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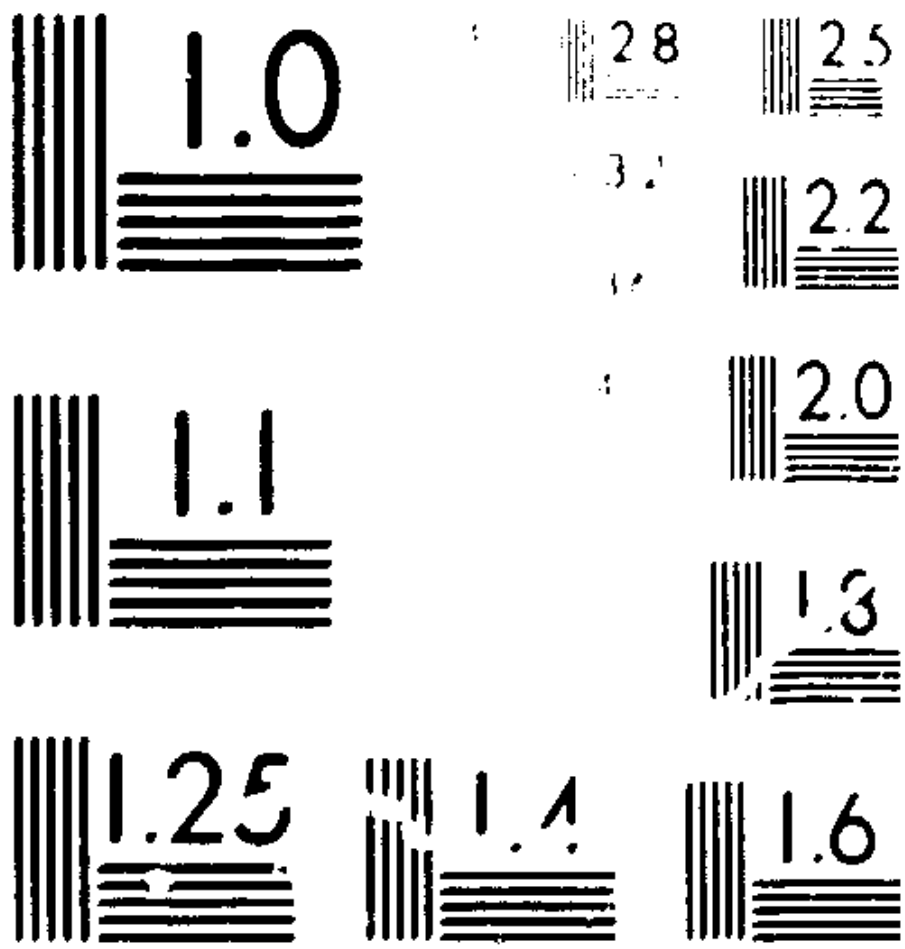
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DEVELOPMENT AND POLICY ISSUES OF THE MANUFACTURING SECTOR

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DEVELOPMENT AND POLICY ISSUES OF THE MANUFACTURING SECTOR

Explanatory notes

A comma (,) is used to distinguish thousands and millions.

A full stop (.) is used to indicate decimals.

Use of a hyphen between dates (e.g., 1960-1965) indicates the full period involved, including the beginning and end years.

The term "billion" signifies a thousand million.

References to "tons" are to metric tons, unless otherwise specified.

Totals may not add precisely because of rounding.

The following forms have been used in tables:

Three dots (...) indicate that data are not available or are not separately reported.

A dash (-) indicates that the amount is nil or negligible.

n.e.s. indicates that data are not elswhere specified.

References to dollars are to United States dollars, unless otherwise stated.

The monetary unit in Peru is the sol (S). The following exchange rates were used in the conversion of the sol to United States dollars:

Year or period	Soles per dollar
1970-1974	38.7
1975	40.8
1976	57.5
1977 (fourth quarter)	105.5
1978 (fourth quarter)	187.4
1979 (fourth quarter)	244.0
1980 (second quarter)	275.6
1980 (August)	294.8

The following abbreviations are used in this report:

ADEX	Asociación de Exportadores (Association of Exporters)
Certex	Certificado Tributario de Exportación (Export Incentive Tax Certificate)
CKD	Completely knocked down
COFIDE	Corporación Financiera de Desarrollo (Development Finance Corporation)

CONAPS	Comisión Nacional de Propiedad Social (Social Property Commission)
EPS	Empresa de Propiedad Social (Social Property Enterprise)
EPZ	Export processing zone
FEM	Fondo de Exportaciones Manufacturadas (Manufactured Exports Fund)
FENT	Fondo de Exportaciones No-tradicionales (Non-traditional Exports Fund)
FONAPS	Fondo Nacional de Propiedad Social (National Social Property Fund)
FONEX	Fondo de Exportaciones (Export Fund)
FOPEX	Fondo de Promoción de Exportaciones (Export Promotion Fund)
GDP	Gross domestic product
INP	Instituto Nacional de Planificación (National Planning Institute)
ISIC	International Standard Industrial Classification
LGI	Ley General de Industrias (General Law of Industries)
MICTI	Ministerio de Industria, Comercio, Turismo e Integración (Ministry of Industry)
NABANDINA	Tariff nomenclature of the Andean Pact
RNM	Registro Nacional de Manufacturas (National Registry of Manufactures)
SENATI	Servicio Nacional de Aprendisaje y Entrenamiento Industrial (National Apprenticeship and Industrial Training Service)
SSE	Small-scale enterprise
SSI	Small-scale industry

PREFACE

This report was prepared following a World Bank/UNIDO Co-operative Programme mission which visited Peru from 7 to 26 July 1980.

On 28 July 1980 the new Government of Peru was established and initiated industrial policy measures which are generally in line with suggestions made in the report. The measures concerned, in particular, foreign trade policies, which have the key role in strengthening the industrial sector. By early 1981, it appears that the first positive results of the new industrial policy are already visible, especially with regard to increased availability of imports, the reduction of fiscal subsidization of industry, and improving the competitiveness of Peruvian industry on domestic and foreign markets. While the policy measures undertaken by the new Government and their positive short-term results are not covered in the report, the basic analysis and the policy suggestions presented remain valid and may prove useful to the Government of Peru in their efforts to strengthen the industrial sector.

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SUMMARY AND MAIN RECOMMENDATIONS

1. The report reviews the performance of the manufacturing sector in Peru and the relationship between industrial structure, performance and policies. Attention is focused on the period after 1975, when a new industrial policy was initiated by the Government, and on an analysis of possible future strategies for industrial development. It is argued that the concept of leading sector, a role attributed to manufacturing during the period from 1968 to 1975, may not be appropriate for Peruvian industry. In the past, that concept has led to policies of excessive subsidization of manufacturing activities by other sectors, with inadequate results in terms of industrial production, employment creation and net foreign exchange earnings. Highly protectionist policies and incentive measures have created a capital-intensive industrial sector, which would require restructuring toward activities relying heavily on domestic labour and resources to be beneficial to the country. Strengthened orientation of industry toward export markets is supported in the report, which also advances the view that now is an appropriate time to initiate the process of restructuring the industrial sector. The policies recommended are a uniform and low level of tariff protection and substantial changes in the incentive system, both of which should be introduced in steps over a relatively long period in order to minimize the transition losses. Finally, the report finds that the short-term growth prospects for manufacturing are good, while prospects for long-term industrial development remain uncertain because of internal and external constraints.

Role and performance of manufacturing

2. During most of the 1950s and 1960s, government development strategies focused on the mining and agricultural sectors, but with rising tariff protection a sizable manufacturing sector developed for the production of import substitutes. By 1968, manufacturing had developed into the most important sector of the economy, with a share of 25% of gross domestic product (GDP). Nevertheless, the structure of the manufacturing sector had remained rather shallow and largely dependent on imported production inputs and on foreign management, technology and capital investment. Manufacturing also contributed to the duality of the Peruvian economy, with strictly separated modern formal and traditional informal sectors.

3. The Government implemented in 1970 a new industrial strategy which made manufacturing the motor of economic development and a major target for social reform policies. A substantial part of industry was nationalized and worker participation in equity and management were introduced in the remaining private enterprises. Incentive and protection policies strongly promoted the manufacturing sector. On the whole, industry did not fulfill the role assigned to it, and the share of manufacturing in GDP stagnated at the 25% level. After 1975, the need to focus on the short-term issue of stabilizing the economy left the industrial sector without a long-term development strategy. The current recovery of the economy and the much-improved foreign exchange situation present an appropriate opportunity to redefine the long-term development role of manufacturing in Peru.

4. In line with overall economic development, manufacturing experienced a period of strong growth until 1976, a recessionary period during 1977 and 1978 and a recovery starting in 1979. Overall growth of manufacturing during the 1970s was about the same as for the whole economy. During the second half of the decade, the informal sector of artisans and small factory manufacturers, which accounts for about 20% of total manufacturing value added, has performed better than formal industry and has helped much to soften the impact of the 1977-1978 economic recession. Within the formal manufacturing sector, light industries such as food, garments and textiles stagnated during the 1970s, while growth was concentrated on heavy industries, including chemicals, processing of minerals and metal products. That resulted in a decline in the share of consumer goods in total manufactured value added, while the intermediate goods sector gained correspondingly. Nevertheless, consumer goods still account for more than half of manufacturing. The share of intermediate goods in manufactured value added increased to over 40%, while the small capital goods sector stagnated during the 1970s. The structural shift in favor of intermediate goods seems to be mainly due to the protection and incentives policy applied during the first half of the 1970s, which supported the second stage of import substitution, particularly the industrial processing of domestic raw materials.

5. Peruvian industry manufactures a broad variety of products which are either processed domestic raw materials, frequently for export, or consumer-oriented import substitutes for the domestic market. The degree of vertical integration of industry is still modest and enterprise concentration is quite high. In most industrial subsectors, a small number of enterprises account for the major share of production. Industrial concentration is particularly high in subsectors dominated by Government or foreign enterprises. Overall, little more than half of total industry in the formal sector is owned by private nationals, while 15% is foreign-owned and the remaining 30% have Government and social sector participation. Foreign ownership and the use of foreign management, technology and licenses declined during the 1970s, although they continue to play important roles, probably with the exception of enterprise management, which is now largely performed by Peruvian nationals.

6. As a result of the concentration on capital-intensive industries, the contribution of manufacturing to employment generation is only half its share of GDP, which stands at 25%. In addition, over 60% of the manufacturing working population is in the informal sector, where employment is frequently part-time and wages little above subsistence level. The percentage of workers in metropolitan Lima obtaining wages above the legal minimum declined from 80% in 1973 to 58% in 1978, and increased slightly to 63% in 1979. Employment in formal sector manufacturing remained rather stable during the 1976-1978 recession at 265,000, largely because of the labour stability legislation. In line with the deterioration of the labour market situation, real wages and salaries suffered a severe decline. By mid-1979, real wages had declined to about half their 1973 level, but they are currently in a process of strong recovery. The decline reduced the already small share of wages in value added from one third to one quarter in 1979. Labour productivity also fell sharply after 1977. The traditionally high profits of manufacturing activities, on the other hand, remained at their historical level during the recession.

7. About 70% of formal sector manufacturing establishments, employment and output are concentrated in Lima and Callao. Most of the import substitution industry is in the metropolitan area, which has the largest share of consumer purchasing power in the country. Resource-based metal processing, cement, sugar and fish-meal industries are frequently located in the provinces. The regional distribution of industry was largely unchanged during the 1970s, which would indicate that Government decentralization policies had little effect.

Main features of industrial policy

8. The General Law of Industries introduced in July 1970 formed the basis for industrial policy during the 1970s. Its main features were a system of tax, duty and credit incentives ranked according to priority and a reorganized property structure of the industrial sector. Key industrial sectors were reserved for the Government, while major worker participation was provided for in the share capital and management of the remaining private sector industrial enterprises (Industrial Community). A Labour Stability Law provided practically complete job security to industrial workers. Much of the legislation was effectively changed after 1975, with the major exception of the Labour Stability Law, which still presents an obstacle to a more flexible labour market policy. The recently revised Small-scale Enterprise Law appears to present a much-improved basis for effective support to small manufacturers.

9. The most important policy changes introduced after 1975 affect foreign trade. Since 1976, export promotion policies have concentrated on the strengthening of the Certificado Tributario de Exportación (Certex) (Export Incentive Tax Certificate) cash incentive system, the improvement of export financing, and a flexible exchange rate policy. The establishment of an export promotion agency under the Ministry of Trade in 1979 will help to promote non-traditional exports more aggressively than in the past. Since 1979 a thorough revision of the system of import tariffs and restrictions has been under way. The main results have so far been the successive abolition of all non-tariff restrictions on imports, a slight decrease in the average tariff level and a substantial reduction in the maximum tariff. The Government has expressed its intention to continue with the tariff reform.

Effects of past industrial policies

10. Abundant credit at subsidized interest rates, cheap imports of capital goods and production inputs as a result of low import duties, subsidization of electricity rates and fuel prices, an over-valued exchange rate, high wages and restrictive labour legislation in formal manufacturing have created an environment which has promoted a capital-intensive industrial structure with a low degree of job creation. The result has been a strengthening of the natural tendency of Peruvian industry toward high capital intensity, due to the substantial mineral, fish and cotton resources of the country, which generally require large investments for their first stages of processing. Average and marginal capital-labour and capital-output ratios are extremely high in Peruvian manufacturing, which is obviously not in accordance with

the relative resources endowment of the country. The overall high capital intensity of industry seems to have developed with a change in the industrial structure involving an increase in the share of industries tending to employ capital-intensive technologies while capital intensities within industries do not appear to be excessive. The relative size and development of the textile and garment industries is a case in point. Both industries seem to apply appropriate technologies, but the labour-intensive garment industry is small and stagnant, while the capital-intensive textile industry is large and growing, particularly in spinning, which is the most capital-intensive part of the textile industry.

Capital is used much more efficiently in the informal than in the formal industry. The lack of access to subsidized formal sector financing and the exposure to an abundance of labour at low wages have led to capital-labour ratios in informal manufacturing which may even be below a level which would be in accordance with the resources of the country. The extremely low labour productivity and the widely deficient product quality of informal manufacturing could probably be improved with a somewhat increased capital intensity.

11. Until 1976, industrial policies generally provided little incentive for private industrial investments, but helped to make it cheap to keep capacity idle on a large scale. In the uncertain environment which prevailed during most of the 1970s, private local and foreign investors found the manufacturing sector generally unattractive for investment. Investments performed by the Government could only compensate to a small extent for the lack of private investments, and they were largely determined by political rather than economic considerations. The direction of manufactured investment, together with the ample incentives to maintain a large part of manufacturing capacity idle during most of the 1970s, has resulted in a generally inefficient use of industrial capital.

12. Although industrial policy is directed exclusively toward the formal manufacturing sector, informal sector manufacturing has suffered not only from neglect and lack of Government support, but also from excessive control, restrictions and discrimination. Informal industry has created more employment and uses capital more efficiently than formal manufacturing. The high rural-urban migration in Peru, which is to a large extent due to the attraction provided by privileged formal sector employment, continuously compressed informal sector wages and profits. This has widened the gap between the two sectors and, as a result, few sub-contracting relationships have developed. Generally, under current conditions, informal sector manufacturing cannot be expected to absorb a large number of workers productively, improve product quality or raise labour productivity.

13. The import substitution policy maintained over a long period is largely responsible for the distortions of the industrial sector in Peru. The first stage of import substitution of replacing manufactured consumer goods imports was completed during the early 1970s, and the second stage of replacing intermediates and capital goods was initiated. As a result, consumers buying locally produced goods have been paying up to two times international prices. Industries which were forced to use domestic production inputs were particularly disadvantaged by the protective system and frequently became the least competitive. The garment industry which was forced to use high-priced locally produced polyester

and nylon fibres, and part of the metalworking industry, using locally produced metal inputs, belong to the category of disadvantaged industry. Administrative restriction of imports have been even more effective than high tariffs to prevent healthy import competition for the domestic industry. Since 1979, these restrictions have been eliminated in successive steps, and from mid-1980 imports of previously restricted products are rising rapidly.

14. The most dramatic effect of the change in industrial policy initiated in 1975-1976 has been on the export of manufactured goods. Manufactured exports increased from a stagnant $100 million per year on the average during the first half of the 1970s to $725 million in 1979, which is about one quarter of the total exports of the country. However, that performance is less impressive when considering that up to 80% of these exports are processed raw materials (fish, wool, cotton, wood and minerals) with mostly little domestic industrial processing involved. In addition, most of the manufactured value added of these export products is generally in the form of profits. On the other hand, exports with high manufactured value added, such as fishing boats, garments, footwear, and refrigerators, have also been rising recently, but their total volume is still small, compared to the resource-based products. Nevertheless, the export orientation of the manufacturing sector has increased rapidly since 1976, and about 10% of manufactured production is currently for export. Between 1975 and 1978, about one quarter of manufacturing growth was due to exports, and in 1979 total growth in industry has to be attributed to exports. Overall, industrial exports have still an extremely weak structure, with a high dependency on incentives and domestic market conditions.

15. The major factors for improving manufactured export performance since 1976 are the flexible exchange rate policy, the increased tax on traditional exports and the strengthening of the Certex cash incentive system. The real exchange rate has been devalued by about 50% since 1975, when the sol was highly overvalued. The relative profitability of export sales as compared to production for the domestic market has been much improved by this measure. The high export tax of 17% on traditional raw material products provides a strong incentive to manufacturers to add a small degree of industrial processing in order to avoid payment of the export tax and, possibly, to obtain in addition the export cash incentive for manufactured products. As 80% of all manufactured exports are processed raw materials, the export tax seems to have been effective in promoting manufactured exports. The Certex export cash incentive for non-traditional products is also providing substantial support, but may not be sufficiently cost-effective. In 1979, the fiscal cost of the Certex incentive was $150 million, providing support to an export volume of little over $500 million. Extensive fraud, export of fake products and a number of other problems have plagued the Certex incentive system, which would appear to require fundamental restructuring.

Main issues of a new industrial policy

16. The future industrial strategy of Peru can be considered in a comparatively advantageous environment. There is no pressing foreign exchange shortage limiting the flexibility of the economic policy of the country as during most of the 1960s and 1970s. Moreover, policy measures taken since 1975, including

tariff reform, the introduction of a flexible exchange rate policy and the reduction of real wages in the formal sector, have been generally in the right direction, but require strengthening and follow-up. Generally, the mission recommends that the industrial policy should be guided by the principle of exploiting the country's comparative advantage of abundant labour and natural resources. That strategy may lead in the long-run to a relative strengthening of other sectors, particularly of mining. Within industry, the strategy would support subsectors which employ labour-intensive technologies along with a relative decline of capital-intensive subsectors. A strategy based on comparative advantage would also help to develop the growth potential of informal and and small-scale industry. Foreign trade policy has the key role in a strategy based on comparative advantage, but effective wage, interest rate and investment policies are also important.

17. The main policy recommendations of the mission are as follows:

(a) A low and highly uniform tariff level of, for example 20-30%, should be established for all imports. The tariff, which should be introduced over a long period of perhaps five years, would have to be co-ordinated with the export incentives and the exchange rate;

(b) The policy of minidevaluations should be continued and strengthened to adjust the exchange rate more effectively than in the past to the domestic-foreign inflation differential;

(c) Infant and structurally inefficient industries should obtain temporary relief from the reduction of import protection;

(d) The Certex export incentive scheme should be revised and a minimum requirement of a 25% share of wage and depreciation value added of sales value should be introduced. Exports below that minimum would only benefit by an exemption from the export tax on traditional products. Exports above the required minimum would obtain a uniform Certex incentive on their f.o.b. value, equal to the suggested 20-30% level of import duties;

(e) The decentralization Certex should be abolished. Qualifying infant export manufacturers would temporarily obtain an additional Certex of, for example, 10%;

(f) The feasibility of export processing zones should be studied before a first zone is established;

(g) The export credit system should be consolidated and strengthened to cover a larger share of exports. The interest rate subsidy involved should be abolished;

(h) The export tax on traditional products should be studied, in order to design a tax system which would reflect the market situation of individual products;

(i) Industrial employment would benefit from a revision of the labour stability legislation and minimum wage policy;

(j) Interest rates of industrial credit should be raised to reflect market conditions, and the access to credit by small-scale and informal manufacturing should be substantially improved. These enterprise groups would also require technical assistance;

(k) Government and foreign-owned enterprises require special attention during the transition to a more liberal trade environment, particularly with respect to the economic appraisal of investment.

Prospects for the industrial sector

18. Short-term prospects for growth of manufacturing output are good, as rapidly rising domestic demand can be satisfied by excess production capacity and extended subcontracting. Exports and employment, however, may rise much less than is currently expected by the Government. Long-term growth prospects of industry appear uncertain. The requirements for restructuring industry in accordance with the country's comparative advantage are considerable. High industrial growth based on exports will be difficult to achieve, as Peru is a late-comer to international markets and will have to compete with established and highly efficient exporters on slow-growing markets. Finally, Peruvian manufacturers, who are used to operating on a protected domestic market, will face rapidly rising competition from imports. Much will depend on the willingness and ability of Peruvian entrepreneurs to adjust to the competitive environment of foreign and domestic markets. On the other hand, the new development strategy suggested in this report should provide an effective basis for healthy long-term growth of the industrial sector.

I. ROLE AND PERFORMANCE OF MANUFACTURING

Role of manufacturing in the Peruvian economy

19. Peru started later than other countries of Latin America to regard industry as the most important sector to provide impetus to economic development. For a long time, industrial activities were concentrated on processing minerals and agricultural products. The manufacture of goods, other than the preparation of mineral and agricultural products for export shipment, was only established on a larger scale during the 1950s. During the 1960s, Government development strategies continued to focus on the mining and agricultural sectors, but with rising tariff protection, a sizable manufacturing sector developed for the production of import substitutes. By 1968, when the military Government was established, manufacturing had developed as the most important sector of the economy with a share of 25% of GDP, as compared with only about 15% during the mid-1950s. At the end of the 1960s, Peru had become a rapidly industrializing country. Metal processing, sugar refining, coffee beneficiation and cotton ginning were still the dominant manufacturing activities.

20. Despite its comparatively large size and broad sectoral coverage, the structure of the manufacturing sector remained rather shallow. As in the case of large-scale agriculture and mining, during the 1950s and 1960s manufacturing was largely dependent on foreign management, technology, and capital investment for operation and further growth. A strong dependence on imported production inputs developed, while the linkages to the domestic economy were rather weak. Overall, manufacturing seemed to have contributed to the duality of the economy of the country, with a formal and an informal sector. Industry, other than the processing of minerals and agricultural raw materials, was only viable when highly protected. Since other sectors were correspondingly unprotected, manufacturing received a continuous flow of subsidies from the rest of the economy. The taxation of non-manufacturing economic activities to support manufacturing may have had a negative effect on the development of promising sectors, particularly mining and agriculture. In addition, the continuous transfer of resources toward manufacturing activities helped to raise the urban-rural income disparity and encouraged the migration of the rural population towards the relatively more prosperous urban areas where industry is located, contributing to the formation of vast urban slums, particularly in Lima. Finally, the increased dependence of a sizable manufacturing sector on imported inputs and foreign investment made the economy vulnerable. Balance of payments difficulties could only be solved by a reduction of imports which were necessary to maintain production and employment levels in industry, and no longer only by reducing imports of unnecessary consumer goods. The dependence on foreign investment required maintaining an investment climate favourable to foreign enterprises, in order to secure the long-term growth of manufacturing.

Role of manufacturing, 1968-1975

21. The new Government introduced a radical change in the role of manufacturing in the economic development of the country. Manufacturing was made the motor of economic development and one of the main targets of social reform policies and of policies designed to reduce foreign influence, while expanding the government role in the economy. Increasing shares of public resources were shifted towards manufacturing, worker participation in industrial assets and management of manufacturing enterprises was introduced, government enterprise activities in manufacturing expanded rapidly, and government planning mechanisms were strengthened. At the same time, the role of foreign enterprises in manufacturing was sharply reduced, while strong support was provided to promote development of new forms of nationally owned enterprises, particularly Empresas de Propiedad Social (EPS) (Social Property Enterprises).

22. The manufacturing sector which had developed behind rising walls of protection was not well prepared for carrying out the simultaneous roles of leading development sector and main field of social reform policies. The previously important role of foreign enterprises was replaced by a rising share of government ownership in manufacturing[1/]. Basic industries (mainly steel, petrochemical, fertilizers, cement and paper) were reserved for the Government. The remaining manufacturing sector was tightly controlled by the Government through allocation of inputs, credit management and investment planning. The government-owned industry obtained a maximum of government support in terms of credit allocation and administrative attention, since it was to be "the base of permanent and self-sustained industrial development".[2/] The social sector enterprises were supposed to cover a wide variety of ind industrial activities, but because of organizational problems they never became an important group of enterprises. The private and the social sector enterprises were to be generally less supported than the government-owned basic industries, but would be given adequate incentives to provide the country with an increasing share of consumer products protected from import competition.

Role of manufacturing after 1975

23. Overall, the manufacturing sector did not fulfill the role assigned to it by the Government during the early 1970s. Despite the concentration of a major part of investment and foreign exchange resources on manufacturing, the share of manufacturing value added in GDP fluctuated during the 1970s around the 25% level reached in 1968. Manufacturing growth, which had been substantially above the average of the economy before industry became the leading sector, levelled off and, after 1975, declined more than other economic sectors. Moreover, the major social reforms, particularly worker participation in share capital and management of manufacturing enterprises were considerably modified in successive steps after 1975. Finally, government control over private sector manufacturing through credit management, investment planning and regulation of technology acquisition and foreign equity participation has been relaxed since 1975. Thus, after 1975, with increased

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1/ In a number of cases, enterprises with joint government and participation were established.

2/ General Law of Industries of 1970, Article 2.

government participation and a reduced share of foreign ownership, the role of manufacturing in development again remained largely undefined as before 1968, because the Government only focused on short-term aspects of industry which would support the economic stabilization effort of 1976-1978. Export manufacturing obtained additional support during that period. Foreign investment in manufacturing was welcomed again, and, within the context of budget stabilization measures, financial support of public manufacturing enterprises was sharply reduced. However, manufacturing, which had performed only marginally better than the overall economy between 1968 and 1975, entered a period of recession in 1977-1978, which was more severe than the stagnation suffered by the economy as a whole. Between 1971 and 1975, the contribution of manufacturing to GDP growth in constant prices was 31%, which is slightly above its share of GDP during that period (25%). However, its contribution to GDP growth was negative after 1975. Mining, which had stagnated between 1971 and 1975, provided the major share of the economic growth achieved in 1979.

24. The new Government that took office in July 1980 does not seem to attach the leading development role to industry. The policy of not giving manufacturing higher priority than other sectors may be prudent and is supported by this report. What seems to be necessary is the establishment of a rational, consistent and stable environment of incentives which would re-establish the conditions for a development of manufacturing in accordance with the relative strengths and weaknesses of the sector. There are indications that the new Government intends to establish such a policy environment, which would permit manufacturing to find its appropriate role in the economic development of Peru.

Overall structure and recent performance of manufacturing

25. During the 1970s, the Peruvian economy went through a cycle of strong growth, subsequent decline and, since 1979, incipient recovery. The period of growth lasted until 1975-1976, when the Government had to take drastic measures to stabilize the economy, restrict imports and reduce the public sector deficit. After 1976 the economy went into a recession, with production and income falling sharply until early 1979. Since then, the economy is recovering at a moderate, but accelerating pace. During the 1971-1979 cycle, GDP grew by 25%; a 22% growth of GDP during 1971-1976 was followed by a decline of about 1% during 1977 and 1978 and an increase of over 3% during 1979. GDP growth during 1980 may be over 4%.

26. In line with overall economic development, manufacturing experienced a period of strong growth until 1976, a recession during 1977 and 1978 and a recovery in 1979. The overall performance of the manufacturing sector during the 1970s was about the same as for the whole economy, but the fluctuations of the business cycle were larger in manufacturing. Table 1 below shows the comparative performance of the economy and the manufacturing sector during the business cycle of the 1970s. Overall, the manufacturing sector in Peru appears to be more easily affected by an unfavourable economic climate and restrictive economic policy measures than other sectors of the economy. On the other hand, manufacturing seems to have the potential to recover rapidly from an economic recession. However, the performance since 1971 does not demonstrate that Peruvian industry has an above-average long-term growth potential.

Table 1. Gross domestic product and manufacturing value added, 1971-1979

Items	Growth (percentage)			
	1971-1976	1977-1978	1979-1980	1971-1979
Gross domestic product	22	-1	7	25
Manufacturing value added	28	-8	9	23

Source: Annex tables 2 and 3.

Note: Mission estimates given for 1980.

Formal and informal sector manufacturing

27. The structure of manufacturing reflects the dual character of the Peruvian economy. Manufacturing is divided into the main formal sector, which includes enterprises registered with the Ministerio de Industria, Comercio, Turismo e Integración (MICTI) (Ministry of Industry), and a large informal sector of non-registered small factory establishments and artisans. Formal sector enterprises generally have more than four employees; informal factory establishments employ one to four workers and the artisans include manufacturers without employed labour, and family production units. In terms of value added, the share of formal manufacturing is estimated at slightly over 80% and the share of informal manufacturing at about 20% of the total. Informal industrial establishments with and without employment have each about 10% of manufacturing value added (see annex, table 4). The performance in terms of value added of informal and formal manufacturing over the 1971-1979 period is shown in table 2 below.

Table 2. Manufacturing value added, 1971-1979

Items	Growth (percentage)			
	1971-1976	1977-1978	1979	1971-1979
Formal sector manufacturing	33	-22	3	14
Informal factory manufacturing	-7	100	5	93
Artisan manufacturing	19	-3	4	20
Total manufacturing	28	-8	4	23

Source: Annex, tables 2,3, 4 and 6, mission estimates.

The statistical base for the disaggregated growth rates in the manufacturing sector may not be fully adequate, but the overall picture presented in the above table 2 seems to be a reasonably accurate reflection of the different performances of the informal and formal manufacturing sectors. Formal sector manufacturing (registered establishments), which was the target of the industrial policy system of the Government, performed well during the period of high incentives and overall economic growth (1971-1976), but also suffered most with an extremely sharp decline during the 1977-1978 recession. In the same way that government incentives and support measures were mainly directed towards formal manufacturing, restrictive measures that had to be implemented during the economic crisis were also aimed at the formal sector. Therefore, formal manufacturing was characterised by volatile fluctuations and below-average overall performance for the period 1971-1979. The informal sector, including artisans and small factory manufacturing, did not benefit much from the growth of the economy during 1971-1976, and seems to have stagnated during that period. But during the recession of 1977-1978, the informal sector performed relatively well; at least, it seems not to have declined. In conclusion, the informal sector has done much to soften the impact of the recession on industry, and has contributed substantially to the long-term overall growth performance of manufacturing.

Performance of the formal sector, 1971-1979

28. Detailed statistical information on subsectoral performance exists only for formal sector manufacturing. Table 3 below shows the performance of seven selected major subsectors at the ISIC three-digit level during the recent business cycle. Five of the subsectors listed, textile and clothing, on the one hand, and basic non-ferrous metals, electrical machinery and appliances and transport equipment, on the other, will be examined in more detail in this report. Generally, fluctuations of subsectoral value added have been substantially larger than for manufacturing in the sector as a whole, with the exception of the food industry where stagnation during the period until 1976 was followed by a decline which is still continuing (see table 3 below).

Table 3. Value added in important industries[a/]

ISIC Code	Subsector	Growth (percentage) 1971-1976	1977-1978	1979[c/]	1971-1979[c/]
311-12	Food[b/]	2	-29	0	-28
321	Textiles	21	-27	7	-5
322	Clothing	44	-48	-7	-30
351	Industrial chemicals	88	-8	7	85
372	Basic non-ferrous metals	30	-30	17	6
383	Electrical machinery and appliances	154	-20	-8	87
384	Transport equipment	141	-52	13	31
	Formal manufacturing	33	-22	4	8

Source: Annex, tables 3 and 5, and mission calculation.

a/ Formal sector industry.

b/ Excluding fish products.

c/ Estimate for 1979 based on production volume (annex, table 5).

29. A number of different factors are responsible for the strong cyclical movement of value added within the subsectors, but all reflect to a large extent government policies and their changes since 1971. The main factor influencing the food industry seems to be the rising import of processed food, partly as a result of stagnating domestic production of inputs to the food industries. The textile and clothing subsectors are largely dependent on the domestic market and do well in a growing economy, but they suffered during 1977-1978 from the sharp decline in domestic purchasing power. In garment manufacturing, production and demand may also shift between the formal and the informal sector, depending on the conditions affecting marginal producers and consumers. The recent recovery of the textile and garment sectors is due to the sharp increase in overall real wages and rising exports of textile products. The industrial, chemical and basic non-ferrous metals industries have strong public sector participation and their performance has been largely dependent on the coming-on-stream of large-scale government-sponsored projects. Nevertheless, the cyclical development of the two sectors shows that government policies, particularly the import restriction during 1977-1978, also affected government-owned manufacturing. Manufacturing of electrical machinery and appliances and of transport equipment benefited, particularly until 1976, from the import protection policy, which made possible the production of electrical household goods and appliances and of vehicles for the domestic market. The automotive industry was particularly affected by the reduction of domestic purchasing power and the restriction of imports during the 1977-1978 recession. Details of the effect of Government policies on the performance of manufacturing will be discussed in chapter III of this report.

30. The contribution of the industrial subsectors to overall growth of manufacturing during the period 1971-1979 is shown in table 4 below:

Table 4. Subsector contributions to the growth of value added in manufacturing a/, 1971-1979

ISIC Code	Subsector	1971-1979 growth	
		Value (billions of soles at 1973 prices)	Change in value (percentage)
31	Food, beverages	-3.2	-16.0
32	Textiles, garments	0.6	3.0
33	Wood products	-	-
34	Paper, printing	-0.1	-0.5
35	Chemicals	7.2	36.0
36	Non-metal minerals	1.4	7.0
37	Basic metals	9.0	45.5
38	Metal products	5.0	25.0
39	Others	-	-
	Total factory manufacturing	19.9	100.0

Source: Annex, table 2.

a/ Includes all factory manufacturing.

