

PANORAMA

Identification of skill needs

Projects and actions for Greece – a review

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Pavlina Karasiotou

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Europe 123
GR-57001 Thessaloniki (Pylea)

Postal Address:
PO Box 22427
GR-55102 Thessaloniki

Tel. (30) 23 10 49 01 11
Fax (30) 23 10 49 00 20
E-mail: info@cedefop.eu.int
Homepage: www.cedefop.eu.int
Interactive website: www.trainingvillage.gr

Edited by:

Cedefop

Manfred Tessaring, Project manager

Published under the responsibility of:
Johan van Rens, Director
Stavros Stavrou, Deputy Director

Introduction

One of the main goals set during the Lisbon European Council in March 2000 was for the European Union (EU) to become the ‘most competitive and dynamic knowledge-based society in the world’ ⁽¹⁾. The development of vocational training is a crucial and integral part of this strategy and the Barcelona European Council, in March 2002 ⁽²⁾, reaffirmed this important role. It gave a mandate to make European education and training a world reference by 2010, and for the development of closer cooperation in vocational training (in parallel to the Bologna process ⁽³⁾ in higher education). An integral part of this process and a prerequisite to its success is the identification, measurement and continual monitoring of skills needs and training requirements from the viewpoint of businesses and employers in general. This dynamic process, which entails many methodological and technical complexities, is vital for the correct design and implementation of education and training systems and programmes. Failure to take into account the close links between demand for and supply of labour and skills, may lead to skill mismatch (a common problem in the European labour markets today), loss of financial and human resources and finally to unemployment and dissatisfaction amongst both employers and employees.

This review seeks to describe the work being done to identify skill demands and design training programmes in or for Greece. It should not, however, be considered as complete or exhaustive. This discussion paper was submitted to the conference Early identification of skill needs in Europe, organised by Cedefop and the German Federal Ministry of Education and Research on 22 and 23 May 2003 in Thessaloniki, Greece. The value of linking the labour market with the educational and training system has only recently begun to be appreciated in Greece and the difficulties encountered in carrying out this review have been considerable.

At this point it is appropriate to thank all those who have given support in various ways throughout the preparation of this paper. Among those are Cedefop, especially the Deputy Director, Mr Stavros Stavrou, and Mr Manfred Tessaring, one of the conference’s organisers, for their moral and financial support, *Facultés Universitaires Saint Louis* which provided the necessary infrastructure, Prof. Ioannis Sakellis (Panteion University) who provided valuable material and Ms Olympia Kaminioti (Employment Observatory Research) for much useful information and Ms Alena Zukersteinova for editing this paper and providing additional useful information.

⁽¹⁾ Lisbon European Council, March 2000. Available from Internet: http://www.europarl.eu.int/summits/lis1_en.htm#a [cited 10.11.2003].

⁽²⁾ Barcelona European Council, March 2002. Available from Internet: http://europa.eu.int/comm/barcelona_council/index_en.html [cited 10.11.2003].

⁽³⁾ Bologna process. Available from Internet: http://europa.eu.int/comm/education/policies/educ/bologna/bologna_en.html [cited 10.11.2003].

The paper is organised as follows. The first part briefly presents some features of the Greek education and training system and the Greek labour market. The second part includes various Greek organisations that are involved in skills identification actions. The third part presents five recent Greek surveys, three completed and two continuing ⁽⁴⁾. The fourth part presents some recent activities and surveys by OECD and Cedefop and finally the fifth part presents conclusions and policy implications.

Pavlina Karasiotou ⁽⁵⁾

⁽⁴⁾ At the time of the completion of this report (May 2003).

⁽⁵⁾ At the time the author is a PhD student at *Université Catholique de Louvain* and receives a scholarship from the State Scholarship Foundation (IKY). She is also a full time member of *Centre de Recherche en Economie (CEREC), Facultés Universitaires Saint Louis*.

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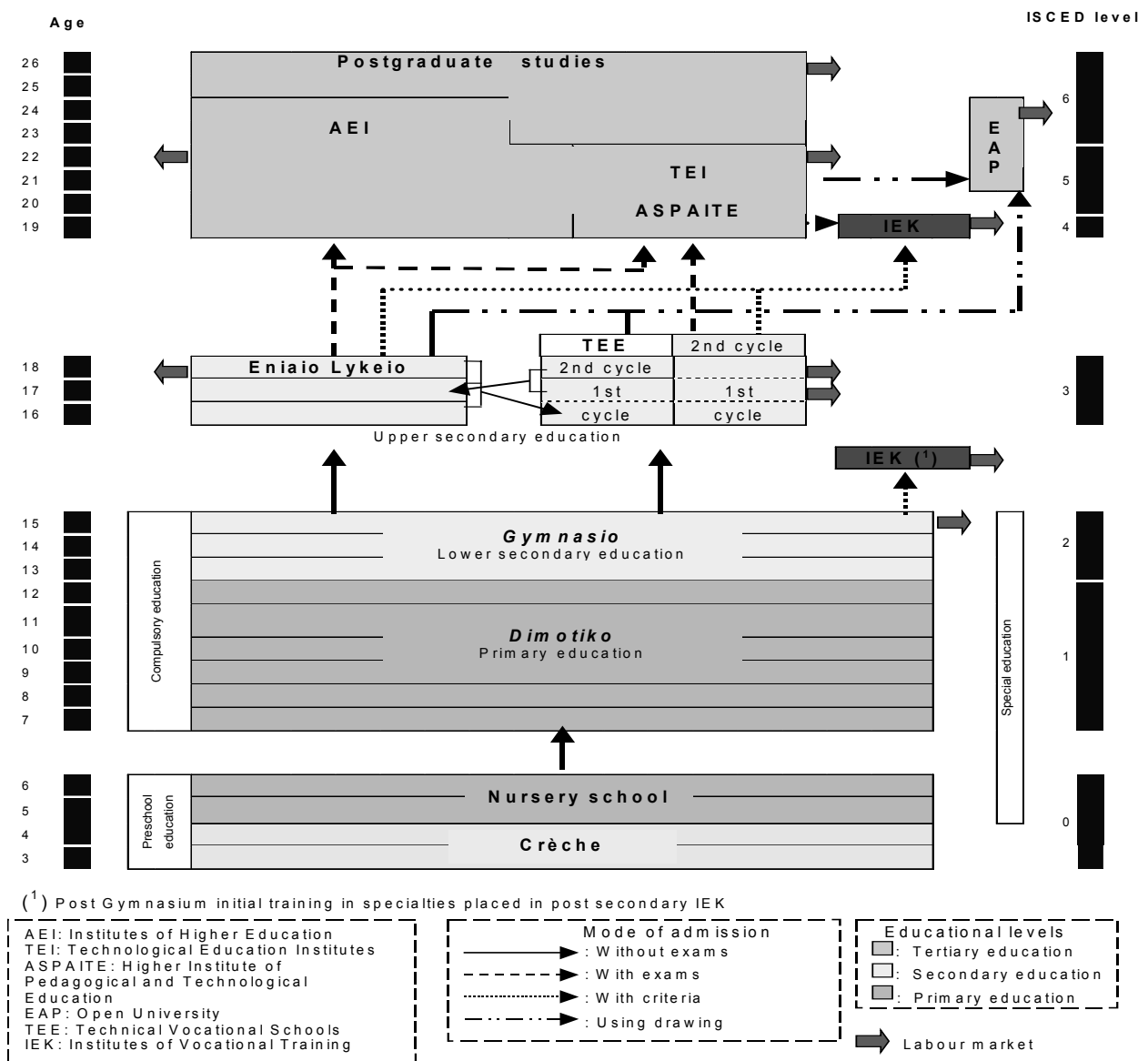
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1. The Greek education and training system and the Greek labour market: some facts

1.1. The Greek system of education and training

After a turbulent period of reforms during the second half of the 1990s, the education and vocational training system in Greece is starting to function properly, although it is still too early to evaluate its results or make qualitative comparisons with the previous system.

