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## **PEDIP**

**Specific Industrial Development Programme for Portugal**

**Final Report**

(presented by the Commission)

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## I. INTRODUCTION

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## I.1 Background

The specific industrial development programme for Portugal (PEDIP) gave practical expression to Protocol 21, concerning economic and industrial development in Portugal, appended to the Act of Accession of Portugal to the Community. The Protocol is a European Community declaration on the adaptation and modernization of the Portuguese economy.

In the declaration, the Community recognized in particular the need "to modernize the (Portuguese) production sector and to adapt it to European and international economic realities" and said it was "prepared to support Portuguese firms, by letting them benefit from its technical support and its credit instruments...".

In February 1986 the Portuguese authorities sent the Commission a comprehensive programme of measures which would modernize Portuguese industry and which required Community funding.

In October 1986 the Commission sent the Council a communication<sup>1</sup> on PEDIP, underlining the specific problems of Portuguese industry and the important role PEDIP had to play in the smooth integration of Portugal into the Community. The communication outlined the main areas of Community intervention within PEDIP and the best ways of using Community funds and loans to finance this action.

The Commission departments most directly concerned, the Portuguese authorities and the relevant economic and social agents then began discussing the instruments which would enable Portuguese industry to become more competitive so that it could meet the challenges of 1993.

Following on from these discussions, the Commission, at its meeting of 14 October 1987,<sup>2</sup> adopted the general framework for a specific programme for the modernization of Portuguese industry (1988-92) with the following priorities:

1. Faster improvement of basic infrastructure
2. Expansion of the vocational training system
3. Improved business financing
4. Productivity drives

The Commission also decided that measures eligible for Community support should mobilize Community resources totalling ECU 2 billion over a five-year period, of which 1 billion would be in the form of EIB/NCI loans. In the 1987 budget ECU 2 million was allocated for preparatory studies.

At its meeting on 12 and 13 February 1988, the European Council approved in principle the allocation of ECU 500 million to a specific budget heading over a five-year period. This would be in addition to the ECU 400 million from the ERDF and ECU 100 million from the Social Fund which the Commission had allocated to Portugal in October 1987 to help the country make its industry more competitive. The total PEDIP appropriation was supplemented by EIB/NCI loans totalling ECU 1 billion during the programme's five-year duration.

On a proposal from the Commission, in June 1988 the Council adopted a Regulation<sup>3</sup> on

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<sup>1</sup> COM(86) 552

<sup>2</sup> SEC(87) 1518

<sup>3</sup> Regulation (EEC) No 2053/88 of 24 June 1988  
OJ L 185, 15.7.1988.

financial assistance for Portugal for a specific industrial development programme (PEDIP).

This Regulation provided for:

1. The introduction of a five-year programme to modernize industry and promote industrial development in Portugal.
2. Financial assistance from the Community budget, over and above Structural Fund support, for five years (1988-92) totalling ECU 500 million, i.e. ECU 100 million per year (1988 prices), for implementation of PEDIP.
3. Four priority development areas:
  - faster improvement of basic industrial infrastructure
  - stronger foundations for basic and further vocational training facilities for careers in industry
  - the financing of productive investment
  - productivity drives
4. Consultation between Portugal and the Commission to define measures which could be financed by the Community.
5. A maximum rate of 75% for Community financing of measures selected under PEDIP, and up to 100% for preparatory studies, pilot measures and technical assistance measures.
6. That PEDIP measures must comply with Community policies and law, e.g. on competition, the award of public contracts and the protection of the environment.
7. The establishment by the Commission, every year, of general guidelines for the implementation of PEDIP measures.
8. The setting up of an Advisory Committee composed of the representatives of the Member States, to assist the Commission.
9. The presentation to the European Parliament and to the Council of two reports on the implementation of the Regulation giving details of all the development measures implemented and the expenditure incurred and assessing their effects.

The first report<sup>4</sup> was presented in May 1990.

This document is the final report which the Commission must present to the Council and Parliament, in accordance with the abovementioned Regulation, by the end of 1993.

## **I.2 The basic decisions**

Following the publication of the PEDIP Regulation, the Commission departments most directly concerned and the Portuguese authorities speeded up the discussions begun at the end of 1986, the aim of which was to formalize the implementing instruments for the four priority areas.

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<sup>4</sup> COM(90) 205

On the Portuguese side, by Government decision, a team was set up (the PEDIP Office) to draw up the instruments and negotiate them with the Commission. This was a small team under the responsibility of a top official directly attached to the Ministry of Industry, independent of traditional administrative structures.

On the Commission's side, by Decision of 19 October 1988,<sup>5</sup> the Member of the Commission responsible for industrial affairs was empowered, on behalf of the Commission and under its responsibility, in agreement with the Member responsible for the coordination of structural instruments and, where necessary - depending on the area concerned - in agreement with the Members responsible for social affairs and regional policy, to decide which measures were eligible under Article B 544 of the general budget additional heading (PEDIP).

The Commission also decided that DG III would be responsible for the financial management of the new PEDIP heading. DG V and DG XVI, responsible for areas 2 and 1 respectively, would work in close collaboration with DG III on the measures financed under the additional PEDIP heading.

Within the inter-departmental coordination group, a special ad-hoc group was set up for PEDIP - GIC PEDIP - under the responsibility of DG XXII, to ensure horizontal coordination. Within DG III a new sector and then a new unit were set up to administer PEDIP.

PEDIP's structure gradually began to take shape. Successive versions were presented by the PEDIP team, discussed at the Commission and negotiated with the Portuguese authorities, leading finally to formal notification of the various programmes.

Table I lists the programmes and the decisions granting Community support.

TABLE I

Basic decisions

<u>PROGRAMMES</u>	<u>DECISIONS</u>
Priority 1	1. Basic and technological infrastructure C(89) 1287 of 13/7
Priority 2	2. Vocational training C(90) 587 of 29/3 (ESF) C(89) 765 of 26/4 (AH)
Priority 3	3. Incentives for productive investment
	3.1. SINPEDIP C(88) 2119 of 11/11
	3.2. SIURE C(89) 484 of 20/3
	3.3.1. Restructuring of the wool industry C(88) 2117 of 11/11
	3.3.2. Restructuring of the metal industry C(90) 704 of 26/4

<sup>5</sup> COM(88) Min 936

	3.4.	Support for specific industries	C(89) 2045 of 27/11
	4.	Financial engineering	C(88) 2220 of 28/11
<b>Priority 4</b>	5.	Productivity drives	C(89) 390 of 7/3
	6.	Quality and industrial design	C(89) 391 of 7/3
	7.	Publicity, implementation and monitoring	C(88) 2118 of 11/11



## **II. PORTUGUESE INDUSTRY BEFORE PEDIP**

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Portuguese industry at the beginning of 1988.

When Portugal joined the European Community Portuguese industry had a number of strengths:

- (a) A good spread of sectors and products, indicating a flexible industrial system adaptable to market requirements;
- (b) A reasonable number of good-sized, well-organized firms able to guarantee a stable supply in most industrial sectors;
- (c) A positive image of Portuguese products in a wide range of external markets;
- (d) Reasonably specialized human resources with remarkable capacity to adapt.

There were also major weaknesses:

- (e) Insufficient industrial specialization, based on sectors with limited capacity to generate wealth, and creating heavy dependance on external suppliers for raw materials, capital goods and energy resources;
- (f) Energy-intensive production and little attempt to rationalize energy consumption;
- (g) Insufficient investment to change the structure of industry, linked to poor entrepreneurial development strategies, which focused on "hard" investment rather than complex competitiveness factors;
- (h) Uncoordinated corporate structures, with little integration and no real collaboration;
- (i) Weak approach to the foreign market, based on exports to uncontrolled markets;
- (j) Little research activity, concentrated in the universities and on the margins of industry;
- (k) Little technological training, technical assistance and research infrastructure;
- (l) Shortage of skilled human resources at all levels;
- (m) Low levels of quality and productivity;
- (n) Insufficient provision for environmental protection, hygiene, health and safety in the workplace.

To solve these problems, Portugal needed:

- an industrial policy clearly defined at national level and well integrated with major Community policy objectives;
- a programme (PEDIP) with instruments well-adapted to Portugal's economic situation and to the needs of its industrial agents.

### **III. PEDIP'S STRUCTURE**

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PEDIP was conceived as an integrated programme to support the development and modernization of Portuguese industry. It concerned not only firms but also their environment. To make industry more competitive the Portuguese authorities and the Commission decided that they should intervene both at the level of production and by creating and improving basic infrastructure, technological support infrastructure (through training), the development of financial engineering schemes and the promotion of productivity, marketing, new management techniques, standardization, certification, metrology and design.

#### **III.1 Basic and technological infrastructure (programme 1)**

Industrial and technological development in Portugal was for many years characterized by dependence on external technology. The inadequacy of basic infrastructure and the weakness of R&TD infrastructure were an indication of this. If the country's industrial base was to be strengthened and diversified, the reliance on external technology had to be gradually reduced.

This need was broadly reflected in Portugal's industrial strategy, in particular the two components of PEDIP's programme to develop basic and technological infrastructure:

- (i) strengthening basic infrastructure (improvement of road and rail communications and the exploitation of natural resources);
- (ii) the development of technological infrastructure.

European integration and the modernization of industry led to the definition of two overall objectives concerning basic infrastructure:

- to improve communications within Portugal and links with the rest of the Community, which required good road and rail networks;
- to make the best possible use of local resources, which required assistance to industry (technical, technological and logistic), decentralization of vocational training and efficient trade associations.

The "basic infrastructure" sub-programme had the following priorities:

- (a) to strengthen road links to industrial areas and areas where industrial products are marketed, sold, etc.
- (b) to encourage the creation of rail infrastructure and related equipment on lines of major use to industry;
- (c) to support the development of port infrastructure and related equipment in industrial areas of great potential value at national and international level;
- (d) to encourage the creation of infrastructure to support the activities of firms and their associations (exhibition centres, multi-purpose buildings which can be used for training and general business support);
- (e) to improve other basic infrastructure to support industrial activity in areas where such infrastructure is lacking (industrial parks, road transport fleets, sewage networks, improvement of the environment, etc.);
- (f) supporting the development of energy infrastructure, including electricity and gas

distribution and transport networks.

To achieve the objectives inherent in industrial modernization, it is essential to have technological infrastructure which will make it possible to restructure traditional industries, make production more technology-intensive, create new products using new technologies, improve productivity and quality and make full use of natural and human resources.

The expansion and optimization of the technological sub-system geared to industrial modernization had the following priority objectives:

- to strengthen the technical and technological capability of firms;
- to further incorporate technology into production;
- to set up joint research, development and demonstration centres;
- to strengthen links between firms and universities;
- to provide SMEs with greater technological assistance.

To this end, the following measures were defined:

- (a) metrological support (central and regional metrology laboratories);
- (b) technological support for industrial sectors (technology centres);
- (c) development of new technologies (centres of new technology, centres of excellence);
- (d) transfer of new technologies (transfer centres, demonstration units);
- (e) the promotion of technological innovation by setting up "incubators", technology parks, etc.

