committee finally named the Comité de Regalías (Committee on Royalties) was formed of representatives of various government institutions whose purpose was to approve or not approve all technology contracts which implied an external payment for royalties, commissions, use of trademarks or patents, etc.<br>Foreign investment could take the following forms: a) The importation of machinery and equipment under non-reimbursable licence, b) The importation of primary materials and intermediate goods under non-reimbursable licence, c) The importation of foreign currency, d) Contributions in technical services and intangible assets, e) Investments in national currency with the right of remittance, and f) Reinvestment of profits. Capital repatriation and profit remittance are allowable although the former may not exceed the total value of registered capital and the latter may not exceed 10 per cent of registered capital per annum. External credits also were to be registered and limits were placed on the maximum rate of interest and the minimum period of amortization. Certain criteria were defined for the approval of technology contracts implying external payments. |

SUMMARY OF PERTINENT ... (continued 2)

| Year | Legislation    | Summary of main aspects of legislation  |
|------|----------------|---|
| 1972 | Resolution 17  | Established that all foreign investment, including reinvestment of more than 5 per cent of registered capital, must be submitted for approval to the Departamento de Planeación Nacional, excluding investment in petroleum and gas which must be approved by the Ministerio de Minas (Ministry of Mines). Approbation of foreign investments realized without previous authorization was prohibited. The conditions and periods for the conversion of foreign enterprises to national enterprises in order to enjoy the benefits of the Andean Group integration scheme were established. Certain criteria were defined for the approval of foreign investments. The limits on capital repatriation and profit remittance were maintained. The means of valuing foreign investment which took place before 1967 were defined.  |
| 1972 | Decree 1234    | Established further criteria for the Comité de Regalías by which to approve technology contracts. Particularly it specified the restrictive clauses deemed unacceptable. Furthermore it specified the necessary elements which must be dealt with in each and every application for approval.   |
| 1973 | Decree 1898    | Established the criterion of 30 percent State participation for a foreign firm to be considered a mixed enterprise.   |
| 1973 | Decree 1900 a/ | Ratified Decision 24 of the Andean Group, the regimen on the treatment of foreign capital, trademarks, patents, licences and royalties. Basic definitions for foreign, mixed and national enterprises were stipulated. New investment in areas adequately covered by existing enterprises was not to be allowed. Foreign investment in existing national enterprises was only to be allowed in the case of imminent bankruptcy or in order to augment its capital without altering its composition. The rate of interest on external credits supplied to a subsidiary from the headquarters was to be controlled. Local credit available to foreign enterprises was restricted to the short term. Technology contracts were to be registered and controlled. Payments for intangible technological contributions to the headquarters of a subsidiary of a foreign firm were to be prohibited. The benefits derived from the tariff liberation programme of the Andean Group were to be applicable only to mixed and national firms and those foreign firms which had signed a transformation accord. Foreign firms exporting to third countries 80 percent or more of their production were not required to follow these norms. New foreign investment in public services was prohibited. Foreign enterprises were not to receive treatment more favorable than national enterprises. |
| 1973 | Decree 2719    | Excepted, in part, commercializing enterprises, from Decree 1900.   |
| 1973 | Decree 2788    | Established the exception to Decree 1900 for basic products.  |
| 1974 | Decree 387     | Established the exception to Decree 1900 for banking and financial enterprises  |
| 1975 | Decree 169     | Restricted foreign investment in commercial enterprises to the internal market and the promotion of local tourism.  |

SUMMARY OF PERTINENT ... (concluded)

| Year | Legislation    | Summary of main aspects of legislation   |
|------|----------------|--|
| 1977 | Decree 170     | <p>Introduced the revisions of Decision 24 of the Andean Group which were expressed in Decisions 103, 109 and 110 of the Andean Group. Defined that foreign investment could take the following forms: a) Freely convertible foreign currency, b) Physical or tangible goods as defined in literal c) of point 11 of Annex 1 of Decision 24, or d) National currency derived from resources with the right of remittance, or reinvestments conforming to the norms stipulated. Definitions were established for the following terms: National investor, subregional investor, foreign investor, national enterprise, mixed enterprise, foreign enterprise, new investment, reinvestment, receiving country, Commission, Junta and Member Country. The reinvestment limit was raised for 5 to 7 percent of registered capital. Local credit restrictions for foreign enterprises were decreased to include medium-term (3 years) as well as short term credit. The date from which the transformation period for foreign enterprises was to begin was changed from 1971 to 1 January 1974 although the period of 15 years was not altered. Transformation could take place by means of augmenting the capital stock of the foreign firm, not only by the sale of shares. The limit on profit remittances was raised from 14 to 20 percent of registered capital. Direct foreign participation by public international financial entities or cooperation agencies of foreign governments is considered neutral (neither foreign nor national) for the purposes of this decree.</p> |
| 1977 | Resolution 001 | <p>Established the internal regulations for the Comité de Regalías. The Committee was authorized to declare when the bureaucratic procedure was terminated for the applicant.</p>  |

Source: DANE, Boletín Mensual de Estadística, No 239, junio 1971; G. Poveda, op cit, others.

a/ Decision 24 of the Andean Group, the regimen on treatment of foreign capital and trademarks, patents, licences and royalties, was first put in practice in Colombia by way of Decree 1299 of 1971 later modified by Decree 2153 of the same year. However, an appeal made to the Supreme Court in Colombia resulted in the fact that the Decree 1299 was declared invalid on 20 January 1972. In 1973 Decree 1900 put into force Decision 24.



COMPARATIVE ANALYSIS OF DECREE 444, DECISION 24 AND DECISION 103 REGARDING THE PRINCIPAL CONTROLS ON FOREIGN INVESTMENT AND TECHNOLOGY

|                           | Decree 444 (1967)<br>(As amended by Decree 688 of 1968)   | Decision 24 (1970)<br>(As modified by decisions 37 and 37A of 1971)   | Decision 103 (1976)<br>(Including provisions of decision 109 and 110)   |
|---------------------------|---|---|---|
| 1. Fundamental objectives | To promote social and economic development and exchange rate equilibrium by way of:<br>a) Export promotion and diversification, b) Adequate usage of available foreign currency,<br>c) Control over the demand for foreign currency,<br>d) Stimulation of foreign investment in harmony with national economic interests, e) Capital repatriation and regulation of Colombian foreign investments, and f) The attainment and maintenance of a sufficient level of foreign reserves.<br>Direct Foreign Investment: May take the following forms: a) Importation of machinery and equipment under non-reimbursable licenses, b) Importation of foreign currency, sold to the Banco de la República (Central Bank), in order to make investments in local currency or the acquisition of rights, shares or other valuables, c) Whatever else the Consejo Nacional de Política Económica may determine by way of general resolutions. | 1. The strengthening of national enterprises in order to enable them to participate actively in the subregional market.<br>2. The strengthening of the negotiating capacity of the member countries vis-a-vis other countries, enterprises which supply capital and technology, and international organizations which are concerned with these matters.   | 1. To introduce greater flexibility in the regimen (Decision 24).   |
| 2. Definitions            | <u>Direct Foreign Investment:</u> Contributions, coming from abroad and belonging to foreign individuals or enterprises, made to the capital of an enterprise, in freely convertible currency, industrial plants, machinery, or equipment, and having the right to re-exportation of their value and the transfer of profits abroad. Likewise, investments in local currency from funds which are entitled to be transferred abroad shall be considered to be foreign investments.  | <u>Direct Foreign Investment:</u> Contributions, coming from abroad and belonging to foreign natural or legal persons, made to the capital of an enterprise, in freely convertible currency or physical or tangible goods (industrial plants, machinery and equipment, spare or loose parts or pieces, raw materials or intermediate products), having the right to re-exportation of their value and transfer of profits abroad. Likewise, investments in local currency derived from resources with the right to be remitted abroad and the re-investments made in conformity with this regimen.                            | <u>Direct Foreign Investment:</u> Contributions, coming from abroad and belonging to foreign natural or legal persons, made to the capital of an enterprise, in freely convertible currency or physical or tangible goods (industrial plants, machinery and equipment, spare or loose parts or pieces, raw materials or intermediate products), having the right to re-exportation of their value and transfer of profits abroad. Likewise, investments in local currency derived from resources with the right to be remitted abroad and the re-investments made in conformity with this regimen.                    |
|                           | <u>Net Value in Foreign Currency of Direct Foreign Investment:</u> The initial foreign investment plus any additional foreign investments plus any profit remittances with the right to be transferred abroad less any reimbursements of capital made, in conformity with the registers of the Oficina de Cambios (Exchange Office).<br><u>Exchange Certificates:</u> Representative titles in foreign currency which are issued by the Banco de la República which will be freely traded by their beneficiaries and holders, except that the Junta Monetaria may, for reasons of general convenience, restrict this activity to authorized credit es-  | <u>National Investor:</u> The State, national individuals, national non-profit entities, and the national enterprises defined below.<br><u>Foreign nationals with consecutive residence in the recipient country of no less than one year, who renounce before the competent national authority the right to re-export the capital and to transfer profits abroad, shall also be considered to be national investors.</u><br><u>National Enterprises:</u> An enterprise organized in the recipient country more than 80 percent of whose capital belongs to national investors, provided that in the opinion of the competent | <u>National Investor:</u> The State, national individuals, national non-profit entities and the national enterprises defined in this article.<br><u>Foreign nationals with consecutive residence in the recipient country of no less than one year, who renounce before the competent national authority the right to re-export the capital and to transfer profit abroad, shall also be considered to be national investors.</u><br>In justified cases the competent national authority of the recipient country may exempt such persons of the one year consecutive residence requirement. Also considered national |

Decree 444 (1967)

(As amended by Decree 688 of 1968)

is reflected in the technical, financial, administrative and commercial management of the enterprise.

Mixed Enterprise: An enterprise organized in the recipient country and whose capital belongs to national investors in a proportion which may fluctuate between 51 and 80 percent provided that in the opinion of the competent national authority, that proportion is reflected in the technical, financial, administrative and commercial management of the enterprise. Also considered mixed enterprises are those in which the State or State enterprises participate, even if the participation is less than 51 percent of the capital, as long as the State representation has a determining capacity in the decisions of the enterprise.

Foreign Enterprise: An enterprise whose capital in the hands of national investors amounts to less than 51 percent or, if that percentage is higher, it is not reflected in the technical, financial, administrative, and commercial management of the enterprise.

Existing Foreign Enterprises: Those legally organized in the territory of the country on 30 June 1971.

New Investment: That investment made after 1 July 1971 in new or existing enterprises.

Reinvestment: Investment of all or part of undistributed profits resulting from a direct foreign investment, in the same enterprise as produced these profits.

Legislation 24 (1970)

(As modified by decisions 37 and 37A of 1971)

investors, are subregional investor, in the following conditions

a) The investment must be previously authorized by the investor's country of origin, when national legislation so requires, b) The investment must be approved and registered by the competent national authority in the recipient country, which requires a certificate of origin from the country of origin and the notification of the competent national authority in that country when the investment is realized in the recipient country, c) The re-exportation of capital and the transfer of profits will be submitted to the norms of this decision and the competent national authority will not authorize these remissions to anywhere except the member country of origin of this capital, d) The competent national authorities shall not authorize subregional investments in enterprises which product or exploit products assigned to other member countries by means of sectoral programmes of industrial development, except in cases where programs of co-production or complementation have been agreed to previously.

Subregional Investor: The national investor or any Member Country apart from the recipient-country.

Existing Foreign Enterprises: Those legally organized or established in the territory of the country on 1 January 1974.

Decision 103 (1976)

(Including provisions of decisions 109 and 110)

investors, are subregional investor, in the following conditions

a) The investment must be previously authorized by the investor's country of origin, when national legislation so requires, b) The investment must be approved and registered by the competent national authority in the recipient country, which requires a certificate of origin from the country of origin and the notification of the competent national authority in that country when the investment is realized in the recipient country, c) The re-exportation of capital and the transfer of profits will be submitted to the norms of this decision and the competent national authority will not authorize these remissions to anywhere except the member country of origin of this capital, d) The competent national authorities shall not authorize subregional investments in enterprises which product or exploit products assigned to other member countries by means of sectoral programmes of industrial development, except in cases where programs of co-production or complementation have been agreed to previously.

Subregional Investor: The national investor or any Member Country apart from the recipient-country.

Existing Foreign Enterprises: Those legally organized or established in the territory of the country on 1 January 1974.

COMPARATIVE ANALYSIS OF DECREES ... (continued 2)

|  | Decree 444 (1967)<br>(As amended by Decree 688 of 1968)  | Decision 24 (1970)<br>(As modified by decisions 37 and 37A of 1971)  | Decision 103 (1976)<br>(Including provisions of decisions 109 and 110)  |
|--|--|--|---|
| i. Authorization, registration and control | <p>The following transactions must be submitted to previous authorization and registration by the pertinent national authority:</p> <ul style="list-style-type: none"> <li>Direct foreign investment</li> <li>New direct foreign investment</li> <li>Reinvestment</li> <li>Profit remittances</li> <li>Capital re-export</li> <li>Foreign investment by Colombian nationals</li> <li>contracts for technical, scientific or artistic services</li> <li>Payments for technology</li> <li>Income and expenditure for services</li> <li>Equipment, machinery sent abroad for repair</li> <li>All foreign credits</li> <li>Remissions of insurance companies</li> <li>All importation of goods which is not duty free</li> <li>All exports, except samples</li> <li>All goods valued in foreign currency</li> <li>All international commercial agreements undertaken by the Central Bank, PROCEXPO, or the National Federation of Colombian Coffee Producers.</li> </ul> | <p>Re-exportable Capital: The capital formed by the total of the original direct foreign investment which is registered and actually made, plus the reinvestments made in the same enterprise in accordance with the provision of this Regime, minus any net losses.</p> <p>The following transactions must be submitted to previous authorization and registration by the competent national authority:</p> <ul style="list-style-type: none"> <li>New foreign investment</li> <li>Reinvestments</li> <li>Contracts on importation of technology</li> <li>Foreign credits</li> <li>External transfers a) Re-export of capital b) Profit remittances c) Payments for technology</li> </ul> | <p>Neutral Capital: The investments made by public international financial entities or foreign governmental entities of economic development cooperation, whatever its legal nature. This capital will not be considered either foreign nor national. In calculating the national, mixed or foreign status of these enterprises with this participation, the neutral capital shall be excluded and the remaining proportions of national and foreign investments shall be taken into account.</p> |

Decision 444 (1967) (As amended by Decree 688 of 1968) Decision 24 (1970) (As modified by decisions 37 and 37A of 1971) Decision 103 (1976) (Including provisions of decisions 109 and 110)

4. Registration  
requisites

- Direct Foreign Investment:
- Name of investor.
  - Value of initial investment, in form required by Consejo Nacional de Política Económica
  - Value of additional foreign investment, in same form
  - Value of profit remittances.
  - Amount of foreign currency remitted abroad as profits
  - Any capital re-exported abroad
  - Whatever else the Oficina de Cambios may require
- Technology contracts:
- Registration of contract itself, if external
- payments of royalties, commissions, use of trademarks, patents, etc. is required
- External credits:
- The rate of interest
  - The principal, as sold to the Banco de la República
  - The commissions and charges
  - The period

- Direct Foreign Investment:
- Identification of the investor (name of firm name; nationality; membership of Board of Directors; composition of personnel and management; economic activity; copy of articles of incorporation).
  - Investment details:
    - a) Financial resources (currency; capital of national origin; capital of foreign origin; credit from parent company; credit from other sources; actual interest to be paid on credits)
    - b) Physical resources (industrial plants; machinery; equipment; loose or spare parts and pieces; raw materials; intermediate products)
    - c) Technological resources (trademarks; industrial designs; management capacity; technical know-how, patented or not; possible alternative know-how, with details)
  - Requirements satisfied:
    - (shortage of domestic savings or foreign exchange; lack of administrative capacity, marketing capacity or local entrepreneurial spirit; need of access to scarce technological knowledge)
  - Plan for progressive national participation:
    - (percent of shares to become national; operating capacity; exportable production; additional employment generated; importation of raw materials or intermediate products required; use of national inputs).
- Technology contracts:
- Identification the terms of the transfer of technology
  - Contractual value of each of the elements concerned in the transfer
  - Determination of the time period involved.

COMPARATIVE ANALYSIS OF DECREE ... (continued 4)

Decree 444 (1967) (As amended by Decree 688 or 1968) Decision 24 (1970) (As modified by decisions 37 and 37A of 1971) Decision 103 (1976) (Including provisions of decisions 109 and 110)

| 5. Evaluative criteria | Decree 444 (1967)<br>(As amended by Decree 688 or 1968)  | Decision 24 (1970)<br>(As modified by decisions 37 and 37A of 1971)   | Decision 103 (1976)<br>(Including provisions of decisions 109 and 110)   |
|------------------------|--|---|--|
|                        | <p><u>Direct Foreign Investment:</u></p> <ul style="list-style-type: none"> <li>- Contribution to national level of employment</li> <li>- Net effect on balance of payments</li> <li>- Use of national inputs, initial and forecast</li> <li>- Proportion between capital imported and necessary fixed investment and working capital required by the firm</li> <li>- Links with national capital and investors</li> <li>- Grade of competition in product market</li> <li>- Contribution to the process of Latin American integration</li> <li>- Technical characteristics of project and its management and administration</li> <li>- Other factors considered pertinent to assure that the investment fits with the programmes of social and economic development and that the link with foreign capital is necessary in that the activity cannot be developed adequately by national resources.</li> </ul> <p><u>Technology Contracts:</u></p> <ul style="list-style-type: none"> <li>- The utility of the contract for social and economic development, considering the external transfers implied</li> <li>- The possibility of producing such without the need to pay royalties, viewing the advances of technology available and the development of national industry</li> <li>- Public treaties signed by Colombia and prevalent international practices in this field</li> <li>- Effects of contract on the balance of payments</li> <li>- Market extension available to the products of this contract</li> <li>- The life of the patent.</li> </ul> | <p><u>Direct Foreign Investment:</u></p> <ul style="list-style-type: none"> <li>- Must correspond to the development priorities of the recipient country</li> <li>- Is not directed to activities adequately covered by existing enterprises</li> <li>- Purpose is not to acquire shares, participations or rights owned by national investors (except in the case of imminent bankruptcy), and others</li> <li>- That investments in mixed or national enterprises signify increasing the capital of the enterprise without altering the enterprises national or mixed status</li> <li>- The investment is registered and authorized in freely convertible currency</li> <li>- If the investment is in a foreign enterprise, that enterprise shall not derive advantages from the tariff liberation programme of the Andean group, unless this enterprise is being transformed into a mixed or national enterprise.</li> </ul> <p><u>Technology Contracts:</u></p> <ul style="list-style-type: none"> <li>- The competent national authority must appraise the effective contribution of the goods incorporating the technology, or other specific forms of measuring the effects of the imported technology</li> <li>- Intangible technological contributions may not be computed as capital contributions, and shows such contributions of intangibles take place between parent company and affiliate, no royalties or tax deductions shall be authorized.</li> </ul> | <p><u>Direct Foreign Investment:</u></p> <ul style="list-style-type: none"> <li>- Purpose is not to acquire shares participations or rights owned by subregional investors.</li> <li>- That investments in mixed or national enterprises signify increasing the capital of the enterprise while maintaining at least a mixed enterprise status.</li> </ul> |

COMPARATIVE ANALYSIS OF DECREE ... (continued 5)

Decision 24 (1970) Decision 103 (1976)  
 (As amended by Decree 688 of 1968) (As modified by decisions 37 and 37A of 1971) (Including provisions of decisions 109 and 110)

|  |  |  |
|--|--|--|
| <p><u>External Credits:</u></p> <ul style="list-style-type: none"> <li>- The rate of interest, the principal, the commissions and charges must fit the established rules of the Junta Monetaria</li> <li>- The Prefectura de Control de Cambios will apply the necessary tests to show that this debt does not pertain to the rules for capital investment or other exchange operations subject to other regulations, of this statute.</li> </ul>  | <p><u>External Credits:</u></p> <ul style="list-style-type: none"> <li>- Global limits on foreign indebtedness may be authorized for specific periods</li> <li>- That the credit is not guaranteed by the State, directly or indirectly, if it concerns a foreign enterprise in which the State does not participate</li> <li>- That the real rate of annual interest in foreign credit contracts does not exceed by more than 3 points the rate of interest of first class securities prevailing in the financial market of the country of origin of the currency in which the transaction is registered</li> </ul>   | <p><u>External Credits:</u></p> <ul style="list-style-type: none"> <li>- Global limits on foreign indebtedness may be authorized for specific periods</li> <li>- That the credit is not guaranteed by the State, directly or indirectly, if it concerns a foreign enterprise in which the State does not participate</li> <li>- That the real rate of annual interest in foreign credit contracts does not exceed by more than 3 points the rate of interest of first class securities prevailing in the financial market of the country of origin of the currency in which the transaction is registered</li> </ul> |
| <p><u>Capital Re-exports:</u></p> <ul style="list-style-type: none"> <li>- In no case shall foreign currency be authorized for capital re-exports superior to the net value in foreign currency of the investment</li> </ul> <p><u>Profit Remittances:</u></p> <ul style="list-style-type: none"> <li>- Annual remittances may not exceed 10 percent of the net value in foreign currency of the investment, except if lower quantities have been remitted for a period, then 3 percent more than the authorized limit may be remitted in later periods, to make up the difference</li> <li>- Higher remittances may be authorized in the case of specific investments of national importance, special risks or particular characteristics which imply delayed profits</li> <li>- Only profits effectively produced by the foreign investment may be remitted</li> </ul> | <p><u>Access to Expanded Markets:</u></p> <ul style="list-style-type: none"> <li>- The advantages deriving from the tariff liberation programme of the Cartagena Agreement shall be enjoyed only by products produced by national or mixed enterprises of the Member Countries, as well as by foreign enterprises which are in the process of being transformed into national or mixed enterprises</li> </ul> <p><u>Capital Re-exports:</u></p> <ul style="list-style-type: none"> <li>- Foreign investors shall be entitled to re-export the invested capital when they sell their shares, participations, or rights to national investors or when liquidation of the enterprise occurs</li> </ul> <p><u>Reinvestment:</u></p> <ul style="list-style-type: none"> <li>- Governments of the Member Countries may permit reinvestment of the profits received by a foreign enterprise without special authorization, up to an amount not exceeding 5 per cent of the company's capital per year.</li> </ul> | <p><u>Capital Re-exports:</u></p> <ul style="list-style-type: none"> <li>- Foreign investors shall be entitled to re-export the invested capital when they sell their shares, participations, or rights to subregional investors or when liquidation of the enterprise occurs</li> </ul> <p><u>Reinvestment:</u></p> <ul style="list-style-type: none"> <li>- Governments of the Member Countries may permit reinvestment of the profit received by a foreign enterprise without special authorization, up to an amount not exceeding 7 per cent of the company's capital per year.</li> </ul>                       |

6. Limits enforced

COMPARATIVE ANALYSIS OF DECREES . . . (continued 6)

Decree 444 (1967)  
(As amended by Decree 668 of 1968)

Decision 24 (1970)

(As modified by decisions 37 and 37A of 1971)

Profit Remittance:

- Upon authorization by the competent national authority, foreign investors shall have the right to transfer abroad in freely convertible currency, the verified net profits resulting from the direct foreign investment, but not in excess of 14 per cent of that investment annually.
- In special cases, the commission may, upon the request of any Member Country, authorize higher percentages than that provided in this article.

Local Credit:

- In regard to domestic credit, foreign enterprises shall have access to short-term credit only, in accordance with the terms and conditions specified in the regulations which the Commission may issue on the matter upon the recommendation of the Board.

Decision 103 (1976)

(Including provisions of decisions 109 and 110)

Profit Remittance:

- Upon authorization by the competent national authority, foreign investors shall have the right to transfer abroad, in freely convertible currency, the verified net profits resulting from the direct foreign investment, but not in excess of 20 per cent of that investment annually.

- Nevertheless each Member Country may authorize superior percentages and communicate to the Commission the measures taken.

- The competent national organization may authorize the investment of the remainder of distributed profits, in this case it would be considered as foreign direct investment.

Local Credit:

- In regard to domestic credit, foreign enterprises will not have access to long term credit. The conditions and terms of access to short and medium term domestic credit will be established by the respective national legislatures, cognizant that medium-term credit does not exceed 3 years.

