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EVALUATION REPORT ON INDUSTRIAL ESTATES NO. 8
ARGENTINA ^{1/}

by

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^{1/} The views and opinions expressed in this paper are those of the consultant and do not necessarily reflect the views of the secretariat of UNIDO or of the Swedish International Development Authority (SIDA), under whose joint auspices the study was undertaken. This document has been reproduced without formal editing.

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INTRODUCTION

This study of the contribution of industrial estates in Argentina to the nation's industrial development is part of a programme of studies undertaken by the United Nations Industrial Development Organization. The first phase was carried out in the autumn of 1975; the present study, carried out by Mr. C.R. Wynne-Roberts, Consultant, was made during the second phase, 27 September to 8 October 1976.

The study was undertaken at very short notice and this contributed to some of the problems encountered. Nonetheless, everyone concerned showed immense interest and goodwill and went out of their way to make it a success. It was supported by Ing. Carlos Pozzo, Director of Regional Development, Federal Ministry of Industrial Development, who made the necessary arrangements with the provincial government agencies, without which the study could never have been made. Mention must also be made of Arq. Jorge Marillo, Director of the Centro de Desarrollo, Rosario (CENDES), who put his facilities at the disposal of the consultant and arranged contacts with industrialists.

Dr. Osvaldo Tatti, Under-Secretary for Industry of Chubut Province, personally briefed the consultant team. Special mention has to be made of Ing. Juan José Vazquez of this Ministry who gave up much of his spare time to ensuring the maximum information on Trelew and the Province generally. Although under great pressure, Mr. Rubén Roussillon, Director of the Neuquen Industrial Estate, took time off to give the team a conducted tour of the estate and answer the questions put to him. The Manager of the Lago Verde S.A., proprietors of the Oks and Pilar Industrial Areas in Buenos Aires Province, Santiago, Mr. N. Bonfanti, devoted most of one day to conducted tours and supplying information. A very useful discussion was held with Dr. Oscar Mercollini of the Municipality of Bahia Blanca on the proposed estate there.

During the whole tour the consultant was accompanied by Ing. Raul Peñaherrera, Project Manager of the UNIDO Small-scale Industries Project attached to CENDES in Rosario. His help in the administration and organization of the tour and his knowledgeable companionship throughout were critically important to its successful completion. Other UNIDO colleagues contributed valuable insights.

Mr. Carlos Navajas Mogro, UNDP Resident Representative in Buenos Aires undertook successfully the negotiations on behalf of the mission at very short notice and gave his encouragement at all stages. Miss Sarah Timpson, Deputy Resident Representative, had special responsibility for the project.

The study was directed at UNIDO Headquarters by Mr. Hans Fahlstrom, Deputy Director of the Industrial Operations Division.

CONCLUSIONS

1. There is not at present a coherent national programme of industrial estates in Argentina, although the Federal Government has encouraged and is actively encouraging their establishment through a programme of financial and fiscal incentives to provincial governments. A few estates, public and private are in operation or part-operation; many are under construction or at the project stage. Certain provincial governments are active in this respect.
2. Because of the short duration of the study mission and the size of the country, visits had to be made on a "sampling" basis. Three types of industrial estate or industrial area were visited, namely:
 - promotional, (Trelew, Neuquen)
 - developmental/dispersal, (Santa Fe Province estates),
 - dispersal, (Buenos Aires private areas).
3. The Trelew Industrial Estate is proving successful in attracting industry to the region and thus fulfilling the stated objectives of the Chubut Government, which are to encourage immigration and build up the economic strength of the province, at present largely dependent on petroleum production. This has been achieved by a combination of pull-factors - considerable financial and fiscal incentives, prepared land at very low prices and availability of suitable land in the major urban areas, especially Buenos Aires. To some extent Trelew may be regarded as a rival to the Buenos Aires private industrial areas. It may be noted that the materials and products of the firms migrated to Trelew are mostly light weight and of relatively high unit value, thus offsetting distances to be transported from raw material supply centres and markets. The Neuquen Estate, with similar aims but a somewhat different industrial make-up, seems likely to succeed.
4. The Santa Fé Province Estates, with San Francisco, are now accepted by local industrialists and seem likely to succeed. Push-factors include difficulties of expansion in existing urban premises, strong in Rosario, somewhat less pressing in the smaller towns. Pull-factors are the financial and fiscal incentives and cheap land. However, these estates have suffered in the past from changes in provincial government policies and their implementation has been delayed, causing discouragement. Their

initiation and progress has, in the main, been due to the persistence and leadership of a few enlightened industrialists, who have seen the possibilities offered. A further pull-factor which has come to be recognised by many potential members, are the benefits of closer businessco-operation, division of labour and of markets and common services, including purchasing, warehousing, marketing and technical assistance.

5. The Buenos Aires private industrial areas present considerable advantages to the medium and large-sized firm wishing to leave the city or to set up new factories within easy reach of markets and imported material supplies, especially in heavier industries. Their success is based solely on their commercial viability and the fact that they enable firms to start production much earlier than they could normally do if they had to buy and prepare their own land.

Economic Effects

6. The economic effects of the Trelew Estate on the town are already visible. It has brought into economic activity an important group, namely, females, who were previously more or less excluded from regular employment. The town has further benefitted from the immigration of labour from other provinces and from abroad and from the considerable increase in the use of local services of all kinds by businessmen, contractors and others visiting the factories. To a less extent, (because it is a larger town), Neuquen should begin to feel similar effects as the estate grows.

7. The economic benefits of the Santa Fe estates will be felt first by the firms themselves, since there is already full employment. Output with the same labour forces will probably greatly increase due to improved production organization in the new factories and economies arising from the rationalization of production and products and reduced overheads through the use of common services. Later there may be increased employment opportunities for workers from the surrounding rural areas.

8. Apart from the benefits of expansion to the firms themselves, the Buenos Aires industrial areas should provide increased employment. This may be particularly important in the Pilar area, since it will draw labour from villages and towns normally outside the Buenos Aires urban catchment area, where there may not be full employment. Since most of the firms are larger than average, the effects should later be felt nationally, both in terms of diversification and import substitution.

Social Effects

9. Only in Chubut Province and at Neuquen were social objectives explicitly stated. The other estates and areas are primarily for the benefit of industry and the social effects, although probably beneficial, are incidental to their primary aims. In the case of Trelew, probably the most important single effect is the introduction of a large number of women into economically active life, which may be expected, over a period of time, to effect changes in their status by giving them economic independence. At present, however, their earning powers appear often to be seen as marginal to the family incomes. Two other social effects may be looked for in the longer term. The first is the introduction of quite a large number of Bolivians and Chileans, many of Indian stock, to an industrial life and a consumer society. The second may well be the beneficial effect on the individual and the family migrating from a city such as Buenos Aires, through living in a small community in healthy conditions and without the stresses of city life. This seems to be recognised by the large number of professional families seeking to settle in Chubut.

10. It cannot be said at present that the Trelew Estate has developed as a social community, except to the extent that newcomers settling in a new, small town, may be drawn together in common activities. The establishment of the housing estates should further this, especially for the executive and technical staffs.

11. The fact that the estates in Santa Fe Province are, with the exception of that at Rosario, all in small or medium-sized towns where people already know each other, seems to make it unlikely that there will be any significant social effects or effects on the life of the community as a whole. On the other hand, it was stated by industrialists in two or three towns that the need to co-operate in committees and associations in order to get the estates under way had already improved relationships and led people into the habit of collaboration. The stronger and more forward thinking industrialists may be seen as having some influence in developing attitudes among the others.

12. No social effects may be expected from the Buenos Aires areas in the sense of effects on communities, because the areas from which the labour is drawn are too extended. The introduction of people from the outlying villages and small towns into industry may have some effects in the long run.

Technical Effects

13. In the Santa Fe estates, the coming together of the industries, especially where there are large groups in the same branch, as at Las Parejas, for example, will enable the extension services offered by CENDES to operate more effectively and for courses in advanced technology or in management to be more easily run. This may lead to the setting up of services such as quality control on the estates which will have the effect of raising standards. Specialization, talked about by a number of industrialists, should both reduce costs and improve quality. The example of different firms on the estate should encourage the interchange of technical information, a matter which at present is apt to be treated with secrecy.

Working Conditions, Safety and Health of Workers

14. In none of the plants seen, whether in the towns or on estates, were the working conditions really bad, although some could have been improved. Safety clothing was generally worn and most machines were guarded. In some cases working conditions were of a high level. The industrial estates are required by law to have a central first aid post adequate to the size of the estate. It is normally to be expected that conditions in new factories will be better than in old ones.

General Conclusions

15. This study has confirmed certain of the conclusions reached in the first phase, namely:

- Government sponsored estates are likely to succeed where consistent policies are pursued over time and incentives and other conditions are tailored so as to be the most effective in furthering those policies.

- Industrialists whom the government is interested in inducing to enter estates must clearly see the advantages in doing so. This may best be done through the leadership of the more forward looking entrepreneurs themselves, rather than by outside persuasion.
- In a free society where coercion is impossible, the most effective means of getting industrial estates to work is where they are initiated by the industrialists themselves, who seek government aid only when they have made up their minds to go ahead.
- The presence of one or two industrial estates on which the member firms are seen to be deriving benefits not shared by those outside are the most effective form of propaganda and lead to a snowball effect very fast, which is illustrated by the Turkish example and may well happen in Argentina.
- In a fairly advanced society where the standard of life is reasonably high, important social effects cannot normally be expected but gradually changes in attitude may be brought about as a by-product of working together and sheer proximity.

I. THE NATIONAL BACKGROUND

1. Basic Statistics^{1/}

Area ^{2/}	km ²	2,776,889
Population (1970)	US\$	23,364,431
GDP (1974 prelim. est.) ^{3/}	US\$	23,300,000,000
GDP per Capita (1974 est.) ^{3/}	US\$	1,000
Growth Rate (1975)	%	1.2
Imports (1973)	US\$	4,183,000,000
Exports (1973)	US\$	5,932,260,000
<u>Imports</u> Agricultural and Forest Products	US\$	520,188,000
Manufactured Goods	US\$	3,662,811,800
<u>Exports</u> Agricultural Products	US\$	4,110,072,000
Industrial Manufactures	US\$	1,813,128,000
Other Goods	US\$	9,060,000

Non-Agricultural Employment

Literacy % 90 plus

Exchange Rate (September 1976) US\$ 1 = 250 New Pesos (Pesos Ley)

Note The New Peso was introduced in January 1970, replacing the old Peso (official exchange rate US\$ 1 = 350 pesos) at a rate of 1 New Peso = 100 old Pesos. The official exchange rate has increased progressively since then as follows:

January - June 1970	US\$ 1 = 3.50 New Pesos
June 1970 - April 1971	US\$ 1 = 4.00 New Pesos
August 1971 - March 1975	US\$ 1 = 5.00 New Pesos
Free Rate to March 1975	US\$ 1 = 9.98 New Pesos

Since then the New Peso has suffered severe devaluation until September 1976, the date of this study, when it stood at US\$ 1 = 250. At the moment it seems to have stabilised a little.

The conversions of new pesos into dollars for the imports and exports have been made at the official rate for 1973, namely 5 New Pesos to one dollar. In fact, attempts to translate New Pesos into dollars are practically meaningless, except in relation to imports. Wages

^{1/} Unless otherwise stated, the statistical and other general information in this Section has been taken from The Europa Yearbook, 1976, A World Survey, London, Europa Publications Ltd. 1976

^{2/} Exclusive of Falkland Islands and Antarctica.

^{3/} Data from UD Dept. of State, Agency for International Development, ATD Economic Data Handbook, Revision No. 356, Aug. 1975.

expressed in dollars do not convey relative purchasing power. In the text the term "pesos" means "New Pesos" unless expressly stated otherwise.

2. General Information

The Argentine Republic occupies almost the whole of South America, south of the Tropic of Capricorn and east of the Andes. It has a long Atlantic seaboard stretching from the River Plate to Tierra del Fuego. The climate varies from sub-tropical in the north to sub-arctic in south Patagonia, generally with moderate summer rainfall. The terrain and vegetation vary from the fertile grazing and wheatlands of the pampas of the wealthy Buenos Aires, Santa Fé and Cordoba provinces to the Mediterranean scrub of Patagonia, the valleys of the foothills of the Andes and the sub-tropical vegetation of the north-west.

Argentina is still primarily an agricultural country and its prosperity depends on foreign trade in meat, wool and cereals. The meat trade has suffered as domestic prices have been held to an unprofitable minimum by the Government. Also, the EEC, which had been taken up to 70 per cent of Argentine beef, banned imports in early 1974 as part of a general attempt to maintain domestic prices. Cereals are the principal export with maize accounting for about one half.

Industry in the past has been mainly concerned with meat packing, but there has been a rapid growth in plastics, textiles, steel, engineering and chemical industries in recent years. In the production of automobiles, Argentina is self-sufficient, the centre of the industry being Cordoba. Production fell somewhat in 1975, reflecting a reduction in investment.

The oil reserves are sufficient to satisfy the bulk of domestic requirements, but it is hoped to reduce the volume of petroleum used in electricity generation and that by 1985 48 per cent of requirements will be provided by hydro-electricity. Natural gas is available in large quantities and is piped to the principal industrial centres. The main oil and gas fields are in Southern Patagonia and the Province of Neuquen.

The country suffered severely from inflation since 1974. From 60 per cent in that year it passed to 200 per cent in 1975. The Government aims to reduce it to 100 per cent in 1976. This inflation coupled with heavy foreign debts, is reflected in the decline in value of the new peso.

The population of the country is in the great majority made up of Italian and Spanish immigrants, with some British, German and important Jewish minorities, together with, since World War II, many Central Europeans.

The principal cities are (1970),

*Buenos Aires (Federal Capital)	2,972,453
*Rosario	806,942
*Cordoba	790,508
La Plata	478,666
*Mendoza	470,896
San Miguel de Tucuman	366,392
Mar del Plata	302,282
*Santa Fé	244,655
San Juan	217,514
Salta	176,216
Bahía Blanca	182,158

* Denotes main industrial centres.

The figure given for Buenos Aires refers only to the area of the Federal Capital but Greater Buenos Aires extends considerable distances in all directions into Buenos Aires Province and is generally considered to have a population of around eight millions. It can be seen from the above figures that more than 50 per cent of the population live in major cities. The total population in 1974 was estimated as over 25 million, the growth of the cities having been disproportionate to the overall increase.

Unemployment is stated as having been up to 10 per cent in 1975, but it seems heavily localised in Buenos Aires and certain of the less developed provinces in the north. The principal industrial provinces are (1970)

Buenos Aires Federal District	2,976,000
Buenos Aires Province	9,734,000
Santa Fé	2,302,000
Cordoba	2,279,000
Mendoza	1,045,000

There are vast areas of unpopulated land, notably in Patagonia, which the Government is concerned to people.

3. The Industrial Framework

With the exception of India, which has not been examined in depth as part of this study, Argentina is by far the most industrially sophisticated country to be visited by any of the consultants. Even in India, the studies have been confined mainly to the small-scale and less advanced industrial sectors. In the attitudes of industrialists, Argentina does not rank as a less developed country, although in small industry there is still technological and managerial backwardness.

Argentina possesses a substantial steel industry, an extensive automobile industry capable of meeting the country's needs in both passenger cars and good vehicles, a machine tool industry as well as textiles, including synthetic fibres, plastics and a wide range of consumer goods industries. The importance of the metals, machinery and transport industries may be gauged from the export figures for 1973 which amounted to 3,801,286,000 pesos (\$ 760,257,000 at the then official rate of \$ 1 = 5 pesos) ^{1/} Already in 1969, the latest figures readily available, production of the manufacturing industries amounted to 2,228,200 million old pesos, (about \$ 6,366,000,000 at S 1= 350 old pesos).

In this context the influence of industrial estates on industrial development on a national scale is very marginal and can only be significant in relation to individual provinces and communities. For this reason, and also because it was not possible to procure statistics or to spend any time in discussions at the Federal level, it is proposed to deal with each province visited as a separate entity as comprehensively as possible, providing in each case - as far as they were available -

^{1/} The Europa Yearbook, op cit.

general information, industrial statistics, provincial government policies and legislation, particularly regarding small industry and industrial estates, the industrial estate programmes and related services to industry. In this way it is hoped to present for each province visited a summary picture of the present situation and the impact or lack of impact, which the industrial estates programmes are making in their present phase on the industrialisation of the provinces and the development of individual communities in which they are located. Before doing so, it must be said that nowhere in Argentina was there seen or heard of any industrial estate conforming to the usual definition, namely confined to small industries and with buildings provided, administration and central services, although the industrial areas in construction in Santa Fé Province come close to the definition and the term will be used in connexion with them.