At the ISIC two-digit level, table 4 confirms for the factory sector (total manufacturing excluding artisan production) the conclusions from the analysis of selected subsectors at the three digit level shown in table 3. Light industries of ISIC categories 31-34 and 39 stagnated or even declined during the 1971-1979 period, while growth was concentrated on the heavy industries of categories 34-38. The two industries with the largest contributions to growth, chemicals and basic metals, are mainly based on the mining and petroleum sectors of the country, and their growth reflects both the expansion of mineral production during the period considered and the rising share of mineral output which is further processed for export. The recent expansion of oil-refining capacity also contributed to the large share of chemicals in manufacturing growth. The most remarkable feature of table 4 is the large contribution of the metal products industry (ISIC code 38), which includes machinery and appliances and transport equipment as the major subsectors with strong performances.

Structure of manufacturing

31. The structure of the manufacturing sector of Peru is characterized by a concentration in the production of consumer and intermediate goods. The share of consumer goods in manufacturing value added has declined substantially since 1971, but is still over one half of the total. The intermediate goods sector gained correspondingly and its share of value added grew to over 40% in 1979, while the share of the small capital goods sector stagnated during the 1970s (see table 5).

Table 5. Structure of manufacturing[a/]

Type of goods	Share of value added (percentage at current prices)		
	1971	1975	1979
Consumer	66.4	62.8	56.0
Intermediate	31.2	33.4	41.0
Capital	2.4	3.8	3.0
Total	100.0	100.0	100.0

Source: Annex, tables 1 and 7, mission estimates.

a/ Includes all factory production. Passenger cars and household appliances are included in consumer goods, textiles in intermediate goods.

The structural shift in favour of intermediate products seems to have resulted mainly from government protection and investment policy which supported second-stage import substitution of intermediate products, channelling public and private financial resources into industrial processing of domestic raw materials.

32. The decline in the share of the consumer goods industry is mainly due to the stagnation during the 1970s of the food processing industry, which, nevertheless, remained the largest industrial sector, with over one fourth of total manufacturing valued added. Food processing includes a broad variety of formal, large and medium-scale production facilities, and informal small facilities.

The structure of subsectors of the manufacturing industry is shown in table 6.

Table 6. Structure of manufacturing subsectors

ISIC Code	Subsector	Share of value added (percentage at current prices) 1971	1975	1979[b/]
31	Food, beverages, tobacco	35.8	29,4	26.1
32	Textiles, garments, footwear	16.4	16.4	12.4
33	Wood products, furniture	2.6	2.7	2.1
34	Paper, printing	5.1	5.3	4.5
35	Chemicals, oil refining	16.0	15.1	18.5
36	Non-metallic minerals	4.7	4.4	4.9
37	Basic metals	6.3	7.0	16.6
38	Metal products, machinery	11.8	18.4	12.9
39	Others	1.3	1.2	0.7
	Total	100.0	100.0	100.0

Source: Annex, table 1.

a/ Includes all factory production.

b/ Preliminary figures.

Modern large-scale facilities for the processing of fish-meal and fish oil were established towards the end of the 1960s, when Peru emerged as the world's largest producer of those products. The fish industry went into a crisis after 1972, partly due to lack of raw material inputs, from which it never fully recovered. The establishment of fish processing for human consumption (canned and frozen fish) during the 1970s has so far not compensated for the reduction in fish-meal production. Other large-scale plants in the food sector are breweries and sugar refineries, the importance of the latter also declining due to the overall stagnation of the agricultural sector.

33. The textile and garment industry covers a wide spectrum from informal small-scale family operations for garment manufacture to large-scale spinning and weaving plants employing technologically sophisticated equipment. At the ISIC two-digit level, the industry now occupies the fifth rank in terms of value added, whereas it ranked second in 1971. Its relative decline is mainly due to the stagnation of the garment subsector, which remained oriented towards the depressed domestic market. Possibly up to one half of garment making is in the informal sector, which markets its production largely in urban areas by street vendors. Informal garment manufacturing and selling probably grew rapidly during the economic crisis of 1977-1978, as incomes earned in the formal sector were increasingly inadequate to buy the expensive products of formal

sector garment manufacturing. The textile industry is more efficient than the garment industry and produces a large variety of wool, cotton and blended yarn and cloth in large-scale plants with technically advanced equipment. It is based on locally available sheep and alpaca wool, on high-quality, long staple cotton and on a sizable production of chemical fibres, mainly acrylic, polyester, and nylon fibres. A rapidly increasing share of textile production is exported.

34. The chemical industry, which includes oil refining, is currently the second largest manufacturing activity after its strong performance during the 1970s. The industry benefited from the increase of domestic oil production, which provided the basis for expanding refining capacity, and from the establishment of a sizable chemical fibre production[3/]. One international chemical firm operates a 20,000 t/a acrylic fibre plant which is currently being expanded to 30,000 t/a, and four smaller local firms produce polyester and nylon. The local manufacturers operate plants of 2,000-3,000 t/a capacity to supply polyester and nylon to the local market, which is below the economic size by international standards. Pellets for fibre production are imported, although capacity and technology exist in several plants for their production.

35. The metals and metalworking subsector have shown the strongest performance of all industries during the 1970s in terms of value added. Those sectors more than doubled their total share in manufacturing value added since 1975, mainly due to the expansion of non-ferrous metal refining and processing for export. The major steel producer in Peru, Siderperu, has not increased production in recent years, but is currently undergoing a large expansion and balancing investment. Siderperu and a number of smaller re-rolling firms provide most of the ferrous inputs needed by metal products and machinery manufacturers. Those important industries supply the domestic market with a broad variety of metal products which are manufactured frequently at small scale. Major products in the mechanical and electrical equipment category are household electrical goods and appliances. The transport equipment industry includes the assembling of cars and trucks and the building of ships and boats. Both industries faced a difficult period after 1975. Car production declined sharply with the reduction of domestic purchasing power. The fishing boats industry, which has no reliable domestic market base, has not yet established a firm export market position, in spite of its relative efficiency. As a result, the metal products industry had in 1979 a sharply reduced share in total manufacturing value added compared with 1975, but remained one of the important manufacturing activities in Peru.

36. In brief, Peruvian industry manufactures a broad variety of products which are either processed domestic raw materials, frequently for export, or consumer-oriented import substitutes for the domestic market. In both cases, generally little industrial processing is involved. Only in textiles, garment-making, part of the chemical industries and some metal industries is the degree of industrial processing relatively high and has some vertical integration

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3/ The sharp increase in the share of value added in the industry from 15.1% in 1975 to 18.5% in 1979, however, seems to be mainly due to the increase in the domestic price of petrol, which raised the profits of Petroperu, or reduced its losses. In constant 1973 prices, the value-added shares of the industry in 1975 and 1979 remained roughly unchanged at 18.8% and 19.0%, respectively.

of production occurred. Finally, industrial plants are frequently below economic size and in practically all subsectors range from small workshops located in private homes to large factories equipped with advanced technology machinery.

Size and ownership of manufacturing enterprises

37. In line with the broad variety of industrial activity using advanced and traditional production technologies, manufacturing establishments vary from one-man and family operations in the informal sector to modern large-scale establishments employing several thousand workers. Nevertheless, the dominant industrial enterprise in Peru has only a small number of workers. About two thirds of the currently 10,000 registered industrial establishments (the 1979 figure was 9,634 establishments, excluding the fish industry) have less than 30 workers. The most recent size distribution of registered enterprises for 1974 lists nearly half of the establishments in the category of five to nine employees and about 1,000 establishments with more than 50 employees. Only 10 firms had more than 1,000 workers in 1974 (see annex, table 9).

38. The 45 larger-scale industrial establishments employing more than 500 workers in 1974 are concentrated in the chemical and metal-processing industries. A small number of textile firms may now also have reached that size. The larger firms generally process domestic raw materials for export. The major exception is Siderperu which is the major steel producer for the local market and the country's largest industrial employer, with about 4,600 workers in 1980. Employment in the large industrial enterprises is limited by the use of advanced labour-saving technology, so that labour productivity, or output per worker, rapidly increases with the size of the establishment. For example, in 1974 the 10 largest industrial firms produced 31% of industrial output with 7% of the industrial work-force. The 6,700 small firms with less than 50 workers employed 36% of the work-force, but produced only 22% of output. One fourth of formal sector enterprises produces food and beverages and another one fourth textiles, garments and footwear (see annex, table 10). The vast majority of informal sector manufacturing are also in those two major subsectors. A relatively high degree of enterprise concentration exists at the subsectoral level. In most industries a small number of firms are responsible for the major share of output[4/]. That is particularly so in chemicals and metal processing, where economies of scale are important, while the enterprise structure in food and clothing is more diversified.

39. While the degree of industrial concentration seems to have increased during the 1970s, the ownership structure of Peruvian formal sector industry underwent a process of diversification. Industrial ownership was affected in three ways. First, nationalization of foreign firms in paper production, sugar refining and processing of metallic minerals reduced the previously

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4/ The Instituto Nacional de Planificación (INP) (National Planning Institute) found in 1975 that in over two thirds of all categories at the ISIC three-digit level, the four largest enterprises accounted for over one half of production.

high share of foreign ownership in Peruvian industry.[5] The reluctance of foreigners to invest in Peruvian manufacturing during much of the 1970s also contributed to a relative decline of foreign industrial participation. Secondly, the Government was the main beneficiary of the reduction of foreign industrial ownership. In addition, the General Industries Law of 1970 reserved activities in basic industries[6] to the Government and advocated government participation in other key industries. Thirdly, EPS, a specific form of Government-controlled industrial co-operatives, have been created. They represent, in addition to the Industrial Community, a way to achieve worker participation in industrial property.[7] However, the share of EPS in industrial ownership has remained small, and most of the over 60 EPS which were in the planning stage in 1976 and were intended to provide 40,000 jobs at a total investment of over $300 million did not materialize. Moreover the only successfully established EPS are small-scale operations, mostly in the form of a co-operative of artisans.[8]

40. Tables 11 and 12 in the annex present an overview of ownership distribution in Peruvian industry in 1978, based on a sample of 517 of the 900 largest manufacturing firms which report annually to the Ministry of Industry. Those firms account for little over 50% of sales and 60% of employment in all formal sector manufacturing firms. Since no major shifts among ownership forms seem to have occurred since 1978, the information provided in the two tables roughly reflects also the current ownership situation of Peruvian manufacturing industry. The composition of the ownership structure is shown in table 7 below. The continued importance of foreign and government ownership

Table 7. Ownership of industry in 1978

Type of ownership	Number of firms	Sales (percentage)	Employment (percentage)
Private national	395	38	48
Private foreign	89	26	21
Government[a]	22	34	25
Social sector	11	2	6
Total	517	100	100

Source: Annex, table 11.

a/ Including mixed enterprises.

5/ Factory output in 1968 was distributed as follows: 5% by Government enterprises, 45% by foreign and 50% by domestic private enterprises.

6/ Basic industries include metal processing and production of chemicals, fertilizers, cement and paper.

7/ Details on Social Property Enterprises (EPS) and the Industrial Community are given in chapter II.

8/ Examples of larger scale EPS are Moto Andina (motor cycles), Normetal (electrical equipment) and Confecciones Populares (garments), apparently all of them at present facing serious difficulties.

in Peruvian industry is clearly demonstrated. Foreign ownership is even somewhat understated in table 7, as there are three enterprises with joint government and foreign capital participation. On the other hand, table 7 probably overestimates government and foreign participation in total formal sector manufacturing.[9] A reasonable estimate of shares of formal sector sales appears to be 55% for national private industry, 15% for foreign industry, 25% for government industry and 5% for social sector industry.

41. Foreign participation is concentrated in industries where foreign know-how and technology are important for the design, production and marketing of manufactured products. Food and beverage industries have above-average foreign participation, because of the importance of foreign brand names in the marketing of internationally known brands of consumer products. Advanced technology is frequently required in the manufacture of chemicals (for example, chemical fibres), a sector in which foreign participation is particularly large (58% of sales). The third group of industries with heavy foreign participation is the assembly industry, in which 87% of sales of electrical machinery are carried out by firms with foreign participation. Most of the machinery consists of household appliances and electronic consumer equipment, with foreign-designed products manufactured or assembled in Peru. Similarly, 77% of sales by firms assembling transport equipment are foreign, since car and truck assembly operations have foreign participation. Government ownership is important in the shipbuilding and repair industry and in the basic industries, paper, petroleum refining, cement and metals, which are reserved by law to the Government. Larger-scale social sector enterprises, including co-operatives and EPS, have only developed in food (sugar refining) and printing industries, where the agrarian reform and the nationalization of newspapers promoted the establishment of co-operative forms of ownership.

42. Foreign technology, licenses, designs, brand names and management have been widespread in Peruvian industry. However, their roles are now much reduced, as compared with the period before 1970. The most impressive change is the nationalization of management of manufacturing enterprises, including management of foreign-owned firms. The vast majority of senior industrial managers are now Peruvian nationals. The flow of foreign technology is also much reduced after the establishment of strict control over payments for foreign patents and licenses. On the other hand, the preference of consumers for products with foreign brand names has maintained the practice of buying and using foreign designs and brand names, which is particularly striking in the garment industry. The assembly industry is clearly the subsector most dependent on foreign technology and licensing. Nevertheless, the Peruvian industry seems to have gained greater overall independence from foreign influence, not only with respect to enterprise and plant management, but also in technology. In some metalworking industries, including fishing boats, some mining equipment and equipment for fish-meal and fish oil production, Peruvian production technology seems to have reached international standards.

9/ It is reasonable to assume that the vast majority of foreign and government enterprises in Peru are large (that is, among the 900 firms forming the basis for the sample) and have also been covered by the industrial survey of the Ministry of Industry (based on a sample of 517 firms). Therefore, the actual share of private national and social sector enterprises in total formal manufacturing should be larger than indicated in table 7.

Employment, wages and vocational training

43. Since Peruvian industry is heavily concentrated on capital-intensive activities such as processing of mineral and agricultural raw materials, its contribution to employment generation is only one half of its share in GDP of 25%. Employment levels in manufacturing are shown in table 8 below.

Table 8. Employment in manufacturing

	Group	Employment levels (thousands of workers) 1971	1976	1979	Growth (percentage) 1971-1979
a.	Total working population	4 291.3	4 957.7	5 440.6	27
b.	Manufacturing working population	538.0	632.3	689.8	28
c.	Employment in formal sector manufacturing	208.8	270.4	267.0[a/]	28
		Relative employment levels (percentage)			
	b/a	12.5	12.8	12.7	
	c/b	38.8	42.8	38.7	

Source: Annex, table 13.

a/ Estimate based on employment index for manufacturing in Metropolitan Lima.

More than 60% of the manufacturing working population of currently 690,000 is in the informal sector. Employment in formal sector manufacturing is below 5% of the total work-force. Employment generation in manufacturing during the period 1971-1979 has been in line with the increase in the total work-force, which rose by over one fourth. Formal and informal sector manufacturing seemed to have created new jobs during that period, roughly in proportion to their respective total employment shares. Until 1976, the formal manufacturing sector absorbed labour at a much higher rate than the informal sector. About 60% of the increase in the manufacturing work-force between 1971 and 1976 was absorbed by the informal sector. Formal sector employment has somewhat declined since 1976, although not to the extent of the production decline. A slight recovery of employment took place in 1980 (see annex, table 13), but so far the 1976 peak of 270,000 workers has not been reached.

44. Table 9 shows the 1978 subsectoral distribution of formal sector employment in manufacturing at the ISIC two-digit level. Food, textiles and metal products industries are the largest employers, providing each roughly 20% of total employment. The chemical industry is also important for industrial employment. Growth of employment in the large food and textile industries was below the average for total manufacturing from 1971 to 1978, while the chemical and the metal products industries had high growth rates of employment (see annex,

table 14). A remarkable feature of employment growth at subsectoral level is the low rate of increase of large industrial subsectors (processed foods, beverages, textiles, clothing, other chemicals), while most of the high growth rates occurred in small subsectors (industrial chemicals, petroleum refining, clay and earthen products, basic ferrous metals). Notable exceptions are electrical machinery and appliances and transport equipement, which are large industries with the highest employment increases. The restructuring of employment in manufacturing is partly due to the process of industrial concentration in capital-intensive subsectors which took place during the 1970s, but also to the long-term stagnation of the food, textile and garment industries.

Table 9. Employment in manufacturing in 1978

ISIC Code	Subsector	Number of workers (10,000)	Share (percentage)
31	Food, beverages	52.4	19.7
32	Textiles, garments	58.0	21.7
33	Wood products	14.8	5.5
34	Paper products	16.2	6.1
35	Chemicals	39.2	14.7
36	Non-metallic minerals	17.4	6.5
37	Basic metals	11.8	4.4
38	Metal products	52.5	19.7
39	Other	4.6	1.7
	Total	266.9	100.0

Source: Annex, table 14.

45. As the working population in manufacturing continues to rise at about 3.5% per year, the informal sector would have to provide at least 20,000 additional jobs annually in order to prevent the rise of unemployment in the manufacturing sector. Available data do not provide a clear picture of the recent development of unemployment in manufacturing, but it appears that "inadequate" employment has increased dramatically since 1976.[10/] The percentage of adequately employed workers in the work force of metropolitan Lima dropped from 80% in 1973 to 72% in 1976 and 58% in 1978, and increased slightly to 63% in 1979. The recovery of the employment level during 1979 seems to have continued during 1980, as indicated by a rise of 2% in the manufacturing employment index for Lima in 1980 (see annex, table 13). The recent trends of formal sector employment in manufacturing and the unemployment and underemployment rates clearly demonstrate the inadequate capability of formal manufacturing industry to provide employment to the rapidly growing work-force of Peru. Formal sector employment in manufacturing has slightly declined since 1976 to a low level of 270,000, while the number of inadequately employed workers in all production sectors has increased by over 500,000.

10/ The Ministry of Labour defines as inadequately employed workers who work less than 35 hours per week or are paid less than the legal minimum wage of currently about S/26,000 per month. Generally, most of the inadequately employed workers are in the informal sector.

46. In line with the deterioration of the labour market situation since 1976, real wages and salaries suffered a severe decline. Wages and salaries had already somewhat eroded before 1976, but subsequently dropped sharply to nearly one half of their 1971 peak level. Since the low of June 1979, real wages and salaries are in a process of strong recovery and rose about 12% until February 1980. Table 10 shows employment, wage and productivity levels in manufacturing during the period 1976-1979. Real labour costs to manufacturing enterprises did not decline as much as indicated by the fall in real wages and salaries. In addition to wage and salary payments, formal sector enterprises have social labour costs averaging about 70% of basic wages and salaries[11] which are partly in the form of goods and services and have maintained much of their real value. That may be reflected in the fact that the share of wages and salaries in total manufacturing value added tended to increase to over one third until 1977, and only thereafter declined sharply to about one fourth of value added in 1979.

Table 10. Employment, wages and productivity in manufacturing, 1976-1979

Item	Values on a basis of 100 in 1973 (percentage)			
	1976	1977	1978	1979
Employment	113.1	111.1	111.7	112.0
Real wages[a] (June)	86.7	66.2	54.7	50.9
Real salaries[a] (June)	96.2	73.9	67.4	60.3
Value added	115.8	113.5	90.0	93.6
Productivity[b]	102.4	102.2	80.6	83.6
Wage share in value added (%)	33.2	34.6	28.1	25.9

Sources: Annex, tables 15 and 16, and Ministry of Labour.

a/ Metropolitan Lima, includes establishments with 10 or more workers.

b/ Value added per worker.

47. Total real labour costs in manufacturing have roughly followed the development of labour productivity, which rose slightly until 1977 and then suffered a sharp decline, due to the reduction of value added and production at only slightly reduced employment levels. The declining share of labour remuneration in value added usually indicates rising profit rates of increasing capital intensity. Manufacturing profits have traditionally been extremely high, with a substantially larger share in value added than wages. Even during the 1977/78 recession, profits seemed to have maintained their high level, but suffered a sharp decline in 1979 when their share in value added dropped below 40%. Thus, profits do not appear to have benefited much from

11/ The additional labour costs include the obligatory 19% of nominal wages for social security, additional salaries (in most cases two monthly salaries per year) and subsidized clothing, food and recreation facilities. The size of the additional subsidies varies according to the individual agreements between firms and trade unions.

the decline of real wages. If depreciation is used as a basis of illustration, overall capital intensity in manufacturing seems to be rising since 1977, possibly as a result of large investment made particularly in the government-owned industry during the first half of the 1970s. The decline of output during that period has also tended to raise the share of depreciation in value added. In 1979, the share of depreciation in manufacturing value added passed the 10% level after rising from about 7% during the early 1970s. Nevertheless, payments of indirect taxes by the manufacturing sector, which made up in 1979 about 25% of value added, as compared with only 10% until 1977, have taken most of the declining wage shares (see annex, table 15).

48. Table 16 in the annex shows that the decline of labour productivity between 1976 and 1978 affected practically all ISIC three-digit branches, with the exception of oil refining and basic ferrous metal production. The productivity decline was particularly heavy in the more labour-intensive sub-sectors of the food, garment, footwear, woodworking, printing and metal products industries, where the inability to release excess labour because of the labour stability law was more detrimental than in the capital-intensive industries.12/ Mission observations during plant visits confirmed that excess labour and low productivity are still widespread, even in the capital-intensive industries of textiles, basic metals and machinery. Little information exists on labour productivity in the informal sector, but calculations based on tables 4 and 13 in the annex indicate that productivity in informal manufacturing is far below formal sector productivity, probably as low as one sixth of the latter. The calculation on the basis of tables 4 and 13 in the annex also indicates a decline of labour productivity in the informal sector since 1976, but to a much lesser extent than in formal manufacturing, which would be in line with expectations. During the 1977/78 recession, the informal sector had to absorb a rising share of the work force at a reduced value added per worker.13/ On the other hand, the informal sector was relatively isolated from the formal sector and has been affected by the recession to a smaller extent.

49. The drastic decline of real wages and salaries during the recent years has brought formal sector manufacturing labour costs back in line with comparable countries in Latin America. In February 1980, nominal monthly salaries in manufacturing were about S 61,000 ($240) and nominal daily wages were S 1,230 ($5) on average.14/ If social costs averaging 70% are added, current total labour costs would be over $400 and $8.50, respectively. Nominal wages and salaries are 50-60% higher in large enterprises with more than 100 employees than in small firms with 10-24 employees. In addition, the percentage to be added for social costs seems to be rising with the size of the enterprise. The relationship between labour costs and firm size suggests that small formal sector enterprises (5-9 workers) pay close to the legal minimum wage (S 22,000 per month - $90, with little social cost in addition to the 19% legal minimum for social security, while informal sector wages would be below the legal mim minimum without contributions to social security.

12/ An exception to this observation is the sharp productivity drop in the transport equipment industry, which also suffers from high excess labour a as a result of the drop in value added to less than one half between 1976 and 1977.

13/ This reflects the rising number of inadequately employed workers. If labour productivity is based on hours of work performed instead of number of workers, productivity in the informal sector may even have increased during 1971-1979.

14/ From the Ministry of Labour, Survey of Establishments with 10 and more employees in metropolitan Lima.

50. The quality of Peruvian labour is considered good, and there is no scarcity of qualified industrial workers, the reasons for which are twofold. Because of the relative stagnation of the economy in recent years, the demand for qualified workers has also stagnated. On the other hand, training of industrial workers, mainly by the Servicio Nacional de Aprendisaje y Entrenamiento Industrial (SENATI) (National Apprenticeship and Industrial Training Service), proceeded at a relatively high rate during the 1970s. SENATI worker training programmes currently involve between 15,000 and 20,000 per year, which is 6-8% of the formal sector work-force. Only about 700 per year are completing the SENATI apprenticeship programme and entering the industrial labour market for the first time. The remainder are employed workers who are trained in plant by SENATI (6,200 workers in 1979) or within the four SENATI training centres (10,000 workers in 1979). Since the training provided by SENATI is of a high standard, industrial enterprises have access to a sufficient number of well-trained workers. Currently, a larger number of well-qualified workers seem to be employed in the informal sector, which cannot offer employment commensurate with the level of training obtained. However, the excess supply of qualified labour may change in the future, when Peruvian industry restructures towards a more labour-intensive production system. SENATI should prepare in time to satisfy the rising demand for qualified industrial workers.

Industrial location and infrastructure

51. Manufacturing activity in Peru is heavily concentrated in the metropolitan area of Lima and Callao. About 70% of formal sector manufacturing establishments, employment and production value are concentrated in this area. Other areas with some agglomeration of industry are Arequipa in the south, and Chimbote, Trujillo and Piura in the north. Basically, the import substitution industry is located in Lima, where most of the consumer purchasing power of the country is concentrated. That includes the food, garment, footwear, printing, oil refining, household electronics and appliances and automotive industry. The only other centre is Arequipa, which is smaller, and mainly engaged in the manufacture of light consumer goods. Major industries outside Lima and Callao are resource-based. The large steelmaking and non-ferrous-metal refining plants of Siderperu and Centromin are close to mining areas, a large cotton spinning and weaving plant is located in the major cotton-growing area of Piura in the north, and the sugar refineries, jointly with a large paper mill based on sugar cane bagasse, are in the northern sugar-cane-growing areas (Trujillo, Chiclayo). Finally, most of the fish-meal industry is in a number of coastal locations (Chimbote being the largest centre). The informal sector industry may have a somewhat higher share of production outside Lima and Callao than formal manufacturing. However, the capital also provides the most important consumer concentration for goods manufactured by informal industry, as shown by the volume of street vending in downtown Lima. But informal production of clothing, footwear and metal products is frequently located outside urban consumer centres.

52. During the 1970s, the Government initiated policies designed to decentralize economic activity away from Lima and Callao to the provinces. Table 18 in the annex shows that in the manufacturing sector those efforts have not been successful, although a further rise of industrial concentration in Lima has been prevented. Apparently, a balance has been achieved between

the growing urban problems of Lima and Callao and the infrastructural problems of provincial industrial locations. Probably with the exception of Arequipa,[15] it is still almost impossible to operate an industrial enterprise in a provincial town without a liaison office in Lima, since arrangements for credit as well as for export and import can only be made in Lima with some degree of efficiency. In addition, transport and other infrastructure are frequently inadequate outside the Lima area. Larger provincial centres, like Arequipa, Piura and Chimbote, have faced power supply problems over long periods, while electricity, at subsidized rates, has always been adequate and reliable in Lima. Finally, the domestic transport systems are inadequate and costly, which places industries located outside Lima at an additional disadvantage.

Industrial investment

53. Investment in manufacturing fluctuated widely during the business cycle of the 1970s. Total national gross fixed capital formation nearly doubled between 1971 and 1975, but by 1978 dropped to its 1971 level. Fixed investment in formal manufacturing enterprises increased at an even higher rate than total capital formation during the 1971/75 period, but thereafter fell by one fourth (see table 11 below). At the three-digit subsectoral level, investment has been more volatile than total manufacturing investment (see annex, table 19), since the investment activity of public and private industries has, to some extent, been counter-cyclical. Because of the deteriorating economic climate for the operations of private local and foreign manufacturing enterprises during the first half of the 1970s, investment in industries dominated by privately owned enterprises declined sharply between 1971 and 1975, while investment in government-controlled industries expanded rapidly.[16] Gross fixed capital formation by public enterprises in the form of industrial machinery and equipment rose from S 0.3 billion in 1971 (about 3% of the total) to S 7.9 billion in 1975 (about 40% of the total). Thus, during the period considered the expansion of industrial production capacity was largely concentrated on capital-intensive government-owned basic industries. After 1975, budgetary and foreign exchange restrictions led to a sharp decline in industrial investment by public enterprises to S 1.4 billion in 1978 and S 1.8 billion in 1979, and an increase in the relative share of private industrial investment.

15/ The customs office of Matarani, the port for Arequipa, is reported to be highly efficient.

16/ This may appear to be inconsistent with statistical data on private foreign investment, which show and increase from $24 million in 1972 to $316 million in 1975, and subsequently a decline to $25 million in 1978 and $71 million in 1979. However, by far the largest part of those amounts has probably been directed towards the petroleum and mining sectors.

Table 11. Investment in manufacturing, 1971-1979

Item	Investment (billions of soles at 1973 prices)				Percentage of total	
	1971	1975	1978	1979	1971	1978
National gross fixed capital formation	47.0	84.9	49.8	55.6	100.0	100.0
Industrial machinery and equipment	11.1	19.6	9.6	12.4	23.6	19.3
Fixed investment in manufacturing[a/]	5.2	12.9	9.5	-	11.1	19.1
Machinery and equipment [a/]	3.3	7.7	4.5	-	7.0	9.0

Source: Annex, tables 18 and 19.

a/ Enterprises with more than four employees.

54. Table 12 below shows the strong fluctuation of investment in major subsectors during 1971-1978 and the general tendency during that period to direct investment towards capital-intensive industries. Particularly striking are the high investment shares of industrial chemicals and basic ferrous metal industries (which have strong public ownership) in 1975 at the height of the government effort to compensate for lack of private investment. Investment in food, clothing and metal product industries, where private ownership dominates, was particularly depressed during the period considered. Also remarkable are the almost negligible investments in the labour-intensive garment industries as compared with the extremely high investment made during 1971-1978 in capital-intensive sectors such as beverages and industrial chemicals, which provide substantially fewer jobs than the garment industry. In brief, capital-intensive industries have received an extremely high share of total manufacturing investment.

Table 12. Employment and investment in manufacturing[a/]

SITC Code	Industry	Average employment (percentage of total) 1971-1978	Investment b/ (percentage of total) 1975	1978
311 - 12	Food	15	10	22
313	Beverages	4	9	6
321	Textiles	13	14	8
322	Clothing	5	1	0.4
351	Industrial chemicals	3	22	4
371	Basic ferrous metals	3	10	1
381	Metal products	7	4	10
384	Transport equipment	5	4	3
	Subtotal	55	74	54
	Total manufacturing	100	100	100

Source: Annex, tables 14. and 19.

a/ Formal sector manufacturing.

b/ Gross fixed investment.

Manufactured exports and imports

55. In line with the level of industrial development of Peru and the import substitution policy followed during a long period, the trade balance for manufactured products is heavily in deficit. Imports of manufactures are substantially higher than exports. However, in recent years the gap has been closed dramatically; manufactured exports, which were only 4% of manufactured imports in 1975, reached a level of 44% in 1979. Table 13 below reflects recent trends.

Table 13. Export and import growth, 1975-1979

Item	Value (millions of $ US)				
	1975	1976	1977	1978	1979c/
Imports[a/]	2 581.6	2 072.5	1 918.0	1 468.1	2 200.0
Manufactures	2 097.0	1 633.0	1 495.0	1 290.0	1 63 .0
Exports	1 313.0	1 302.0	1 654.2	1 781.8	3 158.0
Manufactures[b/]	83.1	116.9	198.1	382.8	724.7
	Percentage of total imports and exports				
Manufactured imports	81.4	78.9	77.9	87.7	74.1
Manufactured exports	6.3	9.0	12.0	21.5	23.0

Source: Annex, tables 26 and 27.

a/ Excluding military equipment.

b/ Excludes traditional manufactured exports of fish-meal, sugar and petroleum products.

c/ Preliminary data on imports, based on Lima entry, adjusted 20% for insurance and freight and 30% for entry in other parts of the country.

The remarkable growth in the share of manufactured exports resulted from the sharp fall in manufactured imports by nearly 50% and a ninefold increase in manufactured exports during the 1975-1979 period. The restrictive measures which had to be taken during the 1976-1978 balance of payment crisis affected imports of manufacturers, both finished and intermediate inputs, more than other imports (mostly foods). The share of manufactured imports in total imports decreased from 81% in 1975 to 74% in 1979. Manufactured exports, on the other hand, have doubled each year since 1976, and are now about a quarter of total exports, compared to 6% in 1975. Manufactured exports are currently over 10% of formal sector industrial production, and 8% of total manufacturing production.

56. The above global statistical picture of manufactured imports and exports tends to exaggerate the degree to which the manufacturing trade balance has been reduced. Most of the imports are machinery, equipment and durable consumer goods with a high degree of industrial processing. Manufactured exports, on the other hand, are dominated by small processed domestic raw materials. Frozen fish, cocoa powder and butter, gold jewellery, cooper wire and alpaca tops fall in that product category. Cotton cloth, cement, fishing boats, footwear and refrigerators are among the major industrial export products with a relatively high manufactured value added, but they represent only one third of manufactured exports. Details of manufactured import and export development will be discussed in chapter III of this report.

II. MAIN FEATURES OF INDUSTRIAL POLICY

57. Between 1968 and 1975, the Government introduced a number of laws and decrees which drastically changed the direction of industrial policy in Peru. Those developments have been analysed at length in a substantial number of studies, including reports prepared by the World Bank[17], so that a brief description of the most important legislation may be sufficient for this report. It should be kept in mind, however, that a major feature of Peruvian economic policy, the import substitution policy, was continued and strengthened during 1968-1975, with rising tariff protection and implementation of a system of non-tariff barriers. That may have had an equally strong effect on the industrial sector as the new government policies.

Legislation affecting the industrial sector, 1968-1975

58. The Ley General de Industrias (LGI) (General Law of Industries), which was introduced in July 1970, forms the basis of the industrial policy of the 1970s. Its main features are as follows:

(a) The industrial sector was divided into four priority groups. Taxation, import duties and credit incentives provided for under the Law were ranked in accordance with priority levels;

(b) The property structure of the industrial sector was reorganized with a view to reserving basic industry to government ownership, limiting industrial ownership of foreign firms, and establishing worker participation in private industrial enterprises with more than five employees.

The major social aspect of the LGI was the introduction of the Industrial Community into private enterprises. The Industrial Community scheme was designed to give workers a participation in profits, management and ownership of manufacturing enterprises through the allocation of 25% of the pre-tax income of the firm to the workers forming the Industrial Community. Ten per cent of the profits would go directly to the workers under a profit-sharing scheme, while the other 15% would be used to purchase common stock of the firm. The process was to continue until the Industrial Community had collectively acquired 50% ownership of the firm. Those goals were never reached, and by the end of 1975 the Industrial Communities owned only about 17% of the share capital of the private manufacturing sector.

59. While the social component of the LGI presented a strong disincentive to expansion of private sector manufacturing, called the "reformed" private sector, the generous benefits provided by the Law initially induced a strong rise of manufacturing investments. The priorities established under the Law, along with the location of the firm, were the basis for granting tariff reductions on imports by the firm of capital goods and raw materials and for allowing reinvestment tax deductions. In addition, the priority system was used to discriminate with respect to credit conditions. The incentives in the LGI included reductions of the import tariff rates for industrial inputs ranging from 20% for third-priority firms to 80% for first-priority firms.

17/ Peru: Long-term Development Issues, vols. I-III, Report No. 2204-PE (Washington, D.C., World Bank, 13 April 1979).

