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"Historic Evolution of Peru's Private Sector, 1950-1970"

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Introduction

The purpose of this study is to analize the evolution of Peru's private sector during 1950-1970. To attain this objective we will apply a historical-economic analysis.

In the first chapter we present the evolution of the whole Peruvian economy for the period of the study. Peru is visualized in the international context and then we try to give some political and economic inside of the country. Since Peru is viewed as a small open economy, special emphasis is given to the external sector in the analysis of the sectorial development of the economy.

The second chapter deals with a very crucial question for this study: the definition of the private sector. This sector as will be seen is difficult to visualize because of its lack of homogeneity, however, we have applied a pragmatic approach based on "successive approximations". We try to measure the size of this sector and study the power groups and their integration between the different sectors.

The third chapter deals with the manufacturing sector, this sector has been chosen for a deeper analysis because it has become during this period the more dynamic one and a relatively less concentrated one. Several aspects of the manufacturing - sector are discussed: growth, structure, import substitution, linkages, efficiency, concentration and ownership.

The fourth chapter deals with the main instruments of economic policy and its relations with the different sectors of the economy. Tariff, exchange, rate, fiscal and monetary policy are analyzed.

Finally, the main conclusions of the study are analyzed in chapter five.

1. The evolution of the Peruvian economy, 1950-1970

1.1 The Peruvian economy in the international context

Peru can be considered a small, open to international trade and underdeveloped middle-income country. It is a small country in terms of population, production and international trade. During 1950-1970, Peru had 0.4 percent of the world population, 0.2 percent of world GDP and 0.17 percent of world trade.

Comparing the Peruvian economy with USA and UK one can also see that Peruvian GDP represented 0.5 and 3 percent of the GDPs of the above countries respectively. In terms of GDP per capita it represented 8 and 16 percent of the GDP per capita of the USA and UK respectively (see table 1.1).

In relation to trade Peru is not only small in terms of its share on world trade but also in the lack of power to influence the prices of the products it exports or imports. In other words Peru is a "price taker". From the exports side Peru can be seen as a price taker, since during the period we are considering it produced 4.5 percent of the world copper, 13.3 percent of world silver, 6.7 percent of world zinc, 1.1 percent of world iron and 0.4 percent of world oil (the latter figure corresponds to 1981). In fishmeal, Peru became the major world producer but it could not influence its price because of the existence of very close substitutes (e.g. soy bean). Peru can be seen as an open economy to international trade, because the share of exports in its GDP has been very significant (between 14 and 23 percent)[1] and it has had several major export products (i.e. representing 20 percent or more of total exports). The major export products of Peru during

1. Reynolds (1965) pp. 258-259.

1950-1970 were the following: cotton 20-40 percent (1950-1960), and fishmeal 22-58 percent (1959-1976).
Peru can be visualized as a middle income underdeveloped country, whose GDP per capita (in 1980) was 37 percent of world GDP per capita and 8 percent of USA-GDP per capita. On the other hand, Peruvian GDP per capita is 3.6 times the GDP per capita of the low income underdeveloped contries.[2] In terms of personal income distribution, Peru has a more unequal distribution tham countries such as Philippines, Colombia or Kenya. The Gini coefficients for these countries are 0.49, 0.60, 0.64 respectively, which are lower than 0.76 which corresponds to Peru.[2]

During the 1950s and 1960s the world economy was characterized by a high rate of growth in production and trade. These decades can be labelled "the golden age" compared to the low growth decades of 1970 and 1980. The world GDP per capita annual rate of growth was 3.1 percent for 1955-1970 and the rate of growth of world real exports for 1960-1970 was 9 percent (see table 1.2). During 1960-1970 the annual average rate of inflation was 3 percent for the Less Developed Countries (LDCs) and 4 percent for the industrial capitalist economies. Inflation was at a very low rate in worldwide terms.
The distribution of world GDP by countries shows that in the 1950s the USA was the major economy representing 40 percent of total GDP but its share was reduced to 30 percent in world GDP. Japan, the EEC and the socialist countries were the ones who increased more its share in world GDP. (see table 1.2)

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2. Jain (1975)

Despite the high rates of growth experienced by the world and USA during 1950-1970, this period was subject to several recessions which were felt in the USA during the following years: 1953, 1958, 1961, 1966-67 (a mini-crises) and 1970.[1] The crises in the Peruvian economy were felt in 1952-1953, 1957-1959 and 1967-1968. The booms due to the Korean War in the early 1950s and the Vietnam war in the early 1960s were also felt by the Peruvian economy. We can therefore conclude that there was a close synchronization between the USA crises and booms with the Peruvian ones respectively. This synchronization increased as USA became the major trading partner of Peru and the major sender of capital flows to the latter.

1. Mandel (1978) p. 54.

Table 1.1

GDP and GDP per capita comparisons between Peru, the USA and UK
(percentage)

Year	(GDP-PE) / (GDP-USA)	(GDP-PC-PE) / (GDP-PC-USA)	(GDP-PE) / (GDP-UK)	(GDP-PC-PE) / (GDP-PC-UK)
1950	0.35	6.7	3.10	19.3
1960	0.48	7.5	3.13	16.1
1970	0.63	9.3	4.96	20.1

Source: Boloña (1981) Table II A-2 p. 349.

Table 1.2

Rates of growth of GDP, Exports and GDP distribution by
groups of countries
(percentage)

Groups	GDP per capita Growth 1955-70	Export growth 1960-1970	CDP Structure	
			1955	1980
1. Industrial countries with market economies	3.6	8.5	70.6	64.8
2. Oil exports with high incomes	4.7	10.9	0.1	1.4
3. Developing countries	3.1	5.0	20.7	21.5
3.1 Low income	1.6	5.0	8.1	4.8
3.2. Middle income	3.5	5.4	12.6	16.7
4. Socialist countries	5.8	9.0	8.6	12.4
World	3.1	9.0	100.0	100.0

Source: World Bank (1982)

1.2 The Political and economic internal context

i) The Administration of Bustamante y Rivero (July 1945-October 1948)

The main problem that Bustamante y Rivero Administration had to face was the adjustment of the Peruvian economy in the past World War II period. After the war, Peruvian exports suffered a severe decline, this situation induced President Bustamante y Rivero to maintain the exchange controls introduced by the former President Prado in June 1945.

> "According to Bustamante y Rivero, the chief economic problems of 1945-1948 were (1) a food scarcity, (2) inflationary control, and (3) the lack of foreign exchange".[1]

Exchange controls were tightened during the balance of payment crisis of 1947-1948, price controls were imposed but the system became so inefficient that it collapsed. High rates of inflation were experienced (around 25 percent), the dollar devalued by 116 percent in the free market and food shortages were experienced. Social tension and unrest were evident throughout Peru. The situation was worsened by the inability to obtain external financing because of the default in the 1930s. Furthermore, Gildemeister, the biggest sugar planter in Peru, publicly defied Bustamante's law which obliged all exporters to turn in their foreign exchange to the Central Bank. The deterioration of the political and economic situation led to the military coup of October 1948.

ii) The Odria's Coup of October 1948

The military coup led by General Odria which overthrew President Bustamante y Rivero in October 1948 had to deal with two fronts.

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1. Van Slooten (1968) p. 10.

In the political side Odría had to be firm and control the APRA party (a populist-leftist party at that time) he decided to outlaw and persecute the party members and applied several social reforms, and secondly on the economic front he needed to return to more export promotion policies (i.e a liberalization of the economy) in order to satisfy the interests of the exporters group who had backed him in the coup.

Economic policy measures were oriented towards the restoration of the market mechanism in the economy in order to equilibrate the balance of payments, to eliminate the fiscal deficit and to control inflation. Measures were taken to restore the lost dynamism of the traditional export sector and tranform it once again into a major source of economic growth. The most significant measures of economic policy adopted were: attraction of foreign investment to extrative industries via the mining code and the petroleum and electricity laws, the elimination of most subsidies and price controls, dismantling of trade and exchange controls, and the adoption of a new and freer foreign exchange regime, reduction of export taxes, and the restoration of the import tariff's fiscal objective. Many of these policies were adopted following the advice of the Klein Mission (presided over by Julius Klein) who advised Odría's government from 1949 to 1955. During Odría's period the Peruvian economy suffered a balance of payment crises in 1952-53 which caused several difficulties to this government.

iii) <u>The Prado Administration (July 1956-June 1962)</u>

Manuel A. Prado, former president of Peru during 1939 1945, was re-elected in July 1956 when he ran against Belaunde. Prado, with the support of Odría and the APRA, managed to defeat Belaunde. "The Prado Administration can be divided into three definite time periods, each period having

distinct economic policy objectives. From July of 1956 through 1957, the principal policy objective appears to have been the strengthening of the Public accounts in view of the commitments made by Odría with respect to government salary increases and public work projects. During 1958-1960 the major policy objective was stabilization which implied inflation control and the restoration of balance of payments equilibrium. During 1961-1962 the stated objectives of economic policy came to bear on the requirements of long-term and social development"[1].
During 1957-1959 balance of payment crisis, the Prado administration had to impose severe stabilization measures in order to get a stand-by from the IMF and after this process in 1960 the economy was to experience one of the major export booms in its history based on copper, iron and fishmeal exports, when the investments of Toquepala and Marcona yielded its fruits.
The Prado administration did not complete its full term in office, a military Junta headed by General Perez Godoy annulled the presidential election of 1962 (it was considered fraudulent). The military junta was a "Caretaker government" which arranged for new elections in June 1963.

iv) <u>The Belaunde Administration (July 1963-October 1968)</u>

Belaunde won the 1963 election defeating the Odría and Haya de la Torre coalition. His government program was based on political issues such as the nationalization of the International Petroleum Company-IPC (a subsidiary of the Standard Oil), Agrarian Reform, the formation of "Cooperación Popular". The economic issues were related to the building of infrastructure to decentralize Peru, from Lima, the promotion of the manufacturing sector, the investment in education and the implementation of a development planning process.

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1. Van Slooten (1968) pp. 32-33

Belaunde's administration started its activities in the mid of one of the most spectacular export boom in Peru's economic history, based on fishmeal and mineral exports. The boom lasted until 1967 when the economy suffered a balance payment crisis, this deterioration of the economic activity added to a deterioration of the political front (the unsettlement with IPC, the guerrillas since 1964, the problem of smuggling and the lack of majority in Congress) led to the military coup headed by General Velasco Alvarado and the beginning of the so called 'Peruvian Revolution' based on the promise of 'Structural Reforms at any cost.'

1.3 Production, employment and income distribution

The annual average rates of growth (a.a.r.g.) of peruvian GNP by quinquenias for 1950-1970 are given in table 1.3. The first and the third quinquenia were periods of very high growth (7 percent per year). The first one is explained by the economic recovery from the 1947-48 crisis experienced under the Bustamante y Rivero administration, and because of the favorable effects on exports due to the Korean war. The second period coincides with the export boom experienced during the first half of the 1960s due to fishmeal and minerals.

Population in 1961 was 9.9 million inhabitants growing at an a.a.r.g. of 2.9 percent (see table 1.3), this high rate of growth contributed to increase urban population because of internal migration from 47 to 53 percent between 1961 and 1972. Lima, the Capital of Peru, was the most populated department of Peru increasing its share in the total population from 21 to 26 percent during 1961-1972. The departments that follow Lima in terms of population are: Cajamarca, Piura, La Libertad and Junín, each one with less than 7 percent of the population of Peru.

The population able to work (from 15 to 64 years) for this period was 52 percent of total population. Furthermore, Peruvian population can be considered a very young one since 45 percent of the total population is under 14 years old.

Employment distribution for 1950, 1961 and 1970 is given in table 1.4. From it we can conclude that employment in the agricultural sector has decreased significantly from 59 percent to 48 percent in twenty years explained mainly by the process of internal migration from rural to urban areas. On the other hand, the sector which has received most of this work force has been the service sector (mainly the commercial sector in the form of street venders and the other forms which can be labeled as the informal sector).

Table 1.3

Peruvian GNP and Population, 1950-1972

Period	Annual Average Rate of Growth of GNP (%)		Year	Population (millions)	Population Rate of Growth
	Current	Real			
1950-54	17	7	1940	6.2	
1955-59	12	3	1961	9.9	2.1
1960-64	16	7	1972	13.5	2.9
1965-69	17	3			

Source: BCR

Table 1.4

Employment Distribution for Peru by Productive Sectors, 1950-1970

Sectors	1950	1961	1970
Agriculture	59	53	48
Mining	2	2	1.5
Manufacturing	13	13	13
Construction	3	3	4
Commerce	7	9	11
Government	4	5	7
Others	12	15	15.5
TOTAL	100	100	100

Source: BCR

The manufacturing sector has demonstrated its inability to absorb labour since it has maintained its relative share at a 13 percent level. Finally the mining sector can be considered one in which its extremely high capital intensity makes it almost impossible to absorb labour in a significant way.

The figures for unemployment in Peru are not reliable because of the crude way they are collected, however and for illustrative purposes we can point out that the figures for open unemployment increased from 2 percent of the labour force in 1940, to 5.5 percent in 1961 and 11 percent in 1972. These figures show a persistent and continuous increase in unemployment through time and in the present it is very likely that these figures continue to increase.

With respect to the concept of underemployment, it has been estimated that in 1969, 21 percent of the labour force was in that condition and by 1971, 28 percent experienced this situation.

Income distribution can be of several categories: functional, personal or regional. Functional income distribution in Peru during 1950 was characterized by a relative share of wages in national income of 39 percent and 16 percent for profits. After 20 years we can notice that wages increased their share in almost 10 percentage points and profits and interests doubled theirs. The income categories which reduced their relative importance were income of independent workers and rent from real estate (See table 1.5).

Personal income distribution shows a very clear picture of Peru's highly unequal distribution. According to the studies of Webb and Figueroa for 1961, one can conclude that the poorest 10 percent of the labour force receives 1 percent of National Income and the richest 10 percent, 53 percent. The richest 1 and 5 percent of the labour force receives 31 and 43 percent of National Income (see table 1.6).

Table 1.5

Functional Income Distribution for Peru, 1950-1970
(Percentage)

Income Categories	1950	1960	1970
Wages	39	46	48
Income of independent workers	36	27	25
Property rent	8	5	2
Profits of firms	16	20	32
Interests	1	2	2
TOTAL	100	100	100

Source: BCR

Table 1.6

Personal Income Distribution in Peru, 1961

(percentage)

Labour force Deciles	Personal Income	National Income
I	1.0	1.0
II	1.5	1.4
III	2.2	2.0
IV	3.3	3.0
V	4.3	4.1
VI	5.9	5.5
VII	7.6	7.0
VIII	9.8	9.2
IX	15.2	14.0
X	49.2	52.8
(richest 5%)	(39.0)	(43.8)
(richest 1%)	(25.4)	(30.5)

Source: Webb y Figueroa (1975) Table 1 p. 29.