Figure 1: Greek education system



Source: Vretakou and Rousseas (2003)

The major change in education and training has been the unification of the former three types of high school at secondary education level (*Geniko Lykeio*, *Polykladiko Lykeio* and *Techniko Lykeio*) into one (*Eniaio Lykeio*). Graduation from the *Eniaio Lykeio* gives access to either one of the traditional university departments (AEIs) or to one of the Technological Education Institutes (TEIs), which have recently been granted the status of university institutes. These reforms have increased the number of university entrants and new university departments, satisfied the preference of Greek students and parents for university education and decreased the flow of students undertaking studies abroad.

A secondary education entrant not wishing to follow general or university education afterwards can enter one of the technical vocational schools (TEEs), where studies are divided into two levels of two and one years duration respectively. Graduates of the first level of TEE have the following options:

- (a) they may receive a certificate to practice a trade;
- (b) they may register in the corresponding specialisation in the second level;
- (c) they may register in the second grade of an *Eniaio Lykeio*.

Graduates of the second TEE level have the following options:

- (a) they may receive a certificate to practice a trade;
- (b) they may register, in order of precedence, in a corresponding specialisation at a vocational training institute (IEK);
- (c) they may seek admission to a Technological Education Institute after passing additional exams.

TEE pupils, during their studies, practice in workshops, in School Workshop Centres (SEK) and in workplaces in the public or private sector.

Initial vocational training in Greece is provided by a number of public as well as private institutions (IEK, KEK) and for various specialisations both in applied (e.g. electricity, mechanics, electronics, agriculture, construction etc.), and theoretical domains (e.g. finance, administration, tourism, communication). Continuing vocational training is provided by privately owned and State-run organisations (KEK), which have been officially accredited by the National Accreditation Centre of Vocational Training Structures and Accompanying Support Services (Ekepis), as well as from the Greek Manpower Employment Organisation (OAED) and various ministries and the General Secretariat for Adult Education.

(For further information on the Greek education [general and vocational] system see Eurydice, 2001; Vretakou and Rousseas, 2003).

1.2. The Greek labour market

Greece has one of the highest unemployment rates in the EU. In 2002 it was 9.6 %, compared to 7.6 % in the EU and 8.3 % in the Euro-zone. For the same year, the unemployment rate for people under 25 years of age in Greece was 25.7 %, compared to 14.6 % and 15.8 % in the EU and Euro-zone respectively (Eurostat, 2003).

Unemployment rates by educational level in 1997, 2000 and 2002 are shown below in Figure 2. In Greece, those most affected in these three years are those who have completed secondary education (ISCED 3-4) while the unemployment rate of those with low qualifications (ISCED 0-2) is significantly lower than the EU average. In 1997, people with completed tertiary education (ISCED 5-6) had the lowest unemployment rate and the rate in Greece was equal to the EU average. The picture is different for 2000 and quite disappointing for Greece as unemployment rates have decreased for all education levels in the EU but have increased in Greece. While university graduates continue to have the lowest unemployment rate, the rate increased considerably by 1.5 percentage points. However, the least qualified group has experienced almost the same increase, by 1.6 points. In 2002 the situation moved in a more favourable direction and unemployment rates have decreased for all educational levels. It is also apparent from Figure 3 that among highly qualified individuals the youngest are those more affected by unemployment.

Figure 2: Unemployment rates in the 25-64 age group by the highest level of education attained in EU-15 and Greece in 1997, 2000 and 2002 (%)

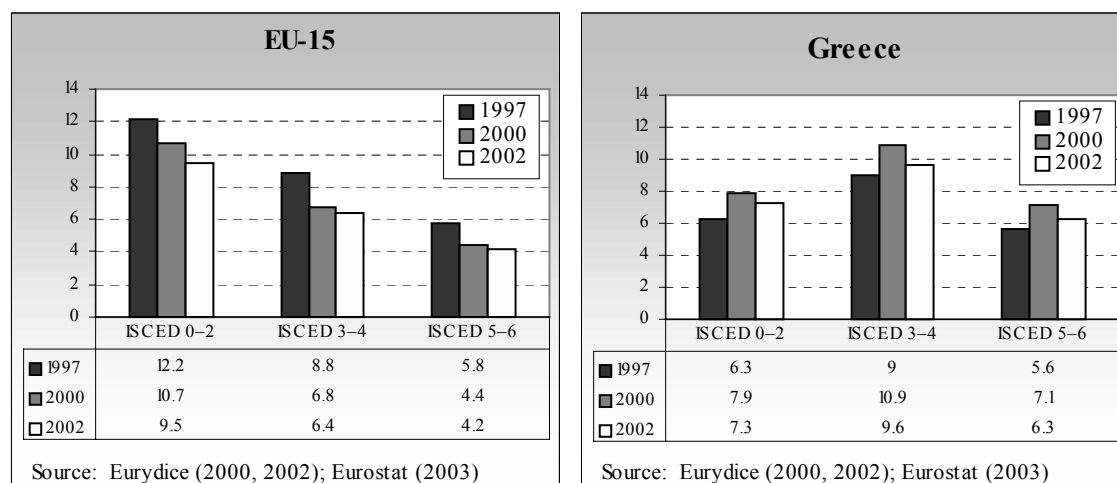
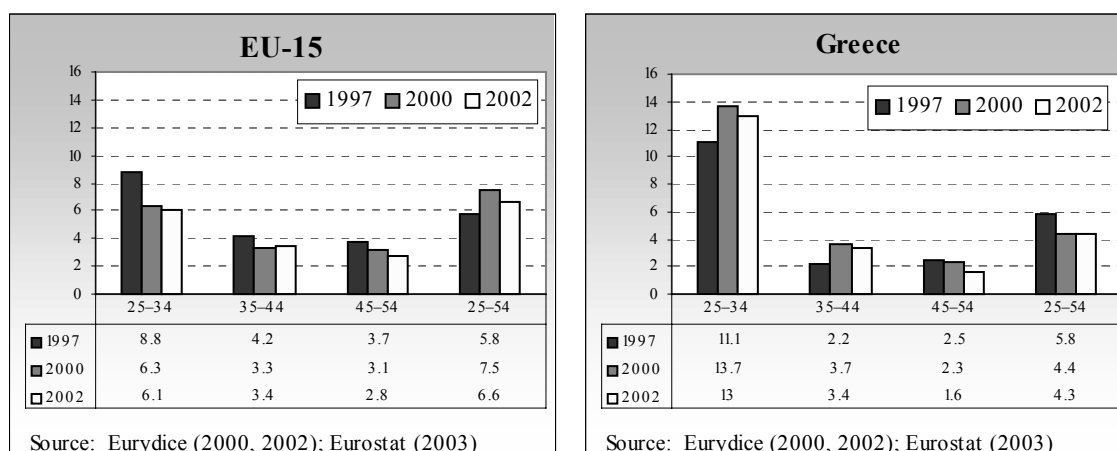


Figure 3: Unemployment rates among higher education graduates (ISCED 5-7) by age group in EU-15 and Greece, in 1997, 2000 and 2002 (%).



Furthermore, Greece, together with Portugal, has the lowest average gross monthly earnings in the EU. Table 1 shows these differences in monthly earnings by education level ⁽⁶⁾.