For imports of capital good, the reduction went from 40% for the third priority to 90% for the first. Firms located outside the Lima and Callao area also received further 25% and 50% tariff reductions when importing, respectively, inputs and capital goods[18]. The most important incentive provided by the Law was the tax credit provision for reinvestment, which allowed deductions for reinvestment of between 65% and 85% of pre-tax income, depending on the priority. The reinvestment tax credit was computed after the deductions for worker participation were made.

60. In addition to the LGI, the Labour Stability Law, which was also introduced in 1970, provided for a strengthening of the position of formal sector employees. Under the provisions of the Law, all workers employed by an enterprise for more than three months acquired permanency and could only be dismissed under strictly limited circumstances. In case of general problems faced by the enterprise, the work-force could only be reduced after successful application had been made to the Ministry of Labour. However, few permissions to release workers have so far been issued by the Ministry, and job losses only resulted from bankruptcy.

61. In response to the slow progress toward worker participation made under the LGI, and in order to offset the declining investment rate of the private reformed industry, the Government introduced in 1974 the Social Property Law, which created a new category of Social Property Enterprise (EPS). Basically, EPS are industrial production co-operatives established by government initiative. However, a number of features distinguish the EPS from other co-operatives. EPS are formed exclusively by workers who receive an initial transfer from the Government to cover investment costs.[19] The initial loan has to be paid back, and once the amortization period is completed, the EPS continues to pay the same amounts as part of the taxation scheme of the system. Firms in the social property sector are supposed to be managed entirely by their workers, but the Law created the Comisión Nacional de Propiedad Social (CONAPS) (Social Property Commission), which was charged with the control and planning of the social property sector. Thus, CONAPS has the task of controlling on a case-by-case basis, investment, salary and employment policies of EPS, and of securing the amortization of the initial loan. Until 1976, the Government placed great hopes on the development of a large-scale social property sector, which would become the predominant form of industrial enterprise in Peru. The EPS were expected largely to replace the poorly performing private sector enterprises, and thus form the basis for a social democracy of full participation. However, as a result of financial and organizational constraints, implementation of a large-scale EPS programme materialized to an even smaller degree than the Industrial Community. Plans to convert the 200 largest industrial enterprises into EPS had to be abandoned, because the Government was unable to raise the required capital. By mid-1976, only six EPS were in operation, although a large number were under preparation.

18/ Enterprises without priority (fourth-priority category) had to pay the full duty and tax charges.

19/ Government funds were to be channelled through the Fondo Nacional de Propiedad Social (FONAPS) (Social Property Fund).

Revision of industrial policy legislation, 1976-1979

62. The incipient economic crisis in 1975 induced a reappraisal of industrial legislation. The most important fiscal incentives in the LGI, the reinvestment tax credits and the tariff exemptions, were changed. The tariff exemptions for high-priority industries were modified in the context of a tariff reform that abolished the multiple tariff system for the same product. Those changes mostly benefited low priority enterprises.

63. In early 1976 the property aspect of the LGI was revised in two respects. First, a small-scale industry law[20/] was introduced, which raised the maximum size of small-scale enterprises, thus increasing the number of firms excluded from the obligation to establish an Industrial Community. Small-scale enterprises are wholly private, and the 25% deductions that were used to buy shares and finance profit-sharing in larger private firms would go in small enterprises only to the workers' profit share. The Law defines small-scale enterprises in terms of minimum wage units paid in Lima. Thus, the maximum level of sales of small industrial enterprises was set at the equivalent of 590 minimum wage units, amounting to about $100,000 at their 1976 value. Since that corresponded to around 20 employees on average, the Law released probably more than one half of the formal sector industrial enterprises of the country from the obligation to establish an Industrial Community. In addition, the enlarged small-scale enterprise sector allowed a rapid rise in the number of new firms, 98% of which registered in 1976 under the new Law.

64. The 1976 revision of the Industrial Community requirements also introduced major changes in the provision for the remaining larger firms still falling under LGI. The Industrial Community virtually lost its role in the ownership and management of enterprises, but the workers continue to obtain shares and participate in profits. Workers continue to receive 10% of the net income of their firm under the profit-sharing arrangements, but temporary workers are now also entitled to participate along with full-time employees. While under the previous law 15% of profits were used for the purchase of common shares, the revised legislation reserved the acquisition of common stock exclusively for the original owners. The workers may buy only special labour shares (acciones laborales) which represent a participation in the assets of the firm, which in turn is made up of the common share and the labour share capital, the legal reserves, the revaluation surpluses and some other minor accounts. As a further consequence of the change, the employees can only obtain a maximum of one third of the total share capital, as compared with one half under the earlier provisions of the Law. The employees can now largely decide on the use of their profit shares and labour stock. Not all of the funds corresponding to the 15% profit share has to be used to buy labour stock. Instead, workers can decide to buy labour shares for a minimum of 4.5% and a maximum of 13.5% of the profit allocation. There is a mandatory minimum of 1.5% for the formation of the assets of an Industrial Community. The labour stock, on the other hand, is held individually by each worker, who can sell shares in the market or, after six years, to the original owners of the firm. The difference between the percentage that workers allocate to the purchase of labour stock and the possible maximum of 13.5% has to be used for bonds issued by the firm or by the Banco Industrial (Industrial Bank). Alternatively, a part of the funds may be used collectively or in individual worker investment programmes.

20/ Decreto Ley 21435: Ley de la Pequeña Empresa del Sector Privado.

65. Finally, in March 1979 the Labour Stability Law was changed. The trial period during which workers may be released was prolonged from three months to three years. New items were added to the list of reasons which may justify the dismissal of a worker. The ambiguity of the reasons still gives a rather large discretionary power to the labour authorities. The revised Labour Stability Law includes also the possibility of employing up to 10% of the work-force as seasonal workers. The new features of the Labour Stability Law provided for some flexibility on the labour market, which had already been partly achieved in the Export Promotion Law of 1978, under which the hiring and firing of workers by export firms was made easier.

Small enterprise legislation

66. A revised Law on Small-scale Enterprise (SSE) was introduced in July 1980 to promote the creation of small-scale businesses and to simplify their relationship with the government regulatory institutions. The new Law includes three important changes as compared with the previous Law: it creates a simplified system of SSE registration; it specifies, for a period of 10 years, a single tax to be paid by SSE; and it creates a fund within the Industrial Bank for the financing of SSE.

67. In order to qualify for SSE status, a firm must have a maximum of 10 workers, including the owner, or 5 for commercial enterprises. The owner has to partipate directly in the production process. The yearly gross income of SSE should be lower than 100 minimum wage units, corresponding to approximately $85,000 in mid-1980, or 50 minimum wage units for commercial enterprises. Registration of an SSE is now performed only at local municipalities, which arrange the formal registration with different government agencies. SSE taxation will consist of a single 5% tax on sales. The proceeds from the tax will be distributed to social security (50%), the municipalities (20%), and the SSE Development Fund at the Industrial Bank (30%). The Development Fund will obtain additional financial resources from the Government to provide credit at preferential conditions to SSE. Finally, SSE are excluded from the Industrial Community and the profit-sharing schemes. They are only required to register revenues and expenditures, including wages and salaries.

Tariff and protection policy

68. Between 1968 and 1979, the Peruvian tariff schedule remained basically unchanged. In 1973, a new tariff schedule was introduced, but it contained only minor changes and incorporated the Tariff Nomenclature of the Andean Pact (NABANDINA), which is the Andean Pact variant of the Brussels code. The average tariff was 69% with a standard deviation of 25 points. In addition, there was an import prohibition list consisting largely of luxury items and products such as textiles.

69. The general Law of Industries of 1970 introduced a Registro Nacional de Manufacturas (RNM) (National Registry of Manufactures) which restricted the import of all products competing with those produced locally. From 1973 onward, the exchange rate was overvalued and high tariffs were not sufficient to prevent a sharp rise in imports. Thus, the administrative restriction of imports listed in the RNM became the most important element of the industrial protection policy of the Government. The combination of import prohibitions, restrictions

and exceptions made the import system extremely complicated. Tariffs on capital goods and industrial imports were drastically reduced from high levels, depending on the priority attached to the particular industry and its location. The tariff exemptions became so widespread that by 1979 the effective duty collection was only 12% of the c.i.f. import value.

70. Before initiating the 1979 tariff reform, the status of the non-tariff restrictions was as follows:

(a) A total of 72% (3,330 items) of the goods in the NABANDINA nomenclature could be imported without restrictions;

(b) The RNM included 1,437 items, implying a de facto prohibition;

(c) A total of 453 items without restrictions needed prior ad hoc government approval. Generally, those items could only be imported with the prior approval of the Ministry of Industry or the Ministry of Agriculture.

71. The first phase of the tariff reform was initiated in March 1979. It involved the elimination of the RNM as an instrument of import prohibition. The RNM was replaced by a temporary list of prohibited items, to be gradually eliminated over two years. Only 539 of the total 1,437 items included in the RNM were put on the list. The remainder did not require the temporary prohibition, since they were either restricted by the prior administrative permit or they were already excluded from the permitted list. The reform proceeded along three lines of action. First, the gradual withdrawal of items from the temporary list of prohibited imports was initiated immediately. Secondly, products previously excluded from the permitted list were made importable, although in several cases with a requirement for a prior permit. Finally, the requirement for a prior permit was gradually reduced. The first important addition to the positive import list was made in May 1979, when about 600 items were included, 100 of which still required a prior permit.

72. Another part of the tariff reform dealt with the elimination of the multiple tariff system. It involved the creation of a tariff schedule that reflected the existing situation by establishing tariff rate averages using the current import volumes as weights. The resulting schedule was the first step towards establishing a tariff schedule which would take into account the agreement on tariffs within the Andean Pact. The new tariff schedule became effective in December 1979.

73. The process of reducing the non-tariff barriers was complex and involved negotiations with the affected industries, since the remaining restricted items included critical products for domestic industry. In response to fears of unfair competition from low-priced imports, particularly of textiles and transport equipment, the Government introduced in December 1979 an Antidumping Law which created a commission to monitor import prices and recommend countervailing duties and fines. The commission will also establish minimum import prices.

74. Several critical items, including textiles and household appliances, were liberalized by the end of 1979, but a further reduction of the restricted list proved difficult. Nevertheless, the process of import liberalization continued

during 1980. By the end of July 1980, only 180 items of the total 5 088 included in the tariff schedule were subject to administrative barriers. In August 1980 the new Government removed the remaining requirements for prior approval for imports of industrial goods, thus completing the process of elimination of non-tariff protection to domestic industry within a short period of less than 18 months. The remaining non-tariff restrictions, which applied to agricultural products imported by government organizations, were removed in October and November 1980. The process of import liberalization since 1979 is shown in detail in tables 32-35 of the annex.

Manufactured export policies

75. The first policy measures designed to promote non-traditional exports[21/] were established in 1968 (Decree Law 227), and included a negotiable tax credit certificate (Certex) of 15% of the f.o.b. value to reimburse exporters for import duties and indirect taxes paid on production inputs. In 1969, the Fondo de Exportaciones Manufacturadas (FEM) (Manufactured Exports Fund), a special credit line for financing manufactured exports, was created at the Central Bank. The export promotion system was substantially strengthened in 1972 by the following measures: an increase to a maximum of 30% in the Certex rate granted to specific products; the establishment of a Certex rate of 25% for artisan products; granting Certex to a number of non-traditional agricultural export products; establishment of a new enlarged Fondo de Exportaciones No-tradicionales (FENT) (Non-Traditional Export Fund) to replace the smaller FEM; and the creation of an export Credit Insurance Scheme.

76. Between 1972 and 1976 there were few changes in the export incentives system, except for a gradual increase in the volume of resources channelled through FENT. In May 1976, the method of calculating the Certex was changed and substantially higher rates were introduced. The average Certex rate, that is, the amount of Certex granted as a percentage of eligible exports, which was about 15% from 1970 to 1972 and 19% up to 1976, rose to 26% and has been approaching 30% since then. A temporary admission system for raw materials and intermediate production inputs was created in 1977 and started to operate in 1979. However, the scheme has not been used to any significant extent, since it was more profitable to pay the relatively low tariffs on inputs and be eligible for the full Certex incentive[22/]. The temporary import system was abolished in October 1980.

Export incentives

77. The Peruvian system of export incentives was consolidated by the Non-Traditional Exports Promotion Law of November 1978 (Decree Law 22342), which maintains all existing export incentives, extending the Certex system for a period of 10 years and freezing the Certex rates for a period of four years. The Law also established several additional incentives (tariff exemptions on

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21/ Non-traditional exports were originally defined as manufactured products with domestic value added of at least 15%, excluding fish-meal and oil, cotton, sugar, cocoa products, refined metals and wool tops.

22/ Exports under the temporary import system obtained Certex only on the domestic value added.

capital goods for exporting firms, special tax exemptions for reinvestment and employment creation), and created a new institution to promote non-traditional exports. In addition, the Law regulates the operations of FENT and introduces a special import duty of 1% as additional resources for FENT. Since 1976, the majority of non-traditional export products of agriculture, mining and manufacturing are eligible for the Certex incentive. The basic Certex rates are established on a product-by-product basis by the Ministry of Commerce, according to a weighting system which takes into account the capacity of the product to generate foreign exchange, the use of domestic resources and factors of production, and the specific fiscal cost of the Certex. The maximum basic Certex is 30% of the f.o.b. value of exports, or the c.i.f. value if shipped under the Peruvian flag, and the rates are concentrated at the high end of the range. Thus, of the approximately 1,800 products which have been classified for Certex, only about 300 products have basic rates below 20%. In addition to the basic Certex, non-traditional exports produced by firms located outside the Lima and Callao area receive a decentralization Certex of 10% of the f.o.b. value.

Export promotion

78. The Export Promotion Law of November 1979 created a Fondo de Promoción de Exportaciones (FOPEX) (Export Promotion Agency) as an autonomous public sector institution with a Board of Directors including four representatives of the Ministry of Industry and the Ministry of Trade and Economy, and two representatives from the Asociación de Exportadores (ADEX) (Association of Exporters). The Law also provides FOPEX with an automatic financing mechanism, by allocating to it one tenth of the special 1% import tariff, with the remaining 90% going to FENT, and 2% of the total amount of Certex granted. As a result, during 1979 more than $5 million were made available to FOPEX for export promotion. FOPEX is currently in the process of defining its work programme for the coming years. While it has been provided with adequate financial resources for its promotion activities, FOPEX is currently excluded from the two main mechanisms of the export incentive system, namely Certex and the export financing schemes. In future, FOPEX could possibly expand its activities to cover export financing and be directly involved in the operation of the Certex system. FOPEX is currently concentrating on export promotion activities which were previously carried out by an Export Promotion Department in the Ministry of Trade. That includes participation in international trade fairs and organization of trade missions abroad, the staff responsible for such activities being transferred fron the Ministry of Trade to FOPEX. Recently, FOPEX has initiated an information system for exporters, and introduced plans to disseminate information on potential export products abroad. In early 1980, FOPEX conducted a survey of exporting firms jointly with the Universidad del Pacifico, and the data collected are currently being processed. The results of the survey will be used to determine the assistance requirements of exporters, and FOPEX intends to plan its work programme in accordance with those requirements.

III. THE EFFECTS OF PAST INDUSTRIAL POLICY

79. The review in chapters I and II of the structure and recent performance of manufacturing in Peru and of the policy environment in which industry has operated during most of the 1970s has revealed crucial distortions and disappointing growth performance. This chapter will focus on the relationship between industrial policy, growth performance and structural distortion. In spite of the radical industrial policy changes that were introduced by the Government after 1968 and again after 1975, the basic environment in which manufacturing operated - import protection and price incentive system for the formal sector - changed little during 1968-1975. The basic changes introduced after 1975 are the more flexible exchange rate policy, a substantial strengthening of the export incentive system and the more recently initiated reduction of import duties and controls, all of which were put into effect during the economic crisis of 1976-1978 or immediately thereafter. The first part of this chapter analyses the structural long-term effects of past industrial policies. Subsequently, the effects of the policy changes after 1975 are reviewed to the extent permitted by statistical data and observations made by the mission.

Industrial structure and factor intensity

80. Abundant credit at subsidized interest rates, cheap imports of capital goods due to low import duties and an over-valued exchange rate, subsidizing of electricity rates and fuel prices, and high wages in the formal manufacturing sector created an environment which promoted a capital-intensive industrial structure. In the informal manufacturing sector, on the other hand, such an environment can be expected to generate low capital intensity. Informal enterprises have only inadequate access to credit at high interest rates from traders and middlemen. Lack of financing and complex import procedures also limit access to imported machinery. Finally, the combined effects of the larger number of workers seeking informal sector employment, partly as a result of the low labour absorption rate of the formal sector, and a completely flexible informal labour market maintain wages at low levels. Generally, there is evidence that factor intensities of formal and informal manufacturing in Peru have been strongly affected by industrial policies in the way described above, although the statistical data are not always conclusive.

81. Tables 14 and 15 below partially reflect the orientation towards high capital intensity of formal sector manufacturing. Table 14 ranks the five largest industries at three-digit level according to the size of their 1971 value added. Those five industries, of a total of 28, accounted in both 1971 and 1978 for roughly half of manufacturing value added, while maintaining the same ranking during that period. That would seem to indicate a considerable stability of the industrial structure established during the period before 1971. However, a closer analysis reveals that the process of concentrating manufacturing activity in a small number of industries with an above-average capital intensity has continued during most of the 1970s. Between 1971 and 1978, value added rose particularly in the next five largest industries,

including electrical machinery and appliances, industrial chemicals, transport equipment, other non-metallic minerals and basis ferrous metals, which raised their total shares of value added from 15.5% in 1971 to 23.2% in 1978. Thus, the ter most important industries, of a total of 28, raised their share of value added from two thirds to three fourths within seven years.

Table 14. Industrial concentration

ISIC Code	Industry	Value added[a/] (billions of 1973 soles) 1971		1978	
311-12	Food	13.9	(18.0)	10.1	(12.7)
321	Textiles	9.7	(12.6)	8.5	(10.7)
313	Beverages	7.0	(9.1)	8.7	(10.9)
352	Other chemicals	5.2	(6.7)	6.0	(7.5)
353	Petroleum refining	3.8	(4.9)	5.0	(6.3)
	Other	32.2	(48.7)	41.3	(51.9)
	Total manufacturing	71.8	(100.0)	79.6	(100.0)

Source: Annex, table 6.

a/ Figures within parentheses represent the percentage of total value added.

82. High growth of value added and an increase in relative size were generally recorded by industries with an above-average capital-labour ratio. In table 15, beverages and petroleum refining show the combination of high growth and capital intensity, which constrasts with the sharp decline experienced by the food industry, with its below-average capital intensity. Similar features can be observed in the next five largest industries. Industrial chemicals ($25,800. in fixed assets per worker), basic ferrous metals ($21,200), including Siderperu steelworks, and other non-metallic minerals, including cement plants, have both high growth and above-average capital intensities. The import substitution industry is an exception to the above relationships. Electrical machinery and appliances, transport equipment and other chemicals, which involve mainly the packaging of pharmaceuticals, have had high growth of value added at relatively low capital intensity. The fixed asset values used in table 15 for the calculation of the average capital-labour ratio probably represent a considerable underestimation of actual replacement values, since assets in Peru are not fully revalued with inflation. The second column of table 15 presents a more realistic picture of the high average cost of job creation, a crude measure of the incremental capital-labour ratio in formal sector industry from 1972 to 1976. The average cost of creating employment was an extremely high $22,000, with variations between low values of $2,500 in garments, $4,000 in footwear, and $6,000 and $8,000 in, respectively, the assembly industries of non-electrical machinery and transport equipment, and high values of $72,000 in beverages, $55,000 in industrial chemicals and $46,000 in petroleum refining.

Table 15. Capital-labour ratios in industry

ISIC Code	Industry	Fixed assets per worker, end of 1976 [a/] (dollars)	Average cost of job creation, 1972-1976 [b/] (1973 dollars)
311-12	Food	5 920	22 600
321	Textiles	8 220	- [c/]
313	Beverages	14 410	72 400
352	Other chemicals	4 700	13 600
353	Petroleum refining	30 380	46 100
	Other	6 480	18 000
	Total manufacturing	7 120	22 100

Source: Industrial Survey 1976, Ministry of Industry of Peru.

a/ Total fixed assets at the end of 1976 divided by average employment during 1976.

b/ Sum of total investment during 1972-1976 at 1973 prices divided by the increase of employment.

c/ The textile industry reduced its employment during 1972-1976.

83. Table 15 reveals not only that much of industrial growth during the 1970s was concentrated in capital-intensive industries, but also a tendency of capital intensity to rise with the size of industry. Therefore, in 1976/77 the five largest industries had fixed assets per worker of about $8,000 on average, compared with $6,500 for the remaining 23 industries. The difference in capital intensity becomes even larger if the 10 largest industries are compared with the 18 smaller branches. The average capital-labour ratio in the large industries is about $10,000 per worker and double the ratio in the smaller industries. The trend reflected in the ratios is generally confirmed by the incremental capital-labour ratios represented in the second column of table 15.

84. The average capital-output ratio and the average labour-output ratio for formal sector industry remained constant from 1971 to 1976, which would indicate unchanged efficiency in the use of both capital and labour. Constant capital-output and labour-output ratios imply a constant overall capital-labour ratio. Although no firm conclusions can be drawn from the available statiscal data, the general relation between capital intensity, size of sector and growth of different industries seems to indicate that the large industries raised an already high capital intensity during the period 1971-1976, while the capital intensity of smaller industries declined further.

85. Little is known about factor intensities in informal sector manufacturing, except that the capital labour ratios are probably very low. Most informal manufacturing is in garment, footwear and bakery products, which had already in 1976 the lowest capital intensities in the formal sector, with $1,100, $1,500 and $2,900, respectively, of fixed assets per worker. That would suggest comparable capital-labour ratios in the informal sector probably substantially below $1,000 per worker. If that estimate is reasonable, the informal sector capital-output ratio is considerably lower than in the formal sector, and capital is used more efficiently in informal sector manufacturing. In addition, while capital productivity sharply declined in formal sector manufacturing during the recession of 1977/78, capital has been used more and more efficiently in informal industry as a result of rising employment and output.

86. In brief, the above analysis of factor intensities in Peruvian industries confirms the hypothesis that past economic policies have helped to establish capital-intensive structures in formal manufacturing. That seems to be a clear consequence of long-tern policies that maintained capital cheap and abundant in the formal sector, but made labour expensive, which is obviously out of line with the relative factor endowment of the country . The low rate of labour absorption in formal sector manufacturing is a result of that policy. The process of increasing overall capital intensity has continued until recently, since capital-intensive industries have shown higher average growth than the relatively more labour-intensive industries. On the other hand, the mission did not find excessive use of capital within the industries analyzed in more detail, mainly textiles and metals industries. That suggests that the overall high capital intensity developed with a change in the industrial structure towards an increasing share of industries which tend to employ capital-intensive technologies. The relative size and development of the textile and garment industries is a case point. Both industries seem to apply appropriate technology, but the labour-intensive garment industry is small and stagnant, while the capital-intensive textile industry is large and growing, particularly in spinning, which is the most capital-intensive part of the textile industry. Finally, capital is much better used in the informal than in the formal industry. The lack of access to formal sector financing and the exposure to an abundance of labour at low wages have led to capital-labour ratios in informal manufacturing which may be even below the levels that would be consistent with the resource endowment of the country. The extremely low labour productivity and the widely deficient product quality of informal manufacturing could probably be improved with a somewhat increased capital intensity.

Investment and capacity utilization

87. The radical changes of economic policy in 1968 and, partly, in 1975-1976 created during the 1970s an overall climate of uncertainty in the industrial sector which had serious repercussions on manufacturing investment. As shown in table 11 and annex table 19, fixed investment in formal sector manufacturing, which had reached a low level of $ 5.2 billion in 1971, increased to $ 10.9 billion in 1975 and declined again to $ 9.5 billion in 1978 (all in 1973 prices). Until 1975, the public sector played the major role in adding to manufacturing production capacity, while private investment was mainly directed towards replacing obsolete equipment. Direct foreign investment in manufacturing virtually stopped during that period, except for a small number of joint ventures, since foreign enterprises were even more affected than national private firms by the social legislation, nationalizations and restrictions on the repatriation of profits. In addition, transnational corporations tend to have high flexibility in directing their investment toward countries which offer the most favourable investment opportunities. It should be noted that one of the two major investment by transnational corporations during the period considered was made in an acrylic fibre plant under a special decree excepting the enterprise from the industrial community legislation.

88. Apart from being inadequate to maintain a high rate of long-term industrial growth, manufacturing investment decisions generally have not been guided by levels of profitability and of capacity utilization. Public investment activity

was directed towards basic industry which appeared to be most suitable for gaining government control over economic development. The acquisition and expansion by the Government of the fish-meal, cement and paper industries made it possible to influence other economic activities, such as the important construction industry. The principle of economic control also served as the main criteria for directing major investment resources toward the nationalized industries. It can be safely assumed that the application of economic criteria, particularly the use of economic prices, as the basis for public investment decisions would have prevented the further strengthening of capital intensity in Peruvian industry, improving the poor performance of formal sector job creation. After 1975, public investment in manufacturing, or the lack of it, were again guided by other criteria than economic or financial profitability. The reduction of the public sector deficit was the main criterion for investment policy, and investments in government industry were reduced, again largely independently of the long-term growth requirements of the industries.

89. The size and direction of private investments did not counterbalance capital-intensive public investments. In the general climate of uncertainty within within the private sector, foreign and national entrepreneurs required extremely high returns on investment in manufacturing. The permanently high shares of profits in value added (see annex, table 15) during the 1970s combined with low rates of private investment in manufacturing is a clear indication of the reluctant attitude of private investors towards expanding production capacity even at high profit rates. According to information obtained by the mission, entrepreneurs frequently require pay-back periods of one year or less on investment in manufacturing. Rising utilization of industrial capacity during the first half of the 1970s also failed to counterbalance the effects of uncertainty on investment performance. According to the Ministry of Industry, capacity utilization in manufacturing rose rapidly from a low 52% in 1968 to 72% in 1972 and 85% in 1975. No further data on capacity utilization are available, but it must have dropped sharply during the 1977/78 recession, probably below the 1972 level. Currently, capacity utilization may have recovered somewhat, but idle capacity is still widespread.

90. There seem to be several reasons for the generally inadequate capacity utilization in manufacturing during the 1970s. Firstly, investment financing at subsidized interest rates was amply available, which reduced the cost of idle capacity. Investments were also generally financed largely by credit, as investors preferred to place their own resources in politically less exposed sectors than manufacturing. The import substitution policy changed factor prices in favour of capital, as capital goods could be freely imported at low import duties and an overvalued exchange rate, which reduced further the cost of keeping capacity idle. The labour legislation provides an additional disincentive to manufacturers to operate a plant at a maximum number of shifts per day or days per week. Additional work shifts would require the employment of additional workers who, under the labour stability law, could be difficult to release in case of declining sales. Finally, long-term protection policies have created monopolistic enterprises which tend to operate below full capacity.

Informal sector

91. Although industrial policy during the 1970s has been exclusively directed toward the formal sector, informal sector manufacturing has suffered not only from neglect and lack of government support, but also from excessive control, restrictions and discrimination. The economic policy environment in Peru has also strengthened the dual character of manufacturing by supporting the establishment of highly capital-intensive formal industry which can employ only a small number of workers and pay wages several times higher than those offered in the informal sector. Both formal sector workers and entrepreneurs resent any closer relationship with the informal sector. The formal sector workers have reached, with the support of the Government and their trade unions, a privileged position in terms of job security and wage levels, although the latter has eroded in recent years. Their position could only be negatively affected if related to the depressed situation of informal sector workers. Similarly, formal sector enterprises have maintained and partly strengthened the barriers separating them from informal sector manufacturing. The Peruvian industrialists association represents only formal sector industries and supports any government restrictive action on informal sector manufacturing, which is felt to benefit unfairly from reduced taxation and lack of application of labour laws. Subcontracting arrangements between formal and informal sector manufacturers, which have been an important factor in the industrial development of East Asian countries, are scarce in Peru.

92. The major indirect effects of past industrial policy on the informal sector have been felt in the field of employment. An important cause of migration toward the urban centres of the country is the expectation of finding well-paid formal sector employment. Since the migration rate has been much higher than the rate of job creation in the formal sector, most migrants participate in informal sector activities, where entrance is comparatively easy. The constant inflow of labour has created sharp competition in the informal sector and led to depressed wages and returns on investment. Hence the large wage gap between formal and informal sector employment has not diminished much in recent years, despite the strong decline in formal sector wage incomes. The low returns, on the other hand, have contributed to the inadequate investment and low capital intensity of informal manufacturing. As long as the incentives to migrate continue, including relatively high formal sector incomes and the general subsidization of the urban population, informal sector manufacturing cannot be expected to absorb a large number of workers productively, improve product quality, raise labour productivity or, in general, help to reduce the gap in relation to the formal sector.

Protection and imports

93. This chapter has already described the overall effects of long-term import protection on the structure of manufacturing in Peru. In addition, the industrial structure has been directly affected by the system of regulating and restricting imports. The import tariff system has reduced the equilibrium price of foreign exchange, making all imports with low tariff rates relatively cheaper than domestic goods. Thus, there has been an incentive

to use low-duty imports rather than domestically produced products. In Peru that has been the case with most intermediate products and capital goods, which had high shares of total imports during the 1970s (see table 16 below). The effects on Peruvian industry have been felt less in the choice of technology, which, as mentioned earlier, seems to be generally appropriate, than in the choice of industry. The import duty system has promoted the development of industries which are intensive in the use of capital and imported inputs. In addition, to the extent that intermediate and capital goods are being produced in Peru under specific protection from import competition, the industries, which are forced to use those inputs, are heavily taxed by the protective system. Consequently, those industries are frequently the least competitive.

Table 16. Structure of industry-related imports

Type of imports	Share of total imports (percentage)		
	1974	1978	January-June 1980
Consumer durables	3.5	3.3	2.5
Transport equipment	6.0	8.2	9.9
Raw materials, intermediate products for industry	46.1	46.0	42.3
Capital goods for industry	28.9	27.3	28.0

Source: Annex, table 29, excluding fuel imports.

94. Examples of the last-mentioned effect of protection are provided by the garment industry and the metalworking industries. The small size and poor performance of the garment industry is to a large extent due to its "taxation" by domestic chemical fibre manufacturers of polyester and nylon, but probably not acrylic fibres, which supply their products at roughly two to three times international prices. Since the domestic market requires garments made of blended cloth, the garment industry is then able to pass on a part of the "tax" to the consumer as a result of the high level of protection of the garment industry. Garment prices in Peru seem to be roughly 100% above the level in the United States of America.[23/] Siderperu has a similar key role as

23/ The example of the garment industry may also demonstrate how the protective system affects income distribution in Peru. Since formal manufacturing is protected (that is, subsidized), other sectors, mainly the informal sector, agriculture and mining are correspondingly "taxed". Prices of products of those sectors are largely determined by the world market or by efficient domestic competition, while the protective system forces them to buy expensive inputs and consumer goods produced domestically. Thus, workers and entrepreneurs in those sectors subsidize the workers and entrepreneurs of the manufacturing sectors. In the case of garments, most of the income transfer involved is from the rural population to the manufacturers of chemical fibres, including their employees.

the major supplier of intermediate ferrous metal products at roughly 40% above world market prices. The major detrimental effect of protection on the use of Siderperu products seems not to have been the high prices, which do not appear excessive considering the competitive situation on the world steel market, but rather the frequently inadequate product quality and the unreliable supply. In particular, the manufacturers of fishing boats, who otherwise are competitive, have suffered in their export effort from being dependent on the supplies of a protected monopolistic steel producer.

95. The impact of the protective system on the process of import substitution has stabilized in recent years (see table 16). The first stage of import substitution seems to have been completed much earlier. Imports of consumer durables were small and stable during the period 1974-1980. Only the share of transport equipment in imports, mostly passenger cars and trucks, increased sharply from 6% in 1974 to 10% during the first six months of 1980, which to some extent reflects the problems of establishing a domestic automotive industry in a small market under heavy protection. The high import figure for the first six months of 1980, which represents a doubling of the dollar value of imports over the previous year, could also be a sign of the effectiveness of the reduction of import restrictions initiated during 1979.

96. The second stage of import substitution, which would encourage replacement of intermediate and capital goods imports, has not been further strengthened since 1974. Table 17 shows the sharp decline of the total import share in domestic supplies in the recession year of 1978, as compared with 1975. The sharper reduction of imported supplies occured for the product categories with a large content of intermediates, namely chemicals, paper products, non-metallic mineral products and basic metals. As a result of the import substitution

Table 17. Share of imports in the domestic supply of manufactured goods

Type of goods	Import share domestic supplies (percentage)	
	1975	1978
Food	7.8	6.4
Textiles, garments	1.8	1.0
Wood products	5.4	3.6
Chemicals	16.2	12.0
Paper products	26.4	15.9
Non-metallic mineral products	9.3	5.9
Basic metals	29.3	15.8
Metal products	40.3	37.0
Other	15.0	22.7
Total	21.0	15.6
Total (national accounts)	24.0	17.1

Source: Annex, table 28.

policy pursued over a long period, substitute products are supplied for most consumer goods, and the structure of Peruvian imports has shifted towards production inputs. Therefore, during the balance of payments crisis of 1977-1978, imports of consumer goods could no longer be cut, and essential imports of intermediate inputs to industry had to be reduced instead. That partly explains the sharp drop in industrial production during the economic crisis, which is the result of the dependence on imports arising from past import protection policy.

97. In addition to the overall effects of import protection described above, a number of other more specific issues have arisen in Peru as a result of the particular features of its system of protection. The impact on government revenues from import duties had been significant. The ratio of import duties to imports was more than halved from 20% in 1971 to 10% in 1974, and thereafter rose slightly to about 12% in 1978 and 11% in 1979. A part of the initial decline of the ratio and its subsequent increase are due to the tariff exemption policies applied during the first part of the 1970s and the later introduction of the 10% tariff surcharge. In addition, however, a shift of imports to low-tariff items took place, particularly up to 1974. The slight reduction of the ratio between 1978 and 1979 may be an indication of a continued declining trend of the revenue ratio, which is already extremely low when compared to the restrictive impact of the protection system.