Details of individual estates and areas visited are to be found in Appendix III.

4. Some Observations on the Conditions in Factories and Workshops

Most of the plants visited in the Santa Fé Province were small or medium sized. They sometimes operated in cramped conditions - one engineering works in San Francisco had spread through the owner's house and into another house in a nearby street. Nevertheless, nowhere were the working conditions wholly intolerable and not comparable with those seen in small industry in Turkey or India. On the whole, the firms seen appeared to be tolerably efficient, one small engineering shop in Las Parejas outstandingly so. Surprisingly, one of the largest foundries in the same town was notably ill-equipped, having virtually no handling devices, even simple roller tables, apart from two overhead travelling cranes. The manual carrying involved must have been very heavy on the workers.

UNIDO experts attached to the CENDES said that technically many of the smaller and even medium-sized shops were backward and the quality, especially in the foundry industry, was often very low. Some safety measures were seen in all workshops but often seemed inadequate.

The only plants seen on the Trelew Estate were modern, in the case very capital intensive and apparently well managed. The working conditions were well up to good European standards. However, it must be said that the small sample of plants visited makes it difficult to generalise.

5. The Argentine Small Industrialist and Worker

No generalisation can be made about the small industrialists in Argentina. In different regions they may well come from different European stocks. In San Francisco, for example, many came from North Italy, an advanced region with a tradition of industry and hard work. The industrialists there and in the Santa Fé Province generally are enterprising and independent. Although willing to accept government financial aid in setting up their estates, they rejected government-run estates as "paternalistic". Said to be too individualistic and secretive to co-operate easily, they have nevertheless set up a successful co-operative to develop and manage the estate in Venado Tuerto and claimed to have benefitted from the experience to the extent that they were now doing more business with each other. In Las Parejas, irked by official delays, they had taken matters into their own hands and gone ahead with the estate.

As in most countries, small industrialists in the engineering and similar craft industries tend to come from the ranks of skilled craftsmen, although most firms seem to have at least one qualified engineer. At Las Parejas most of the foundries had been set up by the former employees of one man, known as the "father" of the foundry industry there.

No opportunity was had to study the associations of industrialists, although they exist in all the towns visited, especially Rosario, where the association is strong. In only one case seen, Las Parejas, did the industrialists' association sponsor the estate.

The workers are generally well trained. Technical training schools are available in all the industrial towns, but are not always up to date with modern production methods. Pay seems to range in the engineering industry in Santa Fé from around 17,500 pesos to 25,000 pesos, including overtime (\$ 70 to \$ 100) per month ^{1/}. These rates compare favourably

^{1/} This does not accurately reflect purchasing power

with the minimum rates promulgated recently for agricultural workers which range from around 9,000 pesos to 15,000 pesos. In Chubut Provinces the averages were given as 15,000 pesos to 20,000 pesos. Women workers in the Tulew garment factory took home about 8,000 pesos per month.

In the past trade unionism has been very strong in Argentina, the principal organization, the Confederación Nacional de Trabajadores, being strongly Peronist. As a result, the present military regime, which took over from the regime of Señora Peron, has banned trade union activity for the time being, although it was recently stated in the press that the ban would soon be relaxed.

II. INDUSTRIAL ESTATE PROGRAMMES IN SELECTED PROVINCES

1. Introduction

Before going on to examine in turn the industrial estate programmes in the three provinces visited, Santa Fé, Chubut and Neuquen, together with the private industrial areas seen in the Buenos Aires Province, it is worth a brief look at the Federal Government policies and actions in this area, in as far as information could be obtained.

2. Federal Government Policies

For many years it has been the policy of successive Federal Governments to encourage the setting up of industrial estates. The latest Decree on this subject appeared in May 1976 ^{1/}. In it the definition of an industrial estate, (parque industrial) is given as:

"Prepared land provided with an infrastructure and common services necessary for the establishment of industrial plants."

The minimum provisions necessary for a terrain to be recognised as an industrial estate for the purposes of obtaining concessions and governmental aid are:

- Internal roads with hard surfaces.
- Access roads with hard surfaces.
- Properly planned and levelled plots.
- Street lighting for both access and internal roads.
- Fencing around the entire estate. ^{2/}

Infrastructure

- Provision of water for industrial use, for firefighting and for the central services
- Rainwater drains and sewers
- Sewage treatment plant
- Provision and distribution of electrical energy for industrial use, internal and external lighting and use of the central services
- Provision and distribution of gas
- Telephone lines.

^{1/} Ministerio de Economía, Secretaria de Estado de Desarrollo Industrial: Resolución No. 94 arising out of Law No. 20.560 and Decree No. 11/74.

^{2/} On larger estates such as that at Trelew, individual plants are fenced around and have security guards.

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Services

- Public transport to and from the estate
- Security guards
- Fire services
- Information
- Weighbridge
- Common use warehouses and unloading facilities.

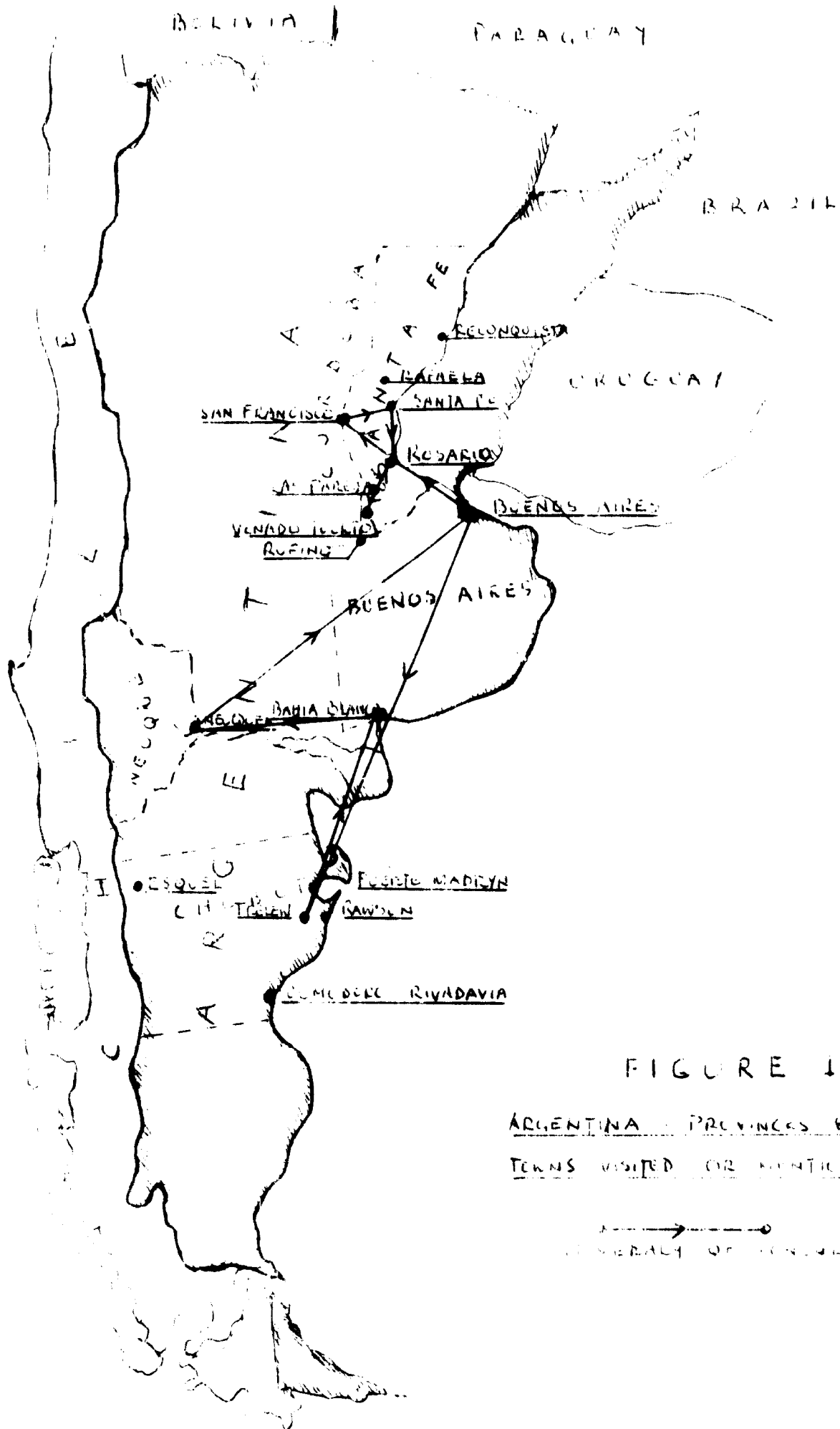
Article 2 of Resolution No. 94 goes on to describe the conditions to be fulfilled in order to obtain Government recognition of an estate. They include:

- A. Analysis and approval of a feasibility study covering technical, economic and social factors and the preliminary plans of the estate.
- B. Analysis and approval of the final plans
- C. Analysis and evaluation of the progress of construction
- D. Final approval of the estate, either as a whole or in stages previously agreed upon.

Final approval of the estate or of the successive stages of completion will permit the firms moving on to the estate to benefit from the incentives offered under Decree No. 11/74. These include loans and other benefits.

A list of feasibility studies and other documents relating to industrial estates throughout the country which have been submitted to the Consejo Federal de Inversiones is given in Appendix IV.

Figure 1 is a sketch map of Argentina showing places mentioned in the text and the itinerary of the study team.



3. Santa Fé Province ^{1/}

Santa Fé Province lies north-west of Buenos Aires. It is flanked on its eastern boundary by the River Parana. It has an area of 132,110 km². There is a good infrastructure of roads, 16,500 kilometres of which are paved, and 4,557 kilometres of railroads. The population in 1970 was 2,144,716, of which 1,815,816 was urban and only 328,900 rural. Greater Rosario contained 853,900 inhabitants and Greater Santa Fé, (the provincial capital), 277,802. The rates of growth of these cities over the ten years 1960 to 1970 were between 18 and 19 per cent. However, this rate of growth was far surpassed by some of the other towns. Venado Tuerto, which was visited in this study, had a growth rate of 41.3 per cent, while Reconquista, where there is also an industrial estate, grew 35.3 per cent. This suggests, which questioning showed to be the case, that there is a heavy migration from the rural areas into the towns, especially the smaller towns such as the two named, which lie in rural areas but which contain quite a number of industrial firms. Already by 1960 only 23 per cent of the population was engaged in the primary sector, mainly stock raising and cereal growing, (Santa Fé with Buenos Aires Province is the main "breadbasket" of Argentina and Rosario the principal grain exporting port). 32.7 per cent of the population were engaged in the secondary sector and 44.3 per cent in the tertiary sector. The latter two percentages have certainly increased in the intervening years at the expense of the primary sector. In 1971, 126,996 persons were occupied in 17,303 industrial establishments, mainly in the south of the province. The source quoted for the statistics of the Province gives the breakdown of industries for 1964, which is certainly invalid by now, but in this year basic metal industries, metals, vehicles and machines and electrical equipment accounted for 40.83 per cent of industrial activity, as important indication of the level of industrial development.

(a) Long Term Policy Objectives ^{2/}

In December 1971 the Government of the Province passed a law for the encouragement of industrial estates ^{3/}. The law defined three classes of estates:

^{1/} The basic statistics have been taken from the handbook Santa Fé en Cifras, Ministerio de Hacienda y Economía, Gobierno de la Provincia de Santa Fé, 1972.

^{2/} Condensed from a UNIDO project report (ARG/74/017), January - June 1976.

^{3/} Santa Fé Province: Ley de Promoción de Parques Industriales - No.6758, 31.12.71

Official - Land, infrastructure and, where applicable, buildings, financed entirely from official funds.

Mixed - Land and infrastructure financed by loans to private industry, repayable over specified periods, buildings financed by individual firms.

Private - Entirely financed by private capital.

It also defined three types of estate:

Promotional - Designed to promote industry in regions economically and industrially underdeveloped.

Developmental - To promote the location on a single site of firms in cities partially industrialised with a view to the further development of industry.

Dispersal - To remove industrial enterprises from cities where they are in congested premises in which expansion is difficult and where they cause environmental problems.

For purposes of aid, the Federal Government has classified provinces into three classes:

- 0 - Prosperous provinces where state aid may be reduced to a minimum.
- 1 - Underdeveloped regions where maximum incentives must be offered to firms willing to locate there.
- 2 - Intermediate regions where there is some need for encouragement but where the full range of incentives is not offered.

The Santa Fé Province falls into Class 0. In the three smaller towns visited, Las Parejas, Venado Tuerto and San Francisco, (Córdoba Province, a few kilometres from the Santa Fé border), there was said to be no unemployment and a shortage of all types of labour. Rosario itself, a much larger city, probably falls into Class 2.

The law covers the expropriation of land, construction of feeder roads, repayment of moneys invested in land and infrastructure and the surface of plots to be covered by buildings, (not more than 70 per cent of the surface). Under a further Decree, (Decreto 01492 dated 21.5.1973) large industries can only be allocated 20 per cent of the space in official estates, the rest being reserved for small and medium industry.^{1/}

^{1/} The definition of "large industry" is that a firm should have

1. Modern technology and high efficiency in processes and product quality.
2. Technical and administrative staff adequately trained.
3. More than 100 persons employed.
4. High capital intensity and power consumption.

TABLA 1

INVERSION TOTAL REALIZADA EN LOS PARQUES INDUSTRIALES

Al 31/5/76

PARQUES INDUSTRIALES	Inversión en Infraestructura			Inversión Total
	Sector Pcial. C.P.P.I.	Sector Privado	Otros Organismos	
	1	2	3	A
VENADO TUERTO	7.565.900	43.050.000	5.200.000	55.815.900
LAS PAREJAS	7.732.300	---	35.000.000	42.732.300
RUFINO	---	12.520.000	---	12.520.000
ALVEAR	95.299.390	5.200.000	4.350.000	104.849.390
SAUCE VIEJO	186.487.000	---	---	186.487.000
RAFAELA	15.074.980	---	---	15.074.980
RECONQUISTA	29.750.000	---	21.800.000	51.550.000
Totales:	341.909.570	60.770.000	66.350.000	469.029.570

NOTE: The figures in this table, which is extracted from a UNIDO project report, cannot be fully reconciled with those given for the individual estates, but the orders of magnitude are the same and are indicative of the level of investment.

Under the Minister of Finance and Economy of the Province, (Directorate General of Industries), a committee is responsible for industrial estates, inter alia, for the acceptance or rejection of factories on grounds of unsuitability such as liability to contaminate the environment, having products liable to be contaminated, such as foodstuffs and so on. No land may be used for dwelling houses other than for estate staff whose constant presence is necessary.

(b) The industrial estates

Up to 31 May 1976, the government, municipalities and private interests had invested 469,029,570 pesos (\$ 1,796,118 at the current rate of \$ 1 = 250 NP) in six industrial estates. (See Table 1). In addition, credits totalling 15,691,974 pesos have been granted to start two additional estates. Of this sum, 342,000,000 pesos (\$ 1,368,000) have been invested by the provincial government. On all these estates, only land and infrastructure are provided during the initial stage, although various central services are planned for later stages. (See individual reports in Appendix III).

On the estates at Las Parejas, Reconquista and Rosario (Alvear), work has progressed to the point where factories are being built and in some cases are operating. It is planned that when the whole programme of estates is completed, some 600 plants will be established on them, representing an investment of 15,000,000,000 pesos (\$ 60,000,000), and providing employment for 18,000 people. These will only be in part new jobs, since in most cases the workers will have been transferred from existing jobs when the firms have moved out. Nonetheless, the move to the estates should enable the firms to expand their operations in the long run and thus create additional employment. The investment works out at \$ 3,333 per job, but will be much higher if only the new jobs created are taken into account. Once the estates are complete the provincial government will recover its investment and will continue to give technical assistance only.

A breakdown of the firms which have so far taken space on the estates in the Province is given in Table 2.