The Gini coefficient for Peru is 0.76 one of the highest in Latin America and in the rest of the world except for some African and Asian countries. The regional income distribution shows that in 1961 the distribution of national income and population by departments was the following (see table 1.7):

The Richest Departments	% of National Income	% of Population
Lima-Callao	42.5	22.0
Moquegua	0.7	0.5
Tacna	1.2	0.7
Ica	3.0	2.5
Arequipa	4.3	3.9

The Poorest Departments	% of National Income	% of Population
San Martin	0.8	1.6
Ayacucho	2.1	4.1
Huanuco	1.7	3.4
Huancavelica	1.7	3.0
Apurimac	1.5	2.9
Cajamarca	4.2	7.5
Loreto	2.3	3.9

Table 1.7

National Income by Departments, 1961

Department	% of National Income	% of Population	Per capita Income as % of National Average
1. Amazonas	0.7	1.2	58.4
2. Ancash	4.3	5.8	73.9
3. Apurímac	1.5	2.9	51.9
4. Arequipa	4.3	3.9	110.6
5. Ayacucho	2.1	4.1	49.8
6. Cajamarca	4.2	7.5	55.8
7. Cuzco	4.5	6.2	72.2
8. Huancavelica	1.7	3.0	55.3
9. Huánuco	1.7	3.4	50.2
10. Ica	3.0	2.5	121.5
11. Junín	4.6	5.2	88.3
12. La Libertad	4.8	5.8	81.4
13. Lambayeque	3.0	3.3	88.0
14. Lima-Callao	42.5	22.7	191.5
15. Loreto	2.3	3.9	57.6
16. Madre de Dios	0.2	0.2	83.6
17. Moquegua	0.7	0.5	139.8
18. Pasco	1.5	1.4	106.6
19. Piura	5.5	6.6	82.7
20. Puno	4.4	7.0	62.6
21. San Martín	0.8	1.6	45.9
22. Tacna	1.2	0.7	185.2
23. Tumbes	0.5	0.6	94.3
Total	100.0	100.0	100.0

Source: BCR

1.4 Sectorial Development

The productive structure of the Peruvian economy in 1950 was the following: Agriculture 23 percent, mining 5 percent, manufacturing 14 percent and construction 5 percent. After 20 years agriculture reduced its relative share to 15 percent, mining increased to 6 percent, manufacturing increased to 20 percent while construction reduced its participation to 4 percent (see table 1.8). These developments can be visualized better if one divides this period in two. The first one, (1950-1960) which coincides with the Odria and Prado administration was characterized by the liberalization of the economy, the promotion of traditional exports, the attraction of foreign direct investment into mining and oil exploration, and the very fast development of the fishmeal industry in Peru. The results are given in table 1.9, the most dynamic sectors in terms of real GDP growth were fishing, mining and Public utilities. Manufacturing grew significant rates following the general recovery of the economy, however, it could have grown at higher rates if more aggressive Import Substitution policies would have been implemented. The less dynamic sectors were agriculture (which experienced very low rates of growth during the whole period because of the unfavorable policies adopted) construction and government.

The second subperiod coincides mainly with the Belaunde administration. According to the economic policies he adopted such as Import substitution at any cost, construction of infrastructure and increase in social services (e.g. education) the most dynamic sectors were manufacturing, construction and government. Fishing continued to be a very dynamic industry mainly because of its own development. The sectors that suffered in terms of lower rates of growth were agriculture, mining (since no new foreign investments were agreed during this subperiod) and Housing property.

Table 1.8

Distribution of Peruvian GNP by Sectors, 1950-1970

Sectors	1950	1960	1970
Agriculture	22.6	20.9	15.1
Fishing	0.4	1.6	2.3
Mining	4.5	7.1	5.5
Manufacturing	13.6	16.6	20.0
Construction	5.1	4.2	3.5
Electricity, gas and water	0.6	0.7	1.0
Housing Property	8.7	6.8	5.2
Government	8.8	7.9	8.1
Others	35.7	34.2	39.3
GNP	100.0	100.0	100.0

Source: BCR

Table 1.9

Peruvian Real GNP Growth by Sectors, 1950-1970
(percentage)

Sectors	1950-55	1955-60	1960-65	1965-70
Agriculture	4.9	3.6	2.1	2.0
Fishing	20.7	25.6	7.8	10.3
Mining	8.6	11.4	3.0	2.2
Manufacturing	7.8	6.7	8.9	5.8
Construction	10.0	-3.7	7.7	-0.4
Electricity, gas and water	2.9	13.8	11.8	6.2
Housing Property	2.1	2.8	3.1	2.1
Government	4.1	3.8	7.7	3.6
Others	6.2	3.2	8.5	5.3
GNP	6.0	4.3	6.6	4.3

Source: BCR

1.5 The External Sector

The Peruvian External Sector has experienced three major long-run export cicles, of approximately 50 years each, between 1830 and the present. The first cicle ran from 1830 to 1885 and is usually referred as the Guano Period. The second export cicle covered the years 1885-1935 and its major export productions were sugar, cotton, rubber, copper, silver, and petroleum. The third major export cicle ran from 1935 to 1979, attaining its peak during the 1950s and 1960s, and slumping during the world economic crisis of 1974-1975 and the Peruvian crisis of 1975-1979.

The third cicle (1936-1979) was characterized as one with the lowest export quantum growth (the annual average rate of growth, a.a.r.g. was 4.4 per cent), while the a.a.r.g. for export prices was the highest for this cicle (that is 12.1 per cent). This cicle also showed higher export instability indices in terms of quantum prices and volume.

In relation to commodity concentration, this period was more concentrated than the second cicle but less concentrated than the first one. The major export products were the following: cotton (1935-1960), fishmeal (1959-1976), copper (1977-1979), petroleum (1978-1979), and non-traditional exports (1977-1979) (see table A. 2.4). The geographical concentration of exports during 1950-1970 has been a very high one. The USA was our major export buyer representing between 23-42 per cent, Great Britain decreased its relative share in Peruvian exports from 24 to less than 2 per cent, Germany and Japan increased its share from 4 to around 15 per cent.

The concept of "returned value" has been applied for export economies during the 1960s and is defined as the share of the total value of production and capital formation in the Export Sector which is paid to domestic factors of production. For the period 1950-1979 the major export products showed higher returned values than the other cicles. For example, sugar had a returned value of 93 per cent (1967); copper, 61-79 per cent (1950-1972).

Imports follwed a similar trend to exports except during the balance of payment crisis periods in which it presented higher levels than the former. The structure of Peruvian imports during 1950-1970 was the following:

Consumer non-durables, 11 per cent
Consumer durables, 10 per cent
Fuels and lubricants, 3 per cent
Inputs for agriculture, 2 per cent
Inputs for manufacturing, 34 per cent
Construction material, 4 per cent
Capital goods, 22 per cent
Transport equipment, 9 per cent
Others, 5 per cent (see table A. 1.5)

The terms of trade for the Peruvian economy during 1950 to 1970 were improving except for the late 1950s.

The balance of trade showed surpluses except for the years 1952-53, 1955-58 in which the deficit reached US$ 70'000,000 and 1966-67 when the deficit had reached its peak of US$ 68'000,000. The balance of services has been traditionally negative and the current account balance has also been traditionally negative except for some years of recovery or boom, such as 1950-51, 1960-64 (see table A. 1.3).

2. The Private Sector

2.1 Definition

To define the Private Sector in any country is a major undertaking. One can take several approaches, but a sensible one is based in "successive approximations". For instance one must start saying that the Private Sector is one which is not included in the Public Sector. The latter was constituted by the central government, local governments, public institutions and public enterprises. For the period 1950-1970 it is not difficult to identify the Public Sector, public enterprises were limited in number (18 in 1968 compared to 152 in 1982) and were easily identifiable : SOGESA (steel industry), Chachimayo (Fertilizers), Empresa Petrolera Fiscal (Petroleum), SIMA (Naval Shipyard), Sectorial Development Banks (v.g. Banco de Fomento Agropecuario, Banco Industrial and Banco Minero), etc. These few Public enterprises had a relatively small significance in their corresponding sectors, and several of them were created in the 1960s.

These definition of the Private Sector as the difference between the Total economy and the Public Sector has problems of its own. First, one has the impression that the Private Sector is an homogeneous one but in reality it is far from it. We can subdivide the Private Sector according to several criteria : Modern or traditional, formal or informal, large or small productive units or several combinations of these categories.

When we deal with the Private Sector we will tend to concentrate on the modern-formal sector. The reasons are relatively simple : the lack of data on the traditional sector and secondly because the Peruvian national accounting figures cover

mainly the modern sector. This bias means that the Private Sector has a better coverage in industrial groups such as : mining, manufacturing, energy and construction. Poor coverage can be expected in agriculture, commerce and other services in which the importance of the informal sector is very significant.

2.2 The Private and the Public Sector

The size of Private Sectors can be measured as the difference between the total economy and the size of the Public Sector, bearing in mind the limitations we have discussed in the former section. The size of the Public Sector is measured according to different proxies which we will apply here. For instance government expenditures as a percentage of GNP, (GG/GNP), government consumption to Total consumption (CG/CT), government investment to Total Investment (IG/IT), Public employees to Total Labour force (PEE/PEA).

The figures for these ratios for the Peruvian economy for 1950-70 are given in table 2.1. The ratio of GG/GNP increased from 11 to 19 per cent in this period. PEE/PEA increased from 4 to 7 per cent, the number of public employees increased from 104 thousand in 1950 to 290 thousand in 1970. IG/IT increased during the same period from 6.5 per cent to 21 per cent. Finally CG/CT experienced an upward tren from 9 per cent to 12 per cent during 1950-70.

From the above figures we can conclude that the Public Sector was very limited in size during the 1950s, this situation started to change in the 1960s when a bigger government in terms of general expenditures, public investment and employment. These figures suggest that the Private Sector was decreasing in its relative size while the Public Sector was gaining rapidly in terms of relative importance. However this displacement was not being accomplished in a specific sector. The government was not getting involved directly in productive activities but was orienting the Private's

Table 2.1

Size of the Government Indices

(percentages)

	GG/GNP[a]	GG/CT	IG/IT	PEE/PEA
1950	10.5	9.0	6.5	4
1955	13.5	9.3	14.3	-
1960	13.0	2.4	5.4	5
1965	17.4	12.1	15.5	6
1970	19.0	12.1	20.7	7

Source: BCR

a = Definitions are given in the text.

Sector activities towards the construction sector (public investment) or was using this Private Sector to supply for goods and services for a very fast growing bureaucracy.

2.3 The Power groups in the private sector

The private sector in Peru has traditionally been managed by highly concentrated power groups. The groups in the private sector prior to the 1950s were based in the export economy, that is the major sugar planter; cotton growers were originally the groups which had greatest economic and political power. In table A. 2.1 we give some of the big "hacendados" (Landlords) which were the biggest land tennants. Families such as Gildemeister, Brescia-Cafferatto, Aspillaga-Anderson, De la Piedra, Romero, among others were the landowners and the ones who generated a very large part of the foreign exchange (50 per cent in the 1950s). These groups diversified their economic interests by investing in sectors related to finance, mining and commerce. A relatively low percentage of this investment was oriented to manufacturing.

These "domestic" families had a very important political influence as to change government, this was probably the case of Gildemeister with President Bustamante y Rivero.

In the agricultural sector, foreign firms played a very important role as a powerful group this was the case of Grace.

The mining and petroleum sector had its own power groups not completely independent of the agricultural sector. In mining and petroleum one can identify two main sub groups: the big mining firms which were mainly foreign owned (e.g. Cerro de Pasco, Southern Peru Copper Corporation, Northern Peru Copper Corporation, Marcona). The second sub-groups is constituted mainly by medium size mining firms which are owned mainly by domestic capitalists such as: Quesada, Boertl, Pardo, Kizo Patrón, etc. (see table A. 2.1). The owners of the mining sector diversified their investments towards the financial and

commercial sectors, but they also exploited some forwad and backward linkages with the manufacturing sector.

With respect to the manufacturing sector, table A. 3.1 shows the concentration and control at the firm level for several industrial groups. Ownership in manufacturing is by far less concentrated than mining and agriculture. One needs to distinguish between foreign owned manufacturing firms, private owned firms whose owners come from the traditional agriculture and mining, and the private owned firms based on new entrepreneurs.

Because of the importance of the manufacturing sector in the economy, its high growth and its less concentration we will dedicate the following chapter to study its main characteristics.

3. The Manufacturing Sector

3.1 The industrial growth and structure

From table 3.1 we can observe that value added of the Manufacturing (VAM) sector in relation to GNP increased from 15 percent during 1950-54 to 23 percent in 1970-74. The highest annual average rates of growth (a.a.r.g.) in real VAM 1950-54, 1960-64, and 1970-74. The first period coincided with a general recovery of the Peruvian economy while the subsequent periods were experienced when protectionist policies were applied (i.e. 1960s and 1970s). The a.a.r.g. for these periods were 8.5, 9, and 12.8 percent respectively. The periods of lowest a.a.r.g. in real VAM (i.e. 1955-59 and 1965-69) coincided with the balance of payments crises which affected negatively the development of the manufacturing sector.

The structure of the Peruvian manufacturing sector for 1945-73 is given in table 3.2. During 1945-50 the most important sector in terms of gross value of production was textiles, which accounted for 39 percent of the production in the manufacturing sector, followed by food industry which represented 27 percent (6 percent of it corresponds to refined sugar - an export oriented industry) and 18 percent corresponded to chemicals. This last figure can be very misleading and orient one to think that Peru had a well developed chemical industry. The truth is far from it; since half of the chemical industry corresponded to refined petroleum, another export oriented industry.

In 1963 the Peruvian industrial structure experienced significant changes. Food industries became the most important industry in terms of value of production representing 38 percent of the manufacturing sector (of which

Table 3.1

Relative Shares of Peru's Manufacturing Sector

in GNP and annual Rates of Growth 1950-1974
(Percentages or Indices)

	VAM/GNP I	VAM/GNP II	Ind.Real Output 1	Ind.Real Output 2	a.a.r.g.
1950-1954	10.89	14.80	871.00	100.00	8.50
1955-1959	12.21	16.60	1,104.00	127.00	6.10
1960-1964	14.30	17.18	1,560.00	179.00	9.03
1965-1969	16.31	19.48	1,867.00	214.00	4.59
1970-1974	20.96	23.16	3,025.00	347.00	12.82

Source:Elaborated from Boloña (1981) Table 6.1 Pag.239

Table 3.2

Structure of the Peruvian Manufacturing Sector 1945-1973

(Percentages)

	1945-1950	1955	1963	1969	1973
Food	27.10	37.58	38.45	31.01	27.59
Other food	21.52	24.70	23.87	20.74	21.85
Sugar	5.58	9.25	8.18	4.55	4.20
Fishmeal	0.00	3.63	6.40	5.72	1.54
Textiles	38.73	23.20	15.35	17.87	16.81
Wood	1.40	3.39	1.85	3.76	2.38
Paper	3.91	2.88	5.34	4.63	5.57
Chemicals	17.90	19.20	10.57	15.80	18.74
Other Chemicals	8.88	5.64	8.36	9.81	15.00
Refined petroleum	9.02	13.56	2.21	5.99	3.74
Non-metallic minerals	6.27	3.97	4.07	3.75	4.69
Basic metals	1.79	1.07	12.98	6.25	7.31
Machinery	2.90	7.06	10.81	14.11	15.58
Others	0.00	1.65	.58	2.82	1.33
Total	100.00	100.00	100.00	100.00	100.00

Source :Elaborated from Boloña (1981) Table 6.2 Pag.241

8 percentage points represented sugar and 6 percentage points fishmeal-Two major exporting industries). Textiles became the second major industrial sector (15 percent of it) chemical and machinery-equipment the third with 11 percent of the manufacturing production each. Finally, during 1973 we can observe a very important change in the composition of the manufacturing sector. Intermediate products and capital goods industries increased their relative importance to 19 and 16 percent respectively of the value of manufacturing production, while food and textiles reduced theirs to 28 and 17 percent respectively.

During the 1950s the dynamic industries were basic metals (which were export oriented), "metal products", paper, sugar (also export oriented), "other foodstuffs" and fishmeal (a very dynamic export industry). Traditional industries such as textiles were already experiencing declining rates of growth (see table 3.3).

The 1960s showed high a.a.r.g. for several industries such as fishmeal, wood, paper, "other chemicals", non-metallic mineral products and machinery. It was clear that traditional industries (food and textiles) had already lost their dynamic power.