98. The administrative problems related to the complicated system of tariff protection and import controls reached major proportions. The complexity of a tariff system including over 5,000 items to which different regulations applied, in part even with different tariff rates for each product according to type and the location of the importer, required a large and well-trained bureaucracy and police force to handle the paper work and check irregularities, including smuggling. Importing firms needed a correspondingly strong force of capable administrators to push imports through the different government clearing stages at an acceptable speed. Therefore, the protection system was costly to importers as well, and only large enterprises could carry the cost and were capable of dealing effectively with the government administration. The complexity of the protection system has therefore helped to create monopoly importers / traders.

99. Administrative restrictions on imports based on "prior approval" (opinión previa) were another specific feature of the Peruvian protection system which had effects on industry over and above the direct protection afforded to manufacturers of import substitutes. During the 1970s, the system of prior approval developed into an important instrument of protection which was more effective than the tariff system. Basically, goods produced within the country could only be imported after verifying that domestic manufacturers could not supply the required quantity and quality at the required time. While the process of verification was performed by the Ministry of Industry, much of the actual decision-making rested with the major domestic manufacturers, who were usually requested to comment on the domestic supply potential.[24/]

24/ Typical of the strong influence over imports exercised by major domestic producers is the indication given to the mission by senior staff of Siderperu that they, and not the Ministry of Industry, were deciding on imports of steel products.

The system has led to continuous differences of opinion between major domestic producers and potential importers. Manufacturers of import substitutes have shown a natural tendency to overvalue domestic supply possibilities, while the potential importers complain about deficient quality and late delivery of products, which are supplied from domestic sources after failing to gain prior approval. The successive reduction of the number of products requiring prior approval from 888 in October 1979 to 165 in August 1980, and the final abolition of that system of protection in October-November 1980 were welcomed by manufacturers using tradable production inputs.

Impact of the reform of the system of protection

100. Two major steps affecting import protection, and hence the structure and performance of the manufacturing sector, have been taken since 1975. The first important measure was the introduction of a more realistic exchange rate starting in 1976 and the subsequent adjustment of the rate to relative inflation levels. That tended to make imports more expensive as compared with domestic products. The sharp decline of imports after 1976, particularly of industrial intermediates and machinery, may be to some extent the result of currency devaluations made without compensatory reduction of the tariff level, in addition to falling production and investment levels.

101. The second measure affecting import protection was the reform of tariff rates and import restrictions initiated towards the end of 1979. As described in chapter II of this report, the results of the reform have so far mainly consisted in the elimination of administrative import restrictions, while there was a minor reduction of the tariff level by July 1980. Between October 1979 and August 1980 the number of products prohibited for import was reduced from 680 to 9, and the number of products requiring prior approval was reduced from 888 to 165. The number of products which could be imported without restriction, except for the import tariff, increased during the period from 3,444 to 4,923 of a total of 5,097 products on the Peruvian tariff schedule. As of November 1980, all products can be imported without administrative restrictions. On the other hand, the average tariff level was reduced by only 7 percentage points from 46% to 39% by August 1980. The subsequent reduction of all high tariff rates to a maximum of 60% led to a further decline of the average tariff level by a number of percentage points.

102. While the reform of the protective system has so far led to substantial import liberalization, it is difficult to determine from available information to what extent imports have already been affected. The overall level of imports for 1980, which is the first year to be affected by the import liberalization measures, can be expected to rise dramatically compared with 1979. Based on f.o.b. import data for the first 6 months, total imports in terms of current United States dollars should be at least 70% higher than in 1979, and pass the level of $2,500 million on a c.i.f. basis. However, it is not clear to what extent the import recovery is caused by the tariff reform. From discussions with entrepreneurs conducted during July 1980, it appears that the major cause of rising imports is the general recovery of the economy, which gained momentum during 1980. Nevertheless, the overall economic upswing cannot be maintained without liberal access to imported production inputs.

103. While total imports rose sharply during the first months of 1980, the import structure remained basically unchanged. The liberalization policy can be expected to raise imports of highly protected import substitutes, mainly consumer durables, garments, textiles and footwear. However, the import data contained in annex table 29 show that the expected results did not occur during the first six months of 1980. The share of consumer durables declined even further, as compared with previous years. The large increase of imports of consumer goods seems to be wholly due to the rising volume of food imports. Only the import of transport equipment, which has continued to rise rapidly, can be considered the result of the relaxation of import restrictions for vehicles. However, a close look at the process of abolishing import restrictions reveals that the general lack of response by import substitutes during the first half of 1980 is not surprising. For nearly all product categories, the major step in removing administrative restrictions, namely the lifting of the requirement of prior approval, which in most cases implied virtual import prohibition, was only taken on 15 May 1980 (see annex, table 32), which was too late to affect the import performance of the first six months of 1980, except for the import of complete vehicles, where the reaction of importers tends to be extremely fast. Apparently in the second half of 1980 large volumes of consumer durables and garments were imported, which would indicate that the tariff reform is effective.

Manufactured exports

104. The most dramatic effects of the change in industrial policy initiated in 1975/76 have been felt in the export of manufactured goods. During the period of inward-oriented import substitution policy of the 1960s and the first half of the 1970s, manufactured exports remained small and stagnating. Between 1973 and 1976 manufactured exports were just over $100 million, less than 7% of total exports on average (see table 18 below). A highly protected domestic market, an overvalued exchange rate and moderate cash subsidies did not provide sufficient incentives to enter into risky export production.

Table 18. Growth of manufactured exports

Item	Value of manufactured exports[a/] (millions of $US)			
	1973	1976	1979[b/]	January-May 1980[b/]
Manufactured exports[c/]	100.2 (9.6)	116.9 (9.0)	724.7 (23.0)	390.0 (22.5)
Total exports	1 041.1	1 302.0	3 158.0	1 728.9

Source: Annex, table 26.

a/ Figures within parentheses indicate percentage of total exports.

b/ Export registration.

c/ Data for 1979 and 1980 may include some non-traditional exports which are not manufactured.

105. The period after 1976 provided an ideal set of conditions for manufactured exports to take off. The currency devaluation and the subsequent adjustments of the exchange rate raised the profitability of export marketing as compared with domestic sales. The 1977-1978 recession reduced domestic demand, thus improving relatively the attractiveness of exports. The substantial strengthening of the Certex system also improved the profitability of export sales. The introduction of a high duty on traditional exports provided an incentive for further domestic processing of export raw materials into subsidized manufactured exports. A number of other less important factors also had a promotional effect, including the strengthening of the export financing system, the introduction of a system of temporary duty-free imports of export production inputs, and the establishment of an export insurance scheme. More important for the rise of manufactured exports than the above three factors was the emergence of an export mentality, particularly within the Government, which during the balance-of-payment crisis of 1977/78 seemed to recognise that a dollar earned in exports is as valuable as a dollar saved by import substitution. Such a positive attitude towards exports helped to reduce administrative barriers and may also have provided the basis for the creation of an export promotion agency in 1979. During that period, manufacturers overcame to some extent their traditional export pessimism, as the rapid rise of manufactured exports demonstrated that Peruvian exporters could be successful in foreign markets.

106. The impressive performance of Peru after 1976 can be explained to a large extent by the composition of manufactured exports. Annex tables 26 and 30 show that the vast majority of manufactured export products are based on domestic raw materials with generally little manufactured value added. Canned and frozen fish are the most important food exports. Alpaca tops and cotton yarn and cloth are major textile exports based on domestic cotton and alpaca wool. Other important processed raw materials for export are cement, copper and zinc products and silver and gold jewellery. Resource-based products have a share of about 80% in manufactured exports. Most of those products have gone through only very simple manufacturing processes. Frozen fish and alpaca tops are in that category. Exports based on domestically mined metallic minerals (copper, zinc, silver and gold) have generally extremely low manufactured value added to the refined metal base. Annex table 22 shows that the share of value added in the gross production value is particularly small for processed foods (30%) and basic non-ferrous metals (27%), compared with an industry total average of 42%. In addition, most of the value added is in the form of high profits and indirect taxes. For example, in 1978 the profit share of value added in the manufacture of basic non-ferrous metal products, including the production of the important export products, copper wire and bars and Zamac, a zinc manufacture, was 76%. Such a result suggests that some of the products, as well as a number of other resource-based export products, may have very low, or even negative, manufactured value added measured at world market prices.[25/] When that is taken into account, the manufactured export performance of the country since 1976 appears much more modest than expressed by the gross export values and raises the issue of the cost effectiveness of the export incentives to promote the growth of manufactured value added. That issue will be dealt with later in this chapter.

25/ Gold and silver jewellery, which had dramatic export growth in 1979 and 1980, and includes products such as solid golden ashtrays, in most cases probably have negative value added at world prices.

107. In 1979, about 80% of manufactured exports were processed domestic raw materials (fish, wool, cotton, wood, non-metallic minerals and metals), a share that had remained unchanged during the export growth period 1976-1979. The high stability in the composition of manufactured exports is also shown in tables 19 and 20 below, which rank the 10 major products according to their export values in 1976 and 1979. Six of the ten most important products in 1976 are also included among the top ten for 1979. However, two of the additional products on the 1979 list, fish protein (a derivation of fish-meal which carries an export duty) and gold jewellery, would disappear under a revised export incentive system. Only cement and cotton cloth can probably be considered permanent additions to the group of important export products. Major shifts occurred within the ranking of items between 1976 and 1979, because of the relatively low rowth of most products on the 1976 list. Only two products, cotton yarn and zinc manufactures, had above-average growth rates.

Table 19. Value and growth of the 10 leading manufactured exports in 1976

Product	Certex rates (percentages)	Export value[a/] (millions of $) 1976	1979	Growth from 1976 to 1979 (percentage)
Frozen fish	12-26	14.8 (12.7)	31.0 (4.3)	109
Alpaca tops	16,12	11.2 (9.6)	25.6 (3.5)	129
Fishing boats	30	8.5 (7.3)	24.6 (3.4)	189
Canned fish	27	7.6 (6.5)	47.9 (6.6)	530
Barite	-	5.6 (4.8)	12.1 (1.7)	116
Synthetic cord	18	4.1 (3.5)	7.4 (1.0)	80
Acrylic fibre	18	4.1 (3.5)	13.6 (1.9)	231
Cotton yarn	26-28	3.3 (2.8)	32.5 (4.5)	885
Cotton wire	22	2.8 (2.4)	13.4 (1.8)	379
Zinc manufactures	18,15	1.7 (1.5)	13.3 (1.8)	882
Other manufactures		53.2 (45.4)	503.3 (69.5)	846
Total		116.9	724.7	520

Source: Annex, table 30.

a/ Figures within parentheses represent the percentage of total manufactured exports.

108. The high growth of "other" products not listed in tables 19 and 20 indicates that a number of new items were added to the export list during the rapid growth of manufactured exports after 1976. Particularly, a number of non-resource based products had high growth and now rank in the middle level of manufactured export products, as indicated by the 1979 export values: footwear ($7.6 million), dental material ($6.2 million), printed matter ($6.5 million), batteries ($5.8 million), explosives ($6.0 million), refrigerators ($4.5 million) and truck chassis ($4.1 million). While the growth of that product category has left the share of non-resource based manufactures in total manufactured exports unchanged at 20%, they have contributed to the overall diversification of manufactured exports which has taken place since 1976.

Table 20. Value and growth of the 10 leading manufactured exports in 1979

Product	Certex rates (percentages)	Export value[a] (millions of $) 1976	1979	Growth from 1976 to 1979 (percentage)
Canned fish	27	7.6 (6.5)	47.9 (6.6)	530
Cotton cloth	28-29	0.9 (0.8)	46.4 (6.4)	5 111
Cotton yarn	27	3.3 (2.8)	32.5 (4.5)	885
Cement	23	0.2 (0.2)	31.1 (4.3)	15 450
Frozen fish	12-16	14.8 (12.7)	31.0 (4.3)	109
Alpaca tops	16,12	11.2 (9.6)	25.6 (3.5)	129
Gold jewellery	27	- (-)	24.9 (3.4)	-
Fishing boats	30	8.5 (7.3)	24.6 (3.4)	189
Fish proteins	-	- (-)	21.9 (3.0)	-
Acrylic fibre	18	4.1 (3.5)	13.6 (2.0)	232
Other manufactures		66.3 (56.6)	425.2 (58.6)	541
Total		116.9	724.7	520

Source: Annex. table 30.

a/ Figures within parentheses represent the percentage of total manufactured exports.

109. The role of exports in manufacturing industry has increased substantially as a result of recent rapid growth. Nevertheless, it was still very small at about 5% of total manufacturing production in 1978 and around 8% in 1979, although it compared favourably with a share of only 1% of export production in 1976 (see annex, table 28). There still exists no industry group at the ISIC two-digit level, where exports are important. In 1978, the highest export share of production was achieved by the textile and garment industry with 14.6%, followed by non-metallic mineral products with 11.6%. The picture is much different at a higher level of industrial disaggregation. Almost all frozen and canned fish and most fishing boats, alpaca tops, cotton yarn and cloth, and copper and zinc products are exported. Half of the acrylic fibre production is also for export. Thus, while the overall dependence of manufacturing on export sales is still quite low, within about a dozen important industries most of the production is now for export. It may therefore be concluded that during the period of strong export growth from 1976 to 1979, a number of industries were established mainly for export production, while the degree of diversion of production from domestic toward export markets was probably relatively small, and mostly affected the non-resource based manufactures mentioned above.

110. Rapidly rising export orientation and export dependence in major industries is confirmed by a marginal analysis of the role of manufactured exports. Approximately one fourth of the growth achieved in the formal manufacturing sector between 1975 and 1978 can be attributed to exports, compared with less than 5% for the period 1968-1975. That illustrates the dramatic reorientation of policy towards exports during 1975-1976. In 1979, probably all manufacturing growth (about 4%) was attributable to exports. At the two-digit level, marginal export-output ratios of 100% and above existed already during 1975-1978 in two subsectors, textiles and garments and non-metallic mineral products, which

were also the only industries with an average export-output ratio of over 10% in 1978. During 1979, all industries at the two-digit level, with the exception of basic metals and non-metallic mineral products, owed all of their growth to exports. In the food sector, the supply to the domestic market was even reduced in favour of exports.

111. In summary, the dramatic rise of manufactured exports represents the most visible success of the new industrial policy after 1975. Since 1976, the degree of export orientation of industry has substantially increased, but the domestic market has generally remained by far the most important target, absorbing over 90% of manufacturing production in 1979. Nevertheless, in a number of mostly resource-based industrial branches, the export share in production is now over 50%, although their degree of industrial processing is generally low and domestic manufacturing value added at world prices may sometimes be negative. In many cases, those industries apparently are not based on comparative advantage, despite the fact that they are resource-based, but rather on the utilization of export cash incentives and the avoidance of the duty on traditional exports. Typically, among major industrial exports there are no labour-intensive products, except fishing boats, that utilize the most important comparative advantage of the country, the abundance of skilled and cheap labour. Exports of labour-intensive or sophisticated products, such as garments and footwear or refrigerators and truck chassis, are still small, but have been rising since 1976. They appear to be to a large extent "spillover" exports made during a period of depressed domestic demand without firmly established foreign markets. Overall, industrial exports have still an extremely weak structure and are highly dependent on incentives and domestic market conditions. The stagnation of the manufactured export volume during 1980 with a recovering domestic demand and a slightly rising real exchange rate may provide an indication of such dependence.

Industrial policy and manufactured export performance

112. The development of manufactured exports during the 1970s, their stagnation until 1976 and their subsequent strong growth show the existence of a close relationship between industrial policies and export performance. The take-off by industrial exports after 1976 coincided with the implementation of a number of policy measures, which raised the profitability of export marketing in relation to domestic sales and provided incentives for further processing of export commodities. The elasticity of exports with respect to industrial policies, that is, incentives and disincentives, may be attributed to the dominant role of profit-oriented private enterprises in manufactured exports. Of the 33 most important non-traditional export items, which comprised two thirds of total non-traditional export in 1979, only cement originated in a predominantly government-owned industry. However, with increasing pressure for financial self-sufficiency of public enterprises, even government enterprises are now more profit-oriented than in the past. Thus, incentives are crucial for practically all manufactured exports.[26]

113. The overall policy system prevailing in Peru during the early 1970s created a number of important obstacles to manufactured export growth. Exports were hampered by three types of policies which have been major

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26/ Before 1976, the Government participated directly in export marketing of manufactures, largely with a view to reducing the dependence on traditional markets for Peruvian products. The exports proved frequently unprofitable. The case of the export of fishing boats to Cuba under an agreement between the two Governments is still unresolved, because some of the boats were rejected and remain unsold.

components of the economic policy system of the country. The policy of promoting industrial growth through import substitution shifted production away from exports. It was consistently more profitable to produce import substitutes than exportables.[27] The policies of supporting capital-intensive investments and investment in industrial plants of less than economic size have altered the pattern of comparative advantage of Peruvian industry and reduced the range of products which can be potentially exported. Past social and nationalization policies and the radical changes of economic policy direction within a short period of time made the environment uncertain to a higher degree for export manufacturers than for producers of products for the domestic market. Exporters faced additional uncertainty as a result of the high degree of administrative discretion with regard to exports. Since the above-mentioned issues are dealt with in other parts of this report in some detail, no further analysis is required at present, although their importance for manufactured export performance may be greater than the more specific export policy measures considered below.

Exchange rate

114. The most important action to encourage exports in recent years was the policy of currency devaluations initiated in 1976 with the subsequent introduction of continued exchange rate adjustments in small steps (minidevaluations). Until 1974, the purchasing power adjusted exchange rate (real exchange rate) had declined by 20% from its 1973 level. The accelerated devaluation after 1976 raised the rate by one third over its 1973 level to a peak in the fourth quarter of 1978, with a subsequent decline because the minidevaluations did not fully compensate for the rising domestic inflation (see table 21 below). The acceleration of the devaluation rate derived from the inflation differential coincides with the rapid rise of non-traditional exports.

27/ The effect of the import substitution policy can be summarized in the development of the purchasing power exchange rate for imports and exports, which shows the amount of soles earned by producing an export commodity or the corresponding import substitute. The table below presents the $/soles rates during 1974-1979 for imports and exports.

	Imports	Exports	Ratio	Real rate
1974	43.5	44.6	1.03	38.7
1975	47.7	46.6	0.98	40.8
1976	65.3	68.0	1.04	57.6
1977	88.6	96.1	1.08	79.3
1978	186.6	189.6	0.99	154.0
1979	266.0	271.8	1.02	225.4

In the above table, the actual exchange rate is corrected for import duties (imports) and export cash incentives (exports). The ratio columnshows that such a measure does not reflect a bias toward import substitution, since exporters and producers for the local market seem to be earning about the same amounts on their sales. Thus, the policy of import substitution is apparently not expressed by the level of tarrif protection, which seems to have been offset by roughly equal amounts of export cash incentives, but rather by the extensive use of import prohibitions and administrative import restrictions which cannot be quantified.

Table 21. Nominal and real exchange rates
(1970 = 100.0)

Year	Nominal rate	Real rate
1970	100.0	100.0
1974	100.0	85.5
1975	105.4	80.6
1976	148.3	89.9
1977 (fourth quarter)	272.6	117.8
1978 (fourth quarter)	484.2	132.6
1979 (fourth quarter)	630.5	117.3
1980 (first quarter)	667.2	116.5

Source: Annex, table 31

Export tax

115. The export duty, which is equivalent to a revaluation of the exchange rate for a number of resource-based products, has tended to promote manufactured exports (see table 22 below). The tax applies only to traditional Peruvian exports of minerals, cotton, fish-meal, wool, coffee and sugar and has provided an incentive for further domestic processing of those products in order to avoid the tax and, in addition, qualify for the Certex export subsidy. Thus, when the export duty and the Certex rate were substantially raised after 1975, cotton, alpaca wool, copper and zinc were increasingly processed into cotton yarn and grey cloth, alpaca tops, copper wire and bars and Zamac (a zinc alloy), since those products were defined as manufactures despite the extremely low manufactured value added involved.[28/] A successful redefinition from a traditional to a non-traditional product is very profitable, and may provide up to 57% of additional revenues (17% saving of export tax plus up to 40% of Certex, including 10% of Certex for decentralization). Even the non-traditional exports that were excluded from both the Certex subsidy and the obligation to pay the export tax, for example animal feedstuffs, barite, cacao beans, and cochineal, grew rapidly and ranked among the 30 most important non-traditional exports in 1979.

28/ The shares of value added in manufacturing production presented in annex table 22 are to a certain extent misleading because of the extremely high profit shares, which include the Certex subsidy. A more realistic picture may be presented by relating only the wage and depreciation shares of value added to production values. Examples of the ratio for a number of export-oriented industries are presented below (1977 values):

ISIC Code	Product	Total value added (percentage)	Labour, depreciation (percentage)
3122	Animal feedstuff	28	5
3211	Yarn, cloth	54	27
3720	Basic non-ferrous metals	33	6
3819	Metal products, n.e.s.	46	23

At the four-digit level, profits represent in most industries over one half of value added.

It therefore seems that the sharp increase of the export tax after 1975 and the possibility of avoiding the tax had an important effect on the growth of manufactured exports. The generous definition of non-traditional and manufactured products, as compared with traditional products, has contributed much to the recent performance of manufactured exports.

Table 22. Export tax

Year	Volume (millions of dollars)	Percentage of traditional exports
1974	9.7	0.7
1975	47.8	3.9
1976	100.0	8.6
1977	233.3	16.3
1978	282.0	20.0
1979[a/]	384.0	15.8

Source: Cuentas Nacionales del Peru, 1979.

a/ Preliminary figures.

Certex export incentive

116. Given the continued high and diverse protection afforded to the import substitution industry, manufactured exports require direct incentives in addition to flexible exchange rate adjustments in order to be profitable. In particular, industries which depend on protected inputs and on imports with high duties need direct export assistance. The Certex system has provided such cash assistance to exporters since 1968 in rapidly increasing amounts. Between 1971 and 1979, the Certex amounts paid rose from $2.5 million to $150 million, as shown in table 23. The increase was to some extent due to

Table 23. Certex and exchange rates

Year	Certex amount (millions of dollars)[a/]	Certex percentage of non-traditional exports	Certex rate[b/]	Real exchange rate (soles per dollar)[c/]	Real effective exchange rate (soles per dollar)[d/]
1971	2.5	3.9	15	37.8	43.5
1972	6.0	11.5	15	36.4	41.9
1973	15.0	13.3	19	35.3	42.0
1974	23.2	15.3	19	33.1	39.4
1975	13.6	14.3	19	31.2	37.1
1976	25.0	18.2	24	34.8	43.2
1977	48.6	21.7	30	39.0	50.7
1978	76.9	20.1	30	50.0	65.0
1979	149.4	20.6	30	48.2	62.6

Source: National accounts, annex, table 31 and mission calculation.

a/ Certex amounts paid according to national accounts.

b/ Estimated average Certex rates of eligible products, including decentralization Certex.

c/ Average annual exchange rate at 1970 prices.

d/ Includes the effect of the estimated nominal Certex rate given in table.

the doubling of the average rate assigned to qualifying products, but the successive broadening of the range of products seems to have been even more effective in raising the subsidy volume. Currently about 1,800 items of the 5,000 products in the Peruvian tariff schedule qualify for Certex. That covers about 70% of the non-traditional export volume and roughly all manufactured exports.[29] Excluded from the Certex incentives are mainly a number of unprocessed agricultural products classified as non-traditional.

117. Except for the product-specific Certex rates and the total amount of Certex paid out in recent years, no further detailed information exists. In general, the current rate structure seems to be concentrated around 25% for the basic Certex, leaving about 5% on average for the decentralization Certex. Therefore, about half of the qualifying export volume obtained a decentralization Certex, which has a nominal rate of 10%, resulting in an estimated $125 million for the basic Certex and $25 million for the decentralization Certex in 1979. Until early 1979, when the regulations (reglamento) of the export promotion law[30] were passed, the criteria for determining the qualifying products and the level of individual Certex rates had remained undefined. At that time, virtually all non-traditional export products already had a Certex rate assigned to them, and the late establishment of criteria appears to be a legal formulation of existing administrative practices. Thus, the ex post establishment of a rationale and basis for the calculation of the Certex may be still useful for an evaluation of the appropriateness and effectiveness of the Certex system.[31]

118. In general a perusal of the Certex rates applied to different export products does not show any firm relationship between the rate levels and the criteria established. First of all, a large number of non-traditional exports differ very little from their raw materials base (non-ferrous metals, fishmeal, wool, cotton, cacao) and largely face the same international market problems. Those products are therefore not in need of export subsidies to establish their competitiveness, especially since their raw materials apparently are competitive even with an export tax. Secondly, the resulting Certex levels are difficult to relate to the three criteria of value added, net foreign exchange earnings and fiscal cost. For example, cotton yarn, cotton cloth and cotton garments obtain marginally differing Certex rates of 27%, 28% and 29%, respectively, which can hardly be based on the weighting process of the three criteria. Cement receives a Certex of only 23%, the same as, for example, cacao butter, although its manufactured value added and net

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29/ Sugar, metals, and fish-meal are manufactured products, but are classified as traditional exports and thus do not obtain Certex.

30/ Decreto Supremo No. 001-79 ICTI/CO-CE regulates Decreto Ley No. 22342 of 1978.

31/ Decreto Supremo No. 001/79 determines that a product would obtain a Certex to establish its competitiveness on foreign markets (article 3.b). The level of the Certex would be determined in a "qualitative" manner according to three criteria and their respective weights (article 10): manufactured value added (40%); net foreign currency earnings (30%); and the relation between the net foreign currency earnings and the fiscal cost of the Certex (30%). The minimum sum of weights should be higher than 50% to qualify for Certex.

foreign exchange earnings, taking into account that cacao beans can be exported in unprocessed form, should be substantially higher. An extreme case of inconsistency with the established criteria is the Certex rate of 27% and 28% for gold and silver products, which have been classified as jewellery. While the value added component, and hence the net foreign earnings, of simple jewellery (bracelets, necklaces) is always a small percentage of their total value, the large price increases for gold and silver during 1979 and 1980 have further reduced the rates to extremely small percentages of the metal value. That has raised the effective incentive rate, or the Certex subsidy related to value added, to extremely high values of several hundred per cent, since the Certex is applied to the f.o.b. export value. Finally, the policy of applying export incentives has been to some extent inconsistent with other regulations designed to orient industrial production. Specifically, major production inputs for the construction industry, such as cement and steel products, are price-controlled, in other words taxed to such an extent that fixed prices are below equilibrium market prices, while at the same time receiving high Certex export subsidies.

119. The above description indicates that the Certex rates have been determined rather arbitrarily, instead of applying the stipulated criteria. As a result, the vast majority of qualifying products obtain a basic Certex which varies little from the average 25% level, which itself is close to the maximum level of 30%. That has helped to promote exports with little value added, since the effective rate of incentive is high for low value added products. The effect has been strengthened by the additional Certex of 10% given to decentralized industries. The industries processing raw materials are frequently located outside Lima, and therefore benefit from the highest Certex at comparatively low value added. As a result, the five most important manufactured exports in 1979 (canned fish, cotton cloth and yarn, frozen fish and cement) probably obtained over one third of the $150 million export subsidies for less than one fourth of the manufactured export volume. The imbalance between export volume and total Certex amounts also casts some doubts on the effectiveness of the costly decentralization Certex. The main beneficiaries of the additional subsidy are resource-based industries, the location of which is largely determined by the availability of raw materials, but not by the decentralization Certex.

120. The apparent ineffectiveness of the decentralization Certex raises the issue of the overall appropriateness of the export cash incentive system.[32] At the request of the Government, ADEX, the exporters association, prepared in mid-1978 a study[33] which forms the basis for the Certex system currently in operation. The study concluded that the Certex system is highly effective. However, the analysis presented by ADEX is not convincing. ADEX intended to demonstrate in the study that: Certex does not present a fiscal burden, but rather leads to a net fiscal gain; and Certex has been an economically efficient instrument for the promotion of non-traditional exports. To determine the net

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32/ A rigorous analysis of the relationship between export incentives and economic efficiency has not been carried out for lack of statiscal data, particularly on the domestic resource cost of the production of exportables. In principle, an export incentive system is efficient if it equates all domestic resource cost at the margin, excluding products over which Peru has some monopoly power.

33/ ADEX, Estudio de Evaluación del Certificado de Reintegro Tributario - Certex (Lima, May 1978).

fiscal cost of the Certex, ADEX assumes that exports benefiting from Certex result in an equal amount of imports which are levied with a 34% duty on average. In addition, Certex payments are part of taxable income at an average tax rate of 35% for the exporting enterprises, and, finally, the export-generated employment leads to additional social security payments. As a result, ADEX estimated that in 1977 the total Certex expenditures of S 4.0 billion generated a fiscal income of S 6.7 billion (S 5.9 billion in import duties, S 1.4 billion in income taxes and S 0.4 billion in social security payments). However, the attribution of those fiscal revenues to Certex expenditures is unjustifiable for several reasons. First of all, only those imports serving as direct production inputs for the manufacture of export products can be considered induced imports. Most non-traditional exports are raw-material-based and not import-intensive, as indicated in annex table 21. In addition, those imports entered the country at duty rates which were below the average effective tariff rate of 10% in 1977 or even duty-free. Total tariff collection on imports related to exports benefiting from Certex was probably below S 0.2 billion, instead of the S 4.9 billion estimated by ADEX. Similarly, the extensive tax holidays granted to industry, particularly to the export and decentralized industry, lead to a much smaller fiscal tax income from Certex payments than estimated by ADEX. On the whole, probably not more than one quarter of Certex expenditures are flowing back to the budget in the form of directly attributable taxes and duties. In 1979, the net fiscal cost of the Certex would, therefore, be over $110 million, which is more than 5% of total tax revenues.[34/]

121. The analysis by ADEX of the high economic benefits generated by the Certex incentives system is also not convincing. ADEX finds that between 1970 and 1977 exports benefiting from Certex have had much higher growth than exports which are not subject to incentives. However, that is only correct for the period 1970-1974, when the share of exports obtaining Certex in total non-traditional exports rose rapidly from 18% to 71%. Since 1974, the share has remained at the 70% level, despite the dramatic increase in Certex incentives which took place, because exports not subject to incentives increased at the same rate as those obtaining Certex. Thus, the different growth rates do not present "very clear evidence of the promotional effect"[35/] of Certex. ADEX also finds that the Certex incentives are effective in promoting exports with particularly high national value added. Over 95% of non-traditional export products (767 products in 1977) had a national value added of over 50%; for 68% of the products, national value added was over 80%. Those high national value added shares are mostly due to the extensive use of domestic raw materials as production inputs for non-traditional export products.[36/] Domestic raw-material-based products with a minimum of manufactured value added therefore seem to benefit most from the Certex system. The highest effective export

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34/ The loss of export duty income as a result of the export of raw materials in processed form is not taken into account.

35/ ADEX, op. cit., p. 27.

36/ ADEX finds that over 80% of non-traditional export products obtain more than 50% of their production inputs in the domestic market (ADEX, op. cit., p. 34).

incentive, that is, the ratio of Certex to manufactured value added, is obtained by those products which have successfully crossed the barrier from the traditional to the non-traditional product list, and thus also avoid the export tax. Once that step has been made, any further processing leads to a rapidly declining effective export incentive and a correspondingly reduced incentive to raise the degree of manufacturing. As a result, the current structure of Certex provides few incentives to establish forward production linkages, generate manufacturing employment, or promote investment in production capacity. The textile industry provides an excellent example of the effects of the Certex system, where the transformation of cotton yarn and cloth for exports, which provides little value added, has been successfully supported by Certex, but the forward integration to garment manufacturing for exports has remained unprofitable. In short, the conclusion by ADEX that the Certex system is effectively promoting exports and domestic value added of exports is not confirmed by the statistical evidence.

122. While the level and structure of the Certex export incentive system appear unsatisfactory for fiscal and economic reasons, the administrative procedures of Certex have recently raised a number of additonal issues.37/ One important administrative issue, which has existed since the broadening of the list of eligible products in 1972, results from the difficulty of distinguishing between the traditional (dutiable) export commodity and the related non-traditional product which obtains [illegible] tives. As previously mentioned, about 80% of manufactured exports fall i[illegible] category of products that barely crossed the barrier to the non-traditio[illegible] category, which shows that the committee responsible for the product list was quite generous. The recent rise of gold and silver jewellery, which included solid golden ashtrays and other products hardly distinguishable from gold ingots, to the largest export items during January-May 1980 (see annex, table 30) has clearly raised the issue of the need to differentiate between the raw material and its product. Most of the over $10 million in subsidies paid during both 1979 and January-May 1980 to exporters of gold and silver products are wasted Government expenditures.38/ Another

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37/ Generally, the procedures are extremely simple. The exporter of a qualified product presents the documents for an export shipment to the Ministry of Trade which issues the Certex in two to four weeks. The Certex can be immediately exchanged for cash at commercial banks at a discount of 2% of face value. At a current inflation and interest rate of about 50%, the total loss of the exporter is about 5% of face value or a little more than one percentage point of the average Certex of 25%.

38/ Many of the exports seem to be fraudulently prepared for the sole purpose of obtaining the Certex and avoiding the export tax. They are most probably reconverted into ingots in the importing countries. However, even in the case of genuine exporters, the Certex system may lead to absurd results. A simple piece of gold jewellery has probably no more than 5% value added content at a gold price of over $600 per ounce. A piece containing one ounce of gold would sell for $631.5 and receive a Certex of $170.5. Alternatively, one ounce of gold exported as ingot would have a net export price of $498, after deducting a 17% export tax for traditional products. Thus, the price difference, including value added, is $304 per ounce, resulting in an effective export subsidy of 865%.

important administrative issue concerns the control of illegal activities relating to the Certex. The large amounts of money involved put a heavy burden on the government officials administering and controlling the Certex system, and also present a strong temptation for manufacturers to bend the rules. The seriousness of the problem is shown by the recent imposition of a fine of S 100 million (about $400,000) on exporters who had manipulated export documents[39/], and the indefinite termination of issuance of Certex for all non-traditional exports through the town of Puno, where apparently fictious exports to Bolivia have occurred on a large scale.[40/]

123. In conclusion, the appropriateness and effectiveness of the current level, structure and administration of the Certex export incentive system is extremely doubtful and the whole system would require a complete revision. Moreover, export incentives, export taxes, import protection and exchange rate variations are strictly interrelated issues and should be considered by the Government as one set of parameters that should be dealt with jointly.