TABLE 2

Firms which have reserved space on Industrial Estates in Santa Fe Province

BRANCH OF INDUSTRY	ALVEAR	FIRMAT ¹	LAS PAREJAS	RAFAELA	RECONQUISTA	RUFINO	SAUCE VIEJO	VENADO TUERTO
<u>Engineering and Metal-working</u>								
General Engineering	6	2	1	2	1	-	1	1
Auto and Bicycle Parts	17	1	-	-	-	-	-	-
Agricultural Machinery	4	15	-	-	-	-	-	-
Industrial Machines and Tools	8	-	5	-	-	1	-	-
Other Metalworking	6	5	1	-	-	-	-	-
Foundries and Forges	9	1	10	2	-	-	-	-
Electrical Equipment	8	1	-	1	-	-	-	-
Food and Drink	3	1	-	1	1	1	1	-
Clothing	-	-	-	-	-	1	-	-
Plastics	2	2	-	1	-	-	-	-
Chemicals	3	-	-	-	1	-	-	1
Leather	1	-	-	1	-	-	-	1
Paper and Carton	1	-	-	1	-	-	-	-
Wood incl. Furniture	2	4	1	-	-	-	1	-
Services	4	1	-	2	-	-	-	-
Construction Materials	2	-	2	-	1	-	-	-
TOTALS ²	107	45	26	17	17	17	17	17

¹ Not listed in other source.

² The totals, which are taken from a BIA project report to the UNWTO Commission with information provided in the course of interviews.

So far the administration of the industrial estates programme by the Government has not been decided upon. In some cases work has been controlled by the Directorate General of Industries, in others by the Ministry of Public Works and in Rosario, the Ministry of Finance and Economy has delegated the execution to local bodies. In all cases financing has been from the Provincial Government, except in the case of Venado Tuerto, where the major role has been played by the private sector. The Provincial Government, in turn, receives funds from the Federal Government through the Consejo Nacional de Inversiones.

From 1976 the Ministry of Finance has decided to concentrate the various activities connected with industrial estates in the hands of the new Under-Secretary for Industries. Technical support is placed with the Development Centre (CENDES), to which a UNIDO mission is attached (see below).

The programme has been seriously delayed due to the changes in both national and provincial governments which have taken place during the last four years which have affected both political and administrative personnel. This has been due not only to differing attitudes regarding the desirability of promoting industrial estates, but also because at each change it has been necessary to contact and inform new sets of officials. Present thinking seems to be that all supervision of execution of the projects should be handed over to the CENDES.

Table 3 lists the estates in the Santa Fé Province to which CENDES and UNIDO are giving technical aid with the addition of the estates at San Francisco, Cordoba Province, which is also being serviced by them. Las Parejas, Venado Tuerto and San Francisco were visited and a meeting was held with some officials of the Alvear Estate at Rosario, but it was not seen. Details of these estates appear in Appendix III. The remainder of this Section is devoted to an overview of these four estates.

In the first place, none of these estates conform to the usual United Nations definition in that, while land and infrastructure and, eventually, administrative and central services buildings are built and financed by common action, each firm builds its own factory to its own

TABLE 3

Comparative Data on the principal industrial Estates in parts of the country
(with San Francisco)

	ALVEAR	SAN PABLO	SAN FRANCISCO	MONTECRISTO	MONTECRISTO	SAN FRANCISCO
Population	900,000 est.	50,000 est.	50,000 est.	50,000 est.	50,000 est.	58,000
Estate Authority	Limited Company	Municipality/ Indust. Assn	Limited Company	Prov. and Mun. Cooperative	Cooperative	Limited Company
Total Area(Hectares)	175	30.6	32.2	55.7	100	25*
Roads	23	6.5	5.7	13	15	NA
Green	7	NA	NA	2	9	NA
Admin. Bldgs and Common Services	9 ¹	1.5	2	2	7	2*
Land usable for industrial Bldgs	136 ¹	22.5	26.5	29.7	73	58*
Maximum Number of Forms	130	65	50	50	100	NA
Feasibility Study	1968	-	-	-	1971-72	-
Project initiated	1973	1972	1971	1968	1971	1969
Work started on Infrastructure	1974	1974	1974	1969	1973	NA
Infra structure	15%	18%	7%	65%	18%	10% 3st. 26
Completion planned	1980	1976	1980	NA	1980	1980
Cost of land	97,376,030	18,000,000	15,158,123	20,053,570	13,207,806	15,000,000
Planned Cost of Infr.	"	633,000,000	117,000,000	56,700,000	269,000,000	NA
Planned Selling Price/Hect. NP	5,500,000	7,100,000	5,600,000	4,600,000	5,400,000	NA
Firms which have bought or reserved Land	51 ²	36	NA	NA	15	34
Industrial Buildings occupied	-	2	-	10	1 ³	-
" " in constr.	-	8	-	NA	1	-
Source of Industries	Two thirds local	Local	Local	Local	Local	Local

* First Phase ¹ The figures given in the CENDES List are 145, which is a discrepancy. ² The figures for firms having reserved in this Table were provided in the course of interviews; they do not tally with the published lists.

³ At present not working; company bought out.

specifications. Industrialization of industrial buildings is talked about but there was no evidence that it has been organized so far. Secondly, the number of small enterprises moving on to the estates seems limited; they appear to be medium and occasionally large firms.

The estates seem to appear to fall into the category of "dispersed estates", since most, if not all the firms moving on to them have premises in the cities and towns concerned and are moving out in order to be able to expand. Many seem to be very wealthy and well able to afford to move to private sites, but obviously find it advantageous to accept the benefits provided by subsidized estates. The possibilities of expansion of production and reduction in manufacturing costs offered should certainly give rise to additional employment in the long term, but the short term effect may well be to enable greater output to be obtained with the same or less manpower due to improved production layouts and methods. However, it is understood that there is full employment and even a shortage of labour in the four towns visited.

These estates seem essentially business ventures as far as the industrialists are concerned. They may well contribute in time to the economic status of the towns where they are located and in the long run to the industrialisation of the region. Furthermore, as they expand, they are likely to induce some migration to the towns from the surrounding rural areas, thus reducing the availability of labour for the economically vital "estancias", which still represent the most important exporting sector of the Argentine economy. The emphasis on industrialization in the first Peron regime and the raising of the wages of industrial workers as compared with those of the rural workers was one of the causes of the shortage of meat and cereals for export in the fifties, which led to a negative trade balance and the start of the devaluation of the peso. It is not suggested that these estates will have the same national effect - their scale is too small - but they may produce local problems unless the rural manpower can be replaced.

There is no evidence of any social objectives in any of the estates. Social services to be provided seem at present to be confined to canteens and first aid posts. The towns concerned are well developed and problems

of workers' housing are not apparent, although they might arise if many workers are attracted from the countryside. Most of the towns seem to have good technical training facilities in basic skills, but there is a need for skill upgrading and management training. Some estates propose holding courses in these fields.

Summing up, the Santa Fé estates and the San Francisco estate seem to be sound commercial propositions and are seen by the industrialists as such. There are some rather elaborate plans for common facilities such as quality control centres and workshops, but these are probably a long way off. The possibility of loans on favourable terms for the provincial government has proved sufficiently attractive for the industrialists to have put up with the many delays, except at Las Parejas, where they have gone ahead on their own. One feels bound to wonder whether delaying moving out to an estate in order not to have to use one's own money or take private loans, when extended over several years, is not a short-sighted policy, since the additional production gained through earlier possibilities of expansion and improved productivity might well have produced revenue which would have offset the other financial benefits.

(c) Some Notes on Methods of Repayment of Loans

It is planned that each of the estates in the Santa Fé Province shall be developed in stages, generally two, except at Alvear. The provincial government is offering loans to permit the purchase of land and construction of the infrastructure. These will be repaid over five years. Certificates of purchase may be bought after four months from the time of the first investments by the Province. A period of grace of six months is provided for, after which payment will be made in six-monthly stages across the five years at $8 \frac{3}{4}$ per cent interest, calculated six-monthly. The quotas are indexed to provide for inflation according to the national system in force. The example below illustrates the system for the case of Venado Tuerto.

Total Area - 100 ha. (1,000,000 m²)

Industrial Area - Industrial Buildings + Common Services - 63 ha.

1st Stage Industrial Area 44 per cent 28 ha.

2nd Stage Industrial Area 56 per cent 34 ha.

(The difference in the totals is made up of the common services buildings).

Cost per industrial hectare

	<u>New Pesos</u>	<u>Per Cent</u>
Roads and rainwater drains	2,436,600	48
Fresh water pipes and cistern	503,256	10
Sewers	221,445	4.4
Electric power	-	-
Lighting	524,601	10.3
Gas	926,132	18.3
Telephone	91,184	1.8
Cost of study and planning	<u>366,268</u>	<u>7.2</u>
	Pesos 5,069,492	100.0
	(\$ 20,278)	

The cost of installing electric power is paid by each firm individually.

Reimbursement

<u>Year</u>	<u>Period</u>	<u>Capital outstanding at start of period</u>	<u>Interest at end of period</u>	<u>To pay</u>	<u>Capital paid at end of period</u>
I	1	5,069,492	202,780	625,023	422,243
	2	4,647,249	185,890	"	439,133
II	3	4,208,116	168,325	"	456,698
	4	3,751,418	150,057	"	474,966
III	5	3,276,452	131,058	"	493,965
	6	2,782,487	111,299	"	513,724
IV	7	2,268,783	90,751	"	534,272
	8	1,734,491	69,380	"	555,643
V	9	1,178,848	47,154	"	577,869
	10	600,975	24,039	625,018	<u>600,979</u>
					5,069,492

(d) Extension Services

Extension services to small and medium industry in the Province and at San Francisco are being provided by the Centro de Desarrollo (CENDES), with the support of the UNIDO team. At the time of the study this centre consisted of a project manager - industrial and chemical engineer - laundry specialist, machine tool specialist and general industrial engineer. They had been working for some time in the region and their services were much sought after, especially in the foundry industry.

The UNIDO team works in conjunction with national specialists. Much of the work consists in diagnosing technical problems and helping individual firms to rectify them, combined with some training programmes and the production of simple, very specific literature. If these services are to be extended to all the towns in the province where there are industries and to industries other than engineering and metallurgical, the Centre will have to be enlarged. Although, at the moment, there seems no justification for setting up technical assistance units in individual estates, the large distances between towns and consequent loss of working time or, alternatively, the need for CENDES staff to stay away for periods of several days, do pose problems. The only estate association at present possessing equipment is San Francisco, where there is a quality control laboratory, the equipment supplied by the United Nations.

CENDES and the international team have been supplying aid to the firms going on to the estates in the form of design and layout of facilities and equipment in the new factories. This activity is critically important, since it enables the new plants to start with conditions conducive to high productivity, whereas introducing industrial engineering improvements in existing workshops, which is what generally has to be done, is merely patching up poor conditions.

4. The Chubut Province

The Chubut Province lies in the southern part of Argentina known as Patagonia. It covers an area of 226,000 km² and at the last census had a population of 190,000^{1/}, a density of less than 1 person per square kilometre. The principal wealth of the province derives from petroleum which

^{1/} Now said to be about 250,000. Information on this and other points was provided verbally by the Under-Secretary for Industries, Chubut Provincial Government.

is to be found in and around Comodoro Rivadavia, the largest city whose population is now approaching 100,000. Comodoro Rivadavia has a refinery and some industry, including products based on petroleum derivatives. The capital of the province is Rawson, a purely administrative centre of about 13,000 inhabitants lies on the coast 400 kilometres north of Comodoro Rivadavia and 30 km further north is the seaside town of Puerto Madryn at which a large aluminium smelting works is nearing completion. Power is being brought by high tension cables from dams in the foothills of the Andes, 600 km further west. Around this works it is intended to build an industrial estate for manufacturing firms using aluminium as the raw material.

16 kilometres inland from Rawson and 50 kilometres south-west of Puerto Madryn lies Trelew, the fastest growing town in Argentina, (25,000 inhabitants), whose population has doubled in two years. Trelew is the site of an industrial estate which is likely to have an important influence on the development and social evolution of the town. The country around Rawson and Trelew and, indeed, throughout a large part of the province, is inhospitable scrubland. There the agriculture is confined to sheep and goat breeding. The land is so poor that it requires one hectare to support one sheep. There is a serious shortage of water but further south the land is well watered and produces abundant fruit and vegetables. The climate is temperate. The provincial authorities are trying to diversify the economy by attracting industry on the one hand and promoting tourism on the other. The great attractions of Chubut are the magnificent beaches with penguins, sea elephants and other fauna.

The original settlers in Rawson and Trelew were a party of Welshmen who landed with their families and livestock at Puerto Madryn in 1866. The stock has since been diluted by the immigration of settlers of Spanish and Italian stock but many family names in Trelew are Welsh, Welsh customs and religious cults are maintained and the language is still spoken alongside Spanish. There is no unemployment in the area.

The provincial government is promoting industrial estates in four towns, Comodoro Rivadavia, Trelew, Puerto Madryn and Esquel, the last named being in the foothills of the Andes not far from the Chilean frontier (See Figure 1). The principal objective of the authorities in so doing is to increase the population of the province by attracting immigrants

from the overcrowded Buenos Aires area, which is becoming unmanageable. In this they appear to have been successful, although a disproportionate number of applications for work in the province come from young professional men, engineers, architects, economists, lawyers and the like who want to bring their families away from the cities. There has also been a substantial inflow of immigrants from Chile and Bolivia, mostly unqualified.

(a) Legislation and Policy

The basic law promoting industrial development from which the legislation on industrial estates has sprung was passed in May 1971. ^{1/} This law gave the Government wide powers to acquire land and build industrial buildings and dwelling houses for industrial personnel. It also authorised the provision of credits, participation in the capital of new enterprises, the use of various incentives, priority for newly established firms for state contracts and the creation of industrial zones and estates.

In December 1974, a decree was issued relating specifically to industrial estates. ^{2/} This Decree sets out the terms and conditions on which firms will be accepted on industrial estates. The most important Articles refer to the information which it is necessary to supply under oath regarding the company, technical and economic features of the project, production costs, investment required and proposed methods of financing.

Land will be reserved for the firm for 60 days on payment of five per cent of the price. Once the proposal for the purchase of the land has been accepted, the purchaser is required to put down a total of 10 per cent of the final price. The price of the land was fixed for all estates at 60,000 new pesos per hectare, which, at the time the Decree was passed was worth US\$ 12,000 and is now worth \$ 240 ^{3/}. The balance of the price must be paid off in four six-monthly instalments subject to bank interest rates for medium-term loans. Mortgages are available through the Banco Nacional de la Provincia de Chubut and the Banco Nacional de Desarrollo, (National Development Bank). Firms are required to submit three-monthly progress reports and to have erected buildings covering not less than 30 per cent of the total land area within five years from the date of purchase.

^{1/} Gobierno de la Provincia de Chubut: Ley No. 842, 11 de Mayo, 1971

^{2/} Decreto No. 2153, 17 Diciembre, 1974

^{3/} Now greatly increased. See Section 4 (c) below.

Among the incentives offered to industry coming to the province and on to the industrial estates are the following:

- until recently, duty-free import of machinery and equipment, now rescinded. It is not clear why this most valuable concession was abolished;
- exception from taxes on vehicles;
- payment for land by instalments (Law no. 512);
- exception from or reduction of various taxes including sales tax and value added tax on finished products and raw materials; (Decree 2943);
- lower tariffs for water and electricity (about 30 per cent off);
- long-term credits from the Banco Nacional de Desarrollo, which can be extended for new buildings and extensions;
- until 1980 exemption from the heavy tax on buildings, (Impuesto inmobiliario);
- until 1980 exception from stamp duties.

Decrees have been promulgated relating specifically to the textile, woodworking and metalworking and metallurgical industries.

(b) The Industrial Estates - General

Of the four industrial estates currently being promoted in Chubut, Comodoro Rivadavia, Trelew and Esquel are functioning. The Comodoro Rivadavia Estate covers 51 hectares and contains between 30 and 40 firms of which between 20 and 30 may be considered as small. It may be noted that the Ministry of Industry of Chubut Province does not seem especially interested in small industries and has no statistics relating specifically to them. Industries represented include metalworking and metallurgical and textiles. Esquel lies in the mountains and is sometimes cut off by snow. It is in an area scheduled for reforestation and there is a mining industry for china clay and bentonite. Firms on the estate mainly use local materials. Neither of the above estates was visited.