Table 3.3

Annual average rate of growth of the quantum

of Peruvian industrial production by sectors 1945-1973
(Percentages)

	1950-55	1945-55	1955-63	1963-69	1969-73
Food	7.37	6.70	5.33	1.43	7.21
Other food	7.10	7.17	4.59	2.70	11.83
Sugar	3.45	4.81	3.43	-4.66	8.20
Fishmeal	0.00	0.00	12.75	3.18	-20.49
Textiles	9.04	7.09	-.25	7.83	8.72
Wood	5.40	14.27	-2.62	18.31	-1.55
Paper	11.85	6.77	13.44	2.65	15.62
Chemicals	6.05	5.12	-2.52	12.41	15.20
Other chemicals	8.12	9.42	10.33	7.96	22.75
Refined petroleum	4.02	.93	-16.27	24.13	-1.88
Non-met. minerals	13.69	9.78	5.35	16.90	16.75
Basic metals	10.87	4.06	43.50	-6.92	14.76
Machinery	13.52	17.07	10.77	9.90	13.15
Other industries	0.00	0.00	-7.82	36.81	-8.48
Total	7.78	6.75	5.03	5.13	10.38

Source: Elaborated from Boloña (1981) Table 6.3 Pag.243

3.2 Import Substitution

The concept of import substituion (IS) was probably introduced by Prebisch[1] in the 1950s to describe a process that he conceived of as beginning in the biggest Latin American economies after the Great Depression. IS was later studied and developed further by ECLA. as Felix[2] says, this concept had little influence on the development of the process itself, which was well on its way by that time. Yet even though the conceptualization of IS as a strategy for development did not influence the induztrialization processes of the big Latin American Countries, it might have had some influence on the late comers to IS (e.g. Perú, Venezuela, Ecuador, Bolivia).

For Prebisch, "Import Substitution (defined here as an increase in the proportion of goods that is supplied from domestic sources and not necessarily as a reduction in the ratio of imports to total income) is the only way to correct the effects on peripheral growth of disparities in foreign trade elasticity"[3]. He not only defines IS but considered it as a strategy for development.

Hirschman[4] considers IS as a process of industrialization and growth via the domestic market (inward oriented growth) in contrast to the export propelled growth characteristic of many Latin American countries before the Great Depression.

1. Prebisch (1959), pp. 251-273
2. Felix (1968), p. 57
3. Prebisch (1959), p. 253
4. Hirschman (1968), pp. 1-32

For a long-run study of IS it is important to distinguish between a "natural" IS process, i.e. imports are replaced by domestic production when the size of the domestic market allows it. The domestic product can compete with the foreign one with the help of a relatively low tariff. The second category can be labelled "imposed or artificial" IS. It is based on highly restrictive import policies, a significant content of imported inputs and an as-yet small domestic market for the type of activity to be developed.

Several empirical works have measured IS as a function of changes in imports with respect to changes in total supply, several alternative variables have also been suggested.

Garay[1] has suggested four measures of IS based on Input-Output table concepts:

i) IS in "productive activity" (IS-PA)
ii) IS in final demand (IS-FD)
iii) IS in intermediate demand (IS-ID)
iv) IS in total demand (IS-TD)

Weisskoff[2] has also constructed a typology of IS based on the changes of absolute and relative imports, the latter defined with respect to total supply.

Boloña[3] has applied different measures of IS to Peru reaching the following conclusions: from 1900-1954 an IS of the "natural" type in which M/GNP fluctuates according to the level and changes in aggregate demand. Since the mid 1950s there is a different trend, the ratio M/GNP shows a persistent decline from a high level of 27 percent in 1955-59 to 17 percent in 1970-74.

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1. Garay (1975), pp. 52-58
2. Weisskoff (1980) pp. 385-391
3. Boloña (1981), pp. 250-251

Changes in the composition of imports also gives evidence to support the hypothesis of a natural IS prior mid 1950s and an imposed IS after that period. In the first period consumer non-durables decreased while the share of the other import categories increased in general in accordance with changes in the level of aggregate demand. During the second period, the relative share of imports of consumer non-durables continued to decline but was also accompanied by consumer durables, construction materials and transport equipment. On the other hand, the share of imports of intermediate and capital goods shows an increasing trend reaching levels higher than those of earlier decades.

Boloña[1] measured IS according to Garay's and Weisskoff's methodologies reaching the following conclusions: For the period 1945-1956, absolute and relative measures of IS were estimated for a group of 43 industries. From them we can conclude that 10 percent of the industries (mainly consumer non-durables) experienced complete IS, 63 percent experienced an increase(decrease) in absolute IS and a decrease (increase) in relative IS and finally 17 percent experienced import dependence (consumer non-durables and intermediate products). In this period IS did not advanced significantly and in several cases it was reversed.

In the words of ECLA ". . . the industrialization process has not been sufficiently intensive to take full advantage of the expansion of demand and (. . .) Peruvian industry, instead of supplying a steadily increasing proportion of consumer requirements, has been loosing ground. This does not mean that no industrial development took place in the period under review. On the contrary,...; but

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1. Boloña (1981) pp. 255-261

the progress made by external sources of supply was still more intensive, so that industry failed to profit fully by the incentives and opportunities which the expansion of demand afforded"[1].

During the period 1955-73 Boloña arrived to the conclusion that the sectors which advanced most in IS (i.e. IS-FD, IS-ID, and IS-TD) were textiles, food, chemicals, non-metallic mineral products and basic metal industries. On the other side, the sectors which show the highest import dependence in terms of IS-PA were metal products and machinery, chemicals, paper and food. Since 1969 there has been a decrease in this import ratio in most sectors except for chemicals which increased it. The capital goods sector experienced a relatively low decrease.

With respect to the question of the 'exhaustion' of the IS process in Peru, it is difficult and risky to give a definite answer. However from the above evidence we can suggest that IS in food and textiles is in an advanced stage due to the low import ratios and low dynamism of these industries (shown by their rates of growth). In the intermediate and capital goods industries there have been some advance but it also appears difficult to extend this process further.

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1. UN-ECLA (1959) p. 19

3.3 Sectorial Linkages

In 1958, Chenery and Watanabe[1] provided operational definitions to measure interdependencies in production (i.e. linkages). The same year, Hirschman[2] suggested a causal relation between interdependencies and development. Two types of linkages were identified: backward linkages (LB) and forward linkages (LF).

During the 1970s these concepts were reconsidered and more sophisticated measures of linkages were developed by Yotopoulos, Nugent and Lau[3].

In Perú, prior to 1955 one can identify several industries established as a result of forward linkages from the export sector (or by-products of it). The most obvious cases were sugar refining, petroleum and metal refining which developed in a more or less 'natural' fashion from their corresponding primary activities. Other less obvious forward linkages were the following:

Export product	Forward linkages	
cotton	cotton seed oil cotton textiles	edible oil, soap apparel
Refined sugar	sugar cane alcohol confectionery	spirits, industrial alcohol
wool	woollen textiles	apparel, hats, etc
hides	leather	footwear

Some backward linkages may have been also generated by the export sector: for instance smelting and mechanical

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1. Chenery and Watanabe (1958) pp. 487-521
2. Hirschman (1958) pp. 98-119
3. Yotopoulos and Lau (1970) pp. 376-384, Yotopoulos and Nugent (1973) pp. 151-171 and Yotopoulos and Nugent (1976) pp. 297-307

workshops were created to satisfy the needs of the mining and sugar industries.

For 1955-1973, Boloña[1] measured linkage indices from the four Input-Output tables available for Peru (i.e. 1955, 1963, 1969 and 1973). From the latter, a two-way classification table was constructed showing the sectors with high and low linkages and those in an intermediate situation (see table 3.4). From this table we can conclude that the sectors with high LB and LF are mainly intermediate manufactures (e.g. chemicals, paper, etc.). Those with low linkages are services (e.g. transport, trade, etc.). Final manufactures are associated with high LB and low LF (e.g. food, textiles, etc.) and intermediate primary production with low LB and high LF (e.g. agriculture, mining etc.).

The classification obtained bears a significant resemblance to the ones constructed by Chenery and Watanabe[2] for four industrial countries and by Yotopoulos and Nugent[3] for eleven countries (six Developed Countries and five Less Developed Countries).

1. Boloña (1981) Table 6.8 p. 264
2. Chenery and Watanabe (1958) p. 493
3. Yotopoulos and Nugent (1973) pp. 162-163

TABLE 3.4

Two-way classification matrix of linkages for Peru

1955 - 1973

	Low L F	High L F
High L B	a 31 32 37 39 5 (7!?)	33 34 35 36 38
Low L B	6 8-9	11-12 13 21-29 4

Note : a. ISIC divisions

Source : Elaborated from Boloña (1981)
Table (6.9) Pag. 265

3.4 Factor Intensities and Factor Payments

It is argued that industrialization policies in Less Developed Countries have stimulated industrial sectors in preference to labour intensive ones. and secondly it has encouraged to use more capital intensive techniques in any given industry.

To consider the first alleged effect one must look at the factor intensity in different industries. For the second effect we must observe the elasticity of substitution (σ) for each sector. The greater the value of 'σ' for a given industry, the larger its propensity to adopt capital-intensive techniques when the relative price of capital is reduced.

Labour intensity was measured by the index of 'relative density of labour' (RDL) which is defined:

$$RDL_{1i} = \frac{Li/Pi}{\sum_{i:1}^{M} (Li/Pi)/M} \quad \text{or} \quad RDL_{2i} = \frac{Li/VAi}{\sum_{i:1}^{M} (Li/VAi)/M}$$

where:

Li: number of workers in sector 'i'

Pi: gross value of production in sector 'i'

VAi: value added in sector 'i'

M: total number of sectors in manufacturing

These indices were calculated by Boloña[1] for the primary and manufacturing sectors between 1955 and 1973. The results show us that agriculture is the most labour-intensive sector; in manufacturing, the most labour intensive sectors have been wood and textiles. Sectors such as food, paper and non-metallic mineral products have been decreasing their relative labour intensity. The least labour-intensive

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1. Boloña (1981) table 6.10 p.268 and table 6.11 p.270

sectors during this period were basic metals and chemicals.

The values for "σ" for the manufacturing sectors were obtained from Abusada's estimates (calculated from cross section data for 1971 and adjusted for capacity utilization) and from Boloña's estimates (which were based on Time series data for 1969-1975).

Correlating "σ" with the tariff level for the different ISIC sectors (at 2 and 3 digit levels) we obtained positive and significant Spearman correlation coefficients giving us some evidence to support that highly protected industries tend to be oriented to invest in more capital intensive techniques.

Finally the index of wages per worker (W/L) for each ISIC group was calculated with respect to the average W/L for the whole manufacturing sector for 1955, 1963 and 1972.

The industries with highest W/L for the whole period were basic metal industries, chemicals and paper (i.e. the capital intensive industries); the ones with lowest relative W/L were wood, textiles, and food (i.e. the labour-intensive ones). The ranking of industries according to their relative W/L was very stable through time.

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1. Abusada (1976) p. 16
2. Boloña (1981) Table 6.11 p. 270

3.5 Efficiency

For Peru, Clague[1] has calculated the Peruvian relative efficiency (PRE)[2] for some industries with respect to the U. S. A. Clague's objective was to measure the differences in labour productivity in the two countries mentioned for eleven manufacturing sectors *circa* 1964. The measures of relative productivity (PRP) and PRE were obtained from a constant elasticity of substitution (CES) production function. Several possible explanations for these variables were investigated, such as: differences in capital labour ratios in the two countries, in economies of scale, quality of labour and management, etc.

PRE was found to be higher in chemicals (98 per cent), cement (86 per cent), raw sugar (81 per cent) and wheat flour (74 per cent). The lowest values of PRE were found in the following industries:

Tyres	57 per cent
Shoes	54 per cent
Shirts	41 per cent
Glass containers	34 per cent
Leather tanning	33 per cent
Hosiery	30 per cent
Cotton textiles	28 per cent

On average PRP was 45.4 per cent (ranging between 23.2 and 99.5 per cent). The average difference (i.e. 54.6 per cent) was attributed to the following variables:

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1. Clague (1966) and (1967), pp. 487-493
2. PRE is defined as the ratio between Peruvian and U. S. A. labour productivity when the capital-labour ratio in Peruvian industries is the same as in the U. S. A. ones.

PRP	45.4 %	(average value)
adjustment for economies of scale (A-ES)	1.02	(multiplicative factor)
PRP-A-ES	46.3	
adjustment for capital labour ratio (K/L)	1.21	(multiplicative factor)
PRE	55.9	
adjustment for interest differentials age of machinery differentials and accounting valuations	1.07	(multiplicative factor)
PRE-adjusted	60.0 %	

As shown by the above figures, an average 26.7 per cent of the productivity difference has been explained, of which 66 per cent is accounted for by K/L ratio differentials, 6 percent by economies of scale and 28 per cent by other variables (e.g. interest differentials, age of machinery differentials, etc.). The unexplained 40 per cent was imputed to variables such as quality of labour and management skill differentials.

Another proxy to the concept of efficiency which has been used in the economic literature refers to capacity utilization. Industrial capacity utilization can be measured in two complementary ways. The first one relates the percentage utilization of capacity to the standard of full utilization at the customary number of shifts. The second concerns the number of shifts.

Until recently there were no empirical works in capacity utilization in Peru. Abusadal made the first study on this field for the manufacturing sector during 1971. He defined the number of shifts (N° of S) as the variable measuring capacity utilization in an industry.

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1. Abusada (1976a) and (1976b)

The results obtained were: that about 64 per cent operate with single shifts, 16 per cent use double shifts and some 20 per cent triple shifts. The industrial sectors operating less than two and three shifts are given below:

Sectors using less than 2 shifts		Sectors using between 2-3 shifts	
32 Textiles	(1.7 shifts)	31 Food	(2.5 shifts)
33 Wood	(1.3 shifts)	34 Paper	(2.1 shifts)
38 Metal products	(1.4 shifts)	35 Chemicals	(2.2 shifts)
39 Other industries	(1.9 shifts)	36 Non-metallic minerals	(2.3 shifts)
		37 Basic metals	(2.8 shifts)

The sectors which utilize a lower number of shifts coincide with those who in general presented lower PRE and who also experienced high levels of protection.

Abusada attempted to explain the N° of S by regressing it as a function of several explanatory variables such as the size of the firm, capital intensity, capital productivity, continuous processes, market share and foreign capital share. For this purpose he used a linear and logistic probabilistic model. The size of the firm and capital intensity were positively related with the N° of S and had the highest explanatory power.

3.6 Industrial Concentration

For Peru, there are three sets of industrial concentration (IC) ratios available: Those of Espinoza and Osorio[1] for 1968; Meller, et, al[2] also for 1968 and Brundenius and Chauca[3] for 1969 and 1973. Espinoza and Osorio calculated capital concentration ratios (CCR) and output concentration ratios (OCR) for the manufacturing sector.

They divided firms into large, medium and small ones according to the values of their fixed assets. These criteria were applied to obtain the CCR as the ratio of capital of big firms over the total capital for a given sector. The OCR was obtained in a similar fashion. This methodology is subject to qualification, because the book value of fixed assets is not a reliable index of capital in Peru.

Meller, et.al used more standard measures of IC. Four concentration indices were estimated: Herfindahl (H), Absolute Entropy (AE), Relative Entropy and Gini Coefficients. The first two measure absolute concentration while the others relative concentration. We will use only those of absolute concentration. Brundenius and Chauca used the CR-4(4) measure of IC. The values of IC for the ISIC at the three digit level calculated by the above authors are given in table 3.5

1. Espinoza-Uriarte and Osorio-Torres (1972)
2. Meller, Leniz and Swinburn (1976), table A-5, p.52
3. Brundenius and Chauca (1975?)
4. CR4: the percentage of the value of shipments of production acccunted for by the top four enterprises in a given industry.

