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TECHNOLOGICAL SUPPORT FOR THE SMALL AND MEDIUM SIZE ENTERPRISES (SMSE) IN GREECE *

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CONTENTS

In this statement, I shall attempt to describe the ways in which technological development in the area of small and medium undertakings and industries is at present promoted in Greece.

Responsibility for planning and policy with regard to technology and for its practical application is assumed either by institutions of the Greek State, such as the Ministry of Industry, Energy and Technology, or by organizations operating under State sponsorship, such as the Greek Organization for Small and Medium Undertakings and Industries and the Greek Productivity Centre.

1. General Research and Technology Secretariat

In view of the vital importance of research and technology for the national economy, as from 1982 the Greek Government set out to reorganize the administrative structures involved. To begin with, it established a Ministry of Research and Technology, converted subsequently into the General Research and Technology Secretariat attached to the Ministry of Industry.

This is made up of seven directorates with clearly defined and complementary objectives:

- Directorate responsible for scientific policy;
- Directorate responsible for financing research projects;
- Directorate responsible for international co-operation;
- Directorate responsible for research institutes;
- Directorate responsible for technological applications;
- Directorate responsible for research and technology documentation and information;
- Directorate responsible for administrative services.

The objectives of the Secretariat include:

- Launching a five-year plan to develop research and technology;
- Financing research and technology;
- Co-ordinating the various agencies involved in promoting technological development;
- Encouraging collaboration between higher education and industry;
- Testing new forms of organization and management in the private sector;
- Preparing studies in connection with the aims indicated above.

Once this arrangement had become operational, we devoted ourselves to the appropriate laws and regulations. These have been brought into force, one example being the law regarding research institutes.

The areas in which the Secretariat is competent include follow-up of technology transfer and the development of industrial know-how in Greece, deriving the greatest possible benefit from international co-operation in respect of science and/or technology.

Moreover, the Secretariat promotes and provides financial support for innovation and applications and circulates information throughout the country. In order to give better support to industry in general and the technological updating of traditional branches of industry, the Secretariat has also established a network of specialized centres for industrial research.

Metallurgy, shipbuilding and textiles were initially chosen as pilot sectors.

The centre for metallurgy or, more precisely, the "Centre for Industrial Research and Technological Development of Metals" is now in the construction stage after having been a subject of study in collaboration with the relevant institutes and undertakings.

We hope that the other two centres, "Centre for Industrial Research on Textiles" and the "Marine Technology Development Company", will soon come into being. This is expected to happen next year. For the success of the operation we are counting on the assistance of other agencies in Greece and abroad. The aim is to provide technical support for undertakings and to develop fresh production and management approaches in their sector.

Similar studies, which could lead to the setting up of other centres or merely to the establishment of quality control laboratories, are under way in other industrial sectors, such as refractory materials, dairy products, agricultural machinery and data processing.

At the same time, efforts are being continued to introduce ways of re-orienting and co-ordinating research with a view to restructuring branches of industry that are not internationally competitive.

An important advance in this direction has been made by the "oriented research" financing programme (PROPE) and the programme to develop "industrial research" (PAVE).

Until now, Greek industry has been unable to keep up with international technological changes in methods of production and automation.

In addition, higher education establishments and research institutes were principally concerned with activities that had nothing to do with the production process. The "oriented research" financing programme has enabled us to set up a system for channelling the work done by scientific personnel to specific targets and for encouraging mutual collaboration among such personnel.

Secondly, we have established means of evaluating and utilizing the results of research programmes aimed at industry. The main objective of this programme is the creation of a technical and material infrastructure and a pool of manpower in a flexible system that is ready to cope with the country's technological needs.

At the same time, the industrial research development programme supports the establishment of research and development focal points within industry. The ultimate target is the creation of new products or even "new production methods for new products" with considerable added value, as well as the enhancement of industrial productivity and of the competitiveness of products manufactured in Greece.

The means of evaluating the advanced technology investments is a separate matter. It is intended to assist the country's development through investments with up to 15 per cent State subsidy.

The patent office comes under the General Research and Technology Secretariat. A commission has also been set up to assess and evaluate inventions. The patent office has become involved in the gathering, processing and circulation of data contained in patents. Training programmes are being conducted for old and new staff and for users.

2. Research institutes

I shall deal only with research establishments that come directly under the General Secretariat and provide technical back-up to the industry concerned. They are classified in four categories:

I. National research centres

- Demokritos National Physical Sciences Research Centre

II. Research institutes

- Greek Pasteur Institute

- Alexander Flemming Fundamental Biological Research Institute

III. Higher education research centres

- Crete Research Centre

IV. Independent higher education institutes

- Chemical Engineering Research Institute

- Computer Technology Research Institute.