### **III.2 Vocational training**

For several decades Portugal had virtually nothing in the way of an active vocational training policy. As a result, there were skills shortages. Immediately before and after accession to the Community there was a vigorous reaction to this situation, with ESF support: short and medium-length intensive training schemes were set up, intended primarily for young people who were unemployed or seeking access to university education. Action by the Portuguese authorities had started to have a positive impact on the industrial base, but there were still serious deficiencies:

- (i) Training demand was not based on the assessment of requirements by activity, region, type of firm, potential trainees or subject area;
- (ii) Training supply was characterized by poor knowledge of requirements and the predominance of "standard" training courses. Nor was there any official recognition of certain new occupations which did not fit any existing career pattern;
- (iii) Training was available mainly for firms and trade associations, and those excluded from the labour market.

The purpose of PEDIP as far as training is concerned has been to enhance the value of human resources in industry, focusing on entrepreneurs and managerial staff, mid- to upper-level

technical staff and specialized technical staff. The measures taken have been designed to have an impact on the organization of firms and not just on the enhancement of workers' skills as before.

The following measures have been taken:

- (a) awareness-raising and short training courses in modern management techniques and new technologies for entrepreneurs, senior executives and specialists;
- (b) management training for senior and middle-ranking executives;
- (c) training in new technologies and techniques for senior and middle-ranking executives;
- (d) training of senior and middle-ranking executives, specialists and other workers in sectors being restructured;
- (e) training of middle-ranking executives and specialization of senior executives;
- (f) training of researchers for work in firms and scientific and technological institutions linked with industrial development (researchers for industry project);
- (g) training of young graduates for jobs in industry (young technicians for industry project - JTI);
- (h) training of trainers and instructors;
- (i) support for the preparation and publication of teaching material for PEDIP training schemes;
- (j) assessment of PEDIP training schemes.

### **III.3 Incentives for productive investment - programme 3**

By virtue of its scope and the size of its budget the programme entitled "Incentives for productive investment" is the core of PEDIP.

The programme comprises various schemes of aid to industry and was expected to have a direct impact on the levels, frequency and allocation of investment in Portugal between 1988 and 1992.

The aim was to support the implementation by industrial firms of investment projects aimed at modernization, rationalization and technological innovation. Initially, activities were horizontal in scope and gave priority to:

- industry-oriented research, including the adaptation and local development of technologies;
- measures to install and expand productive capacity, to convert or diversify production and encourage technological innovation;
- investment in quality management;
- measures to protect the environment and improve health and safety conditions at work;
- energy saving in industrial production.

These activities were supplemented by the following vertical measures:

- restructuring measures in a limited number of struggling traditional industries;
- measures aimed at the development of certain modern industries with considerable growth potential.

Programme 3 was divided into four sub-programmes:

- financial incentives - SINPEDIP;
- rational use of energy - SIURE;
- support for industrial restructuring or modernization;
- support for specific industries.

There were three reasons for this structure: (i) clarity - differentiated criteria for granting aid could be established, geared to specific objectives; (ii) PEDIP could absorb existing national programmes designed on the same lines and pursuing similar objectives, e.g. the energy efficiency scheme and plan to restructure the wool industry; (iii) it would facilitate the implementation of other new measures required under national strategic programmes such as the Integrated Information Technology and Electronics Programme (PITIE) and the Development Programme for Capital Goods Industries (PRODIBE).

### **III.3.1 PEDIP incentives scheme (SINPEDIP) - programme 3.1**

The aim of SINPEDIP was to assist certain types of investment project, especially those relating to new technologies, which would contribute to innovation, the rationalization of production and the modernization of firms.

The programme comprised the following measures:

#### **1. Investment in the purchase and development of technology.**

This meant financing the development of new products or manufacturing processes, especially at the pre-competitive stage of prototype construction or mass production.

Categories of project eligible:

- (a) research and technological development;
- (b) the development of new products and manufacturing processes, including the construction of prototypes and experimental plant;
- (c) the development of technologically advanced products or processes;
- (d) the manufacture of pre-production models and the construction of pilot plants.

#### **2. Investment in innovation and modernization**

Investment projects of considerable technological potential and projects relating to modernization, innovation or rationalization, the introduction of advanced

technologies or the improvement of productivity.

Types of project eligible:

- (a) Investment with considerable technological potential;
- (b) Investment in modernization/innovation;
- (c) Investment in modernization/rationalization;

**3. Support for investment in quality management and protection of the environment.**

This covered investment projects relating to industrial quality and design, the protection of the environment or the reduction of occupational and safety hazards at the workplace.

Types of project eligible:

- (a) the purchase of laboratory quality-control or metrology equipment;
- (b) the introduction and development of quality-management systems;
- (c) production certification and the calibration of measuring instruments abroad;
- (d) the purchase of health and safety equipment for the workplace;
- (e) the purchase of equipment to protect the environment;

**4. Support for specific investment in capital equipment**

This measure financed the replacement and upgrading of equipment not covered by other programmes and not requiring detailed preliminary studies.

Types of project eligible:

- (a) the purchase of equipment to improve productivity;
- (b) the purchase of equipment to improve health and safety standards, product and process quality and environmental protection.

**III.3.2 Rational use of energy: incentives scheme (SIURE)**

SIURE is a scheme of incentives to promote the rational use of energy, authorized by the Commission as a national aid scheme (Decision of 20 January 1988 under Articles 92 and 93 of the EEC Treaty) which is still in force.

PEDIP sub-programme 3.2 provided for SIURE to be co-financed from the PEDIP budget without modification of the scheme.

However, PEDIP assistance could not be combined with assistance granted under the Community's VALOREN programme.

The objective of SIURE was to promote energy saving in industrial firms and diversify the sources of supply.



More particularly:

- (a) to promote the rational use of energy (management, conservation and diversification of supply);
- (b) to decentralize energy production by focusing on renewable resources, energy from waste and the combined production of heat and power;
- (c) to stimulate R&D on new forms of energy production and use, and associated technologies, including the manufacture of energy equipment.

Three types of project were eligible for this scheme:

1. Investment projects relating to the conservation and saving of energy and fuel, including changes to production processes and equipment, the purpose of which was to reduce specific consumption or energy costs;
2. Investment projects relating to energy and fuel production, renewable resources, energy from waste or by-products, or combined heat and power technology;
3. Investment projects relating to the replacement of oil products by other sources of primary energy.

### **III.3.3 Aid for industrial restructuring or modernization - programme 3.3**

PEDIP was part of a general strategy that reflected the priority given by the Community to the establishment of a favourable environment for industrial development.

However, in its definitive structure PEDIP, since it was an integrated programme, had to take account of sectoral measures already in progress. Such measures were incorporated into the general programme, as a separate sub-programme. The industries being restructured when PEDIP was approved were the wool and metal industries.

The instruments used to support these industries could be categorized as follows:

- (i) specific instruments, comprising:
  - (a) structural measures:
    - financing of productive investment
    - technological assistance and tighter management
  - (b) measures relating to infrastructure:
    - technical assistance, training and marketing measures at sectoral level
    - financing of sectoral technical infrastructure
  - (c) other measures (no financial contribution under the programme)
    - consolidation of social security debts, tax reliefs and exemptions
- (ii) complementary instruments
 

restructuring projects recognized as such would have preferential access to other

PEDIP programmes (except SINPEDIP and SIURE): combined applications by firms, guaranteed receipt of aid, maximum rate of assistance

(iii) social measures

in connection with Ministry of Employment job creation measures, grants for firms taking on workers made redundant by restructuring

### **Restructuring of the wool industry - programme 3.3.1**

The purpose of the programme was to make the industry more competitive, modernize its structures, improve the quality of its production, step up its technological capability and upgrade the skills of both workers and management.

The programme provided subsidies for:

- the restructuring of firms;
- the modernization of equipment;
- technical assistance to help rationalize production, staff training, market research, the development of new products and processes, energy saving, etc.;
- co-financing of the salaries of skilled staff with a higher-education qualification or an equivalent qualification in textiles, mechanical or chemical engineering, business organization, management or economics, within the context of a restructuring project.

### **Restructuring of the metal industry - programme 3.3.2**

The objective was to restructure the metal industry in order to increase competitiveness by reducing costs, improving quality and strengthening technological and management capability.

The programme's specific objectives were to:

- reduce production costs and losses;
- maximize capacity utilization;
- reduce specific energy consumption;
- improve financial indicators;
- step up training;
- increase productivity, in particular by improving working conditions;
- implement environmental protection measures.

### **III.3.4 Support for specific industries - programme 3.4**

Sectors which are considered strategically important for industrial competitiveness were not very developed in Portugal. These are:

- information technology

- capital goods

These two areas accounted for only 10% of gross added value in Portugal's manufacturing industry.

Moreover, they exhibited structural weaknesses as regards technological capability and workforce skills.

They nevertheless had potential for development, and aggressive expansion strategies were needed.

The aim of sub-programme 3.4 was to provide the specific additional support necessary for implementing two strategic industrial policy programmes drawn up by the Portuguese Government:

- the integrated information technology and electronics programme (PITIE)
- the development programme for capital goods industries (PRODIBE)

These strategic programmes were implemented chiefly through two other types of instrument:

- (a) Preferential support for PITIE and PRODIBE under PEDIP operational programmes. Under special rules, PITIE and PRODIBE projects were granted preferential treatment in the form of higher or maximum rates of assistance, guaranteed support up to certain ceilings and permission to submit combined applications.
- (b) Support under other operational programmes of the Regional Development Plan, including the regional incentives scheme (SIBR) and Community support instruments, especially in the field of science and technology.

**1. Additional support under the integrated information technology and electronics programme (PITIE)**

The programme covered the following activities:

- (a) Evaluation of training requirements
- (b) Information technology and electronics promotion office (GATIE)

GATIE was a standing advisory body. It was responsible for four specific projects:

- strategic survey of markets, technologies and regulatory provisions
  - support for the development of the domestic IT and electronics industry
  - international cooperation
  - support for the use of information technology and stimulation of the IT market; integration of IT systems in services, industry and agriculture.
- (c) The software industry (training, development of R&D centres, setting up of software design companies, promoting wider use of information technology, etc.).
  - (d) The information industry (training of staff specialized in IT, development of R&D, supporting the establishment in Portugal of one or more database development and operation centres, etc.).

## 2. Development programme for capital goods industries (PRODIBE)

PRODIBE's general aim was to improve Portugal's technological capability by both expanding and upgrading its capital goods industries.

The strategy adopted was to encourage innovative investment in the capital goods industries, for producing new capital goods or upgrading existing production, with the back-up of sectoral measures to increase technological assistance and information resources (technology, vocational training, quality, organization and management).