Temporary imports

124. The system of duty-free imports of production inputs for export products was introduced relatively late at the end of 1978. The system, which is designed to promote manufactured exports by giving unrestricted access to imports at world market prices, has been applied for a long time in other Latin American countries, including Colombia, the Dominican Republic and Mexico, but had little success in Peru. According to the Ministry of Commerce, exports of only about $10 million benefited from the system in 1979. Consequently, the Government abolished the system of temporary imports in October 1980.

Export financing

125. Of the two export credit facilities operated by government institutions, namely FENT, with the Industrial Bank, and the Fondo de Exportaciones (FONEX) (Export Fund), with the Central Bank, only FENT has existed long enough to enable an assessment to be made of its effects on exports. Table 24 below shows that the role of FENT in providing financing to non-traditional exports declined sharply after 1975. In constant value terms, credit disbursements between 1975 and 1979 hardly increased. Those trends may be largely explained by the fact that most FENT financing was channelled into two industries, fishing boats and textiles, which received over one half of the FENT credits. With the decline in the share of financing allotted to fishing boats after 1975, the diversification of FENT somewhat increased, although the textile industry still received the major share of 42.5% of disbursements in 1979. Thus, the overall effect of FENT on manufactured export performance has been small, but the high degree of subsidization involved has provided a welcome addition to the profits of the two industries that have been the main beneficiaries of FENT and have

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39/ In July 1980.

40/ In August 1980.

received the highest Certex incentives. On the other hand, only the fishing boat industry, which is in need of large amounts of comparatively long-term pre- and post-shipment export financing, currently appears to be constrained in its export effort by the inadequacy of FENT. FONEX, which was established within the Central Bank in early 1980, could provide the needed financial assistance to fishing boat exports.

Table 24. Disbursements of FENT

Item	Disbursements						
	1973	1974	1975	1976	1977	1978	1979
Total (billions of soles)	1.4	2.5	3.1	4.6	7.4	12.0	24.1
Percentage to non-traditional exports	32	43	81	59	42	20	15
Percentage for fishing boats	32	27	53	8	3	2	2

Source: Annex, table 29; Industrial Bank, Acción Crediticia del FENT, Período 1973-1978, Lima, March 1979.

IV. MAIN ISSUES OF A NEW INDUSTRIAL POLICY

126. The Government which took office on 28 July 1980, has the opportunity to consider the future industrial strategy within a comparatively advantageous environment. Firstly, it has become quite obvious that the past policy of heavily subsidizing and supporting the formal industrial sector at the cost of other parts of the economy has had unsatisfactory results, particularly in terms of employment generation. A different strategy should therefore meet with less resistance among industrialists and workers. Secondly, a new industrial strategy can now be initiated in an environment free from a pressing foreign exchange shortage, which limited the flexibility of the economic policy of the country during most of the 1960s and 1970s. Foreign exchange revenues from the export of traditional products and oil should remain high for a number of years to come, and may be expected to cover the medium-term foreign exchange requirements of the country. Thus, there should be no need to promote non-traditional exports at any cost in order to earn foreign exchange, and a balanced reduction of both import protection and export incentives can be implemented as the key industrial policy instrument to promote efficient industrial development. Thirdly, the Government can take advantage of a number of policy measures already initiated since 1976, which have been generally in the right direction. During the period between 1976 and mid-1980, those policy measures, the most important being the changes relating to the industrial community, the initiation of import liberalization, the introduction of a flexible exchange rate and the reduction of formal sector real wages, faced substantial resistance by industrialists or trade unions, but have now been largely accepted by the affected groups.

127. The economic measures taken between 1976 and 1980 need substantial strengthening and completion by further specific measures which will be discussed below. The main concern with respect to those specific industrial policy measures should be to fit them into a well conceived overall strategy, and to avoid taking any measure without considering its relationship with others. An appropriate basis for an effective long-term strategy of industrial development of Peru is to exploit the comparative advantage of the country. That principle would apply to industry as well as to the economy as a whole. The analysis contained in previous chapters of this report showed that in the past Peru did not follow that principle, but rather provided strong support to industry at the cost of other sectors and, within the industrial sector, promoted capital-intensive forms of manufacturing. Neither aspect of the past strategy made possible the optimum use of the resources of the country, which consist mainly of abundant skilled labour and raw materials, including minerals and agricultural and fishery products. Thus, a policy designed to exploit the comparative advantage of the country may lead, in the long run, to a strengthening of other sectors, particularly of mining and agriculture, relative to industry, and, within industry, would support subsectors that employ labour-intensive technologies and a relative decline of capital-intensive subsectors. Finally, a strategy based on comparative advantage would help to develop the growth potential of informal and small-scale industry, which in the past suffered from discrimination and lack of government support. Although within such an economic environment, industry would lose its role as the leading development sector and be placed on an equal basis with other sectors, it would be strengthened in its key role of providing employment and generating an increasing share of foreign exchange earnings.

Exchange rate and trade policy

128. The key to restructuring the economy and the industrial sector is foreign trade policy. The major distortions and the disappointing performance of industry are largely the result of unsuitable long-term protection and incentive policies in the past. A revision of those policies would be decisive for correcting distortions and improving industrial performance. The major step towards a reform of trade policy is the introduction of more uniform tariffs. Such a policy was initiated in 1979, but tariff rates still vary widely. Other requirements of the new trade policy are uniform export incentives and a flexible exchange rate, which have already been initiated. They would require proper co-ordination with the level of tariff protection, and, in the case of export incentives, the specific features of Peruvian export products must be taken into account. Thus, the establishment of a more uniform tariff level is the most important aspect of the new trade policy in the current situation of Peru. A first important step in implementing the policy was the reduction of the maximum tariff to 60% in October 1980.

129. Uniform tariffs and subsidies will cause relative prices of Peruvian manufactures to approach the same level as the relative prices of goods traded internationally. That would encourage the manufacture of products for which Peru has a comparative advantage and discourage production when Peru is at a disadvantage. The levels of uniform tariffs and incentives must be determined jointly with the exchange rate. In principle, any set of uniform tariffs and export subsidies combined with an equilibrium exchange rate has the same economic effects as another set of uniform tariffs and incentives combined with another equilibrium exchange rate. A high level of the tariff-subsidy structure has three main disadvantages as compared with a low level. First of all, high tariffs and export subsidies provide incentives for fraud and bribery and for the export of falsified products, and they create continuous pressure on the Government to grant exceptions. Similarly, the administrative costs of control and prevention of fraud are larger at a high level of tariffs and incentives than at a low level. In that connection, high tariff protection, coupled with many exceptions and administrative restrictions, and high Certex incentives created serious problems for Peru in recent years. Secondly, a high incentive level is disadvantageous under current world trade rules, which permit the imposition of countervailing duties by the importing country where fiscal subsidization of exports occurs. Finally, a uniform tariff structure would require that the duties on imports of capital goods and other production inputs be raised from their current extremely low levels. The resistance to higher tariffs by industry would certainly grow with the size of the required increase. Therefore, Peru should aim at a low import tariff and export incentive structure which should probably not be higher than 20-30%.41/ A reduction of the tariff and incentive level would normally involve the need for a compensating revaluation of the equilibrium exchange rate. However, since the weighted average tariff level is currently much below the suggested uniform level of 20-30%, because of the long list of exceptions and the low tariffs on capital goods, intermediates and government imports, which would all be raised to the new uniform level, a devaluation of the equilibrium exchange rate would be required. Thus, during the period of adjusting the import tariff and export incentive structure, the devaluation should be somewhat higher than warranted by the inflation differential.

41/ A further important argument in favour of low tariffs and subsidies is the size of distortions created between subsidized and taxed commodity trade, on the one hand, and free service and capital flows, on the other.

Import tariffs and restrictions

130. While the adjustment of the wide variety of tariff rates to a common level of, for example, 20-30% will require time and further careful analysis, the import prohibitions and restrictions under the system of prior approval remaining in mid-1980 were effectively abolished in October 1980. Where restrictions have been imposed in lieu of a tariff, they should be replaced by a reasonable import tariff, the level of which may be temporarily above the final average. Such a measure would quickly produce some healthy competition, restrain price increases, reduce profit levels and raise government revenues from import duties. The adjustment of tariffs to a uniform structure can only be achieved over a longer period of time, since otherwise relative prices and profitability levels, which have been established during many years in a different policy environment, would change too drastically. Some industries and factor combinations of capital and labour which are now profitable and appropriate may be unprofitable and inappropriate under the new tariff system. Moreover, the overall profit level in formal manufacturing will tend to decrease in a less protected environment. The resulting transition losses, and to sone extent the resistance to the reduction of protection, can be minimized by introducing the tariff adjustment in small steps over a period of, for example, five years and by announcing the final target as well as the different steps well in advance. That would prevent investment which might be unprofitable under the new protection system and reduce the uncertainty faced by industry in a changing policy environment. A reduction in the degree of overall uncertainty would provide a needed balance to the reduced profitability of industrial activity.

131. The variation of the exchange rate needs to be handled along the same lines as the reduction of protection. It is important to continue and strengthen the policy of pre-announced minidevaluations, so that exporters and importers may be informed well in advance about the relative price structure of traded goods, thus enabling them to prepare and implement medium and long-term production and investment plans. For that purpose, it is not sufficient to announce in advance the monthly rates of devaluation over a given period, which is the current procedure,because the projection of the inflation differential may be incorrect. Instead, the Government could announce, as a policy objective, appropriate real exchange rate levels to be maintained over the next twelve-month period. Minidevaluations made on the basis of the most recent information on the inflation differential, taking into account the change in the level of protection, would adjust the nominal exchange rate to those target levels.

132. Two special problems of adjustment to a lower and more uniform protection level are those of inefficient industries and of infant industries which can be expected to become efficient only after a period of adjustment. The analysis of industrial structure in chapter II shows that there may exist a substantial share of industry which would not be competitive under reduced protection, even after granting adequate time for adjustment. Parts of the automotive and chemical fibre industry belong to those structurally inefficient industries. An appropriate procedure to deal with such industries, once they have been identified, would be to grant them the temporary protection required to break even, but not to permit further investment. The industries could be closed down after depreciating their equipment at a small loss to the economy. Infant industries would similarly require a temporary exemption from the uniform

tariff system. However, great care should be taken to identify only industries with the potential to grow up within a given period of time, which should be agreed upon in advance, together with the level of the additional protection to be granted. There is a danger that infant industry exemptions will be given to the wrong enterprises, as has happened in the past. In particular, granting special protection in order to attract foreign investment is an inappropriate measure. If foreign companies, which are generally no "infants", do not find investment in Peru profitable without subsidization, there is little probability that their investment will be economically advantageous to the country, even in the long-term. The real infants are Peruvian industrialists who have to overcome an initial lack of production and marketing experience.

Export incentives

133. The uniformity of export incentives requires major exemptions to make it suitable to the Peruvian situation. Most of the traditional exports of Peru have some degree of monopoly power from which the country can benefit by taxing exports. Export taxation also captures part of windfall profits which would otherwise go fully to the exporters. Therefore, exempting traditional exports from incentives, and even imposing taxes on them, makes sense.[42/] However, the exemption has to be extended to the vast majority of non-traditional exports, which frequently differ little from the taxed traditional product. Several possibilities of dealing with the problem exist. One solution would be to grant an incentive only on the difference between the f.o.b. value of the manufactured product and the f.o.b. export value of the specific traditional commodity used, such as copper ingots and cotton. Another approach similar to the above method would be the use of manufactured value added to determine the export incentive rate. At a uniform level of tariff protection, that would largely represent a compensation for the import tariffs on the production inputs. It appears that the exemption fron the 17% export duty for that category of export products represents an adequate level of compensation. The small amount of non-resource-based exports needs a higher export incentive to take account of the larger manufactured value added and of the higher degree of taxation suffered from the use of protected inputs. Some products in that export category may also deserve treatment as infant export products with a temporary additional Certex to compensate for initial costs of export marketing, production start-up start-up etc.

134. The Government may wish to conduct a further analysis before implementing a radically different Certex system.[43/] Nevertheless, the basic features of a more rational system can be described even now:

(a) Given the practical problems of establishing an optimum Certex system and the administrative difficulties created by finely differentiated incentives, the new system should be as uniform, simple and stable as possible;

42/ Such an argument supports some degree of export taxation, but not necessarily the current high level of 17%, which may be an overestimation of Peruvian monopoly power for several products. If foreign investment is to be attracted, particularly to the mining sector, a careful study of appropriate levels of export taxation would be useful.

43/ It is not clear to what extent the Government is committed by the Export Promotion Law of 1979 to maintain the basic Certex unchanged until 1983. For a small number of products, the Certex rates have been reduced since 1979.

(b) To separate resource-based products and real manufactures, a barrier of, for example, 25% of labour and depreciation value added[44/] should be established. Most of the current non-traditional exports would fall below that level, would not receive Certex, and would only benefit by an exemption from the export tax. Exports with value added above the limit would obtain Certex on their f.o.b. value equal to the percentage level of the uniform tariff, for example, 20%;

(c) The decentralization Certex would be abolished at a substantial budgetary saving. Instead, new export products of national manufacturers qualifying for Certex, that is, meeting the 25% value added criterion, would temporarily obtain, for example, an additional Certex of 10% of f.o.b. value for a period of 2-3 years.

In general, the export incentive system suggested above would support manufactured exports at an appropriate level, would be simple to administer (detailed value added data exist at the four-digit level), and would be substantially less costly to the budget than the current system. A detailed study of the effects, administrative procedures and fiscal cost of the suggested incentive system would still be useful.

Temporary imports and export processing zones

135. The duty-free import of production inputs for export manufacturing, which was initiated in 1979, has not been a successful instrument for export promotion. It is also doubtful whether it could be so in future, particularly if the recommended system of liberalized imports at low duties is implemented. Export production with a labour and depreciation value added above the recommended 25% level would operate practically under conditions of free trade and largely include the benefits of a temporary import system. Temporary imports are a successful component of trade policy only in countries with substantial import restrictions (such as Colombia). Since, under future Peruvian conditions, the temporary import system would unnecessarily complicate trade regulations, it was abolished in October 1980.

136. Export Processing Zones (EPZs) include the temporary import system as one important feature of their operation. The Government has shown a strong interest in establishing one EPZ as a test case, based on the EPZ provision in the 1979 version of the export promotion law. The mission recommends that a careful study should be made before establishing an EPZ. EPZs have successfully provided a substantial number of employment opportunities and some net foreign exchange earnings in many developing countries, particularly in the Caribbean. Industries attracted to EPZs are predominantly foreign-owned firms manufacturing light industrial goods, such as garments and electronic components. In general, the production inputs are imported from the United States of America and the assembled products are re-exported to that country under provisions 806 and 807 of the United States tariff schedule. The main advantage to Peru in the establishment of an EPZ is the generation of employment with comparatively small investments in factory buildings and common facilities, basically the infrastructure required for industrial countries. In other

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44/ As shown in chapter III of this report, the notion of total value added is not very useful in Peruvian manufacturing, since profit rates and indirect taxes are extremely high and vary for the most part independently from the actual degree of manufactured processing involved.

countries, such investments have usually been below $2,000 per job. Disadvantages relating to the EPZ would be: the establishment of an industry in isolated conditions with few links to the domestic economy; operation of industry in the EPZ to a large extent beyond government control and influence; employment generation mostly for young women without transfer of industrial skills to the working population; and the possible diversion of foreign investment from the domestic market to the EPZ.

137. To be successful in attracting foreign enterprises to the EPZ, the major disadvantages faced by enterprises when operating in Peru as compared with other locations, for example the Caribbean, would have to be minimized. Firstly, government red tape relating to the establishment, production and import and export operations of EPZ enterprises must be kept to a minimum. The application of current administrative procedures in Peru to enterprises operating in the EPZ would certainly lead to a failure of the EPZ. Secondly, the legally stipulated minimum wage in Peru is currently somewhat above wages paid to workers in the EPZ of most other locations. Low labour costs are the most important attraction for enterprises operating in the EPZ; EPZ enterprises would therefore, at least initially, have to be excluded from Peruvian labour legislation on minimum wages.45/ The exclusion of EPZ enterprises from the industrial community and labour stabilization legislation would also probably be necessary. In short, export processing zones in Peru could make an important contribution to alleviating the unemployment problem. However, the incentive package to be offered to foreign enterprises would have to be quite attractive in order to be competitive with EPZs in other countries. A detailed study is required to determine whether the package of incentives required to attract foreign enterprises would also be acceptable to Peru.

Export credit

138. Export financing supported by the Government in other countries (for example, Colombia) has developed into an important instrument of export promotion. The FENT and FONEX export financing funds have so far been less useful than they could be with a more aggressive and concerted operation of the funds. It is unpractical to operate two funds separately, while limiting FONEX with its ample resources ($250 million) to export financing of capital goods. Both funds should be consolidated into one in order to provide more ample financing for all non-traditional exports. Moreover, the high interest rate subsidy involved in both export financing sources is unwarranted, since exports are more appropriately stimulated by cash subsidies (the Certex system) than by low interest rates. Finally, neither the Central Bank (FONEX) nor the Industrial Bank (FENT) appear to be appropriate institutions for administering export financing. The recently established Export Promotion Agency (FOPEX) could handle export financing in co-ordination with other promotional activities. But FOPEX would have to gain more operational experience and strengthen its staff before it could be put in charge of that important task.

45/ Under similar conditions, enterprises operating in the EPZ of the Dominican Republic were initially permitted to pay $0.10 per hour (about 20%) less than the legal minimum wage.

Labour policy

139. The adverse impact of labour legislation on industrial employment generation, productivity and income distribution has already been stressed in this report. While the negative effects of the industrial community legislation have been largely eliminated by the amendments to the law since 1975, the labour stability law, which provides nearly full job security to formal sector workers, and the minimum wage legislation granting excessively high wages to formal sector workers, are still in operation. Generally, for the new trade policy to be effective, workers and entrepreneurs in the formal sector have to be satisfied with less, since subsidies received by formal sector manufacturing from other sectors will be lower under the suggested system of reduced protection. Both equilibrium real wages and profits tend to be lower under a more competitive system. The move toward low real wages in formal sector manufacturing and the trends toward higher job creation, reduction of the formal-informal sector wage gap, higher labour productivity and improved export competitiveness are currently thwarted by the job security legislation and rising real wages[46/] granted within the system of government determined minimum wages. Maintenance of high real wages and full job security is inconsistent with the suggested reduction of protection of industry and would tend to raise the number of plant closures and loss of jobs.

Credit and interest rate policies

140. Formal industry has benefited excessively from the system of channelling credit at subsidized interest rates, with the adverse consequences described in chapter III of this report. The system of channelling credit was abandoned in 1979, but the interest rate level continued to be fixed below the market level. Industry will clearly have little incentive to operate at factor proportions consistent with the resources of the country so long as capital is cheap and abundant, while social and minimum wage legislation make labour unattractive to employ. Thus, government interest rate policy should be reviewed so as to allow interest rates to rise over time to a more market-determined level. In addition, the proliferation of sources of government-supported industrial finance in the Industrial Bank, the Central Bank and the Corporación Financiera de Desarrollo (COFIDE) (Development Finance Corporation) has benefited large borrowers and government-owned enterprises, which maintain well-established ties to the lending institutions and have the administrative capability needed for successful processing of loan applications. With regard to financing from government institutions, the major concerns expressed to the mission by various small-scale enterprises referred mainly to the complications involved in loan applications, and also reflected a lack of general knowledge of the large number of different funds available for industrial financing. The Government has indicated its intention to simplify industrial lending and consolidate the different funds in the Industrial Bank and COFIDE. The reorganization would also largely eliminate conflicts of interest which may exist in COFIDE as the main holding institution of government-owned enterprises, and in the Central Bank, which controls the supply of money and credit.

46/ In August 1980, minimum wages per month were again raised from S 21,000 to S 26,000 (December 1979: S 15,000).

141. The Industrial Bank has not been able properly to fulfill its role as the source of financing for small-scale industry (SSI), mainly because of the lack of resources and a high concentration of SSI lending in Lima and Callao, where the bank has its offices. On the other hand, SSI located outside Lima and Callao are the only formal sector industrial enterprises that seem to be suffering from a lack of credit. Therefore, the SSI credit resources of the Industrial Bank should be strengthened and branch offices established in the provincial urban centres of the country, in order to provide credit and technical assistance to SSI more effectively than in the past.

Informal sector policy

142. The informal sector and, in particular, informal manufacturing require more attention by the Government than in the past, including measures such as the abolition of discriminatory regulations to the largest possible extent. A detailed action programme for the support of the informal sector can only be established after studying the needs and problems of informal sector enterprises in more depth than has been done by the mission, but three suggestions can already be made. Firstly, the barriers to the entry of informal enterprises into the formal sector should be reduced to a minimum. In particular, the fees for registration with the Ministry of Industry and the municipalities, which are currently up to S 50,000, should be abolished, and the administrative processing of the application for registration should be simplified and shortened from the current six months. Secondly, enterprises remaining in the informal sector should obtain access to formal sector sources of credit. That would probably have to be studied, before the Industrial Bank and, possibly, the National Bank could implement effective lending programmes to informal sector enterprises; finally technical assistance should be provided to informal sector enterprises in connection with credit programmes. The assistance should be complemented by sponsoring the establishment of subcontracting exchanges, which would establish linkages with formal manufacturing and by organizing markets for used equipment. It may also be worthwhile to put the substantial number of idle and frequently uncompleted industrial parks and estates into operation in order to provide factory sheds and common facilities to formal sector SSI and informal sector enterprises.

143. While specific action for assisting the informal sector is important, instead of restricting its development by excessive regulation, the most effective long-term support to the informal sector would be provided by implementing the suggested trade policy. Reduced subsidization of formal sector manufacturing and lower real wages and profits will help to reduce the gap between two sectors. Rural-urban migration would tend to decline, since the expectation of a highly paid job in the formal sector would be reduced, thus diminishing the pressure on informal sector wages. Therefore, the new trade policy of reduced and uniform protection is also important for the development of the informal sector.

Decentralization policy

144. The suggested trade policy would also help to decentralize industry, which is now being attempted with ineffective, but costly, measures. The decentralization Certex, additional tax benefits for reinvestment[47/] and additional interest rate subsidies of credit to decentralized industries are not sufficient to overcome the structural disadvantages of a location outside Lima and Callao. The new trade policy of reduced protection would support industry based on comparative advantage. That would tend to stimulate resource-based industry, which is mainly located in the provinces, and reduce incentives provided to the import substitution industry, which is mainly in Lima and Callao. Nevertheless, a basic requirement for effective decentralization of economic activities continues to be substantial improvements of infrastructure in the provinces.

Government enterprises and foreign investment

145. The rise of government participation in industry since 1968 was based on the policy of increasing the direct influence of Government on industry, while at the same time reducing the share of foreign participation. That policy has been costly to Peru in several respects. The cost of acquiring private foreign enterprises was high and represented a burden to the budget and the balance of payments. In addition, several of the enterprises acquired by the Government proved to be unprofitable and needed subsidization, representing a continuous burden on the budget. A less visible cost arises from the control and management tasks imposed on senior government officials. Civil servants tend to be inadequately trained to supervise or run manufacturing enterprises, which may be one reason for the poor state of affairs of several government enterprises. Thus, from an economic point of view, industry would be more effectively guided within the government policy framework than by direct government participation.

146. On the other hand, with appropriate policy measures, government enterprises can operate as efficiently and profitably as private enterprises. However, that would require a practical separation of government administration and government enterprises, which would be staffed and operated like private firms. Managers would be recruited from outside the civil service at competitive salaries, and unprofitable firms would be closed. The suggested trade

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47/ Although the tax incentive for reinvestment is higher for enterprises in the provinces, enterprises in Lima and Callao benefit proportionately more from the incentive. The Ministry of Finance estimates that in 1980 the fiscal cost of the incentive scheme was S 74.5 billion in Lima and Callao and S 22.2 billion in the provinces. That represents a higher proportion of the incentive amount to Lima and Callao than would correspond to the regional distribution of industry (70% in Lima and Callao, 30% in the provinces). One reason for the high share of industry located in the metropolitan area could be a higher capital intensity supported by the incentive to reinvest.

policy of reduced tariff protection will expose the current weakness of government industry, which seems to be benefiting more than private industry from the system of protection. Under the new trade policy, the Government would face the options of improving the competitiveness of government enterprises by strengthening management and productivity or subsidizing uncompetitive firms. The government-owned steel manufacturer, Siderperu, would be a prime candidate for substantial subsidization if low-duty imports of steel products were permitted, but a business-oriented management and implementation of the intended investment programme for balancing and expansion of Siderperu plant could make the enterprise viable, even with a low level of protection.

147. The role given to foreign enterprises in Peruvian industry is largely a political issue beyond the scope of this report. However, it has important economic consequences. International firms are the main instrument of technology transfer to developing countries, and are also most effective in in establishing export links with markets in industrial countries. However, Peru can only expect to benefit from foreign investment under a reformed trade policy. Currently, foreign firms obtain all incentives to make monopoly profits by producing for the protected domestic market, and they transfer those profits to their home countries partly by over-invoicing imports. In addition, they can finance their Peruvian operations to a large extent by subsidized domestic credit. Thus, the current operations of foreign enterprises may result in a net economic loss to the country. Over-invoicing and transfer of monopoly profits by foreign firms would disappear under the suggested trade system, and instead of manufacturing for the domestic market, foreign firms would be encouraged to utilize their major comparative advantage, which is their knowledge of export marketing. As the establishment of a low level of protection will take time, the economic appraisal of foreign investment proposals by the Ministry of Industry requires strengthening. That is essential because many uneconomic projects are highly profitable under the current system of protection. The same holds true in the case of industrial projects sponsored for foreign and local investors by Induperu, an engineering and investment group under the Ministry of Industry. Induperu-sponsored projects have been appraised for their technical and, partly, financial viability, while their economic viability has not yet been established. An economic appraisal of Induperu-sponsored projects would be particularly useful, since their capital costs per job created, between $50,000 and $100,000, are exceptionally high.

Policy impact of the Andean Pact

148. The major proposals for a new industrial policy, particularly with respect to trade, have been made without taking into account the initial agreements on tariffs and industrial policy reached among member countries of the Andean Pact. Important parts of the initial agreements, including a diversified and relatively high common external tariff, the allocation of key industries to different member countries on the basis of subsectoral programmes, and restrictions on the operation of foreign enterprises, are generally inconsistent with the suggestions made in this report. During 1980, the appropriateness of the overall protectionist approach to regional integration was intensively discussed by the member countries, and a basic revision of the preliminary agreements may be possible. Thus, the suggestions made in this report may help to strengthen the position taken by Peru in future negotiations on Andean Pact economic policies.

V. PROSPECTS OF THE INDUSTRIAL SECTOR

149. During the current initial period of radical change in the direction of industrial policy, the prospects of industrial development in Peru must be viewed in both a short-term and a long-term perspective. In the short run, the size and structure of industry are largely given and the new policy direction will have relatively little effect on immediate industrial performance. In the longer term, however, the new direction of policy will strongly influence the, structure and performance of the industrial sector.

Short-term prospects

150. For the four-year period 1979-1982, the Government projected in early 1979 an average annual growth of manufacturing of 5.5%, compared with 4.3% for the whole economy. That projection appears quite realistic. After a slow recovery from depressed levels in 1979, manufactured growth has gained momentum in 1980 with an estimated growth rate of 5.2% (see annex, table 3), which is close to the projected average for 1979-1982. The remaining idle capacity, particularly in the domestic-market-oriented industry, will permit further rapid growth of production over a short period. The recovery of domestic purchasing power will benefit especially those industries which have the highest idle capacity. Thus, the textile and garment industry and the manufacturers of transport equipment and consumer durables should benefit most from the economic upswing and show the highest growth of production in the short term, despite rapidly rising imports of those products.

151. Manufactured exports cannot be expected to grow as rapidly as was the case after 1976, although much will depend on whether or not the current system of Certex is maintained until 1983. The small quantity of non-resource-based manufactured exports, which is largely the result of a spillover from production for the domestic market, will tend to stagnate with the rapid recovery of domestic purchasing power. That will mainly affect exports of garments, footwear, refrigerators and, to a lesser extent, textiles. The short and medium-term requirements for adjusting industry to a more competitive and less protected environment will not permit those industries to expand on both domestic and foreign markets. To the extent that construction activity recovers, exports of cement will also tend to decline. The majority of resource-based exports, on the other hand, is less dependent on domestic demand conditions than on incentives. An early revision of the Certex system along the lines suggested in chapter IV of this report would drastically reduce the profitability of manufacturing resource-based products. In particular, exports based on metals and cacao would be less attractive, since most of the current profits in those industries are due to the Certex subsidy which would be discontinued. Therefore, under such a scenario, manufactured exports cannot be expected to maintain their high growth rate. On the other hand, if the current Certex system is maintained, sufficient incentives are provided to process an increasing share of raw materials, and manufactured exports, as currently defined, could continue to grow fast.

152. Short-term employment generation in industry may be disappointing. Government plans to create 400,000 new jobs in industry within two years, of a total of 1 million new jobs to be created during that period, were revised to 100,000, of which one half would be in formal sector industry and the other half in informal manufacturing. The informal sector has shown in the past a capacity to absorb a large share of the growing urban work-force, and may be expected to continue to do so in future. However, most of the 50,000 new informal sector jobs would represent inadequate employment at below minimum wage levels. Employment growth of 50,000 in formal industry within two years, on the other hand, would be extremely difficult to achieve. Even during the period of maximum government support for the manufacturing sector in the first half of the 1970s, employment growth averaged only 12,000 per year and only in the year reached 16,000 new jobs. Thus, creating twice that number of new positions over the next two-year period, with a more critical situation in the manufacturing sector, seems to be very difficult. As a result of the labour stability law, most manufacturing enterprises currently maintain a substantial excess work-force and production increases can be performed largely without hiring additional workers. Therefore, the short-term prospect is for little employment growth in manufacturing, particularly in the formal sector.

Long-term prospects

153. In the long term, the government projection of early 1979 was optimistic about the growth potential of manufacturing in Peru, with a projected average annual growth of manufacturing value added of about 7% during the 1980s. That would represent the highest growth of all producing sectors except construction, and compare favourably with the overall expected long-term GDP of 6%. If the trade policy suggested in this report is implemented in successive steps, the manufacturing sector will be thoroughly restructured toward higher labour intensity and increased export orientation. The speed and extent to which industry would adjust to the new environment and, therefore, the long-term growth rates of manufactured production and exports will largely depend on the capability and willingness of Peruvian industrial entrepreneurs to compete on domestic and international markets. Both domestically and internationally, Peruvian industry will be more competitive than is currently the case, since in the long term the new trade policy would promote the establishment of a production structure in accordance with the comparative advantage of the country. However, for a substantial number of export products, mainly garments, footwear and consumer durables, for which Peru could utilize its comparative advantage of abundant and well-trained labour, Peruvian exporters will be late-comers on highly competitive markets who will face difficulties in establishing a firm position. Measures taken by industrial countries to restrict trade in a number of the above-mentioned products raise additional obstacles to a rapid expansion of export marketing. Thus, while manufactured exports will play a major role in the long-term industrial development of Peru, it appears improbable that the example of export-led high industrial growth set particularly by East Asian countries under favourable world economic conditions prevailing during the 1960s and early 1970s can be repeated. Long-term high growth of manufactured sales on the domestic market will also be difficult to achieve, even with a strong development of consumer incomes, since Peruvian manufactures will have to share the market with imports. In conclusion, the long-term prospects for growth of industry remain uncertain and depend largely on the attitude of Peruvian entrepreneurs toward the improving competitiveness of industry, on the one hand, and the difficulties faced on foreign and domestic markets, on the other.

Annex

THE AUTOMOTIVE INDUSTRY IN PERU AND STATISTICAL DATA

A. Main issues of the automotive industry in Peru

Present situation

154. There are currently five automative assemblers in Peru: Chrysler, Datsun, Toyota, Volkswagen and Volvo. Datsun, Toyota and Volkswagen are engaged in the assembly of passenger cars. Chrysler and Volvo assemble commercial vehicles. Those firms share a potential market of 40,000 vehicles a year, roughly two thirds of which are passenger vehicles. Because of the deteriorating economic conditions in Peru after 1975, the number of vehicles assembled in the country dropped from a high of almost 35,000 units in 1975 to a low of 10,700 in 1979. In an improving economic situation, production is expected to increase to about 20,000 units during 1980.

155. In 1975, the domestic content of vehicles assembled in Peru was estimated at 38% on average, a figure which may still be valid. The domestic content of passenger vehicles is probably a few percentage points lower than for commercial vehicles.

156. The automotive industry is heavily concentrated in the Lima and Callao area, which has 82% of its establishments, 94% of employment and 97% of gross output, as compared with a concentration of 70% of total industrial production.

157. There are about 160 ancillary enterprises engaged in the manufacture of bus bodies, cabs, bumpers, radiators, exhaust systems, springs, rubber parts, tyres, trim, batteries, carpeting, upholstery, starters and other electrical equipment, shock absorbers, water pumps, electric harnesses, hinges, window lifters, glass, steering columns, seats, windshield wipers, braking components, locks, filters and petrol tanks.

158. The automotive industry of Peru has high production costs. The cost of the net value added in Peru is estimated to be more than twice the international level of comparable products. The major benefits to the country from the automotive industry consist in the introduction of new manufacturing technologies, the establishment of a large number of ancillary industries which are locally owned and managed, and the employment generated. Total employment in the automotive industry was 8,100 in 1975, with 3,500 jobs in assembly plants and 4,600 in component manufacture. Despite a production decline, total employment rose to 9,100 in 1977.

Assembly of vehicles in Peru

Type of vehicle	Number assembled							
	1971	1973	1975	1976	1977	1978	1979	January-June 1980
Passenger vehicles	11 059	20 152	21 317	22 290	...	7 046	5 805	4 272
Commercial vehicles	5 580	11 589	12 957	12 054	...	4 197	4 904	3 991
Total	16 639	31 741	34 274	34 344	22 200	11 243	10 745	8 263

Source: COFIDE and the Asociación Peruana de Industria Automovil (Peruvian Automotive Industry Association).

Legal framework

159. The automotive industry in Peru was established under Decree Law (Decreto Supremo) No. 80 of 22 November 1963, which sponsored and supported assembly operations. The Decree Law stipulated that a domestic content of 30% should be progressively achieved within five years. During the period 1967-1971, the decree Law was modified to increase the level of disaggregation of the component kit, favour the assembly of smaller cars than those previously assembled in Peru, limit the number of models to be assembled by each plant and provide incentives for higher national equity participation.