Table 1: Average gross monthly earnings by educational level, 1995

Educational attainment	(EUR)														
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
ISCED 0-2	1840	2349	1549	933	1012	1630	1653	1291	2190	1821	1620	564	1723	1828	1456
ISCED 3	2044	2761	1774	968	1295	1744	1677	1627	3085	2050	2103	812	1786	2072	1752
ISCED 5-7	2885	3885	2667	1386	1705	2744	2438	2526	3930	3030	3862	1660	2567	2593	2447

Source: Eurydice (2000)

The data presented gives an overall picture of Greece as an economy with a strong preference for general and university education but with high unemployment rates and low incomes. These factors could lead to serious mismatches in the labour market and highlight the importance of the need for careful identification and evaluation of skills needs.

⁽⁶⁾ According to Eurostat, more recent figures are not yet available.

2. Organisations in Greece actively involved in identification of skills needs

This chapter briefly describes the organisations in Greece that are involved in the design and implementation of labour market policies with special focus on the identification of skills needs.

2.1. Organisation for Vocational Education and Training (OEEK)

The OEEK was founded within the framework of the national vocational education and training system. It has administrative and economic independence and is supervised by the Ministry of National Education and Religious Affairs. OEEK is responsible for all aspects of vocational education and training in Greece, including the establishment and operation of vocational training institutes, the determination of training programmes curricula, the assessment of trainers, the recognition of certificates and professional rights, etc. Moreover, it conducts surveys and studies and maintains statistical information and documents on issues related to vocational education and training. OEEK also engages in significant international activity within the EU, the Balkans and the Mediterranean area ⁽⁷⁾.

2.2. Employment Observatory Research-Informatics SA (PAEP)

The PAEP, established in April 2002, is one of the three affiliated companies of OAED formed as a result of the merger of the National Employment Observatory and the National Institute of Labour.

The PAEP's wide-ranging activities include research projects and studies on the labour market, implementation of an information system serving the total function of OAED and its affiliates (the companies Vocational Training SA and Manpower Support Services SA), monitoring national, European and international progress and perspectives in the labour markets and analysis of educational and vocational training needs. To fulfil its aims, the organisation operates in three main areas: planning and application of integrated information systems, research and study of the labour market data, and monitoring and evaluation of active employment policies. These activities are supported by financial and administrative services ⁽⁸⁾.

⁽⁷⁾ More information available from Internet: www.oEEK.gr [cited 10.11.2003].

⁽⁸⁾ More information available from Internet: www.eie.org.gr [cited 10.11.2003].

2.3. Labour Institute of the Greek General Confederation of Labour (INE-GSEE)

The INE-GSEE was established in December 1990. It aims at the scientifically supported involvement of the trade union movement in research, study and data gathering activities in areas of interest to the GSEE, its member organisations, and workers. This includes the planning, implementation and development of appropriate schemes for vocational training, the coordination and support of related activities undertaken by the member organisations of GSEE, the development of systems of trade union education and training and the publication of various studies in the fields of interest of GSEE and its member organisations.

INE-GSEE is administrated by an Executive Council, which is appointed by the GSEE. In addition to the central national organisation, INE is organised at the regional level (based on 13 administrative regions) and at the branch level (based on 22 branches of economic activity) ⁽⁹⁾.

2.4. The National Centre for Vocational Orientation (EKEP)

The EKEP, was established in 1997 as a tripartite organisation under the auspices of the Ministries of Labour and Education, and came into operation in 2000. EKEP is recognised as the national resource centre for a comprehensive national guidance policy on education, training and retraining programmes to help meet labour-market demand.

Among its activities, EKEP:

- (a) acts as an advisor and coordinator for the Ministries of Education and Labour;
- (b) coordinates the activities of public and private institutions in order to provide clients with high quality vocational guidance and counselling services;
- (c) conducts research projects and disseminates their results to interested institutions;
- (d) contributes to the content and direction of education and training programmes;
- (e) produces manual and digital information material, and promotes the use of modern information technology in guidance and counselling services;
- (f) participates in the development and updating of information networks of institutions and individuals related to counselling and vocational guidance, etc. ⁽¹⁰⁾.

⁽⁹⁾ More information available from Internet: <http://www.inegsee.gr/English-Page.htm> [cited 10.11.2003].

⁽¹⁰⁾ More information available from Internet: <http://www.ekep.gr/english/default.asp> [cited 10.11.2003].

2.5. Labour Institute of Greek Federation of Bank Employees Unions (INE-OTOE)

The INE-OTOE was founded in 1981, and represents a branch of the Labour Institute of GSEE in the banking sector. It supports OTOE in developing and promoting reliable, documented and valid presentations and in providing regular information and training to its trade union officers and banking sector employee. Its activities include the design and implementation of vocational training programmes for banking sector employees for them to meet labour market needs, research into new conditions and problems in the banking sector and the publication of the results of such studies. In addition, it organises training projects and develops OTOE's international relations and cooperation with trade unions in the banking sector and banking federations both within and outside of the EU ⁽¹¹⁾.

2.6. The Institute of Technological Education (ITE)

ITE is part of the Ministry of Education and Religious Affairs and has decision-making power. It promotes technological education and undertakes research activities. It focuses mainly on technological/technical education and training and has conducted various research studies on the labour market and educational programming ⁽¹²⁾.

⁽¹¹⁾ More information available from Internet: <http://www.ine.otoe.gr> [cited 10.11.2003].

⁽¹²⁾ Contact information: Institute of Technological Education–Secretariat (30-210) 921 45 02.

3. Identification of skill needs: activities

3.1. Connection of specialised training schemes for unemployed to the needs of employers – Greek Ministry of Labour and Metron Analysis

The survey was organised and designed by the Greek Ministry of Labour and conducted by Metron Analysis, a private research company, during 2001. Its main purpose was to identify the skills and human resource needs of employers throughout the country in order to assist in the design and implementation of continuous training schemes.

At present it is one of the surveys in Greece that has been fully completed and for which specific results are available. It is, therefore, presented in more detail, discussing the methodology used and giving some results.

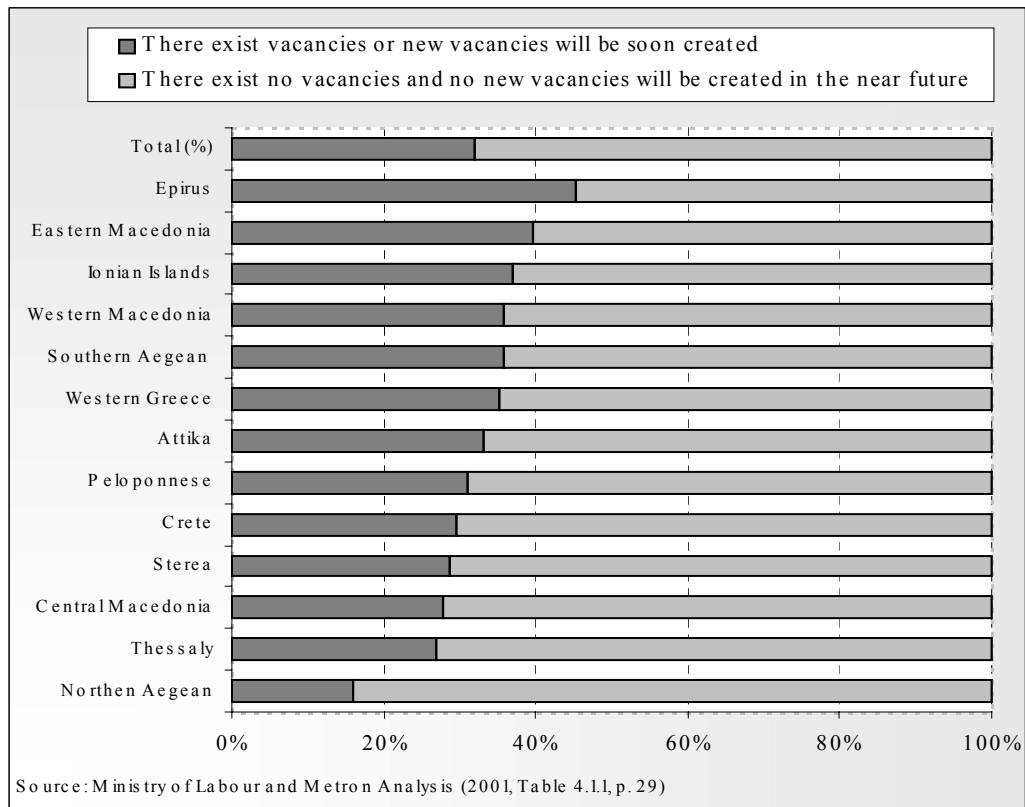
The final sample used in the survey comprised 6 228 enterprises having an annual turnover of more than GRD 10 million (approximately EUR 29 350). The sample was selected in such a way that each of all the 51 regions (*nomoi*) of Greece was represented by at least 20 enterprises. The questionnaire, usually completed by the owner of the firm, the personnel manager or a member of the administrative staff, asked about existing vacancies and those filled during the year prior to the survey, the specialisations and occupations required, recruitment difficulties, the basic and supplementary skills required, and preferences in terms of gender, age and educational level, etc.