7. Exemptions

Foreign enterprises, in which 80 per cent or more of the production goes into export to third country markets, shall not be obliged to abide by the foregoing articles. In that case, the products of such enterprises may not enjoy in any way the advantages deriving from the tariff liberation programme of the Cartagena Agreement.

Foreign enterprises, in which 80 per cent or more of the production goes into exports to third country markets or foreign or mixed enterprises in the tourism sector, shall not be obliged to abide by the foregoing articles. In that case, the products of such enterprises may not enjoy in any way the advantages deriving from the tariff liberation programme of the Cartagena Agreement.

COMPARATIVE ANALYSIS OF DECREE ... (continued 7)

|  | Decree 444 (1967)<br>(As amended by Decree 688 of 1968)   | Decision 24 (1970)<br>(As modified by decisions 27 and 27A of 1971)   | Decision 103 (1976)<br>(Including provisions of decisions 109 and 110)  |
|--|---|---|---|
| 8. Transfor-<br>mation of<br>foreign<br>enterprises. | Foreign enterprises that currently exist in the territory of any Member Country and that wish to enjoy the advantages deriving from the tariff liberation programme of the Cartagena Agreement must agree with the competent national authority of the recipient country, within 3 years following the date the present regime enters into force, to their gradual and progressive transformation into national and mixed enterprises by the transfer of shares, participations or rights to national investors following minimum percentages within a period of 15 years for Colombia, Chile and Peru, 20 years for Bolivia and Ecuador, beginning 30 June 1971. | Foreign enterprises that currently exist in the territory of any Member Country and that wish to enjoy the advantages deriving from the tariff liberation programme of the Cartagena Agreement must agree with the competent national authority of the recipient country, within 3 years following the date the present regime enters into force, to their gradual and progressive transformation into national and mixed enterprises by the transfer of shares, participations or rights to national investors or the increase of capital by incorporating national investors, following minimum percentages within a period of 15 years for Colombia, Peru and Venezuela, 20 years for Bolivia and Ecuador, beginning 1 January 1974. | Foreign enterprises that currently exist in the territory of any Member Country and that wish to enjoy the advantages deriving from the tariff liberation programme of the Cartagena Agreement must agree with the competent national authority of the recipient country, within 3 years following the date the present regime enters into force, to their gradual and progressive transformation into national and mixed enterprises by the transfer of shares, participations or rights to national investors or the increase of capital by incorporating national investors, following minimum percentages within a period of 15 years for Colombia, Peru and Venezuela, 20 years for Bolivia and Ecuador, beginning 1 January 1974. |
| 9. Sectors with special regulations.                 | <p>Sectors with special provisions:</p> <ul style="list-style-type: none"> <li>Mining</li> <li>Petroleum</li> </ul>   | <p>Each Member Country may reserve sectors of economic activity for national public or private enterprises and determine whether the participation of mixed enterprises in those sectors shall be admitted. Foreign enterprises in the sectors referred to shall not be obligated to abide by the provisions for transformation previously noted.</p> <p>- Sectors with special provisions:</p> <ul style="list-style-type: none"> <li>Basic products</li> <li>Public services</li> <li>Financial institutions, insurance and commercial banking</li> <li>Domestic transportation</li> <li>Advertising and marketing</li> <li>Communication (radio, T.V., press)</li> </ul>   | <p>Each Member Country may reserve sectors of economic activity for national public or private enterprises and determine whether the participation of mixed enterprises in those sectors shall be admitted. Foreign enterprises in the sectors referred to shall not be obligated to abide by the provisions for transformation previously noted.</p> <p>- Sectors with special provisions:</p> <ul style="list-style-type: none"> <li>Basic products</li> <li>Public services</li> <li>Financial institutions, insurance and commercial banking</li> <li>Domestic transportation</li> <li>Advertising and marketing</li> <li>Communication (radio, T.V., press)</li> </ul>   |



COMPARATIVE ANALYSIS OF DECREE ... (concluded)

|  | Decree 444 (1967)<br>(As amended by Decree 688 of 1968)  | Decision 24 (1970)<br>(As modified by decisions 37 and 37A of 1971) | Decision 103 (1976)<br>(Including provisions of decisions 109 and 110) |
|--|--|---|--|
| 10. Special provision referring to integration | The Junta de Comercio Exterior which gives special preference to the study of the problems of Latin American integration and this will require cooperation with other governmental organizations or the celebration of special contracts for studies referring to the harmonization of commercial, tax, monetary, remuneration, foreign investment and other policies. |   |  |

Source: Respective official legislation. Author's translation and summary.

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Annex 35

EXXON CORP. (STANDARD OIL N.J.): LIST OF SUBSIDIARIES AND AFFILIATES, 1950.

| Subsidiary                                | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Agentia Americana                         | 100               | Rumania                  |
| Ancon Insurance Co. S.A.                  | 100               | Panama                   |
| Balboa Insurance Co. S.A.                 | 100               | Panama                   |
| Anglo-American Oil Co. Ltd.               | 100               | England                  |
| Agwi Petroleum Corp. Ltd.                 | 100               | England                  |
| Anglo-American Oil Co. Pension Trust Ltd. | 100               | England                  |
| British Mexican Petroleum Co. Ltd.        | 100               | England                  |
| Chetwin Newark & Co. (1920), Ltd.         | 100               | England                  |
| Cleveland Petroleum Co.                   | 100a/             | England                  |
| British Oil Storage Co. Ltd.              | 100               | England                  |
| Petroleum Storage and Finance Corp. Ltd.  | 100               | England                  |
| Esso Development Co. Ltd.                 | 100a/             | England                  |
| Intava Ltd.                               | 100               | England                  |
| Irish-American Oil Co. Ltd.               | 100               | Ireland                  |
| Purfleet Deep Wharf & Storage Co. Ltd.    | 100               | England                  |
| Redline-Glico Ltd.                        | 100               | England                  |
| Standard Candle Co. Ltd.                  | 100a/             | England                  |
| Standard Oil & Refining Co. Ltd.          | 100               | England                  |
| Baltisch-Amerikanische Petroleum          | 100               | Poland                   |
| Butterworth System, Inc.                  | 100               | USA-Delaware             |
| Caloric Co.                               | 100               | USA-New York             |
| Carter Oil Co.                            | 100               | USA-W. Virginia          |
| Hope Producing Co.                        | 100               | USA-Delaware             |
| Powerine Co.                              | 100               | USA-Colorado             |
| Cia. Maritima Brasileira                  | 100               | Brazil                   |
| Deutsch-Amerikanische Petroleum           | 100               | Germany                  |
| Esso Standard                             | 100               | Austria                  |
| Mineraloel-Raffinerie vorm.               | 100a/             | Germany                  |
| Ebano Asphalt-Werke Aktiengesellschaft    | 100               | Germany                  |
| Busscher & Hoffman Aktiengesellschaft     | 100a/             | Germany                  |
| Ebano Gefolgschaftshilfe                  | 100               | Germany                  |
| Vereingte Asphalt GmbH                    | 100               | Germany                  |
| Enjay Co. Inc.                            | 100               | USA-Delaware             |
| Esso Export Corp.                         | 100               | USA-Delaware             |
| Esso Gas Co. of Puerto Rico               | 100               | USA-Delaware             |
| Esso Shipping Co.                         | 100               | USA-Delaware             |
| Esso Standard Oil (Antilles) S.A.         | 100               | Panama                   |
| Esso Standard Oil S.A.                    | 100a/             | Panama                   |
| Lands Exploitation Co. Ltd.               | 100               | Suriname                 |

a/ Total holding, both direct and indirect.

/Annex 35 (cont.1)

Annex 35 (cont.1)

|  |       |                   |
|--|-------|-------------------|
| Esso Standard Oil (Caribbean) S.A.         | 100   | Panama            |
| Esso Standard Oil (Central America) S.A.   | 100   | Panama            |
| Standard Oil of Nicaragua                  | 100   | Nicaragua         |
| Esso Standard Oil Co.                      | 100   | USA-Delaware      |
| Colonial Beacon Oil Co.                    | 100   | USA-Delaware      |
| Esso Incorporated                          | 100   | USA               |
| Kesbec Inc.                                | 100a/ | USA-New York      |
| Penola Inc.                                | 100   | USA-Delaware      |
| Stanco Inc.                                | 100   | USA-Delaware      |
| Sylvestre Oil Co.                          | 100a/ | USA               |
| Sylvestre Oil Co. Inc.                     | 100a/ | USA-New York      |
| Sylvestre Utilities Co. Inc.               | 100a/ | USA-Delaware      |
| Tuscarora Oil Co. Ltd.                     | 100a/ | USA-Pennsylvania  |
| Esso Standard Oil Co. (Cuba)               | 100   | Cuba              |
| Esso Standard Oil Co. (Ecuador) S.A.       | 100   | Ecuador           |
| Esso Standard Oil Co. (Uruguay) S.A.       | 100   | Uruguay           |
| Esso Standard Portugal Inc.                | 100   | USA-Delaware      |
| Esso Transportation Co. Ltd.               | 100   | Great Britain     |
| Esso West India Oil Inc.                   | 100   | Puerto Rico       |
| Gilbert & Barker Manufacturing Co.         | 100   | USA-Massachusetts |
| Gilbert & Barker Mfg. Co. Ltd.             | 100   | Canada            |
| Intava S.A.                                | 100   | Panama            |
| International Co.                          | 100   | Liechtenstein     |
| Interstate Oil Pipeline Co.                | 100   | USA-Delaware      |
| Lago Oil & Transport Co. Ltd.              | 100   | Canada            |
| Mediterranean Standard Oil Co.             | 100   | USA-Delaware      |
| Panama Transport Co.                       | 100   | Panama            |
| Romano-Americana                           | 100   | Rumania           |
| Neo-Petrol S.A.                            | 100   | Rumania           |
| Soc. Ital. Lubrificanti Bedford per Azioni | 100   | Italy             |
| S.A. Cia. Pan Americaine de Petroles       | 100   | n.d.              |
| Societe du Naphte S.A.                     | 100   | Switzerland       |
| Stanco (Australia) Pty. Ltd.               | 100   | Australia         |
| Stanco (Canada) Ltd.                       | 100   | Canada            |
| Standard Oil (Canal Zone) Co.              | 100   | USA-Delaware      |
| Standard Oil Co. (Bahamas) Ltd.            | 100   | Bahamas           |
| Standard Oil Co. (Malta) Ltd.              | 100   | Great Britain     |
| Standard Oil Co. of Brazil                 | 100   | USA-W. Virginia   |
| Cia. Nacional de Gas Esso                  | 100a/ | Brazil            |
| Standard Oil Co. of Canada Ltd.            | 100   | Canada            |
| Standard Oil Co. (Newfoundland) Ltd.       | 100   | Canada            |
| Standard Oil Co. of Egypt Inc.             | 100   | USA-Delaware      |
| The Standard Oil Co. of Egypt S.A.         | 100   | Egypt             |
| Beckwith & Co. Ltd.                        | 100   | Egypt             |
| Standard Oil Co. of Spain S.A.             | 100   | Panama            |
| Standard Oil Co. of Trinidad               | 100   | Trinidad          |
| Standard Oil Development Co.               | 100   | n.d.              |
| Standard Catalytic Co.                     | 100   | USA-Delaware      |

a/ Total holding, both direct and indirect.

/Annex 35 (cont.2)

Annex-85 (cont. 2)

|   |       |                |
|---|-------|----------------|
| Standard Vyroby Mineralnich Oleju A.S.      | 100   | Czechoslovakia |
| Stemco Ltd.                                 | 100   | Great Britain  |
| Svenska Petroleum Aktiebolaget Standard     | 100   | Sweden         |
| Esso Rederi Aktiebolag                      | 100a/ | Sweden         |
| Esso Aktiebolag                             | 100   | Sweden         |
| Skandinavisk-Amerikanska Petroleum Akt.     | 100   | Sweden         |
| Svenska Aktiebolaget Intava                 | 100   | Sweden         |
| Waried Tankschiff Rhederie GmbH             | 100   | Germany        |
| West India Oil Co. S.A.                     | 100   | Panama         |
| Aktieselskapet Ostlandske Petroleumscmp.    | 55.7  | Norway         |
| Akties. Norsk Amerikansk Mineraloljeco.     | 99.9  | Norway         |
| Aktieselskapet Tiger                        | 98.0  | Norway         |
| Akties. Vestlandake Petroleumscmpagni       | 99.9  | Norway         |
| 4 unnamed foreign subsidiaries              | 96.0  | Norway         |
| Cia. Nacional de Gas Esso Brazil            | 83.8  | Brazil         |
| 1 unnamed foreign subsidiary                | 99.0  | Brazil         |
| Cia. Nativa de Petróleos S.A.               | 99.0  | Argentina      |
| Cia. Transportadora de Petróleos            | 99.0  | Argentina      |
| Creole Petroleum Corp.                      | 93.1  | USA-Delaware   |
| Cia. de Petróleo Lago                       | 100   | Venezuela      |
| Standard Oil Co. C.A.                       | 100   | Venezuela      |
| Det Danske Petroleum Aktieselskab           | 82.4  | Denmark        |
| A/S Kalundborg Olieraffinaderi              | 55.2  | Denmark        |
| Entrepot der Standard Amer. Petroleum Cie.  | 50.0  | Netherlands    |
| Esso Standard Algerie S.A.                  | 76.8  | Algeria        |
| Entrepots du Caroubier S.A.                 | 76.8  | Algeria        |
| Esso Standard (Belgium)                     | 87.6  | Belgium        |
| Cie. Industrielle Atlas S.A.                | 99.0  | Belgium        |
| 1 unnamed foreign subsidiary                | 7.1   | Belgium        |
| Standard Luxembourgeoise des Petroles       | 0.3   | Luxembourg     |
| 1 unnamed foreign subsidiary                | 92.9  | Belgium        |
| Standard Luxembourgeoise des Petroles       | 99.6  | Luxembourg     |
| Cie. Industrielle Atlas S.A.                | 0.8   | Belgium        |
| Esso Standard Maroc S.A.                    | 99.7  | Morocco        |
| Esso Standard Oil Co. (Chile) S.A.C.        | 99.9  | Chile          |
| Esso Standard Oil Co. (Puerto Rico)         | 99.9  | Puerto Rico    |
| Esso Standard Refinery                      | 94.0  | Belgium        |
| Esso Standard (Switzerland)                 | 99.9  | Switzerland    |
| Flexflam A.G.                               | 92.0  | Switzerland    |
| Esso Standard Tunisie S.A.                  | 75.6  | Tunisia        |
| European Gas & Electric Co.                 | 81.7  | USA-Delaware   |
| European Gas & Electric Co. von Oesterreich | n.d.  | Germany (GDR)  |
| Magyar Amerikai Olajipari Reszvenytarsasang | n.d.  | Hungary        |
| Forak Co.                                   | 63.9  | USA-Delaware   |
| 1 unnamed foreign subsidiary                | 50.2  | n.d.           |
| 1 unnamed foreign subsidiary                | 100   | n.d.           |

a/ Total holding, both direct and indirect.

/Annex 35 (cont.3)

Annex 35 (cont.3)

|  |      |              |
|--|------|--------------|
| Humble Oil & Refining Co.              | 72.4 | USA-Texas    |
| Humble Pipe Line Co.                   | 100  | USA-Texas    |
| Salt Flat Water Co.                    | 53.7 | USA-Texas    |
| Spanish Peak Oil Co.                   | 63.8 | USA-Oklahoma |
| Imperial Oil Ltd.                      | 69.6 | Canada       |
| Astral Petroleum Ltd.                  | 100  | Canada       |
| Atoka Petroleum Ltd.                   | 100  | Canada       |
| Canora Petroleum Ltd.                  | 100  | Canada       |
| 1 unnamed foreign subsidiary           | 100  | Canada       |
| 3 unnamed foreign subsidiaries         | 100  | Canada       |
| Constellation Petroleum Ltd.           | 100  | Canada       |
| Devcan Petroleum Ltd.                  | 100  | Canada       |
| Devon Estates Ltd.                     | 100  | Canada       |
| Devonian Natural Gas Co. Ltd.          | 100  | Canada       |
| Esso of Canada                         | 100  | Canada       |
| Esso Limited (Newfoundland)            | 100  | Canada       |
| Imperial Oil Air Transport Ltd.        | 100  | Canada       |
| Imperial Oil Ltd. (Newfoundland)       | 100  | Canada       |
| Imperial Oil Refineries Ltd.           | 100  | Canada       |
| Imperial Oil Shipping Co. Ltd.         | 100  | Canada       |
| Imperial Pipe Line Co. Ltd.            | 100  | Canada       |
| Ioco Townside Ltd.                     | 100  | Canada       |
| Mantol Petroleum Ltd.                  | 100  | Canada       |
| Maple Leaf Petroleum Ltd.              | 100  | Canada       |
| Muskogee Petroleum Ltd.                | 100  | Canada       |
| Norcanols Oil & Gas Ltd.               | 100  | Canada       |
| Northwest Co. Ltd.                     | 100  | Canada       |
| Okmulgee Petroleum Ltd.                | 100  | Canada       |
| Padol Petroleum Ltd.                   | 100  | Canada       |
| Palcan Petroleum Ltd.                  | 100  | Canada       |
| Pawhuska Petroleum Ltd.                | 100  | Canada       |
| 1 unnamed foreign subsidiary           | n.d. | Canada       |
| 1 unnamed foreign subsidiary           | 100  | Canada       |
| 2 unnamed foreign subsidiaries         | 100  | Canada       |
| Sirius Petroleum Ltd.                  | 100  | Canada       |
| Spica Petroleum Ltd.                   | 100  | Canada       |
| St. Clair Processing Corp. Ltd.        | 100  | Canada       |
| Stromo Petroleum Ltd.                  | 100  | Canada       |
| 7 unnamed foreign subsidiaries         | 100  | Canada       |
| Taos Petroleum Ltd.                    | 100  | Canada       |
| Tercol Petroleum Ltd.                  | 100  | Canada       |
| Transit & Storage Co.                  | 100  | USA-Delaware |
| Transit & Storage (South America) Ltd. | 100  | Bahamas      |
| 1 unnamed foreign subsidiary           | 100  | n.d.         |
| Walet Petroleum Ltd.                   | 100  | Canada       |
| Weleeta Petroleum Ltd.                 | 100  | Canada       |
| Wewoka Petroleum Ltd.                  | 100  | Canada       |
| International Petroleum Co. Ltd.       | 83.6 | Canada       |
| Andian National Corp. Ltd.             | 97.9 | Canada       |
| Cia. Nacional de Gas Esso S.A.         | 69.9 | Peru         |
| Tropical Oil Co.                       | 99.9 | Colombia     |
| 26 unnamed foreign subsidiaries        | n.d. | n.d.         |

/Annex 35 (conclusion)

Annex 35 (conclusion)

|   |      |              |
|---|------|--------------|
| Interstate Natural Gas Co. Inc.               | 54.0 | USA-Delaware |
| La Columbia Soc. Marittima per Aziona         | 66.6 | Italy        |
| Lubricantina S.A.                             | 99.0 | Argentina    |
| Mineraloel-Raffinerie vorm. August Korff      | 95.4 | n.d.         |
| Osakeyhtio Nobel-Standard Aktiebolag          | 66.7 | Finland      |
| Lappeenrannan Bensiini O/Y                    | 100  | Finland      |
| O/Y Kanter A/B                                | 100  | Finland      |
| Pan American Cia. Argentina de Petróleos S.A. | 99.0 | Argentina    |
| Plantation Pipe Line Co.                      | 50.4 | n.d.         |
| S.A. Surtidores Wico                          | 99.0 | Argentina    |
| Societa Petrolifera Italiana                  | 41.2 | Italy        |
| Societa Metanifera Italiana                   | 100  | Italy        |
| Societe Bedford Iberique                      | 99.5 | n.d.         |
| Soc. Espanola de Asfatos Calol S.A.           | 55.0 | Spain        |
| Societe Mediterraneenne des Petroles          | 99.9 | Tunisia      |
| Standard Amerikaansche Petroleum Cie. N.V.    | 66.0 | Netherlands  |
| Entrepot der Standard Amer. Petroleum Cie.    | 50.0 | Netherlands  |
| 2 unnamed foreign subsidiaries                | n.d. | n.d.         |
| Standard-Italo Americano Petroli-Societa p.A. | 89.5 | Italy        |
| La Columbia Societa Marittima p.A.            | 30.6 | Italy        |
| Societa Patrolifera per Azioni                | 19.9 | Italy        |
| Standard Oil Co.S.A.                          | 99.0 | Argentina    |
| Standard Petroleum Co.                        | 99.8 | Switzerland  |
| Stemco S.A. Francaise                         | 99.0 | France       |
| United Petroleum Securities Corp.             | 67.5 | n.d.         |
| Standard Francaise des Petroles               | 81.5 | France       |
| S.A. Marocaine Le Bitume Liquide              | 98.5 | Morocco      |
| West India Oil Co. S.A. Petrolera Argentina   | 99.0 | Argentina    |
| 58 unnamed foreign subsidiaries               | n.d. | n.d.         |
| Attapulcus Clay Co.                           | 50.0 | USA          |
| Ethyl Corp.                                   | 50.0 | USA          |
| Near East Development Co.                     | 50.0 | USA          |
| Standard Vaccum Oil Co.                       | 50.0 | USA          |

Annex 36

EXXON CORP. (STANDARD OIL N.J.): LIST OF MAJOR SUBSIDIARIES  
AND AFFILIATES, 1965

| Subsidiary                          | Capital Share (%) | Country of Incorporation |
|-------------------------------------|-------------------|--------------------------|
| Creole Petroleum Corp.              | 95.4              | USA-Delaware             |
| Dansk Esso A/S                      | 100               | Denmark                  |
| Esso A.G.                           | 100               | Germany (GFR)            |
| Esso Belgium                        | 100               | Belgium                  |
| Esso Brasileira de Petroles S.A.    | 100               | Brazil                   |
| Esso Chemical Co. Inc.              | 100               | USA                      |
| Esso International Inc.             | 100               | USA-Delaware             |
| Esso Nederland N.V.                 | 100               | Netherlands              |
| Esso Petroleum Co. Ltd.             | 100               | England                  |
| Esso Sociedad Anónima Petrolera     | 100               | Argentina                |
| Esso Standard Eastern Inc.          | 100               | USA-Delaware             |
| Esso Standard (Interamerica) Inc.   | 100               | USA                      |
| International Petroleum Co. Ltd.    | 100               | Canada                   |
| Esso Standard Italiana S.p.A.       | 100               | Italy                    |
| Esso Standard Oil S.A. Ltd.         | 100               | Bahamas                  |
| Humble Oil & Refining Co.           | 100               | USA-Delaware             |
| Imperial Oil Ltd.                   | 69.9              | Canada                   |
| Svenska Esso Aktiebolag             | 100               | Sweden                   |
| United Petroleum Securities         | 77.5              | USA-Delaware             |
| Esso Standard S.A.F.                | 81.6              | France                   |
| Near East Development Corp.         | 50.0              | USA                      |
| Iraq Petroleum Co. Ltd.             | 12.0              | Iraq                     |
| Arabian American Oil Co.            | 30.0              | Saudi Arabia             |
| Trans-Arabian Pipe Line Co.         | 30.0              | Saudi Arabia             |
| Gewerkschaft Brigitta               | 50.0              | Germany (GFR)            |
| N.V. Nederlandse Aardolie Mij.      | 50.0              | Netherlands              |
| Stanic-Industria Petrolifera S.p.A. | 50.0              | Italy                    |
| Societe du Pipe-Line Sub-Europeen   | 28.0              | France                   |
| Iranian Oil Participants Ltd.       | 7.0               | Iran                     |
| Plantation Pipe Line Co.            | 48.8              | n.d.                     |
| Interprovincial Pipe Line Co.       | 23.0              | Canada                   |
| Trans-Mountain Oil Pipe Line Co.    | 6.0               | Canada                   |
| Monterey Transmission Co.           | n.d.              | n.d.                     |

Source: Moody's Industrial Manual.