(c) The Trelew Industrial Estate

Details of the Trelew Estate are to be found in Appendix III. Trelew Estate was specifically created to encourage immigration to the town and seems to have achieved its purpose so far, although it is far from full up. The town has doubled in population in two years. There was not any unemployment in Trelew and it has been able to ride out the recent recession in the country as a whole more successfully than most other cities. The rate of growth of the town and lack of accommodation for immigrants have led to the development of extensive districts of small houses constructed by the owners themselves of breeze blocks. The authorities have organised the districts into blocks with dirt roads, water, sewage and electricity supplies. The first impression is of a "shanty town" contrasting sharply with the neatness and cleanliness of the town proper but, although accommodation is cramped, the houses seem reasonably solid and represent a pioneering effort similar to that in the Far West of the United States. The buildings are added to as the owners' means permit.

The estate itself consists at present mainly of textile firms whose head offices and sales departments are in Buenos Aires. There are two or three plants washing and combing wool from the local sheep but most of the plants are synthetic fibre based, drawing, doubling and dyeing yarn, weaving and finishing. There is one clothing factory making women's underwear and dresses from materials supplied by the textile firms. There is an important furniture factory, a ceramic brick factory and various smaller firms including one engineering workshop. 24 plants are at present in operation occupying 88,048 square metres. 15 more are under construction and 27 have bought land and are active in the planning stage. Of those under construction, at least four more are textile companies. Total numbers employed on the estate at present are about 3,000, the great majority women.

The influence of the estate on the development of the town has clearly been considerable. There was little industry previously and many of the larger firms are new to the area. The most profound long-term impact seems likely to come from the large-scale employment

of women. Argentine society is in the main male dominated, but the ability of numbers of women - wives and daughters - to earn their own, independent incomes, must eventually give the women greater freedom and improve their status, although this will certainly take time. It is interesting to note that at present the women's contribution to the family income seem to be treated as marginal in many cases. The manager of the clothing factory complained that he had serious problems of absenteeism and labour turnover. The absenteeism is running at about 15 per cent. Many women work about four months and then take a rest, apart from those having babies, who stay away longer. They may come back some time later or seek employment with one of the other firms.

The impression is left that, although Trelew is a town with a high standard of living, (it is said to have the highest number of cars per 100 of the population in Argentina), many of the working class families have not yet become consumption oriented. This may apply particularly to the Chilean and Bolivian immigrants who form an important element in the female workforce, but this could not be verified. The women working in the clothing factory have very thorough training in the use of sewing machines so as to be inter-changeable between jobs and the other firms also have training programmes.

The town as a whole has undoubtedly gained from the presence of the estate. Apart from the increased local spending power resulting from the additional employment, the hotel, restaurant, car hire, retail and other services have benefitted considerably from the constant coming and going of executives, buyers and salesmen, contractors and engineers between the town and Buenos Aires and other northern cities.

In spite of its great distance from markets and most sources of raw materials, (the synthetic fibres are imported from Buenos Aires), the Trelew Estate is succeeding. It has managed to attract industry in the first place because of the low cost of the land, 240,000 new pesos per hectare, (about \$ 1,000), easy terms of payment and other concessions noted above. These are felt to outweigh transport costs for raw materials and finished products which are, for the most part, light in weight and of comparatively high value. The experience seems to underline the fact noted in the Report on the Industrial Estate Programmes in Six Countries,

(the interim report on the first phase of this study), that in order to attract industry to an estate where the object is the development of a region, very substantial concessions have to be offered to industry and industrialists must be able to see clearly the advantages offered.

5. The Neuquen Province ^{1/}

The Province of Neuquen, estimated population in 1974, 161,000 inhabitants, lies in the north-west of Patagonia and covers 98,078 km² of plain, foothills and mountains of the Cordillera of the Andes. It is bordered on the north by Mendoza Province and on the east by Rio Negro. The capital city is Neuquen at the junction of the rivers Neuquen and Limay in the extreme eastern corner of the province (See figure 1). Present population is estimated at 60,000 and is said to have doubled in five years. The increase is mainly due to immigration from other provinces and from Chile and gives the town the appearance of a boom town. The area around the city in the river valleys is intensively cultivated, apple growing and market gardening being the main activities. There are also sheep and cattle raising in the valleys, but much of the higher land is covered with typical Patagonian scrub.

The main wealth of the province lies in its petroleum. The output represents 40 per cent of the total current Argentine production. The figures given in the FIEL study for 1968 are 1,109,350,540 m³ of petroleum and 484,401,559 m³ of natural gas. The second major activity is agriculture, most of which is centred round the city of Neuquen itself. Agriculture seems to have stagnated since 1950. In 1964 the industrial sector gave employment to just over 2,000 people and presumably was not much larger in 1970.

(a) The Policy Background

The provincial government's objectives in setting up the Neuquen Estate are summarised in the FIEL study. Three sets of objectives are spelled out - economic, technical and social. The economic objectives include the

^{1/} Information and data on the province are taken from a study made for the industrial estate by a firm of consultants, FIEL, in 1971. It has been published with related papers by the Federación de Investigación Latino-Americana, Buenos Aires, Esmeralda 320, 1972.

increase of the gross industrial product of the province, contributing to the national aim of balanced regional development, increasing the per capita income of the region and diversifying economic activity so as to offset the effects of cyclical depressions in agriculture. Technical considerations include the zoning of the city's development, the avoidance of noxious effects on the city, countering land speculation and facilitating the modernization of medium and small-scale industry. Social aims include a better distribution of income, the levelling out of employment, given the agricultural cycles, increasing and improving technical education by creating a demand and the development of entrepreneurs. The relief of chronic unemployment is not mentioned. In fact, in common with other provincial centres visited, Neuquen seems to have no real unemployment but some under-employment and seasonal unemployment in the agricultural sector.

At the time of the study quoted incomes in Neuquen and particularly in the area surrounding the city seem to have been very low, much below the national average. In the lower income groups, 75 per cent of the heads of families had not completed primary school. A recent newspaper article stated that even today, 50 per cent of the young people in the country as a whole do not complete their primary education.

(b) The Neuquen Industrial Estate

It was unfortunate that the visit to Neuquen, although arranged through the Federal Ministry of Industrial Development, coincided with that of the Federal Minister himself, who was especially interested in the industrial estate. The visit to the estate was therefore confined to a quick drive around it on the evening of arrival with the Director and to some rather summary information. The following day the Director was wholly taken up with the Minister. The estate itself is some kilometres out of the town on the main road. Roads have been made but not yet metalled. Three or four factories are in operation, mainly medium-sized and employing 290 people in all. It is understood that there are already major schemes for increasing the size of the estate. Nothing is known of the incentives being offered to firms to take up places on the estate. The province is comparatively wealthy due to its oil revenues and there are local materials including china clay, bentonite and wood which can be exploited.

6. Buenos Aires Province

Buenos Aires Province is the richest and most populous of the Argentine provinces containing more than one third of the country's total population and much of its industry. Visits to estates in the province were confined to Bahia Blanca, which proved abortive, since the estate planned there had not yet been started and there seemed to be some doubt whether it would be, and two large privately owned industrial areas outside Buenos Aires city.

(a) Private industrial estates in Buenos Aires Province

The Federal Capital of Buenos Aires has a nominal population of about 3,000,000 but, in fact, much of the city's population lives in the built up areas in the Province which form, with the city itself, an urban agglomeration of between eight and nine million inhabitants. The density of the population, a large part of which lives in apartment buildings, make for acute traffic congestion and major problems in getting masses of people daily to and from their work. As a consequence, industry has tended in recent years to move further and further out into the province and a law has been passed recently forbidding the erection of further factories within a 60 kilometre radius of the centre of the city.

The Ministry of Industrial Development made arrangements for the mission to visit two privately owned industrial areas outside the city, the Oks Estate (so named after the proprietor of the promoting company) and the Pilar Estate, still at an early stage of development, owned by the same company. The former is on the Pan-American Highway, 25 kilometres from the city, the latter, developed since the new law was passed, is just over the 60 kilometre limit.

(b) The Oks Industrial Area

The Oks Industrial Area covers just over 50 hectares (503,780 m²), of which, so far, 25.2 hectares have been covered with industrial buildings. 26 firms have built or are building factories on the estate. They are mostly large and medium-sized firms, a proportion being foreign or joint ventures, including Gillette, Champion and International Fragrance and Flavors. The proximity of the Ford Motor Company's main assembly plant might be expected to lead to some sub-contracting to the engineering works on the Area.

Oks draws its labour force from Buenos Aires and suburbs and from nearby towns. The size of the workforce was stated as 1,500. There are no central facilities and, indeed, the promoting company has been concerned only to prepare the land and infrastructure and sell it to individual companies. There is no administrative office and, although some facilities are foreseen such as a bank and possibly some shops, the only one so far in existence is a small restaurant.

(c) The Pilar Industrial Area

The Pilar Industrial Area will cover 900 hectares (9,000,000 m²) and will probably be the biggest industrial area in Argentina. It is being built with the proceeds of the sales of land on the Oks area. About half the surface has metalled roads and an infrastructure, including electric power lines and transformers; work is proceeding on the rest. The promoters seem to have no doubts that they will be able to sell all the plots, since it is the nearest point to Buenos Aires where industry can be established. The price paid per hectare for the land on which the Oks Industrial Area is built is not known - the management were not prepared to give it - but it was sold, with infrastructure, for 2,500 new pesos per square metre (25,000,000 pesos per hectare). If this was prior to March, 1975, this would represent US\$ 500 per square metre - even at today's rate it represents \$ 10, but, as already stated, attempts to translate pesos into dollars are rather meaningless. It would seem, however, that the company made enough money on the sale of land to finance the purchase of land at Pilar, no doubt much cheaper because much further from the city, and construct the infrastructure, which has involved bringing 33,000 volt lines over a considerable distance and major water supply and drainage operations.

26 plots have been sold so far; 232 are planned. Some 200 enterprises are expected to be on the area when it is completed but this will not be for several years. Well over 10,000 people should be employed. Some workers will be drawn from the nearer suburbs of Buenos Aires from which there is a half-hourly service by rail. In addition, bus services will be run to connect the area with the medium and small sized towns of Pilar, Zarate, Escobar and others in the vicinity. This will provide employment in an area where there has previously been no major industry.

In discussing the advantages to industrialists of commercial estates such as Oks and Pilar with the manager, he pointed out that, although 2,500 new pesos per square metre might appear high, the cost of building was 55,000 pesos per square metre covered, including services, so that cost of land represented only 4.5 per cent of the total cost. Furthermore, if a firm had the choice between purchasing land ready prepared on an industrial estate or area and private, unprepared land at a much lower price, the advantage, other things being equal, would almost certainly lie with the former, since it might give a firm as much as two years start in getting into production as opposed to having to get planning permission, install infrastructure, arrange for electrical supply and other services to be brought, possibly from a distance, all of which are immediately available in the area and only had to be connected up. In the case of a large firm the economics would be very favourable. It may be noted that the majority of firms on the Oks estate are at a fairly high level of sophistication and would certainly have done their sums before opting to enter it. However, on the Pilar Industrial Area terms of payment for early entrants are designed to encourage building factories as quickly as possible and thus act as "bait" for further clients. Buildings completed in one year will be eligible for a rebate of 40 per cent on the price of the land; firms completing their buildings within two years from date of purchase will receive a 20 per cent rebate.

III. SOME GENERAL COMMENTS ON THE INDUSTRIAL ESTATES PROGRAMMES AND THE ESTATES VISITED.

There cannot be said to be a coherent programme of industrial estate promotion in Argentina. As it may be gathered from the preceding pages, individual provinces have their own programmes which are supported financially from Federal sources and the Federal Government insists on certain controls being applied before aid will be granted. Provincial laws are modelled on Federal laws. Nevertheless, there are differences from province to province, even among the few visited. The Santa Fé estates are effectively controlled by the industrialists themselves, although they are anxious to take advantage of all the facilities and concessions which the Government is prepared to offer. Everyone with whom the question was discussed welcomed the extension services provided by the CENDES and most had elaborate plans for central facilities on the estates once they had all moved in, but it could well be that these would be found to represent an unacceptable overhead charge in practice and would probably never be implemented. The main complaint was of the delays occasioned by changes in the government and tergiversations in policy.

The Chubut programme comes nearest to a coherent economic and social programme with a clearly defined objective, that of attracting additional population to the province, in which it seems to be having some success. The Chubut programme demonstrates clearly the value of sound incentives to industry in the furtherance of a consistent objective and policy. Part of the slow growth of the Santa Fé estates, in spite of the legitimate grievances of industrialists as regard changing government policies, may well be due to the fact that by no means all the potential purchasers of land on the estates are under heavy pressures to move from their present locations. Conditions in the smaller towns in the province are not, in most cases, intolerable and in no way comparable with the congestion to be found among the small industries in, say, the Turkish cities. Under these conditions the incentives may have to be reinforced -- the possibility of central services for the foundries in Las Parejas seems attractive -- and it could be that some of these estates might be considered as luxuries rather than as strictly necessary to the further development of the firms

concerned. Under these circumstances one may question the value of pressing ahead with an ambitious industrial estates programme.

The Neuquen Estate seems to be acting as a pole of attraction in much the same way as the Chubut estates and for much the same reasons. In both provinces there is a young and enthusiastic staff, (albeit very small), committed to the success of the estates and in both there are consistent policies and substantial incentives.

The Oks and Pilar industrial areas represent cases of purely commercial ventures appealing to firms wishing to establish themselves or expand their operations near to the principal market, Buenos Aires, and choosing to enter the areas on strictly economic grounds. The setting up of the huge Pilar area at the nearest point to the capital permitted under the law is a fine piece of entrepreneurship and for any firm wishing to establish itself from now on, it is difficult to see a more advantageous proposition. Neither of these areas has any pretension to social objectives, although employment in the rural area round Pilar may well be a valuable by-product, but again the objective in setting up the areas is well defined and consistently pursued.

Attempts to set up estates for small and medium firms using the products of major plants as their raw materials such as are mooted at Puerto Madryn and Bahia Blanca have yet to prove themselves. It is understood that some petroleum derivative based industries are operating on the estate at Comodoro Rivadavia, but no details are available. As regards specific features sought in this study, the following brief comments sum up what was seen.

Central Technical Services

Only in the Santa Fé estates and at San Francisco is this question under consideration and the extension services offered by CENDES may well cause these to be left in abeyance, other than, perhaps some quality control laboratories for groups of firms in the metal industries, the first of which, equipped with instruments by the UNIP, was seen at San Francisco.

Social Services

No social services were seen on any of the estates visited, except for a proposal for a housing scheme for estate employees at Trelew. However, the dwellings themselves would be constructed by individual firms on land provided by the Government as part of the estate and would be allocated as to about 90 per cent to managing and technical staff and only 10 per cent to manual workers, probably key workers.

One of the reasons for the lack of social and co-operative elements in the estates seen is certainly that most of the firms are medium and even large rather than small and that the estates have involved little or no co-operative effort in Trelew, Neuquen or the private Buenos Aires areas. This is not true in Santa Fé, where the estates have officials and promotional committees of industrialists, but they are not yet far enough advanced to have produced many results.

Sub-contracting within the Estate

At Trelew because of the vertical nature of the processes in the textile sector, purchase of raw materials from, say the nylon drawing and doubling firm by weavers and the purchase of cloth by the garment making factory. There is no evidence from the other estates so far that they have increased the commercial transactions between firms which might be expected in small towns, although it is claimed that the co-operation at Venado Tuerto has improved the commercial relationship and led to increased business.

Use of Local Raw Materials

The estate at Neuquen is specifically aimed at encouraging firms which can use locally produced china clay and timber, but none of the firms at present on the estate seems to be in suitable industries.

Secondary and Tertiary Industries Generated

The only example of this seen was at Trelew. The important economic effect produced by the presence of the estate on the town has been recounted above.

Return on Investment

No figures are available of the return on investment of any of the officially sponsored estates, although the Trelew estate would appear to have offered a high return in terms of fulfilment of objectives, difficult to quantify. The private areas certainly seem to offer a very high return to the promoter.

APPENDIX I

Principal Organizations visited and Persons Contacted

Federal Ministry of Economy, Secretariat of Industrial Development	Econ. Carlos Pozzo, Director of Regional Development
Chubut Province, Ministry of Economy, Services and Public Works	Dr. Osvaldo Francisco Tatti, Under-Secretary of Production Ing. Juan José Vazquez, Directorate of Industry, Chief, Industrial Analysis and Control Department
Neuquen Province, Executive Authority	Ing. Rubén Roussillon
Santa Fé Province, Centro de Desarrollo (CENDES)	Arq. Jorge Murrillo, Director General
Bahia Blanca, Municipal Council	Dr. Oscar Mercollini, Secretary for Public Works
Industrial Estates and Areas:	
Alvear-Rosario	Mr. C. Prece, Chairman
Las Parejas	
Lago Verde SA (Oks and Pilar)	Arq. Santiago Bonfanti, Manager
San Francisco	Dr. Roque Adán Goiran, Director
Venado Tuerto	Mr. Bruno Brune, Chairman of Co-operative
United Nations:	
United Nations Development Programme (UNDP)	Mr. Hugo Navajas Mogro, Resident Representative Miss Sarah Timpson, Deputy Resident Representative
United Nations Industrial Development Organization (UNIDO)	Mr. Wilfredo Pflücker, Senior Industrial Development Field Adviser
UNIDO/CENDES Project	Mr. Raul Peñaherrera, Project Manager Mr. S.P. Merolla, Expert Mr. John Shand, Expert

In the course of the various visits a number of industrialists and managers, members of the staffs of the estate companies and the CENDES were met. All contributed valuable information to the discussions.

APPENDIX II

Notes on the Methodology of the Study and Problems Encountered

Methodology

The entire mission was carried out jointly with Ing. Raul Peñaherrera, Project Manager of the UNIDO/CENDES Project in Rosario. His contribution to the study has been acknowledged in the Introduction.

The first day was taken up with discussions with the UNDP Resident Representative and his Deputy, a meeting with the Director of Regional Development at the Ministry of Economy, Secretariat of Industrial Development and the administrative details arising out of the consolidation of the programme. Letters of introduction were sent by the Director to the provincial Ministries of Industry in Chubut and Neuquen. The next day was taken up with visits to the private industrial areas of Oks and Pilar in the Buenos Aires Province accompanied by the manager.

The following three working days were spent in Rosario visiting the estates for which the CENDES has technical responsibility at Venado Tuerto, Las Parejas and San Francisco and discussions with industrialists connected with the Rosario Estate at Alvear. The pattern of work was generally some discussions with the Director and industrialists in the Estate Offices, a visit to the site and, where possible, visits to two or three plants in the town in order to observe the general conditions in industry and, in particular, the extent to which working conditions, particularly space and possibilities of expansion, might inhibit development and attract industrialists to the estates.

The second week started with a flight to Trelew, Chubut Province, where a day and a half was spent, followed by a day and a half in Bahia Blanca. One day was spent in Neuquen and the final working day in Buenos Aires debriefing.

It was unfortunately not possible to spend the time at the Federal Ministry of Industrial Development necessary to obtain global statistics and further information about the industrial estates programmes in the country as a whole. However, from the point of view of the objectives of this study, this was probably not of great importance, since the implementation

of the programmes is in the hands of the provincial governments or, as in the case of the Buenos Aires areas visited, of private interests. Everywhere the greatest kindness and consideration were shown by officials of the various ministries and organizations concerned, as well as by the estate directors and industrialists visited. Discussions were frank and all the information readily available was forthcoming. In this connexion, special thanks must be given to Ing. Juan Vazquez of the Ministry of Industry of Chubut who gave a great deal of his own time to compiling statistics on industry in the province and on the Trelew Estate which made it possible to give a very full write-up on the latter.

Problems

Most of the problems encountered were inherent in the short notice given to all concerned of the arrival of the mission and, possibly, insufficient specification of its information needs and in the short duration of the mission itself, ten working days in all, of which the first was necessarily taken up with finalizing the programme and the last in debriefing. This meant that the timetable had to be very inflexible and caused problems in Neuquen (see below).

The second major problem, to some extent arising out of the conditions mentioned above, was that of the time which had to be spent in travelling. The visits in the Santa Fé province involved about 1,500 kilometres travel by car. Those to the other provinces involved several flights and thus complete dependence on the flight schedules.

Lack of information led to a completely wasted day in Bahia Blanca, where there was believed to be an estate. It proved to be only in the planning stage and its future was by no means certain. The fact that there was no morning flight to Neuquen had serious consequences. The coincidence of the mission's arrival there with a visit from the Federal Secretary of Industrial Development caused a further day's work to be lost there since the Director of the industrial estate was necessarily in attendance to the Secretary. Had it been possible to fly from Bahia Blanca on the morning of the previous day, the work could have been completed before the Minister's arrival. Figure 1 shows the location of the estates visited and the itinerary of the mission.

Apart from the lack of statistics readily available, which is in part due to the short notice given to all concerned, the massive inflation and devaluation of the peso over the last two years in which it has gone from 5 to 250 for one US dollar make cost comparisons of doubtful value. For this reason the figures can only be considered as indicative.

Finally, except at Trelew, it was difficult to find any evidence that the industrial estates or areas had or would have any significant influence on social factors or on the communities in which they were or would be located, other than increases in employment. It so happened that most of the communities visited already had virtually full employment and the further labour force required would be recruited from immigrants from other provinces or the countryside.

APPENDIX III

Information on Individual Industrial Estates

Below are the reports on the individual industrial estates visited in the course of the study. Four of them, the OER Industrial Area, Las Paredas, Prelew and Leocadia, were partially operational; the others were in various stages of construction. The Alvear Estate at Rocario was not visited; such details as are available were obtained from discussions. No form has been given for the Pinar Industrial Area, which is still at an early stage of construction. The data for Venado Puerto, which is also still very incomplete as to infrastructure, relate to what is planned for the future and will probably not be realized for several years. The statistical and standard data on the farms are accompanied by amplifying comments in the Notes. The following abbreviations and symbols have been used on the forms:

- * "See notes", where there is not room to write "See notes".
- x Exists; in the case of industrial units the number is unknown.
- P Planned; not yet constructed or operative.
- None reported; probably there are none.
- NA Information not available.
- + Plus; an unknown quantity more than the figure given.

City populations are from various sources believed to be the most up to date available.

Information derived from figures in brackets.

INDUSTRIAL ESTATES STUDY

ESTATE REPORT

COUNTRY PHILIPPINES

REPORT NO. 1

I. BASIC DATA

1. REGION QUEZON / ALCALDE PROVINCE 2. CITY GREATER MANILA AREA 3. POPULATION 1,000,000 est.
 4. NEARBY INDUSTRIAL AREA None 5. OWNERSHIP Private 6. EXECUTING AGENCY Imp. Verde

7. KEY LOCAL DATA 8. INDUSTRIES PLANNED (Nos. of Firms)

Area	Planned	Completed	Industry Group	No.	Industry Group	No.
Industrial Buildings (m ²)	NA	252,000	Cosmetics (US)	1	Abrasives	1
Admin. & Service Buildings (m ²)	-	NA	Printing	1	Foodstuffs	1
Roads & Access (m ²)	NA	NA	Chemical C	1	Rubber Toys	1
Green Area (m ²)	NA	NA	Auto Parts C	1	Asphalt Roads	1
			Textile Spinning	1		
			Paints	1		
Total Site Area (m ²)	503,780	503,780	Non-Ferrous Metal C	1		
			Paper Recovery	1		
			Transport Service	1		
			Precision Instr. (F)	1		
			Printing Machines	1		
			Flavouring (US)	1		
			Plastic Mldg.	1		
			Rubber	1		
			Acrylics	1		
			Deburring m/cs	1		
			Aerosols	1		
			Const. Materials	1		
			Spray Guns	1		
			Metalurgy	1		
			Pressure seals	1		
			Caravans	1	Total:	26

9. SERVICES & COMMON FACILITIES C = Under Const. () = Nationality of foreign firm

Services	Transport	Admin. Bldgs	Amenities	Social Services
Electricity	x Internal Bus	x Confer. Hall	First Aid	x Bank
Gas	x External	Exhibition	Doctor	x Restaurant
Water	x Rail	Tech. Library	Fire Brigade	Canteen
Heating/Steam	- Road	x Classrooms	Police Post	Shops
Sewage	* Water	Cent. Workshop	Warehouse	Barber
Roads	x Buses			
				Bathhouse -
				School -
				Creche -
				Social Centre -
				Sports Ground -
				Housing -

10. FINANCIAL DATA (Local Currency) 11. PROGRESS IN IMPLEMENTATION

Capital Outlay	Allocated	Spent		Planned Date	Actual Date
Land			Initial Action to Establish	1969	1969
Infrastructure			Official Credits approved	-	-
Industrial Buildings			Land purchased	1969	1969
Common Facilities			Infrastructure completed	1975	1975
Social Services			Industrial Buildings started	NA	NA
			" " completed	Continuing	-
Total	NA	NA	Amenities completed	-	-
Government Credits	-	-	Social Services completed	-	-
International Funds	-	-			

Payment for Occupancy
 Rented Purchase at 2,500 new pesos per m².
 Purchase - Initial Payment 10 %
 Period of Repayment 90 % in 20 days or
 Credit Facilities 30 % in 20 days and 60 % over 3 years with indexation and interest.

II. ECONOMIC PERFORMANCE

12. MEMBERSHIP OF FIRM				13. ESTIMATED SALES (Local Currency)			
	Number	%		Before Entry	Current		
Established local Firms	2		All Firms	No information available			
" Firms from other Cities	-		Sample 1.				
Newly established Firms	5		" 2.				
Foreign Firms	-		" 3.				
Joint Ventures	1		" 4.				
14. FIRMS ENLARGED (Employment) (Estimated)				15. FIRM GROWTH			
	Before Entry	Current	% Inc				Number
All Firms		1,000		Business Failure			Non-
Sample 1.				Relocated to larger Premises			Non-
" 2.				Death			Non-
" 3.							
" 4.							
16. INTRA-STATE CONTRACTING				17. NEW EXTERNAL SUB-CONTRACTING			
No information				No information			
18. NEW PRODUCTS DEVELOPED				19. USE OF LOCAL MATERIALS			
No information				No information			
20. NEW MARKETS ENTERED				21. EXPORTS DEVELOPED			
No information				No information			

III. SOCIAL DEVELOPMENTS

22. AVERAGE EARNINGS (Local Currency) - Per Month				23. LABOUR UNION MEMBERSHIP			
No information	Before Entry	Current	% Inc	Number of Union Members	Before	Current	
Unskilled Manual				No information			
Skilled "				Employer Attitudes to Union Membership			
Technicians							
Non-manual Supervisors							
24. OWNERS' HOUSING				25. EDUCATION, TRAINING, EMPLOYER COUNSELLING			
Number of Housing Units	Before	Current		Period	Number of Courses	Number of Trainees	
	-	None		No collective training			
26. COMMUNITY BENEFITS				Basic Literacy			
Secondary/Tertiary Activities Promoted				General Education			
None advised				Manual Skill Upgrading			
Improved Roads, public Services, etc.				Specialist Training			
Increased local Prosperity				Technician "			
				Management "			
				Technical Counselling			
				Management Counselling			

A.1 Notes on the Oks Industrial Area, Buenos Aires

The Oks Industrial Area was set up by a private promoter whose name it bears. It is on the Pan-American Highway, 25 kilometres from the centre of Buenos Aires. Most of the firms are large or medium-sized and include Gillette International Fragrances and Flavors and a French firm. Most of the firms have come from the city or suburbs.

The estate is a purely commercial venture and the promoter is using the funds accruing from the sale of the land to finance the construction of the much larger industrial area (900 hectares), at Pilar, 35 kilometres further out in the province. There are no central services, other than a first aid post and a small restaurant. A bank is foreseen.

The advantage of the prepared area from the point of view of the industrialists who have moved out there is primarily the saving of time in getting into production as compared with buying land privately and having to negotiate and install the necessary services, estimated at saving up to two years. The presence of the Ford Motor Company's main assembly works nearby may give rise to sub-contracts, but there appear to be few engineering firms on the area.

Firms visited

No firms on the industrial area were visited.

Return on investment

The return on investment to the promoter derives entirely from the profit made on the sale of the land after deducting the original purchase price and cost of installing the infrastructure. At 2,500 new pesos per square meter, the proceeds when all the land is sold (30 plots), and assuming the land for sale to be 90 per cent of the total area (approximately 450,000 square meters), the sum realized is about 1,112 million new pesos (US \$4.5 million at the current exchange rate). This money, reinvested in the second industrial area, represents a much greater relative sum in dollars. The return on investment to be expected in economic and social terms as a result of the expansion of the factories which have moved out and of the new plants cannot be estimated.

INDUSTRIAL ESTATES STUDY

ESTATE REPORT

COUNTRY ARGENTINA

REPORT NO. A.2

I. BASIC DATA

1. REGION Santa Fé 2. CITY Las Parejas 3. POPULATION 6,000 est.
4. ESTATE Las Parejas 5. OWNERSHIP Municipality 6. EXECUTING AGENCY Ind. Assn.

7. PHYSICAL DATA

Areas	Space	Planned	Completed
Industrial Buildings (m ²)		230,000	NA
Admin. & Service Buildings (m ²)		75,850	75,850
Roads & Access (m ²)			
Green Area (m ²)			
Total Site Area (m ²)		305,850	-

8. INDUSTRIES REPRESENTED (Nos. of Firms)

Industry Group	No.	Industry Group	No.
Foundries	7		
Machine Shops	5		
Agri. Machines	3		
Furniture	4		
Corr. Metal	1		
Plastics	1		
Cement Prods.	3		
Ceramic sinks	1		
Other	1		
Furniture firms interest.	2		
Firms bldg.	28		

Industrial Buildings (incl. Green Areas) on Plots

Category	Plot Area (m ²)	No. Planned	No. Sold	No. Occupied
A	15	1		
B	2,000 - 3,000	33		
C	3,000 - 4,000	11		
D	4,000 - 5,000	7	NA	
E	5,000 - 6,000	5		
F	6,000 - 8,000	2		
G	8,000 +	6		
Totals		65	26	1

9. SERVICES & COMM. ON FACILITIES ** None of the services are yet completed.

Services **	Transport	Admin. Bldgs	Amenities	Social Services
Electricity	x Internal	- Confer. Hall	x First Aid	x Bathouse -
Gas	P External	- Exhibition	- Doctor	- School -
Water	x Rail	- Econ. Library	- Fire Brigade	- Canteen -
Heating/Steam	- Road	x Classrooms	- Police Post*	- Chops -
Wage	x Water	- Cent. Workshop	- Warehouse	P Barber -
Roads	x Buses	x Quality Cont. P	*Security	- Sports Ground -
Telephones	P	Note: The estate is quite close to the town.		- Housing -

10. FINANCIAL DATA (Local Currency) pesos

11. PROGRESS IN IMPLEMENTATION

Category	Allocated	Spent		Planned Date	Actual Date
Land Donated by Commune - Deficit		by industry			
Infrastructure	179,000,000	18,000,000	Initial Action to Establish	1972	1972
Industrial Buildings	NA	30,000,000	Official Credits approved		
Common Facilities	NA	-	Land purchased		
Social Services	NA	-	Infrastructure completed	1978	
Planning & Admin.		1,800,000	Industrial buildings started		
Total			" " completed		
Government Credits	NA		Amenities completed		
International Funds	-		Social Services completed		

Payment for Occupancy Similar to system explained in Chapter II, Section 3(d).

Rental

Purchase - Initial Payment

Period of Repayment

Credit Facilities

II. ECONOMIC PERFORMANCE

12. MEMBERSHIP OF ESTATE			13. ESTIMATED SALES (Local Currency)			
	Number	%		Before Entry	Current	% Inc
Established local Firms	28		All Firms			
" Firms from other Cities	-		Sample 1.			
Newly established Firms	-		" 2.			
Foreign Firms	-		" 3.			
Joint Ventures	-		" 4.			
14. PERSONS ENGAGED (Employment) (Estimated)			15. LEFT ESTATE			
	Before Entry	Current	% Inc			Number
All Firms	NA			Business Failure		
Sample 1.				Relocated to larger Premises		
" 2.				Death		
" 3.						
" 4.						
16. INTRA-ESTATE CONTRACTING			17. NEW EXTERNAL SUB-CONTRACTING			
Elaborate plans have been made for a division of markets in the foundry and engineering industries involving specialisation and complementary production.						
18. NEW PRODUCTS DEVELOPED			19. USE OF LOCAL MATERIALS			
-			-			
20. NEW MARKETS ENTERED			21. EXPORTS DEVELOPED			
-			-			

III. SOCIAL DEVELOPMENTS

22. AVERAGE EARNINGS (Local Currency) - Per Month			23. LABOUR UNION MEMBERSHIP			
Not available	Before Entry	Current	% Inc	Number of Union Members	Before	Current
Unskilled Manual				See text in main report		
Skilled "				Employer Attitudes to Union		
Technicians				Membership		
Non-manual						
Supervisors						
24. WORKERS' HOUSING			25. EDUCATION, TRAINING, EMPLOYER COUNSELLING			
Number of Housing Units	Before	Current		Period	Number of Courses	Number of Trainees
None						
26. COMMUNITY BENEFITS			Basic Literacy			
Secondary/Tertiary Activities Promoted			General Education			
-			Manual Skill Upgrading			
Improved Roads, public Services, etc.			Specialist Training			
-			Technician "			
Increased local Prosperity			Management "			
-			Technical Counselling			
			Management Counselling			

A.2 Notes on the Industrial Estate, Las Parejas, Santa Fé

Las Parejas is a town of some 6,000 inhabitants in the centre of the Santa Fé province. It has an important foundry industry in which 2,000 people are said to be employed; however, there is a shortage of workmen in the town. Workers are also drawn from the towns nearby and the surrounding countryside.

The estate was approved and supported by the late Perón Government of the province, the Minister of Justice of which is also Chairman of the Estate Committee. However, after the change of government, the authorities lost interest in industrial estates and withdrew their support, although they did continue with the electrical supply and infrastructure. The industrialists therefore decided to go ahead by themselves. The municipalities sold the land at low prices to the factories on the condition that they build on it, the firms contributing only enough to make up the deficit in the original purchase by the town. The cost with infrastructure was 1,100,000 pesos per hectare (\$28,400). This is the most expensive land seen and represents quite a heavy burden for small firms.

There will be 28 firms on the estate, chiefly foundries, but also including a furniture firm. One of the attractions, apart from the need to expand, seems to be the possibility of setting up common sales and purchasing services. Industrialists met with also spoke of sub-division of labour, specialization and division of the market. One is bound to be a little sceptical as to whether this will work out in the long run.

Firms are building their own factories; at present one small foundry is operating and a number of other buildings are nearing completion.

Firms visited in the town

Foundry: This cast iron foundry employs 140 workers in one shift. It will not move on to the estate. It produces castings for the railways and agricultural implement manufacturers. It is not one of the firms which will move on to the estate, having ample premises. Output appears to be large, but there is absolutely no modern materials handling apart from two overhead cranes. The installation of roller tables would greatly facilitate handling the core

boxes and relieve the physical strain on the workers. A new electric furnace was purchased six months ago but there is insufficient electric power to allow it to be used. It is hoped that its existence will enable the firm to pressure the authorities into providing greater capacity.

Working conditions are reasonably good for the type of industry but productivity cannot be very high.

Engineering plant: This small engineering works is located in a residential area but the owners do not intend to move to the estate. It is making precision components on a sub-contract basis, working two shifts and appears highly efficient. The manager is young and dynamic; about twenty people are employed. The housekeeping is excellent and fully up to good European standards.

- 1 Covered area only.
- 2 To be included in dwelling area. INDUSTRIAL ESTATES STUDY
- 3 See text
- Individual firms provide in some cases. ESTATE REPORT

COUNTRY ARGENTINA

REPORT NO. A.3

1. BASIC DATA

1. PROVINCE Chubut (Patagonia) 2. CITY Trelew 3. POPULATION 25,000

4. NAME Parque Ind. de Trelew 5. OWNERSHIP Provincial Govt. 6. EXECUTING AGENCY Ministry of Economy

7. PHYSICAL DATA				8. INDUSTRIES REPRESENTED (Nos. of Firms)			
Areas	Planned	Completed	Industry Group	No.	Covered Area (m ²)		
Industrial Buildings (m ²)	3,000,000	88,048	In Operation				
Admin. & Service Buildings (m ²)			Textiles - Wool & Synthetic.				
Roads & Access (m ²)			Combing (Wool)	1			
Green Areas (m ²)	270,000		Spin. Twist. Dye	5			
Complementary Activities			Weaving	10			
Dwellings	500,000		Clothing	1			
Total Site Area (m ²)	3,770,000		Engin. & Metal	1			
			Pipes	1			
			Chemical	2			
			Ceramics & Bldg	2			
			Woodworking	1	24	88,048	
			Under Const.				
			Textiles - Twist.	1			
			Weaving	3			
			Engin. & Metal	1			
			Furnishing Fabs.	1			
			Plastics	1			
			Not stated	8	15	40,950	
			Planned				
			Not Stated	27	27	89,595	
Totals					66	218,593	

9. SERVICES & COMMON FACILITIES

Services	Infrastructure	Admin. Bldgs	Amenities		Social Services
Electricity	x Internal	- Confer. Hall	- First Aid	- Bank	- Bathhouse
Gas	x External	- Exhibition	- Doctor	- Restaurant	- School See 2
Water	x Hall	- econ. Library	- Fire Brigade	- Canteen See 3	- Creche See 3
Drinking, Steam	- Road	x Classrooms	- Police Post	- Shops	- Social Centre
Waste	x Water	- Cent. Workshop	- Warehouse	- Barber	- Sports Ground
Trucks	x Buses	x			- Housing Item 24 P

10. FINANCIAL DATA (Local Currency)

	Allocated	Spent
Capital Expenditure		
Land Acquired	2,437,950m ²	
Infrastructure + Land		240,000 pesos per hectare
Industrial Buildings		
Common Facilities		
Social Services		
Total		
Government Credits	See text.	
International Loans	None	

11. PROGRESS IN IMPLEMENTATION

	Planned Date	Actual Date
Initial Action to Establish	1971	1971
Official Credits approved		1971
Land purchased		1971
Infrastructure completed	See text.	
Industrial buildings started		1972
" " completed		-
Amenities completed		-
Social Services completed		-

Payment for Currency See text

Rental

Purchase - Initial Payment

Period of Payment

Credit Facilities

II. ECONOMIC PERFORMANCE

13. <u>NUMBER AND TYPE OF FIRMS</u>			14. <u>ESTABLISHED SALES (Local Currency)</u>			
	<u>Number</u>		Information not available See Text		<u>Before Entry</u>	<u>Current Inc.</u>
Established local Firms	-	70	All Firms			
" Firms from other Cities	-	30	Sample 1.			
Newly established Firms	-	-	" 2.			
Foreign Firms	None	-	" 3.			
Joint Ventures	NA	-	" 4.			
14. <u>FIRMS ENGAGED (Employment) (Estimated)</u>			15. <u>DEPARTURES</u>			
	<u>Before Entry</u>	<u>Current</u>	<u>Inc.</u>			<u>Number</u>
All Firms	Nil	2,950		Business Failure		Nil
Sample 1. See text.				Relocated to larger Premises		Nil
" 2.				Death		Nil
" 3.						
" 4.						
16. <u>INTRA-STATE CONTRACTING</u>			17. <u>NEW EXTERNAL SUB-CONTRACTING</u>			
In the textile industry nylon thread is sold by spinners and twisters to weavers and cloth by weavers to clothing manufacturers. So far no engineering contracting in estate.			NA			
18. <u>NEW PRODUCTS DEVELOPED</u>			19. <u>USE OF LOCAL MATERIALS</u>			
N.A.			Wool, combing/ ^{washing} and spinning only.			
20. <u>NEW MARKETS ENTERED</u>			21. <u>EXPORTS DEVELOPED</u>			
N.A.			Wool, mainly to Russia. Not a new market.			

III. SOCIAL DEVELOPMENTS

22. <u>AVERAGE EARNINGS (Local Currency) - Per Month</u>			23. <u>LABOUR UNION MEMBERSHIP</u>			
<u>New Pesos.</u>	<u>Before Entry</u>	<u>Current (Est)</u>	<u>Inc.</u>	<u>Number of Union Members</u>	<u>Before</u>	<u>Current</u>
Unskilled Manual	-	15,000			N.A.	N.A.
Skilled "	-	18,000				
Technicians	-	20,000				
Non-manual - clerical	-	15,000				
Supervisors	-	35,000				
24. <u>WORKERS' HOUSING</u>			25. <u>EDUCATION, TRAINING, EMPLOYER COUNSELLING</u>			
<u>Number of Housing Units</u>	<u>Before</u>	<u>Current</u>		<u>Period</u>	<u>Number of Courses</u>	<u>Number of Trainees</u>
See text.	Nil	Planned				
26. <u>COMMUNITY BENEFITS</u>			Basic Literacy General Education Manual Skill Upgrading Specialist Training Technician " Management " Technical Counselling Management Counselling			
Secondary/Tertiary Activities Promoted N.A.			Individual firms provide training programmes. See visit report to INTECO SA.			
Improved Roads, public Services, etc. Estate lies on main highway outside town. Improved bus services - see text.			Nil			
Increased local Prosperity Substantial - See text.						

A.3 Notes on the Trelew Industrial Estate

The Trelew Industrial Estate is far the most interesting estate seen in Argentina and that on which the most information is available. It is therefore worth examining in some detail.

The Estate lies on either side of Ruta Nacional 7 (Trelew to Gaimon), a few kilometres out of the town. The frontage on the north side is about 3 kilometres, with a depth of about 700 metres. This allows two rows of major plants with a central band used for administrative buildings and some small industries (see Figure A.1, Plan of the estate). On the south side there is at present a free lane of about 200 metres. Behind it is an irregularly shaped area the greatest depth from the road of which is about 1.5 kilometres. Several of the plots on the Trelew side of the estate on both sides of the road are reserved for small workshops. From the plan, these seem to vary in size from about 2,000 square metres to about 1,000 square metres or less, with several plots of about 7,000 square metres. Behind the estate on the south side all plots have been reserved for apartment houses and individual dwellings (see below).

The land was acquired by the provincial government and is not complete with its infrastructure - water, natural gas, electricity, which is brought in at 33,000 Volts, passed through a central transformer, and fed into individual firms at working voltages, rainwater drainage and sewers. Telephone connections are available and there is to be a central telex system. The roads have been made but, apart from the public road itself, they are as yet unpaved. The provincial laws demand that buildings shall be not less than ten metres back from the highway and not less than four metres from the fences dividing the plots. At present the distances in every case are much greater and the covered areas represent only a small fraction of the total area.

The principal industries at present in operation are textile industries. Local wool is handled on in the first stages, washing and combing. It is then baled for export, chiefly to Russia. Most of the industry is in synthetic fibre processing, drawing, twisting, dyeing, cheese winding and weaving. The weaving is on both standard shuttle looms and circular looms (knitting machines). The raw material is shipped in from Buenos Aires and other towns in the industrial north and the products mainly reshipped to Buenos Aires. Some of the thread,

however, is bought from the spinners and doublers by the weavins mills and the cloth is also sold to a medium-sized company (342 employees) making women's blouses, nightdresses and undergarments. Five more industries in the textile field are among the plants under construction, including one manufacturing furnishing fabrics.

Of the 24 firms at present operational, only seven are not in the textile industry. They include one engineering shop. It is not clear from the statistics whether they include small workshops, a number of which are noted on the plan in Figure 3A. At present there does not seem to be much interest on the part of the provincial government in promoting small industries in the province as a whole, the accent being on industries which will attract immigrants, and no figures were readily available.

The buildings are non-standard, each firm building according to its own designs, but it was noted that quite a number of the buildings were built with bays having vaulted concrete roofs standing on concrete pillars with brick walls which can easily be multiplied when extensions are needed. It was not possible to obtain estimates of building costs, but they are said to be 20 per cent higher than in Buenos Aires, presumably because most of the materials have to be imported. The figure given for the Oks Industrial Area was 55,000 new pesos per square metre built up, which seems high.

Out of the planned 300 hectares, 244 hectares have thus far been acquired by the government. The price paid is not known but it is all scrub and virtually useless except for goats. It is being sold to industry at 240,000 pesos, fully prepared, rather under \$1,000 at the current exchange rate. Compared with the cost on the Oks Industrial Area of 5,500,000 pesos per hectare (admittedly the land there is near the city and was agricultural land), this is practically a give away. If the Buenos Aires figure for building costs is used, the cost of the land is only 0.044 per cent. Of course, only a fraction of the plots is actually built on in most cases, but even then the land cost is negligible.

This is the first major incentive for industry to come to Trelew. Other incentives include:

- until recently, no import duties on machinery, but this no longer applies. It was a very important concession;
- exemption from various duties and taxes such as sales tax, value added tax, stamp duties;

- about 30 per cent reduction on electricity and water tariffs;
- purchase of the land from the firms' own resources in the following manner:
 - 5 per cent when the option is taken;
 - 5 per cent on completion of the sale;
 - 70 per cent in four six-monthly instalments;
 - 20 per cent when the deeds are finally handed over.
- 10 year credits for building with the Banco Nacional de Desarrollo which may be renewed for extensions;
- exemption for ten years from real estate duty, apparently an important concession.

With these incentives it is hardly surprising that 66 firms should have already built or signed up to come to Trelew, in spite of the long distance from the capital and its markets.

Common Services

It is not the intention of the Government to provide any central services other than those forming part of the infrastructure. Thus far, most of the firms are medium-sized and able to supply employee facilities such as canteens and nurseries. These were seen in one firm visited and seemed of a high order. It is intended that a school shall be located on the housing estate, when this is built. There is a public bus service from the town, but many firms run their own buses to collect and deliver the workers at their homes. It is understood that some of the smaller firms share the services of the larger ones.

Membership of the Estate

Seventy per cent of the factories on the estate belong to existing firms, most of which have their head offices, sales organizations and other central services in Buenos Aires. Some of the factories are branch factories, others are the sole manufacturing units.

Progress in Implementation

There do not seem to have been any special problems in putting in the infrastructure. Work went ahead very soon after the approval of the project and the acquisition of the land. The impression is gained that the sort of political problems which plagued the estates in Santa Fé Province either did not exist in Chubut or were relatively minor.

Persons on a roll

The latest figures give 2,440 persons engaged in the textile industry. A sample of five firms provided by the minister (in parentheses) is specified below. The following figures for employment and investment in machinery:

<u>Firm No.</u>	<u>Year set up</u>	<u>Capital investment</u> (US \$)	<u>Operators employed</u>	<u>Investment per operator</u> (US \$)
1	1969	8,346,620	430	19,644
2	1970	34,670	350	99
3	1969	2,235,791	138	16,170
4	1974	1,319,029	63	20,950
5	1969	1,057,920	60	17,632
6	1973	321,270	23	13,969

There seems to be little or no correlation between the numbers employed and the per capita investment. All the firms are rather capital intensive except No. 2. It seems likely that this is the garment making firm visited, because the main investment in machinery is in the sewing machines and the number of machinists is, perhaps, only half the total number employed. Even then it looks low.

Estimated Sales

Not known, but figures for output and electricity consumption for five firms in the drawing, twisting and cheese winding section of the synthetic fibre industry and five in the weaving section are given below. The figures were furnished by the Ministry without explanatory notes. The year is not stated but is presumably 1975.

Table III.1 Twisting Plants

<u>Firm No.</u>	1	2	3	4	5
Numbers employed	49	256	175	110	81
Covered area (m ²)	32,500	13,500	4,000	1,500	2,565
Electricity consumed (KW/month)	351,777	187,897	321,731	77,793	28,508
Output (kg/month)	279,333	87,932	84,724	38,070	58,425
Kg/KW	0.794	0.468	0.263	0.489	2.042
Output/worker (kg)	600	343	484	350	721

The variations are considerable and cannot be explained without knowing precisely what processes are carried out. For example, the mill visited, although considered as a twisting and doubling plant, also drew the fibre from the original thread, a process which takes cost, whereas pure doubling and twisting does not. The figures for Firm No. 1 are highly suspect and in the absence of any explanation must be rejected.

Table III.2 Weaving Plants

Firm No.	1	2	3	4	5
Workers employed	145	130	108	70	32
Ground area (m ²)	2,682	4,200	7,400	5,000	2,500
Electricity consumer (KW/month)	25,413	114,328	117,608	49,385	52,285
Output (Kg/month)	9,447	26,750	61,200	64,447	14,010
Kg/KW	0.372	0.234	0.520	1.304	0.268
Output/worker (Kg)	65	205	567	921	438

Again there are considerable variations both in electricity consumed and in output per worker. It is not stated whether the weaving is on shuttle or circular looms (knitting machines). Some firms have both and the Government statistics do not differentiate. It looks as though Firm No. 1 had just started up and had most of its workers under training. The figures for Firm No. 4 are suspect. Several details such as the weight of thread, tightness of weave and so on would be required to interpret the figures sensibly.

Intra-Estate Contracting

The intra-estate contracting is in the textile industry between the thread makers, weavers and garment makers, as noted above.

Social Developments

Average earnings: The figures of average earnings were supplied by the Ministry. If they include women they seem high, taking account of the fact that the recent increases in the basic wages of agricultural workers promulgated in September range from about 15,000 pesos for supervisors down to about 9,000 pesos per month for labourers.

Labour union membership: As noted elsewhere, the trade unions are at present suspended.

Workers housing: As noted above, many of the immigrants to the area, including an important number of Chileans and Bolivians, have started building their own houses. Fifty hectares have been set aside on the south side of the estate for apartments and houses. These will be built by individual firms and are likely to be allocated 90-95 per cent for managers, professional staff and technicians and only 5-10 per cent for manual workers. In view of the high percentage of women workers, nearly all of whom are either married or living with their families, this is perhaps not quite as discriminatory as may appear at first sight. No dwellings have yet been built.

Education and training: No common services are envisaged. All the larger firms have their own training facilities. The garment firm has a special workshop where girls are trained in all aspects of machining so as to be interchangeable.

Community benefits: The benefits already seem substantial. Perhaps the most important is the opportunity for women to obtain employment in a small community where there were previously few jobs for them. In the long run this should give them greater independence, but it may be noted that in Argentina generally, including Trelew, girls seem to be much freer to go about alone than in most Latin American countries. Middle class girls, at least, can be seen driving cars, dining in restaurants or sitting in cafés alone or in couples without any problems. It is not known how true this is in the working classes. Other community benefits are discussed under "Return on Investment".

Return on investment: It is not possible to measure the return on investment in financial terms. In any case, the estate is far from complete. However, in terms of the aims of the Government in promoting it and benefit to the community it is already paying off. Summarizing briefly, the benefits may be said to be the following:

- It has already attracted many immigrants into the town, which has doubled in size in two years;
- It has brought into the economic circuit a large number of persons, mainly women, who were not previously earning and who are increasing the general wealth of the community;
- It has brought and is bringing increased prosperity to the town, not only from the increased money circulated by the wage and salary earners, but also because the existence of important factories,

most of which have their markets and head offices in Buenos Aires, necessarily brings a stream of executives, buyers, salesmen, contractors and others into the town, to the great benefit of the catering and hotel trade and the service industries generally.

What the final employment figures will be can only be estimated at this stage. From the plan in Figure A.2 there seem to be at least 31 major plots (8,000 m² and above) and some 60 odd small ones, which would make for about 100 firms. If the average employment is 50 people, a not unreasonable assumption, this would give at least 5,000 jobs, practically all of which would be new to the region and a net economic gain, as well as greatly increasing the local population.

Firms Visited

A.J. Tendlarz SACIF - Drawing, twisting, doubling and dyeing synthetic fibres: This has its head office in Buenos Aires. It is the firm's only plant. 180 persons are employed, mainly women, on three shifts. There are 14 frames of 200 spindles each plus the cheese winding frames and a circular knitting section. There is also a dyehouse. The firm was set up in 1964.

This appears to be a very well run firm. It is highly capital intensive with modern machinery which is well maintained and operating at a high efficiency. Working conditions are excellent. An extension to the dyeing facilities is being installed involving very expensive stainless steel plant.

The raw materials come from Buenos Aires. The products are partly sold to local weavers, partly sent to the markets at Buenos Aires.

Inteco SAIC - Laides' blouses, nightdresses and underwear: The products are all made of nylon. There are 342 employees, practically all of which are women and girls. The headquarters are in Buenos Aires, where there is another factory employing about 100 persons. The firm appears well managed and there has been some industrial engineering applied to the sewing lines, but much of the cutting out and handling seems to be "artisanal". Working conditions are good; there is a canteen where tea, coffee and milk are provided free and other food and drink at cost. There is also a nursery. Music is played in the workshop, which is light and airy.

In spite of the good conditions and pay, the main problem is absenteeism (15 per cent) and high labour turnover. Most of the women and girls are either second wage earners, if married, or living with their families at home. They

earn about 12,000 pesos per month, well below the average cover in the Ministry's figures, but nevertheless as a second income a substantial addition to the household. If the husband is earning, say, 12,000 pesos (below the average), then the couple has an income of 20,000 pesos a month. Engineers at the CEMEX at Rosario, where life is more expensive, earn 40,000 pesos a month and are considered quite well off.

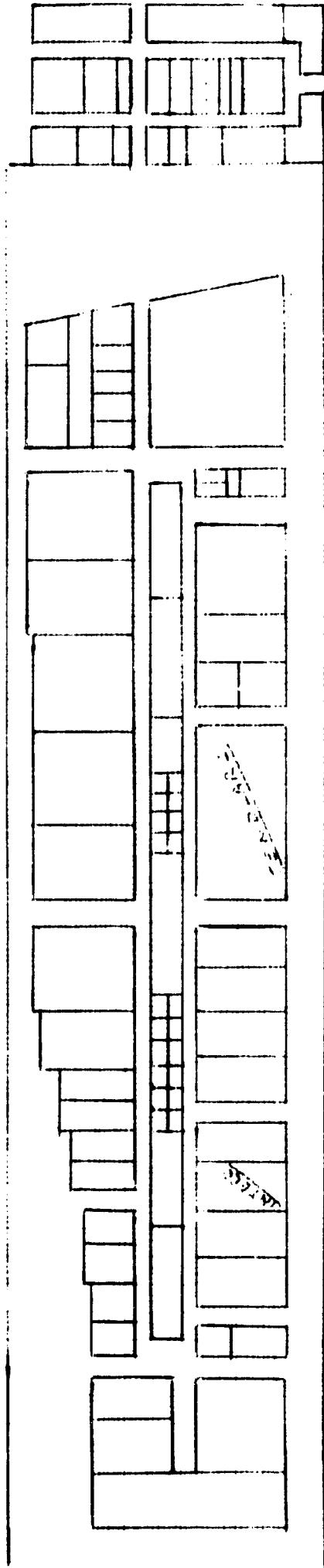
The pressures to work are therefore not always compelling. Many women work about four months, especially towards Christmas, which coincides with summer holidays in Argentina, and then go off. They may return later on or go to one of the other firms. It was noted that many of the women appeared to be of Indian stock and therefore either Bolivians or Chileans. The question was not raised, but it may be that this group of immigrants has not yet fully entered the "consumption ear", although it no doubt will quickly do so.

Puerto Madryn - Ventura SA - Fish freezing and packing: This plant freezes fish, mainly scallops, whiting and salmon, which are caught by its own boats. It was set up in 1973 and has very modern equipment. There are 150 permanent employees; this number is increased in the main fishing season. The products are exported, the scallops to the USA and the whiting to Europe. Workers are all male, many being Chileans and Bolivians, probably because the job is rather a messy one.

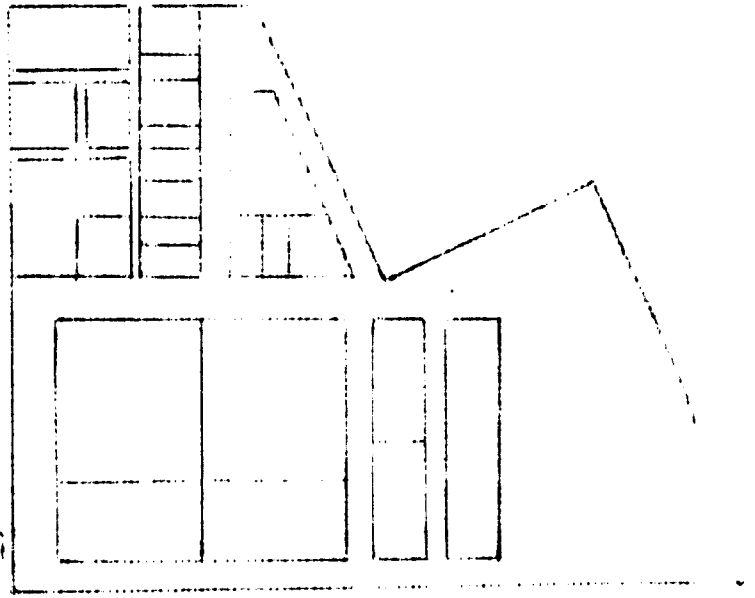
The aluminium plant, to which it is hoped to attach an industrial estate composed of firms making aluminium products, uses bauxite from North Argentina and ingots of raw aluminium from Australia. It has its own jetty and the only deep water port in Argentina capable of taking ships of any draught. The bauxite is conveyed by belt from the ship to the plant.

Figure A.3

APP. III



AVENIDA NACIONAL N° 25



PARQUE INDUSTRIAL TRELEW
ESQ. V. 125

A.4 Notes on the Neuquen Estate

It was unfortunate that, for reasons explained in the main text, it was impossible to make a more thorough study of this estate or to obtain further details on it.

A brief tour was made on the evening of arrival and some details given verbally by the Director. The estate at present covers 178 hectares, 109 hectares being available for occupation by industry. All the plots have been sold. Price of land with infrastructure to industry is 460,000 pesos per hectare (approximately \$1,800). The estate is administered by a consortium which includes three employer members.

The estate lies a few kilometres out of town on a main road and has been carved out of scrub land. Most of the infrastructure is complete but the roads are not yet paved. Plans are going forward for its extension on the other side of the road. Firms already operating include textiles (180 employees), compressed board, face powders, electrical equipment for the oil industry and plastic boxes for fruit. 280 people are employed to date.

The Neuquen Estate has been set up with objectives broadly similar to those underlying the Trelew Estate and is showing signs of being successful. The industries on it will be more locally oriented than those at Trelew, using local materials (wood, eventually china clay) and serving local markets, of which the oil industry represents an important one.

INDUSTRIAL ESTATES STUDY

ESTATE REPORT

COUNTRY ARGENTINA

REPORT NO. B.1

I. BASIC DATA

1. REGION	Santa Fé	2. CITY	Venada Tuerta	3. POPULATION	60,000 est.
4. ESTATE	La Victoria	5. OWNERSHIP	Cooperative	6. EXECUTING AGENCY	Cooperative

7. PHYSICAL DATA				8. INDUSTRIES ESTABLISHED (Nos. of Firms)		
Area	Space	Planned	Completed	Industry Group	No.	Industry Group
Industrial Buildings (m ²)		720,000	-			
Admin. & Service Buildings (m ²)		80,000	-			
Roads & Access (m ²)		190,000	(1.3 km paved)			
Green Area (m ²)						
Total Site Area (m ²)		1,000,000				
Industrial Buildings (incl. Green Areas) or Plots						
Category	Unit Area (m ²)	No. Planned	No. Sold	No. Occupied		
See text.						
A						
B			15	1		
C				(See text)		
D						
E						
F						
G						
Totals					See Table 2	NA

9. SERVICES & COMMON FACILITIES See text.

Services	Transport	Admin. Bldgs	Amenities			Social Services
Electricity	x Internal	P Confer. Hall	- First Aid	P Bank	P Bathhouse	-
Gas	P External	Exhibition	P Doctor	- Restaurant	P School	-
Water	P Rail	P Tech. Library	x Fire Brigade	P Canteen	P Creche	P
Heating/Steam	- Road	P Classrooms	P Police Post	P Shops	- Social Centre	-
Drainage	P Water	- Cent. Workshop	P Warehouse	H Barber	- Sports Ground	-
Roads Partially	y Buses	P Tech. Office	P Post Office	H Petrol Stn.	H Housing	-
		Ext. Services	P			

10. FINANCIAL DATA (Local Currency)			11. PLANNED INVESTIGATION		
Capital Outlay	Allocated	Spent		Planned Date	Actual Date
Land		13,307,806		1971	1971
Infrastructure	299,000,000	72,300,000	Initial Action to Establish	NA	NA
Industrial Buildings		-	Official Credits approved	1973	NA
Common Facilities		-	Land purchased	1980	-
Social Services		-	Infrastructure completed	1975	1975
Cost per hectare	5,400,000	-	Industrial buildings started	-	-
Total			" " completed	1980	-
Government Credits			Amenities completed	-	-
International Funds			Social Services completed	-	-

Payment for Occupancy See main text for example
 Rental
 Purchase - Initial Payment
 Period of Repayment
 Credit Facilities

B.1 Notes on the Industrial Estate at Venado Tuerto, Santa Fé

The Venado Tuerto Industrial Estate, La Victoria consists of 100 hectares of land of which 32 have been endowed with infrastructure including a transformer station. One factory making sheet metal machinery has been erected on the site, but this has now closed down and has been sold to another group of interests. It is to be reactivated. A foundry building is in the course of construction. Fourteen firms have thus far bought land on the estate. Some metalled roads have been made on the completed portion, otherwise it is still open grassland.

The original action to establish the estate was in 1971; however, due to the political changes with consequential changes in the provincial Government's attitude to estates, it took three years to obtain approval for the Government aid. In the meantime, the industrialists and some other people set up a co-operative, which now has 95 members. Not all of them intend to take up plots on the estate.

One of the main reasons for setting up the estate was the fear that firms in the town wishing to expand might go elsewhere, since the Santa Fé Province is Class 0 in the Federal Government's scale for development aid (rich province, little help, see main text). Thus a major purpose is to maintain employment in the locality. In fact, the co-operative chairman's own firm, a drop forging shop (see below), is moving out to San Luis, San Juan Province, which is Class 1 and thus eligible for much greater incentives in the form of tax rebates and the like.

The co-operative plans to have some social services including a canteen and collective transport. They have already established centralized purchasing and expect to set up a common warehouse. Members will pay for these services as they use them.

Firms visited in the Neighbourhood

Forge: This is a drop forging shop working on sub-contracts for the automobile and agriculture equipment industries (Ford, General Motors, John Deere, etc.). It is working three shifts; output is normally 160-180 tons per month but in August 1976 it achieved 250 tons. Working conditions are fairly good; protective clothing is worn. The firm is moving out to San Luis soon. This will throw quite a large number out of work.

INDUSTRIAL ESTATES STUDY

ESTATE REPORT

COUNTRY ARGENTINA

REPORT NO. B.2

1. BASIC DATA

1. REGION Cordoba 2. CITY San Francisco 3. POPULATION 58,000 est.
 4. NEARBY P.O. de San Francisco 5. CEN. REG. Mixed 6. EXECUTIVE AGENCY Managing Board

7. PHYSICAL DATA				8. INDUSTRIES REPRESENTED (Nos. of Firms)	
Area	Space	Planned	Actual	Industry Group	No. Industry Group
Industrial Buildings (m ²)					
Admin. & Service Buildings (m ²)		142,000	None		
Roads & Access (m ²)					
Green Area (m ²)					
Total Plot Area (m ²) (see text)		950,000	None		
9. UTILIZATION OF PLOTS (Nos. of Plots)					
A B C D E F G	Plot No.	Area (m ²)	Planned	Actual	Occupied
Totals					34

9. UTILIZATION OF PLOTS

Category	Internal	External	Planned	Actual	Amenities	Social Services
Community	- Internal	- External	- Center, Hall	- Exhibition	- First Aid	- Bathhouse
Services	x Mail	x Club	x Soc. Library	x Cinema	x Bank	- Restaurant
Utilities	- Gas	x Water	x Electric	x Sewer	- Fire Brigade	- Canteen
Other	x Water	- Sewer	- Workshop	- Warehouse	x Police Post	- Shops
Buildings	x Pipes	x Tech. Office	x P.O. Lab.	x Purchasing	x Barber	- Social Centre
						- Sports Ground
						- Housing

10. FINANCIAL DATA (in thousands)

11. TIMELINE IN IMPLEMENTATION

Category	Planned	Actual	Planned Date	Actual Date
Land	NA	5,000,000		
Infrastructure	NA	NA	1969	1969
Industrial Buildings			-	-
Utilities			1972	1973
Social Services			1980	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-

12. COSTS

Rental
 Purchase - Initial Payment
 Purchase - Period of Payment
 Credit Facilities

II. ECONOMIC PERFORMANCE

12. MEMBERSHIP OF ESTATE		13. ESTIMATED SALES (Local Currency)			
	Number	%	Not Applicable	Before Entry	Current
Established local Firms	34		All Firms		
" Firms from other Cities	None		Sample 1.		
Newly established Firms	-		" 2.		
Foreign Firms	None		" 3.		
Joint Ventures	None		" 4.		