Based on the answers, the researchers created an index for each occupation and each region of Greece, measuring the dynamics each occupation presents in the specific region. The index includes information on the demand of a specific occupation in relation to the total demand for personnel, the number of vacancies filled in the occupation in relation to the total number of vacancies filled and the difficulties in recruiting suitable personnel.

The results of the survey provide an interesting picture of the structure of the Greek labour market from the demand side and some of the aspects considered to be important in relation to the present report are commented on below.

According to the survey, 32.1 % of the enterprises had vacancies or planned to create a vacancy in the near future. 67.9 % said that they had no vacancies nor would they be hiring staff in the near future (Figure 4).

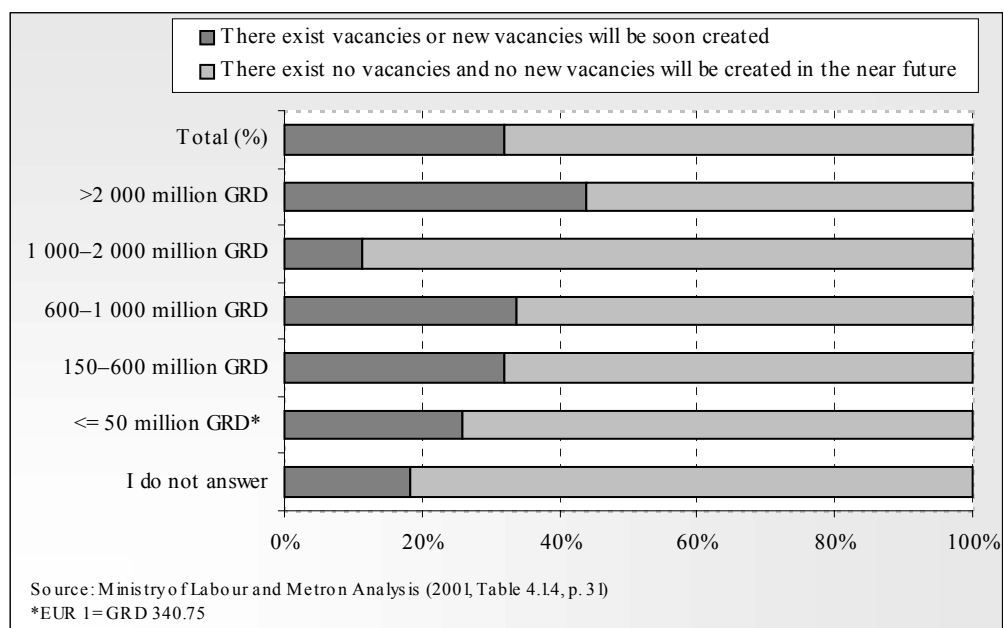
Figure 4: Existing and future vacancy needs by region (percentage of firms surveyed)



NB: Data are available in the Annex, Table 6.

The size of the firm (measured by turnover) plays a significant role in creating labour demand (Figure 5).

Figure 5: Existing and future vacancy needs by reported turnover

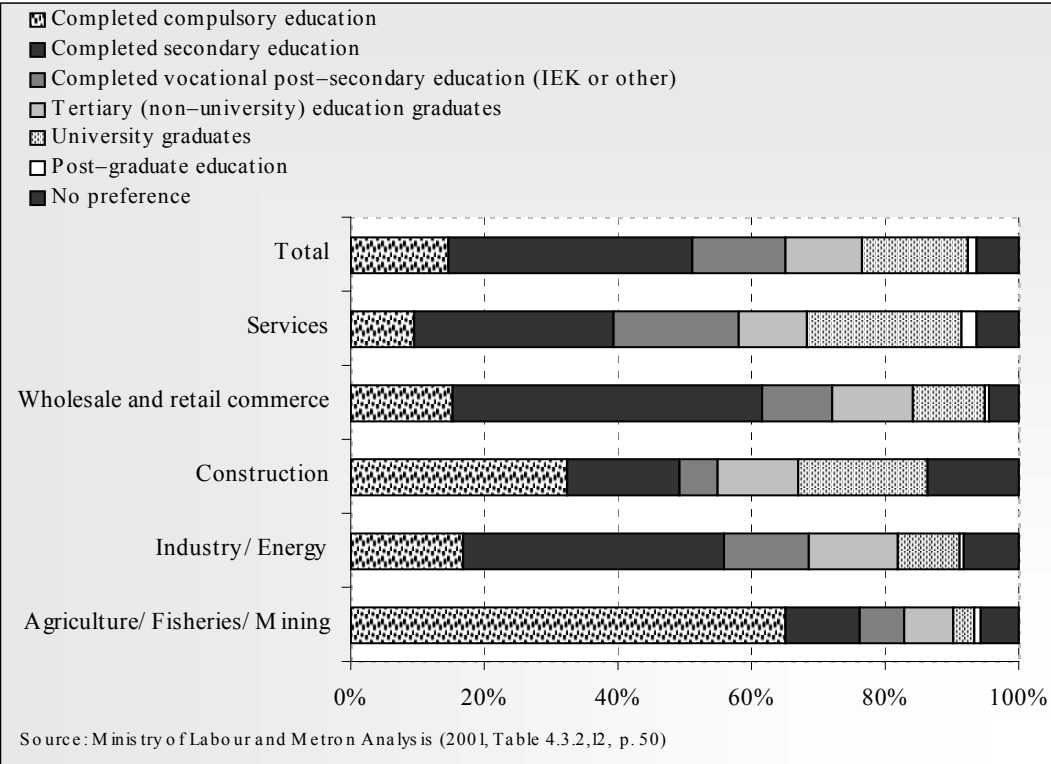


NB: Data are available in the Annex, Table 7.

The total labour demand recorded by the firms was 16 936 vacancies. Of these, 34.3 % were existing positions, which at the time of the interview were not filled, and 65.7 % were newly created positions. Most of the positions offered were full-time and with a permanent contract, while the majority of part-time or non-permanent positions were found in the tourist sector and agriculture. This implies that part-time and non-permanent employment in Greece is not a characteristic of the labour market but is rather connected to specific ‘climate-dependant’ sectors.

Educational qualification requirements are very much interrelated to the particular sector concerned. 65 % of the demand in the primary sector i.e. agriculture, fishery, mining, etc is for persons who have completed compulsory education (nine years of schooling). Industry looks mainly for secondary education graduates (51.8 %) whilst in construction the requirement is for people with completed compulsory education (32.4 %) and tertiary (university and non-university) education (31.3 %). Commercial enterprises demand mostly secondary education graduates or persons with some form of vocational education (57 %). Finally, enterprises within the services sector look to employ those who have completed secondary education or have some vocational education (48.6 %) and also tertiary education graduates (33.3 %) (Figure 6).