The programme covered the following activities:

- (a) Publicizing the opportunities for manufacturing new capital goods
- (b) Campaign to improve the image of the capital goods industries
- (c) Framing a vocational training policy
- (d) Setting up an office for promoting capital goods production (GAPE)

The office was responsible for steering and stimulating the necessary activities for implementing the PRODIBE strategy, including:

- providing information on PRODIBE and assisting firms in preparing applications
  - carrying out activities planned under PRODIBE and participation in studies which do not form part of the programme
  - monitoring progress and evaluating results
- (e) Prototype development (by non-industrial firms)
  - (f) Preparation and use of manufacturing specifications

### III.4 Financial engineering - programme 4

This programme was devised in order to open up the PEDIP financial incentives scheme (SINPEDIP) to firms which, although viable, would otherwise have been disqualified because of temporary cash-flow problems or their inadequate financial structure.

The objectives were to:

- finance investment projects, alongside firms' capital and reserves and any grants they receive, on more advantageous terms;
- put back on a sound footing businesses that are economically viable but suffer from serious financial handicaps;
- inject capital into firms so that they can qualify for assistance under SINPEDIP or SIBR.

These measures supplemented and catalysed the incentive schemes already in existence or set up under PEDIP. They were targeted chiefly on small and medium-sized businesses and

coordinated with activities in the banking sector for maximum possible benefit.

#### Measure A - Investment financing (Guarantee Fund)

This measure was considered an essential concomitant to the aid scheme set up under PEDIP programme 3.

The guarantee fund provided the necessary security for the "participation bonds" issued to finance high-risk projects.

"participation bonds" are a means of financing specific investments whereby the return that holders receive depends on the performance of the investment (or exceptionally, the performance of the business).

Thus:

- Investment projects involving normal risk exposure were financed through the banking system, in particular loans from the EIB;
- Projects involving greater risk exposure were financed by "fundos consignados" issued by venture capital companies (either private or set up under measure B) and underwritten by the Instituto de Apoio às Pequenas e Médias Empresas e ao Investimento (IAPMEI).

#### Measure B - Financial restructuring and industrial development (setting up of two venture capital companies)

Two venture capital companies (NORPEDIP and SULPEDIP, which operate in the north and south of the country respectively) were set up with the following aims:

- (a) to acquire a stake in investment and technological innovation projects of special value to industry (wherever possible in addition to the holdings taken up by other venture capital companies or other market/private sector investors);
- (b) to contribute to the financial recovery of companies carrying a heavy inherited burden of debt, but making a clear operating profit and enjoying a genuine chance of survival.

#### Measure C - Mutual guarantee system

Small and medium-sized businesses find it difficult to obtain bank loans. There are many reasons for this, but the main one is the problem of bank exposure stemming from the undercapitalization and small size of many firms.

The mutual guarantee system is a financial mechanism through which member firms take joint liability for credit defaults by contributing to a fund.

After a detailed viability study the scheme was shelved.

### III.5 Productivity drives - programme 5

The aim of this programme was to boost industrial productivity by promoting demonstration/publicity schemes aimed at significantly increasing the efficient use of factors which affect productivity or by supporting schemes which serve the same purpose but are too specialized to be included in the other PEDIP programmes.

The competitive advantage enjoyed by Portuguese industry could be chiefly ascribed to low wages; considering that labour costs would have a decreasing influence on production costs and that unit labour costs would rise steadily as new technology was introduced, it was clear that Portugal's competitiveness could not last and would not guarantee a gradual long-term rise in the return on the factors of production.

Low productivity was therefore a fundamental obstacle to the restructuring of Portuguese industry, which had to be accompanied by a substantial and lasting improvement in competitiveness.

The revised version of the programme comprised the following measures:

- A. - Demonstration schemes:
- Demonstration schemes in firms
  - Demonstration of advanced technologies in "centres of competence"

The specific aim of this programme was to promote and spread ideas, concepts and techniques which would have a significant impact on industrial productivity.

The schemes were to be implemented in stages:

- assessment of a particular firm's productivity and identification of steps to be taken to improve it. The firm in question was the "demonstration firm";
- aid to enable the "demonstration firm" to carry out the course of action identified. This consisted of technical assistance from an independent outside body ("centre of competence");
- publicizing and promoting these activities in other firms in the same sector and in other sectors.

To ensure that new technologies and techniques were effectively transferred, the publicity work was done by the "centre of competence" or advanced technologies demonstration firm which had provided the firm with technical assistance.

## **B - Promotion, publicity and studies**

Cooperation between firms, in particular SMEs, enables them to achieve the necessary "critical mass" in such fields as production (specialization and complementarity), supplies and marketing.

The purpose of this scheme was to stimulate cooperation by creating favourable conditions for its development; it involved two types of activity:

- stimulation of cooperation, subcontracting and "partnership" schemes
- support for participation by industrial firms in Community programmes
- promotion of health and safety at work and environmental protection
- studies

The purpose of including aid for studies under PEDIP was to help increase productivity by

providing firms with the information gathered.

### **C - Strengthening management capacity and market access**

Increased productivity in industrial firms, even those using updated processes and equipment, depends essentially on the ability to put existing factors of production to good use. One of these factors is business management and organizational capability.

The following activities were provided for:

- assessment of firms
- introduction of advanced management techniques
- legal protection of inventions
- export market prospecting
- publicizing national productive capability

### **D - Technical assistance and information**

The purpose of this scheme was to guarantee the provision of advanced technical assistance to industrial firms which were too small to employ staff of their own at that level.

The scheme comprised six measures:

- setting up and strengthening of "centres of competence"
- industrial development network
- sectoral information systems
- aid for participation in EEC trade associations
- strengthening the technical capability of industry's associative structures
- aid to associations for the opening up of delegations abroad;

## **III.6 Quality and industrial design improvement - programme 6**

The aims of PEDIP programme 6 were (i) to promote consumer protection and (ii) to improve industry's competitiveness by ensuring that national legislation governing industrial activity is adapted to Community law.

The objectives were:

- (a) to strengthen the three target areas of the National Quality Management System (SNGQ): standards, metrology and certification
- (b) to create awareness among producers and consumers of the need for quality
- (c) to develop industry's own quality management capability
- (d) to create the conditions for mutual or multiple recognition of certification systems and bodies

- (e) to promote industrial design

To achieve these objectives the following measures were adopted:

- A1 - support for investment projects relating to the setting up, expansion or quality assessment of testing or metrology laboratories for the provision of services under the SNGQ
- A2 - support for investment projects relating to the setting up, restructuring or quality assessment of sectoral standardization and certification bodies and technical inspection or audit bodies
- B1 - quality awareness campaign
- B2 - industrial design promotion campaign
- C1 - support for standardization
- C2 - promoting the calibration of measuring instruments
- C3 - promoting the use of certification systems
- D1 - support for integrated programmes to improve relations between suppliers and purchasers
- D2 - analytical and forward studies on industrial quality and design
- D3 - support for initiatives to promote industrial design

### **III.7 Publicity, implementation and monitoring - programme 7**

The above programmes alone could have helped to modernize Portuguese industry and played a vital role in integrating Portugal into the single market.

However, the measures planned and instruments and funding available would not have been sufficient to achieve the desired goals unless industry became fully involved and made a genuine contribution to the implementation and, where necessary, adjustment of the PEDIP programmes.

Economic agents could only become involved if they were clearly informed of PEDIP's objectives, the measures it included, the advantages it offered and the instruments at its disposal.

For its own implementation, then, PEDIP had to provide for a set of publicity measures which would provide potential beneficiaries with all the information necessary to enable them to take part.

Since PEDIP was an evolving programme, critical reviews had to be carried out periodically to see how the different schemes were progressing and how successfully they were achieving the programme's objectives. Such reviews could lead to changes in the measures and instruments being used or prompt more searching studies. An information network therefore had to be set up, linking all the bodies involved in implementing PEDIP and providing up-to-date information at any given moment on the various programmes and their state of progress.

The programme was divided into two parts:



- A - Implementation, follow-up and monitoring
- B - Publicity, awareness and information

### **III.8 Initial financial table**

The basic decisions approving the various PEDIP programmes also adopted the financial tables presenting public and private Community and national contributions.

The following table collates the information contained in the financial tables set out in the decisions listed in Table I (p. 10) and shows all the sources of financing for the PEDIP programmes.

**TABLE II**  
**PEDIP - FINANCIAL TABLE RESULTING FROM THE BASIC DECISIONS**

PROGRAMMES	Total Cost	PUBLIC EXPENDITURE									Private Sector
		Total Public Expenditure	Community Funds				National Public Financing				
			TOTAL	ERDF	ESF	PEDIP AH	TOTAL	Central. Govern.	Reg. Local. Author.	Public. Enterpr.	
PROG. 1*	668.17	564.82	349.60	323.12		26.48	215.22	114.27	32.26	68.69	103.35
PROG. 2	202.39	178.54	115.78		100.00	15.78	62.76	62.76			23.85
PROG. 3.1	609.40	326.00	244.50			244.50	81.50	81.50			283.40
PROG. 3.2	64.02	12.90	9.66			9.66	3.24	3.24			51.12
PROG. 3.3.1	54.97	23.45	17.65			17.65	5.90	5.90			31.52
PROG. 3.3.2	68.98	34.00	25.50			25.50	8.50	8.50			34.98
PROG. 3.4	30.46	21.46	16.12			16.12	5.34	5.34			9.00
PROG. 4	76.00	44.00	33.00			33.00	11.00	11.00			32.00
PROG. 5	103.20	68.40	51.30			51.30	17.10	17.10			34.80
PROG. 6	41.47	32.00	24.00			24.00	8.00	8.00			9.47
PROG. 7	11.00	11.00	11.00			11.00					
NOT YET ALLOCATED						25.01					
<b>TOTAL</b>	<b>1955.17</b>	<b>1341.68</b>	<b>932.12</b>	<b>323.12</b>	<b>100.00</b>	<b>500.00</b>	<b>418.56</b>	<b>317.61</b>	<b>32.26</b>	<b>68.69</b>	<b>613.49</b>

Ecu  
Million

\* The figures for programme 1 do not include the projects which received ERDF funding (ECU 76.88 million)<sup>o</sup> in 1988

## **IV. IMPLEMENTATION**

## **IV. IMPLEMENTATION**

### **IV.1 PEDIP - pilot experiment**

When PEDIP was launched it was regarded as a pilot experiment since this was the first time the new mechanisms for intervention and principles introduced by the reform of the Structural Funds - partnership, subsidiarity, additionality and follow-up - had been applied.

Regulation (EEC) No 2053/88, which provided for the PEDIP additional heading, was adopted by the Council in June 1988 at the same time as the framework regulation on the reform of the Structural Funds, for immediate application. However, the regulations relating to ERDF and ESF intervention were not adopted until the end of December, and the dates on which the new principles were to apply to the Structural Funds were fixed as 1.1.1989 and 1.1.1990 respectively.

### **IV.2 Centralized management**

PEDIP's operational machinery, the main feature of which was two centralized management teams (one in Lisbon and the other in Brussels) was set up by the Commission and the Portuguese authorities as soon as the additional heading had been approved.

A "PEDIP manager", reporting directly to the Minister for Industry, independent of the Ministry's traditional administrative structure, was appointed by the Portuguese Government.