160. A classification of vehicles was introduced in the Law in February 1972, in accordance with the future Andean Pact regulations, including the following categories:

Category A - Mopeds, motorcycles and delivery vehicles

A-1 Mopeds and motorcycles up to 150 cc
A-2 Mopeds and motorcycles over 150 cc
A-3 Delivery vehicles; payload up to 500 kg and engine capacity up to 500 cc.

Category B - Passenger cars and station wagons

B-1 Up to 1,500 cc
B-2 Up to 2,500 cc
B-3 Over 2,500 cc

Category C - Commercial vehicles and buses

C-1 Payload between 500 and 2,000 kg
C-2 Payload between 2,000 and 9,000 kg
C-3 Payload over 9,000 kg

Category D - Four-wheel-drive vehicles, payload up to 2,000 kg

Category E - Tractors and industrial automotive machinery

E-1 Agricultural tractors
E-2 Earth-moving machinery
E-3 Other automotive machinery and equipment

At the same time, the local content targets were changed to reach the following levels by January 1973:

10% for category D
25% for category B1 and C3
35% for categories B2, B3, C1 and C2

Tariffs on completely knocked down (CKD) kits were also changed in 1972 to promote the assembly of commercial vehicles and smaller passenger cars to the following tariff levels:

Category	Tariff (percentage)
B1	17.5
B2	45.0
B3	65.0
C1, C2, D	15.0
C3	5.0

The import of complete vehicles was prohibited except for categories A,D and E. However, small numbers of other categories continued to be imported. A legal requirement to compensate component imports with exports was prepared, but never enacted and put in operation.

161. In February 1976, the tariffs on CKD kits were changed to 20-43%, with the majority of the items having an additional imposition of 20-23%.

162. The most recent policy developments affecting the automotive industry of Peru are as follows:

(a) Since 26 March 1980 all types of vehicles may be imported with an ad valorem tariff of 115%. Only few non-tariff restrictions remain to protect the domestic industry;

(b) A new law of May 1980 allows the continuation of assembly operations in Peru on models not covered by the Andean Pact allocations, which affects the plants of Chrysler, Datsun and Toyota;

(c) Decree Law No.23172, issued in July 1980, allows the import of passenger and commercial vehicles and buses, and of their spare parts, by transport enterprises with only a 5% ad valorem c.i.f. tariff until the end 1981. The application of that Decree Law may have serious consequences for the local commercial vehicle assembly industries and component manufacturers.

Automotive programme of the Andean Pact

163. During the 1970s, negotiations were conducted within the Andean Pact on the allocation of automotive industry among the member countries. The idea was to pool the markets of the countries and allocate the production of a limited number of vehicle categories among the member countries. In 1976, the total Andean market was about 234,000 of all types of vehicles, roughly half of which was in Venezuela. The projected demand for 1985 is 460,000 vehicles.

164. The following classification of vehicles was established by the Pact:

Category A - Passenger cars and station wagons

A1	Engine capacity up to 1,050 cc
A2	Engine capacity between 1,051 cc and 1,500 cc
A3	Engine capacity between 1,051 cc and 2,000 cc
A4	Engine capacity over 2,000 cc

Category B - Commercial vehicles and buses

B1.1	Gross weight up to 3 t
B1.2	Gross weight between 3 t and 4.6 t
B2.1	Gross weight between 4.6 t and 6.2 t
B2.2	Gross weight between 6.2 t and 9.3 t
B3	Gross weight between 9.3 t and 17 t
B4	Gross weight over 17 t

Category C - Four-wheel-drive vehicles

Gross weight up to 2.7 t (diesel engine)
Gross weight up to 2.5 t (petrol engine)

165. In September 1977, the Andean Pact countries took decision No.120, which allocated the production of basic vehicle models among the member countries. The basic models included locally produced engines, gearboxes, axles and steering systems, unless co-production agreements with other member countries applied. Decision No.120 further stipulated that a minimum domestic content of 70% (63% for Bolivia and Ecuador) should be reached by 1985, when the programme was planned to be fully implemented. In addition, intra-regional tariffs for automotive vehicles and components would be gradually reduced to 0 by 31 December 1983 (31 December 1981 for vehicles imported from Bolivia and Ecuador, and 31 December 1987 for vehicles imported by the latter from the other member countries). The implementation of the programme has followed a disappointingly slow pace, and the deadlines will probably have to be postponed. Finally, decision No. 120 also provided that a common external tariff on vehicles and components should be applied at the end of 1983 (end of 1988 for Bolivia and Ecuador). The level, or levels, of the tariff has not yet been agreed upon. Venezuela prefers high tariffs to protect its relatively inefficient industry, while Colombia is advocating low tariffs (about 30% for components). The position of Peru with regard to the tariff level is currently being revised, with a tendency toward lower tariffs.

166. According to the allocations stipulated in decision No. 120, Peru is to manufacture the following vehicle categories:

A-3	Allocati shared with Venezuela; two basic models; three fo..ths of the engine for one model to be imported from Venezuela.
C	Co-production with Colombia (a French Manufacturer, Renault, has been chosen by Colombia).
B-2.1	To be produced exclusively by Peru; Bolivia and Colombia have assembly agreements with Peru.
B-3	Allocation shared by Peru with Venezuela and Colombia. Assembly and co-production agreements on the Colombian model.
B-4	Allocation shared by Peru with Venezuela.

A European manufacturer, Volkswagen, is being considered by Peru for the model of category A3, while a Japanese manufacturer, Toyota, may also be chosen. Volvo has already been selected for the manufacture of trucks. According to the specific agreement on the manufacture of engines for commercial vehicles, Peru will perform the assembly as well as the casting of the block and head, while the other major parts are to be imported from Colombia and Venezuela. The assembly plants for both trucks (Volvo) and related engines (Volvo-Perkins) are already in operation, but local content in both products is still very low. The implementation of decision No. 120 was to be completed by 15 July 1980, but the deadline was prolonged to December 1980, partly because no decision had been reached on all the makes of cars to be built, and partly because of the continuing low levels of local content.

167. The pace of implementation of the Andean Pact automotive programme has been very slow, and the establishment of a competitive automotive industry may not be possible because of the lack of economies of scale. The total Andean market of less than half a million units by 1985 is too small for 18 basic models, including six types of passenger vehicles and 12 models of commercial and four-wheel drive vehicles. Co-production agreements reducing the number of models would not much improve the situation since the production volume for each model would still be too low for economic manufacture with the envisaged high domestic content. The minimum annual output for economic manufacture of one basic model is currently about 500,000 units for passenger vehicles and 50,000 units for commercial vehicles. Those minimum production units are continuously rising, as a result of the rapid development of manufacturing technology with an increasing degree of automation. To sum up, the Andean automotive market is too small to permit efficient production of a large number of different models, particularly of passenger vehicles.

168. An additional drawback of the Andean automotive programme is its lack of technological flexibility at a time of profound transformation of product and production technology in the international automotive industry, which has to adjust to lower vehicle production and operating costs, anti-pollution and safety requirements, and new fuels or fuel mixes. Under such conditions, it appears that the Andean automotive programme will involve technological stagnation, because the high investment cost of the establishment of the automotive industry will make it necessary to keep the same design for a maximum number of years, particularly for key components such as gearboxes, steering systems, axles and motors.

169. High production costs and lack of domestic technological development will seriously handicap the Andean automotive industry in competition with industry located in other countries. The industry will require extremely high protection from import competition, and the export potential is very low.

170. In addition to the lack of economies of scale and built-in technological stagnation, the country allocation of the programme on the basis of the final products, the vehicles, seems unsatisfactory. Because of the strong political appeal of the assembly work, the negotiations concerning the allocation of the 11 different categories were difficult, and led to 18 allocations of as many different basic models, with a total of 33 co-production or assembly agreements. While the final assembly of vehicles has a highly political appeal, an allocation of components and sub-assembly manufactures would have had two advantages. Firstly, economies of scale are more important for the manufacture of components than for the final assembly. Secondly, agreements on the country distribution of component manufacture would have been relatively easy to reach, while the politically critical allocation of assembly plants could have been left open to the choice of the individual countries. Vehicle assembly has low local content, usually less than 10%, and the establishment of one assembly plant in each country would be economical, allowing each country the satisfaction of having a national vehicle. The above proposal would enable the manufacturers of components to concentrate on a very reduced number of different models, which would also limit the total number of vehicle models manufactured in the area.

Conclusions

171. Under current conditions, the automotive industry of Peru is economically unviable. Apart from certain activities, such as bus body manufacture and assembly and partial manufacture of certain types of commercial vehicles, it is an inefficient industry which would not survive without high protection.

172. The Andean automotive programme is supposed to improve the efficiency of national industries by enlarging the market and concentrating manufacturing activities on a reduced number of plants of economic size. However, the programme appears inappropriate for the achievement of the intended goal of an efficient industry, and likely to strengthen support for the development in Peru of an inefficient high-cost automotive industry that will require continued high protection from import competition.

173. The critical final negotiations on the implementation of the Andean automotive programme have not yet been concluded. Therefore, it is still possible for Peru to prepare a basic analysis of the costs and benefits of the programme, which would help to establish a rational Peruvian negotiating position and provide for appropriate technological flexibility. Such a procedure may prevent high uneconomic investment expenditures and the establishment of a large industry that would impose a long-term burden on the country.

B. Statistical data

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Table 1. Value added of manufacturing industries at current prices, 1971-1979

Item	Value added (billions of soles)									Share (percentage)		
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1971	1975	1979
Gross domestic product	295.3	327.2	392.6	494.4	627.4	830.4	1 143.1	1 854.3	3 317.6	100.0	100.0	100.0
Manufacturing industry	73.7	81.7	99.5	131.5	156.5	220.7	293.2	504.7	877.4	25.0	25.0	26.5
Artisan products	7.3	8.3	9.6	11.8	15.6	19.3	24.7	40.6	70.7	9.9	10.0	8.1
Factory products	66.4	73.4	89.9	119.7	140.9	201.5	268.5	464.1	806.6	90.1	90.0	91.9
Food, beverages	23.8	22.8	25.6	35.2	41.4	60.2	75.8	128.8	211.0	35.8	29.4	26.1
Textiles, garments	10.9	12.0	14.3	17.9	23.1	29.7	32.9	60.4	110.2	16.4	16.4	12.4
Wood Products	1.7	2.0	2.3	2.9	3.8	6.5	7.7	11.1	17.0	2.6	2.7	2.1
Paper products	3.4	4.2	4.9	6.0	7.5	11.1	14.0	23.7	36.3	5.1	5.3	4.5
Chemicals	10.6	12.5	15.5	19.6	21.3	30.7	46.7	89.3	148.9	16.0	15.1	18.5
Non-metal minerals	3.1	3.5	4.1	5.0	6.2	8.7	9.6	17.5	39.7	4.7	4.4	4.9
Basic metal	4.2	5.4	8.3	12.9	9.8	15.1	34.0	63.1	134.1	6.3	7.0	16.6
Metal products	7.8	10.0	13.8	18.8	26.0	37.0	45.1	66.0	103.9	11.8	18.4	12.9
Other	0.9	1.1	1.2	1.4	1.8	2.5	2.7	4.1	5.5	1.3	1.2	0.7

Source: Cuentas Nacionales del Peru, 1979.

Note: Data for 1978 and 1979 are preliminary; factories are defined as establishments with one or more employees; artisans have no employees.

Table 2. Value added of manufacturing industries at constant prices, 1971-1979

Item	Value added (billions of soles at 1973 constant prices)									Growth (percentage)	
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1971-1975	1976-1979
Gross domestic product	370.3	376.5	392.6	421.9	441.1	450.0	449.7	446.7	461.8	19.1	4.7
Manufacturing industry	93.2	93.9	99.5	110.4	115.0	119.6	114.5	110.4	114.8	23.4	-0.2
Artisan products	8.5	9.1	9.6	10.1	10.7	10.1	9.4	9.8	10.2	25.9	-4.7
Factory products	84.7	84.8	89.9	100.3	104.2	109.4	105.1	100.6	104.6	23.0	0.4
Food, beverages	32.3	27.3	25.6	31.4	31.2	33.1	29.7	28.6	29.1	-3.4	-6.7
Textiles, garments	13.9	13.9	14.3	14.7	14.9	15.9	13.6	14.0	14.5	7.2	-2.7
Wood products	2.1	2.3	2.3	2.3	2.5	2.7	2.4	2.3	2.1	19.0	-16.0
Paper products	4.0	4.4	4.9	5.3	5.1	5.2	4.9	4.4	3.9	27.5	-23.5
Chemicals	12.3	13.7	15.5	17.0	19.0	20.4	19.4	19.5	19.5	54.5	2.6
Non-metal minerals	3.5	3.6	4.1	4.4	1.6	4.9	4.5	4.1	4.9	31.4	6.5
Basic metals	6.6	7.4	8.3	8.4	7.7	8.3	13.2	13.2	15.6	16.7	102.6
Metal products	8.9	11.0	13.8	15.5	17.8	17.7	16.2	13.5	13.9	100.0	-21.9
Other	1.0	1.1	1.2	1.2	1.4	1.3	1.1	1.0	1.0	40.0	28.6

Source: Cuentas Nacionales del Peru, 1979.

Table 3. Index of the volume of manufacturing production

Item	Index number[a] (1973 = 100.0)										Growth (percentage)		
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980[b]	1971-1975	1975-1979	1979-1980
Total manufacturing	86.1	93.1	100.0	111.7	118.2	122.7	112.0	113.9	118.2	124.3	37.3	0.0	5.2
Manufacturing, excluding fish products	81.3	91.7	100.0	110.0	117.8	121.7	112.0	105.7	106.6	116.1	44.9	- 9.5	8.9
Fish products	456.5	212.9	100.0	213.9	167.3	206.6	114.8	154.5	161.6	106.2	-63.3	- 3.6	- 34.3
31 Food, beverages, tobacco products	88.3	92.7	100.0	112.6	117.5	121.4	116.8	108.3	113.3	120.7	33.1	- 3.6	6.5
311-312 Processed Food	88.9	95.4	100.0	106.4	107.9	105.8	105.5	101.2	101.3	100.5	21.4	- 6.1	- 0.8
313 Beverages	83.6	88.7	100.0	121.3	132.6	147.3	134.9	120.1	131.3	151.2	58.0	- 1.0	15.2
314 Tobacco products	81.9	92.0	100.0	116.5	117.9	117.2	116.3	106.1	116.7		44.0	- 1.0	
32 Textiles, clothing	99.5	98.8	100.0	103.7	104.1	111.3	95.1	98.3	102.2	103.8	4.6	- 1.8	1.6
321 Textiles	101.5	98.5	100.0	101.4	102.5	110.3	97.8	106.4	113.4	114.3	1.0	10.6	0.8
322 Clothing	90.1	101.1	100.0	111.7	110.8	102.5	92.2	73.4	68.2		23.0	-38.7	
323 Leather	104.7	95.0	100.0	102.1	120.8	120.0	91.1	80.9	85.1		15.4	-29.6	
324 Footwear	95.6	99.3	100.0	110.4	101.4	126.7	81.0	76.0	72.1	79.3	6.1	-28.9	10.0
33 Wood products	88.0	91.1	100.0	103.9	113.0	122.2	108.2	101.9	97.4		28.4	-13.8	
331 Wood products, excluding furniture	97.7	109.7	100.0	103.1	97.9	152.2	140.7	138.4	113.2		0.2	36.1	
332 Furniture	77.3	70.4	100.0	104.7	129.7	89.0	72.1	61.4	57.7		67.8	-55.5	
34 Paper, printing	85.4	93.4	100.0	109.1	98.5	102.3	93.9	83.1	72.3	74.9	15.3	-26.6	3.6
341 Paper, paper products	100.9	99.7	100.0	124.1	103.7	117.4	124.1	105.4	99.6	97.3	2.4	- 4.0	- 2.3
342 Printing	75.5	89.4	100.0	99.5	95.1	92.5	74.5	68.7	54.7	60.5	26.0	-42.5	10.6
35 Chemical products	72.9	89.3	100.0	109.5	123.2	132.3	126.1	126.9	130.1	143.6	69.0	5.6	10.4
351 Industrial chemicals	62.0	86.6	100.0	115.8	130.9	143.2	156.0	167.8	175.5	187.9	111.1	34.1	7.1
352 Other chemicals	70.5	80.0	100.0	107.0	126.1	137.6	123.1	126.7	113.8	133.6	37.0	- 9.0	17.4
353 Petroleum refining	83.9	92.0	100.0	108.4	114.9	115.0	115.9	114.0	132.2	134.6	37.0	15.1	1.8

Table 3 (continued)

Item		Index number[a] (1973 = 100.0)										Growth (percentage)		
		1971	1972	1973	1974	1975	1976	1977	1978	1979	1980[b]	1971-1975	1975-1979	1979-1980
355	Rubber products	80.0	91.3	100.0	102.1	112.8	140.0	116.8	101.4	109.5	128.6	40.0	- 2.9	17.4
356	Plastic products	74.9	94.9	100.0	113.5	123.3	121.0	109.2	99.6	114.2		64.6	- 7.4	
36 Non-metal mineral products		85.2	93.3	100.0	118.2	126.0	130.3	121.6	112.8	115.0	132.9	47.9	- 8.7	15.6
361	Pottery, chinaware	58.2	86.3	100.0	110.8	116.7	133.6	148.0	140.3	121.9	118.6	100.5	- 4.5	- 2.7
362	Glass, glass products	85.8	98.4	100.0	105.0	121.8	134.4	120.6	96.2	114.0	136.4	42.0	- 6.4	19.6
363	Other non-metal mineral products	89.5	92.7	100.0	123.8	129.0	127.9	117.4	113.2	114.3		26.1	-11.4	
37 Basic metals		81.3	103.1	100.0	100.6	101.2	104.3	168.9	168.6	193.4	.0	24.5	91.1	- 2.3
371	Ferrous metals	38.8	73.2	100.0	122.4	124.7	104.4	123.3	131.2	138.9	148.5	221.4	11.4	6.9
372	Non-ferrous metals	96.5	113.8	100.0	92.9	92.8	104.2	185.1	182.0	212.8	203.5	- 3.8	129.3	- 4.4
38 Metal products		69.2	84.8	100.0	109.3	129.3	127.2	112.2	93.5	92.4	110.5	86.9	- 28.5	19.6
381	Metal products	90.6	92.7	100.0	108.0	115.3	109.2	103.6	97.0	92.0	99.4	27.3	- 20.2	8.0
382	Non-electrical machinery	65.1	92.4	100.0	118.9	150.6	151.7	142.1	122.3	134.6	160.8	131.3	- 10.6	19.5
383	Electrical machinery	62.7	80.8	100.0	123.9	149.7	145.7	140.9	125.7	115.1	126.8	138.8	- 23.1	10.2
384	Transport equipment	58.1	77.2	100.0	89.1	109.1	109.7	72.2	38.4	43.4	73.2	87.7	- 60.2	68.7
385	Scientific equipment	82.0	83.8	100.0	92.5	107.0	127.3	109.6	112.6	98.1		30.5	- 8.3	
39 Other manufactures		71.9	83.6	100.0	93.9	110.7	106.4	92.7	84.8	81.3		54.0	- 26.4	

Source: Ministry of Industry.

a/ Includes establishments with employees.

b/ Estimates based on sample data.

Table 4. Informal sector manufacturing

Item	Value added (billions of soles)					
	1971		1975		1978	
Total manufacturing	73.7	(100.0%)	156.5	(100.0%)	504.7	(100.0%)
Formal sector[a/]	60.5	(82.1%)	138.8	(88.7%)	411.4	(81.5%)
Informal sector						
Small industry[b/]	5.9	(8.0%)	2.1	(1.3%)	52.7	(10.4%)
Artisans[c/]	7.3	(9.9%)	15.6	(10.0%)	40.6	(8.1%)

Source: Cuentas Nacionales, Ministry of Industry.

a/ Includes registered establishments with 5 or more employees.

b/ Includes non-registered establishments with 1 to 4 employees.

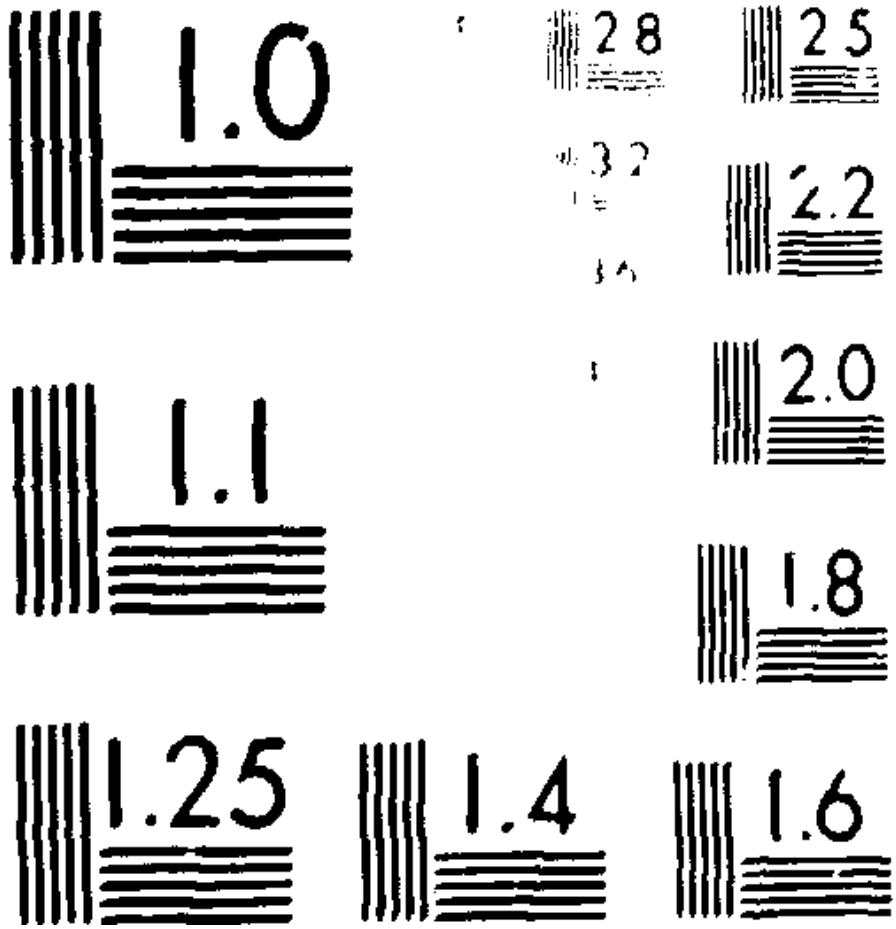
c/ Includes non-registered establishments without employees, independent workers, home workers and artisans not included in the economic census or the annual statistical survey.

Table 5. Value added in manufacturing[a/] at current prices

	Item	Value added (billions of soles at current prices)								Share (percentage)		
		1971	1972	1973	1974	1975	1976	1977	1978	1971	1975	1978
311-312	Processed foods, excluding fish products	10.3	11.1	13.0	17.2	24.0	31.4	39.0	58.1	28.4	28.4	24.7
313	Beverages	5.2	6.4	8.4	8.9	12.7	16.9	23.7	33.6			
314	Tobacco products	1.7	1.8	2.0	1.1	2.7	3.5	4.5	9.7			
321	Textiles	7.6	9.1	11.0	13.1	13.4	22.0	24.2	40.9	18.2	17.7	13.0
322	Clothing	1.3	1.4	1.9	2.5	3.6	4.6	6.2	5.7			
323	Leather goods	0.4	0.5	0.7	0.9	1.1	1.5	1.8	2.8			
324	Leather footwear	1.0	1.1	1.5	1.8	2.5	3.7	3.2	4.1			
331	Wood products, excluding furniture	0.9	1.1	1.2	1.3	2.0	2.2	3.4	3.5	2.6	2.5	1.4
332	Furniture and accessories	0.7	0.8	0.9	1.3	1.5	2.0	2.3	2.3			
341	Paper and paper products	1.6	1.9	2.4	3.2	4.3	5.1	6.0	11.0	5.8	5.5	4.2
342	Printing and publishing	1.9	2.1	2.6	2.9	3.4	4.6	6.6	6.1			
351	Industrial chemicals	2.1	2.8	3.4	4.7	5.3	8.3	11.0	21.1	20.3	19.3	28.6
352	Other chenicals	4.4	5.2	6.5	8.4	10.8	15.8	21.5	28.6			
353	Petroleum refining	3.2	3.0	3.3	1.6	4.4	8.0	12.7	53.1			
354	Petroleum and coal products	0.1	0.01	0.01	0.02	0.2	0.05	0.1	0.2			
355	Rubber products	1.2	1.3	1.5	1.7	2.3	3.0	3.6	5.0			
356	Plastic products n.e.s.	1.3	1.7	2.1	3.1	4.0	6.0	6.1	9.5			
361	Pottery, china and earthenware	0.3	0.3	0.5	0.5	0.7	1.0	1.3	1.5	5.1	4.3	4.4
362	Glass and glass products	0.6	0.7	0.9	1.1	1.4	1.9	2.3	2.9			
369	Other non-metallic minerals	2.2	2.5	2.8	3.5	3.9	5.8	7.7	13.8			
371	Basic ferrous metals	1.2	1.6	2.3	4.8	3.7	3.6	8.3	18.0	4.5	5.2	7.4
372	Basic non-ferrous metals	1.5	2.5	4.2	6.8	3.5	6.1	9.3	12.4			
381	Metal products	2.5	2.9	3.6	5.4	6.0	8.6	10.8	13.3	14.9	18.4	15.5
382	Non-electrical machinery	1.8	2.1	2.6	3.3	4.8	6.7	8.4	13.1			
383	Electrical machinery and appliances	2.1	2.7	3.7	5.3	7.0	10.8	13.3	21.8			
384	Transport equipment	2.4	2.5	3.8	5.1	7.2	12.0	15.5	14.1			
385	Scientific and other equipment	0.2	0.2	0.3	0.3	0.5	0.6	0.9	1.6			
390	Jewellery and miscellaneous manufactures	0.9	1.1	1.2	1.4	1.8	2.8	2.9	3.4	1.5	1.3	0.8
Total manufacturing		60.5	70.5	88.4	111.5	138.8	198.7	257.5	411.4	100.0	100.0	100.0

Source: Ministry of Industry.

a/ Includes establishments with 5 and more employees.


1.0
2.8
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1.25
1.4
1.6

Table 6. Value added in manufacturing[a/] at constant prices

Item		Value added (billions of soles at 1973 constant prices)								Growth (percentage)	
		1971	1972	1973	1974	1975	1976	1977	1978	1971-1975	1976-1978
311-312	Processed foods, excluding fish products	13.9	11.9	13.0	13.2	13.4	14.2	14.3	10.1	- 3.6	-24.6
313	Beverages	7.0	7.4	8.4	8.7	10.8	10.1	11.5	8.7	15.4	-19.4
314	Tobacco products	2.3	1.9	2.0	1.1	2.4	2.2	1.9	2.4	4.3	0.0
321	Textiles	9.7	10.6	11.0	10.6	11.9	11.7	10.0	8.5	22.7	-28.6
322	Clothing	1.6	1.6	1.9	2.0	2.4	2.3	2.6	1.2	50.0	-50.0
323	Leather goods	0.5	0.7	0.7	0.7	0.8	0.8	0.8	0.6	60.0	-25.0
324	Leather footwear	1.2	1.3	1.5	1.4	1.5	1.6	1.0	0.7	25.0	-53.3
331	Wood products, excluding furniture	1.1	1.4	1.2	1.1	1.3	1.0	1.2	0.9	18.2	-30.8
332	Furniture and accessories	0.8	1.0	0.9	1.3	1.2	1.1	0.8	0.6	0.5	-50.0
341	Paper and paper products	1.9	2.1	2.4	2.9	3.1	2.7	2.4	1.8	63.2	-41.9
342	Printing and publishing	2.2	2.2	2.6	2.4	2.1	1.9	1.7	0.7	- 4.5	-66.6
351	Industrial chemicals	2.5	3.0	3.4	4.3	4.1	4.7	4.6	4.3	64.0	4.9
352	Other chemicals	5.2	5.6	6.5	7.1	7.9	9.2	9.3	6.0	52.0	-24.1
353	Petroleum refining	3.8	3.1	3.3	1.6	2.9	2.5	2.3	5.0	-23.7	-72.4
354	Petroleum and coal products	0.1	0.02	0.01	0.02	0.1	0.02	0.04	0.04	-	-60.0
355	Rubber products	1.4	1.5	1.5	1.5	1.6	1.9	1.5	0.9	14.3	-43.8
356	Plastic products n.e.s.	1.5	2.1	2.1	2.3	2.4	2.8	1.9	1.6	60.0	-33.3
361	Pottery, china and earthenware	0.4	0.3	0.5	0.5	0.5	0.7	0.7	0.5	25.0	-
362	Glass and glass products	0.7	0.8	0.9	1.0	1.0	1.2	1.3	0.5	14.3	-50.0
369	Other non-metallic minerals	2.4	2.8	2.8	3.2	3.1	3.6	4.3	3.1	29.2	-
371	Basic ferrous metals	2.0	1.7	2.3	3.8	2.8	2.0	2.7	3.0	40.0	7.1
372	Basic non-ferrous metals	2.3	3.7	4.2	4.5	2.9	3.0	2.6	2.1	26.1	-27.6
381	Metal products	2.8	3.2	3.6	4.1	3.4	4.0	3.8	2.5	21.4	-26.5
382	Non-electrical machinery	2.0	2.5	2.6	2.5	3.1	3.3	2.9	2.1	55.0	-32.3
383	Electrical machinery and appliances	2.4	3.2	3.7	4.7	5.1	6.1	5.8	4.9	112.5	- 3.9
384	Transport equipment	2.7	3.0	3.8	4.4	5.4	6.5	6.2	3.1	100.0	-42.6
385	Scientific and other equipment	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	50.0	-33.3
390	Jewellery and miscellaneous manufactures	1.0	1.4	1.2	1.1	1.1	1.2	0.8	0.6	10.0	-45.5
Total manufacturing		77.2	79.4	88.4	91.8	92.7	102.4	100.3	79.6	20.1	-14.1

Source: Ministry of Industry and mission calculations

a/ For 1971, the price deflator of the national accounts of the Oficina Nacional de Estadistica (National Bureau of Statistics) are used; includes establishements with 5 or more employees.

Table 7. Gross value of production at current prices

	Item	Gross value (billions of soles at current prices)								Share (percentage)		
		1971	1972	1973	1974	1975	1976	1977	1978	1971	1975	1978
311-3[illegible]	Processed foods, excluding fish products	26.5	29.9	33.8	44.4	56.4	76.9	100.6	192.5	30.0	27.0	26.4
313	Beverages	7.6	9.0	11.4	13.1	18.2	24.7	32.8	54.0			
314	Tobacco products	2.0	2.2	2.5	1.6	3.3	4.3	6.7	12.0			
321	Textiles	16.4	19.0	24.5	29.9	31.4	42.1	45.9	90.3	17.6	15.7	12.6
322	Clothing	2.6	2.8	3.6	4.9	7.0	8.9	11.6	17.0			
323	Leather goods	1.1	1.3	1.8	2.3	2.7	3.4	4.0	7.0			
324	Leather footwear	1.8	.9	2.6	3.3	4.2	5.9	5.6	8.6			
331	Wood products, excluding furniture	2.0	2.4	2.6	3.2	4.5	5.6	7.5	8.6	2.7	2.5	1.3
332	Furniture and accessories	1.3	1.5	1.6	2.5	2.7	3.6	4.1	4.6			
341	Paper and paper products	3.9	4.7	5.5	7.3	9.0	10.3	14.2	34.1	5.[illegible]	5.1	5.1
342	Printing and publishing	3.2	3.5	4.3	4.8	5.6	7.8	11.2	15.6			
351	Industrial chemicals	4.0	4.9	6.1	8.7	10.2	15.4	20.3	47.7	19.0	19.7	26.8
352	Other chemicals	8.1	9.5	11.9	15.3	20.2	28.1	40.7	73.1			
353	Petroleum refining	6.9	7.0	8.6	12.3	15.0	30.5	50.7	105.2			
354	Petroleum and coal products	0.2	0.1	0.04	0.1	0.3	0.1	0.4	0.7			
355	Rubber products	1.9	2.0	2.4	3.1	3.7	5.2	8.8	12.8			
356	Plastic products n.e.s.	2.5	3.0	3.8	5.9	7.6	10.7	12.4	22.4			
36[illegible]	Pottery, china and earthenware	0.5	0.5	0.7	0.8	1.0	1.5	1.9	2.8	3.9	3.5	4.0
362	Glass and glass products	0.9	1.1	1.4	1.7	2.2	2.9	3.8	5.6			
369	Other non-metallic minerals	3.4	4.1	4.7	5.7	6.8	10.2	14.2	30.5			
371	Basic ferrous metals	2.8	3.7	4.9	8.6	8.7	9.5	14.3	36.2	6.3	7.2	8.4
372	Basic non-ferrous metals	5.0	7.0	11.0	17.0	12.1	16.7	28.4	46.3			
381	Metal products	5.0	5.9	7.2	10.3	12.0	16.5	21.8	34.3	14.9	18.3	14.6
382	Non-electrical machinery	2.8	3.6	4.5	5.6	8.6	11.2	16.3	28.7			
383	Electrical machinery and appliances	3.9	5.0	7.0	10.2	12.7	20.1	24.5	44.1			
384	Transport equipment	6.5	7.2	10.7	14.3	18.5	28.7	34.8	31.8			
385	Scientific and other equipment	0.3	0.3	0.5	0.6	0.9	1.2	1.6	3.7			
390	Jewellery and miscellaneous manufactures	1.5	1.9	2.0	2.5	3.2	4.5	4.8	7.7	1.2	1.1	.8
Total	Manufacturing	124.5	145.3	181.7	240.0	288.7	406.4	543.7	977.9	100.0	100.0	100.0

Source: Ministry of Industry.