Annex 37

EXXON CORP. (STANDARD OIL N.J.): LIST OF MAJOR SUBSIDIARIES AND AFFILIATES,  
1970

| Subsidiary                                    | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Aksjeselskapet Norske Esso                    | 99.9              | Norway                   |
| Creole Petroleum Corp.                        | 95.4              | USA-Delaware             |
| Dansk Esso A/S                                | 99.9              | Denmark                  |
| Esso A.G.                                     | 100               | Germany (GFR)            |
| Esso Belgium                                  | 99.9              | Belgium                  |
| Esso Exploration & Production U.K. Inc.       | 100               | USA-Delaware             |
| Esso Brasileira de Petróleo S.A.              | 100               | Brazil                   |
| Esso Eastern Inc.                             | 100               | USA-Delaware             |
| Esso Standard Oil (Australia) Ltd.            | 100               | Australia                |
| Esso Standard Sekiyo K.K.                     | 100               | Japan                    |
| Esso Chemical Co. Inc.                        | 100               | USA-Delaware             |
| Enjay Chemical Co.                            | 100               | USA-Delaware             |
| Esso Holding Co. Holland Inc.                 | 100               | USA-Delaware             |
| Esso Chimie N.V.                              | 100               | Netherlands              |
| Esso-Nederland N.V.                           | 99.9              | Netherlands              |
| Esso International Inc.                       | 100               | USA-Delaware             |
| Esso Pakistan Fertilizer Co. Ltd.             | 75.0              | Pakistan                 |
| Esso Holding Co. U.K. Inc.                    | 100               | USA-Delaware             |
| Esso Research & Engineering Co.               | 100               | USA-Delaware             |
| Esso Services S.A.                            | 100               | Panama                   |
| Esso Sirte Inc.                               | 100               | USA-Delaware             |
| Esso Sociedad Anónima Petrolera               | 100               | Argentina                |
| Esso Standard (Interamericana) Inc.           | 100               | USA-Delaware             |
| Esso Andina Inc.                              | 99.9              | USA-Delaware             |
| Esso Colombiana S.A.                          | 99.9              | Colombia                 |
| International Petroleum (Venezuela) Ltd.      | 99.9              | USA-Delaware             |
| Esso Standard Italiana S.p.A.                 | 100               | Italy                    |
| Raffinerie Siciliane Olii Minerali            |                   |                          |
| Rasiom S.p.A.                                 | 100               | Italy                    |
| S.p.A. Raffineria Padana Olii Minerali-Sarpom | 64.2              | Italy                    |
| Esso Standard Libya Inc.                      | 100               | USA-Delaware             |
| Esso Standard (Switzerland)                   | 99.9              | Switzerland              |
| Esso Standard Oil S.A. Ltd.                   | 100               | Bahamas                  |
| Esso Tanschiff Reederei GmbH                  | 100               | Germany (GFR)            |
| Esso Tankvaart Nederlandse Antillen N.V.      | 100               | Netherlands Antilles     |
| Esso Transport Co. Inc.                       | 100               | Panama                   |
| Humble Oil & Refining Co.                     | 100               | USA-Delaware             |
| Humble Pipe Line Co.                          | 100               | USA-Delaware             |
| Imperial Oil Ltd.                             | 69.8              | Canada                   |
| Imperial Oil Enterprises Ltd.                 | 100               | Canada                   |

/Annex 37 (conclusion)

Annex 37 (conclusion)

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|                                     |      |              |
|-------------------------------------|------|--------------|
| Lago Oil & Transport Co. Ltd.       | 100  | Canada       |
| C/Y Esso A/B                        | 100  | Finland      |
| Standard Tankers (Bahamas) Co. Ltd. | 100  | Bahamas      |
| Svenska Esso Aktiebolag             | 100  | Sweden       |
| Essochem Investment AB              | 100  | Sweden       |
| United Petroleum Securities Corp.   | 80.0 | USA-Delaware |
| Esso Standard S.A.F.                | 81.6 | France       |
| Esso Chimie                         | 81.6 | France       |
| Plantation Pipe Line Co.            | 48.8 | Canada       |
| Interprovincial Pipe Line Co.       | 33.0 | Canada       |
| Trans-Mountain Oil Pipe Line Co.    | n.d. | Canada       |

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Source: Moody's Industrial Manual.

Annex 38

EXXON CORP.: LIST OF MAJOR SUBSIDIARIES AND AFFILIATES, 1976

| Subsidiary                                    | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Aksjeselskapet Norske Esso                    | 99.9              | Norway                   |
| Dansk Esso A/S                                | 100               | Denmark                  |
| Esso A.G.                                     | 100               | Germany (GFR)            |
| Esso Chimie GmbH                              | 100               | Germany (GFR)            |
| Esso Brasileira de Petroleo S.A.              | 100               | Brazil                   |
| Esso Chimie                                   | 98.6              | France                   |
| Esso Eastern Inc.                             | 100               | USA-Delaware             |
| Esso Australia Ltd.                           | 100               | Australia                |
| Altona Petrochemical Co. Ltd.                 | 50                | Australia                |
| Petroleum Refineries (Australia) Pty Ltd.     | 35                | Australia                |
| Eastern Energy Ltd.                           | 100               | Hong Kong                |
| Peninsula Electric Power Co. Ltd.             | 60.0              | Hong Kong                |
| Esso Exploration & Production Australia Inc.  | 100               | Australia                |
| Esso Malaysia Berhad                          | 65.0              | Malaysia                 |
| Esso Standard Sekiyu K.K.                     | 100               | Japan                    |
| General Sekiyu Seisei K.K.                    | 50.0              | Japan                    |
| Esso Standard Thailand Ltd.                   | 100               | Thailand                 |
| P.T. Stanvac Indonesia                        | 50.0              | Indonesia                |
| Toa Nenryo Kogyo K.K.                         | 25.0              | Japan                    |
| Esso Europe Supply Co. Linc.                  | 100               | USA-Delaware             |
| Esso Holding Co. Holland Inc.                 | 100               | USA-Delaware             |
| Esso Chimie N.V.                              | 100               | Netherlands              |
| Esso-Nederland B.V.                           | 100               | Netherlands              |
| N.V. Nederlandse Gasunie                      | 25.0              | Netherlands              |
| Nederlandse Aardolie Maatschappij B.V.        | 50.0              | Netherlands              |
| S.A. Esso N.V.                                | 99.0              | Belgium                  |
| Esso Holding Co. U.K. Inc.                    | 100               | USA-Delaware             |
| Esso Chemical Ltd.                            | 100               | Great Britain            |
| Esso Petroleum Co. Ltd.                       | 100               | Great Britain            |
| Esso Italiana S.p.A.                          | 99.0              | Italy                    |
| S.p.A. Raffineria Padana Olii Minerali-Sarpom | 64.2              | Italy                    |
| Esso Pakistan Fertilizer Co. Ltd.             | 75.0              | Pakistan                 |
| Esso Standard Oil S.A. Ltd.                   | 100               | Bahamas                  |
| Esso  | 99.9              | Switzerland              |
| Exxon Enterprises Inc.                        | 100               | USA-Delaware             |

Annex 38 (conclusion)

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|   |      |                  |
|---|------|------------------|
| Exxon Overseas Corporation                  | 100  | USA-Delaware     |
| Arabian American Oil Co.                    | 29.3 | USA-Delaware     |
| Esso Sirte Inc.                             | 100  | USA-Delaware     |
| Esso Standard Libya Inc.                    | 100  | USA-Delaware     |
| Exxon Overseas Investment Corp.             | 100  | USA-Delaware     |
| Exxon Overseas Services S.A.                | 100  | Panama           |
| Esso Tankers Inc.                           | 100  | Liberia          |
| Esso Tankvaart Nederlandse Antillen<br>N.V. | 100  | Netherlands Ant. |
| Exxon Pipeline Co.                          | 100  | USA-Delaware     |
| Plantation Pipe Line Co.                    | 48.8 | USA-Delaware     |
| Exxon Research & Engineering Co.            | 100  | USA-Delaware     |
| Imperial Oil Ltd.                           | 69.6 | Canada           |
| Imperial Oil Enterprises Ltd.               | 100  | Canada           |
| Interprovincial Pipe Line Ltd.              | 32.9 | Canada           |
| Lago Oil & Transport Co. Ltd.               | 100  | USA-Delaware     |
| O/Y Esso A/B                                | 100  | Finland          |
| Svenska Esso Aktiebolag                     | 100  | Sweden           |
| United Petroleum Securities Corp.           | 80.0 | USA-Delaware     |
| Esso S.A.F.                                 | 81.6 | France           |

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Source: Moody's Industrial Manual.

Annex 39

EXXON CORPORATION: LIST OF FOREIGN SUBSIDIARIES AND AFFILIATES, CIRCA 1974

| Corporations  | Country   | Corporations                             | Country        |
|---|-----------|--|----------------|
| EXXON CORP., 1251 Ave. of the Americas, New York/N.Y. 10020 |           |  |                |
| Esso S.A. Petrolera Argentina                               | Argentina | Esso Beleggingsmij. N.V.                 | Holland        |
| Esso Standard (Austria) AG.                                 | Austria   | Esso Motor Hotels N.V.                   | Holland        |
| Esso Standard Oil S.A. Ltd.                                 | Bahamas   | International Gas Transport Mij., N.V.   | Holland        |
| Standard Tankers (Bahamas) Co. Ltd.                         | Bahamas   | Rotterdam-Antwerpen Pijpleiding          |                |
| Distrigaz S.A. (A)  | Belgium   | (Nederland) N.V. (A)                     | Holland        |
| Esso Motor Hotels S.A.                                      | Belgium   | Near East Development Corp. (A)          | Iran           |
| Esso Research S.A.  | Belgium   | Esso Chemica S.p.A.                      | Italy          |
| Essochem S.A./N.V.  | Belgium   | Esso Italiana S.p.A.                     | Italy          |
| Rotterdam-Antwerp Pijpleiding (Belgie) (A)                  | Belgium   | Raffineria Padana Olii Minerali-Sarpon,  |                |
| Esso Brasileira de Petroleo S.A.                            | Brazil    | S.p.A.                                   | Italy          |
| Andian National Corp., Ltd.                                 | Canada    | Stanic Industria Petrolifera S.p.A. (A)  | Italy          |
| Imperial Oil Ltd.   | Canada    | Esso Tankers Inc.                        | Liberia        |
| W.H. Adam Ltd.  | Canada    | Esso Luxembourg                          | Luxembourg     |
| Albury Co. Ltd.   | Canada    | Transalpine Finance Holdings S.A. (A)    | Luxembourg     |
| Allied Heat and Fuel Ltd.                                   | Canada    | Esso Tankvaart Nederlandse Antillen N.V. | Neth. Antilles |
| Archibald Fuels Ltd.  | Canada    | Norske Esso A/S                          | Norway         |
| Atlas Supply Co. of Canada Ltd.                             | Canada    | Esso Pakistan Fertilizer Co. Ltd.        | Pakistan       |
| Bourque Brothers Ltd.                                       | Canada    | Esso Services S.A.                       | Panama         |
| Building Products of Canada Ltd.                            | Canada    | Esso Transport Co. Inc.                  | Panama         |
| Champlain Oil Products Ltd.                                 | Canada    | Arabian American Oil Co. (A)             | Saudi Arabia   |
| Citadel Centres Ltd.  | Canada    | Esso Española                            | Spain          |
| Delta Rope & Twine Ltd.                                     | Canada    | Esso Exploration Spain                   | Spain          |
| Devon Estates Ltd.  | Canada    | Esso Iberia Inc.                         | Spain          |
| Donat Grandmaitre Ltd.                                      | Canada    | Inversiones Esso S.A.                    | Spain          |
| ESF Ltd.  | Canada    | Productos Quimicos Esso S.A.             | Spain          |
| Esso of Canada Ltd.   | Canada    | Svenska Esso AB                          | Sweden         |
| Hall Fuel (1965) Ltd.                                       | Canada    | Essochem Investment AB                   | Sweden         |
| Hi-Way Petroleum Ltd.                                       | Canada    | Esso (Switzerland)                       | Switzerland    |
| Home Oil Distributors Ltd.                                  | Canada    | Gilbarco AG                              | Switzerland    |
| Imperial Oil of Canada Shipping Co.Ltd.                     | Canada    | Esso Engineering Services Ltd.           | United Kingdom |
| Imperial Oil Developments Ltd.                              | Canada    | Esso Overseas Trading Ltd.               | United Kingdom |
| Imperial Oil Enterprises Ltd.                               | Canada    | Gilbarco Ltd.                            | United Kingdom |
| The Imperial Pipe Line Co. Ltd.                             | Canada    | Iraq Petroleum Co., Ltd.                 | United Kingdom |
| Interprovincial Pipe Line Ltd. (A)                          | Canada    | Mainline Pipelines Ltd. (A)              | United Kingdom |
| Loco Townsite Ltd.  | Canada    | Standard Oil International Ltd.          | United Kingdom |
| Lou's Service (Sault) Ltd.                                  | Canada    | Esso Eastern Inc.                        | United States  |
| Maple Leaf Petroleum Ltd.                                   | Canada    | Esso Australia Ltd.                      | Australia      |
| Midwest Fibreboard Ltd.                                     | Canada    | Altona Petrochemical Co. Ltd. (A)        | Australia      |
| Mongeau & Robert Cie. Ltée.                                 | Canada    | Petroleum Refineries (Australia)         |                |
| Montreal Pipe Line Co. Ltd. (A)                             | Canada    | Pty. Ltd. (A)                            | Australia      |
| James Murphy Fuel Oil Co. Ltd.                              | Canada    | Eastern Energy Ltd.                      | Hong Kong      |
| Nisku Products Pipe Line Co. Ltd.                           | Canada    | Peninsula Electric Power Co. Ltd.        | Hong Kong      |
| Northwest Co. Ltd.  | Canada    | Stanvac Indonesia, P.T. (A)              | Indonesia      |
| Oval Natural Gas Co. Ltd.                                   | Canada    |  |                |

Annex 40

TEXACO INC.: ASPECTS OF ITS GLOBAL OPERATIONS, VARIOUS YEARS, 1945-1976  
(Millions of US dollars and percentage)

| Year    | Operating income |                 |                | Net income    |                 |                | Total assets  |                 |                | Employees           |                |
|---------|------------------|-----------------|----------------|---------------|-----------------|----------------|---------------|-----------------|----------------|---------------------|----------------|
|         | Current value    | Constant (1970) | Rate of growth | Current value | Constant (1970) | Rate of growth | Current value | Constant (1970) | Rate of growth | Number of employees | Rate of growth |
| 45      | 556.3            | -               | -              | 51.9          | -               | -              | 833.9         | -               | -              | n.d.                | -              |
| 50      | 1 248.5          | 2 098.3         | -              | 149.1         | 250.6           | -              | 1 448.7       | 2 434.8         | -              | 39                  | -              |
| 55      | 1 767.3          | 2 576.2         | 3.5            | 262.7         | 382.9           | 7.3            | 2 114.6       | 3 082.5         | 4.0            | 53                  | 5.2            |
| 60      | 2 980.5          | 3 768.0         | 6.5            | 391.8         | 495.3           | 4.4            | 3 646.8       | 4 610.4         | 6.9            | 57                  | 1.2            |
| 65      | 3 779.4          | 4 631.6         | 3.5            | 636.7         | 780.3           | 7.9            | 5 342.9       | 6 547.7         | 6.0            | 57                  | -              |
| 70      | 6 349.8          | 6 349.8         | 5.4            | 822.0         | 822.0           | 0.9            | 9 923.8       | 9 923.8         | 7.2            | 74                  | 4.4            |
| 75      | 24 507.5         | 16 913.3        | 17.7           | 830.6         | 573.2           | -5.8           | 17 262.4      | 11 913.3        | 3.1            | 75                  | 0.2            |
| 76      | 26 451.9         | 17 414.0        | 3.0            | 869.7         | 572.5           | -0.1           | 18 193.8      | 11 977.5        | 0.5            | 73                  | -2.8           |
| 60-1976 |                  |                 | 8.2%           |               |                 | 3.1%           |               |                 | 6.1%           |                     | 2.4%           |

Source: Company reports; Company Form 10-K of US Securities and Exchange Commission; Moody's Industrial Manual.

Annex #1

TEXACO INC. (THE TEXAS CO.): LIST OF SUBSIDIARIES AND AFFILIATES, 1950

| Subsidiary or affiliate                    | Capital Share (%) | Country of Incorporation |
|--|-------------------|--------------------------|
| California Petroleum Corp.                 | 100               | USA-California           |
| Cartagena Petroleum Co.                    | 100               | USA-Delaware             |
| Chibcha Petroleum Co.                      | 100               | USA-Delaware             |
| Cia. de Petróleos de Las Amazonas          | 100               | Colombia                 |
| Cia. de Petróleos del Cauca                | 100               | Colombia                 |
| Cia. de Petróleos La América               | 100               | Colombia                 |
| Cia. de Petróleos La Patricia              | 100               | Colombia                 |
| Cia. de Petróleos Las Indias               | 100               | Colombia                 |
| Cia. Petrolera de Bogotá                   | 100               | Colombia                 |
| Convenas Petroleum Co.                     | 100               | USA-Delaware             |
| El Libertador Cia. Petrolera S.A.          | 100               | Colombia                 |
| Florencia Petroleum Co.                    | 100               | USA-Delaware             |
| Florida Petroleum Co.                      | 100               | USA-Delaware             |
| Funza Petroleum Co.                        | 100               | USA-Delaware             |
| Indian Refining Co.                        | 100               | USA-Delaware             |
| Laguna Azul Petroleum Co.                  | 100               | USA-Delaware             |
| Las Animas Petroleum Co.                   | 100               | USA-Delaware             |
| Las Palmas Petroleum Co.                   | 100               | USA-Delaware             |
| Llanos Petroleum Co.                       | 100               | USA-Delaware             |
| Mesa Verde Petroleum Co.                   | 100               | USA-Delaware             |
| Mompos Petroleum Co.                       | 100               | USA-Delaware             |
| Morroa Petroleum Co.                       | 100               | USA-Delaware             |
| Putumayo Petroleum Co.                     | 100               | USA-Delaware             |
| Quesada Petroleum Co.                      | 100               | USA-Delaware             |
| Sabanas Petroleum Co.                      | 100               | USA-Delaware             |
| Sierra Pipe Line Co.                       | 100               | USA-California           |
| Sindicato Ganadero Colombiano S.A.         | 100               | Colombia                 |
| S.A. de Oleo Galena-Signal                 | 100               | Brazil                   |
| Societe Immobiliere Coloniale des Petroles | 100               | France                   |
| Tequendama Petroleum Co.                   | 100               | USA-Delaware             |
| Texaco Exploration Co.                     | 100               | USA-Delaware             |
| Texaco Development Corp.                   | 100               | USA-Delaware             |
| Texaco S.A.                                | 100               | Mexico                   |
| Texas Petroleum Co.                        | 100               | USA- New Jersey          |
| The Texas Co. (Caribbean) Ltd.             | 100               | USA-Delaware             |
| The Texas Co. (Overseas) Ltd.              | 100               | USA-Delaware             |
| The Texas Co. (Panama) Inc.                | 100               | Panama                   |
| The Texas Co. (Puerto Rico) Inc.           | 100               | Puerto Rico              |
| The Texas Co. S.A.E.                       | 100               | Spain-Canary Is.         |

/Annex 41 (conclusion)

Annex 41 (conclusion)

|   |      |                 |
|---|------|-----------------|
| The Texas Co. (South America) Ltd.                        | 100  | USA-W. Virginia |
| The Texas Co. (Uruguay) S.A.                              | 100  | Uruguay         |
| The Texas Co. (West Indies) Ltd.                          | 100  | Cuba            |
| The Texas Distributing Co.                                | 100  | USA-Ohio        |
| The Texas Pipe Line Co.                                   | 100  | USA-Texas       |
| Tolima Land Co.   | 100  | USA-Delaware    |
| Valley Pipe Line Co.                                      | 100  | USA-California  |
| Z & M Independent Oil Co. Inc.                            | 100  | USA-New York    |
| 2 unnamed subsidiaries which operate in foreign countries |      |                 |
| African Petroleum Terminals Ltd.                          | 50.0 | USA-Delaware    |
| American Overseas Petroleum Co.                           | 50.0 | USA-Delaware    |
| American Transport Co.                                    | 50.0 | USA-Delaware    |
| Arabian American Oil Co.                                  | 30.0 | USA-Delaware    |
| California Texas Corp.                                    | 50.0 | USA-Delaware    |
| Caltex International Ltd.                                 | 50.0 | Bahamas         |
| Caltex Oceanic Ltd.                                       | 50.0 | Bahamas         |
| Caltex Oil Products Co.                                   | 50.0 | USA-Delaware    |
| Carthage Hydrocol Inc.                                    | 40.1 | USA-Delaware    |
| Colsag Corp.  | 50.0 | USA-Delaware    |
| Coltexo Corp.   | 49.0 | USA-Maryland    |
| Cia. Colombiana de Petróleo Eldorado S.A.                 | 50.0 | Colombia        |
| Gasoline Products Co. Inc.                                | 33.3 | USA-Delaware    |
| Jefferson Chemical Co. Inc.                               | 50.0 | USA-Delaware    |
| Kaw Pipe Line Co.   | 33.3 | USA-Delaware    |
| Marine Exploration Co.                                    | 50.0 | USA-California  |
| Neches Butane Products Co.                                | 30.0 | USA-Delaware    |
| N.V. Nederlandsche Pacific Petroleum<br>Maatschappij      | 50.0 | Holland         |
| Overship Tankship Corp.                                   | 50.0 | Panama          |
| Process Management Co. Inc.                               | 50.0 | USA-Delaware    |
| Seaboard Oil Co. of Delaware                              | 32.7 | USA-Delaware    |
| S.A. Petrolera Manapire                                   | 50.0 | Venezuela       |
| S.A. Petrolera Las Mercedes                               | 50.0 | Venezuela       |
| Standard Oil Fields Ltd.                                  | 50.0 | England         |
| Texas-New Mexico Pipe Line Co.                            | 45.0 | USA-Delaware    |
| The Bahrein Petroleum Co. Ltd.                            | 50.0 | Canada          |
| Gray Processe Corp.                                       | 50.0 | USA-Delaware    |
| The Texas Empire Pipe Line Co.                            | 50.0 | USA-Delaware    |
| Trans-Arabian Pipe Line Co.                               | 30.0 | USA-Delaware    |
| Transmar S.A.   | 49.0 | Brazil          |
| Ultramar Petroleum Co.                                    | 50.0 | Argentina       |
| United Overseas Petroleum Co. Ltd.                        | 50.0 | England         |
| Venezuela Gulf Refining Co.                               | 33.3 | Venezuela       |
| Wyco Pipeline Co.   | 40.0 | USA-Delaware    |

Source: Moody's Industrial Manual.



Annex 42

TEXACO INC.: LIST OF PRINCIPAL SUBSIDIARIES AND AFFILIATES, 1965

| Subsidiary or affiliate                     | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Coro Petroleum Co.                          | 100               | USA-Delaware             |
| Texaco Belgium S.A.                         | 100               | Belgium                  |
| Texaco Exploration Co.                      | 100               | USA-Delaware             |
| Texaco Development Corp.                    | 100               | USA-Delaware             |
| Texaco Oil Co.                              | 100               | USA                      |
| Texaco S.A.                                 | 100               | Mexico                   |
| Texas Petroleum Co.                         | 100               | USA-New Jersey           |
| Texaco Brasil S.A.                          | 100               | Brazil                   |
| Texaco Experiment Inc.                      | 100               | USA-Virginia             |
| Regent Oil Co. Ltd.                         | 75                | United Kingdom           |
| Texaco Caribbean Inc.                       | 100               | USA-Delaware             |
| Texaco Guatemala Inc.                       | 100               | USA-Delaware             |
| Texaco Panama Inc.                          | 100               | Panama                   |
| Texaco Puerto Rico Inc.                     | 100               | Puerto Rico              |
| Texaco Canarias S.A.                        | 100               | Canary Is.               |
| Texaco Seaboard Inc.                        | 100               | USA-Delaware             |
| Texaco U.K. Ltd.                            | 100               | United Kingdom           |
| Texaco Uruguay S.A.                         | 100               | Uruguay                  |
| Texaco Trinidad Inc.                        | 100               | USA-Delaware             |
| Texaco (Trinidad) Ltd.                      | 100               | England                  |
| Texaco Overseas Petroleum Co.               | 100               | USA-Delaware             |
| The Texas Pipe Line Co.                     | 100               | USA-Texas                |
| Texaco Africa Ltd.                          | 100               | Canada                   |
| Texaco Canada Ltd.                          | 68                | Canada                   |
| Texaco Marcaibo Inc.                        | 100               | n.d.                     |
| Arabian American Oil Co.                    | 30                | USA-Delaware             |
| Badger Pipe Line Co.                        | 22                | USA-Delaware             |
| Colombian Petroleum Co.                     | 50                | USA-Delaware             |
| Colonial Pipeline Co.                       | 16                | USA                      |
| Coltexo Corp.                               | 49                | USA-Maryland             |
| Iranian Oil Participations Ltd.             | 7                 | England                  |
| Jefferson Chemical Co. Inc.                 | 50                | USA-Delaware             |
| Kaw Pipe Line Co.                           | 33                | USA-Delaware             |
| Laurel Pipe Line Co.                        | 27                | USA-Ohio                 |
| Olympic Pipe Line Co.                       | 33                | USA                      |
| S.A. Petrolera Las Mercedes                 | 50                | Venezuela                |
| Texas-New Mexico Pipe Line Co.              | 45                | USA-Delaware             |
| Texas-U.S. Chemical Co.                     | 50                | USA-Delaware             |
| Texaco-Cities Service Pipe Line Co.         | 50                | USA-Delaware             |
| Trans-Arabian Pipe Line Co.                 | 30                | USA-Delaware             |
| Venezuela Gulf Refining Co.                 | 33                | USA-Delaware             |
| Wolverine Pipe Line Co.                     | 25                | USA-Delaware             |
| Wyco Pipe Line Co.                          | 40                | USA-Delaware             |
| California Texas Oil Corp. and subsidiaries | 50                | USA-Delaware             |
| American Overseas Petroleum Ltd. and subs.  | 50                | USA-Delaware             |
| P.T. Caltex Pacific                         | 50                | Indonesia                |

Source: Moody's Industrial Manual.