Figure 6: Labour demand by education level and sector (percentage of firms)



NB: Data are available in the Annex, Table 8.

In general only 14 % of firms are looking for employees with post-secondary vocational education, 11.4 % for those with a tertiary non-university education and 15.8 % for university graduates. As far as additional skills are concerned, there is a significant demand for employees with experience, knowledge of foreign languages and some IT skills. Nevertheless, many jobs – 36.8 % – do not need computer skills (see Table 2). The demand for experienced personnel would indicate that enterprises are unwilling to train their own employees and that they believe that skills are better acquired through experience and not through training and education.

Table 2: Demand of additional skills by sector (percentage of firms)

(%)

Sector	Have to be able to use a PC	Do not have to be able to use a PC	Have to know a foreign language	Do not have to know a foreign language	Have to have working experience	Do not have to have working experience
Agriculture/ Fisheries/ Mining	12.8	53.1	13.0	50.7	45.9	9.6
Industry/ Energy	37.7	40.1	34.2	35.6	59.3	16.1
Construction	26.3	40.7	21.6	43.5	77.9	3.7
Wholesale and retail commerce	44.6	37.0	51.4	31.8	56.4	17.3
Services	28.0	34.2	53.6	18.3	50.1	17.8
Total	35.4	36.8	47.2	28.0	55.4	16.5

Source: Ministry of Labour and Metron Analysis (2001, extract from Table 4.3.2.14, p. 52; Table 4.3.2.16, p. 53 and Table 4.3.2.18, p. 54)

To the question ‘in which professions is it more difficult to find an employee?’ 13.4 % replied ‘specialised technicians and similar professions’ whereas 57.5 % replied ‘we have no difficulties in finding employees with the needed skills’.

However, the results on the demand for skills are rather disappointing for the Greek labour market. In general, most firms ask for low-skilled employees with this demand exceeding 80 %, in some regions, e.g. Chania, (81.6 %), Evoia (80.6 %), Central Macedonia excluding Thessaloniki (81.4 %) and East Macedonia and Thrace (80.8 %) ⁽¹³⁾. Occupations most sought throughout the country as a whole are salespersons, accountants and unskilled industrial workers. The demand almost entirely focuses on ‘traditional occupations’, and only in the region of Attica does there exist a demand for high skilled and more modern occupations such as IT experts and marketing specialists (Table 3). These facts highlight the

⁽¹³⁾ Source: Ministry of Labour and Metron Analysis (2001, p. 62 – not available as a table in the original document).

severe problems faced by Greek labour market in creating high-skill and new-technology orientated jobs.

Table 3: Top-12 and top-10 demanded occupations in Greece (all regions) and in the region of Attica (includes Athens)

Ranking	Greece	Region of Attica
1	Various salespersons	Various salespersons
2	Unskilled industrial workers	IT specialists/programmers
3	Accountants (all levels)	Bus and truck drivers
4	Bus and truck drivers	Civil engineers and construction specialists
5	Waiters/waitresses	Road construction unskilled workers
6	Civil engineers and construction specialists	Accountants (all levels)
7	Various machine users	Unskilled industrial workers
8	IT specialists/programmers	Janitors
9	Janitors	Economists
10	Economists	Marketing experts
11	Road construction unskilled workers	
12	Machine users	

Source: Ministry of Labour and Metron Analysis (2001, combination of Tables 5.1.1, p. 63 and Table 5.1.10, p. 65)

The survey concludes with proposals for the way training schemes should be designed and implemented stressing the need for there to be specialised programmes appropriate to the region, the demand of skills and the existing training schemes in other neighbouring regions.

3.2. Survey on the evaluation of employment strategy (ESA)

The purpose of this research, set up by the Ministry of Labour and Social Affairs, is the evaluation of the applied employment policies, particularly those related to vocational training applied to the unemployed of all ages. The research was conducted by telephone interviews in six urban areas of Greece: Athens, Thessaloniki, Larissa, Patra, Ioannina and Heraklion, between 22 January 2002 and 5 February 2002.

The case-control methodology was used. The case group comprised 400 individuals who had attended any vocational training programme completed up to the end of the year 2001. The control group included 400 individuals who had registered in any public employment organisation within the research area from 1 January 2001 to 31 May 2001. Individuals in the control group were selected only if they had never attended a vocational or similar programme in the past. The demographic characteristics between the two groups were matched to ensure comparability between the two groups.

The survey provides important information on the supply side of the labour market and indirect information on the skills asked for by employers and those results that are of most significance to the present report are commented on here.

It appears that the majority of individuals in the control group had attended a training programme on information technology (28.3 %) or on economics and business administration (26.3 %). Other vocational programmes attended included the areas of technical occupations and transportation (14.8 %), tourism and services (10 %), culture, sports and mass media (8.0 %), etc.

Table 4: Distribution of the respondents who attended vocational training programmes according to subject areas

Information technology	28.3
Economics and business administration	26.3
Technical occupations and transportation	14.8
Tourism and services	10.0
Culture, sports, mass media	8.0
Agriculture	4.3
Environment	4.0
Pedagogic/education	2.5
Health	2.0

Source: Ministry of Labour (2002, Table 1, p. 2).

The results of the survey showed that those who had attended a vocational education course had afterwards generally experienced less time in unemployment, more probabilities to find a job and were more likely to find a full time and/or regular job.

Table 5: Comparison of case and control groups labour market experiences

		Case group	Control group
Percentage of current employment status (at the time of the survey)	Employed	32.5	17.3
	Unemployed	52.8	68.5
	Inactive labour force	14.8	14.3
Duration of current employment	7 months or more	54.6	31.9
	3-6 months	34.6	49.3
	Up to 3 months	10.8	18.8
Employment status during last year	Had at least one job	58.0	28.9
	Unemployed	31.0	59.3
	Inactive labour force	11.0	11.8
Time period until they found their first job	Less than one month	30.3	18.6
	1-2 months	26.3	22.0
	More than 3 months	43.4	59.3
Duration of first employment	Less than one month	3.9	12.1
	1-2 months	13.8	18.1
	3-6 months	34.1	41.4
	More than 6 months	48.3	28.4

Percentage of respondents who found another job after interruption of first employment	Found another job	32.9	20.4
	Did not find up to today	67.1	79.6

Source: Ministry of Labour (2002, combination of Graph 1, p. 8, Graph 4, p. 13, Graph 10, p. 18, Graph 11, p. 19, Graph 14, p. 23 and Graph 15, p. 24.

However, it is felt that the methodology used here is rather restrictive and other approaches could reveal a less satisfying picture. For example as shown by the results, 67.6 % of those who attended a vocational course were either unemployed or inactive during the period of the survey, while 71.5 % responded that the vocational programme they attended was either ‘not that much relevant’ and ‘not at all relevant’ to their current employment. A methodology that would directly assess the effect of training would probably be more effective in evaluating training programmes and employment strategies in general. Nevertheless the data included in the survey is a rich source of information for use in further research.

3.3. Demand for specialisations, skills and training needs – Employment Observatory Research-Informatics SA (PAEP)

A research project being conducted by the PAEP during 2003, on the demand for specialisations, skills and training aims to provide systematic information on the Greek labour market and on the demand for skills and specific professions in both the private and public sectors. The data is intended to be used in the design and implementation of training programmes which will match the requirements of the market.

The methodology of the research and the questionnaire to be completed by the organisations involved have been designed by PAEP. In order to achieve the best possible outcome they have been based on quantitative as well as qualitative methods of data collection and data analysis. The questionnaire asks about the characteristics of the firm and its employees, skill needs, training policies, hiring criteria, etc. Data collection and analysis will be carried out by a market research company, to be appointed after public tender process.