TABLE 3.5

Industrial concentration and foreign ownership ratios for Peruvian industrial sectors, 1968-1973

(percentage or index)

ISIC Group (Rev. 2)	Concentration						Foreign ownership							
	1968				1969	1973	1968				1969		1973	
	CCR	OCR	H	AE	CR4	CR4	FSCI	FSCII	FSPI	FSPII	FSPI	FSPII	FSPI	FSPII
311-312 Food	64	60	0.0060	5.741	21	18	59	39	36	27	51	11	45	8
313 Beverages	87	84	0.0485	4.014	52	47	59	51	33	24	28	14	38	18
314 Tobacco	n.a.	n.a.	0.4924	0.915	100	100	n.a.	n.a.	n.a.	n.a.	68	68	63	63
321 Textiles	36	21	0.0094	5.099	22	21	71	25	16	3	63	14	35	8
322 Clothing	36		0.0416	4.273	28	28	100	36			44	12	41	11
324 Footwear	36	38					100	36	100	38				
323 Leather	44	9	0.0442	3.417	33	32	100	44	100	9	n.a.	n.a.	n.a.	n.a.
331 Wood	n.a.	n.a.	0.0383	3.920	13	13	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
332 Furniture	n.a.	n.a.	0.0237	4.278	19	18	n.a.	n.a.	n.a.	n.a.	100	19	100	18
341 Paper	82	72	0.1119	2.757	71	61	100	82	100	72	93	66	n.a.	n.a.
342 Printing			0.0255	4.380	33	26					13	4	n.a.	n.a.
351-2 Chemicals	70	23	0.0126	4.819	15	13	94	66	43	10	88	13	78	10
353-4 Petroleum deriv.	98	95	n.a.	n.a.	98	98	76	75	75	71	16	16	3	3
355-6 Rubber and Plastics	77	52	0.1732	2.192	100	96	100	77	80	42	100	100	100	96
360 Non-metallic minerals	72	51	0.0247	4.193	36	30	9	7	20	6	88	32	24	7
370 Basic metals	83	91	0.3262	1.803	95	90	71	58	90	85	91	87	85	76
381 Fab. metal prod.	43	19	0.0161	4.539	19	15	39	17	53	10	66	12	61	9
382 Non-electrical machinery	72	25	0.0418	3.739	34	24	65	47	40	10	19	7	32	8
383 Electrical machinery	49	14	0.0366	3.667	33	32	100	49	100	14	100	33	86	27
384 Transport equipment	55	47	0.0258	4.340	27	53	100	55	60	28	84	23	88	47
39 Other industries	60	n.a.	n.a.	n.a.	12	11	87	52	77	23	67	8	39	4
Average of manuf.	54	49			45	39	55	30	67	33	67	30	53	20

BOLOÑA (1981)

The results obtained by Espinoza and Osorio showed that petroleum and derivatives, beverages, basic metals and paper had the highest IC ratios; while textiles, footwear and metal products had the lowest IC ratios. Meller, et. al, and Brundenius and Chauca's figures show a similar pattern. Furthermore, the latter allow us to identify a decrease on the average IC ratio from 45 per cent in 1969 to 39 per cent in 1973.

It is interesting to observe some similarity between the above results and those calculated by Pryor[1] for twelve industrialized countries during the 1960s. IC was highest in: tobacco, transport equipment, machinery and petroleum products; and lowest in furniture, lumber products and clothing. In order to assess the similitude of the ordenings of IC ratios, rank correlation (rs) coefficients were calculated for them. The rs coefficients between the different IC ratios for Peru show that the ranking of industries are very similar, although this similarity diminishes through time.

In order to complement this presentation of IC, table A 3.1 gives us for each industrial group the names of the most important firms, its share in the total gross value of production of the industrial group, who controls the firm and up to what percentage.

Finally, it is important to give a comment related to the partial validity of these approach to the concept of concentration. To get a better view of concentration in the Peruvian economy one must look also to concentration among sectors and not only within a given sector.

It is well known that in Peru several economic groups diversified its investment and ownership in several sectors such as: agriculture-industry-finance, mining-industry-commerce-finance, commerce-finance etc. TableA.3.1can be helpful for this purpose, but in order to get more conclusive results a study of interlocks in the different directories should be done for the years 1950-1970.

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1. Pryor (1973) Table 4, p. 133

3.7 Foreign control of local production

From table 3.5 we can observe indices of foreign control of domestic production and capital for the years 1968, 1969, and 1973. Espinoza and Osorio's figures for 1968 are based on the following criteria defining the nationality of the firm: a national enterprise is one whose national shareholders own more than 80 per cent of the firms capital, a mixed enterprise is one which they own between 51 and 80 per cent and a foreign enterprise is one in which they own less than 51 per cent. The above authors proceeded to identify among the large firms thos which were foreign, calculating their share in capital and gross output (i.e. FSCI and FSPI respectively). Brundenius and Chauca's figures for 1969 and 1973 were based on different criteria for defining a foreign enterprise, regarding as foreign any firm 30 per cent or more of whose shares are owned by foreign shareholders. The foreign shares in local production were calculated by comparing the production of these foreign firms with the total production of the 200 largest firms distributed by industrial sectors.

According to Espinoza and Osorio, the industries with the highest FSCI (and FSPI) were paper, rubber, petroleum derivatives, industrial chemicals, transport equipment and beverages, while for Brundenium and Chauca they were rubber, basic metals, tobacco and paper. The FSPII between 1969 and 1973 was reduced on average from 30 to 20 per cent probably due to the nationalistic policies adopted by the 'Velasco Regime' during those years.

Table A. 3.1 gives foreign control for several industrial groups at the firm level and complements the above discussion. The word of caution on the validity of the figures of industrial concentration is also applicable in this section.

4. The Economic policy

4.1 Commercial policy

By commercial policy we understand a group of measures which affect the flow of imports and exports for a given country. On the import side the tariff has been the main instrument applied in Peru to control imports according to different objectives. When we talk about tariff policy we are also including para tariff measures (e.g. import quotas and prohibitions, etc.) and tariff reductions, rebates import subsidies, etc. On the export side the instrument used was the export tax, subsidies and export controls or prohibitions to orient the level and composition of imports. The years 1950-1970 in terms of tariff policy can be divided in the following periods:

i) the liberal period 1949-1959

ii) the protectionist period: I "Import substitution at any cost" 1960-1968.

iii) the protectionist period: II "Structural reforms at any cost" 1968-1975.

i) The liberal period 1949-1959

The tariff policy of 1949-1959 was intended to make the tariff an important source of fiscal revenue again; in addition some tariff increases were applied to protect certain products and to equilibrate the balance of trade. During 1949 the import prohibitions established in 1947 were eliminated, a measure which provided competition for domestic industries such as textiles, glass, soap, paper and rubber. The latter measure hindered the advance of IS in this period as we have seen in section 3.2. During the balance of payment crises of 1952-53 the government imposed an ad-valorem duty of 50 per cent on luxury goods and on some goods produced domestically this measure was backed by the National Society of Industrialists (SNI) but the pressure exerted by the organizations of agricultural and mining entrepreneurs-export oriented, mainly

(SNA and SNMP) led to the annulment of this decree. During the 1957-59 balance of payment crisis the government approved an increase on import duties by 50-100 per cent on non-essential and luxury goods. This caused another dispute between the SNI and SNA but this time the former was successful.

The first half of the 1950s saw several disputes between the SNA and SNI because of the tariff increases imposed for protectionist reasons on jute sacks (a major input for agriculture) and on glass manufactures. These and other increases in protection were few and isolated, but during the 1950s protectionist attitudes which were to become effective in the 1960s were gathering strength.

The NOT[1] (Nominal Official Tariff) a measure of the tariff level increased from five to seven per cent from 1948 to 1955 but decrease to three per cent in 1960. This measure is a partial one for the tariff level since it only considers specific duties and omits the additional ad-valorem duties which became at least as important. The tariff incidence (TI: import duty revenue/imports) gives a better picture of the tariff level. In 1949 it reached its lowest level, 4per cent, then it increased to 16per cent during 1951-1955 and decreased again in 1958 (see table 4.1).
Another index of the tariff level is given by ET (Effective Tariff)

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1. NOT: Nominal Official Tariff. i.e. . . ."the tariff level expressed in ad valorem terms of the import custom taxes, according to what is established in the customs schedule of each country". Boloña (1981) p. 327

TABLE 4.1

Nominal official tariff structures for Peru by ISIC 1955 - 1973
(Percentages)

	1955/ 1960	1964	1967	1973 NOT
Agriculture	5	55	46	55
Forestry	3	82	65	68
Fishing	5	65	36	88
Coal mining	1	42	46	47
Crude petroleum	1	42	46	29
Metal ore mining	2	34	46	41
Other mining	4	59	45	61
Food	12	82	67	75
Textiles	19	232	140	161
Wood	3	81	88	96
Paper	8	79	70	78
Chemicals	3	65	71	52
Non-metallic minerals	18	91	73	79
Basic metals	4	70	61	65
Machinery	4	44	56	59
Other manufacturing	10	81	89	105
Manufacturing average	9	92	79	70
General average	5	79	61	69

Source : Elaborated from Boloña (1981) Table 3.4 Page 87

The 1955-1960 weighted average ET for manufacturing was 27 per cent and for all the sectors 15 per cent. The ET values for 1936-44 had been 44 and 23 per cent. (See table 4.2).

The tariff structure by ISIC is given in tables 4.1 and 4.2. It shows that the sectors with highest tariffs were: textiles, food and non-metallic minerals.

Finally it is important to mention that during 1950-59 import duties regained their role as a major source of fiscal revenue representing 21 per cent of fiscal revenue compared to 9 per cent during 1945-1949. Export duties declined in relative importance and also in respect of their incidence (ETI) which decreased to 12 per cent in the first quinquennium and 6 per cent in the second.

The decline in the ETI and in the relative importance of export taxes was consistent with the policy of promotion of traditional exports put into practice during the liberal period of the 1950s.

ii) The Protectionist period: I. 'Import Substitution at any cost' 1960-68

Tariff policies played a very important role in this period. On November 1959 the Industrial Promotion Law 13270 was passed, granting tariff and tax reductions to the manufacturing sectors. During 1959-1963 several tariff increases augmented protection of domestic production. In 1964 a tariff was approved which not only consolidated the protectionist trend initiated in the mid-1950s but promoted the manufacturing sector at any cost. The latter tariff was adopted in the middle of an expert boom.

TABLE 4.2

Effective tariffs by industrial sectors net of tariffs input-output coefficients
1948 - 1973 (Percentages)

	1948 W ET 1	1955/1960 W ET 1	1964 W ET	1967 W ET	1973 W NOT
Agriculture	7	4	70	56	62
Fishing	7	4	64	32	110
Mining	3	2	42	56	55
Food	42	26	108	132	105
Textiles	20	34	730	315	642
Wood	1	2	89	201	190
Paper	7	11	87	118	112
Chemicals	10	3	83	127	69
Non-metallic minerals	11	30	128	108	111
Basic metals	45	42	105	264	104
Machinery	4	4	35	88	98
Other industries	-6	84	90	185	190
Simple average M	15	26	163	171	180
Simple average G	13	22	137	140	154
Weighted average M	24	22	193	168	191
Weighted average G	12	10	119	113	139

Source : Elaborated from Boloña (1981) Table 5.3 Page 215

The Industrial Law granted several benefits which increased the effective protection to the manufacturing sector:

a) Commercial incentives: tariff reductions on imported inputs and capital goods, drawbacks, etc.
b) Fiscal incentives: tax exemptions and faster depreciation schemes.
c) General franchies.

The law implied that the government's role was one of indirect encouragement of industrialization via the market mechanism.

The 1960-1963 tariff increases were granted on an individual basis to several industrilists. The SNI played an important role in advising them. A.D. Little has shown that several consumer durables were subject to very high tariffs, giving examples to ". . . dispel the illusion that Peru is a country of low tariffs",[1] such as cotton and woolen cloth (90-139 per cent), synthetic cloth (601 per cent), floor tiles (112 per cent), dishes (151-176 per cent), etc.

The 1964 tariff, simplified the existing tariff system and increased further the level of protection. The SNI received the new tariff with great enthusiasm while the SNA and SNMP attacked it on the grounds that is was excessively protectionist.

The 1964-68 years brought important developments in the tariff policy. The balance of payments crisis of 1967 brought au upward revision of the import tariff. The level of protection was increased, trade restrictions were adopted (e.g. temporary prohibitions on imports of non-essential goods) and an exchange control was imposed.

The NOT level increased from 12 percent in 1959 to 61 per cent in 1967. And the TI form a 14 per cent to

1. Little (1960)

30 per cent respectively. The ET also increased from 15 to 97 per cent in those years. (See table 4.1 and 4.2).

The structure by ISIC shows very high tariffs on consumer goods (69-169 per cent), inputs (79 per cent) and capital goods (43-47 per cent). The last tow groups would be significantly reduced if tariff reductions were taken into account.

Finally import duties as a source of fiscal revenue represented between 19 and 20 per cent of total revenue during the 1960s. A similar level to the one experienced in the 1950s.

iii) The Protectionist Period: II. 'Structural Reforms at any cost' 1968-1975

Even though this period is outside the scope of our study it is important to mention that the Velasco regime who deposed Belaunde in October 1968 aimed to change the whole structure of the Peruvian Economy. However, in terms of tariff policy this period can be labelled as the most highly protectionist Peru has experienced in its history.

Protection was increased mainly by para-tariff instruments such as: import prohibitions, quotas, licenses, tariff reductions on inputs and capital goods. The NOT level reached 69 per cent in 1973 and the ET level to 112 per cent.

4.2 Exchange rate policies

The exchange rate (ER) policies followed a similar pattern as the one described for tariff policies.

i) The liberal period, 1948-1959

The ER policies of 1948-1959 can be classified into four groups: the new ER system during 1948-1949, the dual fluctuating ER during 1949-1954, the fixed ER system of 1954-1959 and the 'free' ER system adopted in 1959.

In December 1948 the exchange controls imposed during 1945-48 started to be dismantled. The sol devalued between 1949-50 by 128 per cent (S/6.50/US$ to S/.14.82/US$) in the official market while in the certificate market the devaluation was of around 10 per cent.

The ER system was reformed in November 1949. The new system was based on a certificate market and a draft market, the former dealing with invisible trade and the latter with visible trade.

Exporters were required to surrender their foreign exchange and received freely negotiable exchange certificates. This system can be labelled "dual fluctuating ER's" in which the two markets were linked, but the spread between the two was narrow. However during the Balance of Payments crisis of 1952-1954 the sol devalued by 23 per cent and led to the adoption of a fixed ER at S/. 19/US$.

The third phase of ER policy was the adoption of the above fixed rate from October 1954 until 1957. Domestic inflation, fiscal deficits and the world recession led to the balance of payment crisis of 1957-1959. Stabilization programs designed by the IMF were imposed but not fully implemented.

The sol experienced a devaluation of 45 per cent during 1957-59 and in June 1959 Beltran was named Prime Minister. A new stabilization programme was approved and a stand by credit was negotiated with the IMF. In May 1960, the exchange certificate was replaced by a freer exchange system.

4.3 Fiscal and Monetary policy

In terms of fiscal policy one can divide 1950-1970 in two relatively difined periods. The first from 1950-1960 can be labeled as one of small government (i.e. G/GNP around 11 per cent), fiscal budget in equilibrium (except for 1955-59) and a relatively lower average annual rate of growth of the Public external debt (9 per cent).

The second period from 1960-1970 shows a significant increase in the size of the government reaching G/GNP during the second half of the period the value of 20 per cent, the fiscal deficit the value of 2 per cent of GDP and the growth of the external debt an a.a.r.g. of 24 per cent.