Annex 43

TEXACO INC.: LIST OF PRINCIPAL SUBSIDIARIES AND AFFILIATES, 1976

| Subsidiary or affiliate                 | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Jefferson Chemical Co. Inc.             | 100               | USA-Delaware             |
| Panama Exploration Inc.                 | 100               | Panama                   |
| Texaco Austria Gesellschaft GmbH        | 100               | Austria                  |
| Texaco International Finance Corp.      | 100               | USA                      |
| Deutsche Texaco A.G. and subsidiaries   | 99.2              | Germany (GFR)            |
| Texaco Canada Ltd. and subsidiaries     | 68.2              | Canada                   |
| Texaco Export Inc.                      | 100               | USA-Delaware             |
| Texaco A.G.                             | 100               | Switzerland              |
| Texaco Exploration Canada Ltd.          | 100               | Canada                   |
| Texaco Development Corp.                | 100               | USA-Delaware             |
| Texaco North Sea Norway A/S             | 100               | Norway                   |
| Texaco Oil Co.                          | 100               | USA                      |
| Texaco Oil Co. of Gabon                 | 100               | Gabon                    |
| Texaco S.A.                             | 100               | Mexico                   |
| Texas Petroleum Co.                     | 100               | USA-New Jersey           |
| Texaco Brasil S.A.                      | 100               | Brazil                   |
| Refinería Panamá S.A.                   | 100               | Panama                   |
| Texaco Ltd. and subsidiaries            | 100               | United Kingdom           |
| Texaco Caribbean Inc.                   | 100               | USA-Delaware             |
| Texaco Guatemala Inc.                   | 100               | USA-Delaware             |
| Texaco Panama Inc.                      | 100               | Panama                   |
| S.A. Texaco Belgium N.V.                | 100               | Belgium                  |
| Texaco Petroleum Co.                    | 100               | Ecuador                  |
| Texaco Puerto Rico Inc.                 | 100               | Puerto Rico              |
| Texaco Canarias S.A.                    | 100               | Spain & Canary Is.       |
| Texaco Uruguay S.A.                     | 100               | Uruguay                  |
| Texaco Overseas Petroleum Co.           | 100               | USA-Delaware             |
| The Texas Pipe Line Co.                 | 100               | USA-Texas                |
| Texaco Africa Ltd.                      | 100               | Canada                   |
| Lubricantes y Tambores del Ecuador C.A. | 100               | Ecuador                  |
| Norsk Texaco Oil A/S                    | 100               | Norway                   |
| Refinería Texaco de Honduras S.A.       | 67.0              | Honduras                 |
| Soc. Antillaise des Petroles Texaco     | 100               | n.d.                     |
| Texaco Holding A/S                      | 100               | Denmark                  |
| Texaco Belize Ltd.                      | 100               | Belize                   |
| Texaco Chile S.A.C.                     | 100               | Chile                    |
| Texaco Cote d'Ivoire                    | 100               | Ivory Coast              |
| Texaco Denmark Inc.                     | 100               | USA                      |
| Texaco Greek Petroleum Co. S.A.         | 100               | Greece                   |

/Annex 43 (cont. 1)

Annex 43 (cont. 1)

|  |      |                |
|--|------|----------------|
| Texaco Iran Ltd.                           | 100  | Iran           |
| Texaco (Ireland) Ltd.                      | 100  | Ireland        |
| Texaco Japan Inc.                          | 100  | USA            |
| Texas Korea Inc.                           | 100  | USA            |
| Texaco Luxembourg S.A.                     | 100  | Luxembourg     |
| Texaco Netherlands Inc.                    | 100  | USA            |
| Texaco Niger Inc.                          | 100  | USA            |
| Texaco Nigeria Ltd.                        | 100  | Nigeria        |
| Texaco North Sea U.K. Co.                  | 100  | United Kingdom |
| Texaco Norway A/S                          | 100  | Norway         |
| Texaco Oil Aktiebolag                      | 100  | Sweden         |
| Texaco Olie Maatschappij B.V.              | 100  | Netherlands    |
| Texaco Operations (Europe) Ltd. and subs.  | 100  | n.d.           |
| Texaco Overseas (Nigeria) Petroleum Co.    | 100  | USA            |
| Texaco Overseas Tankship Ltd.              | 100  | n.d.           |
| Texaco Petr6leos de Angola S.A.R.L.        | 100  | Angola         |
| Texaco Services (Europe) Ltd.              | 100  | n.d.           |
| Texaco S.p.A.                              | 100  | Italy          |
| Texaco (Spain) Inc.                        | 100  | USA            |
| Texaco Trinidad Inc.                       | 100  | USA-Delaware   |
| Texaco Ventures Inc.                       | 100  | USA            |
| Texaco West Indies Ltd.                    | 100  | n.d.           |
| Texaco Financial Services Inc.             | 100  | USA            |
| Texaco Chemicals Canada Ltd.               | 100  | Canada         |
| Heddington Insurance Ltd.                  | 100  | n.d.           |
| Texaco Antilles Ltd.                       | 100  | n.d.           |
| Texaco Bahamas Ltd.                        | 100  | Bahamas        |
| Texaco Bolivia Inc.                        | 100  | USA            |
| Texaco Exploration Guatemala Inc.          | 100  | USA            |
| Texaco Interamerican Exploration Co.       | 100  | USA            |
| Texaco Paraguay, Inc.                      | 100  | USA-           |
| Texaco Services (Venezuela) Inc.           | 100  | USA-           |
| Texaco France S.A.                         | 100  | France         |
| Texaco Germany Petroleum Inc.              | 100  | USA-           |
| Texaco Malta Inc.                          | 100  | USA-           |
| Texaco Portuguesa de Petroleos Lda.        | 100  | Portugal       |
| Soc. Malienne des Petroles Texaco          | 100  | Mali           |
| Texaco Egypt Inc.                          | 100  | USA-           |
| Texaco Ghana Ltd.                          | 60.0 | Ghana          |
| Texaco Gabon                               | 90.0 | Gabon          |
| Texaco Haute Volta                         | 100  | Upper Volta    |
| Texaco Hong Kong Ltd.                      | 100  | Hong Kong      |
| Texaco Indonesia Corp.                     | 100  | n.d.           |
| Texaco Saudia Inc.                         | 100  | USA-           |
| Texaco Sudan Inc.                          | 100  | USA-           |
| Texaco Zaire Inc.                          | 100  | USA-           |
| Texaco Portugal Prospeccao e Producao SARL | 80.0 | Portugal       |

/Annex 43 (conclusion)

Annex 43 (conclusion)

|   |      |               |
|---|------|---------------|
| Arabian American Oil Co.                      | 29.3 | USA-Delaware  |
| Badger Pipe Line Co.                          | 22.0 | USA-Delaware  |
| Colonial Pipeline Co.                         | 14.3 | USA           |
| Elf France                                    | 9.5  | France        |
| Empresa Nacional del Petróleo S.A.            | 11.0 | Spain         |
| Explorer Pipeline Co.                         | 16.0 | USA           |
| Coltexo Corp.                                 | 49.0 | USA           |
| Kaw Pipe Line Co.                             | 33.0 | USA-Delaware  |
| Laurel Pipe Line Co.                          | 34.0 | USA-Ohio      |
| Olympic Pipe Line Co.                         | 27.0 | USA           |
| Texaco Maroc                                  | 50.0 | Morocco       |
| Texas-New Mexico Pipe Line Co.                | 45.0 | USA-Delaware  |
| Texas-U.S. Chemical Co.                       | 50.0 | USA-Delaware  |
| Texaco-Cities Service Pipe Line Co.           | 50.0 | USA-Delaware  |
| THUMS Long Beach Co.                          | 20.0 | USA           |
| Wolverine Pipe Line Co.                       | 14.0 | USA-Delaware  |
| Wyco Pipe Line Co.                            | 40.0 | USA-Delaware  |
| Caltex Deutschland GmbH                       | 50.0 | Germany (GFR) |
| Caltex Oil S.A.E.                             | 50.0 | Spain         |
| Caltex (Kalteks) Petrol A.S.                  | 50.0 | Turkey        |
| Mutsui-Texaco Chemicals Co. Ltd.              | 49.3 | Japan         |
| N.V. Rotterdam-Rijn Pijleiding Maatschappij   | 10.0 | Netherlands   |
| P.T. Caltex Pacific Indonesia                 | 50.0 | Indonesia     |
| Rhein-Main Rohrleitungstransportgesellschaft  | 15.0 | Germany (GFR) |
| Irish Refining Co. Ltd.                       | 20.0 | Ireland       |
| Mainline Pipelines Ltd.                       | 20.0 | England       |
| OMW Oberrheinische Mineralwerke GmbH          | 45.0 | Germany (GFR) |
| The Pipelines of Puerto Rico Inc.             | 40.0 | Puerto Rico   |
| Trans-Alpine Pipeline                         | 9.0  | n.d.          |
| United Kingdom Oil Pipelines Ltd.             | 14.9 | England       |
| LOOP Inc.                                     | 16.7 | USA-          |
| S.A. de la Raffinerie des Antilles            | 11.5 | Martinique    |
| Skandinaviska Raffinaderi Aktiebolag Scanraff | 19.9 | Sweden        |
| S.p.A. Raffineria Padana Olii Minerali        | 10.1 | Italy         |
| American Overseas Petroleum Ltd.              | 50.0 | USA-Delaware  |
| Caltex Petroleum Corp.                        | 50.0 | USA           |
| Caltex Trading Co. (Arabia) Inc.              | 50.0 | USA           |

"In addition to the above subsidiaries Co. has many other wholly and majority owned subsidiaries, which are not shown because if considered in the aggregate as a single subsidiary, they do not constitute a significant subsidiary."

Source: Moody's Industrial Manual.

Annex 44

GOODYEAR TIRE & RUBBER CO.: ASPECTS OF ITS GLOBAL OPERATIONS, VARIOUS YEARS, 1945-1976  
(Millions of US dollars and percentage)

| Year      | Operating income     |                       |                | Net income    |                       |                | Total assets  |                       |                | Employees           |                |
|-----------|----------------------|-----------------------|----------------|---------------|-----------------------|----------------|---------------|-----------------------|----------------|---------------------|----------------|
|           | Current value (1970) | Constant value (1970) | Rate of growth | Current value | Constant value (1970) | Rate of growth | Current value | Constant value (1970) | Rate of growth | Number of employees | Rate of growth |
| 1945      | 716.2                | -                     | -              | 15.1          | -                     | -              | 279.6         | -                     | -              | n.d.                | -              |
| 1950      | 845.1                | 1 420.3               | -              | 35.1          | 59.0                  | -              | 486.5         | 817.5                 | -              | 99                  | -              |
| 1955      | 1 372.2              | 2 000.3               | 5.9            | 59.7          | 87.0                  | 6.7            | 785.7         | 1 145.3               | 5.8            | 101                 | 0.4            |
| 1960      | 1 550.9              | 1 960.6               | -0.3           | 71.0          | 89.8                  | 0.5            | 1 011.2       | 1 278.4               | 1.9            | 96                  | -0.9           |
| 1965      | 2 226.3              | 2 728.3               | 5.7            | 109.2         | 133.8                 | 6.9            | 1 637.5       | 2 006.7               | 7.8            | 103                 | 1.2            |
| 1970      | 3 194.6              | 3 194.6               | 2.7            | 129.2         | 129.2                 | -0.6           | 2 955.3       | 2 955.3               | 6.7            | 133                 | 4.4            |
| 1975      | 5 452.5              | 3 762.9               | 2.8            | 161.6         | 111.5                 | -2.4           | 4 173.7       | 2 880.4               | -0.4           | 148                 | 1.8            |
| 1976      | 5 791.5              | 3 812.7               | 1.3            | 122.0         | 80.3                  | -28.0          | 4 336.1       | 2 854.6               | -0.1           | 151                 | 2.0            |
| 1950-1976 |                      |                       | 3.7%           |               |                       | 1.2%           |               |                       | 4.7%           |                     | 1.6%           |

Sources: Company reports; Company Form 10-K of US Securities and Exchange Commission; Moody's Industrial Manual.

Annex 45

GOODYEAR TIRE & RUBBER CO.: LIST OF SUBSIDIARIES AND AFFILIATES, 1950 a/

| Subsidiary or affiliate                             | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Goodyear Aircraft Corp.                             | 100               | USA-Delaware             |
| Goodyear Clearwater Mills                           | 100               | USA-Georgia              |
| Goodyear Decatur Mills                              | 100               | USA-Alabama              |
| Goodyear Tire & Rubber Co. of Alabama               | 100               | USA-Alabama              |
| Goodyear Tire & Rubber Co. of California            | 100               | USA-California           |
| Goodyear Tire & Rubber Co. of Michigan              | 100               | USA-Michigan             |
| Cia. Goodyear do Brasil Produtos de Borracha        | 100               | Brazil                   |
| The Goodyear Tire & Rubber Co. (Australia) Ltd.     | 100               | Australia                |
| The Goodyear Tyre & Rubber Co. (Great Britain) Ltd. | 100               | Great Britain            |
| Cia. Goodyear del Perú                              | 100               | Peru                     |
| Goodyear Tire & Rubber Co. of Massachusetts         | 100               | USA-Massachusetts        |
| The Kelly-Springfield Tire Co.                      | 100               | USA-Maryland             |
| Kelly-Springfield Engineering Co.                   | 100               | USA-                     |
| Kelly-Springfield Tyre Co. S.A. Pty. Ltd.           | 100               | South Africa             |
| Neumáticos Goodyear S.A.                            | 100               | Argentina                |
| Goodyear Synthetic Rubber Corp.                     | 100               | USA-Ohio                 |
| Windsor Manufacturing Corp.                         | 100               | USA-Vermont              |
| Pathfinder Chemical Corp.                           | 100               | USA-W. Virginia          |
| Goodyear Gummi Fabriks Aktiebolag                   | 100               | Sweden                   |
| The Goodyear Tire & Rubber Co. of Canada Ltd.       | 79.0              | Canada                   |
| Goodyear Cotton Co. of Canada Ltd.                  | 100               | Canada                   |
| Goodyear Improvement Co. Ltd.                       | 100               | Canada                   |
| The Goodyear Tyre & Rubber Co. S.A. Ltd.            | 100               | South Africa             |
| The Goodyear Tire & Rubber Co. of Cuba              | 100               | Cuba                     |
| Goodyear Tire & Rubber Co. of Kansas Inc.           | 100               | USA-Kansas               |
| Goodyear Tire & Rubber Co. Ltd.                     | 100               | Indonesia                |
| Cia. Hulera Goodyear Oxo S.A.                       | 100               | Mexico                   |
| The Goodyear Tire & Rubber Co. Inc.                 | 100               | USA-Delaware             |
| The Goodyear State Bank                             | 94.5              | USA-                     |
| Pacific Zeppelin Transport Co. Ltd.                 | 100               | USA-Delaware             |
| The Goodyear Tire & Rubber Export Co.               | 100               | USA-Delaware             |
| The Goodyear Tire & Rubber Export Co. Ltd.          | 100               | USA-Delaware             |
| The Goodyear Tyre & Rubber Co. of New Zealand Ltd.  | 100               | New Zealand              |

a/ This list omits 13 foreign subsidiaries.

/Annex 45 (conclusion)

Annex 45 (conclusion)

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|  |     |              |
|--|-----|--------------|
| Goodyear Orient Sales Co. Ltd.             | 100 | Hong Kong    |
| Goodyear Foreign Operations Inc.           | 100 | USA-Ohio     |
| The Goodyear Rubber Plantations Co.        | 100 | USA-Ohio     |
| Middlebury Land Co.                        | 100 | USA-Ohio     |
| Goodyear Farms                             | 100 | USA-Arizona  |
| The Wheeling Township Coal Mining Co.      | 100 | USA-Ohio     |
| Wingfoot Corp.                             | 100 | USA-Delaware |
| Goodyear-Nabara Landbouw Maatschappij N.V. | 100 | Indonesia    |
| Goodyear S.A.                              | 100 | Luxembourg   |
| Goodyear Orient Co. Ltd.                   | 100 | Hong Kong    |

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Source: Moody's Industrial Manual.

Annex 46

GOODYEAR TIRE & RUBBER CO.: LIST OF SUBSIDIARIES AND AFFILIATES, 1965

| Subsidiary or affiliate                             | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Goodyear Aerospace Corp.                            | 100               | USA-Delaware             |
| Cia. Goodyear do Brasil Produtos de Borracha        | 100               | Brazil                   |
| The Goodyear Tyre & Rubber Co. (Australia) Ltd.     | 100               | Australia                |
| The Goodyear Tyre & Rubber Co. (Great Britain) Ltd. | 100               | England                  |
| The Kelly-Springfield Tire Co.                      | 100               | USA-Maryland             |
| Neumáticos Goodyear S.A.                            | 100               | Argentina                |
| Goodyear Atomic Corp.                               | 100               | USA-Ohio                 |
| Goodyear Gummi Fabriks Aktiebolag                   | 100               | Sweden                   |
| Geneva Metal Wheel Co.                              | 100               | USA-Ohio                 |
| Goodyear India Ltd.                                 | 63.1              | India                    |
| Gummiwerke Fulda GmbH                               | 100               | Germany (GFR)            |
| The Goodyear Tire & Rubber Co. of Canada Ltd.       | 80.4              | Canada                   |
| Cie. Française Goodyear S.A.                        | 99.9              | France                   |
| The Goodyear Tyre & Rubber Co. (S.A.) Ltd.          | 100               | South Africa             |
| Deutsche Goodyear GmbH                              | 100               | Germany (GFR)            |
| Goodyear Lastikleri Turk A.S.                       | 66.7              | Turkey                   |
| Cia. Hulera Goodyear Oxo S.A.                       | 100               | Mexico                   |
| Goodyear S.A.                                       | 100               | Luxembourg               |
| Goodyear Italiana S.p.A.                            | 100               | Italy                    |
| Les Tier & Rubber Co.                               | 100               | USA-Ohio                 |
| Litchfield Park Land & Development Co.              | 100               | USA-Arizona              |
| The Goodyear Rubber Plantations Co.                 | 100               | USA-Ohio                 |
| S.A. Goodyear N.V.                                  | 99.7              | Belgium                  |
| Goodyear Bank                                       | 99.7              | USA-Ohio                 |
| Goodyear International Corp.                        | 100               | USA-Delaware             |
| Goodyear Tire & Rubber Co. of the Philippines Ltd.  | 100               | Philippines              |
| Motor Wheel Corp.                                   | 100               | USA-Ohio                 |

"There are omitted from the above list 66 subsidiaries which, considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary."

Source: Moody's Industrial Manual.



Annex 47

GOODYEAR TIRE & RUBBER CO.: LIST OF SUBSIDIARIES AND AFFILIATES, 1976

| Subsidiary or affiliate                             | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Goodyear Aerospace Corp.                            | 100               | USA-Delaware             |
| Cia. Goodyear do Brasil Produtos de Borracha        | 100               | Brazil                   |
| The Goodyear Tyre & Rubber Co. (Australia) Ltd.     | 100               | Australia                |
| The Goodyear Tyre & Rubber Co. (Great Britain) Ltd. | 100               | England                  |
| The Kelly-Springfield Tire Co.                      | 100               | USA-Maryland             |
| Neumáticos Goodyear S.A.                            | 100               | Argentina                |
| Goodyear Atomic Corp.                               | 100               | USA-Ohio                 |
| Goodyear Gummi Fabriks Aktiebolag                   | 100               | Sweden                   |
| Goodyear Canada Inc.                                | 88.8              | Canada                   |
| Reneer Films Corp.                                  | 100               | USA-Delaware             |
| Goodyear India Ltd.                                 | 59.9              | India                    |
| Gummiwerke Fulda GmbH                               | 100               | Germany (GFR)            |
| Cie. Française Goodyear                             | 100               | France                   |
| The Goodyear Tyre & Rubber Co. (S.A.) Pty.Ltd.      | 100               | South Africa             |
| Deutsche Goodyear GmbH                              | 100               | Germany (GFR)            |
| Goodyear Lastikleri Turk A.S.                       | 51.0              | Turkey                   |
| Cia. Hulera Goodyear Oxo S.A.                       | 100               | Mexico                   |
| Goodyear S.A.                                       | 100               | Luxembourg               |
| Goodyear Italiana S.p.A.                            | 100               | Italy                    |
| Lee Tire & Rubber Co.                               | 100               | USA-Ohio                 |
| Litchfield Park Properties                          | 100               | USA-Arizona              |
| C.A. Goodyear de Venezuela                          | 100               | Venezuela                |
| Goodyear de Colombia S.A.                           | 100               | Colombia                 |
| Luxmold S.A.  | 100               | Luxembourg               |
| Luxwire S.A.  | 100               | Luxembourg               |
| The Goodyear Rubber Plantations Co.                 | 100               | USA-Ohio                 |
| S.A. Goodyear N.V.                                  | 100               | Belgium                  |
| Goodyear Bank                                       | 99.7              | USA-Ohio                 |
| Goodyear International Corp.                        | 100               | USA-Delaware             |
| Goodyear International Export Corp.                 | 100               | USA-Delaware             |
| Goodyear Western Hemisphere Corp.                   | 100               | USA-Delaware             |
| Gran Industria de Neumáticos Centroamericana S.A.   | 76.1              | Guatemala                |
| Cia. Goodyear del Perú S.A.                         | 89.9              | Peru                     |
| Goodyear Tire & Rubber Co. of the Philippines Ltd.  | 100               | Philippines              |
| Motor Wheel Corp.                                   | 100               | USA-Ohio                 |
| Goodyear Jamaica Ltd.                               | 60.0              | Jamaica                  |

/Annex 47 (conclusion)

Annex 47 (conclusion)

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|  |      |              |
|--|------|--------------|
| Goodyear Hellas S.A.I.C.                           | 100  | Greece       |
| Goodyear International Finance Corp.               | 100  | USA-Delaware |
| Goodyear (Thailand) Ltd.                           | 60.0 | Thailand     |
| Luxembourg Industries S.A.                         | 100  | Luxembourg   |
| The Goodyear Tire & Rubber Co. Ltd.                | 100  | Indonesia    |
| Goodyear Zaire S.A.R.L.                            | 100  | Zaire        |
| Goodyear Maroc                                     | 82.5 | Morocco      |
| Goodyear Taiwan Ltd.                               | 75.0 | Taiwan       |
| Goodyear Financial Corp.                           | 100  | USA-Delaware |
| Goodyear Export S.A.                               | 100  | Panama       |
| Goodyear Malaysia Berhad                           | 56.7 | Malaysia     |
| Goodyear (Suisse) S.A.                             | 100  | Switzerland  |
| Nippon Goodyear Kabushiki Kaisha                   | 100  | Japan        |
| The Goodyear Tyre & Rubber Co. of New Zealand Ltd. | 100  | New Zealand  |

"The are omitted from the above list 121 subsidiaries which, considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary."

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Source: Moody's Industrial Manual.