The criteria used to construct the sample of the survey will include the company’s location, size and sector of activity. In order to ensure the quality of the information collected, questionnaires will be completed only by personal interview and not by phone or correspondence. The interviewers will be highly qualified and experienced and will be further trained for the needs of the specific project. Questions will be answered by companies’ authorised representatives, trades union representatives and other professional bodies. At least 7000 questionnaires are expected to be returned.

At the time of writing this report (May 2003), the project was at the initial stages of drawing up the questionnaire, selecting methodology and carrying out pilot interviews. According to the time schedule, interviews were expected to have been completed by end of June 2003 with final results being available by the end of August 2003.

3.4. National Statistical Service of Greece (ESYE)

Currently, the National Statistical Service of Greece is conducting a research project on existing vacancies, by occupation, in Greek enterprises. The vacancy situation will be followed up every three months for the next two years. However, because the project was in its initial stage at the time of writing this report, it was not possible to obtain any further information on the questionnaire, methodology, sample, etc. However, once completed, it is believed that the project will offer valuable insight into to-days labour demand and skill needs in Greece.

3.5. Prediction mechanism for professional development and qualification in banking effective use in vocational training actions and collective agreements (Premeq) – INE-OTOE

An earlier work in the field of identification of skill needs was completed in 1998 by the INE-OTOE within the framework of the Leonardo da Vinci programme and in collaboration with a number of institutions involved in the banking sector at a pan-European level and in Greece.

The aim of the project was the creation and implementation of a reliable and systematic mechanism for predicting new specialities and skills in the banking sector and its use in vocational training, social dialogue and collective bargaining, at a sectoral and/or company level. The mechanism developed would also assist in the systematisation and qualitative upgrading of continuing training, by combining the acquisition of the knowledge and skills needed under new conditions currently being developed in the banking sector, with modern methods of human resource programming, reliable assessment of educational needs, career planning, protection and creation of new opportunities in employment, enrichment and redesigning of jobs.

The method included the identification of the different fields of knowledge which are considered basic to the banking profession and inherent to several banking jobs, the establishment of six professional skill levels for each field concerned and the development of a guide to banking competences. At a second stage, the author, following the method established in the first stage of the project, defined and established the skill levels required for two specific professions: branch manager and bank teller. Thirdly, probable change factors have been examined and their impact on the competences required in banking jobs was forecast. Finally, the method defined the different ways to face the consequences of these changes.

It is not necessary to go into the detail of the technical aspects of the method applied but the basic results show that the banking sector is currently undergoing many important changes in a number of areas. Among these changes are the intensification of competition, gradual deregulation, expansion of new technology applications, changes in the methods of promotion of employees, new ways of working and industrial relations issues such as distance-working, etc. These developments change employment conditions in the banking sector by

creating jobs in some areas and abolishing jobs in others. Some of these changes are as follows:

- (a) a trend for more jobs involving direct contact with the customer with fewer back-office jobs;
- (b) the expansion in the use of new technologies application, (e.g. automated transactions, electronic money);
- (c) a move towards new ways of working facilitated by the use of new technologies (e.g. working from a distance);
- (d) the outsourcing of support functions such as maintenance, security, etc.;
- (e) an increase in specialised and high skilled employees;
- (f) an increase in employment in banks' affiliated companies (e.g. mutual funds, insurances, etc).

The prediction mechanism for new skills and specialities, developed in the paper, helps companies in the banking sector to evaluate their personnel needs, anticipate possible changes and assess the impact of these changes on their employees' skill requirements. The mechanism could also be adopted by other sectors.

More details of the project are available from the Internet: www.ine.otoe.gr/ekdoseis/Premeq_english/premeq_1_1.htm [cited 10.11.2003].

4. Identification of future skills requirements – actions taken by international and European bodies

4.1. OECD research

The OECD has published a number of papers concerning reforms that have recently been implemented or are currently taking place in Greece. Several of these surveys are cited here and the OECD web site www.oecd.org has further and more detailed information.

Greece set to reap maximum benefit from regulatory reform is a report (OECD, 2002b) on the progress of reforms taking place in various sectors in Greece during the last decade. It focuses mainly on the telecommunications sector, tax policy reform and the public services. The *economic survey: Greece 2002* (OECD, 2002a) also provides an overview of the Greek economy, including macroeconomic performance indicators and an overview of the progress of reforms. More specialised reports on reform progress can be found for the telecommunications sector (OECD, 2000a), the genetic testing sector (OECD, 2001) and the environmental sector (OECD, 2000b), etc. An interesting paper on the policy initiatives taken in Greece to promote research and development and increase competitiveness as well as networking among firms is: *NIS (Phase III) – IFN: Greece case study. Innovation networks. Policy initiatives in Greece* (OECD, 2000c).

These reports and surveys do not deal specifically with skill requirements and skill identification in Greece. However, they do provide a clear picture of the Greek economic environment, and its economic prospects and dynamic sectors, which enables an indirect view to be had of the more dynamic professions, occupations and specialisations both now and in the future.

Two OECD publications deal with the issue of skills needs and make references to Greece, although to a lesser extent. The first, entitled *The evolution of skills in OECD countries and the role of technology* (OECD, 1996) aims to analyse the trends in the skill distribution of employment and to explain the role of technology in that area.

The second is a more recent paper entitled *ICT skills and employment* (OECD, 2002c). It deals with the dual challenge faced by OECD countries in ensuring that the growth of new industries and activities will not be stifled by skill mismatches and labour bottlenecks. It discusses both long- and short-term measures taken by OECD countries to address rapidly growing skill requirements in the new ICT sectors.

Finally, *The public employment service: Greece, Ireland, Portugal* (OECD, 1998) presents and compares the effectiveness of the various employment strategies applied in these

countries and examines the role of national employment services in active labour-market policies.

4.2. Cedefop

4.2.1. Internationalisation and changing skill needs in European small firms

Internationalisation and changing skill needs in European small firms: a synthesis report is a new Cedefop publication. It is the product of a combined effort from seven research teams in seven EU countries. The research team for Greece is from the University of Piraeus. Professor Joseph Hassid, also from the University of Piraeus, was the scientific coordinator of the study. Each national research team produced a nation specific report, which is available from Cedefop on request.

The study addresses small production firms with less than 50 employees, their views and actions towards internationalisation, the specific skills needed for a business to succeed in the international environment and their attitude towards training programmes.

This study is particularly interesting because it focuses on small firms only, while most similar surveys focus on SMEs (up to 200 or 250 employees). It therefore gives an insight into the specifics, needs and problems of this, the predominant size of firm in the EU (EU-15 average 98.9 %, Greece 99.6 % of all firms).

Despite the fact that small firms account for 98.9 % of all firms in the EU, they account only for 5 % of total exports. In general, small firms seem to be reluctant to expand their businesses abroad and are those that feel more threatened by foreign competition. Of those firms who have been involved in activities outside their domestic markets, Greece has the lowest percentage share of firms that explored the potential of foreign markets (21 %) or had a product/technological advantage (0 %). On the other hand, Greece has the highest share of firms that were encouraged by government policies to look abroad (21 %).

As to the keys to success in international activities, small firms place secondary importance on the recruitment of experienced export staff and training of existing staff, valuing foreign language, communication and negotiation skills as more useful attributes in this field.

Small firms show reluctance towards training programmes, finding them unsuited to their needs, and time and resource consuming. They also prefer practical results-oriented skill-acquiring mechanisms such as on-the-job training, experience exchanges and trade fair visits, while seeming not to prefer 'new' mechanisms, such as distribution of written material, videos, CD-ROMs, distance learning, etc. This is rather disappointing as most training programmes are designed around these 'new' learning mechanisms.