At the same time, within the Commission, DG III (Unit III-A-4) took on the role of "chef de file" under the delegation assigned to the Member of the Commission responsible for the internal market and industrial affairs, given that PEDIP specifically concerned industry and the completion of the internal market.

Centralized management avoided the need for parallel negotiations between various Portuguese ministries and Commission DGs and reduced to a minimum the time needed to launch the operational programmes - of which SINPEDIP, the restructuring of the wool industry, financial engineering and the publicity, implementation and monitoring programme had been approved in 1988 - so that the appropriations entered in the Community budget could be committed and paid; it also meant that the negotiation of the other programmes could be speeded up, as shown in Table I which gives the dates of the decisions approving the programmes.

### **IV.3 Subsidiarity**

The principle of subsidiarity was applied with an equal degree of rigour and flexibility.

The PEDIP manager was entirely responsible for all the activities relating to implementation (publicity, administrative organization), selection of projects, incentives and auditing. The Commission was responsible for follow-up, higher-level monitoring (compliance with Community policies and individual approval of major projects) and participated in the assessment of the programme.

Flexibility was apparent in the partnerships established before decisions were taken and each time a decision had to be amended.

### **IV.4 Partnership**

The partnership between the two management teams was an important factor in the launching

of PEDIP and its subsequent implementation.

Meetings were held frequently (at least 6 per year during the stabilization phase), a great deal of communicating was done by fax and essential aspects of PEDIP were discussed at the partners' meetings, the decisions being reserved for the Monitoring Committee.

#### **IV.5 The Monitoring Committee**

In accordance with the principles laid down in the "Structural Funds" regulations, the Commission and the Portuguese authorities set up a PEDIP Monitoring Committee.

The Committee was composed of the PEDIP manager (in the chair), representatives from the Directorate-General for Regional Development, the Department of ESF Affairs, the SME Support Institute and the office of the Portuguese Permanent Representative and, on the Commission's side, representatives from DG III, DG V, DG XVI and DG XXII. The EIB could attend the meetings when the items on the agenda concerned it specifically. The Committee met eleven times while PEDIP was running, first on 7.11.89.

These formal meetings were held for the purpose of discussing and, above all, taking decisions on all aspects of PEDIP's implementation. The Committee gave its opinion on the three-monthly and annual reports presented by the manager, analysed the overall execution of the programme and each particular measure, decided when to launch studies, monitored the assessment work and made any adaptations which proved necessary along the way, in respect of budgetary programming (increases, reductions and rescheduling of funds allocated for measures or programmes) and the general direction of the programme (some measures were scrapped, others strengthened).

The Committee also played an important role in ensuring compliance with Community policies and law, in particular as regards competition, the awarding of public contracts, environmental protection and the notification of projects relating to sensitive sectors or sectors in critical difficulty.

## **IV.6 The Advisory Committee**

The Advisory Committee provided for in Article 8 of Regulation (EEC) No 2053/88 was formally set up on 20 July 1988, the date of its first meeting, five days after the Regulation was published in the Official Journal.

It was composed of representatives of the Member States and chaired by a representative from the Commission. An EIB representative also participated in the Committee's work. Its task was to assist the Commission in the application of the Regulation and to deliver opinions on the Commission's general guidelines for the implementation of PEDIP.

The Committee was regularly briefed, both orally and in writing, on PEDIP's progress, including decisions approving or amending programmes, and on the Annual Report which the Portuguese authorities had to present within six months after the end of the year concerned. No formal comments on the management of the funds available under the additional heading or the execution of the programmes were made at any of the meetings.

## **IV.7 Auditing**

The auditing system was developed in Portugal in collaboration with the various departments of the Ministry of Industry and the Inspectorate-General of Finances (IGF), with advice from the Community Financial Control departments, where two Portuguese officials worked for several weeks. Auditing was done on three levels, each with specific objectives and covering specific fields of activity.

The Ministry of Industry and Energy was responsible for the first level of auditing, which was carried out in accordance with a manual for each institution concerned. This covered all the projects which formed part of the programmes for which the body in question was responsible and the aim was to check the work done, the financing, whether the objectives had been achieved and whether the projects complied with the relevant legal and regulatory provisions.

The PEDIP Office was responsible for the second level of auditing, done by independent consultants selected by open invitation to tender, in accordance with very detailed instructions. These audits, concerning all PEDIP projects, were done on significant samples (covering 10 to 20% of all the incentives per programme) to check (i) the fulfillment of legal and contractual requirements relating to the execution of the projects and (ii) the administrative procedures of the bodies responsible for appraising, examining and auditing the projects. After auditing, the bodies concerned had to take corrective action where necessary.

Auditing on the third level was done by the Inspectorate-General of Finance which, working within its jurisdiction, carried out inspections at the appropriate level, including inspections of the PEDIP Office.

Coordination between the first and second level was achieved by means of periodic reports submitted by the MIE departments to the PEDIP Office, which in turn submitted three-monthly summary reports to the Minister and the Inspeccão Geral de Finanças (IGF).

The auditing and monitoring of PEDIP was regularly monitored by the IGF and the Commission; this involved several specific missions.

#### IV.8 The use of the ECU

It was the first time that the ECU had been used as the only accounting unit in Structural Funds management .

The ECU was used not only in the financial plans, but also in the statements of expenditure, which meant that the funds could be transferred more quickly. In order to avoid any accounting disparities, at the beginning of the month the Commission informed the PEDIP manager of the ECU conversion rate it was using.

#### IV.9 Application of the deflator

Since the resources allocated under the additional heading had been fixed at constant 1988 prices, they were increased each year on the basis of the annual deflator. Table III shows the appropriations entered in the Community budget.

**TABLE III**  
**APPLICATION OF THE DEFLATOR**

**Additional Heading**

Year	Aggregate deflator	Annual	ECU Million Commitments entered in budget
1988	--	--	90.0
1989	3.5%	3.5%	103.5
1990	8.78%	5.1%	108.8
1991	14.11%	4.9%	119.8
1992	21.61%	6.6%	127.7
<b>TOTAL</b>			549.8

## **V. THE RESULTS OF IMPLEMENTATION**



## **V. THE RESULTS OF IMPLEMENTATION**

### **V.1 Final financial table**

When analysing the final overall results of implementation the following must be taken into account: the total amount of funding added to the programme by application of the deflator (see point IV.9) and all financial changes affecting the programmes. These changes were the result of corrections made along the way by the Monitoring Committee, either because certain measures were difficult to apply in an industrial context or because others were unexpectedly successful, as was the case with almost all the measures relating to productivity and quality, which had to be substantially reinforced by funds from other programmes.

TABLE IV  
PEDIP - FINAL FINANCIAL TABLE

PROGRAMMES	Total Cost	DEPENSES PUBLIQUES									Private Sector
		Total Public Expenditure	Subventions Communautaires				Financement Publique National				
			TOTAL	ERDF	ESF	PEDIP	TOTAL	Central. Govern.	Reg. Local+ Author.	Public	
Programme 1	793.98	772.13	412.98	383.00		29.98	359.15	142.92	35.92	180.31	21.85
ERDF*	736.86	732.15	383.00	383.00			349.15	132.92	35.92	180.31	4.71
AH	57.12	39.98	29.98			29.98	10.00	10.00			17.14
Programme 2	180.68	163.19	112.65		100.47	12.18	50.54	50.54			17.49
ESF	162.86	146.94	100.47		100.47		46.47	46.47			15.92
AH	17.82	16.25	12.18			12.18	4.07	4.07			1.57
Progr. 3.1	2270.77	499.03	374.28	81.50		292.78	124.75	124.75			1771.74
ERDF	494.46	108.66	81.50	81.50			27.16	27.16			385.80
AH	1776.31	390.37	292.78			292.78	97.59	97.59			1385.94
Progr. 3.2	64.02	12.90	9.66			9.66	3.24	3.24			51.12
Progr. 3.3.1	54.97	23.55	17.65			17.65	5.90	5.90			31.42
Progr. 3.3.2	57.52	28.35	21.26			21.26	7.09	7.09			29.17
Progr. 3.4	23.17	16.05	12.02			12.02	4.03	4.03			7.12
Progr. 4	76.00	44.00	33.00			33.00	11.00	11.00			32.00
Progr. 5	185.60	94.45	70.83			70.83	23.62	23.62			91.15
Progr. 6	68.38	50.27	37.70			37.70	12.57	12.57			18.11
Progr. 7	12.74	12.74	12.74			12.74					
TOTAL AH	2393.65	728.91	549.8			549.80	179.11	179.11			1664.74
TOTAL PEDIP	3787.83	1716.66	1114.77	464.50	100.47	549.80	601.89	385.66	35.92	180.31	2071.17

\* For projects financed by the ERDF in 1988 the exchange rate was : 1 ECU = 171.14 PTE

This table takes account of budgetary changes between programmes in 1993

TABLE V

DECISIONS DATE		1988	1989	1990	1991	1992	1993
1.	Basic and Technological infrastructure		C(89) 1287 of 13.7		C(91) 753 of 25.4	C(92) 749 of 1.4 C(92) 2220 of 23.9	
2.	Vocational Training		C(89) 765 of 26.4 (AH)	C(90) 136 of 29.1 (AH) C(90) 587 of 29.3 (ESF)	C(91) 74* of 16.1 (AH) C(91) 1057 of 31.5 (ESF)	C(92) 2220 of 23.9 (AH) C(92) 2153 of 7.10 (ESF)	C(93) 712 of 23.4 (ESF)
3.	Incentives productive Investment						
3.1	SINPEDIP	C(88)2119 of 11.11	C(89)1965 of 20.11	C(90) 1922 of 28.9	C(91) 1696* of 26.7	C(92) 1201 of 17.6 C(92) 2220 of 23.9**	C(93) not yet taken
3.2	SIURE		C(89)484 of 20.3	C(90)1221 of 28.6 C(90) 2986 of 11.12			
3.3.1	Restructuring wool	C(88)2117 of 11.11		C(90)704 of 26.4	C(91) 1990 of 20.9		
3.3.2	Restructuring Metal				C(91) 51 of 15.1		
3.4	Support for specific industries		C(89) 2045 of 27.11			C(92) 56 of 22.1 C(92) 2220 of 23.9	
4.	Financial Engineering	C(88)2220 of 28.11					
5.	Productivity Drives		C(89) 390 of 7.3	C(90) 1921 of 28.9	C(91) 1622 of 24.7*	C(92) 435 of 4.3 C(92) 2220 of 23.9	
6.	Industrial Quality and Design		C(89) 391 of 7.3	C(90) 1920 of 28.9	C(91) 1971 of 20.9	C(92) 433 of 4.3 C(92) 2220 of 23.9	
7.	Publicity implementation and monitoring	C(88)2118 of 11.11	C(89) 1400 of 25.7	C(90) 281 of 23.2	C(91) 50 of 15.1	C(92) 2220 of 23.9	
					Financial Provisions Decision	C(91) 211 of 7.2	

\* the financial plan was amended by the Monitoring Committee on 8.10.91 to bring it into line with the new financial provisions adopted by the Commission on 11.6.91

\*\* the financial plan was amended by the Monitoring Committee on 28.10.92 to bring it into line with the new financial provisions adopted by the Commission on 11.6.91

## **V.2 The operational programmes - overall view**

Table VI gives an overall view of all the PEDIP operational programmes.