Table 8. Gross value of production at constant prices

Item		Gross value (billions of soles at 1973 constant prices)								Growth (percentage)	
		a/ 1971	1972	1973	1974	1975	1976	1977	1978	1971-1975	1975-1978
311-312	Processed foods, excluding fish products	35.9	32.2	33.8	34.1	31.5	34.8	36.8	33.5	-12	6
313	Beverages	10.3	10.5	11.4	12.8	15.6	14.7	15.9	13.9	52	-11
314	Tobacco products	2.7	2.2	2.5	1.6	2.9	2.7	2.8	3.0	7	3
321	Textiles	20.9	22.2	24.5	23.9	21.8	16.7	18.6	18.8	3	-13
322	Clothing	3.3	3.3	3.6	3.9	4.7	4.5	4.9	3.7	42	-21
323	Leather goods	1.4	1.9	1.8	1.8	4.9	1.7	1.7	1.5	250	-69
324	Leather footwear	2.3	2.3	2.6	2.6	2.5	2.5	1.7	1.4	9	-44
331	Wood products, excluding furniture	2.4	3.1	2.6	2.5	2.9	2.6	2.6	2.1	21	-28
332	Furniture and accessories	1.6	2.0	1.6	2.5	2.1	1.9	1.5	1.2	31	-43
341	Paper and paper products	4.6	5.1	5.5	6.6	6.6	5.3	5.7	5.6	44	-15
342	Printing and publishing	3.8	3.7	4.3	4.0	3.4	3.3	2.8	2.0	-11	-41
351	Industrial chemicals	4.7	5.4	6.1	7.7	7.8	8.8	8.6	9.8	66	26
352	Other chemicals	9.5	10.3	11.9	13.0	14.9	16.3	17.5	15.2	57	2
353	Petroleum refining	8.1	7.3	8.6	11.8	10.0	9.5	9.2	9.8	24	-2
354	Petroleum and coal products	0.2	0.1	0.04	0.1	0.2	0.04	0.1	0.1	-	-50
355	Rubber products	2.2	2.3	2.4	2.7	2.6	3.3	2.8	2.3	18	-12
356	Plastic products n.e.s.	2.9	3.6	3.8	4.3	4.6	5.0	3.9	3.8	59	-17
361	Pottery, china and earthenware	0.6	0.6	0.7	0.7	0.8	1.0	1.0	1.0	33	25
362	Glass and glass products	1.0	1.3	1.4	1.4	1.6	1.8	2.2	1.0	60	-38
369	*Other non-metallic minerals*	3.8	4.6	4.7	5.3	5.5	6.5	7.9	6.7	45	22
371	Basic ferrous metals	4.4	4.0	4.3	6.9	6.5	5.2	4.8	5.9	48	-9
372	Basic non-ferrous metals	7.9	10.4	11.0	11.3	9.8	8.3	8.1	7.7	24	-21
381	Metal products	5.7	6.5	7.2	7.9	6.7	7.8	7.7	6.4	18	- 5
382	Non-electrical machinery	3.3	4.3	4.5	4.4	5.6	5.6	5.7	4.5	75	-20
383	Electrical machinery and appliances	4.5	5.9	7.0	8.9	9.3	11.3	10.7	9.9	108	7
384	Transport equipment	7.4	8.6	10.7	12.1	14.0	15.4	13.9	7.0	89	-50
385	Scientific and other equipment	0.4	0.3	0.5	0.5	0.6	0.7	0.3	0.5	50	-17
390	Jewellery and miscellaneous manufactures	1.8	1.9	2.0	2.0	1.9	2.0	1.4	1.3	6	-32
Total manufacturing		158.8	163.6	181.7	197.9	192.9	209.4	211.8	189.1	22	-2

Source: Ministry of Industry and mission calculations.

a. For 1971, the price deflator of the national accounts of the Oficina Nacional de Estadistica (National Bureau of Statistics) were used. Includes establishments with 5 or more employees.

Table 9. Size distribution of industry in 1974

Size of enterprise[a/] (number of employees)	Number of enterprises	Number of employees	Value of production (percentage)
5-9	3 554 (46.3%)	23 320 (9.4%)	3.9
10-49	3 173 (41.3%)	64 725 (26.1%)	17.8
50-99	486 (6.3%)	33 451 (13.5%)	11.9
100-199	267 (3.5%)	38 111 (15.3%)	15.1
200-999	193 (2.5%)	70 156 (28.3%)	32.5
1 000 and over	10 (0.1%)	18 361 (7.4%)	30.8
Total	7 683 **(100.0%)**	248 124 **(100.0%)**	100.0

Source: Ministry of Industry; Estadistica Industrial 1974.

a/ Includes establishments with 5 or more employees, excluding the fish industry.

Table 10. Industrial establishments

	Item	Number[a]				Growth (percentage)
		1971	1975	1977	1979[b]	1971-1977
311-312	Processed foods, excluding fish products	1287	1425	1637		27
313	Beverages	401	434	479		19
314	Tobacco products	4	2	2		-
321	Textiles	661	690	806		22
322	Clothing	545	665	766		41
323	Leather goods	121	150	175		45
324	Leather footwear	222	277	313		41
331	Wood products, excluding furniture	325	426	477		47
332	Furniture and accessories	275	359	433		57
341	Paper and paper products	82	92	103		26
342	Printing and publishing	381	409	470		23
351	Industrial chemicals	125	132	147		18
352	Other chemicals	286	333	377		32
353	Petroleum refining	12	11	12		-
354	Petroleum and coal products	10	9	10		-
355	Rubber products	55	40	44		-20
356	Plastic products n.e.s.	145	180	200		40
361	Pottery, china earthenware	16	25	26		63
362	Glass and glass products	49	56	62		27
369	Other non-metallic minerals	297	350	404		36
371	Basic ferrous metals	41	50	52		27
372	Basic non-ferrous metals	23	41	43		87
381	Metal products	480	596	701		46
382	Non-electrical machinery	231	250	263		14
383	Electrical machinery and appliances	145	184	213		47
384	Transport equipment	197	263	315		60
385	Scientific and other equipment	47	53	62		32
390	Jewellery and miscellaneous manufactures	221	279	353		60
Total	manufacturing	6688	7783	8945	9634	34

Source: Ministry of Industry.

a/ Establishments with 5 or more employees.

b/ Of the registered enterprises in 1979, 3,806 had a labour community (totalling over 200,000 participants with an average of over 30 employees each).

Table 11. Ownership of industry in 1978

Type of enterprise	Enterprises		Soles		Workers	
	Number	Percentage	Millions of soles	Percentage	Number	Percentage
Private enterprises	484	93.7	322 318	64.4	110 632	69.3
Private national enterprises	395	74.6	195 618	37.9	77 275	48.4
Private foreign enterprises	54	11.2	83 415	16.2	19 612	12.3
Private mixed enterprises	35	7.3	53 285	10.3	13 745	8.6
Enterprises with government participation	22	4.5	174 582	33.8	40 290	25.2
Mixed enterprises with government participation	4	0.8	7 042	1.4	1 277	0.8
Government associated enterprises	4	0.8	3 681	0.7	1 189	0.7
Government enterprises	14	2.9	163 859	31.7	37 824	23.7
Social sector enterprises	11	2.2	9 214	1.7	8 685	5.5
Social property enterprises	1	0.2	192	0.04	32	0.02
Industrial co-operatives	6	1.2	3 723	0.7	4 082	2.5
Other social sector enterprises	4	0.8	5 299	1.0	4 571	2.9
Total	517	100.0	516 114	100.0	159 607	100.0

Source: Ministry of Industry.

Table 12. Ownership of industrial enterprises in 1978

Ownership category[a/]		Soles		Workers		Firms	
		Billions of soles	Percentage	Number	Percentage	Number	Percentage
311-312	Food products, except beverages						
Private national enterprises	1.1	61 058	49.6	15 687	28.5	64	75.3
Private foreign enterprises	1.2	25 307	20.6	5 847	10.6	9	10.6
Mixed private enterprises	1.3	12 432	10.1	1 636	3.0	5	5.9
Government associated enterprises	2.5	79	0.1	167	0.3	1	1.2
Government enterprises	2.6	1 080	0.9	600	1.1	1	1.2
Social property enterprises	3.7	192	0.2	32	0.1	1	1.2
Industrial co-operatives	3.8	20 042	16.3	27 729	50.4	3	3.5
Other social sector enterprises	3.9	2 924	2.4	3 289	6.0	1	1.2
313	**Beverages**						
Private national enterprises	1.1	15 822	64.0	5 511	75.6	4	66.7
Mixed private enterprises	1.3	8 895	36.0	1 756	24.1	1	16.7
Government enterprises	2.6	11	0.04	21	0.3	1	16.7
314	Tobacco products						
Private foreign enterprises	1.2	9 227	88.1	544	40.3	1	50.0
Government enterprises	2.6	1 248	11.9	806	59.7	1	50.0
321	Textiles						
Private national enterprises	1.1	28 822	80.4	14 804	77.9	43	87.8
Private foreign enterprises	1.2	967	2.7	566	3.0	3	6.1
Mixed private enterprises	1.3	5 370	15.0	3 053	16.1	1	2.0
Industrial co-operatives	3.8	676	1.9	582	3.1	2	4.1

Table 12 (continued)

Ownership category[a/]		Soles		Workers		Firms	
		Billions of soles	Percentage	Number	Percentage	Number	Percentage
	322 Garments, except footwear						
Private national enterprises	1.1	2 723	100.0	2 736	100.0	17	100.0
	324 Footwear						
Private national enterprises	1.1	2 415	40.3	2 242	45.0	5	83.3
Private foreign enterprises	1.2	3 576	59.7	2 744	55.0	1	16.7
	331 Wood products						
Private national enterprises	1.1	1 621	85.0	1 310	77.3	9	81.8
Private foreign enterprises	1.2	162	8.5	232	11.9	1	9.1
Industrial co-operatives	3.8	123	6.4	211	10.8	1	9.1
	341 Paper, paper products						
Private national enterprises	1.1	1 374	8.8	551	11.1	2	50.0
Mixed private enterprises	1.3	1 059	6.8	380	7.7	1	25.0
Government enterprises	2.6	13 151	84.4	4 020	81.2	1	25.0
	342 Printing						
Private national enterprises	1.1	4 553	52.5	2 337	49.0	17	77.3
Government enterprises	2.6	1 739	20.1	1 152	24.1	2	9.1
Other social sector enterprises	3.9	2 375	27.4	1 282	26.9	3	13.6

Table 12 (continued)

Ownership category[a/]		Soles		Workers		Firms	
		Billions of soles	Percentage	Number	Percentage	Number	Percentage
351 Industrial chemicals							
Private national enterprises	1.1	8 856	34.3	823	17.3	20	58.8
Private foreign enterprises	1.2	5 187	20.1	1 127	23.7	5	14.7
Mixed private enterprises	1.3	4 048	15.7	1 164	24.4	4	11.8
Mixed enterprises with government participation	2.4	5 703	22.1	903	19.0	2	5.9
Government associated enterprises	2.5	1 395	5.4	493	10.3	2	5.9
Government enterprises	2.6	616	2.4	254	5.3	1	2.9
352 Other chemical products							
Private national enterprises	1.1	15 803	61.0	4 921	63.6	29	67.4
Private foreign enterprises	1.2	6 429	24.8	1 801	23.3	9	20.9
Mixed private enterprises	1.3	3 671	14.2	1 012	13.1	5	11.6
353 Petroleum refining							
Private foreign enterprises	1.2	4 115	5.5	202	2.4	3	75.0
Government enterprises	2.6	71 287	94.5	8 278	97.6	1	25.0
355 Rubber products							
Private national enterprises	1.1	7 155	90.5	1 330	78.0	2	40.0
Private foreign enterprises	1.2	755	9.5	516	22.0	3	60.0

Table 12 (continued)

Ownership category[a/]		Soles		Workers		Firms	
		Billions of soles	Percentages	Number	Percentage	Number	Percentage
	356 Plastic products						
Private national enterprises	**1.1**	**10 147**	**71.3**	**4 493**	**80.4**	**33**	**80.5**
Private foreign enterprises	**1.2**	**956**	**6.7**	**360**	**6.4**	**3**	**7.3**
Mixed private enterprises	**1.3**	**3 131**	**22.0**	**737**	**13.2**	**5**	**12.2**
	361 Non-metalic mineral products						
Private national enterprises	**1.1**	**1 778**	**100.0**	**1 226**	**100.0**	**3**	**100.0**
	362 Glass products						
Private national enterprises	**1.1**	**3 351**	**91.5**	**3 210**	**93.9**	**10**	**90.0**
Mixed private enterprises	**1.3**	**313**	**8.5**	**210**	**6.1**	**1**	**9.1**
	369 Other non-metallic mineral products						
Private national enterprises	**1.1**	**2 686**	**19.3**	**2 342**	**47.3**	**14**	**66.7**
Private foreign enterprises	**1.2**	**951**	**6.8**	**137**	**2.8**	**1**	**4.8**
Mixed private enterprises	**1.3**	**1 086**	**7.8**	**452**	**9.1**	**1**	**4.8**
Government associated enterprises	**2.5**	**2 207**	**15.9**	**529**	**10.7**	**1**	**4.8**
Government enterprises	**2.6**	**6 970**	**50.1**	**1 495**	**30.2**	**4**	**19.0**

Table 12 (continued)

Ownership category[a/]		Soles		Workers		Firms	
		Billions of soles	Percentage	Number	Percentage	Number	Percentage
371	Iron and steel						
Private national enterprises	1.1	3 175	11.8	721	11.1	6	66.7
Private foreign enterprises	1.2	3 563	13.3	847	13.0	2	22.2
Government enterprises	2.6	20 084	74.9	4 953	76.0	1	11.1
372	Non-ferrous metal products						
Private national enterprises	1.1	2 980	5.7	907	5.3	5	7.4
Private foreign enterprises	1.2	1 233	2.4	119	0.7	1	14.3
Government enterprises	2.6	47 673	91.9	16 245	94.1	1	14.3
381	Metal products						
Private national enterprises	1.1	11 868	86.4	5 022	93.2	27	87.1
Private foreign enterprises	1.2	899	6.5	257	4.8	2	6.5
Mixed private enterprises	1.3	970	7.1	108	2.0	2	6.5
382	Mechanical Machinery						
Private national enterprises	1.1	1 281	62.2	721	87.0	4	80.0
Mixed enterprises with government participation	2.4	777	37.8	108	13.0	1	20.0
383	Electrical machinery						
Private national enterprises	1.1	1 741	9.7	3 396	43.8	17	65.4
Private foreign enterprises	1.2	11 214	62.7	2 772	35.7	5	19.2
Mixed private enterprises	1.3	4 381	24.5	1 328	17.1	3	11.5
Mixed enterprises with government participation	2.4	562	3.1	266	3.4	1	3.8

Table 12 (continued)

Ownership category[a/]		Soles		Workers		Firms	
		Billions of soles	Percentage	Number	Percentage	Number	Percentage
	384 Transport equipment						
Private national enterprises	1.1	4 250	22.6	2 044	41.5	15	75.0
Private foreign enterprises	1.2	7 790	41.5	1 282	26.0	3	15.0
Mixed private enterprises	1.3	6 742	35.9	1 598	32.5	2	10.0
	385 Scientific equipment						
Private national enterprises	1.1	373	19.7	116	22.9	2	33.3
Private foreign enterprises	1.2	1 084	57.1	259	51.1	2	33.3
Mixed private enterprises	1.3	440	23.2	132	26.0	2	33.3
	390 Other manufactures						
Private national enterprises	1.1	1 786	70.5	802	81.8	10	83.3
Mixed private enterprises	1.3	747	29.5	179	18.2	2	16.7

Source: Ministry of Industry: Estadistica Industrial Anual; mission calculation.

a/ The ownership categories are defined as follows:

1.1 Private national enterprises: with foreign participation, private nationals participate with over 80% in equity; with government participation, the Government participates with less than 30% in equity.

1.2 Private foreign enterprises: enterprises with over 50% foreign equity participation.

1.3 Mixed private enterprises: private enterprises with national equity participation of between 50% and 80%, the remainder being foreign.

2.4 Mixed enterprises with government participation: enterprises with government and foreign participation regulated under the Andean Pact Agreement; the government participation in equity is at least 30%.

2.5 Government associated enterprises: enterprises with government and private national participation in equity. The Government has at least 30% of equity and has major influence on enterprise management.

2.6 Government enterprises: enterprises which are fully owned by the Government.

3.7 Social property enterprises: enterprises which are owned by their workers.

3.8 Industrial co-operatives: enterprises which are owned by the members of the co-operative.

3.9 Other social sector enterprises: enterprises which are not categorized under 3.7 or 3.8.

Table 13. Employment in manufacturing

Item	Employment statistics									
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Working population (thousands of employees)										
Total	4 291.3	4 398.1	4 528.9	4 666.1	4 809.0	4 957.7	5 112.6	5 273.6	5 440.6	5 626.9
Manufacturing	538.0	554.2	573.6	593.3	612.9	632.3	651.6	670.8	689.8	...
Employees	328.3	339.5	354.8	370.7	386.5	402.4	418.6	434.2	450.9	...
Self-employed	209.7	214.7	218.8	222.6	226.4	229.9	233.0	236.0	238.9	...
Employment in manufacturing[a/]	208.8	222.9	238.9	248.1	256.6	270.4	265.5	266.9	...	...
Index of employment in manufacturing for metropolitan Lima (mid-year)	...	...	100.0	105.7	111.0	116.6	117.3	116.4	116.5	118.6
Unemployment in all industries in metropolitan Lima (percentage of working population)										
Unemployment	...	...	5.3	5.3	5.6	5.3	8.2	6.6	5.3	...
Underemployment	...	...	14.6	17.2	14.9	19.8	25.1	35.5	31.2	...
Adequately employed	...	...	80.1	77.5	79.5	72.4	62.2	57.9	63.5	...
Applications of industrial firms to reduce employment through:										
Closure of firms	...	...	...	...	...	...	36	41	18	
Reduction of production	...	...	...	...	...	...	191	223	83	
Temporary stoppage	...	...	..	...	...	..	50	54	32	

Sources: Oficina Nacional de Estadistica (National Bureau of Statistics), Ministry of Industry and Ministry of Labour.

a/ Enterprises registered with the Ministry of Industry.

Table 14. Employment in manufacturing enterprises

Item	Employment (thousands of employees)								Growth (percentage)	
	1971	1972	1973	1974	1975	1976	1977	1978	1971-1975	1975-1978
311-312 Processed foods, excluding fish products	31.8	33.0	34.5	35.8	35.7	38.5	40.8	40.3	12	13
313 Beverages	9.9	9.9	11.1	10.8	11.1	11.3	11.1	11.2	12	1
314 Tobacco products	0.7	0.8	0.8	0.9	0.9	0.8	1.0	0.9	30	-
321 Textiles	31.9	35.7	36.8	33.6	33.8	34.3	34.3	34.7	6	3
322 Clothing	10.2	11.0	11.3	12.7	13.6	14.6	13.4	13.3	33	-2
323 Leather goods	2.8	2.7	3.0	3.0	3.1	3.2	3.7	3.3	12	5
324 Leather footwear	6.4	6.8	7.0	6.9	7.5	8.5	6.5	6.7	18	-11
331 Wood products, excluding furniture	6.3	7.2	7.3	7.3	7.6	8.1	8.6	8.9	21	16
332 Furniture and accessories	5.9	5.7	6.0	6.6	6.2	6.1	5.9	5.9	6	-6
341 Paper and paper products	4.8	5.7	5.8	6.1	6.1	6.6	6.0	6.0	27	-1
342 Printing and publishing	9.3	9.4	9.9	9.6	9.6	10.9	10.9	10.2	4	6
351 Industrial chemicals	4.9	5.4	6.0	6.9	7.0	7.3	6.6	6.9	43	-1
352 Other chemicals	12.7	13.2	14.1	14.5	15.5	15.9	15.7	16.3	23	5
353 Petroleum refining	2.0	2.3	2.3	3.4	3.5	3.5	4.1	4.2	18	20
354 Petroleum and coal products	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	16	-
355 Rubber products	2.5	2.6	2.9	3.1	3.0	3.3	3.3	3.3	22	11
356 Plastic products n.e.s.	5.5	5.8	6.2	6.6	7.4	8.0	8.0	8.3	33	12
361 Pottery, china and earthenware	1.2	1.3	1.5	1.7	1.8	1.8	1.8	1.8	57	-
362 Glass and glass products	3.7	3.9	4.2	4.3	4.4	4.6	4.5	4.5	19	3
369 Other non-metallic minerals	8.7	9.4	10.1	10.3	10.3	10.8	10.5	11.2	19	9
371 Basic ferrous metals	4.3	4.8	6.1	7.3	8.3	7.7	7.5	7.7	95	-7
372 Basic non-ferrous metals	3.6	3.7	4.0	4.0	4.1	4.1	4.1	4.1	15	-
381 Metal products	12.5	13.4	15.0	15.6	16.3	17.7	17.5	17.6	30	8
382 Non-electrical machinery	7.5	8.3	8.5	8.7	9.2	9.5	8.8	9.2	23	-
383 Electrical machinery and appliances	6.1	6.9	8.3	10.0	10.9	11.8	10.8	11.3	78	3
384 Transport equipment	8.6	8.6	10.9	12.9	14.1	15.6	14.4	13.0	63	-8
385 Scientific and other equipment	0.9	0.9	1.0	1.1	1.1	1.2	1.4	1.4	30	25
390 Jewellery and miscellaneous manufactures	4.0	4.3	4.1	4.2	4.3	4.6	4.2	4.6	7	5
Total employment in manufacturing	208.8	222.9	238.9	248.1	256.6	270.4	265.5	266.9	23	4
Annual growth (percentage)		6.8	7.1	3.9	3.4	5.4	-1.8	0.5		

Source: Ministry of Industry.

Table 15. Salaries and wages, depreciation of fixed assets and gross profits in manufacturing industry, 1971-1979

Item	Amount (billions of soles)											
	1971		1975		1976		1977		1978		1979	
Manufacturing value added	73.7		156.5		220.7		293.2		504.7		877.4	
Wages, salaries	22.9	(31.1 %)	51.4	(32.8 %)	73.2	(33.2 %)	101.5	(34.6 %)	142.0	(28.1 %)	227.3	(25.9 %)
Depreciation	5.3	(7.2 %)	11.4	(7.3 %)	16.0	(7.3 %)	26.8	(9.1 %)	49.3	(9.8 %)	90.4	(10.3 %)
Gross profits	32.3	(43.8 %)	68.8	(44.0 %)	95.1	(43.2 %)	134.4	(45.9 %)	222.1	(44.0 %)	345.5	(39.4 %)

Source: Cuentas Nacionales del Peru, 1979.

Table 16. Labour productivity in manufacturing

	Item	Value added per worker (1978 soles)			Growth (percentage)
		1971	1976	1978	1971 - 1978
311-312	Processed foods, excluding fish products	437	369	251	- 43
313	Beverages	707	893	776	- 10
314	Tobacco products	3 286	2 750	2 667	- 19
321	Textiles	304	341	245	- 19
322	Clothing	157	157	90	- 43
323	Leather goods	179	250	181	- 1
324	Leather footwear	188	188	104	- 45
331	Wood products, excluding furniture	174	123	101	- 42
332	Furniture and accessories	136	180	102	- 25
341	Paper and paper products	396	409	300	- 24
342	Printing and publishing	237	179	69	- 71
351	Industrial chemicals	510	644	623	- 22
352	Other chemicals	409	579	368	- 10
353	Petroleum refining	1 900	714	1 190	- 37
354	Petroleum and coal products	1 000	1 000	1 000	-
355	Rubber products	560	576	273	- 51
356	Plastic products n.e.s.	272	350	193	- 29
361	Pottery, china and earthenware	286	389	278	- 3
362	Glass and glass products	189	261	111	- 41
369	Other non-metallic minerals	276	333	277	-
371	Basic ferrous metals	465	260	390	- 16
372	Basic non-ferrous metals	639	731	512	- 20
381	Metal products	224	226	142	- 27
382	Non-electrical machinery	267	347	228	- 15
383	Electrical machinery and appliances	393	517	433	- 10
384	Transport equipment	314	417	238	- 24
385	Scientific and other equipment	222	250	143	- 36
390	Jewellery and miscellaneous manufactures	250	260	130	- 48
	Total manufacturing	370	379	298	- 20

Source: Annex, tables 6 and 14.

Table 17. Regional distribution of industry[a/]

Item	1971			1977		
	Establishments	Employment	Production (billions of soles at current prices)	Establishments	Employment	Production (billions of soles at current prices)
Lima and Callao	4 790 (71.6%)	155 990 (74.7%)	85.6 (68.8%)	6 303 (70.5%)	195 670 (73.7%)	370.4 (68.1%)
Provinces	1 898 (28.4%)	52 800 (25.3%)	38.9 (31.2%)	2 642 (29.5%)	69 786 (26.3%)	173.3 (31.9%)
Total	6 688 (100.0%)	208 790 (100.0%)	124.5 (100.0%)	8 945 (100.0%)	265 456 (100.0%)	543.7 (100.0%)

Source: Ministry of Industry.

a/ Excluding the fish industry and including establishments with 5 or more employees.

Table 18. Gross fixed capital formation, 1971-1979

Item	Value (billions of soles at 1973 constant prices)									Growth (percentage)	
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1971-1975	1975-1979
National gross fixed capital formation	47.0	48.6	61.5	78.6	84.9	72.7	60.5	49.8	55.6	80.6	-34.5
Buildings	17.6 (37.4 %)	[illegible]	[illegible] (25.1 %)	23.6 (30.0 %)	23.3 (27.4 %)	22.1 (30.4 %)	22.2 (35.0 %)	18.4 (36.9 %)	17.9 (32.2 %)	32.4	23.2
Industrial machinery and equipment	11.1 (23.6 %)	10.8 (22.2 %)	14.2 (23.3 %)	19.8 (25.2 %)	19.6 (23.0 %)	17.6 (24.2 %)	14.5 (24.0 %)	[illegible] (19.3 %)	12.4 (22.3 %)	76.6	-36.7
National	4.2	3.9	4.0	4.8	4.9	5.1	4.9	4.2	4.4	16.7	-10.2
Imported	6.9	6.9	10.2	15.0	14.7	12.5	9.7	5.4	7.9	113.0	-46.3
Public enterprises	0.3	0.5	3.7	7.1	7.9	3.5	2.3	1.4	1.8	2 533.3	-78.2
Transport equipment	4.2 (8.9 %)	4.5 (9.3 %)	6.1 (9.9 %)	7.6 (9.7 %)	8.3 (9.8 %)	6.2 (8.5 %)	4.5 (7.4 %)	2.5 (5.0 %)	1.9 (3.4 %)	98.3	-77.1
National	3.1	3.8	5.0	5.3	5.6	5.4	3.7	1.3	1.3	80.6	-76.8
Imported	1.1	0.6	1.1	2.3	2.7	0.8	0.8	1.2	0.5	145.5	-81.5
Public enterprises	0.2	1.0	0.4	3.7	1.6	0.9	0.6	0.0	0.2	700.0	-87.5

Source: Cuentas Nacionales del Peru, 1979.

Table 19. Fixed investment in manufacturing

Item	1971 (millions of soles)		1975 (millions of soles)		1978 (millions of soles)		Share of total investment (percentage)			Share of total investment in machinery and equipment (equipment)		
	Total	Machinery and equipment	Total	Machinery and equipment	Total	Machinery and equipment	1971	1975	1978	1971	1975	1978
311 Processed foods, excluding fish products	774	381	1 935	1 206	10 648	4 494	18.8	10.0	21.8	14.8	10.5	19.4
313 Beverages	176	75	1 776	1 028	3 122	1 277	4.3	9.2	6.4	2.9	8.9	5.5
314 Tobacco products	18	10	90	63	172	59	0.4	0.5	0.4	0.4	0.5	0.3
321 Textiles	591	414	2 650	2 145	3 881	2 245	14.4	13.7	7.9	16.2	18.6	9.8
322 Clothing	48	34	182	119	203	79	1.2	0.9	0.4	1.3	1.0	0.3
323 Leather	34	25	67	35	199	100	0.8	0.3	0.4	1.0	0.3	0.4
324 Leather footwear	64	46	109	70	383	176	1.6	0.6	0.8	1.8	0.6	0.8
331 Wood products, excluding furniture	91	55	550	323	711	665	2.3	2.9	1.5	2.2	2.8	2.8
332 Furniture and accessories	43	31	112	76	157	122	1.0	0.6	0.3	1.2	0.7	0.5
341 Paper and paper products	88	65	300	196	4 260	1 904	2.2	1.6	8.7	2.5	1.7	8.2
342 Printing and publishing	61	37	337	265	1 041	566	1.5	1.7	2.1	1.5	2.3	2.4
351 Industrial chemicals	178	111	2 243	1 238	1 866	955	4.3	11.6	3.8	4.3	10.8	4.1
352 Other chemicals	204	90	738	278	3 436	1 737	5.0	3.8	7.0	3.5	2.4	7.5
353 Petroleum refining	144	113	1 147	1 124	937	444	3.5	5.9	1.9	4.4	9.8	1.9
354 Petroleum and coal products	-	-	1	-	36	30	-	-	0.1	-	-	0.1
355 Rubber products	44	31	288	226	631	285	1.1	1.5	1.3	1.2	2.0	1.2
356 Plastic products n.e.s.	186	139	790	590	2 033	1 070	4.5	4.1	4.1	5.3	5.1	4.6
361 Pottery, china and ea. thenware	8	4	126	77	93	8	0.2	0.7	0.2	0.2	0.7	-
362 Glass and glass products	34	23	453	119	926	838	0.8	2.3	1.9	0.9	1.0	3.6
369 Other non-metallic minerals	202	140	660	349	1 748	427	5.0	3.4	3.6	5.5	3.0	1.8
371 Basic ferrous metals	89	45	1 878	364	287	134	2.2	9.7	0.6	1.8	3.2	0.6
372 Basic non-ferrous metals	171	130	240	100	534	522	4.2	1.2	1.1	5.1	0.9	2.3
381 Metal products	211	152	719	451	5 081	2 084	5.1	3.6	10.4	5.9	3.9	9.0
382 Non-electrical machinery	133	81	497	260	3 329	1 504	3.2	2.5	6.8	3.2	2.3	6.6
383 Electrical machinery and appliances	155	124	555	339	1 227	581	3.8	2.8	2.5	4.8	2.9	2.5
384 Transport equipment	304	175	689	273	1 358	468	7.4	3.5	2.8	6.8	2.4	2.0
385 Scientific and other equipment	10	5	62	44	233	219	0.2	0.3	0.5	0.2	0.4	0.9
390 Jewellery and miscellaneous manufactures	41	21	207	148	340	214	1.0	1.1	0.7	1.1	1.3	0.9
Total	4 102	2 559	19 302	11 506	48 873	23 206	100.0	100.0	100.0	100.0	100.0	100.0

Source: Ministry of Industry.

Table 20. Fixed assets in manufacturing[a/]

Item	1971 (billions of soles)		1977 (billions of soles)		1971 share (percentage)		1977 share (percentage)	
	Total	Machinery and equipment	Total	Machinery and equipment	Of total assets	Of machinery and equipment	Of total assets	Of machinery and equipment
311-312 Processed foods, excluding fish products	5.43	2.63	30.12	12.30	13.2	10.1	14.2	10.7
313 Beverages	2.31	1.20	16.86	7.21	5.6	4.6	7.9	6.3
314 Tobacco products	0.24	0.10	0.58	0.26	0.6	0.4	0.3	0.2
321 Textiles	5.77	3.67	29.30	19.51	14.1	14.1	13.7	17.0
322 Clothing	0.31	0.15	1.61	1.00	0.8	0.6	0.8	0.9
323 Leather goods	0.26	0.12	0.89	0.50	0.6	0.5	0.4	0.4
324 Leather footwear	0.27	0.17	0.88	0.54	0.7	0.7	0.4	0.5
331 Wood products, excluding furniture	0.72	0.40	4.38	2.84	1.8	1.5	2.1	2.5
332 Furniture and accessories	0.30	0.15	0.76	0.39	0.7	0.6	0.3	0.3
341 Paper and paper products	2.36	1.78	6.67	4.43	5.7	6.8	3.1	3.9
342 Printing and publishing	0.85	0.51	3.17	2.13	2.1	2.2	1.5	1.9
351 Industrial chemicals	2.13	1.51	21.87	11.83	5.2	5.8	10.3	10.3
352 Other chemicals	1.67	0.66	7.19	2.54	4.1	2.5	3.4	2.2
353 Petroleum refining	1.34	1.07	10.02	8.05	3.3	4.1	4.7	7.0
354 Petroleum and coal products	0.03	0.02	0.22	0.19	0.1	0.1	0.1	0.2
355 Rubber products	0.51	0.24	2.52	1.36	1.2	0.9	1.2	1.2
356 Plastic products n.e.s.	0.82	0.52	5.93	3.98	2.0	2.0	2.8	3.5
361 Pottery, china and earthenware	0.27	0.12	1.37	0.67	0.7	0.5	0.6	0.6
362 Glass and glass products	0.38	0.25	2.36	1.76	0.9	1.0	1.1	1.5
369 Other non-metallic minerals	2.84	1.78	16.83	6.74	6.9	6.8	7.9	5.9
371 Basic ferrous metals	6.04	5.52	17.54	10.21	14.6	21.1	8.2	8.9
372 Basic non-ferrous metals	0.97	0.64	3.57	1.83	2.4	2.5	1.7	1.6
381 Metal products	1.29	0.77	7.23	4.40	3.1	3.0	3.4	3.8
382 Non-electrical machinery	0.61	0.34	5.45	2.47	1.5	1.3	2.6	2.2
383 Electrical machinery and appliances	1.03	0.62	5.23	2.66	2.5	2.4	2.5	2.3
384 Transport equipment	1.71	0.71	7.62	3.42	4.2	2.7	3.6	3.0
385 Professional and other equipment	0.08	0.03	0.85	0.37	0.2	0.1	0.4	0.3
390 Jewellery and miscellaneous manufactures	0.48	0.29	1.68	1.08	1.2	1.1	0.8	0.9
Total	42.02	26.06	212.71	114.71	100.0	100.0	100.0	100.0

Source: Ministry of Industry.

a/ End of year totals.