In general the report provides important information about small firms and their training needs, a field which has hitherto received little attention. The report on Greece offers further insight and valuable information, but due to space limitations these could not be presented here. Small firms are often inward-looking, usually very risk averse in most ways and reluctant to adopt new practices and the report stresses the need for there to be training programmes tailored to their specific characteristics.

More information on the synthesis report and the country-specific reports can be obtained from Cedefop (¹⁴).

4.2.2. Cedefop/ETF project ‘Scenarios and strategies for vocational education and lifelong learning in Europe’

Scenarios and strategies for vocational education and lifelong learning in Europe is a joint sponsored Cedefop-ETF project (1998-2002) that has developed the scenarios methodology and applied it to the fields of vocational training and lifelong learning. The project has involved partnership between 10 countries of the EU including Greece and Central and Eastern Europe accession countries, coordinated by the Max Goote Expert Centre in Amsterdam.

The methodology used was the development of a range of plausible scenarios for a period of 10 years hence. The scenarios were grounded on an analysis of trends and uncertainties. Based on a series of interviews with experts, the researchers attempted to give an indication of strategies that would or could be linked to the development of the different scenarios.

This paper attempts to present very briefly the specific findings and conclusions for Greece and does not refer to the European-level scenarios, strategies and policy conclusions. The subject is a rich source of material and the interested reader can find all necessary information available at www.trainingvillage.gr.

INE-GSEE is the participant representing Greece in this specific project. It has conducted the interviews of the experts based on a common questionnaire for all countries and has selected the responses and processed the data. The questionnaires were addressed to experts on VET including public service officials, business executives, politicians, trades union representatives, consultants, training providers, individual experts and scientists from universities and research bodies. The questionnaire asks about trends and potential strategies in three contexts with close links to training: Context A, the economy and technology; Context B, society and the labour market; and Context C, education and training.

The survey covered 20 common possible trends for each context and a range of potential strategies plus a limited number of trends and strategies specific to each country.

(¹⁴) Available from Internet: <http://www.cedefop.eu.int/> and <http://www.trainingvillage.gr> [cited 10.11.2003].

The number of experts responding to the questionnaires for each context for Greece was rather limited (73 for Context A, 82 for Context B and 74 for Context C). This fact led to serious constraints in deriving solid results which could lead to the proposal of robust strategies.

In Context A (economy and technology) the five most important trends in Greece are that people will follow an even less secure career path; that international competition will become knowledge intensive; companies will have to restructure intensively; effects of globalisation will become more apparent and restraints are going to be imposed on non-regulated competition. Among the trends that appear as less important are that large and small companies will become more interdependent; that more emphasis will be placed on entrepreneurial skills; that the trends towards outsourcing and 'lean' production will intensify; innovation-seeking companies will work more closely together in an area of in-company training and that the boundaries between manufacturing and service industries will become more and more blurred. As to the strategies proposed to cope with the above trends it is interesting to pay attention to the strategies considered as less relevant. These are:

- (a) to ensure that firms themselves become training organisations;
- (b) to encourage private sector investment in education and training rather than state provision;
- (c) to encourage a 'hands-off' approach to the regulation of the content and use of international electronic networks.

The five most important trends under Context B (society and the labour market) are that unemployment among young people under 25 will increase, compared to other age groups; knowledge-management will become generally accepted; the social exclusion of certain 'at risk' and disadvantaged groups will continue and even intensify; and collective labour-market agreements will have less significance. The five less important trends include that hierarchies will become more pronounced; an ageing population will enhance lifelong learning; there will be a 'brain drain' to western Europe; the training will be limited to permanent staff only and collective forms of expression and negotiation of the employees will be gradually reinforced. Almost all strategies proposed in the questionnaire were considered as relevant for the above trends. Among the strategies that received more than 10 % of the answers as being not relevant are the creation of a greater variety of part-time and full time working patterns, the creation of a more flexible and individualised pension system, making workers responsible for keeping their own knowledge and skills up to date, the introduction into the system of vocational education and training of a new level that can help to give recognition to lower-level jobs and the provision of all young people with a basic level of technical training.

Finally the five most significant trends for Context C (education and training) are, in order of importance:

- (a) the school will remain the irreplaceable learning area, despite the extensive knowledge and information provided today through other sources;
- (b) information and communication technologies will become a normal part of formal education and training;
- (c) tackling social exclusion will receive higher priority;
- (d) SMEs will benefit from an increase of knowledge provided through education and training;
- (e) education and vocational training programmes will become more varied and flexible.

The five least significant trends as reported by the experts that answered the questionnaires are that developments in information and communication technology will mean that 'school' or formal training will become less important; individuals will take more responsibility for their own education and training; knowledge management will be subject to rapid change and renewal; decentralisation will have a major impact on the provision of vocational education and training and expenditure on vocational education and training will increase. Once again the responses concerning the strategies led to information on the 'least relevant' rather than the 'most relevant' strategies to face trends. Among the 'least relevant' are strategies:

- (a) to enable those who acquire their skills through experience to achieve certification that has the same value as formal qualifications;
- (b) to develop systems of flexible qualifications so that individuals can develop a portfolio of acquired qualifications;
- (c) to finance training by providing individuals with tax incentives;
- (d) to establish a competence-based vocational education and training system, etc.

From the above the somewhat sad conclusion is that Greek experts attach little importance to trends and strategies that are very widely discussed today and which will probably play a significant role in the policy-making of tomorrow. It is recognised also by the authors of the national report that Greece shows divergences in relation to most of the other countries participating in the research project.

Other features on which comment is necessary are the responses of the experts on the issue of which institutions should be responsible for implementing strategies in the future. The national State is among the first two institutions which in the opinion of the respondents should be responsible for almost all strategies, followed by the European institutions and local authorities. Individuals and enterprises appear as those who should be responsible for the implementation of strategies.

Based on the interviews, three scenarios were constructed for Greece:

- (a) complete domination of the market and increased inequalities on multiple levels;
- (b) individual and selective responses to the effects of globalisation;
- (c) competitive economy – lifelong learning and new dimensions in social policy.

The first scenario appears to be the most pessimistic. Within this scenario, the demand of skills is focusing at low and medium level with only a limited number of large firms demanding high level skills. Further features are that SMEs cannot survive the intense competition, labour occupies a lower place in production and jobs are becoming more and more insecure. In respect of training there exists a dualism: on the one hand, only a few programmes are addressed to highly specialised staff, whereas many programmes focus on supporting unemployed and socially excluded groups. Training policies are designed and implemented in a fragmented way due to the lack of an overall national policy.

In scenario (b) many enterprises have introduced technological modernisation without restructuring their organisational model or training their labour force. Others implement integral flexibility but are indifferent to employment security or increased knowledge and skills for their labour force. These developments exert pressure for a reform of the systems of education and training. A system for diagnosing educational needs and introducing training specifications is being implemented. There is an increased need for planning in-company training to meet specific skills. The number of enterprises that finance their employee's training increases but this applies mainly to large organisations. Commercial training providers play a significant role and vocational training is an integral part of employment strategies. Finally, information and communication technologies require a more rapid reform of education and training programmes as well as a redefinition of the role of teachers.

In the last scenario international competition and the restructuring of enterprises place a need for highly qualified personnel. The need for unskilled labour has been restricted to certain sectors. New types of work such as distance working and piecework rather than time-work are introduced; the labour market is characterised by flexibility and mobility but the issue of social inclusion and cohesion is regarded as of vital importance. In-company training is an integral part of enterprises' development plan and employers invest more and more in the development of their employees. Workers skills acquired via different learning paths are recognised and play a significant role in improving their situation.