The fiscal revenue structure also experienced important changes. Custom revenues reduced its relative importance from 38 percent of total revenue (1950-54) to 24 per cent (1965-69). Profit taxes reduced its share from 19 to 16 per cent and personal income taxes increased theirs from 10 to 20 per cent in the years considered above.

With respect to Monetary policy little can be said because of the lack of studies and consistent data for this period.

M_1 increased his a.a.r.g. from 12 per cent in the first three quinquennia to a 15 per cent in the last one. The income-velocity of money increased from 6 to 8. The interet rate (around 5-7 per cent) was lower than inflation (8 per cent per year during 1950-1964 and 12 per cent per year during 1964-69) providing cheap credit to the different sectors of the economy and a strong subsidy to the manufacturing sector.

ii) The Protectionist Period I. I at any cost, 1960-1968

In the new system the ER was fixed and the Central Bank was to prevent minor short term fluctuations by market operations with its foreign reserves. This new system worked smoothly as long as the export boom continued. During 1960-1966 the ER was kept fixed at S/. 26.82/US$ but the degree of overvaluation of the sol increased substantially (up to 31 per cent). In September 1967, due to a Balance of payment Crisis, the Central Bank withdrew from the foreign exchange market after significant losses in its foreign reserves. In this month the ER depreciated by 42 per cent and in October the Certificate system was reinstated on similar lines as during the 1950s. The certificate market opened at S/. 38.70/US$ but the draft market after several attempts was stabilized by the new Minister of Finance, Manuel Ulloa at around S/, 43-44/US$.

This ER policy of dual fixed ER and Exchang controls was kept during the following years, however, the ER controls became tighter through the years in order to keep the balance of payments in equilibrium. The system collapsed in 1975.

5. Summary and Conclusions

Peru can be considered a small open economy, in addition it is also an underdeveloped middle-income country. World economic crisis and booms have had very significant effects in the major economic variables of Peru, because of the high 'openess' of this economy in terms of trade and capital flows to the U.S.A. and other major developing countries.

The 1950-1970 can be divided in the following periods:

i) The liberal period (1949-1959).
ii) The protectionist period: I. "Import substitution at any cost", 1960-1968.
iii) The protectionist period (1968-1975). II. "Structural reforms at any cost, 1968-1975".

The first period was initiated with Odria's coup to President Bustamante y Rivero. Liberal policies were adopted (imports and exchange controls were eliminated) and a good performance of the economy was experienced in the first half of the period (i.e. high growth, low inflation, external and fiscal equilibrium). The second half had a depressed performance due to the economic crisis of 1957-58.

The sectors with highest growth were: Mining, fishing, and public utilities. The second period was initiated by Belaunde's government, it was characterized by a high protection to manufacturing, overvaluation of the exchange rate and a populist fiscal and monetary policy. Economic performance in the first half of this period was very impressive, since Peru was experiencing an export boom from the supply and demand side but the economic policies adopted were self defeating, they ended in the balance of payment crisis of 1967-68.

The sector with highest economic growth were: manufacturing, construction and government.

In both of the periods discussed, agriculture became the stagnant sector because of the policies adopted and the problem of employment worsened because labour from agriculture was oriented to the service sector generating very important underemployment problems.

Despite the problems of defining the private sector we have used the concept that private is all in the economy which is not public. In addition, because of the available data we are orienting our study to the modern- formal private sectors. The sectors that suffer most from our approach are agriculture and services.

In the first period (1949-1959) we can conclude that the private sector represented 78 per cent of GNP, 91 per cent of consumption 90 per cent of investment and 96 per cent of the labour force. In other words this was a period of a big private sector and small government. The second period can be characterized as one of 'bigger government' since the values for the private sector were reduced to 83, 88, 84 and 94 per cent respectively.

Important power groups were present in the private sectors. In agriculture and mining we had very high concentration, and the latter was dominated by foreign firms. These groups had very important economic and political power and diversified their investments to finance, commerce and to some extend into manufacturing. The manufacturing sector, despite its high relative concentration, was less concentrated than in the other sectors. This sector became a major one in the late 1960s.

Because of its importance, we have analized the manufacturing sector in greater detail reaching to the following conclusions:

i) The highest increase in its share to GNP was experienced when protectionist were imposed.

ii) Foodstuffs and textiles were the industries with the greatest relative importance. During the 1960s chemicals, metal products and machinery increased their relative importance.

iii) Highly protected industries were associated with higher levels of import substitution and total linkages (e.g. Food and textiles). These industries were more labour intensive, had higher elasticities of substitution and showed higher levels of ineffiency.

iv) Tobacco, chemicals, petroleum, and basic metals showed high level of industrial concentration while the contrary was observed in food, textiles, furniture and metal products.

v) Foreign ownership was greater in groups such as basic metals, chemicals, transport equipment, and rubber and plastics.

STATISTICAL APPENDIX

TABLE A: 1.1

Peruvian GNP 1950 - 1970
(Millions of Soles)

	GNP	Real GNP Prices 1963	Real GNP Per cap.	Growth of GNP
1950	15,577.00	38,956.00	4,828.00	0.00
1951	19,746.00	43,036.00	5,237.00	10.47
1952	21,021.00	44,283.00	5,292.00	2.90
1953	22,673.00	45,247.00	5,307.00	2.17
1954	26,302.00	49,613.00	5,704.00	9.65
1955	28,947.00	52,065.00	5,856.00	4.94
1956	32,385.00	54,439.00	5,979.00	4.56
1957	35,535.00	54,968.00	5,888.00	.97
1958	39,549.00	56,819.00	5,929.00	3.37
1959	46,260.00	58,834.00	5,975.00	3.55
1960	55,518.00	64,175.00	6,338.00	9.08
1961	62,294.00	69,411.00	6,661.00	8.16
1962	71,700.00	75,836.00	7,066.00	9.26
1963	78,710.00	78,710.00	7,117.00	3.79
1964	95,481.00	84,852.00	7,404.00	7.80
1965	113,000.00	88,146.00	7,502.00	3.88
1966	134,016.00	93,186.00	7,699.00	5.72
1967	152,763.00	94,711.00	7,585.00	1.64
1968	181,242.00	95,353.00	7,407.00	.68
1969	204,059.00	99,556.00	7,501.00	4.41
1970	237,316.00	108,590.00	7,936.00	9.07

Source : Banco Central de Reserva

TABLE A.1.2 A

REAL GNP BY INDUSTRIAL SECTORS 1950 - 1970
(Millions of Soles at Prices of 1963)

	1950	1955	1960	1965	1970
Agriculture and Fishing	8,950	11,523	14,247	16,388	18,863
- Agriculture	8,790	13,386	13,386	14,875	16,397
- Fishing	160	333	1,041	1,513	2,466
Minning	1,768	2,667	4,585	5,325	5,624
Manufacture	5,286	7,681	10,642	16,330	21,685
Construction	2,000	3,218	2,671	3,864	3,795
Electricity Gas and Water	218	252	480	838	1,134
Housing	3,404	3,784	4,345	5,054	5,597
Goverment	3,432	4,187	5,046	7,323	8,742
Others	13,898	18,753	21,979	33,024	38,750
GNP	38,956	52,065	64,175	88,146	108,590

Source : Banco Central de Reserva

TABLE A.1.3

PERUVIAN BALANCE OF PAYMENTS 1950 - 1970
(Millions of Dollars)

	1950	1955	1960	1965	1970
1.Export FOB	198.40	281.20	444.30	684.60	1,034.30
2.Import FOB	-149.30	-294.60	-341.00	-659.70	-699.60
A. Balance of Trade	49.10	-13.40	103.30	24.90	334.70
1.Freights and Insurance	-12.40	-35.50	-45.70	-83.30	-52.90
2.Rent of Investments	20.60	-38.20	-54.90	-82.00	-148.50
3.Other Sevices	.10	-1.70	-4.50	-22.00	-30.00
B. Balance of Service	-32.90	-75.40	-105.10	-187.30	-231.40
C. Transfer Payments	1.30	7.70	20.60	24.10	81.60
D. Current Account Balance	17.50	-81.10	18.80	-138.30	184.90
1.Long Term Private Capital	-8.00	7.10	16.10	48.80	-76.80
-Direct Invest	-9.00	6.60	11.10	31.50	-79.20
-Private Loan	1.00	.50	5.00	17.30	2.40
Long Term Public Capital	-1.20	54.60	-9.30	123.80	100.50
-Disbursements	0.00	60.30	12.80	98.00	190.40
-Amortizations	-1.30	-8.90	-24.30	-22.40	-120.90
-Others	.10	3.20	2.20	48.20	31.00
E. Long Term Capital	-9.20	61.70	6.80	172.60	23.70
F. Net Basic Balance	8.30	-19.40	25.60	34.30	208.60
G. Short Term Capital	13.70	.20	4.90	-3.90	21.40
H. Errors.Omis. and SDR	-19.70	15.50	2.20	-15.70	27.40
TOTAL	2.30	-3.70	32.70	14.70	257.40

Source : Banco Central de Reserva

TABLE A.1.4

EXPORT BY MAJOR PRODUCTS 1950 - 1970
(Percentages)

	1950	1955	1960	1965	1970
Cotton	35.12	25.14	16.88	13.10	5.00
Sugar	15.34	13.66	10.97	5.51	6.23
Coffee	.52	2.95	4.27	4.35	4.26
Wools	4.08	2.18	1.64	1.36	.31
Fish and derivatives	2.94	4.36	11.54	27.86	32.20
Petroleum and derivatives	13.07	8.16	4.13	1.39	.71
Copper	5.27	10.82	21.87	18.12	25.65
Silver	4.13	5.98	5.59	5.86	5.89
Lead	6.35	9.67	5.01	5.68	3.35
Zinc	5.32	5.09	3.86	5.38	4.47
Iron	0.00	2.95	7.55	7.04	6.26
Other Products	7.85	9.04	6.70	4.38	5.67
TOTAL	100.00	100.00	100.00	100.00	100.00

92.16

Source: Banco Central de Reserva

TABLE A. 1.5

IMPORTS BY END USE CLASSIFICATION 1950 - 1970
(Percentages)

	1950	1955	1960	1965	1970
Consumer Goods	24.19	30.17	21.54	20.80	14.19
Inputs	39.57	49.20	41.91	45.06	49.63
Capital Goods	35.65	44.09	36.12	33.98	36.04
Other Imported Goods	.59	1.07	.42	.16	.15
TOTAL	100.00	100.00	100.00	100.00	100.00

Source : Banco Central de Reserva

TABLE A.1.6

REVENUES AND EXPENDITURES OF THE CENTRAL GOVERNMENT 1950 - 1970
(Millions of Soles)

	1950	1955	1960	1965	1970
Revenue	2,044	3,901	8,532	20,478	45,452
Profit Tax	903	1,098	2,375	3,457	10,484
Personal Tax	2[illegible]5	469	1,205	3,709	9,699
Direct Tax	117	222	491	1,035	3,483
Social Security Contribution	45	168	550	2,304	4,774
Non-Tax Payments	44	79	164	370	1,442
Indirect Taxes	695	2,106	4,523	12,177	23,037
Import Taxes	254	806	1,601	5,053	8,079
Others	441	1,300	2,922	7,124	14,958
Non-Tributary Payments	240	228	429	1,135	2,232
Expenditures	1,737	4,133	7,680	23,933	47,321
Consumption Expenditures	1,132	2,240	4,776	12,542	24,426
Wages	953	1,772	3,898	10,569	19,368
Others	179	468	878	1,973	5,058
Subsidies	205	404	882	2,493	3,184
Personal Transfer Payments	167	423	1,141	5,247	10,936
Foreign Transfer Payments	18	21	41	29	85
Debt Interest	38	91	181	575	2,263
Current Expenditures	1,560	3,179	7,021	20,886	40,894
Machinery and Equipment	15	142	42	405	172
Construction	162	812	617	2,642	4,715

TABLE A.1.7

STRUCTURE OF GOVERNMENT EXPENDITURES 1950 - 1970
(Percentages)

	1950	1955	1960	1965	1970
Consumption Expenditures	64.07	52.83	61.01	51.48	50.69
Wages	54.69	42.37	50.83	44.02	40.50
Others	9.38	10.46	10.19	7.46	10.19
Subsidies	12.42	10.26	12.12	10.79	7.02
Personal Transfer Payments	9.99	10.64	15.63	22.80	24.03
Foreign Transfer Payments	1.10	.54	.57	.13	.19
Debt Interest	2.31	2.32	2.50	2.50	4.93
Current Expenditures	89.89	76.60	91.83	87.70	86.86
Machinery and Equipment	.79	3.47	.41	1.61	3.70
Construction	9.32	19.93	7.75	10.69	9.43
Buildings	2.01	4.21	.90	1.91	3.01
Highways	2.68	7.27	4.52	4.04	3.53
Irrigations	2.86	4.87	.37	1.49	.97
Others	1.77	3.57	1.96	3.25	1.93
Investment Expenditures	10.11	23.40	8.17	12.30	13.14
TOTAL	100.00	100.00	100.00	100.00	100.00

Source : Banco Central de Reserva

TABLE A.1.8

STRUCTURE OF GOVERNMENT REVENUES 1950 - 1970
(Percentages)

	1950	1955	1960	1965	1970
Profit Tax	46.31	29.52	29.14	17.58	23.95
Personal Tax	8.62	10.91	13.16	17.53	19.92
Direct Taxes	6.00	5.97	6.02	5.26	7.06
Social Security Contribution	2.31	4.52	6.75	11.71	10.91
Non-Tax Payments	.31	.43	.39	.55	1.95
Indirect Taxes	34.10	54.87	53.76	59.13	51.56
Import Taxes	13.03	21.67	19.64	25.69	18.46
Others	21.08	33.20	34.12	34.13	33.10
Non-Tributary Payments	10.97	4.70	3.94	5.07	4.57
TOTAL	100.00	100.00	100.00	100.00	100.00

Source : Banco Central de Reserva

TABLE A.1.9

PRICE INDICES
(1963 = 100)

	1950	1955	1960	1965	1970
Personal Consumption	41.80	58.10	89.00	127.90	203.00
Government Consumption	29.30	44.30	78.20	129.50	206.30
Gross Invest	34.30	53.80	89.80	110.00	199.50
Machinery and Equipment	41.90	60.00	96.50	104.00	155.60
Constructions	26.10	48.00	81.60	117.10	185.30
Export of Goods and Services	55.00	69.00	94.90	112.40	229.50
Import of Goods and Services	48.10	67.00	103.50	101.00	144.30
GNP Implicit Deflator	40.00	55.60	86.50	128.10	218.50

Source : Banco Central de Reserva

TABLE A.1.10

EXCHANGE RATE OF THE PERUVIAN SOL WITH RESPECT THE US DOLLAR 1950 - 1970
(Annual Average)

	SOLES/ US $
1950	14.85
1951	15.08
1952	15.43
1953	16.85
1954	19.39
1955	19.00
1956	19.23
1957	19.07
1958	23.40
1959	27.64
1960	26.30
1961	26.81
1962	26.81
1963	26.82
1964	26.82
1965	26.82
1966	26.82
1967	30.85
1968	38.70
1969	38.70
1970	38.70

