

**THE INDUSTRIAL DEVELOPMENT
PROMOTION STUDY
OF
AVEIRO-VISEU REGION
IN THE PORTUGUESE REPUBLIC
(SUMMARY)**

JULY 1992

JAPAN INTERNATIONAL COOPERATION AGENCY

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THE INDUSTRIAL DEVELOPMENT PROMOTION STUDY OF AVEIRO-VISEU REGION IN THE PORTUGUESE REPUBLIC (SUMMARY)

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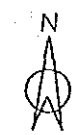
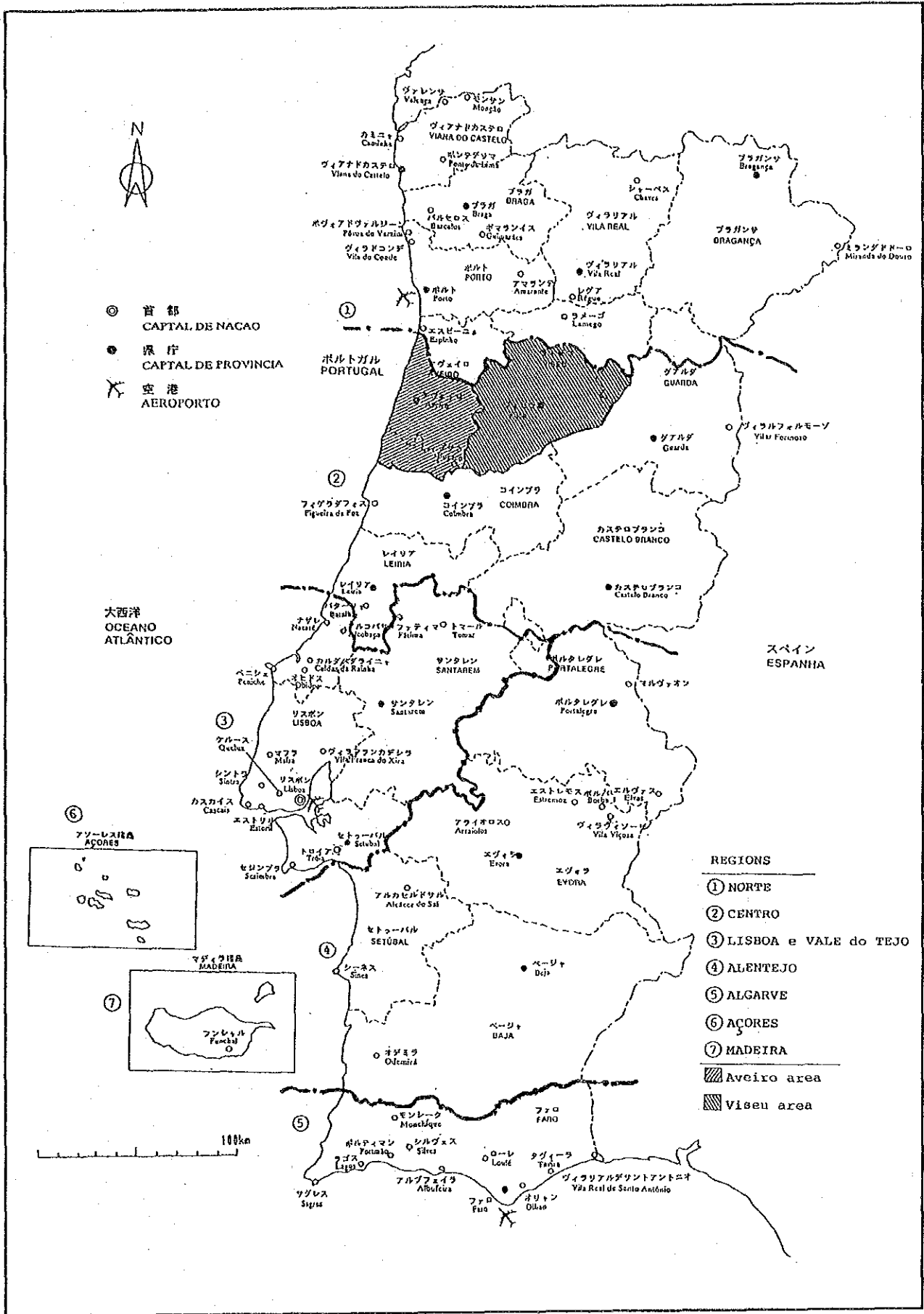
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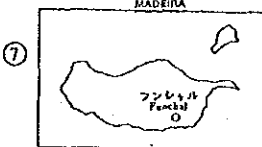
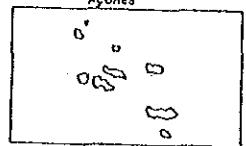
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- REGIONS
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 - ② CENTRO
 - ③ LISBOA e VALE do TEJO
 - ④ ALENTEJO
 - ⑤ ALGARVE
 - ⑥ AÇORES
 - ⑦ MADEIRA

- Aveiro area
- Viseu area

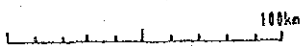


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ABBREVIATIONS (1)

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PORTUGUES / 日本語 (English)

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AIDA	ASSOCIACAO INDUSTRIAL DO DISTRITO DE AVEIRO アベイロ工業連盟 (Industrial Association of Aveiro District)
AIP-LISBOA	ASSOCIACAO INDUSTRIAL PORTUGUESA リスボン工業連盟 (Industrial Association of Portugal - Lisbon)
AIP-PORTO	ASSOCIACAO INDUSTRIAL PORTUENSE ポルト工業連盟 (Industrial Association of Portugal - Porto)
BP	BANCO DE PORTUGAL ポルトガル中央銀行
CAP	(COMMON AGRICULTURAL POLICY) EC共通農業政策
CCRC	COMISSAO DE COORDENACAO DA REGIAO CENTRO 中部経済委員会 (Comission of Cordination of Central Region)
CIP	CONFEDERACAO DA INDUSTRIA PORTUGUESA ポルトガル工業連合会 (Industrial Confederation of Portugal)
EAGGF	(EUROPEAN AGRICULTURAL GUIDANCE AND GUARANTEE FUND) 欧州農業指導補償基金
EC	(EUROPEAN COMMUNITY) 欧州共同体
EFTA	(EUROPEAN FREE TRADE ASSOCIATION) 欧州自由貿易連合
EIB	BANCO EUROPEU DE INVESTMENTO 欧州開発銀行 (European Investment Bank)
EMS	(EUROPEAN MONETARY SYSTEM) 欧州通貨制度
ERDF	FUNDO EUROPEU DE DESENVOLVIMENTO REGIONAL 欧州地域開発基金 (European Regional Development Fund)
ESF	(EUROPEAN SOCIAL FUND) 欧州社会基金
FGRK	FUNDO DE GARANTIA DE RISCOS CAMBIAIS 為替保険基金 (Foreign Exchange Risk Guarantee Fund)

ABBREVIATIONS (2)

PORTUGUES / 日本語 (English)

GDP	GROSS DOMESTIC PRODUCT 国内総生産
IAPMEI	INSTITUTO DE APOIO AS PEGUENAS E MEDIAS EMPRESAS E AO INVESTIMENTO 中小企業振興院 (Institute for Support to Small and Medium Sized Enterprises and Investment)
ICEP	INSTITUTO DO COMERCIO EXTERNO DE PORTUGAL ポルトガル貿易振興庁 (Portuguese Foreign Trade Institute)
IEFP	INSTITUTO DO EMPREGO E FORMACAO PROFISSIONAL 職業訓練雇用院 (Institute for Employment and Professional Training)
INE	INSTITUTO NACIONAL DE ESTATISCAS 国家統計院 (National Institute of Statistics)
INESC	INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES 情報技術研究センター (Institute for Systems and Computer Engineering)
IPE	INVESTIMENTOS E PARTICIPACOES EMPRESARIAIS S.A. 投資育成株式会社 (Investment and Participation Company)
ITEC	INSTITUTO TECNOLOGICO PARA A EUROPA COMUNITARIA E C 技術連盟 (Technological Institute for the European Community)
LNETI	LABORATORIO NACIONAL DE ENGENHARIA E TECNOLOGIA INDUSTRIAL 国立産業技術研究所 (National Laboratory of Technological and Industrial Engineering)
MCT	MINISTERIO DO COMERCIO E TURISMO 商業観光省 (Ministry of Trade and Turism)
MIE	MINISTERIO DA INDUSTRIA E ENERGIA 工業エネルギー省 (Ministry of Indtustry and Energy)
MOPTC	MINISTERIO DAS OBRAS PUBLICAS, TRANSPORTES E COMUNICACOES) 公共事業、運輸・通信省 (Ministry of Public Works, Transport and Communication)
MPAT	MINISTERIO DO PLANEAMENTO E DA ADMINISTRACAO DO TERRITORIO 国土計画行政省または国土計画省 (Ministry of Planning and Territorial Administration)

ABBREVIATIONS (3)

PORTUGUES / 日本語 (English)

PALOP	PAISES AFRICANOS DE LINGUA OFICIAL PORTUGUESA ポルトガル語圏アフリカ諸国 (Portuguese-Speaking African Countries)
PCEDED	PROGRAMA DE CORRECCAO ESTRUTURAL DO DEFICE EXTERNO E DO DESEMPREGO 対外債務と失業是正プログラム (Programme for the Structural Correction of External Deficit and Unemployment)
PDIBE	PROGRAMA DE DESENVOLVIMENTO DAS INDUSTRIAS DE BENS DE EQUIPMENT 生産開発プログラム (Programme of Development of the Equipment Goods Industries)
PEDIP	PROGRAMA ESPECIFICO DE DESENVOLVIMENTO DA INDUSTRIA PORTUGUESA ポルトガル工業開発特別プログラム (Specific Development Programme for Portuguese Industry)
PITIE	PROGRAMA DE DESENVOLVIMENTO DAS INDUSTRIAS DE BENS DE EQUIPMENTO 情報電子技術総合計画 (Integrated Programme for the Information and Electric Technologies)
SIBR	SISTEMA DE INCENTIVOS DE BASE REGIONAL 地域振興インセンティブ制度 (System of Incentives on Regional Basis)
SINPEDIP	SISTEMA DE INCENTIVOS FINANCEIROS DE PEDIP ポルトガル工業開発のための金融インセンティブ制度 (System of Financial Incentives of PEDIP)

CURRENCY EQUIVALENTS

Currency Unit: Escudo (ESC), December, 1990 (End-of period rates)

1US\$	=	ESC 133.60
1ECU	=	ESC 183.20
1Yen	=	ESC 0.989

Definition of "Industry" and "Manufacturing industry"

In terminological exactitude, word "industry" indicates generally all sectors of industries in wider sense, or a specific industrial sector or the manufacturing sectors in narrower sense.

In this Report, "industry" indicates, in principle, the "manufacturing industry" which composes of subsectors classified in CAE 3.

However, according to the proceeding or following word(s) to industry, "industry" is to be meant as all sectors or a specific sector or a specific subsector of industries as case may be.

To give instances, primary industries (sectors), agricultural industry (a sector), chemical industry (sub-sector), industrial structure (all sectors), industrial products (manufacturing products), etc.

Chapter 1 Introduction

1.1 Background of the Study

Portugal has enjoyed a rapid increase in infrastructural through the EC Fund since it joined the EC in 1986 and the Portuguese economy has come to attain the highest growth rate among the member countries of the European Community. Further, as of January 1st, 1993 the EEC will become an integrated market, that is national barriers relating to the movement of the four essential economic elements of commodities, people, capital and services will be removed to result in the creation of a unified single market. While this process holds the promise of great benefits on the one hand, it also confronts the nation with the urgent task of strengthening the foundations of domestic industry including those of the manufacturing sectors.

Portuguese industry has developed along the coast of the Atlantic Ocean and Aveiro located in this area is the third largest industrial center after Lisbon and Porto (in that order). It is necessary to encourage and promote the spread of development from this coastal area inwards to the inland regions. This process will therefore consist of regional development towards the inland eastern lying regions, and it is expected that the driving force behind the envisaged development is to come from manufacturing industries. In 1991 the High Speed Road (IP-5) running across the inland area to the east of Aveiro was completed thus providing access to Madrid and Paris. Viseu is located on this road about 84km. to the east of Aveiro. Viseu is an inland region of agricultural land and forests.

The Aveiro-Viseu region now enjoys the shortest possible overland access route to the heart of the European continent and so is well placed to act as a model test case for the above mentioned program of "Eastward Regional development".

In view of the above, the Portuguese Foreign Trade and Investment Institute (ICEP: Instituto de Comercio Externo de Portugal) made a request to the Japanese Government to carry out "The Industrial Development Promotion Study of the Aveiro-Viseu Region". In response, JICA being the body responsible for the implementation of international technical and economic cooperation programmes, recruited a Study Mission Team which was then dispatched to Portugal to carry out field surveys and to prepare the requested Study. The Mission has drawn up the present Final Report on the basis of the on field surveys and meetings.

1.2 Objective of the Study

The objective of the Study is to formulate a comprehensive plan for the industrial development of the Aveiro-Viseu region with a view to vitalizing and modernizing the national economy.

The plan will consist of overall industrial development strategies, and policy and project recommendations for the Aveiro-Viseu region to achieve the above objective.

1.3 Scope of the Study

The Study is designed to cover a range of activities, from collection of data and information through three times field surveys, to analysis thereof in Japan, and preparation and submission of series of reports including the present report, as well as the following promotional materials:

- (1) Pamphlet to introduce the Aveiro-Viseu region to foreign investors (A4-sized, 4 pages):
2,000 copies in English and 2,000 copies in Japanese
- (2) Video program for the same purpose (20 minutes, VHS)
English version: PAL system (for Europe)
English version: NTSC system (for the U.S.)
Japanese version: NTSC system (for Japan)
- (3) To make the results of the study widely known to all the related parties, seminars will be held in Lisbon for related government authorities and organizations, and in Aveiro for local governments and industries.

1.4 Field Surveys and Reporting

The Study Team conducted the following visits to Portugal:

- 1) 1st field visit: to conduct 1st field survey, with a duration of 30 days, mainly in July 1991
- 2) 2nd field visit: to conduct 2nd field survey, with a duration of 40 days mainly in October 1991
- 3) 3rd field visit: to present the Interim Report and conduct a supplemental field survey, with a duration of 21 days in January/February 1991
- 4) 4th field visit: to present the Draft Final Report and open presentation seminars in Lisbon and Aveiro, with a duration of 21 days in May/June 1992.

The Study Team analyzed the data and information obtained through the above field surveys and prepared the present report. It took around 13 months for the study with nine team members including an interpreters as shown in ANNEX I.

1.5 Naming and Definition of the Region covered by the Study

The name for the entire area to be covered in the present Study is the Aveiro-Visu region. This is in turn divided into two sub-regions in the present Report to be called the Aveiro area and Visu area. The area indicated under the heading of the Aveiro area corresponds to the area designated as Baixo Vouga according to the regional divisions used by the Ministry of Planning and Territorial Administration (MPAT - Ministerio da Planeamento e da Administracao do Territorio), while the Visu area corresponds to the Dao Lafoes division. The former divisional area consists of 14 municipalities while the latter is made up of 15 municipalities.

Chapter 2 National Economic Trends and Industrial Structure

2.1 Portuguese Economic Trends (1960-1990)

The Development of the Portuguese Economy over the period from 1960 has been characterised by efforts to achieve the changeover from an economic structure founded on the historic colonial system to that of a modern industrial state. In particular, considerable structural changes in the economy resulted from the April revolution of 1974 and the official entry into the EC in January, 1986, and these two dates were literally of epoch making importance for the nation. The present chapter presents a brief historic summary of economic trends and industrial structure in Portugal during the above period with making reference to Table 2-1.

(1) 1960-73

In the 1960s the national economy was under the control of a dictatorial form of government which sought to organize the major industries (petrochemicals, steel and shipbuilding) on an oligopoly system run by a section of the country's plutocracy, while at the same time developing the economy through expanding the outlets to Europe especially in textiles and apparel industries which had been made possible with the entry into EFTA (European Free Trade Association) in 1960 and through trade with Portugal's African colonies. However the policy of high trade tariffs adopted at this period resulted in a weakening of the competing power of domestic industries.

It is also worth noting in relation to the economic indicators for Portugal between the period 1960 to 1973 (before the 1974 revolution) that the average rate of inflation was kept at a low level of 3.9% while the rate of increase in investment (gross fixed capital formation) evolved at the relatively high level of 7.9% (representing a ratio of 24.1% against GDP). However, the concentration of wealth led to a greater gap between the rich and the poor, while the public expenditure required for the control of the colonies, military expenditure and provision of social infrastructures resulted in net drain on long-term official reserve which began to weigh down the economy. Also, with the exception of the textile industries, increased exports were not realized and the capital outflow worked to gradually increase the trade deficit.

(2) 1974-1982

The structure of the Portuguese economy was affected by the following changes in policy and society resulting from the April Revolution of 1974.

1) Expansion of the Public Sector through a Policy of Nationalisation

Government control of production sectors was considerably increased through a policy of nationalisation. The nationalisation policy created uneasiness among foreign investors and from 1975 there was a large decrease in the inflow of foreign capital as a result. Domestic investment also lagged for the same reason.

2) Price Control Policies and Increase in Production Costs

A price control policy covering almost all industries was introduced between 1974 and 1976, and a large number of subsidies were granted as a result. However, these measures obstructed the working of the mechanisms of a free market system and resulted in large increases in production costs as a result of the upward impetus in wages which was favoured by the government. As a result the Portuguese economy suffered from a very high rate of inflation.

3) Effect of the Independence of Colonies

As of 1974 a number of Portugal's overseas territories achieved independence one after another. The Portuguese economy was burdened with the increased government expenditure to cover the intake and assistance of large numbers of refugees and by the rapid increase in unemployment which resulted. Also the reduction in the level of trade with former colonies (reduced exports) increased the trade deficit.

The policies of nationalisation, price control and of income redistribution which were introduced after the April Revolution of 1974, though later, they were discontinued -nationalized companies being privatized and price control lifted- resulted in a temporary increase in individual incomes and so of consumer expenditure. On the other hand the levels of inflation which were tolerated produced a lowering of industrial productivity in Portugal so that the general economic trend was towards poor performance.

(3) 1983-1985

During this period policies to restrain real wages were implemented in an effort to control the inflation which had continued to trouble the economy since the late 1970s. However, the upward surge in oil prices due to the Second Oil shock hit the country just at this moment and due to the economic recession worldwide and the rapid increase in

domestic money supply the Portuguese economy suffered from ever greater inflation. The average rate of increase in the consumer price index for the period 1983 to 1985 was 24.4% while the record breaking level of 29.3% was registered for 1984.

Further, domestic and foreign investment for 1984 was extremely dull and investment (gross fixed capital formation) showed a sharp downward turn, and was 20% under the level of the previous year. In 1985 the external debt ratio increased to 37%.

(4) 1986-1990

Portugal became an official member of the EC as of January 1986 and has proceeded since to strengthen further the political and economic ties with other member countries. The major tasks for the Portuguese economy during the above period remained the restraint of inflation and the improvement of the international balance of payments. To achieve these ends while adopting flexible policies with regard to wages and interest rates, trade was expanded with special emphasis on trade with EC partners. All of Portugal's economic indicators showed an improvement between 1985 and 1989. Further, a 4.3% increase in real GDP was achieved which exceeded the average of 2.5% of the EC. Reasons for the increase in GDP include the increase in investment from domestic and foreign sources which judged the domestic political stability to be secure and economic stability and growth assured by EC membership. Moreover there was an increase in infrastructural investment through EC funding. The rate of increase in investment over the period 1986-88 reached a double digit level.

Table 2-2 shows GDP per capita of EC countries compare with Japan and U.S.A. (The EC countries was designated as 100).

2.2 Characteristics of National Industrial Structure

(1) Share of Gross Domestic Product by Sector

Table 2-3 shows the breakdown of the GDP share of individual industrial sectors for Portugal as well as for other EC countries, the USA and Japan. The table indicates average values for a thirty year period from 1960 to 1989. A comparison of the sectorwise share of GDP in Portugal with that of the other EC countries shows that the percentage accounted for by the primary industries is larger in the case of Portugal while the share of the service industries is low. However, looking at this pattern of breakdown annually (Table 2-4) reveals that statistically Portugal has gradually moved closer to the typical EC model over the last ten years. Though traditionally an agricultural country, the share of the GDP accounted for by the sectors of agriculture, forestry and fishing in

Portugal decreased considerably from 26% to 10% in the 20 years between 1960 and 1980, and fell to 6% in 1990.