It is practically impossible to present here all aspects of the scenario project for Greece and to proceed with comparisons between Greece and the rest of the project's participating countries. The extremely rich material covering all phases of the project and participating countries as well as the synthesis to European-level scenarios is available by Cedefop on Internet: www.trainingvillage.gr [cited 10.11.2003].

5. Conclusions: policy implications

This paper attempts to present some recent activity and projects in the field of identification of future skill requirements in Greece. The author has noticed a growing interest in this subject by the relevant Greek organisations, which has resulted in an increasing number of surveys and projects. As already mentioned, it is not claimed here to have described all existing projects and it would be of great interest to hear about other similar activities.

In the conclusions of this review the author would like to comment on a feature of the Greek economy which in her opinion poses the greatest concern and bring to the attention of all concerned. It seems from the surveys discussed above that the problems of mismatches in Greece are mainly due to a deficit in demand for high skilled labour and new specialisations rather than to a deficit in supply of skills. The results of the Greek Ministry of Labour survey are worrying: the demand for unskilled workers in some regions of the country reaches and even exceeds 80 % of total demand. The majority of Greek firms seem to remain small family businesses which are not open to new developments and do not see the need to develop the skills of their existing employees or to create new positions for highly skilled employees. It is usually the owners themselves or their family members who perform the majority of skill-demanding tasks within the typical Greek firm (small or medium sized, family owned, local market oriented).

This feature of the Greek market should become a challenge for the policy-makers. In parallel to training for employees, the unemployed etc., they should reconsider the possibility of programmes that will keep owners of businesses, especially SMEs, informed of new developments in the labour markets, increasing international competition, opportunities available from the information and communication technologies and the challenges that their firms will face in the future. Since employers are those who will create the demand for new skills and vacancies, it is they who should be informed about the gains from having well trained and highly qualified personnel and be given incentives to train their employees or to employ highly trained ones.

The EU is already focusing on SMEs, their specificities and needs and this is a first good step. However, these activities should be extended nationally and regionally so that every firm and employer is reached.

Research activities in general are very limited in Greece and even more so in the areas which are dealt with in the present paper. They are also often absent from large-scale international research projects (e.g. OECD). However, it is widely accepted that policy decisions should be supported by serious and scientific research, which provides policy-makers with all the necessary facts, trends and possible strategies. A larger number of research activities are needed immediately to highlight the problems that exist in the Greek labour market and in educational and training activities and to propose correct and robust solutions.

Another serious drawback in Greece today is that research studies are not easily available to the scientific community for evaluation, critique and further development. However publicity about research results is common among the scientific community and is indispensable, as no progress can be made without dialogue and disagreement. Moreover when surveys and projects are not publicly available significant resources can be wasted. The same or similar projects may be run by different organisations and if existing information is not used, knowledge already gained and past experiences are not developed upon.

It is important for everyone in Greece to realise that the problems of unemployment, skill mismatch and skill acquisition is not only a problem for the State and the EU. They are problems for everyone and steps should be taken to ensure that all concerned, enterprises, local authorities and individuals, are made aware of the situation.

Greece can learn from the good practice of other countries, regions and institutions firstly in the way that information and knowledge is gathered and disseminated and secondly in the way other countries deal with their problems in labour supply, demand and education and training. International and European cooperation is an indispensable factor for success and these days national borders are practically non-existent. Problems experienced by countries in this field can be very similar and one country's problem today is its neighbour's problem tomorrow. A satisfactory state of affairs may be a long way off but it is hoped that more intense research on the issues addressed in this paper and its successful transfer into policy and practice will contribute to finding solutions.

Abbreviation lists

EKEP	National Centre for Vocational Orientation
EKEPIS	National Accreditation Centre of Vocational Training Structures and Accompanying Support Services
ESA	National employment strategy
ESYE	National Statistical Service of Greece
GSEE	Greek General Confederation of Labour
IEK	Vocational training institute
INE-GSEE	Labour Institute of the Greek General Confederation of Labour
INE-OTOE	Labour Institute of Greek Federation of Bank Employees Unions
ISCED	International standard classification of education
ITE	Institute of Technological Education
KEK	Vocational training centre
OAED	Greek Manpower Employment Organisation
OEEK	Organisation for Vocational Education and Training
PAEP	Employment Observatory Research-Informatics SA
TEE	Technical vocational schools

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Annex

Table 6: *Existing and future vacancy needs by region (percentage of firms surveyed)*

Region	There exist vacancies or new vacancies will be soon created	There exist no vacancies and no new vacancies will be created in the near future
Total (%)	32.1	67.9
Epirus	45.3	54.7
Eastern Macedonia	39.6	60.4
Ionian Islands	37.1	62.9
Western Macedonia	35.9	64.1
Southern Aegean	35.8	64.2
Western Greece	35.2	64.8
Attika	33.0	67.0
Peloponnese	31.1	68.9
Crete	29.7	70.3
Sterea	28.6	71.4
Central Macedonia	27.7	72.3
Thessaly	26.9	73.1
Northern Aegean	16.1	83.9

Source: Ministry of Labour and Metron Analysis (2001, Table 4.1.1, p. 29)

Table 7: *Existing and future vacancy needs by reported revenue*

Annual revenue	There exist vacancies or new vacancies will be soon created	There exist no vacancies and no new vacancies will be created in the near future
Total (%)	32.1	67.9
<=50million GRD*	26.0	74.0
150-600 million GRD.	32.1	67.9
600-1000 million GRD	33.6	66.4
1000-2000 million GRD	11.2	69.1
>2000 million GRD	43.8	56.2
I do not answer	18.3	81.7

Source: Ministry of Labour and Metron Analysis (2001, Table 4.1.4, p. 31)

* EUR 1 = GRD 340,75

Table 8: Labour demand by education level by sector (percentage of firms)

Sector	Completed compulsory education	Completed secondary education	Completed vocational post-secondary education (IEK or other)	Tertiary (non-university) education graduates	University graduates	Post-graduate education	No preference
Agriculture/ Fisheries/ Mining	65.2	11.0	6.6	7.4	3.2	0.9	5.7
Industry/ Energy	16.8	39.0	12.8	13.4	9.1	0.6	8.3
Construction	32.4	16.7	5.8	12.0	19.3	0.1	13.6
Wholesale and retail commerce	15.1	46.4	10.6	12.0	10.9	0.5	4.5
Services	9.6	29.8	18.8	10.0	23.3	2.1	6.3
Total	14.7	36.5	14.0	11.4	15.8	1.2	6.4

Source: Ministry of Labour and Metron Analysis (2001, Table 4.3.2.12, p. 50)

Cedefop (European Centre for the Development of Vocational Training)

Identification of skill needs. Projects and actions for Greece – a review

Pavlina Karasiotou

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This review describes recent activities and projects in identifying skill requirements in Greece.

Results suggest that problems of skill mismatch are mainly due to a deficit in demand for skilled labour rather than a deficit in supply of skills. Most Greek firms – mainly small businesses – are not open to new developments and/or developing their employees' skills.

This is a challenge for policy to support training, to foster openness to cope with new challenges, raise awareness of the importance of training and skills and make use of the opportunities offered by information and communication technologies.

Much more research is needed in Greece on skill needs, mismatch in labour markets and skill acquisition of target groups – and above all on transferring research findings into policy and practice.

Identification of skill needs

Projects and actions for Greece – a review

PANORAMA



European Centre for the
Development of Vocational Training

Europe 123, GR-570 01 Thessaloniki (Pylea)
Postal address: PO Box 22427, GR-551 02 Thessaloniki
Tel. (30) 23 10 49 01 11, Fax (30) 23 10 49 00 20
E-mail: info@cedefop.eu.int
Homepage: www.cedefop.eu.int
Interactive website: www.trainingvillage.gr

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