Source : Elaborated from Boloña (1981) Table A.3.4-9 Page 376

Table A. 2.1

Power Groups in the Private Sector in the 1960s

1. Agricultural Sector

Families	Name of the Company	Main Crop	Location & Department	No. of Hectares
Aspillaga Anderson	Negociacion Aspillaga Anderson S.A.	Sugar	Zaña - Lambayeque	7,585 cultivated
Beltran Espantoso	Hacienda Montalban Hacienda San Jacinto	Cotton	Cañete - Ica	4,385
Bellido Espinoza	Sociedad Agricola El Pilar S.A.	---	Ica	---
Palacios Moreyra	Hacienda Talambo	---	Lambayeque	4,433
Moreyra Paz Soldan	Hacienda San Isidro	---	Lima	---
Izaga	Sociedad Agricola Pucala Ltda.	Sugar & Rice	Lambayeque	4,561
Picasso Perata	---	Cotton & Vid	Ica, Lima, Lambayeque	5,925

Families	Name of the Company	Main Crop	Location & Department	No. of Hectares
Berckemeyer Pazos	Hacienda Jesus del Valle S.A.	---	Huaral - Lima	882
Brescia Cafferatta	Sociedad Agricola San Nicolas & Others		Lima	7,817
Cilloniz Eguren	Compañia Agricola San Jose	Cotton & Vid	Chincha - Ica	4,673
Calixto Romero	Negociacion Agricola Calixto Romero & Others	---	Piura	6,000
Fumagalli Persico	Hacienda Ingenio & Others	---	Lima	1,653
Grace Group	Cartavio S.A. Sociedad Agricola Paramonga Ltda.	Sugar	La Libertad, Lima	12,399
Lopez De Romaña	Inversiones Generales S.A.	---	Arequipa	2,783

Families	Name of the Company	Main Crop	Location & Department	No. of Hectares
Gildemeister	Empresa Agricola Chicama Ltda.	Sugar	La Libertad	19,862
Mujica Gallo	Compañia Agricola Peru Ltda. Sociedad Agricola San Ramon S.A.	Cotton	Lima, Ica	7,380
Olaechea	Empresa Agricola Tacama S.A.	Vid	Ica	1,088
Pardo	Hacienda Tuman	Sugar	Lambayeque	5,342
Peschiera Carrillo	Several Haciendas	Cotton & Vid	Ica	3,864
De la Piedra	Agricola Pomalca Ltda. & Others	Sugar, Rice & Coffee	Lambayeque, Cajamarca	10,707
Hilbeck Seminario	Negociacion Agricola y Ganadera Pabur S.A.		Piura	4,553

2. Mining Sector

2.1 Big Mining Companies

Name	Location	Minerals	Production Millions of Dollars
Cerro de Pasco Corp.	Junin	Copper, Zinc, Silver	57.3 (1965)
Southern Peru Copper Corp.	Toquepala, Quellabeco, Cuajone, Moquegua & Tacna	Copper, Silver, Gold	90 (1960-65)
Northern Peru Mining	La Libertad	Copper, Lead, Silver, Zinc	6.6 (1965)
Marcona Mining Co.	Ica	Iron	44.6 (1965)

2.2 Other Foreign Groups

Name	Location	Minerals
Leon James Rosenshine	Junin, Huancavelica, Ayacucho	Zinc, Silver, Gold
Minerales de Santander Inc.	Canta - Lima	Zinc, Lead, Silver, Copper
Natomas Co. of Peru S.A.	Puno	Gold

2.3 National Firms

Name	Location	Minerals
Atacocha S.A. (Quesada, Bianchini, Torres Belon)	Cerro de Pasco	Lead, Zinc, Silver, Gold
Milpo, Pacococha (Baertl, Venegas, Caceres, Nicander & Montori)	Cerro de Pasco	Lead, Zinc
Fernandini Clotet	Cerro de Pasco, Huancavelica	Lead, Zinc
Rio Pallanga (Pardo, Rizo Patron & Others)	Junin	Lead, Copper, Zinc, Silver
Felipe Zacharias	Lima	Lead, Copper, Zinc, Silver
Galjuf	Pasco	---
Loret de Mola Group (Loret de Mola, Arrus, Brazzini)	Huancayo	Lead, Copper, Zinc, Silver, Coal
Minera Castro Virreyna	Huancavelica	Zinc, Lead, Silver
Sociedad Minera Llauly Ltd. (Osma Family)	Junin	Lead, Silver & Zinc

Name	Location	Minerals
Compañia Minera Condor S.A. (Badani, Lewis, Fleischman)	Ica	---
Boza-Wiese	Ayacucho, Ica	Copper, Zinc, Silver, Gold
Mario Samame Boggio	Puno	Copper, Lead, Silver, Zinc
Marcionelli Miculicich-Hanza	Junin	Copper
Miguel Caro Ramirez - David Aguilar Cornejo - Victor Proaño	Ancash	Lead, Zinc, Copper, Silver

3. Main Petroleum Producers

- International Petroleum Co.
- Lobitos Oil Co.
- Belco Petroleum Corp. of Peru
- Empresa Petrolera Fiscal

4. Main Fishing Groups

1. Luis Banchero Rossi
2. Grupo Manuel Elguera MC. Parlin y Arturo Madueño Gonzalez
3. Grupo Ralston Purina (U. S. A.)
4. Grupo Hnos. Piazza y Compañia Salvessen (Escocia)
5. Grupo H. J. Heinz (U. S. A.)
6. Grupo Hnos. Brescia Cafferatta
7. Grupo Deltec
8. Cesar Vallarino Vasquez
9. Carlos del Rio Suito
10. Grupo Grace (U. S. A.)
11. Grupo John Ryan III (U. S. A.) y Alfonso Diez Hidalgo
12. Grupo Gildemeister

Source : MALPICA (1965).

Table A. 3.1

Concentration and Control at the firm level for Several Industrial Groups, 1973

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INDUSTRIAL GROUP: 202
(Dairy Products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Leche Gloria	40.7	Carnation Corp. Gral. Milk (EEUU)	46.7
2. Perulac	19.7	Nestlé A. G. (Suiza)	100.0
3. U. P. A. S.A.	16.8	P.S. Donofrio	99.0

INDUSTRIAL GROUP: 205
(Mill Products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Nicolini Hnos.	20.4	Fam. Nicolini	41.0
2. Cía. Mol. Santa Rosa	14.0	-Belén S.A. (Panamá)	46.2
		-Soc. Inv. Ind. Latino-americanas (Panamá)	46.2
3. Soc. Ind. del Sur	10.0	Calpurnia S.A. (Panamá)	50.0

INDUSTRIAL GROUP: 207
(Sugar refinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Coop. Casa Grande	20.6	CAP Casa Grande	100.0
2. Coop. Cartavio	13.0	CAP Cartavio	100.0
3. Coop. Tumán	12.6	CAP Tumán	100.0

INDUSTRIAL GROUP: 209
(Other food industries)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Nicolini Hnos. S.A.	21.8	Fam. Nicolini	41.0
2. Cía. Molinera Santa Rosa	12.3	Belén S.A. (Panamá)	46.2
		Soc. Inv. Ind. Latino-americanas (Panamá)	46.2
3. Cía. Oleaginosa del Perú S.A.	9.6	La Fabril S.A. (Panamá)	

INDUSTRIAL GROUP: 211
(Spirits)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Soc. Pomalca	16.4	s/i n.a	
2. Soc. Agrícola Para-monga	15.1	W.R. Grace Co.	
3. Empresa Chicama	8.3	s/i	

INDUSTRIAL GROUP: 212
(Wine industry)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Tacama	19.5	Fam. Olaechea	
2. Viña Ocucaje	18.1	s/i n.a	
3. M. Picasso	14.9	S/i	

INDUSTRIAL GROUP: 213
(Beer and Malt)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Backus y Johnston	46.0	Swiss Bank Corporation (Suiza)	14.6
2. Cía. Nacional de Cerveza	36.2	Cía. de Inv. Com. Odracin	22.2
3. Cía. Cervecera del Sur	15.4	Schweizerische K. (Suiza)	27.1

INDUSTRIAL GROUP: 214
(Soft drinks)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cía. Emb. Lima L. Barton	21.8	Barton Rey Consuelo	66.7
2. J. R. Lindley	20.6	Lindley Isaac R.	59.4
3. Cía. M. Ventura	8.0	Cía. Inmobiliaria Maven S. A.	26.0

INDUSTRIAL GROUP: 231
(Textiles)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. La Fabril S. A.	12.0	Dakota S.A. (Panamá)	50.6
2. Fáb. La Unión	9.9	Duncan Fox Co. (Reino Unido)	21.8
3. Cuvisa	5.3	W.R. Grace (USA)	
4. Cía. Peruana Textil El Hilado	3.0	Moll Herman Federico	24.3
5. Cía. Roberto Sarfaty	2.8	Sarfaty Salgue Roberto	100.0

INDUSTRIAL GROUP: 232
(Knitted articles)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Manufacturas Lolas	8.7	Fam. Lolas	66.8
2. Tejeduría Ziltex	7.6	Fam. Zillserman	80.0
3. Manufacturas Tres Estrellas	4.4	S/i	
4. Confec. Lancaster	4.0	Fam. Farah	75.0
5. Bateco S.A	4.0	Amsel Heller Marcos	33.3

INDUSTRIAL GROUP: 233
(Ropes and Nets)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Rayón y Celanese	28.9	Celanese Corp. (EEUU)	49.0
2. Retex Peruana S.A.	25.1	Margix (Suiza)	69.6
3. Sacos Peruanos S.A.	14.2	Euroamerican (Panamá)	37.4

INDUSTRIAL GROUP: 241
(Footwear)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Fca. de Calzado Peruano	34.1	Overseas Manufacturing (Bermudas)	32.6
		I.M. Bank Nominees Limited (Canadá)	30.4
2. Fca. de Calzado El Diamante S.A.	33.5	Familia Pinasco	45.0
3. Fca. El Inca	9.7	s/i	

INDUSTRIAL GROUP: 243
(Clothing)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Compas. Indust. S.A.	9.3	Tinman Shijman Enrique	41.7
2. Conf. Texoro S.A.	6.9	s/i	
3. Beauty Form Per. S.A.	4.6	Kreimer Fleischman Benjamín	48.0
4. Manfín S.A.	4.2	s/i	
5. Fca. de Camisas Arco	4.0	Fam. O'Custer	71.0

INDUSTRIAL GROUP: 251
(Sawmill and Wood)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Madera Prensada S.A.	9.4	s/i	
2. L. Guillermo Ostolaza S.A.	8.5	Fam. Van Ginhoven Ostolaza	67.5
3. Enchapes Peruanos S.A.	8.3	Wiedemann Wiedemann Armin (Alem. Occ.)	40.0
4. Maderas Laminadas S.A.	7.2	Grupo Ostolaza	

INDUSTRIAL GROUP: 259
(Wood Products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Crown Cork del Perú	22.6	Crown Cork Seal Inc. (EEUU)	69.4
2. Ind. Manuf. Nac. S.A.	13.9	s/i	
3. Kamerich Miyasato e Hijo	10.4	s/i	

INDUSTRIAL GROUP: 260
(Wood furniture)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Estudio 501	16.2	Wiedemann W. Armin (Alem. Occ.)	40.0
2. Soc. Mad. Ciurlizza Maurer Ltda.	4.0	s/i	
3. Cía. Ind. Peruana Monfer	3.9	Familia Moncloa	97.0
4. Komfort S.A.	3.6	Salinas S. Salvador	45.0
		Kairy Bueno Rubén	40.0
5. Chaide y Chaide S.A.	3.3	s/i	

INDUSTRIAL GROUP: 271
(Wood pulp, paper and cardboard)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Soc. Paramonga Ltda.	52.3	W.R. Grace y Co. (EEUU)	100.0
2. Cía. Papelera Trujillo S.A.	26.7	W.R. Grace y Co. (EEUU)	100.0
3. La Papelera Peruana S.A.	9.8	s/i	
4. Industrial Papelera Atlas S.A.	5.5	s/i	

INDUSTRIAL GROUP: 272
(Paper products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Soc. Paramonga Ltda.	38.3	W.R. Grace y Co. (EEUU)	100.0
2. Sociedad Agrícola Paramonga	19.7	W.R. Grace y Co. (EEUU)	
3. Envases Industriales S.A.	5.8	Perutécnica S.A.	50.0
4. Envases Sanmarti S.A.	5.5	W.R. Grace y Co. (EEUU)	86.0

INDUSTRIAL GROUP: 280
(Printing)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. La Prensa S.A.	12.6	Cía. Peruana de Prom. e Inv.	54.3
		Cía. Nac. de Inversiones	16.9
2. Empresa Editora El Comercio S.A.	12.6	Fam. Miro Quesada	
3. Editora Nacional S.A.	8.4	s/i	
4. Ind. Pap. Atlas S.A.	7.1	s/i	

INDUSTRIAL GROUP: 291
(Tanneries and leather)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. El Diamante S.A.	10.3	Fam. Pinasco	45.0
2. Fab. Calzado Peruano S.A.	10.0	Overseas Manufacturing (Bermudas)	32.6
		Im Bank Nominees Limited (Canadá)	30.4
3. Curt. Cocodrilo S.A.	9.5	s/i	

INDUSTRIAL GROUP: 300
(Rubber)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cía. Good Year del Perú	52.7	Good Year Tire Rubber Co. (EEUU)	99.9
2. Lima Rubber Company	22.0	B.F. Goodrich (EEUU)	40.5
3. Pátamo S.A.	12.2	Fab. de Calzado Peruano	100.0

INDUSTRIAL GROUP: 311
(Chemical)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Rayón y Celanese Peruana S.A.	16.1	Celanese Corporation (EEUU)	49.0
2. Soc. Paramonga Ltda.	11.9	W.R. Grace Co. (EEUU)	
3. Exsa	10.4	Cerro de Pasco Co. (EEUU)	32.4
4. Fert. Sintéticos S.A.	9.5	Montecatini (Italia)	62.0

INDUSTRIAL GROUP: 312
(Oil and Fats)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cía. Oleaginosa del Perú S.A.	44.5	La Fabril S.A. (Panamá)	
2. Oleoficio Lima S.A.	11.9	Pizzolli Bellora	98.7
3. Lever Pacocha	9.0	Doma N.V. (Holanda)	100.0
4. Ind. Anderson Clayton S.A.	8.9	Anderson Clayton Co. (EEUU)	98.3

INDUSTRIAL GROUP: 313
(Paints and Varnish)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Ind. Vencedor S.A.	27.6	W.R. Grace (USA)	
2. Tecno Química S.A.	17.4	De Almenara y Zaracondegui (España)	50.0
		Placenza Soave Mario (Italia)	50.0
3. Cía. Ind. Quím. S.A.	10.6	Soc. Inv. Com. Ind. Mineras (EEUU)	100.0

INDUSTRIAL GROUP: 319
(Other chemical products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Deterperú S.A.	8.1	s/i	
2. Sydney Ross S.A.	4.7	Clafin Chemical Co. (EEUU)	100.0
3. Lab. Efesa S.A.	4.4	Enrique Ferreyros y Cía.	99.8
4. Lab. Anakol S.A.	3.7	Guinea T. Eduardo (España)	48.0

INDUSTRIAL GROUP: 321
(Petroleum refinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. PETROPERU	84.4	PETROPERU	100.0
2. Ref. Conchán Chevron S.A.	10.9	PETROPERU	100.0
3. Mobiloil del Perú	2.4	s/i	

INDUSTRIAL GROUP: 331
(Non-mineral products for construction)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Ref. Peruana S.A.	35.9	Cerro Corp. New York (EEUU)	42.0
		Dresser Industries Inc. (EEUU)	58.0
2. Mayólica Nacional S.A.	9.7	s/i	
3. Eléct. Cerámica Chimbote	9.2	s/i	

INDUSTRIAL GROUP: 332
(Glass)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. P. y J. Hartinger	17.7	s/i	
2. Vidrios Planos del Perú	13.9	Cía. Man. Vidrio del Perú Ltd.	52.5
3. Cía. Manufacturera de Vidrio del Perú	12.6	Cía. Nacional de Cerveza Soc. Agríc. Comerc. Unión Swiss Bank Corporation (Suiza)	