(2) Industrial Employment Structure by Sector

To date in 1990 the population of Portugal is approximately 10.47 million, 94% of which is composed of residents on the mainland of Portugal. The rate of population increase registered over the last ten years is 0.3%. The total working population is estimated to be approximately 4.5 million. From Table 2-5, which shows the evolution of the employment structure by industry, it can be seen that there the predominant trends reflect those already indicated in our discussion of the share of GDP accounted for by the importance of the primary industries and an increase in the tertiary industries is also marked in the changing pattern of employment. Agricultural, Forestry and Fishing industry (primary sector) accounted for 44% of employment in 1960, but this fell to 33% in 1970 so that in the latter year this sector as well as the mining & manufacturing and service sectors each accounted for about one third of the total employment. Subsequently, the mining & manufacturing sector has maintained a similar level. However the agricultural sector has consistently decreased in importance since 1960, while the service sector has consistently continued to increase in importance. According to data for January to September of 1990 the former accounted for 18% and the latter for 48% of employment.

(3) National Economic Productivity by Sector

Portuguese agriculture sector shows rather low productivity. Portugal only has one fourteenth of the productivity of Holland which has the highest productivity for this sector among the EC countries.

With regard to the productivity of Portugal's manufacturing sector, a comparison of statistics shows that this was on a level equaling that of Greece in 1987, and was approximately one fifth of the productivity registered for Germany which has the highest level among the EC nations. While it can be said that the manufacturing sector in Portugal has a high level of productivity compared to the figures for the agricultural sector, it is also true that the figures by industry reveal that there are certain structural problems since the number of small size industries employing less than 5 represents only 10% of the total output of the manufacturing industries.

The financial, insurance, real estate and tourist industries form the mainstay of the service industries. The importance of the financial sector has grown first through the nationalization policy under taken in 1970 and then with the re-privatisation carried out

in 1984. Tourism also plays a very central role in Portugal's service sector as a source of foreign currency acquisition. While tourism has developed to certain extent thanks to the low wage costs the per capita productivity in this sector is on a par with the level in the manufacturing sectors.

2.3 International Balance of Payments

The international balance of payments recorded a positive balance in 1985 for the first time in eleven years since 1974. Between these dates the trade figures had registered a consistent minus which had been set off by the income from the service sector (in particular the tourist industry), the remittances sent back by emigrant Portuguese workers, medium and long term capital income together with foreign loans so that the basic balance almost registered a positive figure. However, the trade deficit began to widen as of 1988 despite the fact that tourist revenue and remittances from abroad were also growing. During this period there was a considerable increase in medium and long term capital largely of direct foreign investment and this resulted in a rapid expansion of imports of capital goods and raw materials which was reflected in the balance of trade.

The recent economic relations with main trading partners the importance of the EC countries has taken on greater relative importance. The rapid increase of imports from the EC countries after Portugal's entry into the EC in 1986 was one factor in the widening trade deficit. On the other hand, the relative share of American relations in trade, investment and tourism has fallen.

(1) Trade Patterns

The biggest items are textiles and apparel accounting for about 30% of the total. These are followed by electrical machinery, vehicle products, agricultural processed goods, cork and paper as main export items. The percent distribution of these export items in the 1970s shows the same trends. That is processed foodstuffs and agricultural products such as canned fish, tomato products, wine, etc. and cork (including cork products) which are the traditional exports still account for more than 50% of total exports while the remainder of the percent distribution is accounted for by manufactured goods and mineral resources.

Conversely, clear trends in the changes affecting import items over the last ten years can be identified from statistics. Instead of the traditional import structure according emphasis to crude oil, foodstuffs and industrial raw materials there has been a shift in emphasis towards manufactured goods such as machinery, transport machinery, and apparel.

The major import item to date has been crude oil. In the early 1980s this evolved around a 25% level of the total import value. Together with imports of manufacturing raw materials such as iron, steel and chemical raw materials these accounted for 45% of all imports. This was equally so in the 1970s. A change in this import structure can be seen to arise from around 1987.

On the one hand, an increase has been observed recently with such items as machineries, transport machinery, and electrical equipment. The import of transport vehicles and of cars in particular has continued to show growing imports since the 1980s. By 1990 the ratio in money terms accounted for by machinery and transport machinery were about equal (14% and 14.2% respectively) thus constituting the top items. Crude oil and mineral resources had fallen to 11.3% of the total in the same year.

(2) Trends in Foreign Investment

There has been a very rapid increase in the number and size of cases of direct foreign investment into Portugal since 1987.

The overall investment sum has continued to register an annual increase which doubles the sum for the previous year so that each year witnesses a new maximum record. The investment sum for 1990 was 508,9 billion ESC (approximately 7.2 billion US \$) which is about 55 times the level registered 10 years earlier, and is about 21 times the level registered in 1986, the year when Portugal became a member of the EC. There has been a similar marked increase in the number of cases of investment which increased from 640 in 1986 to 2,873 in 1990.

Change of direct foreign investment

Year	1985	1986	1987	1988	1989	1990
No. of DFI	471	640	1,113	1,853	2,328	2,873

Looking at the breakdown by country and region reveals that much of the investment comes from the EC countries as is also the case in trade. The EC accounted for 69% of the investment achievement for 1990. In particular, Great Britain has been at the top of the investing parties annually since 1985 followed by France and Spain in order of importance as investors.

Table 2-1 PORTUGAL : PRINCIPAL ECONOMIC INDICATORS, 1960 - 1990

UNIT	1960-73	1974-82	1983	1984	1985	1986	1987	1988	1989	1990
Gross domestic product, GDP	6.8	2.8	-0.3	-1.7	3.0	4.1	5.1	4.0	5.4	4.4
Total domestic demand	7.1	2.8	-0.7	-6.8	0.7	7.3	9.8	8.4	4.1	5.2
Private consumption	6.5	3.1	-1.0	-3.0	0.8	5.5	5.0	7.0	3.2	4.7
Public consumption	8.4	4.5	2.7	2.5	6.4	7.3	4.8	5.4	2.0	3.7
Investment [*1]	7.9	1.7	-7.5	-20.0	-3.4	10.9	15.1	15.2	8.0	6.6
Exports of goods and service	9.6	11.3	16.7	14.8	10.1	7.6	10.7	7.2	18.1	12.0
Imports of goods and service	10.6	4.5	-8.7	-2.7	1.8	17.8	23.7	18.1	10.6	12.4
Rate of inflation (CPI)	%	3.9	25.5	29.3	19.3	11.7	9.4	9.6	12.6	13.4
Unemployment rate, restricted sense	%	4.2	5.1	7.9	8.6	8.4	7.0	5.7	5.0	4.7
Total employment	%rrc	0.2	0.1	-2.0	-3.8	-0.5	2.6	2.6	2.2	1.4
Nominal salaries [*2]	%rrc	6.4	11.8	-5.0	-9.0	21.6	12.1	9.1	10.4	13.6
Current account balance	%GDP	0.4	-6.8	-8.0	-2.7	1.9	1.2	-2.4	-1.2	-0.1
in USD	USD billion			-1.6	-0.6	0.4	0.4	-1.1	-0.6	-0.1
Trade balance (CIF/FOB)	%GDP	n.a	n.a	-14.1	-11.0	-10.0	-12.7	-16.6	-14.8	-10.9
in USD	USD billion			-1.1	-2.1	-2.1	-4.7	-6.9	-6.7	-6.6
Change in terms of trade (merchandise trade)	%rc	n.a	n.a	-1.7	-1.1	4.0	2.1	2.4	-1.6	0.2
External debt	%GDP			70.4	78.1	80.4	50.3	41.6	39.0	28.9
in USD	USD billion	n.a	n.a	14.5	15.0	16.7	18.5	17.4	17.7	18.4
Debt service	%CAR [*3]	n.a	n.a	27.6	35.6	37.0	30.0	29.0	17.9	16.6
Implicit interest rate	%			8.6	9.1	8.8	7.3	6.9	7.8	8.4
Total GG deficit	%GDP	n.a	n.a	11.4	13.4	7.6	9.1	7.1	4.8	6.7
GG borrowing requirements	%GDP	n.a	n.a	10.9	13.4	11.9	10.1	9.3	5.6	6.7
Direct public debt	%GDP	n.a	n.a	55.8	61.1	68.9	71.5	74.2	71.1	68.2

[*1] Gross fixed capital formation

[*2] Average of collective wage agreement schedules, total excluding civil servants.

[*3] CAR, Current Accounts Credits =

Exports of goods and services + Other items recorded as credits in the CA, including unilateral public transfers.

GG - General Government

rc - rate of change

rrc - real rate of change

n.a - not available

Source: Banco de Portugal, Report of Board of Directors

Table 2-2 GROSS DOMESTIC PRODUCT AT CURRENT MARKET PRICES PER CAPITA

	Unit: PPS EUR 12, EC12=100								
	1960	1970	1980	1985	1986	1987	1988	1989	1990
Portugal	38.8	48.9	55.1	52.1	52.7	53.8	54.0	55.2	56.2
Belgium	95.4	99.0	104.2	101.7	101.0	100.2	101.0	101.6	102.8
Denmark	118.4	115.3	108.0	116.0	116.7	112.8	108.6	106.6	105.1
Spain	59.6	73.9	73.4	71.8	72.2	73.9	74.7	75.9	76.7
France	105.9	110.5	111.8	110.8	110.1	108.8	108.3	108.7	108.5
Greece	38.7	51.6	58.2	56.8	55.8	54.2	54.3	54.1	53.4
Netherland	118.7	115.9	111.0	107.2	106.3	104.0	102.7	103.2	103.8
Italy	86.6	95.5	102.6	103.2	103.2	103.5	103.8	103.9	104.0
Luxembourg	158.4	141.5	119.3	122.6	124.2	120.6	121.0	124.1	124.2
U.K.	128.7	108.5	101.1	104.1	105.1	106.9	107.4	106.4	105.4
W. Germany	118.0	113.3	113.8	114.4	114.3	113.5	113.2	112.5	112.4
Ireland	60.8	59.6	64.1	65.2	63.5	64.9	65.2	67.2	68.8
EUR 12	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
U.S.A.	190.0	164.9	151.8	156.6	155.8	156.0	156.3	154.2	150.9
Japan	55.9	91.8	101.1	111.5	111.0	112.2	114.2	116.0	119.6

Note: PPS indices in purchasing power standard

Source: European Economy, Annual Economic Report 1990-91

Table 2-3 SECTORAL CONTRIBUTION TO GDP
AS AN AVERAGE PERCENTAGE DURING 1960-89

Unit: %

	Agriculture[1]	Industry	Manufacturing in Industry	Services	Total GDP
Portugal	13.9	38.2	(30.1)	47.9	100.0
Belgium	3.6	37.6	(27.4)	58.8	100.0
Denmark	6.8	29.0	(19.8)	64.2	100.0
Spain	10.8	36.6	(27.2)	52.5	100.0
France	6.0	35.8	(26.2)	58.3	100.0
Greece	17.1	25.6	(15.9)	57.2	100.0
Netherland	5.3	36.8	(24.4)	57.9	100.0
Italy	7.5	39.1	(26.8)	53.4	100.0
Luxembourg	4.0	44.2	(33.8)	51.8	100.0
U.K.	2.3	37.0	(25.6)	60.7	100.0
W.Germany	3.1	46.1	(35.6)	50.8	100.0
Ireland	14.5	31.1	(-)	54.4	100.0
EUR 12	5.4	38.9	(28.1)	55.7	100.0
U.S.A.	2.9	34.1	(24.0)	63.0	100.0
Japan	6.2	43.2	(32.1)	50.6	100.0

Note: [1] including forestry, fishery

Source: OECD Economic Outlook Historical Statistics

Table 2-4 PORTUGUESE SECTORAL CONTRIBUTION TO GDP 1960-1990
(ANNUAL AVERAGE)

Sector	Unit: %								
	1960	1970	1980	1985	1986	1987	1988	1989	1990
Agriculture [1]	26	16	10	8	8	7	6	6	6
Industry	36	46	38	37	38	38	38	38	37
Services	38	39	52	55	55	55	56	56	57
Total [2]	100	100	100	100	100	100	100	100	100

Notes:

[1] including forestry, fishery

[2] Total may not exactly equal the sum of its elements due to rounding

Source: National Statistic Institute - INE

Table 2-5 PORTUGUESE EMPLOYMENT BY MAIN SECTORS 1960-1990
(ANNUAL AVERAGE)

Sector	Unit: %								
	1960	1970	1980	1985	1986	1987	1988	1989[2]	1990
Agriculture [1]	44	33	28	24	22	22	21	19	18
Industry	29	36	36	34	34	35	35	35	34
Services	27	31	36	43	44	43	44	46	48
Total [2]	100	100	100	100	100	100	100	100	100

Notes:

[1] including forestry, fishery

[2] Total may not add exactly due to rounding

Source: National Statistic Institute - INE

Chapter 3 Outline of the Project Area

3.1 Delineation of the Project Region

Portugal is made up of 18 administrative districts (distrito) on mainland, and 2 districts on Acores and Madeira islands, each of which is given the significant autonomy. Each district is further divided into municipalities (concelhos), and there are 305 municipalities in 18 districts on mainland. At the same time, the country is divided into 7 regions for the purpose of regional economic development, 5 on mainland and 2 on the islands, as shown in Fig.3-1. The Aveiro-Viseu region covered by the present study belongs to the Central (Centro) Region, which planning is controlled by the secretariat located in Coimbra.

It should be noted here that administrative boundaries do not agree with boundaries of development regions. For instance, as shown in Fig.3-1, northern parts of the Aveiro, Viseu and Guarda districts are incorporated into the Northern (Norte) Region, while southern parts belong to the Central Region. Also, each of Leiria and Santarém is divided into the Central Region and the Lisbon and Valle do Tejo Region. Thus, the development regions are delineated as an aggregate of "municipalities" on the basis of similarities in geographical, environmental and weather conditions, and the progress of regional development.

The Central Region is further divided into the following 8 areas for the sake of regional development:

<u>Name</u>	<u>Urban center</u>	<u>Number of municipalities</u>	<u>Characteristics</u>
1) Baixo Mondeco	Coimbra	5	Academic/administrative center
* 2) Baixo Vouga	Aveiro	14	Coastal/industrial center
3) Cova da Beira	Covilha	3	Agriculture
* 4) Dao-Lafoes	Viseu	15	Forestry, agriculture
5) Pinhal Interior	Arganil	19	Textile, agriculture
6) Pinhal Litoral	Leiria	5	Coastal/industrial center
7) Raia	Castelo Branco	12	Bordering to Spain
8) Serra da Estrela	Seia	5	Mountainous region
		78	

Among them, 2) Baixo Vouga and 4) Dao-Lafões, marked by "*" have been covered by the present study. In this study, the former is referred to as the "Aveiro area" from its core city, and the latter as the "Viseu area". In addition, the both areas are to be jointly called as the "Aveiro-Viseu region" or "Project area" in this study. Thus the "Aveiro area" does not coincide with the "Aveiro district", and so on.

The area subject to the present study is shown in Fig.3-2 and 29 municipalities within the project area are listed as follows:

<u>Aveiro area</u> (Baixo Vouga)	<u>Viseu area</u> (Dao-Lafões)
1 Agueda	1 Aguiar da Beira
2 Albergaria-a-Velha	2 Carregal do Sal
3 Anadia	3 Castro d'Aire
4 Aveiro	4 Mangualde
5 Cantanhede	5 Mortagua
6 Esiarreja	6 Nelas
7 Ilhavo	7 Oliveira do Frades
8 Mealhada	8 Penalva do Castelo
9 Mira	9 Santa Comba Dao
10 Murtosa	10 Santao
11 Oliveira do Bairro	11 S.Pedro do Sul
12 Ovar	12 Tondela
13 Sever do Vouga	13 Vila Nova de Paiva
14 Vagos	14 Viseu
	15 Vouzela

3.2 Characterization of Major Industries in Aveiro-Viseu Region

As shown Table 3-1, the Aveiro-Viseu region accounts for 6.3% of land, 6.9% of population, 5.7% of GDP, and 5.7% of employment in Portugal. Thus, the region's economy is considered to have a size equivalent to slightly above 6% of the national economy. Then, when the region is divided into the Aveiro and Viseu areas, there is a marked difference in industrial structure between them. While the Aveiro area is an industrialized area (coastal industrialized area), Viseu is dominated by agriculture and forestry (inland rural area).

The Aveiro area has population density equivalent to 1.61 times the national average, and the Viseu area 0.75 of the national average. In terms of composition of GDP by economic sector, the secondary sector accounts for 59% of GDP in the Aveiro, far above 38% of the national average, compared to 34% in the Viseu area. Another indicator to discern economic structure of the two areas is composition of employment by economic sector (1988 data), the percentage of population employed by the primary sector is 20% in the Aveiro area, more or less the same level with the national average of 21%, making a sharp contrast to 51% in the Viseu area. Thus, two of ten people are engaged in agriculture and forestry for Aveiro area, but five of ten people

for Viseu area.

Table 3-2 compares the number of enterprises of manufacturing industry in the Aveiro-Viseu region, by subsector, to that in the national average. Clearly, one subsector "Textile, Garments, Footwear in CAE 3.2" shows a distinctive difference between the Aveiro-Viseu region and the national average; 4% versus 28%, respectively. Thus, the textile/garments/footwear industry - the largest manufacturing subsector in the country - is not a major industry in the region, but it is dominated by the footwear industry, rather than textile and garments.

In addition, the Aveiro-Viseu region shows much higher percentage in food processing (processing of agricultural products, dairy products, and fishery products), compared to the national average; 42% versus 12%. Thus, it is roughly said that the food processing has replaced the textile, garments, and footwear industry in the region when compared to the nation's industrial structure. Then, industrial structure is analyzed for the Aveiro and Viseu areas. While the Viseu area has a higher percentage of the food processing industry (agricultural products) than the Aveiro area. On the other hand Aveiro area has a larger share in the machinery and metalworking industry. Again, the Viseu area is dominated by processing of primary products, 66% (CAE 3.1 + 3.3), compared to 55% in the Aveiro area.

3.3 Classification of the Aveiro-Viseu Region by Level of Industrialization

Among a set of data concerning 14 municipalities of the Aveiro area (Baixo Vouga) and 15 municipalities of the Viseu area (Dao Lafoes) two parameters - population density (per km²) and density of manufacturing enterprises (per km²) - are plotted on the map, as shown in Fig.5-1-3. Notably, the two parameters are closely related to each other, depicting the level of industrialization in the municipalities. In general, municipalities with relatively a high level of industrialization (relatively a large number of manufacturing enterprises) shown higher population densities. At the same time, the level of industrialization seems to be affected by geographical conditions to some extent. To identify this, a topographical map of the project area is attached as Figure 3-4.

3.4 Regional Development Policies of Local Government (Municipalities)

In planning and implementing an industrial development plan for the project region which as 29 municipalities, it is essential to reflect opinions of the municipalities. In this recognition, the study team visited 9 municipal governments and 2 district governments to interview with governors, mayors, secretaries, and development planners. At the same time, a questionnaire survey was conducted for 29 municipalities. The questionnaire survey was responded by 9 out of 14 municipalities in the Aveiro area and 13 out of 15 municipalities in the Viseu area, resulting in the total response rate of 76% (22 out of 29 municipalities.). The results of the

interview and questionnaire surveys are analyzed below and are considered to represent a majority of opinions (around 70%) of 29 municipalities if invalid answers involved in each question are excluded.

(1) Basic conditions for industrial development

All the respondents (municipalities) recognized the importance of industrial development, but 80% responded "under certain conditions". In this survey, these conditions were defined as "undesirable industries." The results represent the ranking of negative factors related to industrial development.

The results indicate that such industries which have possibility to pollute environment are considered to have the highest negative factor, and agreeing with opinions heard from the interview survey. Then, industries adversely affect local traditional industries or small businesses ranked the second, followed by those using a large amount of utilities (electricity and water); those using a large land area; and those using a large number of workers. This order is basically the same in both the Aveiro and Viseu areas.

(2) Desirable industries

As a mirror image of the negative factors, the respondents were asked for preference in types of industry to be located in their municipalities. The respondents were asked to choose one from the two options. The figures in () represent the percentage in the Aveiro or Viseu area:

1) Labor-intensive or capital-intensive

Labor-intensive industry : 36% (Aveiro=33%, Viseu=38%)

Capital-intensive industry: 64% (Aveiro=67%, Viseu=62%)

2) Traditional or new industry

Traditional industry: 11% (Aveiro= 0%, Viseu=14%)

New industry : 89% (Aveiro=100%, Viseu=86%)

3) Heavy or light industry

Heavy industry: 10% (Aveiro= 0%, Viseu=15%)

Light industry: 90% (Aveiro=100%, Viseu=85%)

4) Large or small- and medium-sized enterprise

Large enterprise : 17% (Aveiro= 0%, Viseu=24%)

Small- and medium-sized

enterprise : 83% (Aveiro=100%, Viseu=76%)

5) Industry using locally available resources

Industry using locally

available resources : 31% (Aveiro=29%, Viseu=33%)

Not necessarily : 69% (Aveiro=71%, Viseu=67%)

6) Foreign investment

All the municipalities welcomed foreign companies, but 90% of which stated that they should not be types identified in (1) and meet requirements in (2).