The table shows that 14 175 applications were received, representing applications to invest over 1 275 billion escudos.

All in all, 9 568 projects and courses were approved (54.9% of the projects examined), corresponding to approved incentives totalling 308 billion escudos and applications to invest over 924 billion escudos.

As at 31.12.92 the promoters had received nearly 155 billion escudos, corresponding to over 60% of the value of the incentives approved for projects under contract.

TABLE VI

## PEDIP OPERATIONAL PROGRAMMES 31.12.92

(10<sup>6</sup> PTE)

PROG.	SUB-PROGRAMMES	PROJECTS PRESENTED		PROJECTS		PROJECTS APPROVED			PROJECTS WITH CONTRACT			PROJECTS WITH PAYMENT			
		N°	INV.	N°	INV.	N°	INV.	INC.	N°	INV.	INC.	N°	INV.	INC. ATTRIB	INC. PAYÉ
1	1.1-IBasic infr.	505	147.762	341	106.559	317	83.812	48.659	298	83.464	48.305	293	81.750	47.390	29.073
	AH	295	32.533	158	19.234	144	11.546	7.554	125	11.198	7.200	125	11.198	7.200	5.090
	ERDF	210	115.229	183	87.325	173	72.266	41.105	173	72.266	41.105	168	70.552	40.190	20.083
	1.2 Techn Infr..	132	90.577	93	70.990	73	49.944	44.071	66	49.156	43.034	66	49.156	43.034	25.147
	<b>TOTAL PROG.1</b>	<b>637</b>	<b>238.339</b>	<b>434</b>	<b>177.549</b>	<b>390</b>	<b>133.756</b>	<b>92.730</b>	<b>364</b>	<b>132.620</b>	<b>91.339</b>	<b>359</b>	<b>130.906</b>	<b>90.424</b>	<b>54.220</b>
2	ESF	1.948	59.742	1.679	52.787	1.416	45.777	32.774	1.030	30.149	21.035	836	24.409	18.407	9.822
	AH	2.292	12.143	2.184	9.413	1.614	7.772	4.810	1.248	6.053	4.184	1.246	6.027	2.920	2.303
	<b>TOTAL PROG.2*</b>	<b>4.240</b>	<b>71.885</b>	<b>3.863</b>	<b>62.200</b>	<b>3.030</b>	<b>53.549</b>	<b>37.584</b>	<b>2.278</b>	<b>36.202</b>	<b>25.489</b>	<b>2.082</b>	<b>30.436</b>	<b>21.328</b>	<b>12.126</b>
3	3.1-SINPEDIP	5.699	756.233	5.699	756.233	3.532	583.528	120.583	2.811	448.707	92.894	2.510	398.688	82.396	62.531
	3.2-SIURE	30	21.241	30	21.241	30	21.241	3.328	19	14.187	2.224	16	10.296	1.738	1.495
	3.3-Restr/Modern..	135	51.400	134	50.749	95	43.583	13.368	71	35.192	10.689	66	32.536	9.691	6.656
	3.3.1-Wool	83	26.033	82	25.382	58	22.471	6.218	44	17.460	4.695	44	17.460	4.695	4.143
	3.3.2-Metal	52	25.367	52	25.367	37	21.112	7.150	27	17.732	5.994	22	15.076	4.996	2.513
	3.4-Specif.indust.	210	19.480	189	17.589	112	10.376	4.872	54	5.378	2.929	40	4.102	2.280	1.112
	3.4.1-PITIE	180	17.718	160	15.945	91	9.196	3.933	47	4.621	2.258	34	3.464	1.727	813
	3.4.2-PRODIBE	30	1.762	29	1.644	21	1.180	939	7	757	671	6	638	553	299
	<b>TOTAL PROG.3</b>	<b>6.074</b>	<b>848.354</b>	<b>6.052</b>	<b>845.812</b>	<b>3.769</b>	<b>658.728</b>	<b>142.151</b>	<b>2.955</b>	<b>503.464</b>	<b>108.736</b>	<b>2.632</b>	<b>445.622</b>	<b>96.105</b>	<b>71.794</b>
5	PROGR. 5	2.229	92.415	2.180	88.581	1.627	62.832	24.514	1.347	46.152	19.117	1.009	37.124	15.674	10.587
6	PROG. 6	995	24.351	807	16.291	752	15.527	11.354	590	13.383	9.837	461	12.354	9.069	6.112
<b>TOTAL PEDIP</b>		<b>14.175</b>	<b>1.275.344</b>	<b>13.336</b>	<b>1.190.433</b>	<b>9.568</b>	<b>924.392</b>	<b>308.333</b>	<b>7.534</b>	<b>731.821</b>	<b>254.518</b>	<b>6.543</b>	<b>656.442</b>	<b>232.600</b>	<b>154.839</b>

\* The figure entered in the N° column is the number of courses, not projects

## **V.2.1 Programme 1 - Basic and technological infrastructure**

### **Sub-programme 1.1 - Basic infrastructure**

This sub-programme was financed by the ERDF and topped up from the additional heading. The ERDF supported 173 projects, with incentives totalling 41 105 million escudos (total public expenditure) relating to road, rail, port and energy infrastructure which would directly support industry.

The additional heading supported trade association infrastructure and vocational training for members of the active population. 144 projects were financed and public incentives totalled 7 554 million escudos.

### **Sub-programme 1.2 - Technological infrastructure**

A total of 73 technological infrastructure projects were approved (metrology laboratories, technology centres, centres of excellence, transfer/demonstration centres, technology parks). Co-financing from the ERDF totalled 44 071 million escudos (public expenditure).

Nearly 90% of the promoters supported were private non-profit-making organizations.

## **V.2.2 Programme 2 - Vocational training**

This programme was financed by the social Fund and topped up from the additional heading.

The ESF contribution went mainly on the vocational training itself, while the additional heading funded publicity and awareness-raising measures, support for the production and publication of teaching material and assessment of the training activities of the programme.

A total of 792 projects were approved, representing 3 030 courses with incentives totalling 37 583 million escudos.

60% of the courses were promoted by educational establishments and scientific institutions. Industrial firms ran 35% of the courses. The sectors most involved were the metal and capital goods industries.

## **V.2.3 Programme 3 - Incentives for productive investment**

### **Sub-programme 3.1 - SINPEDIP**

Table VI gives the following information:

- The PEDIP Office received 5 699 applications to invest, of which 3 532 were approved. The approval rate was 62%, which shows that the Committee was very selective.
- A total of 583 billion escudos was invested in approved projects, with incentives totalling 120 billion escudos, representing an average aid rate of 21%.

The sectoral distribution of the approved projects was fairly good, closely mirroring the structure of Portuguese industry. Nevertheless, the textiles/clothing sector was slightly under-represented and the metal, machinery and transport equipment sectors were slightly over-represented. The sectors which received the most incentives were:

-	Textiles, clothing, leather	19%
-	Non-metallic mineral products	13%
-	Metal products, machinery and transport equipment	34%
-	Chemicals industry	12%

### Sub-programme 3.2 - SIURE

This programme funded 30 projects, with investment amounting to 21 billion escudos and aid totalling 3 billion escudos (average aid rate 16%).

The projects approved were in sectors with high energy consumption. Paper and pulp had the highest number of projects - 11 - and 40% of incentives.

### Sub-programme 3.3.1 - Restructuring of the wool industry

There were 83 applications to participate in this sub-programme, of which 70% were approved.

44 projects were carried out, with investment amounting to 17 billion escudos and aid totalling 4 billion escudos. The co-financing rate was 24%.

### Sub-programme 3.3.2 - Restructuring of the metal industry

The Selection Committee examined all the applications. 37 projects (71% of the total) were approved. Incentives totalling 7 billion escudos were granted for investment of 21 billion escudos. The average aid rate was 34%.

Most of the applications were from the basic metal industries; 75% of the projects approved were also in this sector.

### Sub-programme 3.4 - Support for specific industries

This programme focused on information technology and electronics and the capital goods sector.

Firms in these sectors were given preferential access to other PEDIP and SIBR programmes (207 integrated projects). In addition, 112 projects were approved with incentives totalling 4 977 million escudos (91 projects and 3 938 million escudos in PITIE and 21 projects and 939 million escudos in PRODIBE).

The setting-up of the GATIE (Information technology and electronics support office) and the GAPE (Capital goods production support office) was vital to the success of this programme. These two offices were the driving force behind most of the action taken, including studies, conferences and participation in trade fairs and exhibitions, image promotion, etc.

## V.2.4 Programme 4 - Financial engineering

Two venture capital companies were set up under this programme.

These two companies carried out 73 operations at a total cost of over 7 700 million escudos, in the following areas:

-	Advanced technology	7
-	Innovation/modernization	31
-	Modernization/reorganization	26
-	Other areas	9

Sectoral analysis of the operations shows that the textiles sector is over-represented. The Commission has told the Portuguese authorities that this imbalance should be corrected when the new operations are organized.

There were long delays in implementing the rest of the programme, owing to unexpected changes in the relevant Portuguese legislation and the existence of rules that the participants had not taken into account.

Investment was financed from an EIB credit line used by Portuguese banks. The first instalment (7 000 million escudos) was completely used up, financing 75 projects with investment totalling 21 000 million escudos.

A guarantee fund was set up for a specific EIB loan to IAPMEI, to finance high-risk projects with "participation bonds". The first instalment of the loan, totalling 2 000 million escudos, has been practically exhausted. 16 operations have been funded.

#### **V.2.5 Programme 5 - Productivity drives**

The Selection Committee approved 1 627 projects representing investment of 62 831 million escudos, with a contribution totalling 24 513 million escudos.

Nearly 50% of the incentives allocated were spent on demonstration activities.

There was a reasonable sectoral distribution of approved projects, with a slight imbalance in favour the traditional industries.

The programme was slow in getting off the ground because of its innovatory nature; it gradually attracted new applicants and the budget initially provided for had to be supplemented several times.

#### **V.2.6 Programme 6 - Quality improvement**

Incentives totalling 11 354 million escudos were allocated for 752 projects, for investments of 15 527 million escudos.

54% of the incentives were allocated to projects relating to standardization, the calibration of measuring instruments and the certification of products or quality control systems in firms.

The development of quality control systems in Portugal received 28% of the incentives, totalling 3 000 million escudos.

Industrial firms presented 63% of the projects and obtained 33% of the incentives, while other institutions providing support for industry (testing laboratories, technological infrastructure) presented 29% of the projects and received 59% of the incentives. This figure reflects the higher cost of building laboratories.

The largest number of projects were in the metal products and capital goods sectors.

The spread of projects over the various measures shows that Portuguese firms are beginning to understand that quality is an important aspect of competitiveness.