## Annex 48

**B.F. GOODRICH CO.: ASPECTS OF ITS GLOBAL OPERATIONS, VARIOUS YEARS, 1945-1976**  
(Millions of US dollars and percentage)

| Year      | Operating income     |                |               | Net income      |                |               | Total assets    |                |                 | Employees      |                     |                |
|-----------|----------------------|----------------|---------------|-----------------|----------------|---------------|-----------------|----------------|-----------------|----------------|---------------------|----------------|
|           | Current value (1970) | Rate of growth | Current value | Constant (1970) | Rate of growth | Current value | Constant (1970) | Rate of growth | Constant (1970) | Rate of growth | Number of employees | Rate of growth |
| 1945      | 372.1                | -              | 12.3          | -               | -              | 182.8         | -               | -              | -               | -              | n.d.                | -              |
| 1950      | 514.6                | -              | 34.7          | 58.3            | -              | 301.2         | 506.2           | -              | -               | -              | 37                  | -              |
| 1955      | 755.0                | 1              | 46.7          | 68.1            | 2.6            | 507.9         | 740.4           | 6.5            | 6.5             | 6.5            | 43                  | 2.5            |
| 1960      | 764.7                | 966.8          | 30.0          | 37.9            | -9.3           | 613.1         | 775.1           | 0.8            | 0.8             | 0.8            | 36                  | -3.0           |
| 1965      | 980.1                | 1              | 40.7          | 49.9            | 4.7            | 746.1         | 914.3           | 2.8            | 2.8             | 2.8            | 41                  | 2.2            |
| 1970      | 1 090.6              | 1              | 19.5          | 19.5            | -14.5          | 1 304.0       | 1 304.0         | 6.1            | 6.1             | 6.1            | 48                  | 2.7            |
| 1975      | 1 901.2              | 1              | 22.1          | 15.3            | -4.0           | 1 595.7       | 1 101.2         | -2.8           | -2.8            | -2.8           | 45                  | -1.1           |
| 1976      | 1 996.0              | 1              | 15.8          | 10.4            | -32.0          | 1 567.8       | 1 032.1         | -6.3           | -6.3            | -6.3           | 39                  | -15.5          |
| 1950-1976 |                      |                | 1.6%          |                 | -6.1%          |               |                 | 2.7%           |                 |                |                     | 0.2%           |

Sources: Company reports; Company Form 10-K of US Securities and Exchange Commission; Moody's Industrial Manual.

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THE B.F. GOODRICH CO.: LIST OF SUBSIDIARIES AND AFFILIATES, 1950

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| Subsidiary or affiliate                     | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| The Akron Rubber Co.                        | 100               | USA-Ohio                 |
| American Anode Inc.                         | 100               | USA-Delaware             |
| Tulsa Rubber Products Co. Inc.              | 100               | USA-Oklahoma             |
| Chicago Tire Co.                            | 100               | USA-Illinois             |
| Transportation Rubber Co. Inc.              | 100               | USA-New York             |
| Hope Rubber Co. Inc.                        | 100               | USA-Rhode Island         |
| Lone Star Defence Corp.                     | 100               | USA-Ohio                 |
| Philadelphia Rubber Works Co.               | 100               | USA-Ohio                 |
| The B.F. Goodrich Rubber Co. of Canada Ltd. | 100               | Canada                   |
| Industry Inventions Inc.                    | 50.0              | USA                      |

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"Seven unnamed foreign subsidiaries have been omitted from this list. The B.F. Goodrich has foreign associations in England, France, Sweden, Holland, New Zealand, Mexico, Cuba, Colombia and Japan."

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Source: Moody's Industrial Manual.

Annex 50

THE B.F. GOODRICH CO.: LIST OF SUBSIDIARIES AND AFFILIATES, 1970

| Subsidiary or affiliates                 | Capital Share (%) | Country of Incorporation |
|--|-------------------|--------------------------|
| B.F. Goodrich Canada Ltd.                | 100               | Canada                   |
| International B.F. Goodrich Corp.        | 100               | USA-Ohio                 |
| B.F. Goodrich Realty Corp.               | 100               | USA                      |
| B.F. Goodrich International Finance      | 100               | USA                      |
| Industria Colombiana de Llantas S.A.     | 70.3              | Colombia                 |
| Gordy Tire Co.                           | 100               | USA-Georgia              |
| Ameripol Inc.                            | 100               | USA-Delaware             |
| B.F. Goodrich S.R.L.                     | 100               | Italy                    |
| B.F. Goodrich Co. Ltd.                   | 100               | England                  |
| N.V. Chemische Industrie AKU Goodrich    | 60.0              | Netherlands              |
| E.P.P.C. Polypastic S.A.                 | 100               | France                   |
| Ciago Vienna GmbH                        | 100               | Austria                  |
| Ciago Milano S.p.A.                      | 100               | Italy                    |
| Textile Rubber Europe N.V.               | 60.0              | Netherlands              |
| B.F. Goodrich Chemical (N.Z.) Ltd.       | 60.0              | New Zealand              |
| B.F. Goodrich Aktiebolag                 | 100               | Sweden                   |
| International B.F. Goodrich Ltd.         | 100               | Bahamas                  |
| Sun Manufacturing Inc.                   | 100               | Puerto Rico              |
| Cabo Rojo Manufacturing Corp.            | 100               | Puerto Rico              |
| Aguada Manufacturing Inc.                | 100               | Puerto Rico              |
| B.F. Goodrich GmbH                       | 100               | Germany                  |
| B.F. Goodrich S.A.                       | 100               | Belgium                  |
| B.F. Goodrich Chemical (U.K.) Ltd.       | 100               | England                  |
| B.F. Goodrich Chemical de Venezuela S.A. | 97.0              | Venezuela                |
| B.F. Goodrich Iran S.A.                  | 57.4              | Iran                     |
| B.F. Goodrich Trading Co.                | 100               | Iran                     |
| B.F. Goodrich Liberia Inc.               | 100               | Liberia                  |
| B.F. Goodrich Philippines Inc.           | 53.9              | Philippines              |
| B.F. Goodrich Australia Pty. Ltd.        | 99.8              | Australia                |
| West Manufacturing Co.                   | 100               | Puerto Rico              |
| Goodrich Co. Ltd.                        | 100               | Singapore (Malaysia)     |
| B.F. Goodrich Co. of Japan Ltd.          | 100               | Japan                    |
| Motor Freight Corp.                      | 100               | USA-Indiana              |
| Lexusco Inc.                             | 100               | USA-Ohio                 |
| Rubber Distributors Inc.                 | 100               | Panama                   |
| B.F. Goodrich Chemical Ltd.              | 80.0              | Australia                |
| B.F. Goodrich N.V.                       | 100               | Netherlands              |

"Above list excludes unconsolidated subsidiaries since they are not significant in the aggregate."

Source: Moody's Industrial Manual.

Annex 51

THE B.F. GOODRICH CO.: LIST OF SUBSIDIARIES AND AFFILIATES, 1976

| Subsidiary or affiliate                        | Capital Share (%) | Country of Incorporation |
|--|-------------------|--------------------------|
| International B.F. Goodrich Corp.              | 100               | USA-Delaware             |
| B.F. Goodrich International Finance Co.        | 100               | USA-Delaware             |
| B.F. Goodrich International Sales Corp.        | 100               | USA-Delaware             |
| B.F. Goodrich Realty Corp.                     | 100               | USA-Delaware             |
| B.F. Goodrich Chemical (U.K.) Ltd.             | 100               | England                  |
| B.F. Goodrich Chemical (Australia) Ltd.        | 80.0              | Australia                |
| B.F. Goodrich Canada Ltd.                      | 100               | Canada                   |
| The B.F. Goodrich Co. of Japan Ltd.            | 100               | Japan                    |
| B.F. Goodrich GmbH                             | 100               | Germany (GFR)            |
| Goodrich Co. Private Ltd.                      | 100               | Singapore                |
| International B.F. Goodrich Ltd.               | 100               | Bahamas                  |
| B.F. Goodrich Liberia Inc.                     | 100               | Liberia                  |
| B.F. Goodrich Chemical de Venezuela C.A.       | 97.0              | Venezuela                |
| B.F. Goodrich Chemical (N.Z.) Ltd.             | 60.0              | New Zealand              |
| B.F. Goodrich Australia Ltd.                   | 99.9              | Australia                |
| B.F. Goodrich Philippines Inc.                 | 53.9              | Philippines              |
| Industria Colombiana de Llantas S.A.           | 98.9              | Colombia                 |
| Chamische Industrie AKU-Goodrich B.V.          | 100               | Netherlands              |
| E.P.P.C. Polyplastie S.A.                      | 100               | France                   |
| Ciágo Vienna GmbH                              | 100               | Austria                  |
| Ciágo Milano S.p.A.                            | 100               | Italy                    |
| N.V. Ciágo Belgie                              | 100               | Belgium                  |
| Textile Rubber Europe N.V.                     | 60.0              | Netherlands              |
| B.F. Goodrich Química de Costa Rica S.A.       | 100               | Costa Rica               |
| Servicio de Llantas de Panamá S.A.             | 100               | Panama                   |
| Siltown Realty Inc.                            | 100               | USA-Alabama              |
| Automotive Proving Grounds Inc.                | 100               | USA-Texas                |
| B.F. Goodrich do Brasil S.A. Produtos de Borr. | 100               | Brazil                   |
| B.F. Goodrich Chemical (Far East) Ltd.         | 100               | Hong Kong                |
| Risktech Insurance Co. Ltd.                    | 100               | Bermuda                  |
| B.F. Goodrich Chemical Europe B.V.             | 100               | Netherlands              |

/Annex 51 (conclusion)

Annex 51 (conclusion)

Unconsolidated Associates

|                                  |      |              |
|----------------------------------|------|--------------|
| B.F. Goodrich Finance Co.        | 100  | USA-Delaware |
| Chemicals & Plastics India Ltd.  | 25.7 | India        |
| Abadan Petrochemical Co. Ltd.    | 26.0 | Iran         |
| Yokohama Rubber Co. Ltd.         | 33.7 | Japan        |
| Japan Power Brake Inc.           | 49.0 | Japan        |
| Policid S.A.                     | 40.0 | Mexico       |
| Química Orgánica de México S.A.  | 31.9 | Mexico       |
| Cia. Hulera Euzkadi S.A.         | 35.0 | Mexico       |
| Lima Rubber Co. S.A.             | 28.3 | Peru         |
| Philippine Vinyl Consortium Inc. | 20.1 | Philippines  |
| Plásticos Petroquímica C.A.      | 25.0 | Venezuela    |

Source: Moody's Industrial Manual.

Annex 52

UNIROYAL INC.: ASPECTS OF ITS GLOBAL OPERATIONS, VARIOUS YEARS, 1945-1976  
(Millions of US dollars and percentage)

| Year      | Operating income     |                |                       | Net income    |                |                       | Total assets  |                |                       | Employees      |                     |                |
|-----------|----------------------|----------------|-----------------------|---------------|----------------|-----------------------|---------------|----------------|-----------------------|----------------|---------------------|----------------|
|           | Current value (1970) | Rate of growth | Constant value (1970) | Current value | Rate of growth | Constant value (1970) | Current value | Rate of growth | Constant value (1970) | Rate of growth | Number of employees | Rate of growth |
| 1945      | 477.5                | -              | -                     | 13.0          | -              | -                     | 226.2         | -              | -                     | -              | n.d.                | -              |
| 1950      | 696.5                | 1 170.6        | -                     | 24.7          | -              | 41.5                  | 380.1         | 638.8          | -                     | -              | 56                  | -              |
| 1955      | 925.5                | 1 349.1        | 2.4                   | 33.6          | 2.8            | 49.0                  | 575.9         | 839.5          | 4.7                   | 4.7            | 64                  | 2.3            |
| 1960      | 940.4                | 1 188.9        | -2.1                  | 30.7          | -3.8           | 38.8                  | 645.0         | 815.4          | -0.5                  | -0.5           | 60                  | -1.1           |
| 1965      | 1 225.5              | 1 501.8        | 4.0                   | 37.2          | 2.7            | 45.6                  | 926.8         | 1 135.2        | 5.7                   | 5.7            | 65                  | 1.3            |
| 1970      | 1 555.6              | 1 555.6        | 0.6                   | 24.1          | -10.1          | 24.1                  | 1 308.4       | 1 308.4        | 2.4                   | 2.4            | 64                  | -0.2           |
| 1975      | 2 187.6              | 1 509.7        | -0.5                  | 23.0          | -6.7           | 15.9                  | 1 605.9       | 1 108.3        | -2.7                  | -2.7           | 55                  | -2.6           |
| 1976      | 2 314.8              | 1 523.9        | 0.9                   | 20.1          | -17.0          | 13.2                  | 1 633.7       | 1 075.5        | 3.0                   | 3.0            | 54                  | 0.1            |
| 1950-1976 |                      |                | 1.0%                  |               | -4.2%          |                       |               |                | 2.0%                  | 2.0%           |                     | -0.1%          |

Sources: Company reports; Company Form 10-K of US Securities and Exchange Commission; Moody's Industrial Manual.

1976



Annex 53

UNIROYAL INC. (UNITED STATES RUBBER CO.): LIST OF SUBSIDIARIES AND AFFILIATES, 1950

| Subsidiary or affiliate                        | Capital Share (%) | Country of Incorporation |
|--|-------------------|--------------------------|
| Dominion Rubber Co. Ltd.                       | 100               | Great Britain            |
| Dominion Rubber Co. Ltd.                       | 100               | Canada                   |
| Fabric Fire Hose Co.                           | 100               | USA-New York             |
| Frank W. Gorse Co. Inc.                        | 100               | USA-Massachusetts        |
| Hollandsche Amerikansche Plantage Maatschappij | 100               | Netherlands E. Indies    |
| Malayan American Plantations Ltd.              | 100               | Fed. Malayan States      |
| Mishawaka Rubber & Woolen Manufacturing Co.    | 100               | USA-Indiana              |
| Nederland Langkat Rubber Maatschappij          | 100               | Netherlands E. Indies    |
| New York Belting & Packing Co.                 | 100               | USA-Delaware             |
| Si Pare Pare Rubber Maatschappij               | 100               | Netherlands E. Indies    |
| United States Rubber Co. Ltd.                  | 100               | USA-Delaware             |
| United States Rubber Export Co. Ltd.           | 100               | USA-Delaware             |
| Dominion Tyre & Rubber Co. Ltd.                | 100               | New Zealand              |
| S.A. de Produits en Caoutchouc                 | 100               | France                   |
| United States Rubber Co. Aktiebolag            | 100               | Sweden                   |
| United States Rubber Co. (South Africa) Ltd.   | 100               | South Africa             |
| Latex Fiber Industries Inc.                    | 51.0              | USA-New York             |
| Wellman Co.                                    | 60.6              | USA-Massachusetts        |

Source: Moody's Industrial Manual.

Annex 54

UNIROYAL INC.: LIST OF SUBSIDIARIES AND AFFILIATES, 1970

| Subsidiary or affiliate                         | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Uniroyal Ltd.                                   | 100               | Canada                   |
| Fabric Fire Hose Co.                            | 100               | USA-New York             |
| Gulf Coast Merchandising Inc.                   | 100               | USA-Texas                |
| Uniroyal Malaysian Plantations Sendirian Berhad | 100               | Malaysia                 |
| Mishawaka Rubber Co. Inc.                       | 100               | USA-Indiana              |
| Cranbar Corp.                                   | 100               | USA-Delaware             |
| Liberian Agricultural Co.                       | 100               | Liberia                  |
| U.S. Rubber Uniroyal Holdings S.A.              | 100               | Luxembourg               |
| William Heller Inc.                             | 100               | USA-New York             |
| Penso Corp.                                     | 100               | USA-Delaware             |
| Uniroyal (Proprietary) Ltd.                     | 100               | South Africa             |
| Uniroyal C.A.                                   | 100               | Venezuela                |
| Dee Realty Co.                                  | 100               | USA-Georgia              |
| Uniroyal International Corp.                    | 100               | USA-Delaware             |
| Uniroyal Merchandising Co. Inc.                 | 100               | USA-Delaware             |
| Uniroyal S.A.                                   | 100               | France                   |
| Naugatuck S.p.A.                                | 100               | Italy                    |
| Uniroyal S.A.                                   | 100               | Mexico                   |
| Uniroyal Aktiengesellschaft                     | 100               | Germany (GFR)            |
| P.T. United States Rubber Sumatra Plantations   | 100               | Indonesia                |
| Uniroyal S.p.A.                                 | 100               | Italy                    |
| Uniroyal Luxembourg S.A.                        | 100               | Luxembourg               |
| Uniroyal International S.A.                     | 100               | Switzerland              |
| Uniroyal Ltd.                                   | 100               | United Kingdom           |
| Uniroyal International Vertrieb GmbH            | 100               | Germany (GFR)            |
| Latex Fiber Industries Inc.                     | 51.0              | USA-New York             |
| Agencias Croydon del Valle Ltda.                | 60.0              | Colombia                 |
| Wellman Co.                                     | 66.0              | USA-Maine                |
| Uniroyal Croydon S.A.                           | 73.9              | Colombia                 |
| Geismar Industries Inc.                         | 50.0              | USA-Louisiana            |
| Monochem Inc.                                   | 50.0              | USA-Louisiana            |
| Rubicon Chemicals Inc.                          | 50.0              | USA-Louisiana            |
| Texas-U.S. Chemical Co.                         | 50.0              | USA-Delaware             |
| Uniroyal Englebert Belgique S.A.                | 96.2              | Belgium                  |
| Uniroyal Endustri Turk A.S.                     | 60.0              | Turkey                   |
| Uniroyal España S.A.                            | 99.1              | Spain                    |

"63 subsidiaries (all in consolidated statements), are omitted above since considered in the aggregate, they would not constitute a significant subsidiary."

Source: Moody's Industrial Manual.

Annex 53.

UNIROYAL INC. (UNITED STATES RUBBER CO.): LIST OF SUBSIDIARIES AND AFFILIATES, 1950

| Subsidiary or affiliate                        | Capital Share (%) | Country of Incorporation |
|--|-------------------|--------------------------|
| Dominion Rubber Co. Ltd.                       | 100               | Great Britain            |
| Dominion Rubber Co. Ltd.                       | 100               | Canada                   |
| Fabric Fire Hose Co.                           | 100               | USA-New York             |
| Frank W. Gorse Co. Inc.                        | 100               | USA-Massachusetts        |
| Hollandsche Amerikansche Plantage Maatschappij | 100               | Netherlands E. Indies    |
| Malayan American Plantations Ltd.              | 100               | Fed. Malayan States      |
| Mishawaka Rubber & Woolen Manufacturing Co.    | 100               | USA-Indiana              |
| Nederland Langkat Rubber Maatschappij          | 100               | Netherlands E. Indies    |
| New York Belting & Packing Co.                 | 100               | USA-Delaware             |
| Si Pare Pare Rubber Maatschappij               | 100               | Netherlands E. Indies    |
| United States Rubber Co. Ltd.                  | 100               | USA-Delaware             |
| United States Rubber Export Co. Ltd.           | 100               | USA-Delaware             |
| Dominion Tyre & Rubber Co. Ltd.                | 100               | New Zealand              |
| S.A. de Produits en Caoutchouc                 | 100               | France                   |
| United States Rubber Co. Aktiebolag            | 100               | Sweden                   |
| United States Rubber Co. (South Africa) Ltd.   | 100               | South Africa             |
| Latex Fiber Industries Inc.                    | 51.0              | USA-New York             |
| Wellman Co.                                    | 60.6              | USA-Massachusetts        |

Source: Moody's Industrial Manual.

Annex 54

UNIROYAL INC.: LIST OF SUBSIDIARIES AND AFFILIATES, 1970

| Subsidiary or affiliate                         | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Uniroyal Ltd.                                   | 100               | Canada                   |
| Fabric Fire Hose Co.                            | 100               | USA-New York             |
| Gulf Coast Merchandising Inc.                   | 100               | USA-Texas                |
| Uniroyal Malaysian Plantations Sendirian Berhad | 100               | Malaysia                 |
| Mishawaka Rubber Co. Inc.                       | 100               | USA-Indiana              |
| Cranbar Corp.                                   | 100               | USA-Delaware             |
| Liberian Agricultural Co.                       | 100               | Liberia                  |
| U.S. Rubber Uniroyal Holdings S.A.              | 100               | Luxembourg               |
| William Heller Inc.                             | 100               | USA-New York             |
| Penso Corp.                                     | 100               | USA-Delaware             |
| Uniroyal (Proprietary) Ltd.                     | 100               | South Africa             |
| Uniroyal C.A.                                   | 100               | Venezuela                |
| Dee Realty Co.                                  | 100               | USA-Georgia              |
| Uniroyal International Corp.                    | 100               | USA-Delaware             |
| Uniroyal Merchandising Co. Inc.                 | 100               | USA-Delaware             |
| Uniroyal S.A.                                   | 100               | France                   |
| Naugatuck S.p.A.                                | 100               | Italy                    |
| Uniroyal S.A.                                   | 100               | Mexico                   |
| Uniroyal Aktiengesellschaft                     | 100               | Germany (GFR)            |
| P.T. United States Rubber Sumatra Plantations   | 100               | Indonesia                |
| Uniroyal S.p.A.                                 | 100               | Italy                    |
| Uniroyal Luxembourg S.A.                        | 100               | Luxembourg               |
| Uniroyal International S.A.                     | 100               | Switzerland              |
| Uniroyal Ltd.                                   | 100               | United Kingdom           |
| Uniroyal International Vertrieb GmbH            | 100               | Germany (GFR)            |
| Latex Fiber Industries Inc.                     | 51.0              | USA-New York             |
| Agencias Croydon del Valle Ltda.                | 60.0              | Colombia                 |
| Wellman Co.                                     | 66.0              | USA-Maine                |
| Uniroyal Croydon S.A.                           | 73.9              | Colombia                 |
| Geismar Industries Inc.                         | 50.0              | USA-Louisiana            |
| Monochem Inc.                                   | 50.0              | USA-Louisiana            |
| Rubicon Chemicals Inc.                          | 50.0              | USA-Louisiana            |
| Texas-U.S. Chemical Co.                         | 50.0              | USA-Delaware             |
| Uniroyal Englebert Belgique S.A.                | 96.2              | Belgium                  |
| Uniroyal Endustri Turk A.S.                     | 60.0              | Turkey                   |
| Uniroyal España S.A.                            | 99.1              | Spain                    |

"63 subsidiaries (all in consolidated statements), are omitted above since considered in the aggregate, they would not constitute a significant subsidiary."

Source: Moody's Industrial Manual.