(3) Preferred industry subsectors

The top three subsectors are "the woodworking industry", "the food processing industry", and "the machinery and metalworking industry", which are the same as the existing industrial structure, but the woodworking industry ranked first, instead of the food processing industry, because of popularity in the Viseu area. "The other industries" ranked fourth, and some of respondents specified "the ceramic industry" or "the electric/electronic industry". Then "the non-metal mineral industry" and "the textile and leather industry" ranked fifth and sixth, respectively. On the other hand, the lowest three subsectors are "the chemical, plastic, and rubber industry", "the pulp and paper industry", and "the base metal industry".

(4) Overall evaluation

Overall evaluation of items (1) through (3) above indicates that the following types of industries are preferred by local governments for industrial development.

1) Industries not producing pollution

Environmental preservation is one of requirements for industrial development in Portugal. This is clearly reflected in the fact that heavy industries including "the chemical, rubber, plastic industry", "the pulp and paper industry", and "the base

metal industry" are not preferred.

2) Light industries using advanced technology

In addition to environmental consideration, the local governments do not welcome heavy industries in many cases, as they consume a large amount of utilities (electricity and water) and use a large land area. On the other hand, many of them wish to attract hi-tech or modern technology based industries rather than traditional ones. "Hi-tech industries" were identified by most of municipalities as desirable industry types at the time of the interview survey.

3) Capital-intensive small- and medium-sized industries

64% of the municipalities preferred the capital-intensive industry, and 83% small- and medium-sized industries. These are not as high as industry types identified in 1) and 2), which are preferred by 90% or more of the respondents. In particular, these percentages further decrease in the Viseu area to 62% and 76% respectively. This can be interpreted that the Viseu area has room to accept labor-intensive large enterprises. However, since many municipalities stated a condition "not to adversely affect existing small- and medium-sized enterprises", it is safe to think that small- and medium-sized enterprises are more preferred.

4) Modernization of traditional industries

While the municipalities identified the traditional industries: "the food processing industry", "the woodworking industry", and "the machinery and metalworking industry" as industries preferred in their communities, they expressed preference for hi-tech products and "capital-intensive industries rather than labor-intensive industries". Analysis of these conflicting responses, together with the results of the interview survey, seems to point to "modernization of traditional industries or increase in value added."

Table 3-1 STRUCTURAL POSITION OF THE PROJECT AREA IN THE COUNTRY

	Aveiro area	Viseu area	Aveiro-Viseu region	Country
A. Principal indicators				
A-1) Land area(Km2)	2,333(2.5%)	3,465(3.8%)	5,818(6.3%)	92,000(100%)
A-2) Population('000)-1990	424.2(4.1%)	296.3(2.8%)	720.5(6.9%)	10,400(100%)
A-3) Population density(Habit./Km2)	182 (1.61)	85 (0.75)	124 (1.10)	113(1.00)
A-4) Share of active population-1989	39.0%	36.0%	38.0%	47.0%
A-5) Unemployment rate-1989	5.4%	6.4%	5.8%	5.0%
A-6) Illiteracy rate-1989	15.0%	24.0%	18.9%	15.0%
B. Structure of economy				
B-1) GDP(Billion Escudos)-1988	233.7%(3.7%)	125.2(2.0%)	358.9(5.7%)	6,332.2(100%)
-Primary sector	6.0%	21.0%	11.0%	6.0%
-Secondary sector	59.0%	34.0%	51.0%	38.0%
-Tertiary sector	35.0%	45.0%	38.0%	56.0%
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
B-2) Employment('000)-1988	164.4(3.8%)	116.8(2.7%)	281.2(6.5%)	4,299.0(100%)
-Primary sector	20.0%	51.0%	33.0%	21.0%
-Secondary sector	53.0%	23.0%	41.0%	35.0%
-Tertiary sector	27.0%	26.0%	26.0%	44.0%
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Source: JICA team's compilation

Table 3-2 STRUCTURE OF MANUFACTURING INDUSTRY IN THE PROJECT AREA AND THE COUNTRY

Subsectors	(unit:% of number of establishments)			
	CAE*)	Aveiro area**)	Viseu area**)	Country(1988)
Food processing, beverage, tobacco industry	3.1	39	46	12
Textile, garment, footwear industry	3.2	4	4	28
Wood and cork industry	3.3	16	20	19
Pulp & paper, printing industry	3.4	2	2	4
Basic chemicals, rubber, plastics industry**)	3.5	3	3	2
Non-metal minerals industry	3.6	7	5	6
Basic metal industry	3.7	1	1	1
Metal products, machinery, transport equipm. ind.	3.8	26	20	25
Other manufacturing industries	3.9	1	nil	3
MANUFACTURING INDUSTRIES	3	100	100	100

Note : *) Portugues abbreviation for "Classification of Economic Activities."
 **) for 1991

Source: JICA team's compilation

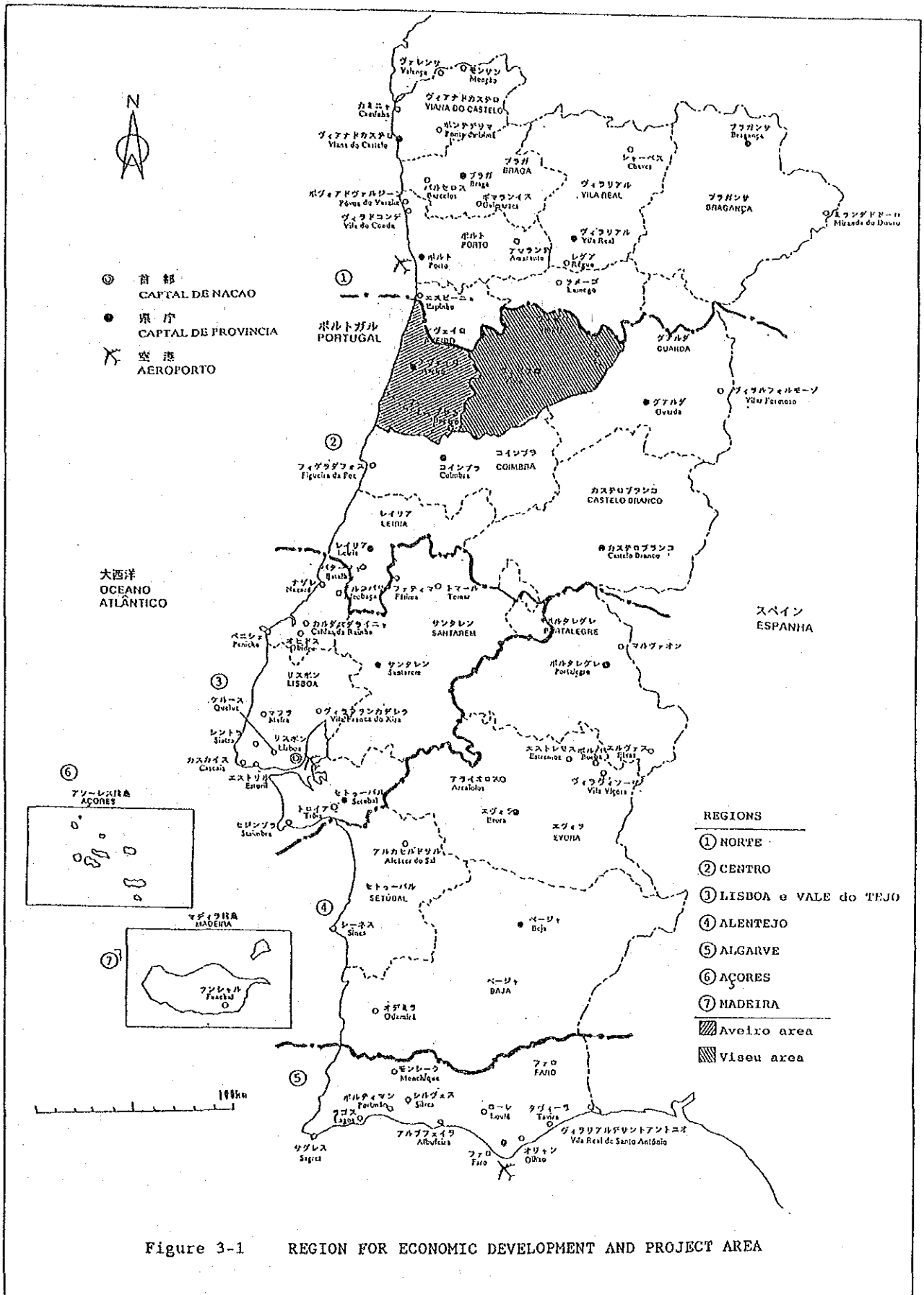


Figure 3-1 REGION FOR ECONOMIC DEVELOPMENT AND PROJECT AREA

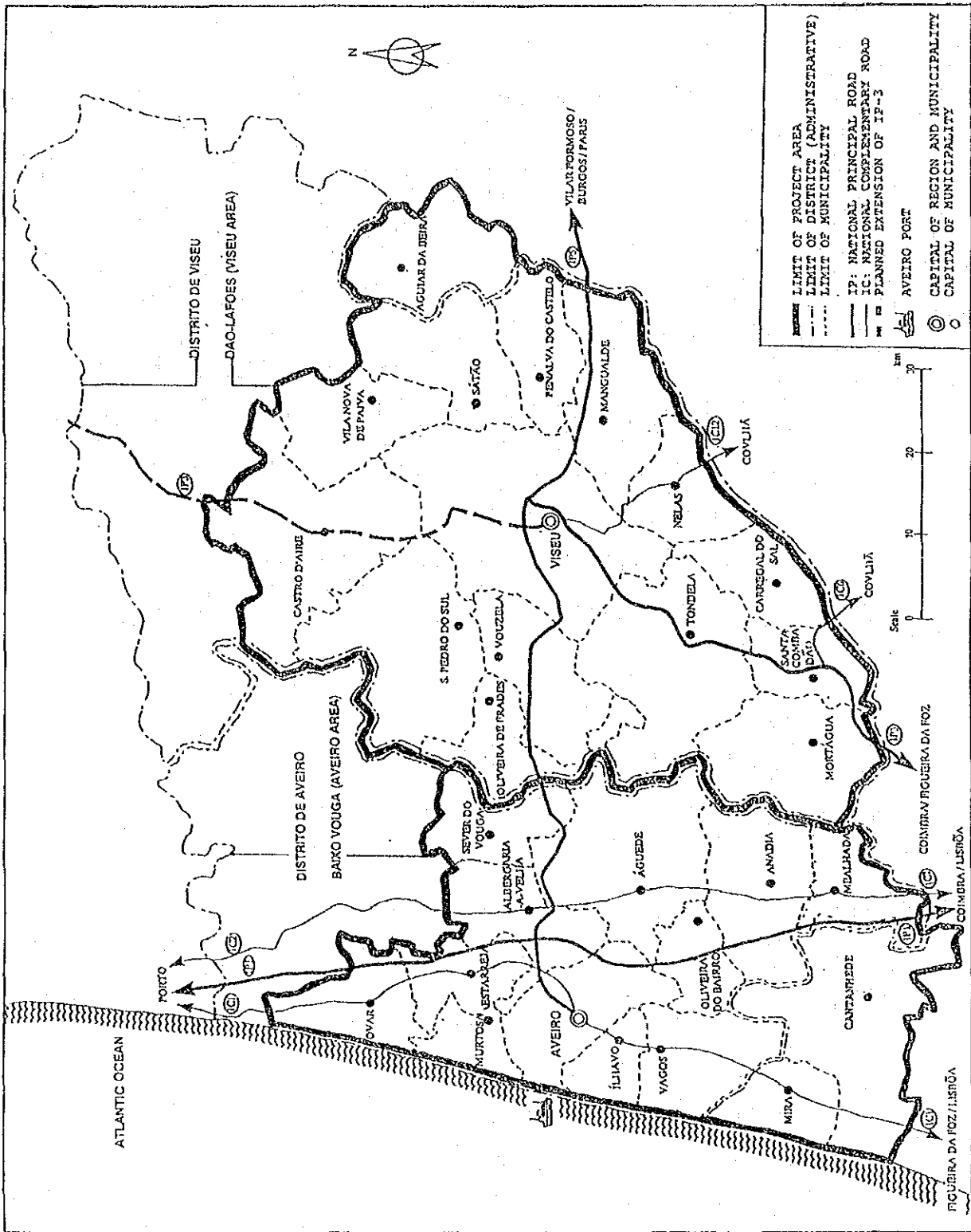


Figure 3-2 PROJECT AREA (AVEIRO-VISEU REGION)