### **V.2.7 Programme 7 - Publicity, implementation and monitoring**

This programme of technical assistance was one of the keys to PEDIP's success.

The opportunities offered by PEDIP were widely publicized. Studies, including assessment studies, were carried out which meant that certain measures could be modified as the programme developed; an information system was developed for the management of PEDIP allowing the funds allocated to be used at 100%; the monitoring and auditing system set up minimized irregularities and ensured recovery of undue payment.

### V.3 Implementation (major areas)

Table VII gives the breakdown of approved projects for each of the major areas provided for:

**TABLE VII**

**Investment and Incentives (major areas)**

AREA/PROGRAMME		INVESTMENT (ECU MILLION)	INCENTIVE (ECU MILLION)
Innovation and Technological Development	Prog. 1	260,6	233,6
	Prog. 3	1912,4	369,3
	Prog. 6	197,8	94,2
	PITITE	137,9	51,8
	PRODIBE	142,6	38,0
	<b>TOTAL</b>	<b>2651,4</b>	<b>786,8</b>
Industrial quality and design	Prog. 1	24,8	18,3
	Prog. 3	139,7	49,5
	Prog. 6	88,7	64,9
	<b>TOTAL</b>	<b>253,2</b>	<b>132,7</b>
Human resources	Prog. 1	19,4	14,9
	P 2	305,7	214,5
	<b>TOTAL</b>	<b>325,2</b>	<b>229,5</b>
Protection of the environment	Prog. 1	109,4	68,9
	Prog. 3	107,6	31,4
	<b>TOTAL</b>	<b>217,0</b>	<b>100,3</b>

The table shows that innovation and technological development received the greatest amount of PEDIP support: almost 50% of the total value of the projects approved and 45% of the incentives.

The importance of the measures relating to quality and design improvement and PEDIP's contribution to the implementation in Portugal of Community Directives concerning the environment must be emphasized.

### V.4 Budget execution

Since PEDIP was financed from several sources (ERDF, ESF and AH) which are administered separately, we will look at each source in turn:

#### V.4.1 The additional heading

The execution of the budget can be looked at from two angles.

Firstly, the execution of the programme vis-à-vis the Community budget, which shows the extent to which the appropriations entered in the Community budget have been used, as commitments or payments.

Secondly, analysis of the internal execution of the programme, i.e. commitments and payments made by the Portuguese authorities to the final beneficiaries.

#### V.4.1.1

The table below shows that 100% of the appropriations entered in the Community budget, whether as commitments or payments, were used for five consecutive years during the programme's implementation.

**Table VIII**  
**PEDIP - Commitment and payment appropriations up to 31.12.92**  
**Additional Heading**

Ecu Million

<u>Year</u>	<u>Commitments</u> <u>entered in</u> <u>budget</u>	<u>Made</u>	<u>Payments</u> <u>entered in</u> <u>budget</u>	<u>Made</u>
1988	90.0	90.0	45.0	45.0
1989	103.5	103.5	80.0	80.0
1990	108.8	108.8	101.0	101.0
1991	119.8	119.8	114.4	114.4
1992	127.7	127.7	121.6	121.6
<b>Sous-total</b>	549.8	549.8	462.0	462.0
1993-1994			87.8	*
<b>TOTAL</b>	549.8	549.8	549.8	*

\* not yet made

Further details are given in Table IX below.

The amounts requested by the Portuguese authorities were sometimes higher than the amounts entered in the budget, therefore some projects had to be postponed until the following years when new funds could be transferred.

**TABLE IX**  
**USE OF PAYMENT APPROPRIATIONS BY PROGRAMME**

(situation on 30/09/93)

(Mecu's)

PROGRAMMES	COMMITMENTS		PAYMENTS		
			1 <sup>st</sup> Advance	2 <sup>nd</sup> Advance	Balance
1. BASIC AND TECHNOLOGICAL INFRASTRUCTURE	6,05 (89/90)		3,025 (89)	1,815 (91)	1,210 (91)
	9,050 (91)		4,525 (91)	2,715 (91)	1,81 (93)
	14,880 (92)		7,44 (92)	4,464 (92)	2,976*
2. VOCATIONAL TRAINING	6,71 (89/90)		3,355 (89)	2,013 (89)	1,342 (92)
	4,20 (91)		2,100 (91)	1,260 (92)	0,84 (93)
	1,270 (92)		0,635 (93)	0,381*	0,254*
3.1. SINPEDIP	37,10 (88)		18,55 (88)	11,13 (89)	7,42 (89)
	66,65 (89)		31,257 (89)	22,063 (90)	4,523 (90)
					8,807 (91)
	71,92 (90)		35,960 (90)	21,576 (91)	14,384 (91)
	62,76 (91)		31,380 (91)	18,828 (92)	12,552 (92)
	54,35 (92)		31,275 (92)	1,571 (92)	10,870*
			10,634 (93)		
3.2. SIURE	2,02 (89)		1,01 (89)	0,606 (90)	0,404 (91)
	2,17 (90)		1,085 (90)	0,651 (91)	0,434 (92)
	3,300 (91)		1,650 (91)	0,99 (92)	0,66 (93)
	2,170 (92)		1,085 (93)	0,651 (93)	0,434*
3.3.1. WOOL	17,65 (88)		8,825 (88)	5,295 (90)	3,53 (93)
3.3.2. METAL	8,37 (90)		4,185 (90)	2,511 (91)	1,674 (92)
	4,295 (91)		0,230 (91)	1,2885 (92)	0,859 (93)
	8,595 (92)		4,2975 (93)	1,9175 (92)	1,719*
			2,5785 (93)		
3.4. PITIE/PRODIBE	1,26 (89/90)		0,63 (89)	0,378 (91)	0,252 (92)
	8,47 (91)		4,235 (91)	2,541 (92)	1,694*
	2,29 (92)		1,145 (93)	0,687*	0,458*
4. FINANC. ENGIN.	33,0 (88)		16,5 (88)	16,5 (89)	
5. PRODUCT DRIVES .	10,9 (89)		5,45 (89)	3,27 (90)	2,18 (91)
	16,29 (90)		8,145 (90)	4,887 (91)	3,258 (92)
	20,195 (91)		10,0975 (92)	6,0585 (92)	4,039 (93)
	23,445 (92)		11,7225 (93)	7,0335 (93)	4,689*
6. QUALITY IMPROVEMENT	7,5 (89)		3,75 (89)	2,25 (90)	1,5 (91)
	7,44 (90)		3,72 (90)	2,232 (91)	1,488 (92)
	5,520 (91)		2,760 (91)	1,656 (92)	1,104 (93)
	17,240 (92)		7,32 (92)	5,172 (93)	3,448*
				1,3 (93)	
7. PUBLICITY, IMPLEMENTATION MONITORING	2,25 (88)		1,125 (88)	0,675 (89)	0,45 (90)
	2,41 (89)		1,205 (89)	0,723 (90)	0,482 (91)
	2,61 (90)		1,305 (90)	0,783 (91)	0,522 (92)
	2,010 (91)		1,005 (91)	0,603 (92)	0,402 (93)
	3,46 (92)		1,73 (92)	1,038 (92)	0,692*
<b>TOTAL</b>	<b>549,8</b>		<b>273,7145</b>	<b>171,6575</b>	<b>76,126</b>
	<b>TOTAL PAYMENTS</b>			<b>521,498</b>	
	<b>* : Not yet paid</b>			<b>28,302</b>	

#### V.4.1.2

On an internal level, we must look at:

- the administration's commitments to the promoters of approved projects, corresponding to the value of the incentives approved;
- the payments made to promoters of projects, completed or under way, either as advances or as reimbursement of expenses incurred.

Table X shows that commitments exceeded 34% of the additional heading because they included projects to be financed by ERDF in 1993 .The payments, totalling ECU 593 million, accounted for 83% of the appropriations entered in the budget.

TABLE X

**Implementation of the Budget  
(situation on 30.12.1992)**

(Mecu's)

<b>PROGRAMMES</b>	<b>BUDGET (1988-92)</b>	<b>COMMITMENTS APPROVED (*)(**)</b>	<b>PAYMENTS</b>
1. Basic and technological infrastructure	39.980	41.396	28.756
2. Vocational training	16.250	27.485	13.064
3.1 SINPEDIP	390.360	572.709	351.380
3.2 SIURE	12.900	14.789	8.405
3.3.1 Restructuring of the metal industry	23.550	23.674	24.101
3.3.2 Restructuring of the metal industry	28.350	33.966	14.233
3.4 Support for specific industries	16.050	21.059	6.354
4. Financial engineering	44.000	44.000	44.000
5. Productivity drives	94.450	127.821	59.397
6. Quality and design improvement	50.270	62.046	34.061
7. Publicity, implementation and monitoring	12.740	11.526	10.017
<b>TOTAL</b>	<b>728.900</b>	<b>980.471</b>	<b>593.768</b>

(\*) Average exchange rate used : 1988, 1989, 1990, 1991, 1992: 1ECU = 175\$00. For Programme 4 the exchange rate applicable on the date of the transfer was used.

(\*\*) The commitments include projects with conditions and projects to be financed by ERDF in 1993.

## V.4.2 ERDF contributions

### Programme 1

In October 1987 the Commission decided to allocate 400 MECU from the ERDF to Improve the Competitiveness of Portuguese Industry in the framework of PEDIP. In 1988 13.157.433.000 Escudos (76.880.000 ECU) were committed for individual projects under the then existing ERDF Regulations. Until 31st October 1993 11.710.618.017 Escudos (89%) had been paid out by the Commission on the basis of expenditure declarations made by the Portugueses authorities.

On 13th July 1989 the balance of the 400 MECUs, an amount of 323,120,000 ECU, was fixed as the ERDF contribution to tprogramme n° 1. In June 1993 it was decided by the Monitoring Committee of PEDIP to transfer 17 million ECU from Programme 1 to Programme 3.1 (Sinpedip) thus reducing the total amount committed to this programme by the ERDF to 306.120.000 ECU.

The situation of Commitments and Payments as of 31st December 1993 wsill be:

	<b>Commitments</b>	<b>Payments</b>	<b>in ECU</b>
1989/1990	49.791.375	49.791.375	
1991	96.250.000	96.250.000	
1992	66.608.625	66.608.625	
1993	93.470.000	88.376.000	
1994*	-	5.094.000	
<b>TOTAL</b>	<b>306.120.000</b>	<b>306.120.000</b>	

### Programme 3.1

Following a proposal of the Monitoring Committee of the Community Support Framework for Portugal the Commission decided on 17th June 1992 to transfer 45 million ECU to Programme 3.1 (Sinpedip) from the ERDF. This was reinforced by a further 19.5 million ECU fro the ERDF in 1993 in addition to the amount transferred from Programme 1 (cf. subrs). The total ERDF support for Sinpedip thus became 81.5 million ECU.