It is also worth mentioning here that there are plans for a new Centre to be responsible for the utilization of the so-called new energy sources. There are also other Institutes which report to other Ministries.

3. Greek Agency for Small and Medium Undertakings and Industries (EOMMEH)

Before looking at other bodies concerned in the development of small and medium undertakings and industries it is essential to have some details regarding the country's true economic position. We therefore use the following criteria to describe a small or medium undertaking:

(a) Staff of not more that 50 persons;

(b) Three-year turnover not exceeding 180 million drachmas or 10 million drachmas per person employed (this is the minimum figure used);

(c) The owner runs the business himself.

It should be noted that 97 per cent of undertakings in Greece fall into this category. To be more precise, 94 per cent of undertakings have up to nine employees and only 3 per cent have between 10 and 50 employees. In all, they account for 60 per cent of the work force but cover only 40 per cent of total production output. They usually employ traditional production and management procedures. They are faced with the following problems:

- Limited opportunity to exploit the domestic market;
- Lack of competitiveness;
- Export difficulties;
- Excessive management costs;
- Need to modernize installations;
- Special staff training requirements;
- Lack of information on national and European financing possibilities;
- Products sometimes not sufficiently reliable because there is no systematic quality control;
- Lack of product advertising and promotion;
- Lack of productive investments, etc.

The banks offer the small and medium undertakings the following financing possibilities to cope with their economic problems:

- Loans of up to 30 per cent of turnover;
- Long-term loans of up to 70 per cent for new investments, but with a ceiling of 60 million drachmas.

The State guarantee is:

- Up to 3 million drachmas: 100 per cent
- From 3 to 6 million drachmas: 80 per cent
- From 6 to 60 million drachmas: 60 per cent.

Efforts to assist small and medium undertakings to overcome their difficulties are co-ordinated by the Greek Agency for Small and Medium Undertakings and Industries.

The objectives to be achieved are:

- Assistance to enable small and medium undertakings to participate in co-operatives;
- Training for supervisory staff in small and medium undertakings;
- Technical and technological support for undertakings;
- Subsidies for new ideas (undertakings or independent inventors) in the manufacture of product prototypes;

- Product promotion through exhibitions in Greece and abroad;

- Assistance in obtaining international patents.

There are three kinds of assistance:

- Advice;

- Technical help;

- Financing.

The way in which the Agency operates allows it to work in close collaboration with the undertakings concerned and with independent inventors and innovators. It can thus provide better circulation of information regarding new ideas and technological development. Furthermore, in order to make its role in the country's development more effective, it has taken the initiative in decentralizing its activities with regard to innovation. In 1983 it established four regional offices. For the time being their role is restricted to evaluation of the problems of local undertakings and dissemination of an understanding of technology in conjunction with local education and research establishments. The experience gained in this manner is appreciable. The campaign has also eliminated the undertakings' initial mistrust concerning the effectiveness of this new approach. It was at this point that the need for information channels developed. For example:

- Information guides on specialists, experts and laboratories for prototype manufacture and quality control, both national and local;

- Lists of undertakings and products manufactured;

- Development of data banks, etc.

There are plans for a network of 50 regional offices. The objectives are as follows:

- Generalization of the concept of innovation;

- Awareness of the needs and problems of small and medium undertakings;

- Establishment of close links between the undertakings and the sources of technology;

- Financial assistance;

- Assistance in solving technical and economic problems.

There are also plans for the setting up of 10 outlying centres for new ideas, with the necessary equipment for quality control, prototype manufacture and access to data banks in Greece and abroad.

Their tasks will be:

- To promote and co-ordinate the various local establishments (production units, co-operatives, local authorities, laboratories, etc.);

- To pursue regional decentralization.

The State contribution is inadequate for this purpose. The participation of banks in risk-capital undertakings is needed. We shall then be able to provide support at all stages in the process of innovation, from research to product launch via the development of new production methods. To date, however, only the two investment banks (ETVA and ETEVA) have shown interest in such risk-capital ventures in a small number of cases.

4. Greek Centre for Productivity

The Centre's ongoing concerns are management and advanced technologies.

The sectors involved are:

- Micro-electronics;
- Data processing;
- Bio-technology;
- New forms of energy.

Among the Centre's activities, mention may be made of:

- The dissemination of information;
- The training of qualified staff;
- The preparation of feasibility studies and technical studies;
- Technical advice;
- The design and development of new products;
- Quality control;
- Standardization in conjunction with the Greek Standards Organization;
- The development of new production methods for sectoral technological advances.