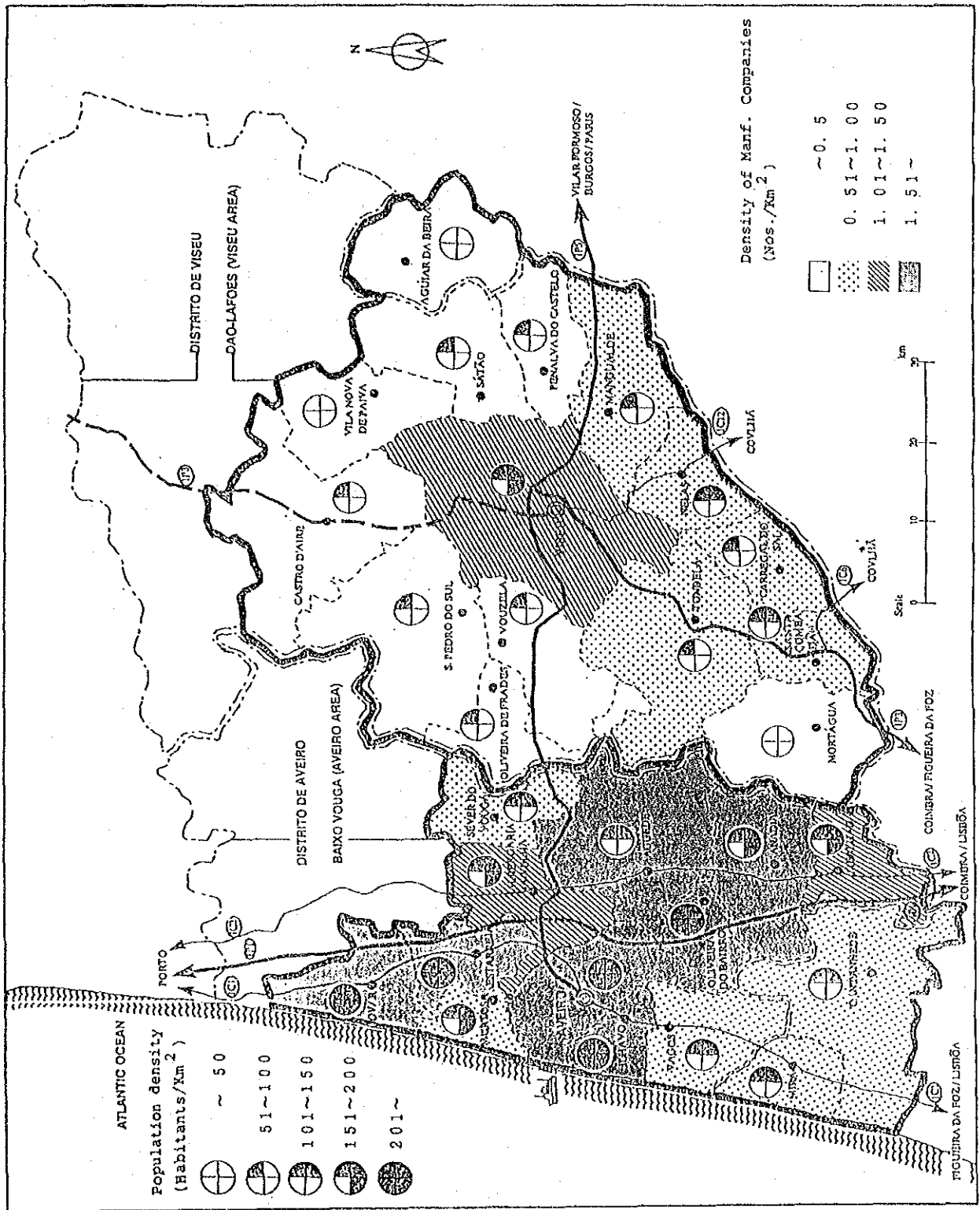


Figure 3-3 POPULATION DENSITY OF HABITANTS AND MANUFACTURING COMPANIES

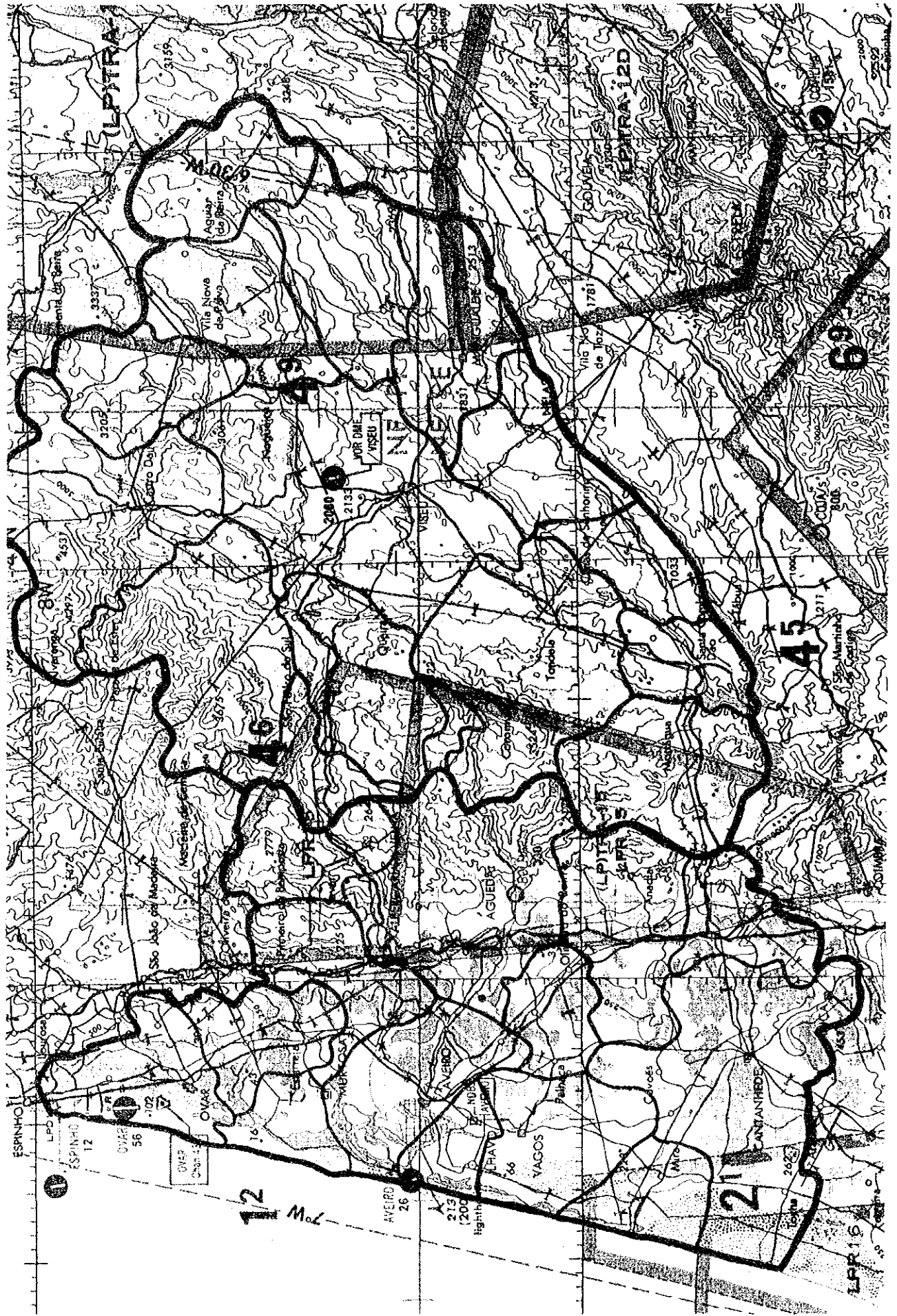


Figure 3-4 TOPOGRAPHICAL MAP OF THE PROJECT REGION

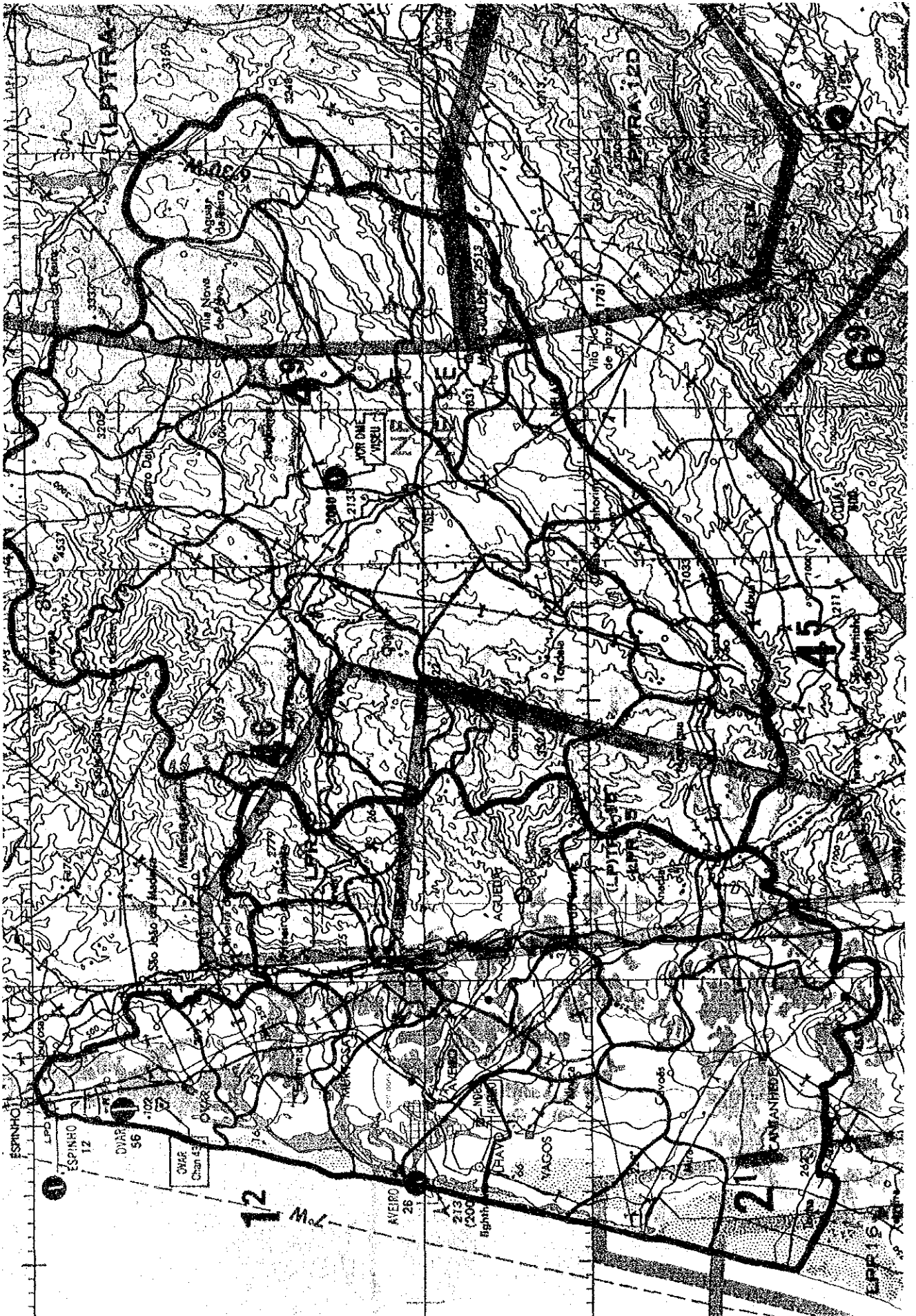


Figure 3-4 TOPOGRAPHICAL MAP OF THE PROJECT REGION

Chapter 4 Selection of Prospective Sub-Sectors

4.1 First Screening at National Level

The promotion of the further industrialization of Portugal in general and that of the target area, Aveiro-Viseu region in particular, involve the identification of those manufacturing subsectors and/or product groups, which so far account for a major share in output, exports and imports.

The Study uses the "total flow analysis approach" for the identification of those manufacturing subsectors, which have a significant overall economic impact. The total flow analysis is based on the standard formula:

Consumption = production + import - export

This formula is redefined into:

Total Flow = consumption + export = production + import

If the "apparent consumption" would be used as a parameter for such identification, those subsectors which have small consumption but large amount of export will be removed from the promising subsectors.

The total flow is then accumulated over the reference period, 1981 to 1987, under consideration and subsectors are ranked in line with the absolute magnitude of their total flow.

This approach needs to combine production data, which are classified according to ISIC, with trade data, which are grouped around the SITC system. While there are conversion tables for translating quasi mechanically one code into the other, the best level of disaggregation and grouping will depend often on the particular product or product group being produced in the manufacturing sector under consideration.

Official statistics subdivide the manufacturing sector into single 140 subsectors (the word subsector will be used, in this context, as synonymous to product group) at a 6-digit CAE classification level. After a matching with trade statistics, a total of 72 subsectors at the mixture of the 6-, 4- and 3-digit CAE level remain, which allow, in this particular case, for a meaningful computation of total flow.

Table 4-1 lists those 43 subsectors out of the 72, which account for some 90.6 % of the total manufacturing flow over the period 1981 to 1987, or some 89.6 % of apparent consumption of manufactured goods over the same reference period. In other words, these 43 subsectors are, in terms of overall impact, the essence of Portuguese manufacturing. The balance of 29 subsectors account for only some 10 % of total flow and apparent consumption.

4.2 Selection of Prospective Sub-Sectors for Regional Industrialization

The first stage of screening conducted in the previous chapter relied upon statistical data as selection criteria at a national/macro level. In this section, final selection of prospective sub-sectors is carried out through qualitative analysis which takes account the existing industrial structure of the Aveiro-Viseu region. In the process, 3 negative factors are established for further screening of sub-sectors which have survived through the first screening process. At the same time, sub-sectors rejected in the first screening process, which have a significant value in the region, are re-selected as prospective sub-sectors.

(1) Removal Based on Negative Factors

1) Negative factor (A)

- a) Daily products, food stuff and the like, for which Portugal does not and will not be able to have competitive advantages against other European countries which carry out intensive farming. These products are produced in quantity to supply domestic consumption, thus maintaining self-sufficiency. (e.g., milk and animal feeds)

Also, major products in the Aveiro-Viseu region, which are considered to have small impacts on contemplated industrial development. (e.g., wine)

- b) Food stuff and similar products which raw materials are not suitable for cultivation in Portugal due to climate and other natural conditions, and which need to be imported to cover domestic consumption. (e.g., coffee products, and flour-based products)

2) Negative factor (B)

Products which can obtain international competitiveness by consuming a large amount of petroleum or other mineral resources and by achieving the scale of economy as a result of large investment. Namely products which raw materials are not available in Portugal and which need to be imported because of small domestic consumption. (e.g., petrochemical products, chemical fertilizers)

Note: if these products are to be locally produced, they will be positioned as a national project. Thus it is difficult to select them as prospective sub-sectors for industrial development in a region.

3) Negative factor (C)

- a) Traditionally important export products with a risk of oversupply if further capacity expansion is made. Also, products which are losing competitiveness in export markets and which manufacturers are not much located in the Aveiro-Viseu region. (e.g., spinning and weaving)
- b) Traditional export products which raw materials are not produced in the Aveiro-Viseu region and their availability is limited domestically, thus there is no benefit to foster production in the region. (e.g., cork products)

Sub-sectors to be excluded due to any of the above negative factors are selected and listed in Table 4-2.

(2) Re-selection Based on Positive Factor

As noted in previous chapter, all manufacturing products was categorized into 72 items for which statistical data were available, and top 43 items accounted for 90% of national total flow (= consumption + export = production + import).

However, some of those ranked lower than 43rd were also retained as prospective sub-sector, when they were considered to show the importance specific for the Aveiro-Viseu region. The product groups re-selected on the positive factor are as follows:

- 1) Motorcycles and bicycles ranked 65th in terms of total flow at the national level but 90% of them were manufactured in Aveiro area. Thus if modernized in terms of manufacturing technology, they can grow to important export products.
- 2) Sawn wood is classified under "sawn wood and sawn cork" in statistics. However, wood (eukalypt and pine) is key products in the Aveiro-Viseu region, while cork is produced in the southern region, so that sawn wood was retained as a prospective sub-sector.
- 3) Construction materials, which are classified under "cement, gypsum, and construction materials" in statistics, are classified as prospective products, partly because the Aveiro-Viseu region produces tiles and bricks, and partly because demand for other construction materials, such as steel bars, sash, particle boards, and floor materials, is expected to increase with development of the area.

- 4) Ceramic and leather have a long history in the Aveiro-Viscu region and thus can be used as a technological base if modernized.
- 5) Metal products and machinery and equipment are to be retained as prospective sub-sectors.
- 6) So-called hi-tech industries and R&D industries are not reported in official statistics. The former is included in IC and electronic components which are incorporated into electric and electronic products. On the other hand, R&D industries are classified as services, rather than goods, which are not included in industrial statistics. For these reasons and in response to strong request from local people, these industries were designated as prospective sub-sectors.

It should be noted that definitions of high-tech industries and R&D industries vary with countries, depending upon the level of industrialization in each country; a country calls any non-traditional industries as high-tech industries.

For the purpose of this study, hi-tech industries are defined as industries manufacturing the following products:

- a) Electric/electronic components (e.g., ICs) and electronic products (computers and office equipment)
- b) Bio-technology related products
- c) Fine chemicals/pharmaceuticals
- d) Computerized precision machinery (CAD/CAM)
- e) Computer software programs and peripherals, and information processing industry

(3) Prospective Sub-Sectors Selected

Sub-sectors selected through screening on the basis of the negative and positive factors are listed in Tables 4-3 (traditional export industry), 4-4 (electric/electronic, motorcycles, and chemical products), and 4-5 (metal products, and machinery and equipment). Then high-tech and R&D industries are added as above.

Table 4-1 SUMMARY RANKING OF THE TOP 43 COMMODITY GROUPS BY TOTAL FLOW ANALYSIS OVER THE PERIOD 1981 TO 1987
(IN REAL TERMS)

COMMODITY GROUPING	CMB CODE	T O T A L F L O W				C O N S U M P T I O N			
		RANK	FLOW	ACCUMUL.	ACCUMUL.	RANK	FLOW	ACCUMUL.	ACCUMUL.
				FLOW	IN %			FLOW	IN %
Refinery products	3530	1	1625.3	n.a.	10.2	1	1484.3	n.a.	11.5
Yarn & woven fabrics	3211/3212	2	1530.1	3155.4	19.8	2	1171.2	2655.5	20.5
Motor vehicles	3843	3	963.8	4119.2	25.9	3	963.8	3619.3	28.0
Organic, inorganic basic chemicals	3511.0.	4	688.3	4807.5	30.2	4	674.6	4293.9	33.2
Prepared animal feeds	3122.0.0	5	545.4	5352.9	33.0	5	545.4	4839.3	37.4
Cordage	3215	6	496.3	5340.2	36.7	7	432.0	5271.3	40.8
Basic iron & steel products	3710	7	461.5	6310.7	39.6	6	446.3	5717.6	44.2
Garments & confectionary articles	3220	8	457.7	6768.4	42.5	11	-345.5	5372.1	41.6
Synthetic resins & fibres	3513.1.2/ 3513.3.0	9	442.0	7210.4	45.3	9	413.7	5785.8	44.8
Flour & cereal floes	3116.2.0/ 3116.5.0	10	430.8	7641.2	48.0	8	430.8	6216.6	48.1
Radio, TV, telecommunication equipment	3832	11	400.3	8041.5	50.5	14	308.3	6524.9	50.5
Paper, carton, packing material	3411.2.3/ 3412.9.0	12	395.0	8436.5	53.0	12	333.4	6858.3	53.1
Cement, gypsum, construction materials	3692/3699	13	384.9	8821.4	55.4	13	327.1	7185.4	55.6
Milk & milk based products	3112.0.0	14	356.2	9177.6	57.6	10	356.2	7541.6	58.3
Metal products, not elsewhere classified	3819	15	299.6	9477.2	59.5	15	299.6	7841.2	60.7
Wood pulp	3411.1.0	16	291.6	9768.8	61.3	47	71.8	7913.0	61.2
Pharmaceuticals	3522.3.0	17	266.5	10035.3	63.0	17	231.0	8144.0	63.0
Printed and graphics products	3420	18	264.8	10300.1	64.7	16	264.8	8408.8	65.1
Footwear, excluding rubber & plastics	3240.0.0	19	231.4	10531.5	66.1	65	-15.5	8393.3	64.9
Products from plastic materials	3560	20	219.9	10751.4	67.5	18	219.9	8613.2	66.6
Folios, boards, wooden articles & furniture	3311/3312	21	213.6	10965.0	68.8	20	183.4	8796.6	68.1
Canned meat	3320 3111.2.0	22	185.7	11150.7	70.0	19	185.7	8982.3	69.5
Fertilizer and pesticides	3512.1.0/ 3512.2.0	23	179.8	11330.5	71.1	23	165.2	9147.5	70.8
Professional & scientific equipment	385	24	179.5	11510.0	72.2	27	154.5	9302.0	72.0
Other non-electrical machinery	3829	25	174.4	11684.4	73.3	26	156.5	9458.5	73.2
Coffee	3121.1.0	26	171.5	11855.9	74.4	21	171.5	9630.0	74.5
Cork articles	3319.1.0	27	167.6	12023.5	75.5	60	21.3	9651.3	74.7
Industrial electrical machinery	3831	28	166.7	12190.2	76.5	38	120.1	9771.4	75.6
Soaps, washing powder, detergents	3523	29	166.6	12356.8	77.6	22	166.6	9938.0	76.9
Fats and non-eatable oils	3524	30	163.5	12520.3	78.6	24	163.5	10101.5	78.1
Sawnwood and sawcork	3311.1.0	31	162.3	12682.6	79.6	45	79.5	10181.0	78.8
Bread & other baker's wares	3117.1.0	32	160.1	12842.7	80.6	25	160.1	10341.1	80.0
Conserved fruits and vegetables	3113.0.0	33	159.6	13002.3	81.6	43	85.2	10426.3	80.7
Metallic, non-metallic ships, incl. repair	3841	34	158.8	13161.1	82.6	37	121.0	10547.3	81.6
Food, beverage, construction machinery, scales	3824.1.0/3824.4.0/ 3825.2.0	35	151.2	13312.3	83.6	30	139.6	10686.9	82.7
Rubber products	3551-9	36	150.8	13463.1	84.5	31	137.3	10824.2	83.7
Paints	3521.0.0	37	150.5	13613.6	85.5	28	150.5	10974.7	84.9
Raw & refined sugar	3118.1.0/3118.2.0	38	146.4	13760.0	86.4	29	143.9	11118.6	86.0
Brandy, wine, beer & malt	3131.3.0/3131.4.0 3132.3.0/3133.00	39	144.6	13904.6	87.3	66	-12.1	11106.5	85.9
Conserved fish & fish products	3114.1.0/3114.2.0	40	138.7	14043.3	88.1	42	90.6	11197.1	86.6
Textile & garment machinery	3824.2.0/3824.3.0	41	136.7	14180.0	89.0	35	122.5	11319.6	87.6
Electrical machinery, not elsewhere classified	3834	42	131.1	14311.1	89.8	32	131.1	11450.7	88.6
Tabacco & tabacco products	3140.0.0	43	126.2	14437.3	90.6	33	126.2	11576.9	89.6

Note:

The total flow analysis is based on the standard formula: apparent consumption = production + imports - exports + / - stock movements. Stock movements have been disregarded here due to lack of data.

The total flow is defined as: production + import = consumption + exports. Negative figures in the table indicate considerable stock movements. These figures have been treated with their simple negative value.

The import coefficient calculated from this analysis is defined as: import divided by total flow. The export coefficient is defined as: exports divided by total flow. Both coefficients are calculated on basis of accumulated real values over the period 1982 to 1987.

Source: JICA Study team computation.

Table 4-2 COMMODITY GROUPS REMOVED BY NEGATIVE FACTORS

COMMODITY GROUP	TOTAL FLOW	RANKING		
		PROD' N	IMPORT	EXPORT
I Removed by Negative factor (A)				
1) Prepared animal feeds (ss)	5	3	19	-
2) Flour & cereal floccs (I)	10	-	-	-
3) Milk & milk based products (ss)	14	9	-	-
4) Canned meats (ss)	22	-	-	-
5) Coffee (I)	26	-	-	-
6) Soaps, washing powder, detergents (ss)	29	-	-	-
7) Fats and non-catable oils (ss)	30	-	-	-
8) Bread & other baker's ware (ss)	32	-	-	-
9) Raw & refined sugar (I)	38	-	-	-
10) Brandy, wine, beer & malts (E)	39	-	-	5
11) Tobacco & tobacco products (I)	43	-	-	-
II Removed by Negative factor (B)				
1) Refinery products (I)	1	1	4	7
2) Organic & inorganic chem. products (I)	4	4	2	-
3) Base iron & steel products (I)	7	11	6	-
4) Synthetic resin & fibres (I)	9	12	7	-
5) Cement, gypsum & construction mat'l (E)	13	-	-	-
6) Fertilizer & pesticides (I)	23	-	18	-
III Removed by Negative factor (C)				
1) Yarn & woven fabrics (E)	2	2	8	2
2) Cordage (I/E)	6	7	11	11
3) Cork articles (E)	27	-	6	-
4) Sawn wood & sawn cork (E)	31	-	9	20

Notes: ss = Self sufficiency E = Export oriented I = Import intensive
 I/E = Categorized in both E & I
 Production, import and export are ranked by the accumulated value from
 1981-1987 upto the top 20.

Table 4-3 IDENTIFIED COMMODITY GROUPS (Traditional Export Oriented Goods)

COMMODITY GROUP	RANKING			
	TOTAL FLOW	PROD'N	IMPORT	EXPORT
I Garments				
1) Garments, confectionary articles (E)	8	6	-	1
2) Special fabrics (E/I)	54	-	-	17
3) Carpets, rugs & similar products (E)	60	-	-	12
II Food industry				
1) Conserved fruits & vegetables (E/I)	33	-	17	10
2) Conserved fish & fish products (E)	40	-	-	15
III Wood, pulp & paper				
1) Wood pulp (E)	11			
2) Paper, carton & packing material (I/E)	12			
3) Printed & graphics products (ss)	18			
4) Folios, board, wooden furniture	21			
5) Sawn wood	n.a.	included as part of III-4) of Table 8-2-1		
IV Ceramic and glass				
1) Porcelain & pottery products (ss)	45			
2) Glass & glass products (E)	47			
3) Clay products (ss)	48			
4) Construction materials (tiles etc.)	n.a.	included as part of II-5) of Table 8-2-1		
V Leather				
1) Footware excl. rubber & plastic (E)	19	17	-	3
2) Tanned leather (ss)	44	-	-	-
3) Leather goods for personal use (ss)	69	-	-	-

Table 4-4 IDENTIFIED COMMODITY GROUP (ELECTRICAL, VEHICLES, CHEMICAL)

COMMODITY GROUP	RANKING			
	TOTAL FLOW	PROD'N	IMPORT	EXPORT
I Vehicles				
1) Motor vehicles, parts & components (I)	3	5	1	-
2) Motorcycle & bicycle (ss)	65	-	-	-
II Electrical appliances				
1) Radio, T.V. Telecomm. equip (E/I)	11	14	13	8
2) Electrical machinery n.e.s (ss)	42	-	-	-
3) Electrical household goods (ss)	55	-	-	-
III Chemicals & Pharmaceuticals				
1) Pharmaceuticals (E/I)	17	-	12	19
2) Products from plastic materials (ss)	20	18	-	-
3) Rubber products (I)	36	-	-	-
4) paints (I)	37	-	18	-

Table 4-5 IDENTIFIED COMMODITY GROUP (METAL PRODUCTS, MACHINERY)

COMMODITY GROUP	RANKING			
	TOTAL FLOW	PROD'N	IMPORT	EXPORT
I Metal products				
1) Metal products n.e.s. (ss)	15	13	-	-
2) Metal furniture (ss)	61	-	-	-
3) Hand tools	64	-	-	-
II Machinery and equipment				
1) Professional & scientific equip. (E/I)	24	-	5	-
2) Other non-electrical machine (I)	25	-	-	-
3) Industrial electrical machinery (E/I)	28	-	15	16
4) Ships including repair (E/I)	34	-	-	18
5) Food, beverage, construction m/c (I)	35	-	9	-
6) Textile & garments machinery (I)	41	-	10	-
7) Tanks, vats & boiler (I)	53	-	-	-
8) Metal & wood working machinery (I)	57	-	-	-
9) Agriculture machinery & equip (I)	59	-	-	-

Chapter 5 Economic Growth Target and Investment Requirements up to the Year 2000

5.1 Government Growth Estimations

There are no publicly available estimations on real gross domestic product (GDP) growth covering the whole decade of the 1990s. In fact, it appears that the only Government estimations on real GDP growth covering the years up to 1995 are contained in the two adjustment plan "National Adjustment Programme For The Transition Towards The Economic And Monetary Union [QUANTUM]". These policy documents, which were adopted in July 1990 [QUANTUM-I] and January 1992 [QUANTUM-II], investigate in two scenarios the effects of policy changes required to create conditions for membership of EC in the "narrow band option" of the exchange rate mechanism of the "European Monetary System [EMS]".