The situation of commitments and payments as of 31st December 1993 will be as follows:

	<b>Commitments</b>	<b>Payments</b>	<b>in ECU</b>
1993	81.500.000	36.500.000	
1994	-	45.000.000	
<b>TOTAL</b>	<b>81.500.000</b>	<b>81.500.000</b>	

## V.4.3 ESF contributions

The ESF contribution to programme 2 (vocational training):

1989 During this transitional period applications for funding were submitted in

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\* 1994 is a forecast

accordance with Council Regulation (EEC) No 2950/83 of 17.10.1983 and approved by Commission Decision No C(89) 0570 of 22.03.89. Details are given in the table below:

Dossier	Requested	Approved	Committed	Spent	
890011P1	1.145.381	1.145.381	1.145.381	947.124	
890011P3	15.883.180	15.883.180	15.883.180	4.496.348	
<b>1989 TOTAL</b>	<b>17.028.561</b>	<b>17.028.561</b>	<b>17.028.561</b>	<b>5.443.472</b>	<b>ECU</b>

**1990/93** By Decision C(90) 587 of 29.03.90 the Commission adopted PEDIP's programme 2 for the period 1990-92, with an ESF contribution of ECU 83 million.

Since the Portuguese CSF covers the period 1989-93 the Portuguese authorities asked for PEDIP's programme 2 to be extended until 31.12.93 so that it could fit in with the CSF (Decision C(91) 1057 of 31.12.91).

In view of the problems which arose in 90/91 in connection with the programme's execution, the Commission decided, on a proposal from the CSF Monitoring Committee, to increase the ESF contribution from 65% to 75% of total public expenditure (Decision C(93) 2153 of 7.10.92) and to reduce the amount of the ESF contribution by ECU 11 million (Commission Decision C(93) 712 of 23.04.93).

After these changes had been made and the deflator applied to the various instalments the financial execution of PEDIP could be summarized as follows:

	Initial Plan 89 Prices	Initial Plan Indexed	Current Plan 93 Prices	Amount Committed	Amount Spent
1989	17,029	17,029	17,029	17,029	5,443
1990	23,576	24,519	7,525	24,519	7,525
1991	26,558	28,780	16,305	6,819	16,305
1992	32,865	38,008	24,029	27,765	24,029
1993			35,586	24,342	35,586*
<b>INSGEZA MT</b>	<b>100,028</b>	<b>108,336</b>	<b>100,474</b>	<b>100,474</b>	<b>88,888</b>

\* Estimated Expenditure

## V.5 Auditing results

Table XI below shows the audits referred to in point IV.7.

On 31.12.92, 5 736 first and second level audits had been carried out on 4 344 projects (59% of the projects approved), corresponding to 79% of the funds invested and 74% of the incentives. In 1993 auditing will continue, to cover all the projects.



TABLE XI

## Auditing

Programme /Body	Year	PROJECTS AUDITED			% of projects approved
		Number			
		Level 1	Level 2	TOTAL	
1-GEP	1990	-	-	-	
	1991	11	1	12	
	1992	49	4	53	
<b>Sub-total</b>		60	5	65	17%
2-INETI	1990	158	41	199	
	1991	60	5	65	
	1992	153	20	173	
<b>Sub-total</b>		371	66	437	55%
3-IAPMEI	1990	519	204	723	
	1991	531	255	786	
	1992	812	164	976	
<b>Sub-total</b>		1862	623	2485	69%
5-DGI	1990	260	16	276	
	1991	369	29	398	
	1992	306	45	351	
<b>Sub-total</b>		935	90	1025	63%
6-IPQ	1990	49	10	59	
	1991	98	17	115	
	1992	147	11	158	
<b>Sub-total</b>		294	38	332	44%
<b>TOTAL</b>		3522	822	4344	61%

N.B. The table does not include the auditing of the two venture capital companies or auditing done this year.

During auditing, various types of irregularity were detected.

The PEDIP Office divided them into two major categories:

- infringements of PEDIP legislation
- fraud

The first group covers a wide range of infringements, e.g.:

- accounting system which does not allow the project's effects to be singled out
- failure to publish the incentive
- incentive incorrectly recorded
- accounting delay
- failure to comment on the project's effects in the report
- delay in finishing the project

In such cases, the firm was notified so that it could take the appropriate corrective action, aid was suspended and, where necessary payments already made were recovered.

The auditors found 16 cases of suspected fraud. Investigations were carried out by the Portuguese authorities and the results were as follows:

four cases unconfirmed, three other cases were regarded as mere anomalies without fraud and corrected, the other cases led to cancellation of contracts and the recovery of funds, or are still being investigated. The total amount of incentives in question is 327 million escudos (approx. ECU 1.8 million) i.e. 1% of total incentives approved. The system of contract guarantees set up by the PEDIP Office will enable all the funds granted to firms found guilty of fraud to be recovered.

We can conclude that the auditing and monitoring system set up, covering the fields of activity of all the establishments/bodies involved and providing for coordination between them, enabled the main aims to be achieved: guaranteeing strict monitoring of the application of the rules, checking that the projects were actually being carried out, in accordance with the financial plan, assessment of the projects' achievements.

## **V.6 Compliance with Community policy**

### **V.6.1 Public procurement**

Specific clauses on compliance with public procurement rules were included, where appropriate, in the contracts with project promoters who received PEDIP funding.

This was also looked at by the auditors.

### **V.6.2 The environment**

Two strategies were adopted for ensuring compliance with Community Directives:

Firstly, projects which might conflict with national and Community environmental policy were not included in PEDIP. For a certain number of projects, the promoters were asked to carry out environmental impact studies.

Secondly, direct support was provided for projects which would help preserve the environment or minimize the impact of industrial activity on the environment.

### **V.6.3 Competition**

Competition rules were complied with in two ways: firstly, all the programmes and any changes to programmes were notified to the Commission; secondly, the same project selection criteria were used for all firms.

### **V.6.4 Big projects**

All big projects, i.e. industrial projects involving investment over ECU 10 million, and infrastructure projects with investment over ECU 15 million, were the subject of prior ad-hoc notification to the Commission, which examined them and delivered a binding opinion.

### **V.6.5 Sensitive sectors and sectors in critical difficulty**

All projects in sectors in critical difficulty (steel - NACE 221 and 222, shipbuilding - NACE 361 1/2 and synthetic fibres - NACE 260) were notified to the Commission, which delivered a binding opinion.

For investments projects in sensitive sectors, an information system was set up and an annual report was sent to the Commission.

Annual reports were prepared on the following sectors: textiles/clothing, footwear, vehicle parts and mass-market electronics. The information included the name and location of the firm, the amount of the investment and of the aid and analysis of the overall effects of the investment on production capability at national and Community level.

## **VI ASSESSMENT**

## VI ASSESSMENT

### VI.1 Pre-PEDIP studies

Following the decision of 14 October 1987, the Commission, with a view to preparing all the measures to support Portuguese industry, launched a series of study contracts to assess the situation and determine where aid was required:

The following studies were done by consultants:

- "Method of cofinancing SME investments"
- "Analysis of mutual guarantee schemes"
- "Forward study on the modernization of Portuguese industry"
- "The preparation of young people for work and adult life"
- "Vocational training and rural development"
- "Technological training and industrial development"
- "Development of vocational training guidance and advisory structures"
- "Urgent infrastructure needs of Portuguese industry in the fields of science, research and technological development"
- "Preparatory study for the manufacturing actions"
- "Identification of basic infrastructure needs of Portuguese industry, within the framework of a future regional development plan"
- "Pilot scheme for cooperation between Portuguese and Spanish SMEs, to promote modernization"

The Commission also cofinanced a study launched by the Portuguese authorities on "The restructuring of the system for standardizing and certifying industrial products in Portugal".

### VI.2 Assessment studies

When the various programmes were being negotiated, the Commission and the Portuguese authorities agreed that thorough assessment was necessary to measure the effectiveness of public aid.

Consequently, on 7 November 1989 the Monitoring Committee formally decided to participate in the assessment activities being prepared by the PEDIP manager. A Task Force was set up to monitor assessment, composed of a representative from the Ministry of Industry's Studies and Planning Office, a representative from the PEDIP manager's office and a representative from DG III.

It was decided that the assessment of PEDIP should be divided into three sections: analysis of the macroeconomic impact of the programme, done by the Studies and Planning Office, which is behind schedule at the moment; an ex-ante assessment of PEDIP's relevance and effectiveness followed by an ex-post assessment, carried out by a firm of consultants - CESO - in collaboration with a university research centre - CISEP - selected by open invitation to

tender.

The following information is based on the study of PEDIP's relevance and effectiveness, the only one completed to date.

### **VI.3 Assessment of PEDIP's relevance and effectiveness**

The consultants took their information from the application forms submitted by economic operators whose projects had been approved. The study is therefore based on the promoters' intentions and not what they actually did. A follow-up study is now being done to complete the analysis and confirm, on the basis of surveys of firms which have finished their projects, whether or not the conclusions of the relevance study are correct.

The reason for doing an assessment study is to determine how and to what extent PEDIP has penetrated industry and the extent to which the programme's objectives have been achieved.

#### **VI.3.1 Penetration of PEDIP into industry**

The team looked at 7 023 projects supported by PEDIP, representing investment of approximately 1 056 billion escudos, with subsidies totalling 322 billion escudos.

Of the total amount invested 62.7% was spent on productive investment projects, 13.7% on basic and technological infrastructure, 4.6% on human resources, 11.6% on risk capital operations and 6.3% on investment relating to complex competitiveness factors (productivity and quality).

Since the programme began, there have been an increasing number of applications to participate in the quality improvement and productivity programmes and for support for productive investment in strategic areas (technological development, environmental protection and quality management) and sectors, which meant that the budgets for these programmes had to be increased, at the expense of the hard incentives programmes.

As regards the distribution of funds by type of economic operator, firms received 68%, educational and research establishments 20.6% and trade associations 8.2%.

Firms supported by PEDIP accounted for 42% of Portugal's industrial employment. The study found that the distribution of PEDIP firms by volume of employment does not reflect the structure of Portuguese industry: firms with over 100 workers are over-represented and firms with less than 50 workers are under-represented. This may mean one of two things: either that not many very small firms applied for PEDIP support, or that they did apply but the eligibility criteria were too strict, which would justify the setting-up of a specific incentives scheme for this type of firm.

As regards industrial sectors, traditional industries are under-represented (textiles and forestry-related sectors) and "modern" industries are over-represented (metal, electrical goods) This suggests that PEDIP has encouraged Portuguese industry to move forward into new sectors.

#### **VI.3.2 PEDIP firms and the rest of industry**

The study showed that PEDIP firms were more dynamic and "healthier" than other Portuguese firms. This dynamism, especially where investment was concerned, made their financial structure more vulnerable, because they had higher costs than other firms.

As regards international trade, PEDIP firms exported more, although the figures fell as new

projects were approved.

As regards human resources, less upward pressure on wages and higher average wage costs were recorded. This was the result of higher productivity, which offset the burden of increased wage costs. Under PEDIP the distribution of added value is thus favourable to firms.

### **VI.3.3. Access to PEDIP**

A fairly wide range of sectors are represented within PEDIP. This diversity indicates that PEDIP, while supporting traditional industries, also encouraged the development of new industries in Portugal.