Table 21. Inputs of raw materials and components in manufacturing[a/]

Item	1971 (billions of soles)		(percentage	1974 (billions of soles)		(percentage	1978 (billions of soles)		(percentage
	Imports	Total	Share	Imports	Total	Share	Imports	Total	Share
311-312 Processed foods, excluding fish products	4.27	12.87	33	8.31	22.23	37	48.53	105.50	46
313 Beverages	0.30	1.57	19	0.72	2.60	28	7.28	14.38	[illegible]
314 Tobacco products	0.14	0.27	52	0.13	0.40	33	0.31	1.35	23
321 Textiles	1.57	7.54	21	1.74	14.83	12	5.15	39.59	13
322 [illegible]	0.08	1.19	7	0.05	2.22	2	0.07	6.15	1
323 Leather goods	0.25	0.65	38	0.40	1.26	32	0.84	3.16	26
324 Leather footwear	0.06	0.67	9	0.05	1.26	4	0.71	1.59	45
331 Wood products, excluding furniture	0.22	0.94	23	0.48	1.50	32	0.59	3.83	15
332 Furniture and accessories	0.08	0.54	15	0.10	0.98	10	0.54	1.82	29
341 Paper and paper products	0.56	1.94	29	1.10	3.48	32	1.77	13.03	14
342 Printing and publishing	0.68	1.14	60	0.84	1.62	52	1.30	6.59	20
351 Industrial chemicals	0.81	1.25	65	2.06	2.89	71	10.67	17.12	62
352 Other Chemicals	1.78	2.33	76	3.56	4.65	77	13.44	20.06	67
353 Petroleum refining	1.62	3.30	49	6.54	10.18	64	4.07	48.27	8
354 Petroleum and coal products	0.002	0.14	2	0.08	0.082	98	0.08	0.33	24
355 Rubber products	0.48	0.59	81	1.03	1.27	81	5.48	6.35	86
356 Plastic products n.e.s.	0.60	1.00	60	1.79	2.58	69	6.77	9.71	70
361 Pottery, china and earthenware	0.02	0.06	33	0.09	0.16	56	0.20	0.52	38
362 Glass and glass products	0.12	0.20	60	0.24	0.37	65	0.77	1.26	61
369 Other non-metallic minerals	0.19	0.68	28	0.42	1.25	34	2.73	10.64	26
371 Basic ferrous metals	0.58	1.28	45	0.81	3.10	26	3.95	7.88	50
372 Basic non-ferrous metals	0.19	2.72	7	0.42	8.51	5	0.25	27.51	1
381 Metal products	1.41	2.28	62	2.12	4.29	49	3.61	17.07	21
382 Non-electrical machinery	0.52	0.84	62	0.84	1.93	44	1.14	13.21	54
383 Electrical machinery and appliances	0.84	1.61	52	1.74	3.98	44	10.24	18.97	54
384 Transport equipment	2.83	3.73	76	5.15	8.38	61	6.98	12.90	54
385 Scientific and other equipment	0.08	0.11	73	0.14	0.26	54	1.24	1.70	73
390 Jewellery and miscellaneous manufactures	0.29	0.55	53	0.44	0.88	50	1.60	3.04	53
Total manufacturing	20.59	52.00	40	41.36	107.07	39	146.27	413.48	35

Source: Ministry of Industry and mission calculation.

a/ Includes only raw material and component inputs; other production inputs are power, fuel, packaging material [illegible] services. In 1978, materials and components were about 75 % of total production inputs.

Table 22. Value added as a percentage of gross value of production[a/]

	Item	Value added (percentage)							
		1971	1972	1973	1974	1975	1976	1977	1978
311-312	Processed foods, excluding fish products	38.9	37.1	38.4	38.6	42.5	40.8	38.8	30.2
313	Beverages	68.3	70.4	73.9	68.0	69.8	68.5	72.1	62.3
314	Tobacco products	84.2	83.6	82.9	67.3	22.9	79.7	81.4	81.2
321	Textiles	46.5	47.9	45.1	44.4	55.3	52.3	52.6	45.2
322	Clothing	49.2	49.6	51.9	50.0	52.0	51.8	53.8	35.6
323	Leather goods	37.2	38.1	40.3	41.9	41.1	44.0	44.6	39.7
324	Leather footwear	55.5	56.5	56.9	55.3	59.1	63.0	57.0	48.1
331	Wood products, excluding furniture	45.4	47.0	47.9	43.4	43.6	40.1	45.8	40.0
332	Furniture and accessories	53.2	51.9	56.0	53.0	56.2	56.5	55.1	51.2
341	Paper and paper products	41.8	40.5	43.4	43.6	47.6	50.0	42.7	32.1
342	Printing and publishing	58.0	60.5	60.3	60.0	60.7	58.6	59.1	39.4
351	Industrial chemicals	53.0	56.1	56.4	54.4	51.9	54.3	54.2	44.2
352	Other chemicals	54.7	54.6	54.5	54.7	53.4	56.4	52.8	39.1
353	Petroleum refining	47.2	43.3	38.1	13.2	29.0	26.3	25.0	50.5
354	Petroleum and coal products	28.0	10.8	33.3	15.5	57.7	41.6	35.2	35.2
355	Rubber products	64.8	64.2	61.5	55.1	61.9	58.4	52.1	40.2
356	Plastic products n.e.s.	53.3	56.8	54.0	52.4	52.2	56.2	49.6	42.4
361	Pottery, china and earthenware	71.0	55.1	66.8	63.0	65.4	64.2	68.1	55.0
362	Glass and glass products	65.8	66.5	68.6	68.0	62.4	64.3	62.1	52.4
369	Other non-metallic minerals	62.7	61.4	59.2	60.4	57.2	56.3	54.1	45.3
371	Basic ferrous metals	44.4	43.4	47.5	56.0	42.9	37.7	50.7	49.9
372	Basic non-ferrous metals	29.2	35.4	36.0	40.2	29.0	36.7	32.8	26.9
381	Metal products	49.2	49.2	50.4	52.1	55.6	52.2	49.7	35.7
382	Non-electrical machinery	63.1	58.2	58.2	58.1	55.3	59.8	51.3	45.8
383	Electrical machinery and appliances	54.6	55.1	53.3	52.2	50.2	53.7	54.5	49.4
384	Transport equipment	36.9	34.9	35.4	35.9	38.8	41.9	44.6	44.4
385	Scientific and other equipment	53.2	52.9	53.7	51.5	56.0	53.6	54.8	42.1
390	Jewellery and miscellaneous manufactures	56.3	57.6	59.2	57.8	56.8	62.1	59.8	44.4
Total manufacturing		48.6	48.5	48.7	46.5	48.1	48.9	47.4	42.1

Source: Ministry of Industry.

a/ Includes establishments with 5 or more employees.

Table 23. Outstanding comme cial and savings bank loans to industry according to priority and industry category in 1979

Item	Outstanding loans to industry in 1979 (millions of soles)				
	First priority	Second priority	Third priority	No priority	Total
Export industry	5.982 (6.2%)	5.698 (5.9%)	0.163 (0.2%)	44 (0.1%)	11.887 (12.4%)
Import substitution industry	13.018 (13.5%)	44.377 (46.1%)	3.219 (3.3%)	216 (0.2%)	60.830 (63.1%)
Other industry	6.082 (6.3%)	11.974 (12.5%)	4.895 (5.1%)	589 (0.6%)	23.540 (24.5%)
Total	25.082 (26.0%)	62.049 (64.5%)	8.277 (8.6%)	849 (0.9%)	96.257 (100.0%)

Source: Superintendencia de Banca y Seguros.

Table 24. Credit approvals to manufacturing industry by the Industrial Bank

Item		Credits (billions of soles)								1979 share (percentage)
		Ordinary		Small-scale industry		Export		Total		
		1978	1979	1978	1979	1978	1979	1978	1979	
311-312	Processed foods[a]	1.13	1.01	0.38	0.71	0.39	1.06	1.90	2.78	17.9
313	Beverages	0.01	0.01	0.07	0.08	0.01	0.01	0.08	0.09	0.6
314	Tobacco products	-	-	-	-	-	-	-	-	-
321	Textiles	0.70	4.44	0.13	0.17	1.20	0.05	2.03	5.69	36.6
322	Clothing									
323	Leather goods	0.04	0.06	0.21	0.42	0.05	0.09	0.30	0.57	3.6
324	Leather footwear									
331	Wood products, excluding furniture	0.13	0.02	0.17	0.38	0.10	0.14	0.40	0.54	3.5
332	Furniture and accessories	0.03	0.02	0.09	0.15	0.03	0.01	0.15	0.18	1.2
341	Paper and paper products	0.01	0.07	0.02	0.10	0.01	0.01	0.03	0.17	1.1
342	Printing and publishing	0.15	0.13	0.11	0.18	0.01	0.02	0.26	0.33	2.1
351	Industrial chemicals	0.21	0.41	0.13	0.11	0.30	0.19	0.64	0.71	4.5
352	Other chemicals									
353	Petroleum refining	-	-	-	-	-	-	-	-	-
354	Petroleum and coal products	-	-	-	-	-	-	-	-	-
355	Rubber products	0.04	0.22	0.06	0.03	0.01	0.06	0.10	0.31	2.0
356	Plastic products n.e.s.	-	-	-	-	-	-	-	-	-
361	Pottery, china and earthenware									
362	Glass and glass products	0.12	0.45	0.07	0.12	0.13	0.13	0.32	0.70	4.5
369	Other non-metallic minerals									
371	Basic ferrous metals	0.06	0.21	0.01	0.07	0.01	0.07	0.08	0.35	2.2
372	Basic non-ferrous metals									
381	Metal products	0.41	0.67	0.20	0.24	0.09	0.12	0.70	0.43	2.7
382	Non-electrical machinery	0.22	0.09	0.14	0.19	0.02	0.24	0.38	0.52	3.4
383	Electrical machinery and appliances	0.09	0.06	0.07	0.06	0.65	0.21	0.81	0.33	2.1
384	Transport equipment	0.75	0.26	0.16	0.23	1.25	0.93	2.16	1.44	9.3
385	Scientific and other equipment	-	-	-	-	-	-	-	-	-
390	Jewellery and miscellaneous manufactures	0.51	0.15	0.17	0.14	0.10	0.14	0.78	0.43	2.7
Total		4.60	7.68	2.21	3.47	4.32	4.52	11.13	15.67	100.0

Source: Industrial Bank.

a/ Credits of 0.60 billion soles in 1979 and 0.90 billion soles in 1978 to fish-processing industries are included in the ordinary credits.

Table 25. Disbursements of the Non-traditional Exports Fund (FENT)

	Item	Disbursements (billions of soles)							1979 share (percentage)
		1973	1974	1975	1976	1977	1978	1979	
311-312	Processed foods, excluding fish products	-	-	-	-	-	2.11	4.32	18.0
313	Beverages	-	-	-	-	-	0.02	0.03	0.1
314	Tobacco products	-	-	-	-	-	0.01	-	-
321	Textiles	-	-	-	-	-	5.01	10.25	42.5
322	Clothing	-	-	-	-	-	0.18	0.44	1.8
323	Leather goods	-	-	-	-	-			
324	Leather footwear	-	-	-	-	-			
331	Wood products, excluding furniture	-	-	-	-	-	0.03	0.98	4.1
332	Furniture and accessories	-	-	-	-	-	-	0.06	0.3
341	Paper and paper products	-	-	-	-	-	0.57	0.03	0.1
342	Printing and publishing	-	-	-	-	-	0.01	0.03	0.1
351	Industrial chemicals	-	-	-	-	-	0.81	1.69	7.0
352	Other chemicals	-	-	-	-	-			
353	Petroleum refining	-	-	-	-	-	-	-	-
354	Petroleum and coal products	-	-	-	-	-	-	-	-
355	Rubber products	-	-	-	-	-	0.21	0.44	1.8
356	Plastic product n.e.s.	-	-	-	-	-	-	-	-
361	Pottery, china and earthenware	-	-	-	-	-	0.39	0.59	2.5
362	Glass and glass products	-	-	-	-	-			
369	Other non-metallic minerals	-	-	-	-	-			
371	Basic ferrous metals	-	-	-	-	-	0.53	1.44	6.0
372	Basic non-ferrous metals	-	-	-	-	..			
381	Metal products	-	-	-	-	-	0.16	0.30	1.2
382	Non-electrical machinery	-	-	-	-	-	0.28	0.21	0.9
383	Electrical machinery and appliances	-	-	-	-	-	0.60	1.33	5.5
384	Transport equipment	-	-	-	-	-	0.22	0.46	1.9
385	Scientific and other equipment	-	-	-	-	-	-	-	-
390	Jewelery and miscellaneous manufactures		-	-	-	-	0.33	0.57	2.4
	Agricultural and other products	-	-	-	-	-	0.58	0.91	3.8
Total		1.37	2.51	3.14	4.63	7.39	12.04	24.09	100.0

Source: Industrial Bank.

Table 26. Manufactured exports

Item	Value (millions of dollars)									Share (percentage)	
	1973	1974	1975	1976	1977	1978	1979 1/	Jan-May 1979 a/	Jan-May 1980 a/	1973	Jan-May 1980
Food, beverages, tobacco	25.4	14.1	9.5	12.1	21.4	43.0	76.1	28.1	25.9	25.3	8.0
Fish products	10.1	14.8	10.9	18.8	21.8	56.4	119.8	34.6	60.8	10.1	18.9
Textiles, garments	15.5	25.0	15.0	28.4	50.1	111.3	178.8	65.7	72.0	15.5	22.3
Leather						3.0	8.6	2.4	4.9		1.5
Wood products, furniture	2.2	2.3	0.6	2.0	4.5	13.4	20.8	9.1	4.1	2.2	1.3
Paper, printing	2.2	3.1	1.9	3.8	3.6					2.2	
Chemicals	9.7	14.7	7.2	13.9	38.6	31.2	54.6	20.1	23.1	9.7	7.2
Non-metallic minerals	1.7	1.5	0.8	1.8	2.6	28.9	51.2	18.4	24.9	1.7	7.7
Basic metals	26.1	48.4	15.8	12.7	14.8	38.8	75.0	25.8	31.7	26.0	9.8
Metal products, machinery	5.0	13.1	18.2	18.0	36.6	37.8	68.5	31.5	24.5	5.0	7.5
Artisan products	2.3	2.3	3.2	5.4	4.1	7.4	35.0	5.0	8.9	2.3	2.8
Other manufactures						11.7	37.6	6.4	41.8		13.0
Total manufactured exports	100.2	139.3	83.1	116.9	198.1	382.8	724.7	247.1	322.6	100.0	100.0
Total non-traditional exports	112.8	151.3	95.8	136.9	223.9	382.8	724.7	247.1	390.0		
										9.6 b/	18.7 b/
Total exports	1 041.1	1 505.3	1 313.0	1 302.0	1 654.2	1 781.8	3 158.0	1 140.3	1 728.9	100.0	100.0

Source: Ministry of Industry, Central Bank.

a/ Export registrations.

b/ Share of manufactured exports in total exports.

Table 27. Manufactured imports (f.o.b.)

	Item	Value (millions of dollars)						Share (percentage)		
		1974	1975	1976	1977	1978	1979	1974	1978	1979
311-312	Processed foods, excluding fish products	99.1	136.3	109.6	105.6	105.4	99.6	9.1	9.6	9.2
313	Beverages	6.4	13.9	9.3	7.1	4.8	3.9	0.6	0.4	0.4
314	Tobacco products	-	-	-	0.1	-	-	-	-	-
321	Textiles	13.6	17.8	10.2	6.6	5.8	6.7	1.2	0.5	0.6
322	Clothing	0.2	0.9	0.6	1.9	1.2	0.1	-	0.1	-
323	Leather goods	0.4	0.7	0.1	0.1	0.1	0.2	-	-	-
324	Leather footwear	-	-	-	-	-	-	-	-	-
331	Wood products, excluding furniture	5.2	9.4	4.7	3.2	2.7	3.3	0.5	0.3	0.3
332	Furniture and accessories	0.2	0.2	0.2	0.1	0.2	0.4	-	-	-
341	Paper and paper products	42.4	44.3	29.2	30.9	26.8	25.3	3.9	2.4	2.3
342	Printing and publishing	18.7	20.1	17.7	14.5	15.8	7.4	1.7	1.4	0.7
351	Industrial chemicals	172.3	300.9	182.8	185.4	185.9	207.0	15.8	16.9	19.1
352	Other chemicals	39.6	64.1	51.4	42.0	45.1	41.7	3.6	4.1	3.9
353	Petroleum refining	34.5	59.8	48.0	88.2	48.9	27.0	3.2	4.4	2.5
354	Petroleum and coal products	3.6	20.1	6.8	11.1	12.1	11.8	0.3	1.1	1.1
355	Rubber products	12.5	21.4	16.3	16.0	15.6	17.3	1.1	1.5	1.6
356	Plastic products n.e.s.	1.7	2.5	1.6	1.3	1.5	1.1	0.2	0.1	0.1
361	Pottery, china and earthenware	0.5	1.1	1.0	1.1	1.0	1.1	-	0.1	0.1
362	Glass and glass products	6.1	12.4	8.0	5.9	5.4	4.9	0.6	0.5	0.4
369	Other non-metallic minerals	4.6	10.2	9.1	8.6	7.3	6.6	0.4	0.7	0.6
371	Basic ferrous metals	101.5	172.1	80.2	72.7	74.2	53.9	9.3	6.7	5.0
372	Basic non-ferrous metals	18.7	19.7	15.3	18.4	17.4	18.6	1.7	1.6	1.7
381	Metal products	38.2	63.1	58.1	54.9	37.0	32.4	3.5	3.3	2.9
382	Non-electrical machinery	271.9	411.4	372.7	280.2	263.2	283.3	24.9	23.9	26.1
383	Electrical machinery and appliances	80.6	106.7	106.0	81.1	81.8	86.1	7.4	7.4	8.0
384	Transport equipment	78.5	190.0	178.2	174.8	100.9	121.9	7.2	9.9	11.2
385	Scientific and other equipment	31.4	35.8	36.3	25.7	25.3	19.0	2.9	2.3	1.7
390	Jewellery and miscellaneous manufactures	9.5	12.7	7.2	7.8	8.9	5.5	0.9	0.8	0.5
	Total manufactured imports	1 091.3	1 747.6	1 360.6	1 245.5	1 102.4	1 086.1	100.0	100.0	100.0
	Total imports[a/]	1 275.4	2 135.3	1 747.9	1 621.9	1 252.3	1 274.6	85.6[c/]	88.0[c/]	85.2[c/]

Source: Ministry of Finance (Customs).

a/ Excluding military equipment.

b/ Only Lima port entry (about 70% of total).

c/ Share of manufactured imports in total imports.

Table 28. Pattern of import substitution and export orientation

Item	1975 Value (billions of sales)					1978 Value (billions of sales)					Export orientation (percentage)				Import-dependency (percentage)		Supply-balance (percentage)	
	Gross production (1)	Exports c/ (2)	Imports f.o.b. (3)	Exports (4)	Domestic supply (5)	Gross production (6)	Exports (7)	Imports f.o.b. (8)	Exports (9)	Domestic supply (10)	1975 (4)/(1)	1978 (9)/(6)	1975 (4)/(5)	1978 (9)/(10)	1975 (3)/(5)	1978 (8)/(10)	1975 (4)-(3)	1978 (9)-(8)
Food, beverages, tobacco a/	77.90	6.50		0.41	85.01	254.50	17.07		6.74	249.03	0.5	2.6	0.5	2.5	7.8	6.6	6.1	39.6
Textiles	49.30	0.04		0.09	49.49	170.90	1.10		17.91	186.09	1.4	14.6	1.4	16.9	1.0	1.0	77.4	1 686.2
Wood products	7.00	0.61		0.03	7.58	13.80	0.45		1.18	12.67	0.4	8.9	0.4	9.5	5.4	3.6	7.1	262.9
Paper products	16.61	2.00		0.08	17.32	49.70	6.08		0.93	99.65	0.5	1.9	0.5	1.7	16.2	18.0	9.9	7.2
Chemicals	37.00	20.36		0.36	77.03	251.90	48.44		4.89	209.45	0.5	1.9	0.4	1.6	96.4	19.5	1.5	10.1
Non-metal products	10.00	1.02		0.04	10.98	30.90	2.15		4.93	35.92	0.4	11.6	0.4	12.4	9.3	5.9	1.9	810.7
Basic metals	80.00	8.32		0.09	88.43	80.90	14.37		6.08	90.79	3.3	7.4	2.4	6.7	89.3	19.8	8.1	42.3
Metal products	90.70	20.01		0.79	86.90	240.00	80.10		5.90	216.86	1.3	4.8	0.9	2.7	60.3	37.0	9.3	7.4
Other industry & artisan products	3.00	0.54		0.14	3.60	7.70	1.30		3.00	6.60	4.4	38.7	3.9	49.4	15.0	28.7	85.9	217.4
Total	888.70	79.00		3.14	961.26	977.00	170.00		51.10	1 220.00	1.1	4.8	0.9	4.3	21.0	19.6	4.1	27.4
Total (national accounts) b/	930.70	79.00	17.10	3.00	940.70	1 220.00	170.00	39.30	50.97	1279.93	1.0	4.9	0.8	4.2	21.8	15.3	3.9	23.4
Total (national accounts) d/	930.70	81.70	17.10	3.00	926.00	1 220.00	200.40	39.30	50.97	1400.00	1.0	4.9	0.8	4.3	20.0	17.1	3.9	29.8

Note: The following exchange rates were used: $1 = S43.38 in 1975; and $1 = S 156.65 in 1978.

a/ Excludes fish products.

b/ Includes fish products.

c/ Imports f.o.b.

d/ Includes 21% (1975) and 17% (1978) for insurance and freight.

Table 29. Imports according to economic use

Item	1974		1976		1978		Jan.-June 1980 c/	
	Amount (millions of dollars)	Share (percentage)	Amount (millions of dollars)	Share (percentage)	Amount (millions of dollars)	Share (percentage)	Amount (millions of dollars)	Share (percentage)
Consumer goods	185.9	9.2	195.2	9.4	116.7	7.9	146.8	13.6
Consumer durables	62.9	3.1	80.9	3.9	46.2	3.1	26.7	2.5
Raw materials and intermediate products	1103.6	54.4	1070.6	51.7	771.2	52.6	499.4	46.2
For industry a/	829.7	40.9	658.3	31.8	638.9	43.5	450.4	41.7
Capital goods	733.0	36.1	801.7	38.7	577.6	39.3	433.9	40.2
For industry	520.9	25.7	560.4	27.1	379.9	25.9	298.7	27.7
For transport equipment	108.3	5.3	158.4	7.7	113.5	7.7	105.7	9.8
Other	6.2	0.3	5.0	0.3	2.6	0.2	-	-
Total imports b/ (c.i.f.)	2 028.7	100.0	2 072.5	100.0	1 468.1	100.0	1 080.1	100.00

Source: Central Bank, and Ministry of Finance.

a Except fuels.
b Excluding military equipment.
c Preliminary f.o.b. value.

Table 30. Major manufactured export products

Product	Value (millions of dollars)								Share (percentage)			
	1973	1974	1975	1976	1977	1978	1979 b/	Jan.-May 1980 b/	1973	1976	1979	Jan.-May
Canned fish	7.9	5.0	4.0	7.6	15.8	23.4	47.9	25.0				
Frozen fish	-	10.2	8.5	14.8	17.7	22.2	31.0	19.7	9	19	14	17
Other manufactures based on fish a/	1.0	1.5	0.1	-	0.1	-	21.9	8.8				
Alpaca tops	4.6	4.2	6.1	11.2	13.4	11.7	25.6	...				
Cotton yarn	0.1	0.4	0.1	3.3	9.5	18.8	32.5	12.4				
Nets of synthetic cord	4.5	7.4	0.5	4.1	9.0	8.0	7.4	...	10	17	17	...
Cotton cloth	0.6	2.0	0.4	0.9	12.1	27.5	46.4 c/	14.9				
Garments	-	0.1	0.1	0.1	0.8	0.3	10.0 c/	9.1				
Sawn wood	1.2	0.9	0.4	1.1	2.3	...	4.4	1.4	1	1	1	1
Acrylic fibre	0.3	1.7	1.2	4.1	7.3	9.0	13.6	...	-	4	2	...
Cement	1.3	0.6	0.1	0.2	1.7	10.3	31.1	16.2	4	5	6	7
Barite	2.6	3.4	4.1	5.6	6.7	7.2	12.1	5.2				
Copper wire	0.2	0.2	5.9	2.8	8.7	4.5	13.4	6.2				
Copper bars	7.8	11.8	0.1	0.3	0.8	12.3	11.4	3.6	17	4	5	4
Zinc manufactures	9.1	16.6	4.9	1.7	1.2	3.3	13.3	4.3				
Fishing boats	1.4	6.7	11.5	8.5	23.7	13.4	24.6	6.5	2	7	4	3
Dry batteries	0.3	0.5	0.1	0.1	0.6	2.0	5.8	2.0				
Silver jewellery	-	-	-	-	-	-	8.1	7.6	-	-	5	12
Gold jewellery	0.1	-	-	-	-	0.3	24.9	30.9				
Total	43.0	73.2	48.1	66.4	132.0	174.2	385.4	174.0	43	57	53	45
Total manufactures	100.2	139.3	83.1	116.9	198.1	382.8 d/	724.7 d/	390.0 d/				

Source: Ministry of Industry.

a/ Preparados alimenticios para animales (animal feedstuffs).
b/ Registrations.
c/ Estimates based on January-September figure.
d/ Total non-traditional exports.

Table 31. Nominal and real exchange rates, 1970-1980

Year	Nominal exchange rate, period average (soles per dollar)	Consumer price index in Peru	Consumer price index in the United States	Real exchange rate (soles per dollar)
1970	38.7	100.0	100.0	38.7
1971	38.7	106.8	104.3	37.8
1972	38.7	114.5	107.7	36.4
1973	38.7	125.4	114.4	35.3
1974	38.7	146.5	127.0	33.1
1975	40.8	181.2	138.6	31.2
1976	57.5	241.9	146.6	34.8
1977, quarter				
I	71.8	297.1	152.0	36.7
II	77.1	318.9	155.4	37.6
III	80.8	354.0	157.6	36.0
IV	105.5	368.6	159.4	45.6
1978, quarter				
I	130.3	417.3	162.0	50.6
II	141.9	488.2	166.3	48.3
III	165.8	569.0	170.2	49.6
IV	187.4	633.8	173.5	51.3
1979, quarter				
I	203.4	720.5	178.0	50.3
II	218.6	820.5	184.1	49.0
III	232.2	921.2	190.2	47.9
IV	244.0	1 052.4	195.7	45.4
1980				
First quarter	258.2	1 164.9	203.3	45.1
March	263.5	1 205.9	206.2	45.1

Source: International Monetary Fund, International Financial Statistics; mission calculations.

Table 32. Distribution of import restrictions by tariff classification group

Product description[a/]	Import restrictions (number of items)																							
	10 October 1979				21 November 1979				4 December 1979				15 May 1980				25 July 1980				15 August 1980			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Products of animal origin	31	0	45	63	7	0	46	86	0	0	28	111	0	0	24	115	0	0	24	115	0	0	24	115
Products of vegetable origin	11	1	71	150	1	1	71	160	0	0	30	203	0	0	29	204	0	0	28	205	0	0	28	205
Animal fats	3	5	27	50	0	5	27	53	0	0	5	80	0	0	4	81	0	0	3	82	0	0	3	82
Foods, beverages	5	1	24	178	0	1	27	180	0	0	13	195	0	0	9	200	0	0	9	200	0	0	8	201
Mineral products	0	3	25	127	0	3	25	127	0	0	20	135	0	0	17	138	0	0	17	138	0	0	16	139
Chemicals	11	56	99	1132	0	56	102	1140	0	0	146	1152	0	0	73	1265	0	0	58	1280	0	0	39	1299
Rubber products	1	8	30	127	0	8	30	128	0	0	34	132	0	0	13	159	0	0	10	164	0	0	2	172
Leather products	0	0	0	58	0	0	0	58	0	0	0	58	0	0	0	58	0	0	0	58	0	0	0	58
Wood products	0	1	2	75	0	1	2	75	0	0	3	75	0	0	0	78	0	0	0	78	0	0	0	78
Paper, paper products	7	3	32	98	0	3	35	102	0	0	32	108	0	0	5	139	0	0	5	140	0	0	5	140
Textile, clothing	180	3	88	110	4	3	257	117	4	0	225	152	4	0	7	374	4	0	7	375	4	0	7	375
Footwear	17	0	6	8	0	0	10	21	0	0	5	26	0	0	1	30	0	0	0	31	0	0	0	31
Clay, cement, glass and glass product	1	12	29	94	0	12	30	94	0	0	36	100	0	0	17	123	0	0	9	131	0	0	0	140
Jewellery	20	0	11	5	0	0	11	25	0	0	5	31	0	0	4	32	0	0	4	32	0	0	4	32
Metal, metal products	6	49	105	310	0	49	114	307	0	0	160	310	0	0	26	447	0	0	16	458	0	0	0	474
Electrical, non-electrical machinery	26	129	179	483	0	125	226	466	0	0	347	470	0	0	122	707	0	0	98	735	0	0	8	825
Transport equipment	49	17	44	76	10	17	64	95	2	0	84	100	2	0	4	136	2	0	34	151	2	0	6	179
Scientific and other equipment	8	7	29	223	0	7	32	228	0	0	37	230	0	0	12	255	0	0	9	259	0	0	4	264
Armaments	4	1	11	4	3	1	11	5	3	0	12	5	3	0	12	5	3	0	11	6	3	0	11	6
Miscellaneous	0	0	31	67	0	0	36	66	0	0	36	66	0	0	1	101	0	0	1	101	0	0	0	102
Art objects	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6	0	0	0	6
Total	384	296	888	3 444	25	292	1156	3 444	9	0	1258	3 745	9	0	425	4 653	9	0	343	4 745	9	0	165	4 923

Source: Ministry of Commerce.

Note: A- Import prohibition; B- Temporary import prohibition; C- Administration restriction; D- Not restricted.

a/ NABANDINA (Tariff nomenclature of the Andean Pact).

Table 33. Average, minimum and maximum tariff rates by main trade classification group

Product description[a]	Number of items	Tariff rates[b] (percentage ad valorem) 16 October 1979 Average	Minimum	Maximum	26 March 1980 Average	Minimum	Maximum	15 August 1980 Average	Minimum	Maximum
Products of animal origin	139	42.8	5 (23.8)	96	35.4	5 (21.4)	86	35.4	5 (21.4)	86
Products of vegetable origin	233	53.4	10 (25.4)	106	45.6	10 (23.1)	96	36.7	10 (15.8)	91
Edible fats	85	41.7	15 (10.2)	61	31.9	15 (9.7)	51	31.7	10 (9.9)	51
Food, beverages	208	87.1	20 (28.1)	131	77.6	11 (27.4)	121	63.0	11 (23.8)	121
Mineral products	155	26.6	0 (11.2)	51	19.5	0 (8.9)	41	19.5	1 (8.9)	41
Chemicals	1298	32.4	0 (13.5)	111	24.8	0 (11.5)	101	25.3	0 (12.4)	101
Rubber products	166	43.8	10 (17.5)	101	38.6	10 (15.8)	91	41.2	10 (17.8)	91
Leather products	58	80.7	26 (30.6)	131	70.7	16 (30.6)	121	70.7	16 (30.6)	121
Wood products	78	48.2	20 (20.1)	91	38.9	11 (19.6)	81	39.1	11 (19.6)	81
Paper, paper products	140	54.2	0 (29.1)	111	46.2	0 (26.0)	101	46.9	0 (26.5)	101
Textile, clothing	381	81.8	25 (30.5)	131	76.2	21 (35.0)	141	69.7	16 (29.1)	121
Footwear	31	103.6	61 (12.1)	111	93.2	51 (12.1)	101	93.9	51 (11.9)	101
Clay, cement, glass	136	55.1	15 (24.1)	111	46.8	10 (21.8)	101	47.3	10 (22.1)	101
Jewellery	36	75.0	0 (49.0)	161	65.3	0 (48.3)	151	65.3	1 (48.5)	151

Table 33 (continued)

Product description [a]	Number of items	Tariff rates [b] (percentage ad valorem) 16 October 1979 Average	Minimum	Maximum	26 March 1980 Average	Minimum	Maximum	15 August 1980 Average	Minimum	Maximum
Metal, metal products	470	43.8 (19.1)	5	91	36.3 (17.4)	5	90	37.8 (18.7)	5	91
Machinery	817	35.3 (17.7)	5	110	33.3 (17.5)	5	110	35.3 (20.1)	5	111
Transport equipment	186	39.5 (32.6)	0	155	39.2 (32.2)	0	155	37.8 (27.0)	1	151
Scientific and other equipment	267	42.9 (21.0)	10	91	39.7 (19.7)	10	91	40.2 (19.9)	10	91
Armament	20	49.6 (23.2)	0	81	41.1 (19.8)	0	71	41.3 (19.5)	1	71
Miscellaneous		65.6 (21.2)	25	111	57.1 (19.3)	25	101	58.3 (19.4)	55	101
Art objects	6	10.0 (0.0)	10	10	10.0 (0.0)	10	10	11.0 (0.0)	11	11
Total	5 012	45.9 (27.4)	0	161	39.7 (26.5)	0	155	38.9 (24.4)	0	151

Source: Ministry of Trade.

a/ NABANDINA (Tariff nomenclature of the Andean Pact).

b/ Standard deviation within parentheses.

Table 34. Non-tariff restrictions on trade

Item	Number of products				
	1978	March 1979	Oct. 1979	March 1980	August 1980
Total[a/]	4 643	4 643	5 012	5 062	5 097
Not restricted	1 753	1 753	2 969	4 124	4 923
Prohibited	1,852	1,313	384	9	9
Temporary prohibition	-	539	293	-	-
Restricted	1 038	1 038	1 366	929	165
Imported only by the public sector	58	58	61	58	55
Requiring prior approval					
From the Ministry of Agriculture	24	24	45	46	49
From the Ministry of Industry	262	262	934	793	26
From the Ministry of the Navy	2	2	6	6	6
From the Ministry of Energy	2	2	2	2	2
From the Ministry of the Interior	10	10	11	11	11
From the Ministry of Health	9	9	8	8	8
Imported only by authorized firms	125	125	1	3	4
Prior approval from the Ministry of Fisheries	1	1	2	-	-
Special cases	6	6	3	2	4

Source: Ministerio de Economia, Finanzas y Comercio (Ministry of the Economy, Finance and Trade).

a/ NABANDINA (Tariff nomenclature of the Andean Pact).

Table 35. Frequency distribution of Peruvian tariff rates, 1980

Range (ad valorem tariff)	Number of Products	Share (percentage)	Cumulative share (percentage)
0 - 9	156	3.1	3.1
10 - 19	667	13.1	16.2
20 - 29	1 426	28.1	44.3
30 - 39	902	17.8	62.1
40 - 49	500	9.9	72.0
50 - 59	366	7.2	79.2
60 - 69	412	8.1	87.3
70 - 79	215	4.2	91.5
80 - 89	159	3.1	94.6
90 - 99	116	2.3	96.9
100 - 109	100	2.0	98.9
110 - 119	12	0.2	99.1
120 - 129	51	1.0	100.0

Source: Ministry of Commerce.