By the very nature of this exercise, estimations concentrate on the interdependence of macro indicators, such as GDP growth, unemployment rate, current account deficit, public debt and inflation.

However, in view of the absence of other "official" projections, the real GDP growth estimations contained in QUANTUM-II in the scenario "with convergence" to EC averages is taken later into account as an orientation point and check mark for the estimations undertaken by the Study team.

In the QUANTUM-II, since the growth rate estimations by output sector, i.e. Agriculture, Industry and Services are not available, the Study team made an estimation to identify the growth rate of the manufacturing sector which is necessary for further discussion in this study. The JICA team's estimation is more or less similar to the QUANTUM-II's estimation, but interdependence with the other output sectors was taken into account.

The real GDP growth rate estimated in QUANTUM-II is shown in Table 5-1 as 2.5% for 1991, 3.0% for 1992 and 4.0% for the period of 1993 to 1995.

As regards projections for the real growth of manufacturing industries a similar situation, as described above, prevails. The only figures available are contained in a study undertaken by the Ministry of Industry and Energy (MIE) in 1987.

The basic approach of the study covers two scenarios, optimistic versus pessimistic, and it comprises three time horizons: 1990 to 1995, 1995 to 2000 and 2000 to 2010. Estimations have been undertaken for some 23 "product groups", not fully compatible either with the ISIC or CAE code classification systems. Government official warn, however, that these predictions may be out of date, because circumstances have changed since the time the predictions were

made. Notwithstanding this fact and in the absence of any more recent projections, these data are likewise employed as cross-checks to estimations undertaken by the Study team. They are summarized in the following Table 5-2.

5.2 Growth Forecast by the Mission

Growth forecast for the manufacturing sector was performed in accordance with the following procedure, with necessary adjustments:

- 1) To forecast growth rates of each sector on the basis of actual data in the past 11 years, with particular emphasis on recent 5 years, including 1987 data published by the Ministry of Industry and Energy. (see Table 5-2)
- 2) To make adjustment on a trial and error basis, through comparison with the government's GDP forecast in QUANTUM-II.

Through the process, forecast growth rates of the industrial sectors and their shares in GDP are summarized in Table 5-3.

(1) Manufacturing sector (mining)

The manufacturing sector is expected to grow at an annual 5.5% between 1991 and 1995, and at 6.5% between 1996 and 2000. As a result, the sector's share in GDP will increase from 24.6% recorded in 1990 to 30.2% in 2000, which exceeds the 1960 - 1989 average share for EUR 12 countries (28.1%). To improve the country's economic indicators to the EC average level (currently the second lowest) toward the unification of the EC, the manufacturing sector is expected to serve as a major driving force for the future growth, while other sectors do not show significant growth potential. Thus, growth forecast here is set at somewhat higher levels than the past results, serving as target levels.

The average growth rate after the country's joining in the EC (between 1986 and 1990) was 4.0%.

(2) GDP growth rates

By adding up the above sectors, GDP growth rates between 1991 and 2000 were estimated as follows, in comparison to those forecast in QUANTUM-II:

	<u>QUANTUM-II</u>	<u>Forecast by the study team</u>
1991	2.5%	3.5%
1992	3.0%	3.6%
1993 - 1995	4.0%	3.7% p.a.
1996 - 2000	Not Available	4.0% - 4.1% p.a.

The average growth rate between 1986 and 1990 was 4.9%. However, QUANTUM-II and the study team's forecast envisage that such high growth rate cannot be sustained, because of oversupply in the service sector which has been on of the strongest driving power of the economy, mainly financial service, slowdown in growth of public investment and service due to excess supply and tight government budget, and possible decline in inflow of EC Funds to the country.

Compared to QUANTUM-II, the study team expects that the slowdown will occur at a relatively moderate pace. The growth rate, dropping to a 3.5% level in 1991, is expected to recover gradually as a result of increase in foreign investment in the manufacturing sector, thus bolstering the entire economy.

5.3 Forecasting Investment Demand in the Manufacturing Sector

Gross fixed capital formation (GFCF) is expressed as a sum of net investment and replacement investment to cover depletion (depreciation) of fixed assets. As GFCF in the manufacturing sector can be used as a surrogate for investment demand, GFCF for the whole country is first estimated up to 2000, followed by estimation for the Aveiro-Viseu region. Note that the investment demand is also considered as investment required for the manufacturing sector to achieve the grow rates forecast in Table 5-3.

(1) Investment demand at the national level

As the first step, actual GFCFs in the manufacturing sector between 1979 and 1988 were adjusted to 1988 prices by using inflation rates during the period. The results are shown in Table 5-4, and the average annual GFCF was 192 billion escudos. As no GFCF data are available between 1988 through 1991, GFCF in the 1991 price was estimated by using

actual inflation rates and real growth rates of the manufacturing sector during the period. The results are shown in Table 5-4. Note that growth rates of the manufacturing sector and GFCF are assumed to be the correlation.

Then, the investment demand up to 2000 was estimated, as shown in Table 5-4. Note that the figures in this table represent the growth of investment in real terms, but not do no including increments due to inflation after 1992, in order to prevent inflated figures from deviating our eyes off a real picture of investment growth between 1991 through 2000. The results of calculation are summarized as follows:

Total required investment

between 1991 and 2000 4,053 billion escudos
Annual average investment 445.4 billion escudos

(2) Investment demand in the Aveiro-Viseu region

The investment demand for the entire country estimated above was allocated to the Aveiro-Viseu region as follows.

Aveiro area accounted for 3.7% of GDP and Viseu area 2.0% in 1988. In terms of GFCF, Aveiro area's share ranges between 10.9% and 15.5%, and Viseu area between 0.6% and 1.2%, during the 1979 - 1986 period. The average figures are 12% for Aveiro and 0.8% for Viseu. Allocation based on the average GFCF shares is called "scenario 1."

Alternatively, the investment demand is expected to increase in both areas; in particular, investment in Viseu area may increase significantly because of increased development potential in response to inauguration of arterial highway IP5. Thus, as "scenario 2", GFCF in Aveiro area in terms of percentage share in the entire country is assumed to be 15.5% - the highest level between 1979 and 1986 - and that in Viseu area is assumed to jump to a 2% level - the area's share in GDP.

The investment demands in the Aveiro-Viseu region under the above two scenarios are estimated as follows.

Estimated Investment Requirements in the Aveiro-Viseu Region
(Million Escudos, 1991 Price)

Scenario 1	Percentage share in the country	Average between 1991 - 2000	Accumulated total between 1991 - 2000
Aveiro area	12.0%	486,468	48,647
Viseu area	0.8%	32,431	3,243
Total	12.8%	518,899	51,890

Scenario 2	Percentage share in the country	Average between 1991 - 2000	Accumulated total between 1991 - 2000
Aveiro area	15.5%	628,355	62,836
Viseu area	2.0%	81,078	8,108
Total	17.5%	709,433	70,944

Thus, the above estimation roughly indicates that the manufacturing sector in the Aveiro-Viseu region will require investment in the range between 52 billion and 71 billion escudos annually on the average (by 1991 value).

Table 5-1 GOVERNMENT REAL ECONOMIC GROWTH RATE ESTIMATIONS

Unit: percent

(1) GDP Growth Rate in QUANTUM II: 1991 to 1995 *)

I T E M	1991	1992	1993-1995
ESTIATED REAL GDP GROWTH RATE	2.5	3.0	4.0

(2) Ministry of Industry and Energy Growth Rate Estimations for
the Manufacturing sector: 1990 to 2000 **) (1987 Estimation)

S C E N A R I O S	1990-1995	1995-2000
Scenario 'A' (optimistic)	4.5	3.7
Scenarioa 'B' (pessimistic)	3.3	2.5

Notes:

- *) Estimations are those contained in the 'with convergence' to EEC averages scenario.
- ***) Estimations for the period 2000 to 2010 are disregarded, because they are beyond the time frame of the present Study.

Sources:

- *) 'QUANTUM Program'; QUANTUM II, January 1992.
- ***) 'Portuguese Industry - Scenarios 1988 2010', MoIE, Lisbon 1990, page 6.

Table 5-2 PAST TREND OF GDP BY MAJOR OUTPUT SECTORS: 1980 to 1990

(1) Real Growth Rate	Unit: percent												
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990*	Average 1980-1990	1986-1990
Agriculture, forestry, fishing	2.3	-10.5	6.1	-1.4	9.1	8.1	3.1	4.1	-11.5	7.5	-3.0	1.3	-1.0
Manufacturing and mining	4.2	2.0	-0.8	-1.3	-3.8	2.6	6.2	3.0	2.0	5.0	6.0	2.3	3.4
Electricity, gas, water	16.4	-18.3	34.8	11.3	8.0	12.3	-6.2	3.3	14.7	7.1	10.0	8.5	8.7
Construction	7.1	4.6	1.9	0.7	-9.4	-5.7	2.5	7.8	11.0	7.9	5.0	3.1	7.9
Sub-total: Industry	2.2	0.0	3.1	0.6	-3.0	2.9	3.6	3.7	5.2	5.8	6.5	2.8	5.3
Services	6.3	3.5	3.1	0.7	-3.4	2.6	4.1	7.5	4.4	5.0	4.1	3.4	5.3
Gross Domestic Product	4.8	1.2	3.3	0.5	-2.4	3.1	3.9	5.9	4.0	5.4	4.5	3.1	4.9
(2) Share	Average 1980-1990												
Agriculture, forestry, fishing	7.4	6.5	6.7	6.6	7.3	7.7	7.6	7.5	6.2	6.3	5.9	6.9	
Manufacturing and mining	26.5	26.8	25.7	25.2	24.9	24.8	25.3	24.6	24.3	24.2	24.6	25.2	
Electricity, gas, water	4.3	3.4	4.5	5.0	5.5	6.0	5.4	5.3	5.9	6.0	6.3	5.2	
Construction	5.5	5.7	5.6	5.6	5.2	4.8	4.7	4.8	5.2	5.3	5.3	5.2	
Sub-total: Industry	36.3	35.9	35.8	35.8	35.6	35.5	35.4	34.7	34.5	35.5	36.2	35.6	
Services	56.3	57.6	57.5	57.6	57.1	56.8	56.9	57.8	58.4	58.2	58.0	57.5	
Gross Domestic Product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Note: *) Preliminary estimations, based on "Bank of Portugal (BOP)" figures.

Source: Bank of Portugal (BOP)

Table 5-3 TARGET GROWTH OF GDP BY MAJOR OUTPUT SECTORS: 1991 TO 2000
(In constant 1977 price base)

(1) Real Growth Rate	Unit: percent										
	1990*	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000 Average 2000 1990
Agriculture, forestry, fishing	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Manufacturing and mining	5.5	5.5	5.5	5.5	5.5	5.5	6.5	6.5	6.5	6.5	6.0
Electricity, gas, water	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Construction	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Sub-total: Industry	5.2	5.4	5.4	5.4	5.4	5.4	6.0	6.0	6.0	6.0	5.7
Services	2.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Gross Domestic Product	3.5	3.5	3.6	3.7	3.7	3.7	4.0	4.0	4.0	4.1	3.8
(2) Share											
	1990*	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000 Average 2000 1990
Agriculture, forestry, fishing	5.9	5.8	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0	4.9
Manufacturing and mining	24.6	25.1	25.5	26.0	26.4	26.9	27.5	28.2	28.9	29.5	30.2
Electricity, gas, water	6.3	6.4	6.5	6.6	6.7	6.9	7.0	7.1	7.2	7.3	7.3
Construction	5.3	5.4	5.4	5.4	5.5	5.5	5.5	5.6	5.6	5.6	5.7
Sub-total: Industry	36.2	36.8	37.4	38.0	38.6	39.3	40.1	40.8	41.6	42.4	43.2
Services	58.0	57.4	56.9	56.4	55.8	55.3	54.5	54.0	53.3	52.6	51.9
Gross Domestic Product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: JICA Study team computation model, designed as spreadsheet program.

Table 5-4

PAST PERFORMANCE OF GROSS FIXED CAPITAL
FORMATION (GFCF) OF PORTUGAL: 1979-1988
AT 1988 PRICES (MANUFACTURING SECTOR)

Year	GFCF in Current Prices (Bil. Esc.)	Inflation rate (%)	GFCF at 1988 prices (Bil. Esc.)
1979	51.8	22.7	209.2
1980	61.8	16.1	215.1
1981	81.8	20.3	236.5
1982	115.5	22.0	273.9
1983	113.5	25.5	214.5
1984	97.2	29.3	142.0
1985	95.0	19.3	116.4
1986	132.3	11.7	158.3
1987	174.2	9.4	191.0
1988	163.1	9.6	163.1
Average GFCF per year at 1988 price:			192.0

Source: JICA team estimation

Table 5-5 PROJECTED GROSS FIXED CAPITAL FORMATION
 (GFCF) OF PORTUGAL UPTO 2000:
 AT 1991 PRICES (MANUFACTURING SECTOR)

Year	Real growth rate in mnf'g (%)	Inflation (%)	Projected GFCF (Bil. Esc.)
Base (1979-1999 average at 1988 prices) 192.0			
1989	5.0	12.6	225.8
1990	5.5	13.4	268.5
At 1991 price: 1991-2000			
1991	5.5	11.4	313.8
1992	5.5	0	331.1
1993	5.5	0	349.3
1994	5.5	0	368.5
1995	5.5	0	388.7
1996	6.5	0	414.0
1997	6.5	0	440.9
1998	6.5	0	469.6
1999	6.5	0	500.1
2000	6.5	0	532.6
1991 to 2000			
Total GFCF:			4,053.9
Average GFCF/year:			405.4

Note: Inflation rate of 1992 onwards is disregarded in order to compute at 1991 prices.

Source: JICA team estimation

Chapter 6 Foreign Investment Promotion Measures

This chapter outline the main point of investment promotion activities and propose some programs.

Generally speaking, "promotional activities" to attract foreign investment are composed of following programs.

- (1) Activities program at the national (central government) level
- (2) Activities program at a regional-or local-level (focusing on local characteristics)
- (3) Activities program through foreign branch offices of the central government

On the other hand, a foreign investor starts from selection of a country, then selecting a particular region, area and location. For this reason, promotional activities should be carefully designed by taking into account the type, size, and nationality of the industry to be invited, together with local characteristics including natural resources and industrial infrastructure; although there is not much difference between activities carried out by the promoting organization and the foreign investor in terms of nature, scope and methodology, some adjustment is needed to effectively advertise a region or area to be promoted.

This chapter first identifies possible activities to be included in the foreign investment promotion program at a national level, followed by basic design concepts of the same program at a local level, namely the Aveiro-Viseu Region in this case. Finally, promotional activities targeting Japanese industries are proposed, followed by recommendation on an organization to implement the promotional activities.

6.1 Foreign Investment Promotion Program at a National Level

6.1.1 Need for the new program

- (1) Effective use of ICEP's resources

Although ICEP is primarily responsible for promotion of foreign trade and investment, priority is given to the former (promotion of exports in particular); 80% of ICEP's budget is allocated to its activities related to trade promotion. Furthermore, its organization is based on experts who are in charge of specific products. This certainly serves the national interest, as promotion of foreign trade is recognized as one of the most important issues in the country's economic policy, particularly effective in promoting exports of various products. The important point is how to reorganize the present functional set-up, within the scope of ICEP organization and also on the basis of the present organizational framework, in order to further the promotional activities for

inducement of foreign investment.

(2) Establishing target-specific strategies

Foreign investors presumably have different needs and wants according to the country, industry type, and company size. As a result, the method of promoting foreign investment and information supplied to potential investors should be modified or adjusted accordingly.

For instance, ICEP's representative office in Japan has held small seminars for specific industries, but more elaborate strategies are needed to address the needs of potential investors, in different industry groups and varying sizes, under cooperation of the trade promotion section.

(3) Strategic supplying of local information

At present, ICEP does not appoint staff responsible for promotion of a particular region or area for foreign investment. For example, if some potential investors want to get local investment related information, no places where can provide any kind of information.

From the investors point of view, it is quite natural they want more specific and up-dated information, and sometime it will be big influence to investor's decision. Under the present system, Portugal does not have any organization to effectively control and supply information on each region and area. From the viewpoint of streamlining the potential investor's decision making, such efforts seem to be one of determinant factors in successful promotion of foreign investment.

(4) Increase in information flow

Over 70% of companies who responded to a survey conducted in Japan pointed out lack of information in evaluating the investment climate of Portugal. More importantly, there is apparent lack of general information on the country, including society, culture, leisure, and so on. The similar situation is observed for other countries which simply have minimal knowledge on Portugal. This clearly indicates an urgent need for much efforts to make the country known to the Japanese public, particularly by increasing an amount of information on Portugal through "publicity" activities.

6.1.2 Proposed Program Package

Promotion program can be classified into as follows.

- 1) To establish or improve a public image of Portugal in target countries.
- 2) To attract and find potential investors.
- 3) To provide consultation and follow-up communication for potential investors who show a general interest in Portugal.

Based on this classification, the following programs are proposed.

(1) Advertisement and publicity

ICEP has been conducting a variety of promotional activities, including preparation and distribution of PR materials, and advertisement on general media. To establish and improve a public image of Portugal, however, these activities should be strengthened and diversified, i.e., programs focusing on potential investors to raise their interest through mass media and ICEP's own network.

1) Preparation and distribution of pamphlets and other PR materials

To maximize effectiveness and productivity, pamphlets should be prepared in the following 3 categories:

1) General information on Portugal

- Major investment circumstances
- Comparative advantages

2) Portugal's foreign investment policy

- Government policy
- Privatization
- Labor relations
- Taxation system and incentives

3) Detailed information useful for decision-making of foreign investors

- Questions and answers on foreign investment
- List of industrial estates

- Locally available procurement goods, service and their cost
- Availability of subcontractors by industry subsectors

At the same time, it is useful to store these data and information in the form of database.

2) Use of mass media

The process starts from selection of media considered to be effective for the promotional purpose, where major advertisements are placed mainly in the form of PR article. In addition, contribution to "Special Report on Portugal" articles by domestic and international newspapers and magazines, distribution of press release on a regular basis, and meetings with influential media, and guided tours for journalists are considered to be cost-effective programs.

3) Tie-up with foreign investment promotion organizations

This consists of distribution of PR materials to investment promotion organizations, banks, and consulting firms in Portugal and target countries on a regular basis, together with the placing of advertisements and supply of news releases for their publications. Also, a system to provide quick access to databases of these organizations should be developed. These efforts increase a chance of exposure to potential investors, while providing accurate and useful information on Portugal for investment promotion organizations in their consulting and advice.

(2) Programs to explore potential investors

1) Sending of promotion missions and acceptance of investment missions

These activities should preferably be conducted as a package program including investment seminars and consulting services. In addition, preparation of attractive pamphlets and PR materials, together with provision of investment advisors and consultants by using networks of ICEP and external organizations, are critical in exploring potential investors within a limited period of time.

2) Investment seminars

ICEP has been holding a number of investment seminars in key target countries. However, they are mainly held in large cities and should be expanded in terms of geography and scope to include regional cities and industrial areas, as well as

small- and medium-scale enterprises. In particular, regional seminars should include trade promotion and serve as a place for answering questions and providing consultation by inviting experts having work experience in Portugal.

3) Use of direct mail marketing

This approach starts from the listing of potential investors, companies having interest in trade with Portugal, companies in target countries, and companies who operate in neighboring countries. PR materials are sent directly to them, followed by a questionnaire. Interest is measured by response rate and detail analysis of responses then put it in order for next promotion.

4) Establishment of informal communication network through personal contact

An informal communication network, developed through regular contact with foreign investment promotion organizations, major banks, and trading companies, is an integral part of promotional activities. Such network can only be developed on trustworthy relations on a person-to-person basis, through "grass-root" efforts which fully utilize local staff. Once established, the network often provides vital information that is not made known through an official channel of communication, i.e., actual needs and wants of potential investors, thus enabling realistic and attractive offer. Such "grass-root" approach should be needed in ICEP's present activities to explore investors in the highly competitive environment.

(3) Individual consulting service

Potential investors identified through the above programs and activities should be provided with consulting service by experts according to their level of interest in Portugal.

1) Provision of investment advisors system

Investment advisors should be secured by hiring outside consultants or through in-house training. To provide information and advice for prospective potential investors is a critical factor to affect their decision making.

2) Visiting counseling service

For potential investors as well as companies which are considered to be a major candidate by ICEP, detailed consultation services and special seminars are the

next important step. ICEP staff and investment advisors visit these companies to furnish information and advice customized to specific needs of these companies. At the same time, cooperation of local governments, business organizations, central government offices, and banks is often important.

(4) Follow-up and monitoring activities

The Information Desk should be established at ICEP's headquarters to monitor the progress of promotional programs and to conduct follow-up and support activities. It is designed to ensure timely action and effective budgetary allocation according to needs in target countries.