The best-equipped firms invested in a wider range of initiatives (marketing, training, quality improvement, etc.) and the most productive firms were those which concentrated most on productivity drives. However, the firms most linked to foreign markets did not sufficiently coordinate productive investment measures with measures taken in strategic areas linked to productivity.

The study divided projects into four major groups:

- (a) "offensive projects" which could make Portuguese industry much more competitive;
- (b) modernization projects geared to improving management techniques, but not designed to improve competitiveness;
- (c) "defensive projects", involving investments which would give little return, to restructure sectors in critical difficulty or with little scope for innovation and modernization;
- (d) infrastructure projects and projects concerning the industrial environment, not promoted by firms and which would have an indirect impact on competitiveness.

The major investment in infrastructure and projects concerning the industrial environment (18% of investments and 34% of incentives) will have a positive impact not only on PEDIP firms but on manufacturing industry as a whole.

More money was spent on "offensive" projects (over 40% of investments) than on "defensive" projects (35%). As regards the number of projects, the reverse was true.

The investment in both modernization and "offensive" projects should contribute to the structural transformation of Portuguese industry.

### **VI.3.4 Anticipated effects and actual achievements**

- (a) Rationalization of investment

PEDIP, through a wide range of support measures, encouraged entrepreneurs to shift to new investment aims. Instead of focusing almost exclusively on productive investment (modernization and increasing productive capacity) they tried to focus on other important elements, i.e. complex competitiveness factors. 2 600 projects costing 111 000 million escudos were supported by investments which were not directly productive.

- (b) Increasing innovation potential

Most PEDIP firms benefited from the opportunities to innovate offered by the various measures. An improvement in the technological level of equipment and human resource skills is therefore expected.

Under PEDIP, large sums of money were allocated for the improvement of know-how in firms, in particular sectors where production is more technology-intensive, and for the diversification and strengthening of Portugal's technological infrastructure. It also supported a significant number of R&D projects in advanced fields of technology. It is therefore expected that projects carried out by the most dynamic firms with the best qualified staff will serve as a model for the rest of Portuguese industry.

#### (c) Stimulation of industry-based research and development

PEDIP supported industrial research in two ways:

- indirectly, by creating or strengthening the technological infrastructure which is the basis for development and the use of new technologies and is the interface between universities and firms;
- directly, by helping firms to acquire and develop new technologies.

Institutes of new technology, technology centres and transfer centres received 70% of the 60 billion escudos spent by PEDIP on technological infrastructure. Investment in the acquisition and development of industrial technology was greatest in the field of advanced technologies (information technology, communications and electronics), in particular new products and processes.

The effects of this investment will be felt only in the medium-term and will mainly concern quality improvement, technological support for firms, quicker technology transfer and the development of new technologies.

As far as supply is concerned, PEDIP has done what it set out to do. Action must now be taken to encourage firms to take advantage of these opportunities.

#### (d) Increasing productivity

The consultants calculated that the average growth rate of PEDIP firms was now 5%, with a 2.4% increase in employment. These two figures point to rapid economic growth.

More particularly, the productivity growth figures of firms which benefited from demonstration activities ("soft" aid to improve complex competitiveness factors) should be even more significant. The study gives them an annual growth rate of 11%.

Firms with over 500 employees have better productivity levels, higher average wages and a more unequal distribution of added value.

#### (e) Quality improvement

Three types of action were taken: strengthening of the national quality management system, general support for firms in the field of industrial quality and design and support for investment in quality management.

Despite the high cost of infrastructure, it should be pointed out that 70% of the investments in



quality improvement were promoted by industrial firms.

Portuguese quality management has been given a considerable boost. 3 200 million escudos were spent on setting up a basic metrology network. 108 other testing and metrology laboratories were supported with 7 700 million escudos. Sectoral standardization, certification and auditing bodies also received PEDIP support.

(f) Diversification of production

According to the assessment study, industry tended to disregard this objective. Not much attention was focused on the introduction of new products or the improvement of the technological content of existing ones. However, PEDIP did support a significant number of investments in the development of new "specialization poles", especially in the metal industry.

(g) Human resources

Considerable attention was focused on bridging the gap between the qualifications provided by the formal education system and the requirements of industry: 70% of training project incentives focused on this problem.

20% of the incentives went on retraining and further training in new management methods and new technologies.

(h) Rational use of energy

Programme 3.2 (SIURE) mainly benefited firms which consume large amounts of energy (paper and chemicals industries, etc.)

Annual energy savings of 30% of the investment are expected in energy efficiency projects (concerning the production of energy from renewable resources or combined heat and electricity production techniques).

Innovation and modernization projects supported by SINPEDIP also helped reduce energy consumption, since energy efficiency was one of the eligibility criteria for these projects.

(i) Development of industrial cooperation

Under programmes 5 (Productivity) and 6 (Quality) industrial cooperation projects received 7% of incentives for investment covering 10% of the total number of projects carried out under these two programmes.

Over 50% of projects concerned trade association activities. The highest number of projects was in the metals industry (12.5%): these were partnership and subcontracting projects.

(j) Modernization of management

Three types of action were taken to modernize management. Firstly, it was an aspect of the major innovation/modernization projects supported by SINPEDIP. Secondly, two-thirds of the support provided under the training programme, where Portugal's largest industrial sectors (textiles and the metal industry) were well represented, focused on this objective.

Finally, under the "Productivity drives" programme, 16% of projects and 7% of incentives also concerned the modernization of management. The demonstration activities which were

part of this programme also contributed indirectly to achieving this objective.

(k) Strengthening of technical assistance

Two programmes made a major contribution to the reinforcement of technical assistance:

Programme 1.2 - Technological infrastructure - helped create the basic infrastructure needed by suppliers of services to industry.

Programme 5 - Productivity - directly supported technical assistance to firms. Thus, 489 activities representing 57% of programme 5 incentives were cofinanced. The programme also helped set up 75 "centres of competence", directly providing 3 000 jobs, mostly for technical staff.

(l) Market access

More attention was focused on the participation in or organization of fairs in Portugal or abroad than opening offices outside the country, indicating that trade is considered more important than internationalization in the wider sense. Trade associations were extremely interested in this aspect of the programme and submitted a large number of projects concerning their respective sectors which received 50% of the funds.

The metal industry submitted the largest number of projects concerning access to external markets. Sectors traditionally geared to export (textiles/clothing, footwear and furniture) also made substantial investments in this field.

## VI.4 PEDIP studies

In addition to the studies already mentioned, many other studies were also carried out while PEDIP was being implemented:

- Overall assessment study of PEDIP publicity - GLOBAL
- Feasibility study on the setting-up of cooperation networks - DANSK TEKNOLOGIK INSTITUTE
- Study to devise a training programme for the wool industry - NORMA/EGF
- Study on the relevance of the PEDIP training programme to industry NORMA
- Study of a microelectronics and electronics project - CONSULTRONIQUE
- Study of the effectiveness of the support given to SMEs by associative structures - TECINVEST
- Assessment study of the change in entrepreneurial strategies as Portuguese industry is modernized - COOPERS AND LYBRAND
- Study of the strategic development of technological infrastructure COOPERS AND LYBRAND
- Vocational training requirements in the wood and furniture industries CFPIMM
- Response to programme 2 from sub-sectors of the wood industry G. TOURNIER

- Response to programme 2 from sub-sectors of the food industry G. TOURNIER
- Identification of vocational training needs in the sub-sectors of the food industry - CIDECE
- Human resources assessment study (information technology and electronics) - TDC, FUNDETEC, DINAMIA
- Assessment study of the training provided in schools and vocational training establishments (information technology and electronics) - COOPERS & LYBRAND
- Study to assess training needs for the introduction of IT in firms (flexible automation) - TDC, FUNDETEC, DINAMIA and COMPTA RH
- Microelectronics and components - CONSULTRONIQUE
- Computer-assisted manufacturing (CIM) - CONSULTRONIQUE
- The software and information industry - BIS MACKINTOSH
- The electronic telecommunications industry - BIS DECISIONS STRATEGY
- Electronic equipment/automobile electronics - SRI INTERNATIONAL
- Qualified human resources and training for the capital goods industry NORMA, TECINVEST/EGS
- Study of the timber processing equipment sector - F. ROLIN
- Survey of metal working equipment production - GAPE
- Survey of agricultural equipment production - GAPE
- Survey of quarrying and building equipment production - GAPE
- Survey of timber processing equipment production - GAPE
- Survey of the production of equipment for the ceramics and glass industries
- Survey of the production of lifting, handling and packaging equipment production
- Survey of the production of equipment for the food industry - GAPE
- Survey of the production of equipment for the textiles/clothing and tanning/footwear industries - GAPE

## VI.5 CONCLUSIONS

1. Although PEDIP is still running (ERDF and ESF Programmes) and the full effects of the programme will not be felt immediately, we may nevertheless conclude that it has been a success at several levels.

All the PEDIP instruments and measures have set in motion or speeded up fundamental change in three areas:

- the business environment

- the efficiency of production
- entrepreneurs' approach to complex competitiveness factors

As regards the business environment, PEDIP has helped create the basic conditions for the harmonious development of firms, especially SMEs, by filling the gaps in other sectoral policies (science, training, environment, etc.) and developing support services for industry (technological and other infrastructure). PEDIP has also paved the way for quicker transfer of scientific and technological know-how to firms.

As regards training, PEDIP has enhanced the skills of senior and middle-ranking executives and corrected deficiencies that would have been difficult to correct through the normal education system .

The programme has strengthened the capability and effectiveness of trade associations in all regions of the country.

It has helped improve business financing in general, and for SMEs in particular.

As regards production, PEDIP has speeded up modernization in traditional sectors of Portuguese industry and boosted investment in sectors with significant technological potential.

It has encouraged Portuguese industry to move, albeit slowly, into new areas of specialization.

The programme has encouraged firms to take steps to improve their competitiveness and reduce wastage of raw materials and energy resources.

It has reduced firms' dependence on cheap labour, until now the most important factor in competitiveness.

It has encouraged firms to innovate more rapidly.

It has also led to a significant increase in investment by firms in quality, design, innovation, protection of the environment and safety in the workplace.

Finally, PEDIP has enabled a large number of firms to become financially stable.

PEDIP has also made entrepreneurs aware of the importance of investing in training, productivity, quality, design, innovation and marketing.

2. As regards PEDIP's macro-economic effects, subject to the conclusions of the study now being carried out on the programme's real impact on the Portuguese economy, it may already be said that PEDIP has made a significant contribution to changing a number of indicators.

Since accession Portugal's unemployment rate has fallen from 10.9% to 4.8% in 1992.

The trend in the annual rate of growth in investment has been reversed, moving from -3% to 3.2% in 1992.

The capacity to attract direct investment from abroad has significantly increased: from 1% of GDP to 5.1% in 1992.

Over the same period GDP at current prices rose from ECU 27.1 billion to ECU 65.2 billion per inhabitant and from 27.0 to 43.5 (EC=100).