INDUSTRIAL GROUP: 333
(Clay and porcelain products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cerámica Mosaico S.A.	72.2	Gattinoni Franco	29.7
2. Cerámica del Pacífico S.A.	18.1	Inversiones Rialta S.A.	67.1

INDUSTRIAL GROUP: 334
(Cement)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cemento Lima S.A.	46.2	Sind. de Inv. y Ad. (Suiza)	50.0
2. Cemento Andino	23.1	Lehman Brothers (EEUU)	12.4
3. Cía. de Cemento Pacasmayo S.A.	17.4	Mauricio Hochschild y Cía. (EEUU)	

INDUSTRIAL GROUP: 339
(Other non-metallic mineral products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Fábrica Peruana Eternit S.A.	28.7	Compagnie Financ. Eternit (Bélgica)	21.3
2. Cía. Minera Agrocalcáreos S.A.	8.1	Fam. Roselló	100.0
3. Concreto Premezclado S.A.	6.0	Arenera La Molina	50.0
4. Roselló y Cía. S.A.	4.3	Fam. Roselló	100.0

INDUSTRIAL GROUP: 341
(Steel industry)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Soc. Siderúrgica Chimbote S.A.	59.4	Sider Perú	100.0
2. Metales Peruanos S.A. MEPSA	15.0	Cerro Corporation New York (EEUU)	28.4

INDUSTRIAL GROUP: 342
(Metal refinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cerro de Pasco Co.	95.0	Cerro de Pasco Corp. (EEUU)	100.0
2. Fáb. de Aluminium y Met. S.A.	1.6	Solenco Anstalt Vaduz (Litchenstein)	14.5
3. Cía. Electrodo Oerlinkón S.A.	0.9	Cerro Corporation New York (EEUU)	100.0

INDUSTRIAL GROUP: 350
(Metal products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Industrias Reunidas	8.6	Continental Can Co. (EEUU)	10.5
2. Leche Gloria	6.6	Carnation Corp. (EEUU)	46.6
3. Prod. de Alambre S.A.	5.5		
4. Ferrum Perú S.A.	4.6	Androsorbis A.G. (Suiza)	80.7
5. Manufact. Met y Alum. Record S.A.	4.4	s/i	

INDUSTRIAL GROUP: 360
(Non-electrical machinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Industrias Reunidas S.A.	15.1	Continental Can Co. (EEUU)	10.5
2. Perunamel S.A.	7.2	s/i	
3. Empresa Agrícola Chicama	6.9	s/i	
4. Hidrostal S.A.	4.9	Sthale Martin (Suiza)	34.3

INDUSTRIAL GROUP: 370
(Electric machinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Ind. Peruana de Prod. Elec.	15.0	Phillips Peruana S.A. (Holanda)	99.8
2. Ind. del Cobre	10.2	Cerro Corp. (EEUU)	76.0
3. Pirelli Peruana Cord. Elect.	6.1	Soc. Int. Pirelli S.A. (Suiza)	40.6
4. Sunbeam del Perú	5.7	Sunbeam Corp. (EEUU)	49.0
		Reiser y Curioni S.A.	49.0

INDUSTRIAL GROUP: 381
(Naval construction)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Pesquera Ind. Callao S.A.	55.3	PESCAPERU	
2. Fabricantes Met. S.A.	21.0	s/i	
3. Maestranza y Astilleros Delta	6.2	s/i	

INDUSTRIAL GROUP: 383
(Cars)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Ford Motor Co. Perú	28.0	s/i	
2. General Motors Perú S.A.	17.6	s/i	
3. Chrysler Perú S.A.	12.8	Chrysler International S.A. (Suiza)	100.0
4. Motor Perú S.A.	6.6	Motor Import	96.1
5. Fiat del Perú S.A.	6.3	Fiat S.P. (Italia)	99.9
6. Ind. Automotriz del Perú S.A.	5.6	s/i	
7. Toyota del Perú S.A.	4.2	s/i	

INDUSTRIAL GROUP: 398
(Plastics)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Perú Plast S.A.	7.1	Shinetsu Chemical Co. (Japón)	23.8
2. Bakelita y Anexos S.A.	6.4	Fam. Denemoustier	100.0
3. Fábrica de Calzado Peruano	6.0	I.M. Bank Nominees Limited Canadá	51.4
4. Plásticos Fort	4.7	s/i	

Source: Tornes (1975)

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TABLE A.1.4

EXPORT BY MAJOR PRODUCTS 1950 - 1970
(Percentages)

	1950	1955	1960	1965	1970
Cotton	35.12	25.14	16.88	13.10	5.00
Sugar	15.34	13.66	10.97	5.51	6.23
Coffee	.52	2.95	4.27	4.35	4.26
Wools	4.08	2.18	1.64	1.36	.31
Fish and derivatives	2.94	4.36	11.54	27.83	32.20
Petroleum and derivatives	13.07	8.16	4.13	1.39	.71
Copper	5.27	10.82	21.87	18.12	25.65
Silver	4.13	5.98	5.39	5.86	5.89
Lead	6.35	9.67	5.01	5.68	3.35
Zinc	5.32	5.09	3.86	5.38	4.47
Iron	0.00	2.95	7.55	7.04	6.26
Other Products	7.85	9.04	6.70	4.38	5.67
TOTAL	100.00	100.00	100.00	100.00	100.00

92.16

Source: Banco Central de Reserva

TABLE A. 1.5

IMPORTS BY END USE CLASSIFICATION 1950 - 1970
(Percentages)

	1950	1955	1960	1965	1970
Consumer Goods	24.19	30.17	21.54	20.80	14.19
Inputs	39.57	49.20	41.91	45.06	49.63
Capital Goods	35.65	44.09	36.12	33.98	36.04
Other Imported Goods	.59	1.07	.42	.16	.15
TOTAL	100.00	100.00	100.00	100.00	100.00

Source : Banco Central de Reserva

TABLE A.1.6

REVENUES AND EXPENDITURES OF THE CENTRAL GOVERNMENT 1950 - 1970
(Millions of Soles)

	1950	1955	1960	1965	1970
Revenue	2,044	3,901	8,532	20,470	45,452
Profit Tax	903	1,098	2,375	3,457	10,484
Personal Tax	206	469	1,205	3,709	9,699
Direct Tax	117	222	491	1,035	3,483
Social Security Contribution	45	168	550	2,304	4,774
Non-Tax Payments	44	79	164	370	1,442
Indirect Taxes	695	2,106	4,523	12,177	23,037
Import Taxes	254	806	1,601	5,053	8,079
Others	441	1,300	2,922	7,124	14,958
Non-Tributary Payments	240	228	429	1,135	2,232
Expenditures	1,737	4,133	7,680	23,933	47,321
Consumption Expenditures	1,132	2,240	4,776	12,542	24,426
Wages	953	1,772	3,898	10,569	19,368
Others	179	468	878	1,973	5,058
Subsidies	205	404	882	2,493	3,184
Personal Transfer Payments	167	423	1,141	5,247	10,936
Foreign Transfer Payments	18	21	41	29	85
Debt Interest	38	91	181	575	2,263
Current Expenditures	1,560	3,179	7,021	20,886	40,894
Machinery and Equipment	15	142	42	405	172
Construction	162	812	617	2,642	4,715

TABLE A.1.7

STRUCTURE OF GOVERNMENT EXPENDITURES 1950 - 1970
(Percentages)

	1950	1955	1960	1965	1970
Consumption Expenditures	54.07	52.83	61.01	51.48	50.69
Wages	54.69	42.37	50.83	44.02	40.50
Others	9.38	10.46	10.19	7.46	10.19
Subsidies	12.42	10.26	12.12	10.79	7.02
Personal Transfer Payments	9.99	10.64	15.63	22.80	24.03
Foreign Transfer Payments	1.[illegible]	.54	.57	.13	.19
Debt Interest	2.31	2.32	2.50	2.50	4.93
Current Expenditures	89.89	76.60	91.83	87.70	86.86
Machinery and Equipment	.79	3.47	.41	1.61	3.70
Construction	9.32	19.93	7.75	10.69	9.43
Buildings	2.01	4.21	.90	1.91	3.01
Highways	2.68	7.27	4.52	4.04	3.53
Irrigations	2.86	4.87	.37	1.49	.97
Others	1.77	3.57	1.96	3.25	1.93
Investment Expenditures	10.11	23.40	8.17	12.30	13.14
TOTAL	100.00	100.00	100.00	100.00	100.00

Source : Banco Central de Reserva

TABLE A.1.8

STRUCTURE OF GOVERNMENT REVENUES 1950 - 1970
(Percentages)

	1950	1955	1960	1965	1970
Profit Tax	46.31	29.52	29.14	17.58	23.95
Personal Tax	8.62	10.91	13.16	17.53	19.92
Direct Taxes	6.00	5.97	6.02	5.26	7.06
Social Security Contribution	2.31	4.52	6.75	11.71	10.91
Non-Tax Payments	.31	.43	.39	.55	1.95
Indirect Taxes	34.10	54.87	53.76	59.83	51.56
Import Taxes	13.03	21.67	19.64	25.69	18.46
Others	21.08	33.20	34.12	34.13	33.10
Non-Tributary Payments	10.97	4.70	3.94	5.07	4.57
TOTAL	100.00	100.00	100.00	100.00	100.00

Source : Banco Central de Reserva

TABLE A.1.9

PRICE INDICES
(1963 = 100)

	1950	1955	1960	1965	1970
Personal Consumption	41.80	58.10	89.00	127.90	203.00
Government Consumption	29.30	44.30	78.20	129.50	206.30
Gross Invest	34.30	53.80	89.80	110.00	199.50
Machinery and Equipment	41.90	60.00	96.50	104.00	155.60
Constructions	26.10	48.00	81.60	117.10	185.30
Export of Goods and Services	55.00	69.00	94.90	112.40	229.50
Import of Goods and Services	48.10	67.00	103.50	101.00	144.30
GNP Implicit Deflator	40.00	55.60	86.50	128.10	218.50

Source : Banco Central de Reserva

TABLE A.1.10

EXCHANGE RATE OF THE PERUVIAN SOL WITH RESPECT THE US DOLLAR 1950 - 1970
(Annual Average)

	SOLES/ US $
1950	14.85
1951	15.08
1952	15.43
1953	16.85
1954	19.39
1955	19.00
1956	19.23
1957	19.07
1958	23.40
1959	27.64
1960	26.30
1961	26.81
1962	26.81
1963	26.82
1964	26.82
1965	26.82
1966	26.82
1967	30.85
1968	38.70
1969	38.70
1970	38.70

Source : Elaborated from Boloña (1981) Table A.3.4-9 Page 376

Table A. 2.1

Power Groups in the Private Sector in the 1960s

1. Agricultural Sector

Families	Name of the Company	Main Crop	Location & Department	No. of Hectares
Aspillaga Anderson	Negociacion Aspillaga Anderson S.A.	Sugar	Zaña - Lambayeque	7,585 cultivated
Beltran Espantoso	Hacienda Montalban Hacienda San Jacinto	Cotton	Cañete - Ica	4,385
Bellido Espinoza	Sociedad Agricola El Pilar S.A.	---	Ica	---
Palacios Moreyra	Hacienda Talambo	---	Lambayeque	4,433
Moreyra Paz Soldán	Hacienda San Isidro	---	Lima	---
Izaga	Sociedad Agricola Pucala Ltda.	Sugar & Rice	Lambayeque	4,561
Picasso Perata	---	Cotton & Vid	Ica, Lima, Lambayeque	5,925

Families	Name of the Company	Main Crop	Location & Department	No. of Hectares
Berckemeyer Pazos	Hacienda Jesus del Valle S.A.	---	Huaral - Lima	882
Brescia Cafferatta	Sociedad Agricola San Nicolas & Others		Lima	7,817
Cilloniz Eguren	Compañia Agricola San Jose	Cotton & Vid	Chincha - Ica	4,673
Calixto Romero	Negociacion Agricola Calixto Romero & Others	---	Piura	6,000
Fumagalli Persico	Hacienda Ingenio & Others	---	Lima	1,653
Grace Group	Cartavio S.A. Sociedad Agricola Paramonga Ltda.	Sugar	La Libertad, Lima	12,399
Lopez De Romaña	Inversiones Generales S.A.	---	Arequipa	2,783

Families	Name of the Company	Main Crop	Location & Department	No. of Hectares
Gildemeister	Empresa Agricola Chicama Ltda.	Sugar	La Libertad	19,862
Mujica Gallo	Compañia Agricola Peru Ltda. Sociedad Agricola San Ramon S.A.	Cotton	Lima, Ica	7,380
Olaechea	Empresa Agricola Tacama S.A.	Vid	Ica	1,088
Pardo	Hacienda Tuman	Sugar	Lambayeque	5,342
Peschiera Carrillo	Several Haciendas	Cotton & Vid	Ica	3,864
De la Piedra	Agricola Pomalca Ltda. & Others	Sugar, Rice & Coffee	Lambayeque, Cajamarca	10,707
Hilbeck Seminario	Negociacion Agricola y Ganadera Pabur S.A.		Piura	4,553

2. Mining Sector

2.1 Big Mining Companies

Name	Location	Minerals	Production Millions of Dollars
Cerro de Pasco Corp.	Junin	Copper, Zinc, Silver	57.3 (1965)
Southern Peru Copper Corp.	Toquepala, Quellabeco, Cuajone, Moquegua & Tacna	Copper, Silver, Gold	90 (1960-65)
Northern Peru Mining	La Libertad	Copper, Lead, Silver, Zinc	6.6 (1965)
Marcona Mining Co.	Ica	Iron	44.6 (1965)

2.2 Other Foreign Groups

Name	Location	Minerals
Leon James Rosenshine	Junin, Huancavelica, Ayacucho	Zinc, Silver, Gold
Minerales de Santander Inc.	Canta - Lima	Zinc, Lead, Silver, Copper
Natomas Co. of Peru S.A.	Puno	Gold

2.3 National Firms

Name	Location	Minerals
Atacocha S.A. (Quesada, Bianchini, Torres Belon)	Cerro de Pasco	Lead, Zinc, Silver, Gold
Milpo, Pacococha (Baertl, Venegas, Caceres, Nicander & Montori)	Cerro de Pasco	Lead, Zinc
Fernandini Clotet	Cerro de Pasco, Huancavelica	Lead, Zinc
Rio Pallanga (Pardo, Rizo Patron & Others)	Junin	Lead, Copper, Zinc, Silver
Felipe Zacharias	Lima	Lead, Copper, Zinc, Silver
Galjuf	Pasco	---
Loret de Mola Group (Loret de Mola, Arrus, Brazzini)	Huancayo	Lead, Copper, Zinc, Silver, Coal
Minera Castro Virreyna	Huancavelica	Zinc, Lead, Silver
Sociedad Minera Llauly Ltd. (Osma Family)	Junin	Lead, Silver & Zinc

Name	Location	Minerals
Compañia Minera Condor S.A. (Badani, Lewis, Fleischman)	Ica	---
Boza-Wiese	Ayacucho, Ica	Copper, Zinc, Silver, Gold
Mario Samame Boggio	Puno	Copper, Lead, Silver, Zinc
Marcionelli Miculicich-Hanza	Junin	Copper
Miguel Caro Ramirez - David Aguilar Cornejo - Victor Proaño	Ancash	Lead, Zinc, Copper, Silver

3. Main Petroleum Producers

- International Petroleum Co.
- Lobitos Oil Co.
- Belco Petroleum Corp. of Peru
- Empresa Petrolera Fiscal

4. Main Fishing Groups

1. Luis Banchero Rossi
2. Grupo Manuel Elguera MC. Parlin y Arturo Madueño Gonzalez
3. Grupo Ralston Purina (U. S. A.)
4. Grupo Hnos. Piazza y Compañia Salvessen (Escocia)
5. Grupo H. J. Heinz (U. S. A.)
6. Grupo Hnos. Brescia Cafferatta
7. Grupo Deltec
8. Cesar Vallarino Vasquez
9. Carlos del Rio Suito
10. Grupo Grace (U. S. A.)
11. Grupo John Ryan III (U. S. A.) y Alfonso Diez Hidalgo
12. Grupo Gildemeister

Source : MALPICA (1965).

Table A. 3.1

Concentration and Control at the firm level for
Several Industrial Groups, 1973

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INDUSTRIAL GROUP: 202
(Dairy Products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Leche Gloria	40.7	Carnation Corp. Gral. Milk (EEUU)	46.7
2. Perulac	19.7	Nestlé A. G. (Suiza)	100.0
3. U. P. A. S.A.	16.8	P.S. Donofrio	99.0

INDUSTRIAL GROUP: 205
(Mill Products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Nicolini Hnos.	20.4	Fam. Nicolini	41.0
2. Cía. Mol. Santa Rosa	14.0	-Belén S.A. (Panamá)	46.2
		-Soc. Inv. Ind. Latino-americanas (Panamá)	46.2
3. Soc. Ind. del Sur	10.0	Calpurnia S.A. (Panamá)	50.0

INDUSTRIAL GROUP: 207
(Sugar refinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Coop. Casa Grande	20.6	CAP Casa Grande	100.0
2. Coop. Cartavio	13.0	CAP Cartavio	100.0
3. Coop. Tumán	12.6	CAP Tumán	100.0

INDUSTRIAL GROUP: 209
(Other food industries)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Nicolini Hnos. S.A.	21.8	Fam. Nicolini	41.0
2. Cía. Molinera Santa Rosa	12.3	Belén S.A. (Panamá)	46.2
		Soc. Inv. Ind. Latino-americanas (Panamá)	46.2
3. Cía. Oleaginosa del Perú S.A.	9.6	La Fabril S.A. (Panamá)	

INDUSTRIAL GROUP: 211
(Spirits)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Soc. Pomalca	16.4	s/i n.a	
2. Soc. Agrícola Paramonga	15.1	W.R. Grace Co.	
3. Empresa Chicama	8.3	s/i	

INDUSTRIAL GROUP: 212
(Wine industry)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Tacama	19.5	Fam. Olaechea	
2. Viña Ocucaje	18.1	s/i n.a	
3. M. Picasso	14.9	S/i	

INDUSTRIAL GROUP: 213
(Beer and Malt)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Backus y Johnston	46.0	Swiss Bank Corporation (Suiza)	14.6
2. Cía. Nacional de Cerveza	36.2	Cía. de Inv. Com. Odracin	22.2
3. Cía. Cervecera del Sur	15.4	Schweizerische K. (Suiza)	27.1

INDUSTRIAL GROUP: 214
(Soft drinks)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cía. Emb. Lima L. Barton	21.8	Barton Rey Consuelo	66.7
2. J. R. Lindley	20.6	Lindley Isaac R.	59.4
3. Cía. M. Ventura	8.0	Cía. Inmobiliaria Maven S. A.	26.0

INDUSTRIAL GROUP: 231
(Textiles)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. La Fabril S. A.	12.0	Dakota S.A. (Panamá)	50.6
2. Fáb. La Unión	9.9	Duncan Fox Co. (Reino Unido)	21.8
3. Cuvisa	5.3	W.R. Grace (USA)	
4. Cía. Peruana Textil El Hilado	3.0	Moll Herman Federico	24.3
5. Cía. Roberto Sarfaty	2.8	Sarfaty Salgue Roberto	100.0

INDUSTRIAL GROUP: 232
(Knitted articles)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Manufacturas Lolas	8.7	Fam. Lolas	66.8
2. Tejedurfa Ziltex	7.6	Fam. Zillserman	80.0
3. Manufacturas Tres Estrellas	4.4	S/i	
4. Confec. Lancaster	4.0	Fam. Farah	75.0
5. Bateco S.A	4.0	Amsel Heller Marcos	33.3

INDUSTRIAL GROUP: 233
(Ropes and Nets)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Rayón y Celanese	28.9	Celanese Corp. (EEUU)	49.0
2. Retex Peruana S.A.	25.1	Margix (Suiza)	69.6
3. Sacos Peruanos S.A.	14.2	Euroamerican (Panamá)	37.4

INDUSTRIAL GROUP: 241
(Footwear)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Fca. de Calzado Peruano	34.1	Overseas Manufacturing (Bermudas)	32.6
		I.h. Bank Nominees Limited (Canadá)	30.4
2. Fca. de Calzado El Diamante S.A.	33.5	Familia Pinasco	45.0
3. Fca. El Inca	9.7	s/i	

INDUSTRIAL GROUP: 243
(Clothing)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Compas. Indust. S.A.	9.3	Tinman Shijman Enrique	41.7
2. Conf. Texcro S.A.	6.9	s/i	
3. Beauty Form Per. S.A.	4.6	Kreimer Fleischman Benjamín	48.0
4. Manfín S.A.	4.2	s/i	
5. Fca. de Camisas Arco	4.0	Fam. O'Custer	71.0

INDUSTRIAL GROUP: 251
(Sawmill and Wood)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Madera Prensada S.A.	9.4	s/i	
2. L. Guillermo Ostolaza S.A.	8.5	Fam. Van Ginhoven Ostolaza	57.5
3. Enchapes Peruanos S.A.	8.3	Wiedemann Wiedemann Armin (Alem. Occ.)	40.0
4. Maderas Laminadas S.A.	7.2	Grupo Ostolaza	

INDUSTRIAL GROUP: 259
(Wood Products)

	Firms	Percentage of Group GDP	Control	Percentage of Capital
1.	Crown Cork del Perú	22.6	Crown Cork Seal Inc. (EEUU)	69.4
2.	Ind. Manuf. Nac. S.A.	13.9	s/i	
3.	Kamerich Miyasato e Hijo	10.4	s/i	

INDUSTRIAL GROUP: 260
(Wood furniture)

	Firms	Percentage of Group GDP	Control	Percentage of Capital
1.	Estudio 501	16.2	Wiedemann W. Armin (Alem. Occ.)	40.0
2.	Soc. Mad. Ciurlizza Maurer Ltda.	4.0	s/i	
3.	Cía. Ind. Peruana Monfer	3.9	Familia Moncloa	97.0
4.	Komfort S.A.	3.6	Salinas S. Salvador	45.0
			Kairy Bueno Rubén	40.0
5.	Chaide y Chaide S.A.	3.3	s/i	

INDUSTRIAL GROUP: 271
(Wood pulp, paper and cardboard)

	Firms	Percentage of Group GDP	Control	Percentage of Capital
1.	Soc. Paramonga Ltda.	52.3	W.R. Grace y Co. (EEUU)	100.0
2.	Cía. Papelera Trujillo S.A.	26.7	W.R. Grace y Co. (EEUU)	100.0
3.	La Papelera Peruana S.A.	9.8	s/i	
4.	Industrial Papelera Atlas S.A.	5.5	s/i	

INDUSTRIAL GROUP: 272
(Paper products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Soc. Paramonga Ltda.	38.3	W.R. Grace y Co. (EEUU)	100.0
2. Sociedad Agrícola Paramonga	19.7	W.R. Grace y Co. (EEUU)	
3. Envases Industriales S.A.	5.8	Perutécnica S.A.	50.0
4. Envases Sanmarti S.A.	5.5	W.R. Grace y Co. (EEUU)	86.0

INDUSTRIAL GROUP: 280
(Printing)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. La Prensa S.A.	12.6	Cía. Peruana de Prom. e Inv.	54.3
		Cía. Nac. de Inversiones	16.9
2. Empresa Editora El Comercio S.A.	12.6	Fam. Miro Quesada	
3. Editora Nacional S.A.	8.4	s/i	
4. Ind. Pap. Atlas S.A.	7.1	s/i	

INDUSTRIAL GROUP: 291
(Tanneries and leather)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. El Diamante S.A.	10.3	Fam. Pinasco	45.0
2. Fab. Calzado Peruano S.A.	10.0	Overseas Manufacturing (Bermudas)	32.6
		Im Bank Nominees Limited (Canadá)	30.4
3. Curt. Cocodrilo S.A.	9.5	s/i	

INDUSTRIAL GROUP: 300
(Rubber)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cía. Good Year del Perú	52.7	Good Year Tire Rubber Co. (EEUU)	99.9
2. Lima Rubber Company	22.0	B.F. Goodrich (EEUU)	40.5
3. Pátamo S.A.	12.2	Fab. de Calzado Peruano	100.0

INDUSTRIAL GROUP: 311
(Chemical)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Rayón y Celanese Peruana S.A.	16.1	Celanese Corporation (EEUU)	49.0
2. Soc. Paramonga Ltda.	11.9	W.R. Grace Co. (EEUU)	
3. Exsa	10.4	Cerro de Pasco Co. (EEUU)	32.4
4. Fert. Sintéticos S.A.	9.5	Montecatini (Italia)	62.0

INDUSTRIAL GROUP: 312
(Oil and Fats)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cía. Oleaginosa del Perú S.A.	44.5	La Fabril S.A. (Panamá)	
2. Oleoficio Lima S.A.	11.9	Pizzolli Bellora	98.7
3. Lever Pacocha	9.0	Doma N.V. (Holanda)	100.0
4. Ind. Anderson Clayton S.A.	8.9	Anderson Clayton Co. (EEUU)	98.3

INDUSTRIAL GROUP: 313
(Paints and Varnish)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Ind. Vencedor S.A.	27.6	W.R. Grace (USA)	
2. Tecno Química S.A.	17.4	De Almenara y Zaracondegui (España)	50.0
		Placenza Soave Mario (Italia)	50.0
3. Cía. Ind. Quím. S.A.	10.6	Soc. Inv. Com. Ind. Mineras (EEUU)	100.0

INDUSTRIAL GROUP: 319
(Other chemical products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Deterperú S.A.	8.1	s/i	
2. Sydney Ross S.A.	4.7	Clafin Chemical Co. (EEUU)	100.0
3. Lab. Efesa S.A.	4.4	Enrique Ferreyros y Cía.	99.8
4. Lab. Anakol S.A.	3.7	Guinea T. Eduardo (España)	48.0

INDUSTRIAL GROUP: 321
(Petroleum refinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. PETROPERU	84.4	PETROPERU	100.0
2. Ref. Conchán Chevron S.A.	10.9	PETROPERU	100.0
3. Mobiloil del Perú	2.4	s/i	

INDUSTRIAL GROUP: 331
(Non-mineral products for construction)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Ref. Peruana S.A.	35.9	Cerro Corp. New York (EEUU)	42.0
		Dresser Industries Inc. (EEUU)	58.0
2. Mayólica Nacional S.A.	9.7	s/i	
3. Eléct. Cerámica Chimbote	9.2	s/i	

INDUSTRIAL GROUP: 332
(Glass)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. P. y J. Hartinger	17.7	s/i	
2. Vidrios Planos del Perú	13.9	Cía. Man. Vidrio del Perú Ltd.	52.5
3. Cía. Manufacturera de Vidrio del Perú	12.6	Cía. Nacional de Cerveza Soc. Agríc. Comerc. Unión Swiss Bank Corporation (Suiza)	

INDUSTRIAL GROUP: 333
(Clay and porcelain products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cerámica Mosaico S.A.	72.2	Gattinoni Franco	29.7
2. Cerámica del Pacífico S.A.	18.1	Inversiones Rialta S.A.	67.1

INDUSTRIAL GROUP: 334
(Cement)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cemento Lima S.A.	46.2	Sind. de Inv. y Ad. (Suiza)	50.0
2. Cemento Andino	23.1	Lehman Brothers (EEUU)	12.4
3. Cía. de Cemento Pacasmayo S.A.	17.4	Mauricio Hochschild y Cía. (EEUU)	

INDUSTRIAL GROUP: 339
(Other non-metallic mineral products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Fábrica Peruana Eternit S.A.	28.7	Compagnie Financ. Eternit (Bélgica)	21.3
2. Cía. Minera Agrocalcáreos S.A.	8.1	Fam. Roselló	100.0
3. Concreto Premezclado S.A.	6.0	Arenera La Molina	50.0
4. Roselló y Cía. S.A.	4.3	Fam. Roselló	100.0

INDUSTRIAL GROUP: 341
(Steel industry)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Soc. Siderúrgica Chimbote S.A.	59.4	Sider Perú	100.0
2. Metales Peruanos S.A. MEPSA	15.0	Cerro Corporation New York (EEUU)	28.4

INDUSTRIAL GROUP: 342
(Metal refinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Cerro de Pasco Co.	95.0	Cerro de Pasco Corp. (EEUU)	100.0
2. Fáb. de Aluminium y Met. S.A.	1.6	Solenco Anstalt Vaduz (Litchenstein)	14.5
3. Cía. Electrodo Oerlinkón S.A.	0.9	Cerro Corporation New York (EEUU)	100.0

INDUSTRIAL GROUP: 350
(Metal products)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Industrias Reunidas	8.6	Continental Can Co. (EEUU)	10.5
2. Leche Gloria	6.6	Carnation Corp. (EEUU)	46,6
3. Prod. de Alambre S.A.	5.5		
4. Ferrum Perú S.A.	4.6	Androsorbis A.G. (Suiza)	80.7
5. Manufact. Met y Alum. Record S.A.	4.4	s/i	

INDUSTRIAL GROUP: 360
(Non-electrical machinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Industrias Reunidas S.A.	15.1	Continental Can Co. (EEUU)	10.5
2. Perunamel S.A.	7.2	s/i	
3. Empresa Agrícola Chicama	6.9	s/i	
4. Hidrostal S.A.	4.9	Sthale Martin (Suiza)	34.3

INDUSTRIAL GROUP: 370
(Electric machinery)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Ind. Peruana de Prod. Elec.	15.0	Phillips Peruana S.A. (Holanda)	99.8
2. Ind. del Cobre	10.2	Cerro Corp. (EEUU)	76.0
3. Pirelli Peruana Cord. Elect.	6.1	Soc. Int. Pirelli S.A. (Suiza)	40.6
4. Sunbeam del Perú	5.7	Sunbeam Corp. (EEUU)	49.0
		Reiser y Curioni S.A.	49.0

INDUSTRIAL GROUP: 381
(Naval construction)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Pesquera Ind. Callao S.A.	55.3	PESCAPERU	
2. Fabricantes Met. S.A.	21.0	s/i	
3. Maestranza y Astilleros Delta	6.2	s/i	

INDUSTRIAL GROUP: 383
(Cars)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Ford Motor Co. Perú	28.0	s/i	
2. General Motors Perú S.A.	17.6	s/i	
3. Chrysler Perú S.A.	12.8	Chrysler International S.A. (Suiza)	100.0
4. Motor Perú S.A.	6.6	Motor Import	96.1
5. Fiat del Perú S.A.	6.3	Fiat S.P. (Italia)	99.9
6. Ind. Automotriz del Perú S.A.	5.6	s/i	
7. Toyota del Perú S.A.	4.2	s/i	

INDUSTRIAL GROUP: 398
(Plastics)

Firms	Percentage of Group GDP	Control	Percentage of Capital
1. Perú Plast S.A.	7.1	Shinetsu Chemical Co. (Japón)	23.8
2. Bakelita y Anexos S.A.	6.4	Fam. Denemoustier	100.0
3. Fábrica de Calzado Peruano	6.0	I.M. Bank Nominees Limited Canadá	51.4
4. Plásticos Fort	4.7	s/i	

Source: Torres (1975)