The Information Desk should be headed by the key staff who can keep close communication with ICEP's foreign offices and can make prompt decision.

(5) Improvements Related to Operation of the Incentive

As actual operation of incentive programs are under jurisdiction of IAPMEI, IEFP and other organizations, ICEP which is responsible for overall investment promotion should act as an intermediary for these organizations, and propose improvements in operation of incentives, and coordinate related activities for implementation and materialization of improvement measures. Regarding the stepped-up promotion of investment from target countries, particularly Japan, the following improvement measures are recommended.

For organizations which manage incentive programs:

- 1) To increase transparency of evaluation standards thereby maintaining fairness.
- 2) To limit requirements for documentation to a minimum level, thereby reducing work load for the applicants and evaluators as well.
- 3) To ensure that every application is processed within a specified evaluation period by establishing a screening system to find an application lacking required documentation or information at the time of initial acceptance.
- 4) To promptly notify a reason for delay in payment of incentive, if any, followed by a revised schedule.

For ICEP:

- 5) To provide an one-stop consultation desk for convenience of potential investors. This desk will be located in one location and served by full-time ICEP staff and IAPMEI and IEFP experts who will provide one-stop information service and advice for potential investors, thereby minimizing their time and cost in the application process, and allowing timely and effective implementation of incentive programs.

6.2 Foreign Investment Promotion Measures for the Aveiro/Viseu Area and Activity Expansion and Strengthening Programs

This section describes the basic concept of foreign investment promotion programs for Aveiro-Viseu region, and proposes a set of programs developed along this line. Proposed programs are basically similar to those proposed at a national level in terms of methodology and tools, but they should incorporate elements which take into account local characteristics. In addition, arrangement should be made to supplement and support program implementation at a local level in areas of staff and budget, by coordinating efforts at a national level.

6.2.1 Framework of Program Formulation

The results of this study has revealed one drawback of foreign investment promotion activities conducted at a local level; it is not clear which organization is responsible for implementation of the promotion activities. The Aveiro-Viseu region is no exception to this. Although the following organizations are involved partially in foreign investment promotion activities, each conducts its own activities based on its policy, organization, and function, without coordination:

- 1) ICEP's Aveiro office
- 2) IAPMEI's Aveiro and Viseu office
- 3) NRC (CCRC Regional Coordination Office) and GAT (CCRC Technical Support Office)
- 4) Local governments
- 5) Trade and industrial associations

All of these organizations are partly involved in promotion activities but none of them is responsible for overall management. For potential investors, it is not very convenient as many information sources, Although these organizations are partly involved in promotional activities for the Aveiro-Viseu region, but none of them is responsible for coordination and management of individual activities. For potential investors, this means that there are different information sources and organizations to contact, discouraging them from further commitment or action.

Thus, it would become a major obstacle to promotion of investment by foreign manufacturers. In this recognition, it is proposed to strengthen human resource and function of ICEP's domestic branch office and to position it as a responsible body for comprehensive promotion programs, particularly foreign investment. For this purpose, programs proposed for promotion of investment in the Aveiro-Viseu region should be implemented by ICEP's headquarters and overseas network as far as practicable, thus minimizing financial and other

burdens of local governments.

6.2.2 Investment Promotion Programs

(1) Preparation of pamphlets

This program consists of preparation of pamphlets regarding the Aveiro-Viseu region as well as existing PR materials in English and other major languages. These materials will also be distributed to foreign potential investors through ICEP's overseas network, thereby to help establish public recognition of the region.

(Note) Investment promotion pamphlet for Aveiro-Viseu areas were prepared by the Mission in English and Japanese.

(2) Preparation of the manual/guidebook for foreign companies to operate in the Aveiro-Viseu region

A manual/guidebook serves as a reliable source of information for both domestic and foreign companies intending to operate in the region.

This guidebook should include the following information to help potential investors accurately evaluate feasibility of their operation. In this connection, collection, analysis, and editing of relevant data are important and should be conducted by a reliable organization including the central government.

- Investment opportunities and advantages of the region
- Major characteristics of institutional framework relating to foreign investment, and application procedures
- General description and current state of major industrial estates
- Major incentives and their actual application
- Current state of companies (particularly foreign companies) operating in the region
- Current state of subcontractors by sub-sector

(3) Survey on foreign companies operating in the region, and production of visual PR materials

Videos, films, and slides are one of the most effective PR materials, which should report foreign companies operating in the region, in addition to its major features and advantages include following points.

- Investment promotion policies in the region, and industry sub-sectors given of priority or preference
- Reasons for foreign companies to site in the region
- Tax and other incentives available to foreign companies
- Current state of foreign companies operating in the region, their impacts on local economy, and reputation in local communities

Investment promotion VTR film for Aveiro-Viseu areas were prepared by the Mission in English and Japanese.

(4) Establishment and strengthening of communication network with foreign embassies and ICEP

As neither Aveiro nor Viseu has own base of investment promotion activities in foreign countries, they should rely on embassies and ICEP's overseas network. In particular, establishment and strengthening of an effective communication network should be promoted through ICEP's headquarters. The network will be used for distribution of PR materials including videos and films. Also, the local governments should actively participate or co-sponsor ICEP-led programs, including the sending of investment promotion missions and the receiving of foreign missions.

(5) Co-sponsoring of investment seminars

Investment seminars held in Portugal and foreign countries should include the Aveiro-Viseu region as a co-sponsor, as far as possible. Also, it is desirable to hold investment seminars in the region under co-sponsorship with various organizations, which would have a significant advertising effect.

- 1) Investment seminars co-sponsored by domestic investment promotion organizations, business organizations, and foreign investment promotion

organizations operating in Portugal

- 2) Group meetings with corporations looking for joint venture in the region
 - 3) Group meetings with subcontractors in the region
 - 4) Investment seminars held in foreign countries
- (6) Strengthening of consulting service and staff

Foreign investors are often required to go through a complicated process, including site selection (including evaluation), reporting requirements and application procedures relating to investment and incentives. In other words, potential investors may find a certain country or area attractive if it provides consulting service to assist them in the process by staff who are familiar with applicable requirements and procedures. ICEP's Aveiro office is not suitable for this task in terms of resource and authority. Thus, alternative solutions are to train in-house staff to consultants or to hire investment advisors who have been trained in outside organizations.

- (7) Joint campaigns with related local governments and private organizations

A joint campaign focusing on the region by local governments, public organizations, and business enterprises should be carried out in target countries, while securing government subsidy as far as possible. Such campaign should aim to establish public recognition of the region and to promote investment as well as tourism. Naturally, it is important to have support and assistance of ICEP's local office and related investment promotion organizations.

- (8) Questionnaire survey and follow-up activities

Series of questionnaire surveys should be conducted in key or strategic areas of target countries to identify interest in the region. Companies who responded to each questionnaire should be contacted regularly.

- (9) Development of the investment information system and database

Data and information related to investment in the region should be classified and stored in a centralized system.

In particular, those suitable for storing in a computer database should be inputted to a database system at ICEP's headquarters, so that they can be accessed from computer terminals at ICEP's Aveiro office.

Such database should consist of at least the following lists:

- 1) Companies and organizations which show interest in investment in the region;
- 2) Companies which are interested in joint venture with local companies in the region;
- 3) Local suppliers and subcontractors;
- 4) Locally available equipment and materials
- 5) Foreign companies to which direct mail is sent
- 6) Foreign companies and organizations to which questionnaire is sent
- 7) Industrial estates and locations
- 8) Various cost datas
- 9) Conditions of infrastructure
- 10) Supplying conditions of utility and tariff

6.3 Expansion and Strengthening of Japanese Investment Promotion Activities

Proposed investment promotion programs for Japan are basically similar to those proposed in Chapter 6.1. This section describes the important point to carry out promotion programs in Japan.

6.3.1 Building of the Information Network

Clearly, activities to promote industrial investment by Japanese industries in Portugal need to take an approach different from European and the U.S. industries by taking into account decision-making procedures and other characteristics peculiar to Japanese companies.

The process should start from the establishment of a reliable network to provide investment information on Portugal to sources which are frequently used by Japanese companies in studying and planning direct overseas investment. In particular, the following organizations provide useful routes for strengthening the information network. Regular contact with these organizations should help establish quick access to useful information and advice.

- (1) Strengthening relationship with public agency such as "JETRO" and the use of its domestic and overseas networks

- 1) Cooperation with JETRO

JETRO is the place Japanese companies most frequently contact to obtain information related to overseas investment and consulting service. Similarly, foreign corporations and investment promotion organizations often rely on JETRO as the first Japanese organization to contact. JETRO is established by a special law as an extra-governmental organization under the Ministry of International Trade and Industry. It operates a global network of offices, 80 overseas and 30 in Japan, and plans and implements a wide variety of projects worldwide. It provides a wide range of service to meet changing and diverse needs of each region, country, project area. Part of its industrial cooperation project, JETRO offers the following services intended to promote Japanese investment in foreign countries and technical cooperation:

- a) Collection and dissemination of foreign investment related information to Japanese companies;
- b) Dissemination of information to foreign and Japanese investment promotion organizations;

- c) Planning and sponsoring of investment seminars, as well as support and assistance;
- d) Assistance in sending and receiving of investment and technical exchange promotion missions;
- e) Identification of investment and technical exchange projects, and assistance in their implementation; and
- f) Listing of companies interested in foreign investment and industrial sites available in foreign countries, their compilation to a database, and consultation based on the database.

These activities are backed up by experienced staff and strategically allocated budget, so that it is important to keep close contact with a department or division which is responsible for a particular activity.

JETRO has its office in Lisbon, which can be used as a primary contact to use JETRO's resources. Through the Lisbon office, access to a vast network of JETRO headquarters can be obtained.

In particular, investment promotion programs in Japan, especially in regional cities other than major cities like Tokyo and Osaka, can be implemented under cooperation from any of 30 JETRO Trade Information Centers throughout Japan. JETRO's network is very useful in designing effective presentation for a particular region or area and identifying potential investors by taking into account local needs. Thus, JETRO should be the first organization to contact in planning such programs.

Considering its vast resources and capabilities, it is important to keep regular contact with JETRO in order to get acquainted with its organization, authority, budget, and projects, which can be fitted into programs initiated by the Portuguese government and other organizations.

2) Establishing Communication Channel with Japan Small Business Corporation

Japan Small Business Corporation, under Small Business Agency of the Ministry of International Trade and Industry, is spearheading promotion and vitalization of small businesses, including assistance in modernization, structural transformation,

and diversification. As a result, the corporation has a wealth of information related to small- and medium-sized enterprises in Japan, as collected through regular communication. Such information presumably includes direct investment by small businesses in foreign countries. Thus, the corporation will serve as a good source of information which may lead to discovery of potential investors or companies looking for local partners in Portugal. Also, the corporation has branch offices throughout Japan, which are useful in promotional activities for small businesses in regions other than major cities.

(2) Cooperation with international organizations

The Japan-EC Industrial Cooperation Center is an excellent source of information on industrial partnership and direct investment, as well as opportunities to promote joint venture and technical assistance. Collaboration with the center is possible through information exchanges.

(3) Cooperation with major city banks

Most of city banks have customers who may be interested in direct investment in Portugal. They have been collecting up-dated information, providing and consulting with customers for their overseas investment. Therefore, it is essential for the investment promotion to tie-up with those banks which have branch offices in Portugal and interest in business in Portugal.

(4) Cooperation with Sougou Shousha (general trading companies)

Sougou Shousha (general trading companies) serve as the primary wholesalers and are responsible for settling accounts with makers and providing information to them. In particular, these functions are important in foreign trade; many makers rely on Sougou Shousha in obtaining market information and in market development. Sougou Shousha plays a similar role in overseas investment. Also, Sougou Shousha offers a wide range of service in foreign investment, ranging from collection of information, consultation, to discovery of potential partners in joint venture business. Again it is very beneficial to establish a communication channel with related departments of Sougou Shousha, which can be developed into personal networks and information sources.

(5) Cooperation with business organizations

Many business organizations in Japan are endowed with resources in terms of organization, fund, and information. In particular, regular contact should be maintained

with leading business organizations, such as Keidanren, Kankeiren (covering the Osaka/Kyoto region), and Kynuokeiren (covering the Kyushuu region), through periodical visit and distribution of PR materials, which may lead to investment seminars as well as trade or investment promotion missions. Efforts should be made to provide them with updated and detailed information advertising investment opportunities in Portugal.

(6) Use of sister city relationship

Although only a few sister city affiliations exist between Japan and Portugal, such as "Porto-Nagasaki", "Aveiro-Ooita" "Leiria-Tokushima" and "Cascais-Atami", these are good starting points to advertise an image of Portugal to regional cities by holding or sponsoring events to promote economic relationship.

These events should preferably be attended by the ambassador or other high official of Portugal, who is likely to be publicized on local news media to create a significant advertising effect.

(7) Establishing a communication network with journalists

Japanese mass media has excellent information gathering capabilities and strong influence on public opinions. The first step is to select a limited number of media from newspapers, TV and radio stations, and magazines, and to provide them with news releases constantly. In the process, efforts should be made to develop closer relationship by supplying useful information and holding press meetings and invited tours. A goal is to win interest of journalists who become acquainted with Portugal and its relationship with Japan.

6.3.2 Programs to Identify Potential Investors

(1) Establishment of the Japan Desk within ICEP

This should be done by a team of persons who can effectively communicate with Japanese people and are familiar with Japanese and Portuguese economies, headed by a key staff of manager class.

Our proposal is to make the team an independent section, namely the Japan Desk, which is responsible for promotion of Japanese investment and trade, in particular management of the entire programs in these areas. Ideally, the Japan Desk should consist of a few members including present export promotion advisors sent by JETRO, and it should directly report to the president or the vice president.

To effectively identify Japanese potential investors and to serve prospective investors, establishment of this task force should be given of priority as the most important project.

(2) Organization of Japanese investment advisory group

This is a team of Japanese experts who support the Japan Desk as investment advisors. The advisory group should be led by a Japanese expert representing a public organization to secure fair and neutral viewpoint, with participation of other people representing Japanese companies.

At the same time, another advisory group should be organized in Japan by a number of experts representing public organizations to support ICEP's representative office by giving advice and proposing programs.

(3) Project focusing on Japanese companies operating in countries near Portugal

Some of Japanese manufacturers operating in countries near Portugal may consider the country as the second or third production/material supply base. In particular, large corporations, globally operated corporations in particular are expected to find importance of Portugal in their strategies relating to the EC and Europe, watching the country's comparative advantages and their changes.

As these corporations always look for latest information, periodic seminars on investment climate and particular industry sub-sectors in Portugal are important. Also effective are special events including guided tours on local industries, leisure, cultural and educational facilities, and housing, which would advertise an overall image of the country.

(4) Special seminars and meetings for major corporations

It is widely known that a special seminar or meeting for a major corporation is effective in promoting investment.

In this connection, it is important to plan such seminar or meeting for different departments of the major corporation, which are likely to have different policies, strategies and objectives. Also, a special seminar and meeting for a particular industry, including automobiles, automotive parts and accessories, TV sets, VTRs, and semiconductors - which Portugal considers the key products to future industrial development - is meaningful. In this case, detailed presentation by experts and participation of suppliers and subcontractors are recommended to further increase the effect.

(5) 450th anniversary events related project

In 1993 will be the 450th anniversary of the first Portuguese landing on Japan (Tanega-shima), an extensive image advertising campaigns has already started to celebrate the 450th anniversary of first Portuguese landing on Tanega-shima Island of Japan. A variety of special events are being planned and provide opportunities to establish an accurate and favorable image of Portugal. To raise interest of potential investors, investment and trade promotion seminars as well as Portuguese produce exhibitions should be held in major cities, including sister cities. Again, co-sponsoring with local offices of JETRO and Japan Small Business Corporation, local governments, and business organizations, is recommended to maximize their advertising effect.

6.4 Organizational Arrangement for Program Implementation

The organization is the key to the success of the proposed promotion programs. In particular, there is a need for arrangement to coordinate operations and opinions of ICEP and other public organizations, and business organizations. Furthermore, organizational arrangement of ICEP relating to implementation of investment promotion programs should be reviewed and restructured for each function.

At the same time, a new organization should be established to implement promotion programs for the Aveiro-Viseu region, as proposed below. Such new organizational structure should be linked to an overseas network consisting of related government authorities and business organization, led by ICEP's representative offices.

6.4.1 Program Implementation and Support at the National Level

(1) ICEP's present organization

1) General background

- a) Name: Portuguese Foreign Trade Institute (ICEP)
- b) Year of establishment: 1982 (Instituto do Comércio Externo de Portugal)
- c) Authority: Law to establish ICEP of 1982
Law to reform ICEP of 1988
Law to reform ICEP in dissolution of IIE
(Foreign Investment Institute) of 1989
Organizational reform under Decree 428/91 on October 31, 1991
- d) Organization: Under supervision of the Ministry of Commerce and Tourism
(Ministério do Comércio e Turismo)
(See Figure 6-3 for its organizational chart)
Headquarters in Lisbon
6 domestic offices (Oporto, Aveiro, Covilhã, Guimarães, Funchal, and Ponta Delgada)
42 overseas offices in 35 countries (including Tokyo)
- e) 589 employees (including 140 local staff, both domestic and overseas)
- f) Annual budget: 5.4 billion ESC in 1990
8.7 billion ESC in 1991
-7.3 billion ESC in 1992
- g) General council (Conselho Geral) responsible for advice and approval of overall management, organized by 5 representatives of business organizations appointed by public organizations and two ministries (Ministry of Commerce

and Tourism, and Ministry of Industry and Energy) designed by law, and ICEP's president and secretary

2) ICEP's functions

ICEP is a public organization responsible for promotion of Portuguese trade and foreign direct investment in Portugal, and its major activities are classified into the following 4 areas:

- a) Trade promotion (mainly exports)
- b) Promotion of foreign investment
- c) Assistance of Portuguese industries in foreign operation
- d) Collection, analysis, and dissemination of trade, investment, and economic information

In the area of foreign investment, ICEP is responsible for the following activities:

- e) Dissemination of information, support, and guidance to foreign investors
- f) Supervision of legal application related to form and registration of investment application, and approval for investment application
- g) Advise and guidance for effective contact between foreign investors and public organizations/private enterprises
- h) Promotion and support of industrial cooperation between domestic and foreign enterprises
- i) Dissemination of information on industrial sites to potential investors, and assistance in site selection

(2) Proposed reform in ICEP's domestic organization

To further strengthen ICEP's present organization and function, the following reform is recommended.

Establishment of an organization which directly advises ICEP's Foreign Investment Division - liaison council on promotion of foreign industrial investment: Such organization is organized by officials of IAPMEI, which accepts and approves application for investment incentives, and B.F.E. which serves as both development and exports/imports banks, and joined by representatives of business organizations such as CIP and AIP.

1) Management of the liaison council

The liaison council will be organized by members representing investment promotion organizations, banks, and business organizations, under the agreement and approval of the Ministry of Commerce and Tourism and the Ministry of Industry and Energy, and under the leadership of ICEP. The council will serve as a public advisory organ for implementation of foreign investment promotion programs. Its secretariat will be located in ICEP (cf. Figure 6-1).

2) Functions of the liaison council

- a) To endorse basic policies for promotional activities;
- b) To consider proposals, requests and implementation policies referred to by members;
- c) To decide on actual programs for promotional activities; and
- d) To evaluate the above programs.
- e) To estimate the program budget and provide advice on budget request.

3) Integration of information networks for the council members

While each member organization is responsible for its own information resources, an integrated database should be established as early as possible. In particular, as programs for promotion of foreign investment are carried out under the leadership of ICEP, databases of the member organizations should be connected to that of ICEP to process related information quickly and effectively.

4) Need for increase in ICEP's staff and budget

To operate the liaison council and to implement promotion programs in an integrated manner, significant increase in ICEP's staffing and operating budget

will be required.

6.4.2 Program Implementation and Support at the Local Level

As pointed out in paragraph 6.2, any of existing investment promotion organizations for the Aveiro-Viscu region does not supervise overall promotional activities.

Lack of leadership in investment promotion should be corrected by establishing an organization which defines responsible bodies of implementing a variety promotion programs. This organization is designed to fit into present situation of the Aveiro-Viscu region, thus offering a feasible solution.

(1) Establishment of Aveiro/Viscu Investment Promotion Council

At present, the following organizations are involved in promotion of investment in the Aveiro-Viscu region:

- 1) ICEP's Aveiro office
- 2) IAPMEP's Aveiro and Viseu office
- 3) CCRC's local office
- 4) Local governments
- 5) Private industry organizations

The proposed council will focus on promotion of investment, particularly foreign investment and will be organized by selected organizations, among the above, which are eager to promote foreign investment in the region. The council will have its secretariat at ICEP's Aveiro office, which will provide functional linkage to ICEP headquarters which is responsible for investment promotion at the national level. The entire organization of the council is illustrated in Figure 6-2.