Annex 55

UNIROYAL INC.: LIST OF SUBSIDIARIES AND AFFILIATES, 1976

| Subsidiary or affiliate                         | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Computeristics Inc.                             | 100               | USA-Delaware             |
| Fabric Fire Hose Co.                            | 100               | USA-New York             |
| First of Boston Computeristics Inc.             | 50.0              | USA-Massachusetts        |
| Latex Fiber Industries Inc.                     | 51.0              | USA-New York             |
| Monochem Inc.                                   | 50.0              | USA-Louisiana            |
| Rubicon Chemicals Inc.                          | 50.0              | USA-Louisiana            |
| Texas-U.S. Chemical Co.                         | 50.0              | USA-Delaware             |
| Uniroyal Credit Corp.                           | 100               | USA-Delaware             |
| Uniroyal International Corp.                    | 100               | USA-Delaware             |
| Uniroyal International Inc.                     | 100               | USA-New Jersey           |
| Uniroyal Merchandising Co. Inc.                 | 100               | USA-Delaware             |
| USCO Services Inc.                              | 100               | USA-Delaware             |
| Wellman Co.                                     | 73.5              | USA-Maine                |
| Uniroyal Holdings Ltd.                          | 57.8              | Australia                |
| Uniroyal Pty. Ltd.                              | 100               | Australia                |
| Uniroyal Englebert Belgique S.A.                | 97.5              | Belgium                  |
| Uniroyal Comercio e Participacoes Ltda.         | 100               | Brazil                   |
| Uniroyal do Brasil S.A. Ind. Quimicas           | 100               | Brazil                   |
| Uniroyal Pigmentos S.A.                         | 52.7              | Brazil                   |
| Uniroyal Ltd.                                   | 100               | Canada                   |
| Uniroyal Croydon S.A.                           | 73.9              | Colombia                 |
| Uniroyal S.A.                                   | 100               | France                   |
| P.T. United States Rubber Sumatra Plantations   | 100               | Indonesia                |
| Janine Footwear of Italy S.p.A.                 | 100               | Italy                    |
| Uniroyal Manuli S.p.A.                          | 50.0              | Italy                    |
| Uniroyal S.p.A.                                 | 100               | Italy                    |
| Naugatuck S.p.A.                                | 100               | Italy                    |
| Uniroyal Chimica S.p.A.                         | 100               | Italy                    |
| Sumitomo Naugatuck Kabushiki Kaisha             | 49.0              | Japan                    |
| Unitta Co. Ltd.                                 | 50.0              | Japan                    |
| Liberian Agricultural Co.                       | 100               | Liberia                  |
| Uniroyal Luxembourg S.A.                        | 100               | Luxembourg               |
| U.S. Rubber Uniroyal Holdings S.A.              | 100               | Luxembourg               |
| Uniroyal Malaysian Plantations Sendirian Berhad | 100               | Malaysia                 |
| Cia. Quimica Ameyal S.A.                        | 25.0              | Mexico                   |
| Uniroyal S.A.                                   | 100               | Mexico                   |

/Annex 55 (conclusion)

Annex 55 (conclusion)

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|                             |      |                |
|-----------------------------|------|----------------|
| Orchem (Pty.) Ltd.          | 30.0 | South Africa   |
| Uniroyal (Pty.) Ltd.        | 100  | South Africa   |
| Uniroyal España S.A.        | 100  | Spain          |
| Uniroyal International S.A. | 100  | Switzerland    |
| Uniroyal Endustri Turk A.S. | 60.0 | Turkey         |
| Uniroyal Ltd.               | 100  | United Kingdom |
| Uniroyal C.A.               | 100  | Venezuela      |
| Uniroyal Aktiengesellschaft | 100  | Germany (GFR)  |

"55 wholly or majority-owned subsidiaries (19 domestic and 36 foreign) and 3 affiliated companies accounted for under the equity basis, which are included in consolidated statements, are omitted above since considered in the aggregate, they would not constitute a significant subsidiary."

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Source: Moody's Industrial Manual.

Annex 56

CONTAINER CORP.: ASPECTS OF ITS GLOBAL OPERATIONS, VARIOUS YEARS, 1945-1976  
(Millions of US dollars and percentage)

| Year      | Operating income     |                |                       | Net income    |                |                       | Total assets  |                |                       | Employees      |                     |                |
|-----------|----------------------|----------------|-----------------------|---------------|----------------|-----------------------|---------------|----------------|-----------------------|----------------|---------------------|----------------|
|           | Current value (1970) | Rate of growth | Constant value (1970) | Current value | Rate of growth | Constant value (1970) | Current value | Rate of growth | Constant value (1970) | Rate of growth | Number of employees | Rate of growth |
| 1945      | 74.1                 | -              | -                     | 2.0           | -              | -                     | 30.5          | -              | -                     | -              | n.d.                | -              |
| 1950      | 154.8                | -              | 260.2                 | 12.0          | -              | 20.2                  | 74.1          | -              | 124.5                 | -              | 10                  | -              |
| 1955      | 215.6                | 3.2            | 314.3                 | 15.7          | 2.1            | 22.9                  | 143.8         | 2.1            | 209.6                 | 9.1            | 15                  | 7.0            |
| 1960      | 327.3                | 4.7            | 413.8                 | 17.1          | -1.0           | 21.6                  | 240.0         | -1.0           | 303.4                 | 6.4            | 19                  | 4.0            |
| 1965      | 405.7                | 3.1            | 497.2                 | 27.3          | 7.6            | 33.5                  | 333.8         | 7.6            | 409.1                 | 5.1            | 21                  | 1.7            |
| 1970a/    | 526.6                | 1.0            | 526.6                 | 25.7          | -4.3           | 25.7                  | 571.6         | -4.3           | 571.6                 | 5.7            | 126                 | 35.0           |
| 1975a/    | 953.3                | 3.8            | 657.9                 | 64.1          | 9.5            | 44.2                  | 974.0         | 9.5            | 672.2                 | 2.7            | 146                 | 2.5            |
| 1976a/    | 994.9b/              | -0.4           | 655.0                 | 53.9          | -19.7          | 35.5                  | 1 032.6       | -19.7          | 679.8                 | 1.1            | 125                 | -14.4          |
| 1950-1976 |                      | 3.5%           |                       |               | 2.1%           |                       |               |                |                       | 6.5%           |                     | 9.8%           |

Sources: Company reports; Company Form 10-K of US Securities and Exchange Commission; Moody's Industrial Manual.

a/ Marcor Inc.

b/ 11 months only.

Annex 57

CONTAINER CORPORATION OF AMERICA: LIST OF SUBSIDIARIES  
AND AFFILIATES, 1950

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| Subsidiary or affiliate     | Capital<br>Share (%) | Country of<br>Incorporation |
|-----------------------------|----------------------|-----------------------------|
| California Container Corp.  | 100                  | USA-Delaware                |
| Pioneer Paper Stock Co.     | 100                  | USA-Illinois                |
| Sefton Fibre Can Co.        | 100                  | USA-Delaware                |
| Carton Internacional S.A.   | 100                  | Panama                      |
| Cartón de Colombia S.A.     | 50                   | Colombia                    |
| Cartoenvases de México S.A. | 50                   | Mexico                      |
| Mid-west Box Co.            | 100                  | USA                         |
| O.B. Andrews Co.            | 100                  | USA-Tennessee               |

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Source: Moody's Industrial Manual.



Annex 58

CONTAINER CORPORATION OF AMERICA: LIST OF SUBSIDIARIES AND AFFILIATES, 1965

| Subsidiary or affiliate                | Capital Share (%) | Country of Incorporation |
|--|-------------------|--------------------------|
| Bremer Papier und Wellpappen-Fabrik, A | 100               | Germany (GFR)            |
| Cartoenvases de México S.A.            | 100               | Mexico                   |
| Heisler Corp.                          | 100               | USA                      |
| Europa Carton A.G.                     | 100               | Germany (GFR)            |
| Europa Carton Italiana S.p.A.          | 100               | Italy                    |
| Industries Aztlan S.A.                 | 100               | n.d.                     |
| Mercurius Golfcartnindustrie N.V.      | 100               | Holland                  |
| Llery Paper Packages                   | 100               | n.d.                     |
| Vosa S.p.A.                            | 100               | Italy                    |
| Cartón de Colombia S.A.                | 16.5              | Colombia                 |
| Cartón Internacional S.A.              | 100               | Panama                   |
| Cartón de Colombia S.A.                | 50.3              | Colombia                 |
| Cellulosa y Papel S.A.                 | 100               | Colombia                 |
| Cartón y Papel de México S.A.          | 100               | Mexico                   |
| Cartones Nacionales S.A.               | 82.0              | Venezuela                |
| Corrugadora de Venezuela S.A.          | 80.0              | Venezuela                |
| Cartón de Venezuela S.A.               | 80.0              | Venezuela                |
| Fibras Industrias de Venezuela S.A.    | 80.0              | Venezuela                |
| Cartotecnica Europa Carton             | 100               | Italy                    |
| EM SRL                                 | 100               | Italy                    |
| Union Grafica S.A.                     | 80.0              | Venezuela                |

Source: Moody's Industrial Manual.

Annex 59

MARCOR INC.: LIST OF SUBSIDIARIES AND AFFILIATES, 1970

| Subsidiary or affiliate               | Capital Share (%) | Country of Incorporation |
|---------------------------------------|-------------------|--------------------------|
| Hydro Conduit Corp.                   | 99.9              | USA                      |
| Associated Sand & Gravel Co. Inc.     | 100               | USA                      |
| Rocky Mountain Prestress Inc.         | 100               | USA                      |
| Craftsman Construction Co. Inc.       | 100               | USA                      |
| J.W. Peters & Sons Inc.               | 100               | USA                      |
| Marcor Service Corp.                  | 100               | USA                      |
| Marcor Housing Systems Inc.           | 100               | USA                      |
| Container Corporation of America      | 100               | USA                      |
| Heisler Corp.                         | 100               | USA                      |
| Mercurius Golfcartonindustrie         | 100               | Holland                  |
| Vosa S.p.A.                           | 100               | Italy                    |
| Vosa-Sud S.p.A.                       | 100               | Italy                    |
| Cartotecnica Europa Carton            | 100               | Italy                    |
| Cartón de Colombia S.A.               | 66.8              | Colombia                 |
| Celulosa y Papel S.A.                 | 100               | Colombia                 |
| Reforestadora del Cauca S.A.          | 88.3              | Colombia                 |
| Cartón y Papel S.A.                   | 100               | Mexico                   |
| Cartones Nacionales S.A.              | 82.0              | Venezuela                |
| Corrugadora de Cartón S.A.            | 80.0              | Venezuela                |
| Cartoenvases Valencia S.A.            | n.d.              | Venezuela                |
| Cartón de Venezuela S.A.              | 80.0              | Venezuela                |
| Fibras Industriales de Venezuela S.A. | 80.0              | Venezuela                |
| Unión Gráfica S.A.                    | 80.0              | Venezuela                |
| Europa Carton Austria A.G.            | 100               | Austria                  |
| Papelera Victoria S.A.                | 50.0              | Spain                    |
| Fibras Vegetales S.A.                 | 52.0              | Spain                    |
| Cartonajes Vigueses S.A.              | 50.0              | Spain                    |
| Cartonajes Burgaleses S.A.            | 50.0              | Spain                    |
| Cartonajes Onubenses S.A.             | 50.0              | Spain                    |
| Montgomery Ward & Co. Inc.            | 100               | USA-                     |
| Montgomery Ward Credit Corp.          | 100               | USA-Delaware             |
| M-W Properties Corp.                  | 100               | USA-Delaware             |
| Montgomery Ward Reality Corp.         | 100               | USA                      |
| Standard T Chemical Co. Inc.          | 100               | USA                      |
| Pioneer Trust & Savings Bank          | 100               | USA                      |
| Montgomery Ward Life Insurance Co.    | 100               | USA                      |
| Third Wycombe Properties Inc.         | 100               | USA                      |
| Fourth Wycombe Properties Inc.        | 100               | USA                      |
| Montgomery Ward Development Corp.     | 100               | USA                      |
| M-W Education Corp.                   | 100               | USA                      |

Source: Moody's Industrial Manual.

Annex 60

MOBIL OIL CORPORATION: LIST OF SUBSIDIARIES AND AFFILIATES, CIRCA 1974

| Corporations  | Country                        | Corporations                         | Country        |
|---|--------------------------------|--------------------------------------|----------------|
| Mobil Oil Corp., 150 E. 42nd St., New York/<br>N.Y. 10017                               |                                |                                      |                |
| Abu Dhabi Petroleum Co. Ltd. (A)  | Abu Dhabi                      | Stanvac Indonesia, P.T. (A)          | Indonesia      |
| RIPLA S.A.P.F.I.N.T.  | Argentina                      | Mobil Oil Iraq with Ltd. Liability   | Iraq           |
| Altona Petrochemical Co. Ltd. (A)   | Australia                      | Iraq Petroleum Co. Ltd. (A)          | Iraq           |
| Australian Synthetic Rubber Co. Ltd. (A)  | Australia                      | Mobil Oil Cote D'Ivoire              | Ivory Coast    |
| Mobile Sales (International) Ltd.   | Bahamas                        | Eyokuto Sekiyu Kogyo K.K. (A)        | Japan          |
| Mobil Oil Barbados Ltd.   | Barbados                       | Toa Henryo Kogyo K.K. (A)            | Japan          |
| Socony Paints (Barbados) Co. Ltd.   | Barbados                       | Mediterranean Refining Co. (A)       | Lebanon        |
| Mobil Chemie Belgie N.V./Mobil Chimie<br>Belge S.A.                                     | Belgium                        | Mobil Oil Liberia Inc.               | Liberia        |
| Mobil Tankships Ltd.  | Bermuda                        | Mobil Malaysia Exploration Co.       | Malaysia       |
| Mobil Trading Co. Ltd.  | Bermuda                        | Mobil Oil Malaya Sdn. Bhd.           | Malaysia       |
| Mobil-Novos Empreendimentos Mercantis Ltda.   | Brazil                         | Mobil Oil Mali                       | Mali           |
| Mobil Oil do Brasil, (I.C.) Ltda.   | Brazil                         | Mobil Oil de Mexico S.A.             | Mexico         |
| Mobil Quimica Ltda.   | Brazil                         | Desarrollos y Negocios, S.A. de C.V. | Mexico         |
| Mobil Oil Cameroun  | Cameroun                       | Mobil Atlas S.A. de C.V.             | Mexico         |
| Camerounaise Equatoriale de<br>Fabrication de Lubrifiants<br>(S.C.E.F.L.) Ltd. Co. Sté. | Cameroun                       | Mobil Finances Co. N.V.              | Neth. Antilles |
| Mobil Marine Transportation Ltd.  | Canada                         | Mobil Overseas Finance Corp. N.V.    | Neth. Antilles |
| Mobil Marine Services Ltd.  | Bermuda                        | New Zealand Refining Co. Ltd. (A)    | New Zealand    |
| Mobil Tankers Ltd.  | Bermuda                        | Mobil Oil Niger                      | Niger          |
| Brilliant Transport Co.   | Liberia                        | Mobil Oil Nigeria Ltd.               | Nigeria        |
| Destiny Tankers Ltd.  | United Kingdom                 | Mobil Producing Nigeria              | Nigeria        |
| Iberian Tankers Co.   | Liberia                        | Mobil Development Norway A/S         | Norway         |
| Mobil Overseas Shipping Co.   | Liberia                        | Mobil Carrier Co. Inc.               | Panama         |
| Mobil Shipping & Transportation Co.   | Liberia                        | Mobil Oil Caribe Inc.                | Panama         |
| MATCO Tankships Ltd.  | Bermuda                        | Mobil Tankers Co S.A.                | Panama         |
| Mobil Petroleum Carriers Inc.   | Panama                         | Mobil Trade Carrier Co. Inc.         | Panama         |
| Nocos Tankers Inc.  | Panama                         | Pegasus Participation S.A.           | Panama         |
| Tai Ta Chemical Co. Ltd.  | Taiwan                         | Inmobiliaria Samaria S.A., Cia.      | Peru           |
| Mobil Oil Canada Ltd.   | Canada                         | Bataan Refining Corp. (A)            | Philippines    |
| Mobil Ventures Ltd.   | Canada                         | Mobil Oil Portuguesa S.A.R.L.        | Portugal       |
| Rainbow Pipe Line Co. Ltd. (A)  | Canada                         | Portugal Marrocos S.A.R.L. Soc.      | Portugal       |
| South Saskatchewan Pipe Line Co. (A)  | Canada                         | Qatar Petroleum Co. Ltd. (A)         | Qatar          |
| Sovosco Petroleum Ltd.  | Canada                         | Mobil Oil Rwanda-Burundi (S.A.R.L.)  | Rwanda-Burundi |
| Mobil Oil de Chile Ltda.  | Chile                          | Mobil Oil Senegal                    | Senegal        |
| Mobil Oil Tecnica de Chile Ltda.  | Chile                          | Mobil Oil Sierra Leone Ltd.          | Sierra Leone   |
| Colombianos Distribuidores de<br>Combustibles S.A.                                      | Colombia                       | Mobil Oil Singapore Pte. Ltd.        | Singapore      |
| Mobil Oil Dahomey   | Dahomey                        | Mobil Oil de Canarias S.A.           | Spain          |
| Mobil Oil de l'Afrique Equatoriale  | French<br>Equatorial<br>Africa | Mobil Oil de Espana S.A.             | Spain          |
| Mobil Oil Egypt (S.A.A.)  | Egypt                          | Mobil Oil Sudan Ltd.                 | Sudan          |
| Mobil Oil Oy. AB  | Finland                        | Mobil Oil Thailand Ltd.              | Thailand       |
| M.O. Kfitelstot Oy.   | Finland                        | Mobil Oil Togo                       | Togo           |
| Mobil Oil Francaise   | France                         | Anadolu Tasfiyehanes A.S.            | Turkey         |
| Garage Pineau, S.A.R.L.   | France                         | Mobil Overseas Oil Co. Ltd.          | United Kingdom |
| Mobil Sahara  | France                         | Mobil Oil Kuwait Ltd.                | United Kingdom |
| Station-Service Lunes   | France                         | Mobil Oil Qatar Ltd.                 | United Kingdom |
| Mobil Oil Mauritanie  | France                         | Socony Overseas Oil Co. (Iraq) Ltd.  | United Kingdom |
| Mobil Oil Nord-Africaine  | France                         | Mobil Trading (West) Ltd.            | United Kingdom |
| Mobil Oil Gabon   | Gabon                          | Esternoil Corp.                      | United States  |
| Aral AG. (A)  | W. Germany                     | Sonarep (South Africa) (Pty.) Ltd.   | South Africa   |
| Bayerische Mineral-Industrie AG.  | W. Germany                     | Arezina Investments (Pty.) Ltd.      | South Africa   |
| Erdoel-Raffinerie Neustadt GmbH. & Co.(A)   | W. Germany                     | Braamkey Investments (Pty.) Ltd.     | South Africa   |
| Mobil Oil AG. in Deutschland  | W. Germany                     | Changdor Depot Extension (Pty.) Ltd. | South Africa   |
| Deutsche Mobil Oil Erschliessungs-GmbH.   | W. Germany                     | First Eastleigh No. 163 (Pty.) Ltd.  | South Africa   |
| Deutsche Mobil Oil Explorations-GmbH.   | W. Germany                     | K.D. Keyzers Investments (Pty.) Ltd. | South Africa   |
| Deutsche Mobil Oil Gewinnings-GmbH.   | W. Germany                     | Prepsak (Pty.) Ltd.                  | South Africa   |
| Mobil Oil Raffinerie Wilhelmshaven<br>GmbH. & Co. oHG.                                  | W. Germany                     | Wierda Park (Pty.) Ltd.              | South Africa   |
| Mobil Oil Raffinerie Worth GmbH. &<br>Co. oHG.  | W. Germany                     | Marcor Inc.                          | United States  |
| Mobil Oil Reederei GmbH.  | W. Germany                     | Marinco International Insurance Ltd. | Bermuda        |
| Mobil Oil Raffinerie GmbH.  | W. Germany                     | Container Corp. of America           | United States  |
| Mobil Oil Ghana Ltd.  | Ghana                          | Europa Carton Austria, AG.           | Austria        |
| Mobil Oil Guinee S.A.R.L.   | Guinea                         | Carton de Colombia S.A.              | Colombia       |
| Mobil Oil Haute Volta   | Haute Volta                    | Celulosa y Papel de Colombia S.A.    | Colombia       |
| Bradway Development Ltd.  | Hong Kong                      | Reforestadora del Cauca S.A.         | Colombia       |
| Mei Foo Investments Ltd.  | Hong Kong                      | Mercurius Golfcartonindustrie, B.V.  | Holland        |
| Indian Oil Blending Ltd. (A)  | India                          | Cartotecnica Europa Carton S.p.A.    | Italy          |
|   |                                | VOSA S.p.A.                          | Italy          |
|   |                                | VOSA SUD S.p.A.                      | Italy          |
|   |                                | Carton y Papel de Mexico S.A.        | Mexico         |
|   |                                | Cartonajes Burgaleses S.A.           | Spain          |
|   |                                | Cartonajes Onubenses S.A.            | Spain          |
|   |                                | Cartonajes Vigueses S.A.             | Spain          |
|   |                                | Papelera Victoria S.A.               | Spain          |
|   |                                | Fibras Vegetales, S.A.               | Spain          |

Annex 60 (concluded)

| Corporations                               | Country        | Corporations                                   | Country        |
|--|----------------|--|----------------|
| Mobil Oil Corp. (continued)                |                |  |                |
| Corrugadora de Carton S.A.                 | Venezuela      | Mobil Marine Oil A/S                           | Norway         |
| Cartoenvases Valencia S.A.                 | Venezuela      | Mobil Oil A/S Norge                            | Norway         |
| Carton de Venezuela S.A.                   | Venezuela      | Faavang Autoverksted A/S                       | Norway         |
| Cartones Nacionales S.A.                   | Venezuela      | Norpak, A/S                                    | Norway         |
| Fibras Industriales de Venezuela S.A.      | Venezuela      | Oslo Oljebunkring A/S                          | Norway         |
| Fibras Internacionales de Puerto Rico S.A. | Puerto Rico    | Turistgarasjen, A/S                            | Norway         |
| Molinos de Carton y Papel, S.A.            | Venezuela      | Mobil Oil (Milawi) (Pvt.) Ltd.                 | Nyasaland      |
| Unión Grafica S.A.                         | Venezuela      | Mobil Oil Philippines Inc.                     | Philippines    |
| Montgomery Ward & Co. Inc.                 | United States  | Mobil Oil Southern Rhodesia (Pvt.) Ltd.        | Rhodesia       |
| Montgomery Ward International Inc.         | United States  | Mobil Chemical Singapore Pte. Ltd.             | Singapore      |
| Montgomery Ward Brazil Comercial Ltda.     | Brazil         | Mobil Oil Southern Africa (Pty.) Ltd.          | South Africa   |
| Montgomery Ward Marketing Services GmbH.   | W. Germany     | Socony Southern Africa (Pty.) Ltd.             | South Africa   |
| Montgomery Ward (Hong Kong) Ltd.           | Hong Kong      | Vialit Road Products (Pty.) Ltd.               | South Africa   |
| Montgomery Ward Japan Ltd.                 | Japan          | Mobil Refining Co. Southern Africa (Pty.) Ltd. | South Africa   |
| Mobil Chemical International Ltd.          | United States  | Petroleum transport International (Pty.) Ltd.  | South Africa   |
| Mobil Ami S.A.                             | Colombia       | Westchester Insurance Co. (Pty.) Ltd.          | South Africa   |
| Mobil Exploration Equatorial Africa Inc.   | United States  | Mobil Oil Swaziland (Pty.) Ltd.                | Swaziland      |
| Mobilrex                                   | France         | Mobil Oil AB Sweden                            | Sweden         |
| Mobil Exploration Mediterranean Inc.       | United States  | Impeilalkoks, AB                               | Sweden         |
| Mobil Refining Co. Inc.                    | Panama         | Kol & Kuks, AB                                 | Sweden         |
| Mobil Oil del Uruguay S.A.                 | United States  | Servo-Center, AB                               | Sweden         |
| Pegaso S.A.                                | Uruguay        | Mobil Investments AG                           | Switzerland    |
| Mobil Participations Corp.                 | United States  | Mobil LP Gaz Cyprus Ltd.                       | Cyprus         |
| Mobil Aruba N.V.                           | Neth. Antilles | Francaise Stoner-Mudge, Std.                   | France         |
| Mobil Petroleum Co. Inc.                   | United States  | Mobil Oil (Switzerland)                        | Switzerland    |
| Mobil Oil Australia Ltd.                   | Australia      | Benoil S.A.                                    | Switzerland    |
| Emoleum (Australia) Ltd.                   | Australia      | Cerera S.A.                                    | Switzerland    |
| Euphoric Pty. Ltd.                         | Australia      | Mobil Oil Turk A/S                             | Turkey         |
| Melbourne Oil Terminal Pty. Ltd.           | Australia      | Ankara Gaz Satis A.S.                          | Turkey         |
| Mobil Exploration Australia Pty. Ltd.      | Australia      | Istanbul Petrol ve Makine Yaglari Ltd. Sirketi | Turkey         |
| Mobil Minerals Australia Ltd.              | Australia      | Mobil Gaz-Mobil Petrol Gazlari A.S.            | Turkey         |
| Mobil Oil Constructions (Australia) Ltd.   | Australia      | Mobil Uganda Ltd.                              | Uganda         |
| Petroleum Refineries (Australia) Pty. Ltd. | Australia      | Mobil Oil East Africa Ltd.                     | United Kingdom |
| Somerton Terminal Pty. Ltd.                | Australia      | Mobil Oil Gibraltar Ltd.                       | United Kingdom |
| Stabilisers (Australia) Ltd.               | Australia      | Mobil Holdings Benelux Inc.                    | United States  |
| Vacuum Oil Company Pty. Ltd.               | Australia      | Mobil Chemie B.V.                              | Holland        |
| Mobil Oil New Guinea Ltd.                  | Papua          | Mobil Chemie Manufacturing B.V.                | Holland        |
| Mobil Oil Austria AG.                      | Austria        | Mobil Oil B.V.                                 | Holland        |
| Investitions-und Verwaltungs AG.           | Austria        | Lijs & Bosch B.V.                              | Holland        |
| Mobil Oil Botswana (Pty.) Ltd.             | Botswana       | Petrotank B.V.                                 | Holland        |
| Mobil Chemical Plastics Canada Ltd.        | Canada         | Mobiltank Scheepvaart                          | Holland        |
| Mobil International Holdings Ltd.          | Cayman Is.     | Maatschappij B.V.                              | Holland        |
| Mobil International Supply Co.             | Cayman Is.     | Scholte's Oliehandel B.V.                      | Holland        |
| Mobil Overseas Marine Co.                  | Cayman Is.     | S.K.G. Olie B.V.                               | Holland        |
| Mobil Oil Cyprus Ltd.                      | Cyprus         | Mobil Holdings (United Kingdom) Ltd.           | United States  |
| Mobil Oil A/S                              | Denmark        | Mobil Holdings Ltd.                            | United Kingdom |
| A/S af 15. Juli 1962                       | Denmark        | Bowen Petroleum Co. (1969) Ltd.                | United Kingdom |
| Mobil Oil Hellas A.E. Petroleum Co.        | Greece         | Fountain Real Estate Ltd.                      | United Kingdom |
| Mobil Oil Hong Kong Ltd.                   | Hong Kong      | Mobil African Services Ltd.                    | United Kingdom |
| Altadena Ltd.                              | Hong Kong      | Mobil Carrier Ltd.                             | United Kingdom |
| Ophelis Investments Ltd.                   | Hong Kong      | Mobil Coatings Ltd.                            | United Kingdom |
| Mobil Oil Italiana S.p.A.                  | Italy          | Mobil Data Services Ltd.                       | United Kingdom |
| Mobil Plastics Adriatics S.p.A.            | Italy          | Mobil Marine Sales Ltd.                        | United Kingdom |
| Mobil Plastics Italiana S.p.A.             | Italy          | Mobil Oil Co. Ltd.                             | United Kingdom |
| Mobil Plastics Mugello S.p.A.              | Italy          | Mobil Oil Co. (Ireland) Ltd.                   | Eire           |
| Chuo Kaihatsu Kogyo K.K.                   | Japan          | Vacuum Oil Co. (Ireland) Ltd.                  | Eire           |
| Chuo Asphalt Hoso K.K.                     | Japan          | Mobil Supply Co. Ltd.                          | United Kingdom |
| Chuo Katei Dumbo Nenryo Kigu K.K.          | Japan          | Vacuum Oil Co. Ltd.                            | United Kingdom |
| Chuo Nenryo Gas K.K.                       | Japan          | Mobil Sales and Supply Corp. Ltd.              | United Kingdom |
| Chuo T.B.A. Hambai K.K.                    | Japan          | Mobil Services Co. Ltd.                        | United Kingdom |
| Kagaku Seihin Hambai Kaihatsu K.K.         | Japan          | Mobil Shipping Co. Ltd.                        | United Kingdom |
| Mobil Sekiju K.K.                          | Japan          | Mobil Trustee Co. Ltd.                         | United Kingdom |
| Mobil Sempaku K.K.                         | Japan          | Mobil Producing North Sea Ltd.                 | United Kingdom |
| Mobil Lesotho (Pty.) Ltd.                  | Lesotho        | Mobil Trading (1968) Ltd.                      | United Kingdom |
| Mobil Oil Holdings S.A.                    | Luxembourg     | Mobil Oil Zambia Ltd.                          | Zambia         |
| Bluefield Insurance Ltd.                   | Bermuda        | Propiedades Sucre. C.V. de,                    | Venezuela      |
| Commercial Exchange & Finance Co. Ltd.     | Bermuda        | Mobil Investments S.A.                         | Panama         |
| General Worldwide Insurance Co.            | Cayman Is.     | Navemar C.A.                                   | Venezuela      |
| Atlantic Union Oil Co. (N.Z.) Ltd.         | New Zealand    | Mobil Exploration Zaire                        | Zaire          |
| Emoleum (N.Z.) Ltd.                        | New Zealand    | Mobil Oil Zaire                                | Zaire          |
| Neuchatel Industries (N.Z.) Ltd.           | New Zealand    | Immobiliere Riveria S.C.P.R.L., Cie            | Zaire          |
| Mobil Oil New Zealand Ltd.                 | New Zealand    |  |                |

Source: Based on information supplied by the United Nations Center on Transnational Corporations.

Annex 61

INTERNATIONAL PAPER CO.: ASPECTS OF ITS GLOBAL OPERATIONS, VARIOUS YEARS, 1945-1976

(Millions of US dollars and percentage)

| Year      | Operating income     |                |                       | Net income    |                |                       | Total assets  |                |                       | Employees      |                     |                |
|-----------|----------------------|----------------|-----------------------|---------------|----------------|-----------------------|---------------|----------------|-----------------------|----------------|---------------------|----------------|
|           | Current value (1970) | Rate of growth | Constant value (1970) | Current value | Rate of growth | Constant value (1970) | Current value | Rate of growth | Constant value (1970) | Rate of growth | Number of employees | Rate of growth |
| 1945      | 234.2                | -              | -                     | 8.5           | -              | -                     | 252.4         | -              | -                     | -              | n.d.                | -              |
| 1950      | 509.1                | -              | 855.6                 | 66.6          | -              | 111.9                 | 408.5         | -              | 686.6                 | -              | 30                  | -              |
| 1955      | 799.5                | 5.3            | 1 165.5               | 83.1          | 1.3            | 121.1                 | 620.1         | 4.7            | 903.9                 | 4.7            | 51                  | 9.3            |
| 1960      | 1 012.6              | 1.6            | 1 280.2               | 71.7          | -4.7           | 90.6                  | 930.0         | 4.5            | 1 175.7               | 4.5            | 48                  | -1.0           |
| 1965      | 1 303.7              | 3.8            | 1 597.7               | 88.5          | 3.1            | 109.5                 | 1 120.0       | 2.6            | 1 372.5               | 2.6            | 51                  | 1.0            |
| 1970      | 1 840.8              | 2.4            | 1 840.8               | 82.5          | -4.5           | 82.5                  | 2 046.5       | 6.9            | 2 046.5               | 6.9            | 55                  | 1.2            |
| 1975      | 3 080.8              | 2.4            | 2 126.2               | 218.0         | 10.5           | 150.4                 | 3 341.0       | 2.0            | 2 305.7               | 2.0            | 51                  | -1.0           |
| 1976      | 3 540.6              | 9.6            | 2 330.9               | 253.6         | 11.0           | 167.0                 | 3 639.6       | 3.9            | 2 396.1               | 3.9            | 52                  | 2.0            |
| 1950-1976 |                      | 3.8%           |                       |               | 1.5%           |                       |               | 4.7%           |                       |                |                     | 2.1%           |

Sources: Company reports; Company Form 10-K of US Securities and Exchange Commission; Moody's Industrial Manual.

Annex 62

INTERNATIONAL PAPER CO.: LIST OF SUBSIDIARIES, 1950

| Subsidiary                                     | Capital Share (%) | Country of Incorporation |
|--|-------------------|--------------------------|
| American Paper Exports Inc.                    | 73                | USA                      |
| Bay Harbor Warehouse Corp.                     | 100               | USA                      |
| Brassua Stream Dam & Improvement Co.           | 100               | USA                      |
| Canadian International Paper Co.               | 100               | Canada                   |
| Aldermac Sulphur Ltd.                          | 100               | Canada                   |
| Atlantic Transmission Co. Ltd.                 | 100               | Canada                   |
| British International Paper Ltd.               | 100               | U.K.                     |
| Gatineau Boom Co.                              | 100               | Canada                   |
| Gatineau Co. Ltd.                              | 100               | Canada                   |
| Gatineau Housing Co.                           | 100               | Canada                   |
| Hull Electric Co.                              | 100               | Canada                   |
| Industrial Cellulose Research Ltd.             | 100               | Canada                   |
| International Fibre Board Ltd.                 | 100               | Canada                   |
| Ten Test Fibre Board Co. (1929) Ltd.           | 100               | Canada                   |
| International Fibre Board & Plywood Sales Ltd. | 100               | Canada                   |
| International Plywoods Ltd.                    | 100               | Canada                   |
| Lake Expanse Driving & Booming Co.             | 100               | Canada                   |
| Lower Ottawa Boom Co. Ltd.                     | 100               | Canada                   |
| New Brunswick International Paper Co.          | 100               | Canada                   |
| Quinze Rapids Improvement Co.                  | 98                | Canada                   |
| Riordon Cellulose Ltd. (London)                | 100               | England                  |
| Riordon Cellulose S.A. (Paris)                 | 100               | France                   |
| Riordon Sales Corp. Ltd.                       | 100               | Canada                   |
| Rouge Boom Co.                                 | 100               | Canada                   |
| Rouge River Improvement Co.                    | 100               | Canada                   |
| Timbers & Powers Ltd.                          | 100               | Canada                   |
| Continental Paper Products Ltd.                | 100               | Canada                   |
| Continental Wood Products Co. Ltd.             | 100               | Canada                   |
| Chase Stream Improvement Co.                   | 100               | USA                      |
| Consolidated Packaging Machinery Corp.         | 58                | USA                      |
| Capem Machinery Corp.                          | 100               | USA                      |
| Hoepner Automatic Machinery Corp.              | 100               | USA                      |
| Grey River Development Co. Ltd.                | 100               | Canada                   |
| Hastings Brook Improvement Co.                 | 100               | n.d.                     |
| International Envelope Corp.                   | 100               | USA                      |
| International Records Corp.                    | 100               | USA                      |

/Annex 62 (conclusion)

Annex 62 (conclusion)

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|   |     |        |
|---|-----|--------|
| Little Madawaska Improvement Co.        | 100 | n.d.   |
| Magalloway River Improvement Co.        | 100 | n.d.   |
| Mattakeunk Stream Dam & Improvement Co. | 100 | n.d.   |
| Miramichi Lumber Co. (Ltd.)             | 100 | Canada |
| Montague Machine Co.                    | 100 | n.d.   |
| Musquacook Stream Dam & Improvement Co. | 100 | n.d.   |
| Newfoundland Hydro-Electric Co. Ltd.    | 100 | Canada |
| Phillips Brook Improvement Co.          | 100 | n.d.   |
| Reserve Power Ltd.                      | 100 | Canada |
| Sheet Harbor Land Co. Ltd.              | 100 | Canada |
| Southern Electrical & Pipefitting Corp. | 100 | USA-   |
| Southern Kraft Timberland Corp.         | 100 | USA-   |
| St. Andrews Bay Holding Co.             | 100 | USA-   |
| Atlanta & St. Andrews Bay Railway Co.   | 100 | USA-   |
| St. Andrew Bay Transportation Co.       | 100 | USA-   |
| Universal Navigation Corp.              | 100 | USA-   |
| Van Buren Lumbering & Manufacturing Co. | 100 | n.d.   |

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Source: Moody's Industrial Manual.

Annex 63

INTERNATIONAL PAPER CO.: LIST OF MAJOR SUBSIDIARIES AND AFFILIATES, 1976

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| Subsidiary or affiliate              | Capital Share (%) | Country of Incorporation |
|--------------------------------------|-------------------|--------------------------|
| International Pulp Sales Co.         | 100               | USA                      |
| General Crude Oil Co.                | 100               | USA                      |
| Canadian International Paper Co.     | 100               | Canada                   |
| International Paper Sales Co. Inc.   | 100               | Canada                   |
| British International Paper Ltd.     | 100               | United Kingdom           |
| International Paper Export Corp.     | 100               | USA                      |
| Arizona Chemical Co.                 | 50                | USA                      |
| Masonite Canada Ltd.                 | 50                | Canada                   |
| Cargal Ltd.                          | 50                | Israel                   |
| Productora de Papeles S.A. Propal    | 50                | Colombia                 |
| Envases International S.A.           | n.d.              | Venezuela                |
| International Stanley Corp.          | 50                | USA                      |
| International Stanley of Canada Ltd. | 50                | Canada                   |
| Tahsis Co. Ltd.                      | 50                | Canada                   |
| Ucona Holdings Ltd.                  | 50                | Canada                   |

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Source: Moody's Industrial Manual.



Annex 64

INTERNATIONAL PAPER CO.: LIST OF SUBSIDIARIES AND AFFILIATES, CIRCA 1974

| Subsidiary or affiliate                | Country of Incorporation |
|--|--------------------------|
| International Paper Co. (Asia) Ltd.    | Bahamas                  |
| International Navigation Ltd.          | Bahamas                  |
| Puerto Rico Container Co. Ltd.         | Bahamas                  |
| International Paper Industrial Ltd.    | Brazil                   |
| International Paper S/C Ltd.           | Brazil                   |
| The Atlantic Transportation Co. Ltd.   | Canada                   |
| Canadian International Paper Co.       | Canada                   |
| Anglo-American Paper Co. Ltd.          | Canada                   |
| CIP Victoria Ltd.                      | Canada                   |
| CIP Mid-West Ltd.                      | Canada                   |
| CIP Van-Pac Ltd.                       | Canada                   |
| Monarch Papers Ltd.                    | Canada                   |
| Phillips Papers Co. (1965) Ltd.        | Canada                   |
| CIP Paper Products Ltd.                | Canada                   |
| CIP Research Ltd.                      | Canada                   |
| Canadian International Pulp Sales Ltd. | Canada                   |
| Commercials Alcohols Ltd.              | Canada                   |
| Eastern Distilleries Ltd.              | Canada                   |
| The Continental Paper Products Ltd.    | Canada                   |
| Hygrade Corrugated Containers Ltd.     | Canada                   |
| Dominion Cellulose Ltd.                | Canada                   |
| Facelle Co. Ltd.                       | Canada                   |
| The Gatineau Boom Co.                  | Canada                   |
| Griwold Corporation (1961) Ltd.        | Canada                   |
| Griswold Engineering Ltd.              | Canada                   |
| Hendershot Paper Products Ltd.         | Canada                   |
| International Stanley of Canada Ltd.   | Canada                   |
| Lake Expanse Driving & Booming Co.     | Canada                   |
| The Lower Ottawa Boom Co.              | Canada                   |
| Masonite Canada Ltd.                   | Canada                   |
| New Brunswick International Paper Co.  | Canada                   |
| The Matamajow Salmon Club Inc.         | Canada                   |
| Miramichi Lumber Co. (Ltd.)            | Canada                   |
| York Mining Co. Ltd.                   | Canada                   |
| Noota Cedar Products                   | Canada                   |
| The Quinze Rapids Improvement Co.      | Canada                   |
| Rouge Boom Co.                         | Canada                   |
| Tahsis Co. Ltd.                        | Canada                   |
| Timbers & Powers Ltd.                  | Canada                   |

/Annex 64 (Conclusion)

Annex 66

W.R. GRACE & CO. LIST OF SUBSIDIARIES AND AFFILIATES, 1950

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| Subsidiary or affiliate                 | Capital Share (%) | Country of Incorporation |
|---|-------------------|--------------------------|
| Grace Line Inc.                         | 100               | USA                      |
| Gulf & South America Steamship Co. Inc. | 50                | USA                      |
| Pan-American Grace Airways Inc.         | 50                | USA                      |
| Grace National Bank                     | >50               | USA                      |
| Brown Manly Plow Co.                    | 100               | USA                      |
| Naco Fertilizer Co.                     | 100               | USA                      |
| Pacific States Oil Co.                  | 100               | USA                      |
| Huron Stevedoring Corp.                 | 100               | USA                      |
| Naco Manufacturing Co.                  | 100               | USA                      |

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"Subsidiary companies own cotton and woolen mills, sugar plantations and mills and other industrial plants in Chile, Peru, Colombia and Bolivia."

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Source: Moody's Industrial Manual,

Annex 67

W.R. GRACE & CO.: LIST OF SUBSIDIARIES AND AFFILIATES, 1965

| Subsidiary or affiliate                        | Capital Share (%) | Country of Incorporation |
|--|-------------------|--------------------------|
| The Albert Dickinson Co. of the Columbia Basin | 100               | USA-Washington           |
| The Albert Dickinson Co. of Idaho              | 100               | USA-Idaho                |
| The Albert Dickinson Co. of Oregon             | 100               | USA-Oregon               |
| The Albert Dickinson Co. of Washington         | 100               | USA-Idaho                |
| American Chemical & Fertilizer Corp.           | 60                | USA-Delaware             |
| Arrow Inter-American Corp.                     | 100               | USA-W. Virginia          |
| Arrow Pan-American Corp.                       | 100               | USA-Delaware             |
| Carolina Nitrogen Corp.                        | 100               | USA-Delaware             |
| Cornelius Wax Refining Corp.                   | 100               | USA-New Jersey           |
| Cornmar Transportation Corp.                   | 100               | USA-New Jersey           |
| Craver-Dickinson Seed Co.                      | 100               | USA-New York             |
| Dearborn-Agua-Serv. Inc.                       | 100               | USA-Illinois             |
| Dearborn Chemical Co. of Cuba                  | 100               | USA-Illinois             |
| Dearborn Chemical International Corp.          | 100               | USA-Illinois             |
| Dearborn Chemical Service Corp.                | 100               | USA-Delaware             |
| Deeps Inc.                                     | 100               | USA-Texas                |
| Dewey & Almy Co.                               | 100               | USA-Massachusetts        |
| Dewey & Almy Inter-American Co.                | 100               | USA-Delaware             |
| Dezaan Inc.                                    | 100               | USA-New York             |
| Edison Chemical Corp.                          | 100               | USA-New Jersey           |
| Electro-Chemical Engineering Corp.             | 100               | USA-Illinois             |
| Estalsa S.A.                                   | 75                | USA-Delaware             |
| Fort Lonesome Investments Inc.                 | 100               | USA-Florida              |
| Grace & Cfa. Puerto Rico                       | 100               | USA-Delaware             |
| Grace & Co. Central America                    | 100               | USA-Delaware             |
| Grace & Co. (Ecuador)                          | 100               | USA-W. Virginia          |
| Grace Corp.                                    | 100               | USA-New York             |
| Grace Electronic Chemicals Inc.                | 51                | USA-Delaware             |
| Grace Line Inc.                                | 100               | USA-Delaware             |
| Grace Ore & Mining Co.                         | 100               | USA-Delaware             |
| W.R. Grace Overseas Development Corp.          | 100               | USA-Delaware             |
| Grace Petroleum Corp.                          | 100               | USA-Delaware             |
| Hanover Square Corp.                           | 100               | USA-Delaware             |
| Hatco Chemical Corp.                           | 100               | USA-New Jersey           |
| Hooton Chocolate Co.                           | 100               | USA-New Jersey           |
| Huron Stevedoring Corp.                        | 100               | USA-Delaware             |
| Kurda Mills Inc.                               | 100               | USA-Iowa                 |

/Annex 67 (Conclusion)

Annex 68 (a)

W.R. GRACE AND CO.: LIST OF FOREIGN SUBSIDIARIES, 1974

| Subsidiary or affiliate            | Country of Incorporation |
|------------------------------------|--------------------------|
| W.R. Grace Australia Property Ltd. | Australia                |
| Grace & Cia. (Bolivia) S.A.        | Bolivia                  |
| Productos Químicos Durex Ltda.     | Brazil                   |
| Vulcan Material Plástico S.A.      | Brazil                   |
| Cryovac Co.                        | Canada                   |
| Davison Chemical Co. Ltd.          | Canada                   |
| Dewey & Almy                       | Canada                   |
| Grace y Cia. (Chile) S.A.          | Chile                    |
| Conservas California S.A.          | Colombia                 |
| Comestibles La Rosa S.A.           | Colombia                 |
| Grace y Cfa. S.A.                  | Colombia                 |
| Ico Pinturas S.A.                  | Colombia                 |
| Productora de Papeles S.A.         | Colombia                 |
| Química Proco S.A.                 | Colombia                 |
| Sintéticos S.A.                    | Colombia                 |
| Grace & Co.                        | Costa Rica               |
| Pozuelo S.A.                       | Costa Rica               |
| W.R. Grace A/S                     | Denmark                  |
| Hellerup Folde Is. A/S             | Denmark                  |
| Grace & Cia. (Ecuador) S.A.        | Ecuador                  |
| PINTEC                             | Ecuador                  |
| Agencia Salvadoreana S.A.          | El Salvador              |
| W.R. Grace y Cfa.                  | El Salvador              |
| W.R. Grace Ltd.                    | England                  |
| Grace Bros. Ltd.                   | England                  |
| Silica Gel Ltd.                    | England                  |
| Darex S.A.                         | France                   |
| Grace SARL                         | France                   |
| Agencia Marítima S.A.              | Guatemala                |
| Grace & Co. Central America        | Guatemala                |
| Darex GmbH                         | Germany (GFR)            |
| W.R. Grace (Hong Kong) Ltd.        | Hong Kong                |
| Hughes Bros Ltd.                   | Ireland                  |
| Lucan Dairies Ltd.                 | Ireland                  |
| Urney Chocolates Ltd.              | Ireland                  |
| Boston Nastri S.p.A.               | Italy                    |
| Grace Italiana S.p.A.              | Italy                    |
| Boston Industries Chimiche S.p.A.  | Italy                    |

/Annex 68(a) (Conclusion)

Annex 68(a) (conclusion)

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|                                  |             |
|----------------------------------|-------------|
| Fuji Davison Chemical Co. Ltd.   | Japan       |
| W.R. Grace Kabushi Kaisha        | Japan       |
| Cueros Artificiales S.A. de C.V. | Mexico      |
| Dubois Mexicana S.A. de C.V.     | Mexico      |
| Productos Dares S.A. de C.V.     | Mexico      |
| Grace (Netherlands) N.V.         | Netherlands |
| Koninklijke Fabriek C.J.         | Netherlands |
| Panama Agencies Co.              | Panama      |
| W.R. Grace & Co.                 | Peru        |
| Darex Española S.A.              | Spain       |
| W.R. Grace                       | Switzerland |
| W.R. Grace A/B                   | Sweden      |
| Rexolin Chemicals A/B            | Sweden      |
| Federation Chemicals Ltd.        | Trinidad    |
| Plastiflex C.A.                  | Venezuela   |

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Sources: Moody's Industrial Manual (1976).  
Who Owns Whom in America (1974).

Annex 69

OWENS-ILLINOIS INC.: ASPECTS OF ITS GLOBAL OPERATIONS, VARIOUS YEARS, 1945-1976  
(Millions of US dollars and per cent)

| Year      | Operating income     |                 |                | Net income    |                 |                | Total assets         |                 |                | Employees |
|-----------|----------------------|-----------------|----------------|---------------|-----------------|----------------|----------------------|-----------------|----------------|-----------|
|           | Current value (1970) | Constant (1970) | Rate of growth | Current value | Constant (1970) | Rate of growth | Current value (1970) | Constant (1970) | Rate of growth |           |
| 1945      | 163.7                | -               | -              | 8.8           | -               | -              | 122.7                | -               | -              | n.d.      |
| 1950      | 282.9                | 475.5           | -              | 24.3          | 40.8            | -              | 193.7                | 325.5           | -              | 23        |
| 1955      | 370.3                | 539.8           | 2.1            | 27.1          | 39.5            | -0.5           | 280.4                | 408.7           | 3.9            | 34        |
| 1960      | 561.0                | 709.2           | 4.7            | 52.2          | 66.0            | 8.9            | 491.9                | 621.9           | 7.3            | 34        |
| 1965      | 825.8                | 1 012.8         | 6.1            | 67.2          | 82.4            | 3.8            | 698.7                | 856.3           | 5.5            | 53        |
| 1970      | 1 402.4              | 1 402.4         | 5.6            | 53.2          | 53.2            | -7.0           | 1 318.3              | 1 318.3         | 7.5            | 65        |
| 1975      | 2 273.2              | 1 568.8         | 1.9            | 87.3          | 60.2            | 2.1            | 1 947.9              | 1 344.3         | 0.3            | 67        |
| 1976      | 2 571.7              | 1 693.0         | 7.9            | 178.3         | 117.4           | 95.0           | 2 195.2              | 1 445.2         | 7.5            | 67        |
| 1950-1976 |                      |                 | 4.8%           |               |                 | 4.0%           |                      |                 | 5.7%           | 4.0%      |

Sources: Company reports; Company Form 10-K of US Securities and Exchange Commission; Moody's Industrial Manual.

Annex 70

OWENS-ILLINOIS INC.: LIST OF SUBSIDIARIES AND AFFILIATES, 1950

| Subsidiary or affiliate            | Capital share (%) | Country of incorporation |
|------------------------------------|-------------------|--------------------------|
| Blair Veneer Co.                   | 100               | USA-Vermont              |
| Vermont Plywood Inc.               | 100               | USA-Vermont              |
| Owens Brush Co.                    | 100               | USA-Ohio                 |
| Lauterbach Corp.                   | 100               | USA-Delaware             |
| American Structural Products Co.   | 100               | USA                      |
| Toledo Automatic Brush Machine Co. | 100               | USA-Ohio                 |
| Glassco Products Co.               | 100               | USA-Illinois             |
| Owens-Corning Fiberglass Corp.     | 50                | USA-Delaware             |

Source: Moody's Industrial Manual.

Annex 71

OWENS-ILLINOIS INC.: LIST OF SUBSIDIARIES AND AFFILIATES, 1965

| Subsidiary or affiliate                              | Capital share (%) | Country of incorporation |
|--|-------------------|--------------------------|
| Owens Inc.   | 100               | USA-Ohio                 |
| Owens-Illinois Inter-American Corp.                  | 100               | USA-Ohio                 |
| Marinette, Tomahawk & Western R.R. Co.               | 100               | USA-Wisconsin            |
| Forest Products Corp.                                | 100               | USA-Pennsylvania         |
| O-I Services Inc.                                    | 100               | USA-Ohio                 |
| O-I Timber Corp.                                     | 100               | USA-Wisconsin            |
| Sabine River & Northern R.R. Co.                     | 100               | USA-Texas                |
| Valdosta Southern R.R. Co.                           | 100               | USA-Florida              |
| São Raimundo, Participações e Representações Ltda.   | 100               | Brazil                   |
| Owens-Illinois de Venezuela C.A.                     | 100               | Venezuela                |
| Owens-Illinois of Canada Ltd.                        | 100               | Canada                   |
| Owens-Illinois of the Bahamas Ltd.                   | 100               | Bahamas                  |
| Durobor S.A.   | 99                | Belgium                  |
| Owens-Illinois International S.A.                    | 100               | Switzerland and Panama   |
| Manufacturera de Vidrios Planos C.A.                 | 96                | Venezuela                |
| Actien-Gesellschaft der Gerresheimer Glashuttenwerke | 76                | Germany (GFR)            |
| Kimble Italiana S.p.A.                               | 60                | Italy                    |
| Cristalería Peldar S.A.                              | 50                | Colombia                 |
| Cia. Industrial São Paulo e Rio Cisper               | 60                | Brazil                   |
| Nippon Electric Glass Co.                            | 450               | Japan                    |
| National Petro-Chemical Co.                          | 50                | USA                      |

Also holds shares of Container Corp. of America, Monsanto Co. and Pennsylvania Glass Sand Corp.

Source: Moody's Industrial Manual.



Annex 72

OWENS-ILLINOIS INC.: LIST OF SUBSIDIARIES AND AFFILIATES, 1976

| Subsidiary or affiliate                               | Capital share (%) | Country of incorporation |
|---|-------------------|--------------------------|
| Forest Products Corp.                                 | 100               | USA-S. Carolina          |
| Marionette, Tomahawk & Western Railroad Co.           | 100               | USA-Wisconsin            |
| Owens-Illinois Development Corp.                      | 100               | USA-Ohio                 |
| Owens-Illinois Inter-American Corp.                   | 100               | USA-Ohio                 |
| Sabine River & Northern Railroad Co.                  | 100               | USA-Texas                |
| Valdosta Southern Railroad Co.                        | 100               | USA-Florida              |
| O-I International Sales Corp.                         | 100               | USA-Michigan             |
| L.E. Smith Glass Co.                                  | 100               | USA                      |
| Gerresheimer Glas Aktiengesellschaft                  | 80.0              | Germany (GFR)            |
| Buender Glas GmbH                                     | 100               | Germany (GFR)            |
| Durobor S.A.  | 99.3              | Belgium                  |
| Emballages Laurent S.A.                               | 80.0              | France                   |
| Lily Cups   | 100               | Canada                   |
| Manufacturera de Vidrios Planos C.A.                  | 96.7              | Venezuela                |
| Owens-Illinois de Venezuela C.A.                      | 100               | Venezuela                |
| Owens-Illinois International S.A.                     | 100               | Panama                   |
| Bahamas Agricultural Industries Ltd.                  | 100               | Bahamas                  |
| Owens-Illinois International S.A.                     | 100               | Switzerland              |
| Kimble Italiana S.p.A.                                | 75.0              | Italy                    |
| Owens-Illinois de Puerto Rico                         | 80.0              | Puerto Rico              |
| Owens Insurance Ltd.                                  | 100               | n.d.                     |
| Papeteries d'Esplay                                   | 74.0              | France                   |
| São Raimundo Administração Participações e Rep. Ltda. | 100               | Brazil                   |
| Cia. Industrial São Paulo e Rio                       | 79.4              | Brazil                   |
| United Glass Ltd.                                     | 50.0              | Great Britain            |
| National Petro-Chemical Corp.                         | 50.0              | USA-Delaware             |

"The names of 24 subsidiaries included in consolidated financial statements and 4 non-consolidated subsidiaries at 31 December 1976, are omitted since, considered in aggregate as a single subsidiary, they would not constitute a significant subsidiary."

Some of the companies not included would be the following:

|                                       |       |               |
|---------------------------------------|-------|---------------|
| Hygenic-Lily Ltd.                     | ±50.0 | Canada        |
| Cristalería Peldar S.A.               | ±50.0 | Colombia      |
| Spessarter Hohlglaswerke GmbH         | ±50.0 | Germany (GFR) |
| Hellenic-Owens Elefsis Glass Co. S.A. | ±50.0 | Greece        |
| Kangar Consolidated Industries P.T.   | ±50.0 | Indonesia     |
| Nippon Electric Glass Co. Ltd.        | ±50.0 | Japan         |
| Sasaki-Owens Glass Co. Ltd.           | ±50.0 | Japan         |

/Annex 72 (Conclusion)

Annex 72 (Conclusion)

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|                                    |        |              |
|------------------------------------|--------|--------------|
| Hankuk Electric Glass Co. Ltd.     | ≤ 50.0 | Korea        |
| Ampolletas S.A.                    | ≤ 50.0 | Mexico       |
| Ampolmex S.A.                      | ≤ 50.0 | Mexico       |
| Cajas Corrugadas de México S.A.    | ≤ 50.0 | Mexico       |
| Cajas y Empaques de Occidente S.A. | ≤ 50.0 | Mexico       |
| Cajas y Empaques del Pacífico S.A. | ≤ 50.0 | Mexico       |
| Inmuebles Heda S.A.                | ≤ 50.0 | Mexico       |
| Kraft S.A.                         | ≤ 50.0 | Mexico       |
| Vidrio Neutro S.A.                 | ≤ 50.0 | Mexico       |
| Productos Kimax de México          | 100    | Mexico       |
| Consolidated Glass Works Ltd.      | ≤ 50.0 | South Africa |
| Giralt-Laporta S.A.                | ≤ 50.0 | Spain        |

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Sources: Moody's Industrial Manual and information supplied by the  
United Nations Center on Transnational Corporations.

Annex 73

CELANESE CORPORATION: LIST OF SUBSIDIARIES AND AFFILIATES, 1950

| Subsidiary or affiliate                                  | Capital share (%) | Country of incorporation |
|--|-------------------|--------------------------|
| The American Cellulose & Chemical Manufacturing Co. Ltd. | 100               | USA-Delaware             |
| Atlantic-Roseville Corp.                                 | 100               | USA-New Jersey           |
| Canadian Cellulose Products Ltd.                         | 100               | Canada                   |
| Celanese Lanese Corporation                              | 100               | USA-Delaware             |
| Celanese Pan American Co. Inc.                           | 100               | USA-Delaware             |
| The Celluloid Corp.                                      | 100               | USA-New Jersey           |
| Columbia Cellulose Co. Ltd.                              | 100               | Canada                   |
| Fort Branch Realty Corp.                                 | 100               | USA-Virginia             |
| Pabin Corp.  | 100               | USA-New York             |
| New London Fabrics Corp.                                 | 100               | USA-Delaware             |
| Williamsport Textile Corp.                               | 100               | USA-Pennsylvania         |
| Celatino S.A.  | 100               | Panama                   |
| Viscosa Mexicana S.A.                                    | 50                | Mexico                   |
| Celanese Mexicana S.A.                                   | 51                | Mexico                   |
| Viscosa Mexicana S.A.                                    | 50                | Mexico                   |

Source: Moody's Industrial Manual.

Annex 74

CELANESE CORPORATION: LIST OF SUBSIDIARIES AND AFFILIATES, 1965

| Subsidiary or affiliate                    | Capital share (%) | Country of incorporation |
|--|-------------------|--------------------------|
| Amcel Inc.                                 | 100               | USA-Delaware             |
| Pabin Corp.                                | 100               | USA-New York             |
| Dyeing Co. Inc. a/                         | 100               | USA-New York             |
| Pan Amcel Co. Inc.                         | 100               | USA-Delaware             |
| Chemcell Ltd.                              | 57.0              | Canada                   |
| Western Chemicals Ltd. of Canada           | 100               | Canada                   |
| Columbia Cellulose Co.                     | 27.6              | Canada                   |
| Celgar Ltd.                                | 100               | Canada                   |
| Skeena Kraft Ltd.                          | 60.0              | Canada                   |
| Química General S.A.                       | 40.0              | Mexico                   |
| Celanese Venezolana S.A.                   | 55.0              | Venezuela                |
| Cel Euro N.V.                              | 100               | Netherlands              |
| Amcel (United Kingdom)Ltd.                 | 100               | United Kingdom           |
| Champlin Petroleum Co.                     | 100               | USA-Delaware             |
| FESCO Inc.                                 | 100               | USA-Delaware             |
| Celanese Coatings Co.                      | 100               | USA-Delaware             |
| Celanese Colombiana S.A.                   | 51.3              | Colombia                 |
| Sayles-Biltmore Bleacheries Inc.           | 100               | USA-Delaware             |
| Fiber Industries Inc.                      | 62.5              | USA-Delaware             |
| Amcel Europe                               | 100               | Belgium                  |
| Celanese Mexicana S.A.                     | 48.2              | Mexico                   |
| Campco de México S.A.                      | 100               | Mexico                   |
| Cia. Petroquímica Brasileira Copebras      | n.d.              | Brazil                   |
| Mitsubishi Acetate Co. Ltd.                | n.d.              | Japan                    |
| Ticona Polymerwerke GmbH                   | n.d.              | Germany (GFR)            |
| C.A. Fibras Químicas Copebras Polyplastics | n.d.              | Brazil                   |

Source: Moody's Industrial Manual.

a/ Illegible.

Annex 75

CELANESE CORPORATION: LIST OF SUBSIDIARIES AND AFFILIATES, 1976

| Subsidiary or affiliate                  | Capital share (%) | Country of incorporation |
|--|-------------------|--------------------------|
| Amcel Co. Inc.                           | 100               | USA-Delaware             |
| Pan Amcel Co. Inc.                       | 100               | USA-Delaware             |
| Celanese Fibers Co.                      | 100               | USA                      |
| Camden Fiber Mills Inc.                  | 100               | USA                      |
| Pama Manufacturing Inc.                  | 100               | USA                      |
| Celanese Chemical Co.                    | 100               | USA                      |
| Celanese Plastics Co.                    | 100               | USA-Delaware             |
| Celanese Polimer Specialities Co.        | 100               | USA-Delaware             |
| Celanese Canada Ltd.                     | 56.6              | Canada                   |
| Millhaven Fibre Co. Ltd.                 | 50.0              | Canada                   |
| Fiber Industries Inc.                    | 62.5              | USA-Delaware             |
| Millhaven Fibre Co. Ltd.                 | 50.0              | Canada                   |
| Amcel Europe S.A.                        | 100               | Belgium                  |
| Celanese Piping Systems Inc.             | 100               | USA-Delaware             |
| Narmco Materials Inc.                    | 100               | USA-Delaware             |
| Stein, Hall & Co. Inc.                   | 100               | USA-Delaware             |
| Meyhall Chemical AG and Meypro AG        | 100               | Switzerland              |
| Meypro B.V. and Vamus B.V.               | 100               | Holland                  |
| Hager & Kassner GmbH                     | 55.0              | Germany (GFR)            |
| Plast-Labor S.A.                         | 100               | Switzerland              |
| Stein, Hall Ltd.                         | 100               | Canada                   |
| Celanese Colombiana S.A.                 | 49.2              | Colombia                 |
| Polyplastics Co. Ltd.                    | 45.0              | Japan                    |
| Ticona Polymerwerke GmbH                 | 41.0              | Germany (GFR)            |
| Celanese Mexicana S.A.                   | 40.0              | Mexico                   |
| Celanese do Brasil Fibras Químicas Ltda. | n.d.              | Brazil                   |
| Alma Paint & Varnish Co. Ltd.            | n.d.              | n.d.                     |
| Celanese Venezolana S.A.                 | 73.2              | Venezuela                |
| Rayon Celanese Peruana S.A.              | 37.2              | Peru                     |
| Indal-Industries de Alfaro Lda.          | n.d.              | Portugal                 |
| Pakistan Gum & Chemicals Ltd.            | 60.0              | Pakistan                 |
| Stein, Hall (Pty) Ltd.                   | n.d.              | South Africa             |
| Hindustan Gum & Chemicals Ltd.           | 50.0              | India                    |
| Pumyang Industrial Co. Ltd.              | 40.0              | Korea                    |

Source: Moody's Industrial Manual.

Annex 76

CELANESE CORP.: ASPECTS OF ITS GLOBAL OPERATIONS, VARIOUS YEARS, 1945-1976

(Millions of US dollars and percentage)

| Year      | Operating income     |                 |                | Net income    |                 |                | Total assets  |                 |                | Employees           |                |
|-----------|----------------------|-----------------|----------------|---------------|-----------------|----------------|---------------|-----------------|----------------|---------------------|----------------|
|           | Current value (1970) | Constant (1970) | Rate of growth | Current value | Constant (1970) | Rate of growth | Current value | Constant (1970) | Rate of growth | Number of employees | Rate of growth |
| 1945      | 104.2                | -               | -              | 7.6           | -               | -              | 137.3         | -               | -              | n.d.                | -              |
| 1950      | 232.5                | 390.8           | -              | 40.4          | 67.9            | -              | 274.4         | 461.2           | -              | 18                  | -              |
| 1955      | 177.5                | 258.7           | -6.6           | 15.4          | 22.4            | -16.9          | 319.9         | 466.3           | 0.2            | 13                  | -5.6           |
| 1960      | 264.1                | 333.9           | 4.3            | 19.9          | 25.2            | 2.0            | 401.0         | 507.0           | 1.4            | 13                  | -              |
| 1965      | 862.3                | 1 056.7         | 21.2           | 64.9          | 79.5            | 21.1           | 1 418.6       | 1 738.4         | 22.8           | 37                  | 19.0           |
| 1970      | 1 036.7              | 1 036.7         | -0.3           | 51.0          | 51.0            | -7.1           | 1 610.7       | 1 610.7         | -1.3           | 24                  | -7.5           |
| 1975      | 1 900.0              | 1 311.2         | 4.0            | 50.0          | 34.5            | -6.3           | 1 908.0       | 1 316.8         | -3.3           | 37                  | 7.5            |
| 1976      | 2 123.0              | 1 397.6         | 1.1            | 69.0          | 45.4            | 31.6           | 1 910.0       | 1 257.4         | -4.5           | 32                  | -13.5          |
| 1950-1976 |                      |                 | 4.8%           |               |                 | -1.5%          |               |                 | 3.8%           |                     | 2.2%           |

Sources: Company reports; Company Form 10-K of US Securities and Exchange Commission; Moody's Industrial Manual.

VII. BIBLIOGRAPHY

(a) Official Colombian materials

- Banco de la República, XLVII y XLVIII Informe anual del gerente a la junta directiva, 1970 y 1971, segunda parte, Bogotá, 1973.
- Banco de la República, XLVIII Informe anual del gerente a la junta directiva, 1971, Bogotá, 1972.
- Banco de la República, LII Informe anual del gerente a la junta directiva, 1975, Bogotá, 1976.
- Banco de la República, División de Análisis Económico, Oficina de Cambios, Registro de Inversiones Extranjeras en Colombia, Bogotá, 1977.
- Banco de la República, División de Análisis Económico, Oficina de Cambios, Exportaciones manufacturadas de empresas con inversión extranjera directa, Bogotá, 1973.
- Banco de la República, División de Análisis Económico, Oficina de Cambios, Empleo directo generado por empresas manufactureras con inversión extranjera, Bogotá, 1973.
- Banco de la República, División de Análisis Económico, Oficina de Cambios, Importaciones y balanza comercial de la industria manufacturera con inversión extranjera directa, Bogotá, 1974.
- Banco de la República, "Empresas mixtas en Colombia", by George Kalmanoff Revista del Banco de la República, (XXXI, 366), Bogotá, 20 April 1958.
- Departamento Administrativo Nacional de Estadística (DANE), Anuario de Comercio, Bogotá, various years.
- Departamento Administrativo Nacional de Estadística (DANE), Anuario de Estadísticas Industriales, 1972, Bogotá, 1975.
- Departamento Administrativo Nacional de Estadística (DANE), Cifras y coeficientes de la industria manufacturera nacional, 1964-1966, Bogotá, 1969.
- Departamento Administrativo Nacional de Estadística (DANE), Industria manufacturera nacional, Bogotá, various years.
- Departamento Administrativo Nacional de Estadística (DANE), III Censo industrial, 1970, Bogotá, 1976.
- Departamento Administrativo Nacional de Estadística (DANE), Boletín mensual de estadística, Bogotá, various issues (see below):

/"Inversión extranjera

- "Inversión extranjera en Colombia", (Nº 239, April 1971).  
"La industria química en Colombia", (Nºs 270-271, January-February 1974).  
"La industria del caucho en Colombia", (Nº 272, March 1974).  
"Concesiones forestales 1900-1968", (Nº 285, April 1975).  
"Inversión extranjera en la industria manufacturera, I", (Nº 302, September 1976).  
"Inversión extranjera en la industria manufacturera, II", (Nº 303, October 1976).

Departamento Nacional de Planeación, Revista de Planeación y Desarrollo, Bogotá, various issues (see below):

- "Análisis general de la estructura arancelaria colombiana vigente en febrero de 1975", (Vol. VIII, Nº 1), January-April 1976.  
"Industria del vidrio", (Vol. IX, Nº 1), January-March 1977.  
"El crecimiento de las exportaciones menores y el sistema de fomento de las exportaciones en Colombia", (Vol. IX, Nº 2), April-June 1977.

PROEXPO, Fondo de Promoción de Exportaciones 1967-1977, Puerta Central de Información, Bogotá, 1977.

Ministerio de Desarrollo Económico, Superintendencia de Industria y Comercio, Secretaría Técnica del Comité, Recuento de las labores del Comité de Regalías de Colombia, 1967-1977, Bogotá, 1977.

Instituto de Fomento Industrial, Informe al Gerente, Bogotá, various years.

Ministerio de Fomento, Memoria del Ministro de Fomento, 1966-1968, Bogotá, 1968.

Ministerio de Minas y Energía, Memoria, Bogotá, various years.

Ministerio de Minas y Energía, Bases para un plan energético nacional, Bogotá, October 1977.

(b) Other materials

Asociación Nacional de Industriales de Colombia (ANDI), "Nuestra industria; el sector de pulpa, papel y cartón", Revista bimestral, Nº 31, Bogotá, n.d.

Bernhardt R., Jaime, "Ubicación del sector textil en el Grupo Andino y en la ALALC", Colombia Textil, Nº 43, Bogotá, June 1977.

Berry, Albert and Francisco Thoumi, "Import Substitution and Beyond: Colombia", World Development, Vol. 5, Nºs 1/2, 1977.

Canada, Report of the Royal Commission on Corporate Concentration, Supply and Services Canada, Ottawa, March 1978.



- Centro de Investigación y Educación Popular, Controversia: las multinacionales en el mundo y en Colombia, CINEP, Bogotá, 1977.
- CEPAL, Análisis y proyecciones del desarrollo económico, III El desarrollo de Colombia, E/CN.12/365/Rev.1, México, November 1956.
- CEPAL, External Financing in Latin America, E/CN.12/Rev.1, New York, 1965.
- CEPAL, Colombian Export Promotion Policy by Ricardo Ffrench-Davis and José Piñera Echeñique, ST/CEPAL/Conf.59/L.3, Santiago, 1976.
- CEPAL, Colombia: la política de promoción de las exportaciones - encuesta a los exportadores, Bogotá, 1976.
- CEPAL, Indicators of Economic and Social Development in Latin America, 1976, E/CEPAL/1021, November 1976.
- CEPAL, "Series históricas del crecimiento de América Latina", Cuadernos Estadísticos de la CEPAL, Santiago, Chile, 1978.
- Cepeda, Fernando, "La influencia de las Agencias Internacionales en el proceso de desarrollo de Colombia", Estudios Internacionales, XI, July-September 1978.
- Chandler, Geoffrey, "The Innocence of the Oil Companies", Foreign Policy, No. 27, Summer 1977.
- Fanning, Leonard M., American Oil Operations Abroad, McGraw-Hill, New York, 1947.
- Fund for Multinational Management Education; Council of the Americas; United States Council of the International Chamber of Commerce and the George Washington University, Public Policy and Technology Transfer: viewpoints of the U.S. Business, Vols. I-III, March 1978.
- Great Britain, Natural Environment Research Council, Institute of Geological Sciences, Mineral Resources Division, Statistical Summary of the Mineral Industry, 1944-1950 and 1967-1971, London, 1951 and 1973.
- Hymer, Stephan Herbert, The International Operations of National Firms: a study of foreign direct investment, The MIT Press, Cambridge, Mass., 1976.
- IDB, The External Public Debt of the Latin American Countries, Washington, D.C., April 1978.
- IBRD, Economic Growth of Colombia: problems and prospects, The Johns Hopkins University Press, Baltimore, 1972.
- IMF, Balance of Payments Yearbook, Volume 28, Washington D.C., 1977.

/IMF, International

- IMF, International Financial Statistics, Volume XXX, Nº 5, Washington, D.C., May 1977.
- Matter, Konrad, Inversiones extranjeras en la economía colombiana, Ediciones Hombre Nuevo, Medellín, 1977.
- Meller, Patricio; Soledad Leniz y Carlos Swinburn, "Comparaciones internacionales de concentración industrial en América Latina", Ensayos ECIEL, Nº 3, August 1976.
- Misas, Gabriel, Contribución al estudio del grado de concentración en la industria colombiana, Ediciones Tiempo Presente, Bogotá, 1975.
- OECD, Development Assistance Committee, Stock of Private Investments by DAC Countries in Developing Countries, Paris, various issues.
- Paleaz, Ramiro, "El comportamiento de la Banca Extranjera en Colombia", Información y Documentación CINDA, Santiago, Chile, May 1978.
- Penrose, Edith, The Large Firm in Developing Countries: the international petroleum industry, The MIT Press, Mass., 1968.
- Poveda Ramos, Gabriel, Políticas económica, desarrollo industrial y tecnología en Colombia, 1925-1975, Colciencias, Bogotá, 1977.
- Reveziz, Edgar and Diego Otero, Análisis de algunos impactos regionales de tres complejos industriales en Colombia, CEDE, Bogotá, October 1977.
- Silva Colmenares, Julio, Los verdaderos dueños del país: oligarquía y monopolios en Colombia, Fondo Suramérica, Bogotá, 1977.
- United States, Bureau of Mines, Minerals Yearbook, Volume III - Area Reports; International, Washington D.C., various years.
- United States, Department of Commerce, Investment in Colombia: Conditions and Outlook for United States Investors, Washington D.C., 1953.
- United States, Department of Commerce, Survey of Current Business, Washington D.C., various years.
- (c) Other sources
- Bolsa de Bogotá, Manual del Mercado Bursatil, 1977, July 1977.
- Business Latin America
- Business Week
- Company annual reports
- Economía y Sociedad
- El Informador ALALC
- Eurooney
- Europe's 5,000 Largest Companies, 1977

/Fortune

Fortune

Guia Interinvest

Mercado

Moody's Industrial Manual

NACLA's Latin America & Empire Report

Progreso

Visao

Who Owns Whom