14. PERSONS ENGAGED (Employment) (Estimated)				15. LEFT ESTATE	
Not applicable	Before Entry	Current	% Inc	Not applicable	Number
All Firms				Business Failure	
Sample 1.				Relocated to larger Premises	
" 2.				Death	
" 3.					
" 4.					

16. <u>INTRA-ESTATE CONTRACTING</u> This is expected to increase, but in a small town most industrialists are already in close contact, especially those in the cooperative.	17. <u>NEW EXTERNAL SUB-CONTRACTING</u> -
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18. <u>NEW PRODUCTS DEVELOPED</u> -	19. <u>USE OF LOCAL MATERIALS</u> -
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20. <u>NEW MARKETS ENTERED</u> -	21. <u>EXPORTS DEVELOPED</u> -
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III. SOCIAL DEVELOPMENTS

24. AVERAGE EARNINGS (Local Currency) - Per Month			23. LABOUR UNION MEMBERSHIP				
	Pesos	Before Entry	Current	% Inc	Number of Union Members	Before	Current
Unskilled Manual	per month				<u>Employer Attitudes to Union Membership</u>		
Skilled	" "						
Technicians							
Non-manual							
Supervisors							

24. HOMEOWNERS' HOUSING			25. EDUCATION, TRAINING, EMPLOYER COUNSELLING		
Number of Housing Units	Before	Current	Period	Number of Courses	Numbers Trained

26. COMMUNITY IMPROVEMENTS		
Secondary/Tertiary Activities promoted		
Improved Roads, public Services, etc.		
Increased local Prosperity		

- Basic Literacy
- General Education
- Manual Skill Upgrading
- Specialist Training
- Technician "
- Management "
- Technical Counselling
- Management Counselling

B.2 Notes on the San Francisco Industrial Estate

San Francisco is a town of about 60,000 inhabitants in Córdoba Province, a few kilometres over the Santa Fé border. Through an arrangement between the two provincial governments, industry there is being assisted by the CENDES in Rosario. One member of the present UNIDO team worked there for two years.

The town has some 400 enterprises, including a factory of the armed forces, which is mainly manufacturing consumer durables and employs between 300 and 400 workers. In 1972 a questionnaire was sent out to all industrialists in the town by the industrial estate company in an effort to determine how many would be likely to want space on the estate and what their needs in both land and common services might be. This resulted in 170 replies, 139 forms returned blank and 31 with no replies at all. The breakdown of the 170 firms by industries is:

Food and drink	24
Textiles and clothing	4
Knitting	8
Furniture	14
Paper and printing	5
Leather	1
Rubber goods	2
Chemical products	3
Non-metallic minerals	2
Engineering and metallurgy	71
Electrical goods	7
Transport equipment	16
Miscellaneous	13

The distribution of sizes was:

Employees	1 - 10	105
	11 - 25	27
	26 - 50	19
	51 - 100	9
	101 - 200	3
	201 - 300	1
	301 - 400	2

The sizes of four firms are not given. The engineering and metallurgical industries, which represent about 42 per cent of the firms replying range from repair shops through small batch manufacture of capital goods to quantity production. The metallurgical shops are generally foundries.

The estate at present is a fenced-in area of 7 hectares. Electricity substations have been installed in each sector and water and drainage are in process of being put in. No roads have yet been constructed. The delays in completion are attributed, as everywhere else in the region, to changes in policy accompanying the various changes in provincial government.

The main reasons the industrialists want the estate are difficulties in expanding inside the town. They justify it on grounds of greater efficiency and convenience, but it may not really contribute much to the development of the area, since there is already an acute shortage of industrial workers and what was described as "overfull employment". Most of the industrialists are well to do and could afford, if they wished, to buy their own land and install the necessary infrastructure; but the group of industries seems logical from both the industrial and town planning points of view. Thus far 34 firms have bought plots.

The Industrial Estate Company was formed in 1972 on the initiative of seven or eight industrialists, stimulated by a municipal decree aimed at getting industry out of the centre of town. Apart from the various changes of government, there were legal problems and a shortage of finance. One major chore was simply the need to explain the idea of an industrial estate to successive ministers and their senior officials.

The company was aided by a UNIDO consultant, Mr. A. Neilson, who carried out a short-term advisory mission in 1972. He was followed by another consultant who stayed two years and whose principal role seems to have been persuading the ministries and other local firms that the estate was a good thing.

The industrialists, particularly those in the metal industries, see the estate as an opportunity to rationalize production. Many of the firms are complementary, and it is felt that by grouping them close together physically, not only does co-operation become easier and the movement of components and materials quicker and cheaper, but also provides opportunities for central services. A quality control laboratory has already been set up on the site of the estate company, equipped with instruments largely supplied by UNIDO. In addition to this there will be a central warehouse for raw material storage (central purchasing was not mentioned but will probably be practised), and a central packing station, which will be especially valuable for those firms making heavy machinery. Technical upgrading of both managers and workers is also envisaged.

Firms Visited

Engineering workshop: One small engineering workshop was seen. This employs about 15 workers and is run by the owner and his son. It had modern, standard machine tools and was manufacturing, among other things, drill chucks in large quantities. They had also designed and built a prototype shaper, a type of machine tool not yet produced in Argentina, for which there should be a good market. The firm had started on the ground floor of the owner's house, spread to the upper floor and had then been forced to take additional premises nearby. Working conditions were rather cramped and the owner was eager to move on to the estate. The workers seemed skilled; the owners worked with them. They were reported to earn between \$ 70 and \$ 100 per month, roughly the same as in the other towns in the region.

B. 3 Some Notes on the Alvear Industrial Estate, Rosario

Rosario is a city with a population approaching the one million mark. It lies about 350 kilometres up the Parana River from Buenos Aires, has a deep water port on the river and is the principal outlet for grain exports in the country.

In 1958-59 the provincial government had the idea of setting up an industrial estate in Rosario and a feasibility study was made. In 1971, promotional action was taken and land 15 kilometres outside the city was expropriated by the government and purchased at a cost of 96,374,040 pesos, (\$ 1,928,000 at the time of purchase when the official rate was \$ 1 = 5 pesos). An association of industrialists interested in purchasing land on the estate was formed with an administrative board. As ever, this was the work of a few enthusiasts and it was necessary to go out and look for candidates for places. In the initial stages the main arguments were:

- the cramped conditions in the city which inhibited further expansion;
- the low cost of the land;
- favourable financial terms and long-term credits;
- 10 years exemption from taxes.

The idea gradually took hold and today 51 firms have bought plots. The maximum number which the estate can contain is 130. About two thirds of the places have been taken by local firms, small and medium-sized, with an average employment of around 50 workers. As everywhere else, government action was delayed by the political changes.

The estate covers 175 hectares of which 145 hectares have been allocated for industrial building, 23 for roads, seven for green areas and nine for administrative buildings and central services. The infrastructure is 15 per cent complete to date. The usual services will be available; completion is expected in 1980. Land is expected to cost 5,500,000 pesos per hectare. The majority of firms taking up places are in the engineering and related industries and there are some furniture manufacturers.

It was said here, as elsewhere, that the industrialists in the region have not been much accustomed to co-operate, but the experience of working together in the association and the administrative board has already established close links between firms and these should become economically even closer once they have moved in. The high proportion of firms in the metal industries has stimulated them to consider setting up central

services including centralized purchasing, a common warehouse and technical centre.

Rosario manufacturers are among those receiving technical assistance from the UNIDO/CEADES extension services in the city, which are much appreciated. This has, no doubt, prompted firms to consider their own central services.

Provisional cost figures have been stated, but the fact that the estate is still far from completion and the first factory will not be operational before 1977 makes giving provisional figures of doubtful value.

B. 4 Some Notes on the Proposed Bahia Blanca Estate

Bahia Blanca, a city of 200,000 inhabitants in the extreme south of Buenos Aires Province, was visited in the belief that there was an estate operating there, which proved to be false. An interview was given by the Secretary for Public Works of the Municipal Council who described briefly the proposals and progress.

The idea of the municipality was to set up a "mini-estate" with the aims of

- centralising dispersed firms on a single site where they would have proper infrastructural facilities;
- attract industrialists from other regions.

The second of these aims was developed because Bahia Blanca is one of the few cities in Argentina which seems to have stagnated for some decades without any substantial increase in population.

The land is available - 20 hectares have roads, water, gas and electricity on the site near the river, but it is said to be on soggy ground and liable to flooding. There seems to have been some confusion in the original concept; the site was chosen near to a small refinery and it was proposed that the firms on it should be those using by-products of the refinery as their raw materials, but this idea seems to have been put in abeyance. This would have been the only justification for the site.

Many firms are interested in acquiring land and it is thought that the estate could be sold out in 24 hours to small and medium-sized firms in the metal and other industries. Bahia Blanca is in Zone 1 (high incentives to industries coming from outside). The refinery produces ethylene and PVC and other petrochemicals.

The reasons for the present delay in allowing firms to enter seems to be mainly concerned with the unsuitability of the site.

APPENDIX IV

Feasibility and Other Studies for Industrial Estates in Argentina

- Parque industrial ganadero, provincia de San Luis
C.F.I. (Consulting Engineers y Estudio Dr. C.M. Vandersi), 1970.
- Diseño del Parque Industrial de Trelew
Asesoría de Desarrollo de la Provincia del Chubut, 1970
- Orientación tecnológica del parque industrial de Comodoro Rivadavia
Asesoría de Desarrollo de la Provincia del Chubut, 1970
- Parque industrial de Neuquén
C.F.I. (FIEL), 1970
- Parque industrial de Santiago del Estero
C.F.I. (Mario Navarro), 1970
- Parque industrial de Olavarría: estudio de factibilidad.
C.F.I. (Federico H. Quiroga), 1969 - 1970.
- Estudio de factibilidad para instalar industrias en los partidos incluidos en el área de influencia del polo de Bahía Blanca.
C.F.I. (Instituto de Economía - Universidad Nacional del Sur), 1971
- Parque industrial San Juan
C.F.I. (FIEL), 1971
- Bases para el ordenamiento espacial y urbano del Area Jujuy-Palpalá, y estudio de factibilidad técnica-económica de la localización de un parque industrial en Palpalá.
C.F.I. (Latinoconsult Argentina - ADE) 1970-71.
- Programa industrial del Proyecto Río Dulce: información preliminar para la consideración de interesados.
Corporación del Río Dulce, 1971.
- Estudio sobre el complejo industrial Santa Fé - San Nicolás
Consejo Federal de Inversiones, 1961

Programación del desarrollo del complejo industrial San Nicolás

CAFADE - DGFM, 1964

Parque industrial piloto de la ciudad de Córdoba

CONADE, 1962

Programa de desarrollo de la cuenca de Río Turbio en función del desarrollo de la explotación del carbón

CFI - YCF, 1963.

Localización industrial en la provincia de Córdoba

Fernando Ferrero, Instituto de Economía y Finanzas de la Universidad Nacional de Córdoba, 1964.

Estudio para la localización y proyecto de un parque industrial en la provincia de Tucumán

CFI - 1967

Parque industrial petroquímico (Mendoza)

Ministerio de Economía de la Provincia de Mendoza, 1965

Complejo Industrial San Nicolás; estudio de factibilidad, anteproyecto y pliego para su implantación

Italconsult Argentina, Dirección General de Fabricaciones Militares, 1966.

Parque industrial Santa Fé

C.F.I. - 1968

Complejo Industrial Ramallo - San Nicolás

Latinoconsult Argentina, Dirección General de Fabricaciones Militares, 1968.

Estudio de mercado. Parque Industrial Bahía Blanca

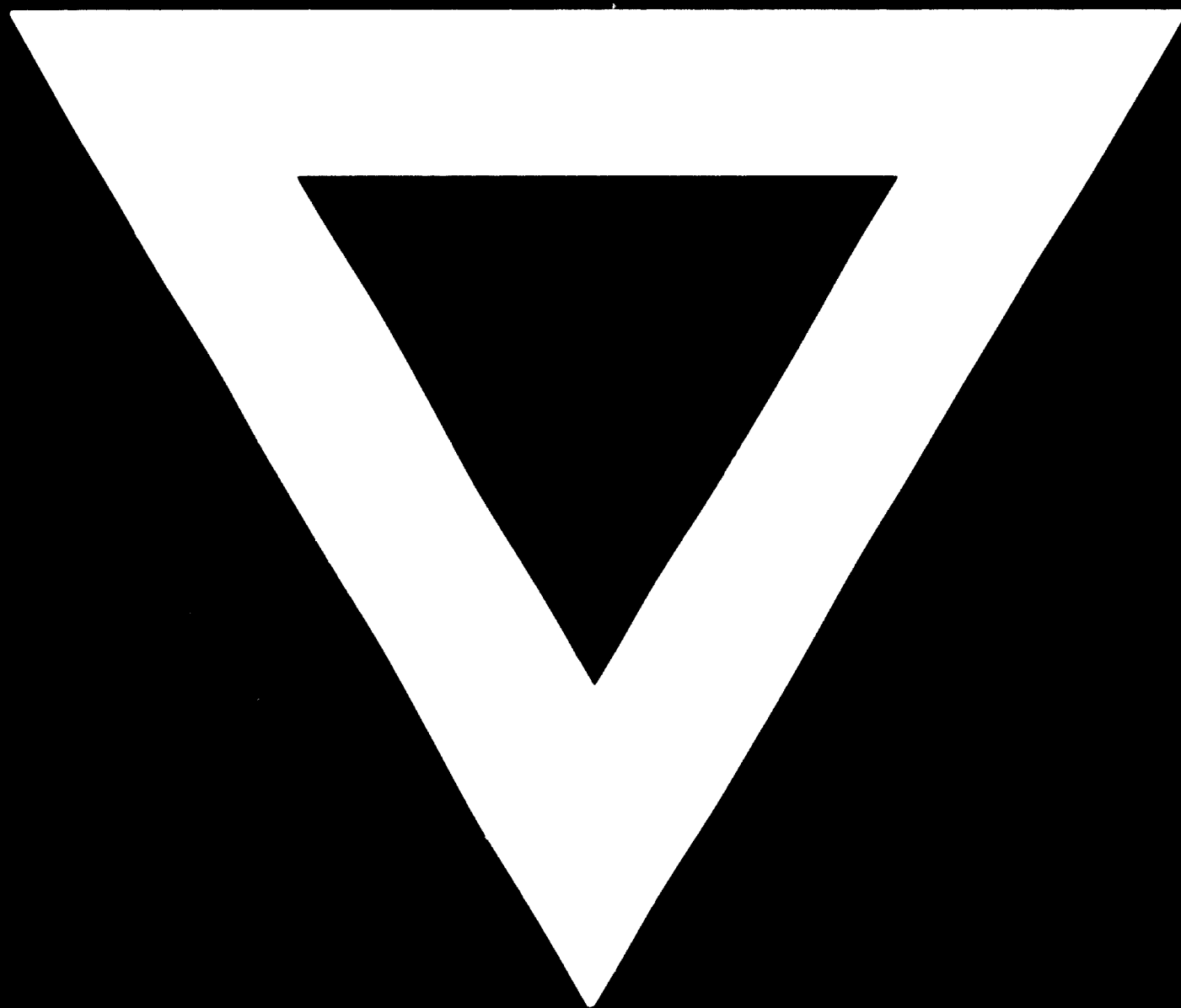
C.F.I. - 1969

Studies under Preparation

- Estudio y diseño del área industrial de Ushuaia
- Parque industrial Río Gallegos. Caleta Olivia (Santa Cruz)
- Parque industrial de Concepción del Uruguay (Entre Ríos)
- Parque industrial de Paraná (Entre Ríos)
- Parque industrial en la provincia de Salta
- Parque industrial de General Pico (La pampa).



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