(2) Management of the council and its activities

- 1) Management
 - a) The council will be organized by members representing selected investment promotion organizations.
 - b) The secretariat will be established at ICEP's Aveiro office.

- c) Each of the member organizations will appoint one staff to support management of the secretariat as required.
- d) The council will meet at least once per month.
- e) The council will be operated in close communication with ICEP headquarters.
- f) Operating expenses will be borne by the member organizations which contribute membership fees, while actual promotion programs will be financed by ICEP's and the central government's budget as far as possible.
- g) The council may obtain support and assistance of foreign investment advisors who will be hired by ICEP headquarters.

2) Activities

The council will evaluate actual promotion programs proposed in 6.2.2, select target countries, and set priorities for implementation. Its primary responsibility is to coordinate activities and programs of the member organizations on the basis of generally acceptable criteria including rationale and consistency, thereby to maximize the efficiency of promotional activities by taking into account resources available to each member organization.

Also, the council will set forth basic guidelines for promotion of foreign investment and actual operation, and will lead coordinated activities of the member organizations to offer programs in line of such guidelines.

(3) Upgrading of ICEP's Aveiro office

ICEP, in its present organization, is not capable of effectively promoting foreign investment at a local level. If ICEP is to play a central role in establish the proposed organization as well as coordination of promotion programs, ICEP Aveiro office should be upgraded in terms of staffing and authority related to actual promotional activities. In particular, the manager of the Aveiro office should be delegated with more authority to provide basic service focusing on a certain area and/or industry.

Figure 6-1 ORGANIZATIONAL ARRANGEMENT CHART

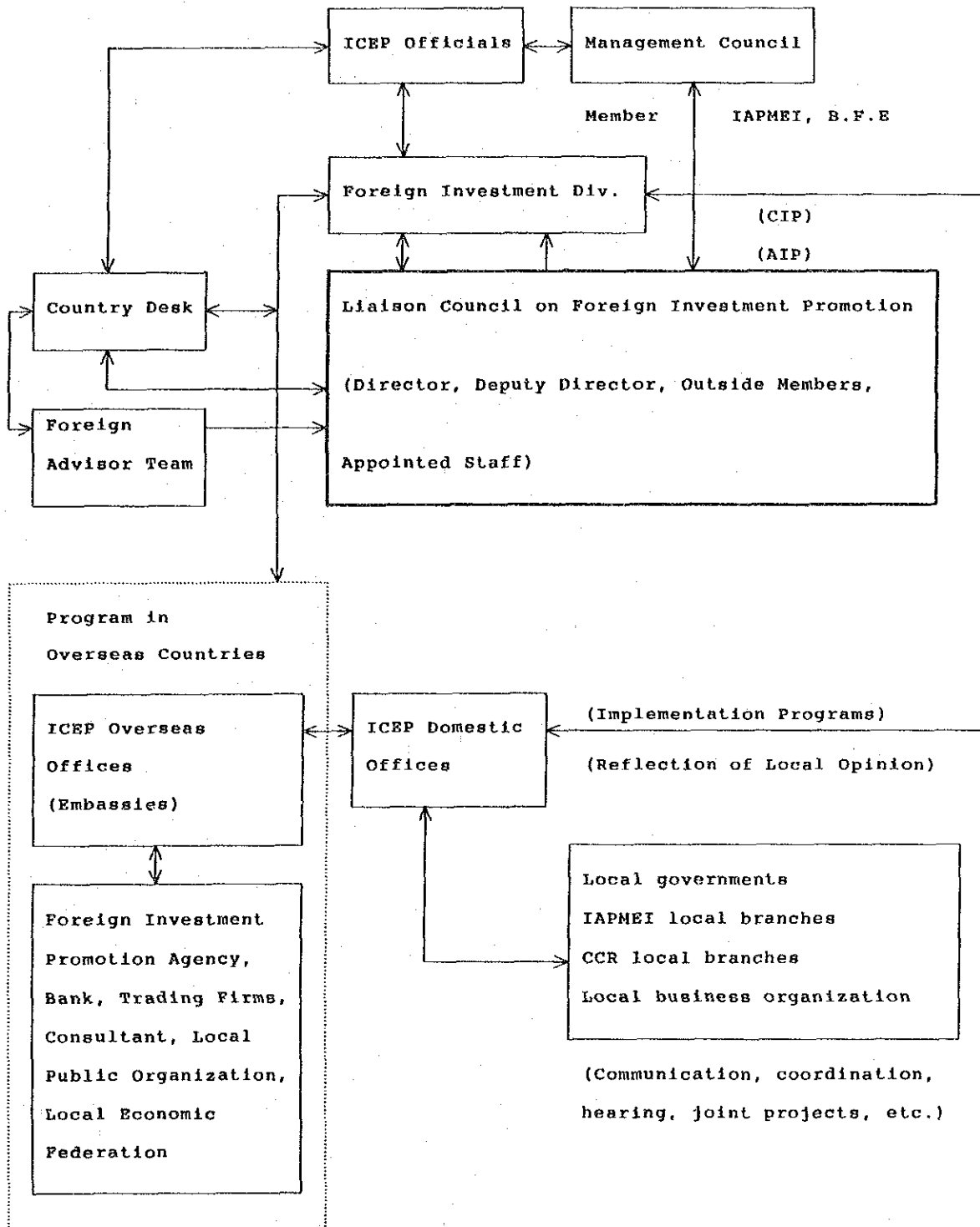
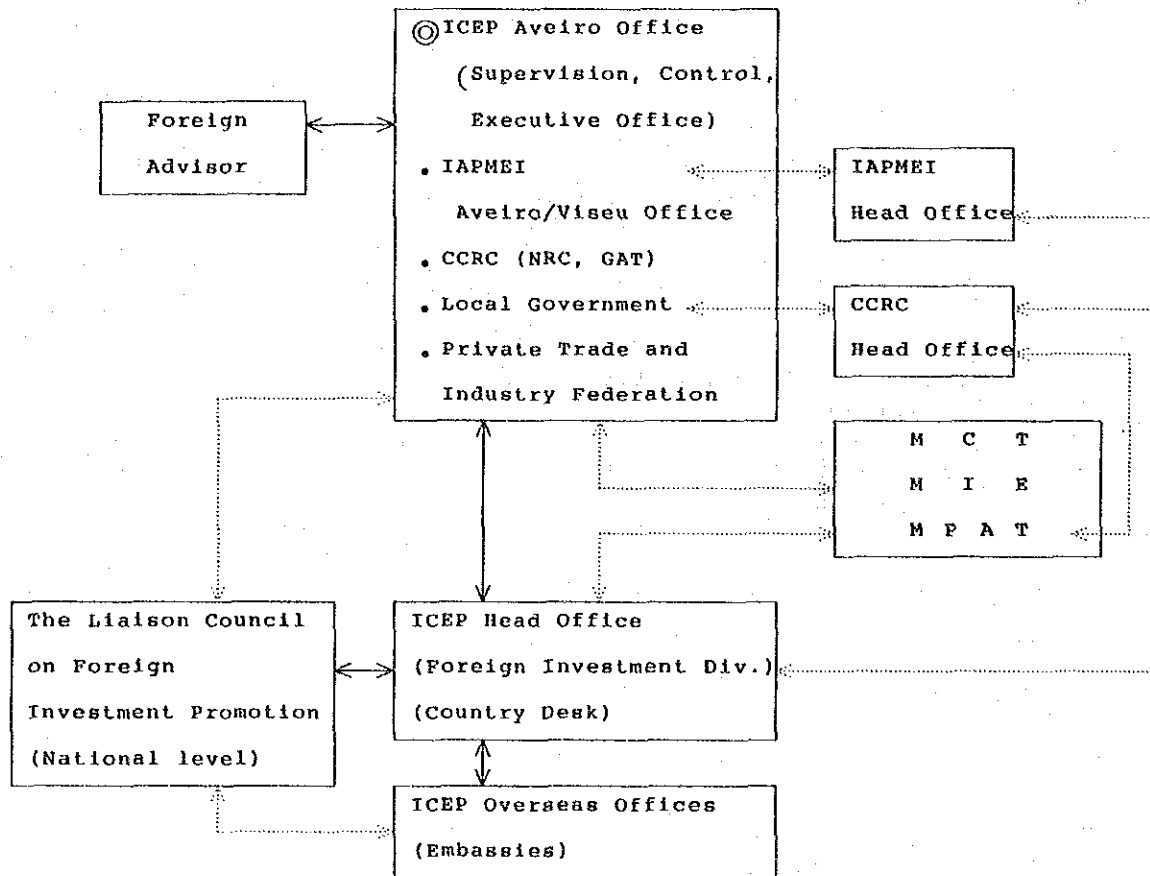


Figure 6-2 ORGANIZATIONAL ARRANGEMENT CHART (AVEIRO-VISEU AREAS)



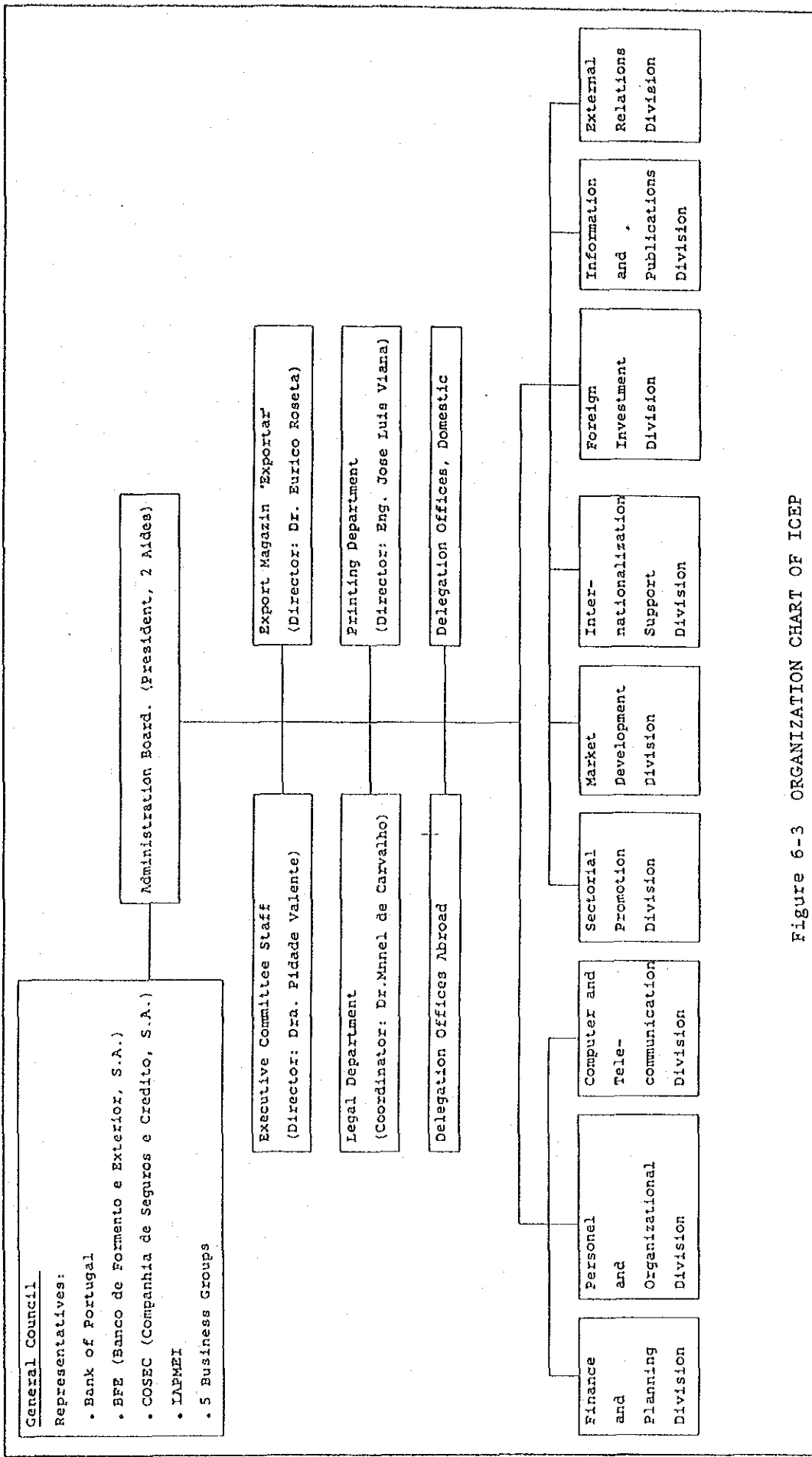


Figure 6-3 ORGANIZATION CHART OF ICEP

Chapter 7 Industrial Development Plan for the Aveiro-Viseu Region

7.1 Objective and Direction of Regional/Industrial Development

Based on classification in Figure 3-3, Figure 7-1 was developed after several adjustments^(Note) to take into account local characteristics pertaining to industrial development as well as measured development potential. This represents the zoning process to establish a basis of industrial development plan; local characteristics in each zone are defined, and objectives and directions of industrial development are established.

As seen in Figure 7-1, the Aveiro-Viseu region is divided into the following zones according to their level of industrialization:

- 1) Industrialized zone
- 2) Core municipality A
- 3) Core municipality V
- 4) Agro-industrial zone
- 5) Viseu satellite zone
- 6) Agro-forest zone

(Note): 3 municipalities, Ilhavo, Mealhada, Sever do Vouga, were re-zoned in Figure 3-3. Reasons for these rezoning are given in each zone.

(1) Industrialized zone

(Local characteristics)

- 1) This is an industrialized area around Aveiro.
- 2) 7 municipalities contained in the zone are located old highways, IC1 and IC2, while new arterial highway (IP1) runs through them.

Note 1: Ilhavo shows the highest population density as well as the density of manufacturing industry in the region, thus should be classified as the industrialized zone (industrialization level I). However, the municipality is classified as the agro-industrial zone, partly because it does not have direct access to IP1 and partly because it's local characteristics are similar to those of the agro-industrial zone in many respects. Thus, Ilhavo has characteristics of both the industrialized zone and the agro-industrial zone.

Note 2: On the other hand, Mealhada is in the lower level of industrialization (level II), compared to other municipalities classified into the industrialized zone. Nevertheless, it is included in the industrialized zone because of its direct access to IP1 and geographical characteristics similar to other municipalities.

(Advantages and constraints)

Advantages:

- 1) Established industrial/technological base as the third largest industrial area in the country;
- 2) Relatively high level of industrial infrastructure (including universities and colleges);
- 3) Availability of a major market within the zone, and strategic location in terms of access to Porto, Lisbon, and the international border; and
- 4) Ocean transport access as a gateway to other countries.

Constraints:

- 1) Limited availability of industrial land and water;
- 2) Increased risk of environmental impacts, i.e. factories are encroaching in the environmental preservation district;
- 3) Increase in wage level due to shortage of labor supply; and
- 4) Increased congestion on road traffic.

(Objectives and directions of industrial development)

- 1) The zone should be re-developed into a supply center of capital goods, starting from import substitute goods and finally parts and components to the EC.
- 2) Factors scattered in the environmental preservation district should be relocated to the industrial district.

- 3) Upgrading of production technology and increase in value added by using the existing technological base, thereby to absorb cost pressure from wage increase.
- 4) In light of constraints in supply of industrial land and water, small- and medium-scale capital intensive light industries should be attracted.

(Sub-sectors recommended for accelerated development)

- 1) Automotive parts and components

To meet growing domestic demand in response to large investment products in the automobile industry (including Ford and Volkswagen project).

- 2) Machinery and equipment/metalworking industries

To upgrade traditional motorcycle and bicycle industries to have international competitiveness. At the same time, to produce import substitutive capital goods and to modernize metalworking industries which support equipment and machinery production, while fostering subcontractors.

- 3) High-tech and R&D industries

To take advantage of opportunities for joint research with Aveiro University and amenities for researchers and engineers.

(2) Core municipality A

Albergaria-a-Velha is positioned as core municipality A (Core-A) in Aveiro area.

(Local characteristics)

- 1) The municipality is strategically located in terms of road transport, as a crossing point of 2 new arterial highways (IP1 and IP5), while having 2 old highways (IC1 and IC2).
- 2) Relatively high level of industrialization (level II) and availability of industrial land

(Advantages and constraints)

Advantages:

- 1) Proximity to 2 market and industrial centers, Aveiro and Porto, with good access to Viseu;
- 2) Relatively high level of industrial/technological base (industrialization level II);
- 3) Locational advantages in adjacent to the industrialized zone;
- 4) Relatively abundant supply of industrial land; and
- 5) Municipality offers very high development potential.

Constraints:

- 1) Undeveloped road network (physical distribution and commuting) accessible to the new highways;
- 2) Limited supply of industrial estates which serve as a core of industrial development; and
- 3) Undeveloped urban amenities and living environment for professional and management class employees.

(Objectives and directions of industrial development)

- 1) The municipality should be developed to an industrial and distribution center in Aveiro area.
- 2) Also, it should be developed as an intermediate point for movement of technology, people and goods to Viseu area.
- 3) Industrial development to accommodate factories relocating from the industrialized zone
- 4) Emphasis on promotion of small- and medium-scale capital intensive light industries and modernization of traditional industries

(Sub-sectors recommended for accelerated development)

1) Machinery and equipment/metalworking industries

The area has a technological base for machinery and equipment production and metalworking by accommodating the largest number of these industries in Aveiro area, while being adjacent to Agueda where less and less industrial land is available.

2) Woodworking industries

There is a large number of woodworking industries using locally available pine and eucalyptus, thus the area can set an example for modernization of traditional industries.

(3) Core municipality - V

Viseu is positioned as core municipality V (Core-V) in Viseu area.

(Local characteristics)

1) Viseu is located at a crossing point of 2 new arterial highways (IP5 and IP3). IP3 has been completed for a southward section starting in Viseu, and a northward route is planned to be completed in 1995.

2) Core-V is geographically located in the center of Viseu area, containing relatively large flat land in a basin-like area.

3) The level of industrialization is highest in Viseu area (level II), while there is relatively abundant supply of industrial land.

(Advantages and constraints)

Advantages:

1) Direct access to Aveiro and Coimbra via IP5 and IP3;

2) Strategically located in the midway between the coastal industrial area and the border with Spain, offering the best access in the country to the rest of European Continent;

- 3) Availability of industrial land at relatively a low cost;
- 4) Abundant supply of unskilled labor with relatively a low wage; and
- 5) Amenities offered by natural environment.
- 6) All in all, the area has very high development potential.

Constraints:

- 1) Limited supply of professional and manager class workers;
- 2) Remoteness from central markets of Porto and Lisbon;
- 3) Lack of urban amenities; and
- 4) Undeveloped local transportation networks accessible to new arterial highways

(Objectives and directions of industrial development)

- 1) The area should be developed to an industrial and distribution center in Viséu area, as well as a core city for industrial development in the surrounding area.
- 2) At the same time, it should be positioned as a promotion center for modernization of small- and medium-scale traditional industries in Viséu area.
- 3) Finally, efforts should be made to develop amenities based on natural environment to attract high-tech industries in the future.

(Sub-sectors recommended for accelerated development)

- 1) Household appliances and automobile assembly

To attract major investment from foreign countries in industrial areas which are relatively labor-intensive and have a wide range of related industries, thereby serving as a basis of fostering local industries. Such industries are expected to serve domestic and EC markets. Automobile and household appliance industries satisfy these requirements.

- 2) Food processing, woodworking, furniture, leather, ceramic, and printing

These are traditional industries in the area, and their modernization (in terms of design and production technology) should be promoted.

- 3) High-tech (electronics) industries

In particular, the electronics industry requires clean air and water. While Viseu area offers locational advantages, other amenities should be developed over a long period of time.

(4) Agro-industrial zone

(Local characteristics)

- 1) This zone consists of 5 municipalities located along the coast of Aveiro area. It has developed along old national highway (IC1) and is not served by a new arterial highway. Murtosa is not served by IC1.
- 2) The zone is classified as industrial level III, excepting Ilhavo which is rated as level I. Major industries in the zone are agriculture, fishery, dairy farming, forestry, and tourism. Thus, the word "agro" represents these primary products and services.
- 3) The above analysis is supported by percentage distribution of manufacturing industries in the zone, where food industries using primary products account for 56%, well above an average 39% in Aveiro area.

(Advantages and constraints)

Advantages:

In terms of industrial development potential, the zone does not have significant advantage compared to other zones.

Constraints:

- 1) It is difficult to secure sufficiently large industrial land, in light of harmony with other non-manufacturing industries.
- 2) To use the new arterial highway, it is necessary to go to Aveiro first via IC1 and

other roads.

(Objectives and directions of industrial development)

- 1) To organize and modernize existing small- and medium-scale enterprises as well as microenterprises.

(Sub-sectors recommended for accelerated development)

- 1) Food processing

Emphasis should be made on food processing industries using locally available products (agriculture, fishery, and dairy) and serving the domestic market.

(5) Viseu satellite zone

(Local characteristics)

- 1) This zone consists of 5 municipalities located on the south side of Viseu, which serves as a center of industrial development.
- 2) The level of industrialization is still low (level III). The zone is endowed with water resources and contains wide flat land.
- 3) It is generally suitable for resort based on rivers and forest.

(Advantages and constraints)

Advantages:

- 1) Development potential has increased, as IP3 runs through centers of Tondela and Santa Comba Dao, and IP5 passes the northern part of Mangualde.

Constraints:

- 1) Lack of direct access to Aveiro, Porto, and other European countries (via Viseu), being relatively remote from major markets and industrial areas.
- 2) Weak industrial base

(Objectives and directions of industrial development)

- 1) Industrial development should be promoted in close coordination to Viscu (Core-V), to which the zone has strong linkage in terms of road transport and geographical proximity.
- 2) As the first stage, the priority should be given to Tondela and Mangualde which are closer to Viscu and new arterial highways (IP3 and IP5).

(Sub-sectors recommended for accelerated development)

- 1) Sub-contractor in Viscu

Industries supplying parts and components to major industries to be attracted in Viscu (Core-V), including metalworking, plastic, and rubber.

- 2) Modernization of traditional industries (woodworking, food processing, and metalworking)

Food processing accounts for 50% of manufacturing industries currently located in this zone, while woodworking represents 19% and metalworking 18%. Emphasis will be placed on developing competitiveness of these industries with foreign products which are expected to be imported in large quantities after the unification of the EC.

(6) Agro-forest zone

(Local characteristics)

- 1) The zone consists of 10 municipalities on; 8 municipalities on the north side of Viscu (Core-V), Mortagua on the southwest side of Viscu, and Sever do Vouga in Aveiro area which is adjacent to Viscu area having similar geographical characteristics to the others. It is rated as the lowest level of industrialization (Level IV) except Sever do Vouga in Level III.
- 2) The zone does enjoy much benefits from the new principal roads. Of 9 municipalities classified in Level IV, Oliveira de Frades and Vousela which are served by IP5, and nearby S.Pedro do Sul show a higher level of industrialization than other 5 municipalities.

(Advantages and constraints)

Advantages:

In terms of industrial development potential in the near future, the zone does not have significant advantage.

Constraints:

- 1) There are many slopes in the zone, making it difficult to obtain suitable industrial land in sufficient size.
- 2) Poor road access
- 3) Weak industrial base

(Objectives and directions of industrial development)

- 1) For the time being, promotion efforts should be limited to further development of traditional industries. In the long run, diversification of industries should be contemplated to enjoy benefits from a trickle-down effect of industrial development in Viseu (Core-V).

(Sub-sectors recommended for accelerated development)

- 1) Woodworking industry

To increase value added for the woodworking industry using locally produced materials.

7.2 Strategies and Selected Programs/Projects

7.2.1 Basic Industrial Promotion Strategies

All the local governments (municipalities) in the region do not welcome the industries which may adversely affect the region's environment, and environmental preservation is one of major national policies. Also, the local governments expect industrialization in harmony with existing industry sectors. Thus, the first strategy can be expressed in the following statement, which is also considered as the prerequisite to industrial development.

(Strategy 1) Industrial Promotion in Harmony with Environment

Industrial development must be promoted in harmony with natural environment, within the context of environmental preservation policies of the national and local governments. In particular, a contemplated industrial development plan should take into account the principles and guidelines of the National Agriculture Preservation Program (RAN) and the National Ecological Preservation Program (REN). At the same time, industrial promotion should be in harmony with other industrial sectors, e.g., agriculture, forest and fishery.

Aveiro and Viseu have significantly different characteristics, in terms of the level of development, geography, topography, and industrial structure, different strategy needs to be established for each area, as expressed in the following statements.

(Strategy 2) Modernization and Upgrading of Industries in Aveiro

The Aveiro area is the third largest industrial area next to Lisbon and Porto. However, it faces its limit for further industrial development, without effective management, due to conflict with other land uses such as farming, forestry and housing, shortage of labor supply, and environmental problems. Thus, industrial development in the area should focus on promotion of more sophisticated, higher value-added, and hi-tech industries by using industrial base which has established to this date, in addition to relocation of existing industries.

(Strategy 3) Accelerated Promotion of Industries in Viseu

Under this strategy, the first priority is given to Viseu, the core municipality having the highest development potential. Then efforts should be directed toward surrounding municipalities with the next highest potential. In this connection, as it is difficult to accomplish the objective by a combination of existing small

enterprises with conventional facilities and technologies, large corporations having a diverse range of support industries should be attracted to the core municipality as a basis of accelerated industrial promotion.

Then, another important factor to be considered in the industrial promotion strategy is a new highway (IP5) which has connected the two areas to facilitate interaction. As regional development in Portugal is confined to coastal areas and its expansion to inland areas, so-called "eastward advancement", IP5 provides an opportunity for the region to become a model case of "eastward industrialization". In this context, the fourth strategy is expressed as follows.

(Strategy 4) Industrial Dissemination and Establishment of Industrial Linkage

This strategy first focuses on dissemination of industrialization from the Aveiro area to the Viseu area, as well as the establishment of industrial linkage between the areas. The second priority should be given to industrial decentralization and the strengthening of inter-industrial linkage in each area or municipality. It should be noted that decentralization, dissemination, and linkage should be induced consistently with economic principles, not forced by law or government action.

The Aveiro - Viseu region have a diverse range of traditional industries; food processing, metalworking (steel furniture), machinery and transport equipment (bicycles and motorcycles), sawn wood and woodwork, paper and pulp, ceramic (tile and porcelain), textile and garment, and leather products (footwear). Although these industries, excepting food processing, supply important export items, they are generally slow in modernization and are likely to competitiveness after the unification of the EC market. Thus, the fifth strategy should address this issue.

(Strategy 5) Modernization of Traditional Industries

The most effective means to maintain or strengthen international competitiveness of traditional industries is to manufacture products which meet changing market needs. Competitiveness in terms of design, quality, and pricing requires modernization of manufacturing technology. Thus, this strategy aims to introduce advanced technology needed for traditional industries.

Now, the above five strategies are incorporated into the industrial promotion concept for the Aveiro-Viseu region, as follows:

To promote industrial dissemination within the context of environmental preservation and

harmony with other industry sectors, through separate development strategies for the Aveiro and Viseu areas, which are significantly different in characteristics, while ensuring the stronger linkage between the areas. In particular, effective support and assistance should be provided for traditional industries, dominated by medium- and small-size enterprises, for the purpose of strengthening their international competitiveness in preparation for the unification of the EC.

7.2.2 Selection of Programs/Projects to Implement Basic Strategies

In this section, conditions which are essential in achieving a development objective but lack or are insufficient in the region are identified for each strategy as development "requirements". These conditions may be considered as "input" required to accomplish the objective. Then, means to meet these requirements, denoted here as programs or projects, are identified.

(1) Industrial promotion in harmony with primary factor and environment - both areas

(Requirements)

- 1) Appropriate factory sites well equipped with infrastructure in the industrial zone
- 2) Well organized industrial waste management system
- 3) Relocation of factories scattered in the agro-forest zone to the industrial zone

(Programs/projects)

- 1) Industrial park construction project
- 2) Centralized industrial waste treatment facilities construction project
- 3) Support program for factory relocation

(2) Restructuring and upgrading of industries in Aveiro area

(Requirements)

- 1) Relocation of factories scattered in the agro-forest zone to the industrial zone
- 2) Diversification to high value-added capital goods production
- 3) Groundwork for fostering hi-tech and R&D industry.

(Programs/projects)

- 1) Industrial park construction projects in Aveiro and vicinity municipalities
- 2) Support for factory relocation
- 3) Joint-venture job promotion program for latest/modern technology introduction

(3) Intensive industrialization of the core municipality in Viseu area

(Requirements)

- 1) Creation of industrial seeds (large scale industry)
- 2) Preparation of investment climate
- 3) Groundwork for inviting hi-tech and R&D industry

(Programs/projects)

- 1) Large scale foreign investment attraction program - assembling industries
- 2) Large scale industrial park construction projects
- 3) Township construction project
- 4) Viseu airport upgrading project

(4) Industrial dissemination to potential areas and less-industrialized areas - both areas

(Requirements)

- 1) Mechanism and infrastructure for easy movements of personnel, goods, capital and information
- 2) Linkage/subcontracting jobs among areas and municipalities

(Programs/projects)

- 1) Industrial park construction project
- 2) Large scale investment attraction program - assembling industry

Note: The concept of industrial dissemination is shown in Figure 7-2, which is made up of the following directions:

- 1) Within each municipality, from the existing industrial zone to the area along the new highway;
- 2) Within the Aveiro area, from the existing densely industrialized area to Albergaria-a-Veiha and Mealhada which are located along the new highway and have industrial infrastructure;
- 3) Within the Viseu area, from Viseu to its vicinity; and
- 4) From the Aveiro area to the Viseu area (as well as foreign investment).

(5) Modernization of traditional industry and introduction of new technology - both areas

(Requirements)

- 1) Foreign investment in the form of direct investment
- 2) Investment to capital intensive projects for modernization of technology, equipment and machinery
- 3) Modern management method instead of traditional family type management skill

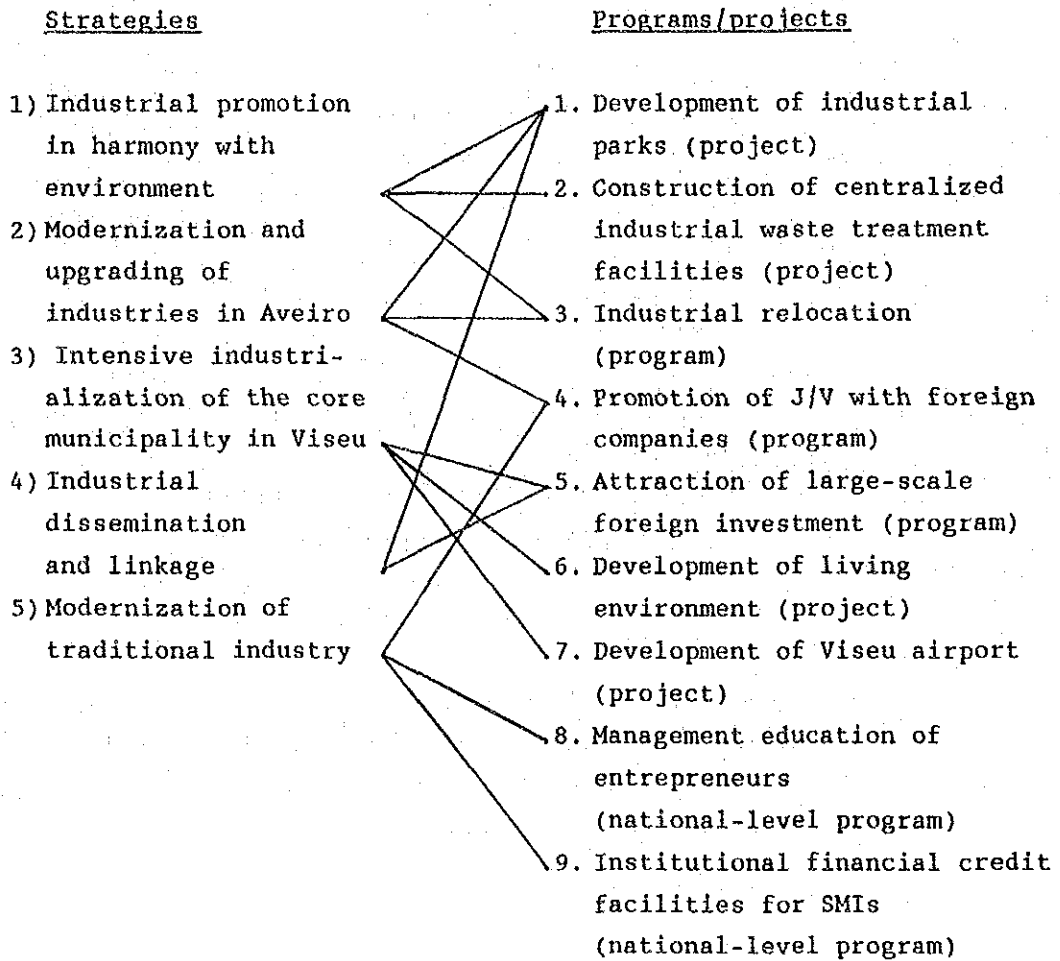
(Programs/projects)

- 1) Institutional financial credit facilities program for new investment especially for SMIs.
- 2) Education program for entrepreneurs in managerial skill
- 3) Foreign investment attraction program for the region

Note: 1) and 2) above should be dealt with at a national level.

Programs/projects proposed above, designed to meet "requirements for development", contain those which address local issues to be implemented under leadership of local municipality, and those which are to be dealt with at a national level. Also it became apparent that one sub-program or project could serve as a means to accomplish the development objective of more than two programs.

Relationship between these five strategies and programs/projects is summarized as follows:



7.3 Implementation Schedule of Programs and Projects

7.3.1 Inter-Relationship Between Programs/Projects and Their Implementation Schedule

Preliminary schedule for selected national and local programs and projects is shown in Figure 7-3. Based on this figure, inter-relationship between the programs and projects, the order of implementation, and priority are described as follows. Note that the first year covers July 1992 through June 1993, and the same period for ensuing years.

- (1) The entrepreneur management education program and the institutional financial credit facilities program for SMIs, both to be promoted as national programs, should preferably be implemented as a pair of programs. The period of programs is assumed to be 5 years long, with one year for discussion and preparation. In particular, the institutional financial credit facilities program is expected to complete its purpose as the Portuguese high interest rate policy to control inflation rates will terminate within 5 years. The entrepreneur management education program is designed to be incorporated into the financial program as part of qualification to use the new institutional financial facility, thus lasting 5 years as the first trial of the program.
- (2) The large-scale foreign investment attraction program and the joint venture job promotion program are positioned as promotion activities specially designed for the Aveiro-Viseu region, in addition to similar projects implemented by ICEP at a national level. These programs can be started immediately, and in fact their early implementation is desirable. Thus, these programs will start in the first year, with 5 years of implementation to achieve sufficient results. The large-scale foreign investment attraction program is intended to establish "industrial seeds" in the Viseu area, while the joint venture job promotion program will mainly contribute to modernization of traditional industries in the Aveiro area.
- (3) The industrial relocation program should be given priority; it should be started as early as possible, with 3 years of implementation. While it is important for the Aveiro-Viseu region as a whole, the Aveiro area should be prioritized in consideration of industrial concentration in the area.
- (4) Under the industrial park construction project, at least one large industrial park (150 to 200ha) each will be constructed in the Aveiro and Viseu areas. The industrial park in the Aveiro area is designed to accommodate medium- and large-size factories relocating from the existing area of industrial concentration, as well as new factories including those constructed under the joint venture job promotion program. Thus it is expected to spearhead the introduction of advanced technology and high-value added capital goods

production. On the other hand, the industrial park in the Viseu area will accommodate foreign investment projects to be implemented under the large-scale foreign investment attraction program.

Construction schedule is established under the assumption that the joint venture job promotion program and the large-scale foreign investment attraction program should produce the first results within 1 year and 6 months after the start of their 5-year plans. During the period, suitable sites will be identified and acquired. Then, it will take another year and a half to complete the first phase of large-scale industrial park construction. Finally, additional one year and a half will be allowed for subsequent phases development according to the progress of occupation.

- (5) The centralized industrial waste treatment facilities construction project will be incorporated within the framework of the Study on Production, Treatment, and Elimination of Harmful Wastes, which is being implemented at a national level. This procedure, together with land acquisition, will take about one year. Then, construction will take about 1 year and 6 months.
- (6) The Viseu airport (airdrome) upgrading project and the township construction project will be planned in the first year, so that they can be started once a large-scale foreign investment project in the Viseu area is decided. Construction will start within 1 year and 6 months after the inception of the development plan. The airport project will be completed in one year to timely serve the large-scale foreign investment project. The township project will start with the airport project but it will take 4 to 5 years before it nears the stage of the first stage completion.

If the programs and projects proceed as scheduled, in the sixth year, the Aveiro-Viseu region will have the foundation of industrialization in harmony with environment and equipped with modern technological base.

Now, individual programs and projects are reviewed in terms of their background, rationale, and objective, followed by implementation methods and major considerations.

7.3.2 Entrepreneur Management Education Program

(1) Background, rationale, and objective

The bottleneck to modernization of any industry sector, including manufacturing, is old-fashioned corporate management - particularly owners of medium- and small-size enterprises and microenterprises. These enterprises are often operated in the form of

corporation but actually are managed as family business, characterized by the management style focusing on short-term profit. The major shortcoming of such management is found in that profit from corporate activities is not re-invested for modernization of facilities and equipment. And this lack of re-investment for new facilities and equipment is a major cause for small enterprises in Portugal to lag behind in industrial development. For this reason, education of enterprise owners and managers forms an integral part of industrial promotion, and the entrepreneur management education program needs to be implemented throughout the country.

(2) Implementation body

The program should be implemented by the Institute of Institute for Support to Small and Medium Sized Enterprises and Investment (IAPMEI), under the Ministry of Industry and Energy. IAPMEI is headquartered in Lisbon and has 10 branches in major cities including Aveiro and Viseu. IAPMEI mainly conducts the following activities:

- 1) Application for financial incentives (SIBR, PEDIP, etc.)
- 2) Market and other surveys and technical support for small enterprises
- 3) Modernization project
- 4) Promotion of cooperation between enterprises as well as international cooperation with other organizations

The program will be conducted by instructors who are temporarily hired from universities and training institutes.

(3) Eligibility

The entrepreneur management education program is designed for owners, managers and new investors of small- and medium-size enterprises as well as microenterprises, particularly those in relatively young age groups.

(4) Major courses

- 1) Accounting
- 2) Cost control
- 3) Marketing
- 4) Business planning
- 5) Management principle
- 6) Financial analysis
- 7) Personnel management

8) Quality control

As the program is designed to teach the modern management principle and methodology for manufacturing enterprises, education of production technology is not included in the curriculum; technical education will be included in IAPMEI's technical support service, as mentioned earlier.

(5) Implementation method

- 1) Each course will be conducted by using the same textbook throughout the country to ensure the same level of education.
- 2) Each course will be conducted mainly at night (2 hours each day), consisting of 10 hours (5 days x 2 hours: 1 course per week). Thus, to complete all the eight courses, 8 weeks, total 80 hours, will be required.
- 3) In addition, daytime intensive (around 2 weeks) courses should be offered.
- 4) Certificate of completion will be issued to each trainee who completes the program.
- 5) Each trainee will bear costs related to textbooks and instructors, with other expenses to be borne by IAPMEI.

(6) Implementation schedule (Figure 7-3)

As the program will be conducted in combination with the institutional financial credit facilities program, which is described in the next section, the first phase of the program will take 5 years, after one year of preparation.

(7) Consideration

To ensure the success of the program, certain incentives or compulsion for trainees are necessary. For this reason, persons who obtain financial incentives such as SIBR and PEDIP or who use the proposed institutional financial credit facilities, as discussed in the next section, should be required to submit the certificate of completion on the management education program.

7.3.3 Institutional Financial Credit Facilities Program for SMIs

(1) Background, rationale, and objective

- 1) Medium- and small-size enterprises as well as microenterprises, which are mostly classified as traditional industries, are lagging behind in the modernization

process and have lost or are losing international competitiveness. Their rehabilitation requires technological renovation through capital investment, which is difficult to be financed by small enterprises with poor financial resource.

While various investment incentives such as PEDIP and SIBR are available, critics say that they are not easily accessible by small enterprises.

- 2) At present, Portugal has no financial credit facility specially designed for industrial development of medium- and small-size enterprises and microenterprises. Meanwhile, the high-interest rate policy under the inflationary pressure has been working to suppress investment, sacrificing industrial modernization. If the monetary policy is to be continued for a while, some relief measures for small enterprises should be provided for a certain period.
- 3) Investment incentives such as PEDIP and SIBR are provided in the form of grant. However, loans have advantages in stimulating self-help effort of small enterprises and benefiting as many enterprises as possible through the recycling of funds. For this purpose, the establishment of long-term loan program at a low interest rate is recommended.

The program should also be implemented at a national level covering the entire country.

(2) Implementation body

As this program is expected to implement in combination with the entrepreneur management education program, IAPMEI should be responsible for management. However, the banking business involved in this program should be borne by bankers. The Caixa Geral de Depositos (CGD), a state bank, which has the largest branch network and has experience in financial service for small enterprises is recommendable as the principal bank of the program. In addition, all the commercial banks should be chartered to handle loans under the program in order to minimize regional difference in terms of loan accessibility.

(3) Eligibility and scope

Persons eligible for loans under the program are operators of medium- and small-size enterprises and microenterprises, who have completed the said entrepreneur management education program.

The loan will be extended to the following purposes: