«ΣΠΟΥΔΑΙ», Τόμος 59, Τεύχος 3ο-4ο, (2009) / «SPOUDAI», Vol. 59, No 3-4, (2009), University of Piraeus, pp. 72-101

"REGIONAL LABOUR MARKETS IN GREECE: THE CASES OF NORTHERN AEGEAN AND THE IONIAN ISLANDS"

By

Stavros Rodokanakis
Department of Social and Policy Sciences, University of Bath

Abstract

The basic aim of this paper is to investigate the impact that educational level of individuals and participation in training programmes (apprenticeship, intra-firm training, continuing vocational training, popular training) have on their job prospects in the regions of Northern Aegean and the Ionian Islands during the implementation of the first Community Support Framework - CSF (1989-1993). We try to see whether the educational level itself and participation in training programmes increased the chances of finding a job. More specifically, we research what are the social and demographic characteristics that increase the chances of someone in the examined population finding a job, how those chances change (if they do) after the introduction of training courses and, also, whether University graduates, in contrast to most of the rest of the EU member states, face greater difficulties in finding a job than non-University graduates, as a series of studies or aggregate statistics for Greece conclude. The findings of the logit model show that although concerning education the picture is mixed, the more trained a person did not improve his position in the labour market during the examined period. To the author's knowledge, this is the first attempt to analyse individual anonymised records (micro-data) of the Labour Force Survey (LFS) for both employed and unemployed at NUTS-2 level. JEL Classifications: C21, J08, J24, O18.

Keywords: Cross-sectional models; Labour economics policies; Human capital; Skills; Regional, Urban and Rural analyses.

1. Introduction

The aim of the paper is to study the impact that education and training programmes (apprenticeship, intra-firm training, continuing vocational training-CVT, popular training) had on the labour market in the Greek regions of Northern Aegean and the Ionian islands, during the implementation of the CSF-1 (1989-93). The vocational training programmes of the CSF-1 in the regions under examination started in March 1990 and ended in March 1994. During the examined time period both regions belonged to the Objective 1 of

the EU Structural Funds. The total population of the above two regions constitute 3.9% of Greece's total.

The main questions to be answered are:

(i) What are the social and demographic characteristics that increase the chances of someone in the examined population finding a job?

(ii) How does the participation in training courses affect the chances of getting an employment?

(iii) Whether University graduates, in contrast to most of the rest of the EU member states, face greater difficulties in finding a job than the non-University graduates, as a series of studies (see Meghir *et al*., 1989; OECD, 1990; Iliades, 1995; IN.E./GSEE-ADEDY, 1999; Katsikas, 2005) or aggregate statistics (LFS; Eurostat: Education and Employment Prospects, 1995) for Greece conclude.

We test the human capital theory, which underpins many of the important developments in modern economics and provides one of the main explanations for wage and salary differentials by age and occupation, and the uneven incidence of unemployment by skill (education and training). We try to research whether the more educated and the more trained a person is, the higher the probability of him finding a job. We cannot examine the impact of training on earnings, because this kind of information does not exist in the questionnaire of the Greek LFS.

Previous labour market studies for Greece were based on qualitative research and LFS aggregated data. The importance of this research lies in the fact that, to the author's knowledge, it is the first time that the analysis of investigating the impact of training on the Greek labour market – at NUTS-2 level – is based on the micro-data of the Greek LFS. This is because access to the individual anonymised records of the Greek LFS was not allowed to researchers until the summer of 2005, due to the Data Protection Act.

Also, all training actions in Greece are co-financed by the EU funds and so we try to see what happened with the EU money during the period of the CSF-1 in the domain of training. Thus, we do not simply research early 1990s, but for a specific reason namely the management of EU funds in the first programming period. There is the opportunity for other researchers to compare the 2nd and 3rd CSFs with the CSF-1 based on empirical analysis.

The article starts examining the relation between education, training and unemployment in the EU, and especially the impact of training programmes on the employment prospects of individuals in the EU and the rest of the OECD according to a series of studies; the results are based on both cross-sectional and longitudinal data. We also discuss the main problems of vocational training in Greece and the EU. Then, we refer to the macroeconomic indicators of the examined regions and follow a logistic regression for the years 1988 and 1992 - based on micro-data of the Greek LFS - for the two regions under study. The article concludes with the impact of training on employment probability in Europe and the examined areas, and ends with some general comments on the merit and value of this study.

2. Unemployment and skills in Greece and the rest of the EU

2.1 Educational level and unemployment in the EU

Table 1 gives unemployment rates by qualification in different EU countries according to Eurostat data. The differences were enormous. There are only a few countries where this inverse relation between unemployment and qualification did not exist: in Greece and Portugal unemployment among people on ISCED (International Standard Classification of Education) 3 level (Lyceum) was higher than among the less qualified, but not among the University graduates (ISCED 5-7); in Italy and Luxembourg, unemployment rates among the highly qualified (ISCED 5-7, University) exceeded those of people with intermediate qualifications.

Looking at the long-term unemployment (LTU) of different skill levels, we again find that intermediate and higher educated people were less affected. This is true for the whole Union except Spain and Greece, where LTU was higher on ISCED levels 3 and 5-7 compared to levels 0-2, for Italy where LTU was the highest on ISCED 3 level, and for Luxembourg and Portugal where the ratios of ISCED levels 0-2 and 3 were equal (Eurostat, Education and Employment Prospects, 1995).

TABLE 1

Unemployment rates by level of educational attainment(1); EU 1994

Country	ISCED 0-2[c]	ISCED 3[b]	ISCED 5-7[a]
BEL	12.5	7.5	3.7
DEN	12.6	8.3	4.6
GER	14.8	8.9	5.3
GRE	6.2	8.3	5.3
ESP	22.4	20.0	15.1
FRA	14.8	9.7	6.6
IRL	21.0	9.1	5.3
ITA	9.3	7.4	8.1
LUX	3.7	1.9	2.4
NL	12.6	7.7	5.5
POR	6.1	6.4	2.4
UK	11.2	7.9	4.1
EU-12	**13.2**	**8.8**	**6.1**

(1) 25-59 years old

Source: Eurostat: Education and Employment prospects, 1995.

[a] *All first and higher degrees. All teaching, nursing qualifications. HNC/HND.*

[b] *1 or more A-level passes, GNVQ 3 and equivalent, NVQ 3 and equivalent. Trade apprenticeship. GNVQ 2 or equivalent, NVQ2 or equivalent.*

[c] *ISCED 2: 1 or more O-level/ GCSE passes, 1 or more CSE passes. All other qualifications.*

ISCED 0-1: No qualifications.

2.2 CVT and unemployed in the EU

For the EU as a whole, unemployment in the 20-29 age group with supplementary vocational education and training was less than half that of those in the same age group without such further training (11.5% compared to 23.5%). With regard to the individual member states, young people with additional vocational education and training were in a more advantageous position on the labour market than those without, except in Spain, Portugal and Greece (see Table 2).

TABLE 2

Unemployment rates among young people (20-29) with basic education and those with supplementary vocational education and training (EU - 1995 figures)

COUNTRIES	BASIC EDUCATION	BASIC EDUCATION PLUS SUPPLEMENTARY VOCATIONAL EDUCATION / TRAINING
EU-14	**23.5**	**11.5**
Belgium	24.3	19.7
Denmark	17.7	8.5
Germany	16.2	7.6
Greece	14.3	20
Spain	33.9	34.9
France	30	17.1
Italy	22.2	15.9
Luxembourg	5.7	:
Netherlands	14.8	7.2
Austria	:	4
Portugal	11.2	16.2
Finland	35.4	23.6
Sweden	21.7	:
UK	18.5	10

Ireland – No figures available

: = Data unreliable

Source: Eurostat (as quoted in Economic and Social Committee of Greece, 1998, p. 31).

3. Training evaluation in Europe and Greece

3.1 Impact of training at micro-economic level

The early European evaluation studies are mostly characterized by the fact that research was not based on longitudinal and non-experimental data, as is the norm in the second generation studies (see section 3.1.2), but on cross-sectional and (quasi) experimental data. Experimental evaluations are common in the U.S. but scarce in Europe (Bjorklund and Regner, 1996). The micro-economic studies on active labour market policies (ALMPs) were effectively summed up in OECD (1993a) and Fay (1996). Regarding training the basic conclusion was a frequently weak return to the training of the unemployed. In the majority of cases the most significant force decreasing the return was deadweight (i.e. a trained job-hunter is taken on but would have been employed in any case without training) - (Jackman *et al*., 1996).

3.1.1 The findings from European training evaluations (first generation studies)

Among the ALMPs the greatest advance has been in the evaluation of training programmes, whilst the majority of training studies focused on the impact of training on future remuneration or on the likelihood of re-employment. The impact on the duration of the following employment period, too, has just been examined in studies done lately (e.g. Kaitz, 1979; Ridder, 1986; Card and Sullivan, 1988; Ham and Lalonde, 1991; Gritz, 1993; Bonnal *et al.*, 1994; Torp, 1994; Zweimuller and Winter-Ebmer, 1996) – it is important to separate the length of employment from the duration of job tenure (Cockx *et al*., 1998).

Examination of accessible micro studies on training forces us to realize that it has been remarkably difficult to be clear about the foreseeable positive impact on those taking part (Jackman, 1995). It could be thought more extraordinary, according to Calmfors and Skedinger (1995), in view of the powerful theoretical points suggesting a positive impact when programmes were concentrated on a set of outsiders like these, that there is no more definite evidence on the impacts of centreing on the young.

A large number of different sorts of training programmes and their impacts were studied by OECD (1993a). In general it was found that programmes aimed at a few people only whose requirements are easily recognizable and at quite a high cost per person, frequently seemed to succeed relatively well in improving the remuneration and job possibilities of a number of the participants (this might account for the fact that training programmes in Norway, which were not that large, seemed to have succeeded much more effectively

than in Sweden - Calmfors, 1995). In contrast, wider programmes involving more participants at quite a low cost per person normally appeared to make almost no difference (if any) to the prospects of those involved (Jackman, 1995). According to Rosholm and Skipper (2003) training raises the unemployment rate of participants but this effect disappears over time and this would indicate a locking-in effect.

These findings can be explained in different ways. One is that the characteristics of the unemployed differ to a great extent and taking into account their age, education and occupational backgrounds, just a few were able to gain from more training. Therefore, the only training programmes that had economic returns were those aimed at particular groups. Another explanation is that due to greater returns to training, only programmes with large inputs, i.e. targeted programmes, succeed. For instance, this could apply where the trainees are not used to the kind of skills they are learning, or for those not used to gaining skills by formal means (Jackman, 1995).

It follows that a labour market policy desirous of putting all unemployed people on a programme or giving them temporary work, cannot be largely made up of effective training programmes (OECD, 1993b; Calmfors, 1994).

3.1.2 Findings from recent European Programme evaluation on training (second generation studies)

In contrast to the early European evaluation studies - cited in section 3.1.1 - cross-sectional data is hardly to be found and training research in Europe has replaced it with the more useful longitudinal data, allowing for the possibility that impact assessments will be more robust (Kluve and Schmidt, 2002). Namely, the studies of section 3.1.2 examined the same population groups over time, apart from those of Winter-Ebmer (2006) and Cueto and Mato (2009) which used only one reference year in their research; also, only one study (that of Malmberg-Heimonen and Vuori, 2005) used experimental data.

These results show that the more expensive programmes having a significant amount of training appear to be most effective at increasing employment prospects (see Kluve *et al*., 1999; Brodaty *et al*., 2001; van Ours, 2001; Kluve and Schmidt, 2002; Raaum and Torp, 2002). Lately, national studies do not all find positive impacts (Gerfin and Lechner, 2000; Regner, 2002); but bearing in mind that job creation and subsidies for employment in the public sector usually do not succeed (Kluve *et al*., 1999; Brodaty *et al*., 2001), especially if their

one aim is to remove unemployed people from the register (Lechner, 2000), training seems to have a significant impact.

Concerning the most recent research (Weber and Hofer, 2003; Graversen, 2004; Graversen and Jensen, 2004; Hujer *et al*., 2004; Rosholm and Svarer, 2004; Centeno *et al*., 2005 - on earnings as well; Hogelund and Holm, 2005; Aakvik and Dahl, 2006), there is no impact of training on employment probability in the European labour markets. Also, according to a series of studies (Lechner *et al*., 2005 - on earnings as well; Malmberg-Heimonen and Vuori, 2005; Steiger, 2005; Lechner *et al*., 2007 - on earnings as well; Cueto and Mato, 2009 - a locking-in effect of trainees is shown that it may be decreasing labour mobility) the employment effects of training are mixed, namely there are positive and negative results. Furthermore, recent research on Europe has also found that training has positive effects on employment probability, although in some cases more for specific age groups or areas [Cockx, 2003; Hamalainen and Ollikainen, 2004 - on earnings as well; Leetmaa and Vork, 2004; Albrecht *et al*., 2005 - for young men on employment effects (research on earnings as well, but no impact on income effects); Arellano, 2005 - higher positive effects for women than for men; Cavaco *et al*., 2005; Fitzenberger and Speckesser, 2005 - more in West Germany than in East Germany; Kluve *et al*., 2005; Lorentzen and Dahl, 2005 - but modest effects and only on earnings; Stenberg, 2005; Winter-Ebmer, 2006 - for men and on earnings as well; Mato and Cueto, 2008 - but no effects on earnings].

In conclusion, up-to-date evaluation studies point to minor impacts of European training policies and they are most likely less significant and not always as positive as those responsible for designing them had wished. Although the cross-national figures show a few positive results from programmes, it is impossible to disregard the more negative results. The findings allow us to conclude that training programmes seem to have some positive effects on employment and no effects on earnings. Moreover, effects diminish over time. The negative effects reported by several evaluations can be explained, on the one hand by a locking-in effect, and on the other by the fact that some participants seem to enrol in training merely in order to collect unemployment insurance benefits (Cueto and Mato, 2009). The conclusions based on the recent studies are somewhat similar to those of Heckman *et al*. (1999) and Stanley *et al*. (1999) for the U.S.

3.2 Vocational training in the EU: Main problems

It is rather difficult to present a detailed picture of the different forms of CVT offered within the member states. This depends not only on the fact that

data are not consistent and complete, but also on that there is no consensual definition of "CVT". Brandsma *et al*. (1995) stated that for the Flemish community of Belgium, Greece, Ireland, Netherlands, Spain and the UK a definition of CVT was missing entirely (national definitions of CVT have been compiled by CEDEFOP, 1996). According to CEDEFOP (1997) the definition of CVT is as follows: “The term ‘CVT’ is used to cover all types of post-initial vocational training and lifelong learning – whether or not organised, whether school based or at the work place, etc. and irrespective of the nature of their funding, organization and target group”.

The very rapidity of technological change may create a certain degree of uncertainty concerning the appropriate future possibilities and the orientation of both demand and supply. Such an uncertainty may lead either to unsuccessful attempts to "anticipate" future demand of skills or to the unnecessary preservation of existing structures and contents until future trends become more clear and certain. This last strategy is often seen in courses designed to provide specific rather than general training, in the sense of enhancing the learning and co-operative capacities of the trainees skills, but it affects also some of the courses aiming at the provision of general skills resulting in rigidities and lack of innovation.

The most important thing is to focus upon the procedures through which anticipated skill needs are translated into training needs and take the form of a training programme. The comparative study (Dedoussopoulos *et al*., 1995) of the vocational training systems in three different EU regions (Central Macedonia, South Wales, Lower Saxony) aims at the construction of a typology of the most important problems faced by vocational training. This typology is presented in Table 3 below.

TABLE 3

Main problems of vocational training programmes in the EU

EXTERNAL FACTORS	INTERNAL FACTORS
• OVERALL CRISIS	• LACK OF KNOWLEDGE OF LABOUR MARKET SITUATION AND OF SKILL NEEDS
• HIGH CONCENTRATION OF INDUSTRIES IN CRISIS	• LACK OF COMMUNICATION – MARKETING BETWEEN TRAINING DESIGNERS AND SOCIAL PARTNERS
• UNCERTAINTIES CONCERNING CHANGES IN SKILLS	• LACK OF DETERMINATION OF TARGET GROUPS
• HIRING POLICIES OF FIRMS	• LACK OF TRAINING METHODS AND STANDARDS

Source: Dedoussopoulos *et al*., 1995.

Another serious problem is the lack of transparency between the different CVT systems. In its recommendation concerning access to CVT, the European Council 1993 stated that because of the variety of measures and forms of CVT in Europe, it was hardly possible to get an overview of impacts and results (CEDEFOP, 1998).

Finally, according to van Lith (1998), ex-post calculations of returns, growth and employment effects cannot help state bodies, when it comes to substantiating subsidies or the financing of specific vocational education and training (VET) investments. They cannot explain what type of education and what scale is required by industry and public administration or which one helps to reduce the risk of unemployment, to promote innovation or to increase productivity.

3.3 Vocational training policies for the unemployed in Greece

The structure of expenditures for "active" interventions in 1997 shows that the level of expenditures in Greece (0.35%), as a percentage of the GDP, is behind that of the EU-15 average (1.13%) concerning all specific interventions, with the exception of "measures for the young" (youth vocational education and training, etc. – 0.10%) which are comparable to the European average (0.13%). Furthermore, there is an extremely low level of expenditures on the

training of adults (0.06% for Greece in comparison to 0.29% for the EU-15) - (OECD, Employment Outlook, 1999).

The system of CVT in Greece was developed mainly due to its incorporation in Community funding programmes (Iliades, 1995; Chletsos, 1998; Papakonstantinou, 1998). Policies concerned with training and retraining for the unemployed have been confined to continuing training programmes. Vocational training programmes for the unemployed were wholly unconnected with employment policies, and were thus wasteful of training resources (Gravaris, 1991, p. 37; Christodoulakis and Kalyvitis, 1995; Balourdos and Chryssakis, 1998; Economic and Social Committee of Greece, 1998). This is reflected in the fact that the unemployment rate for those (20-29 years old) with complementary vocational training in Greece was 20%, compared to 14% for those with only compulsory schooling; the corresponding figures for the EU were 11.5% and 23.5% (see Table 2).

Particularly with regard to training programmes for the unemployed in Greece, the method of identifying skills requirements, on the basis of which the programmes were offered, was wholly inadequate. It was based on changes in labour force categories derived from the LFS, on estimates of the impact of investment programmes on employment (where these existed or where such estimates were possible) and on Job Market Surveys. These last record shortages of skills on the basis of company estimates of their own shortages, which were often inaccurate or did not correspond to the capacity of the firms to utilise the skills demanded (Linardos-Rylmon, 1998).

It is noteworthy that there are authors like Economou (1997) who suggest that the first Greek CSF (1989-1993) turned out to be a failure due to the reproduction of the clientist relations, which are claimed to be the essence of Greek policy and administration.

4. Macroeconomic data of the examined regions

4.1 The Region of Northern Aegean

The Region of Northern Aegean contains the counties of Lesvos, Samos and Chios, and consists of nine inhabited islands (Lesvos, Limnos, Agios Efstratios, Chios, Oinousses, Psara, Samos, Ikaria and Fourni). The per capita GDP was 14,500 euro in 2003 (84% of the EU-25 average, and 104% of the Greek GDP mean which was 80.9% of the EU-25, fourth more affluent region in the country). The region is noteworthy that in 1995 the region's GDP was just 83% of the country's average. With Mytilini as its centre, it is inhabited by 1.9 % of the country's

population (204.108 inhabitants according to 2001 census), thereby being the smallest region. Between the census of 1991 and 2001 the population rose by 3.4%, as opposed to the national average of 6.9%. The region produces 1.9% of the GNP (the smallest contributor), 3.3% of agricultural produce, 0.2% of manufacturing and 1.7% of services. Sixty-seven percent of the region's produce comes from services (data of 2003). The region accounts for 2.8% of the country's cultivated land. Unemployment in the region fell by half a unit in 2001 - after a fall of four units in 2000 - to 6.6% of the workforce (10.5% for the whole of Greece), the lowest proportion nationally (source: www.economics.gr).

4.2 The Region of the Ionian islands

The Region of Ionian islands contains the counties of Zakynthos, Corfu, Kefallinia and Lefkada. The region consisits of 32 small and big islands, but only 13 of them are inhabited (the four forementioned islands plus Antipaxi, Ereikousa, Ithaka, Kalamos, Kastos, Mathraki, Meganisi, Othoni and Paxi). Between the census of 1991 and 2001 the population rose 9.9%, the third largest rise nationally after the Southern Aegean and Crete (source: www.economics.gr).

With Corfu as its centre, the region is inhabited by 2% of the country's population and produces 1.7% of the GDP (2003). In 2001 the per capita GDP was equal to 61% of the EU-15 average (69% for Greece as a whole), whereas in 2003 the regional GDP per head was 87% of the country's mean (85% in 1995) and 71% of the EU-25 mean (80.9% for the country as a whole). The region produces 2% of the agricultural produce of the country, 0.15% of manufacturing production and 2% of services. Eighty percent of the region's produce comes from services, with an important contribution to tourism, considering that 20% of the regional GDP stems from hotels and restaurants (the second highest proportion in the country after that of Southern Aegean) - (data of 2003). In 2001 it accounted for 2% of cultivated land in the country. Unemployment in the region rose by 1.2 units in 2001 to 10.2% of the workforce, the largest rise in the country (11.3% in 2003 - 10.5% for the whole of Greece) - (source: www.economics.gr).

5. Econometric model: Logistic regression for unemployment

5.1 The problems with selection bias, self-selection and proxy interviews on training in the LFS

There is a huge literature (see section 3) that shows the importance of taking into account selection bias and self-selection into training when attempting

to evaluate the impact of training on employment status. Selection bias comes from differences between participants and non-participants. There can be three kinds of selection bias: because of comparing non-comparable subjects, because of a different distribution of the observable characteristics or because of non-observable characteristics. Researchers rely on analyzing programmes that have been designed to be evaluated; that is, the program intervention is randomly assigned to a treatment group and results are compared with the control group. In the absence of randomization like in the case of the Greek LFS (otherwise we could use propensity score matching estimators in our analysis), there are other advanced micro-econometric evaluation techniques like generalised propensity score (in case of missing values, non-response), differences-in-differences (selection on unobservables), or heterogenous and multiple treatment. However, regarding the LFS data for Greece for the years under examination, the use of new techniques could not provide us with reliable results, mainly due to the sample's design, but also the questionnaire's design. Also, a number of writers in Austria, Ireland, Norway, Sweden and the UK have observed that cross-sectional estimators that ignore trainees choosing themselves - this is the case with the Greek LFS data in the examined period - probably minimize the importance of the effect of European training programmes (Heckman *et al*., 1999).

Felstead *et al*. (1998) has pointed to difficulties connected to using European LFS, such as the fact that the questionnaire was greatly modified in 1992, leading to an interrupted sequence in the data. A larger difficulty is that of proxy interviews when the person is not there to be interviewed and a member of their household provides information on their behalf. In the ELFS proxy interviews are common because they are cheaper than returning to the houses to interview the individuals in person. According to Felstead *et al*. (1998) proxy interviews create a special difficulty for the analysis of training data. Although the person answering the questions by proxy might know a certain amount about the status of a member of their household in the labour force, they could be unaware of their household in the labour force and of training details, especially if this was casual and on-the-job. The difficulty is increased since the young are more likely to be covered by proxy interviews and they are also the group with the greatest possibility of being involved in training.

5.2 The logistic regression based on the micro-data of the Greek LFS

European Community Household Panel (ECHP) and Survey on Income and Living Conditions (SILC) data have been designed for the country as a whole in the case of Greece, so we cannot really work at regional level. Also,

individual census records do not exist in Greece, like e.g. in Denmark, so the only way is to base our research on the LFS micro-data.

The questionnaire of the Greek LFS was greatly modified in 1992. The originality of this research is that we use individual anonymised records (micro-data) of the LFS for both employed and unemployed (about 1.5% of the total population of each region).

Table 4 shows the numbers of records eligible for analysis in the LFS samples of the two regions under examination in 1988 and 1992. Apart from the system missing records, following the limitation of age (15-64 years old) and removing the non-active population, we ended with the following numbers of records eligible for analysis in each region (in the spring and early summer, namely from the 14th to 26th week of the year).

TABLE 4

Numbers of records eligible for analysis in the LFS samples

Year	Region	No. of records
1988	**Northern Aegean**	**993**
	Ionian islands	1,103
1992	**Northern Aegean**	**858**
	Ionian islands	994

The basic aim of the econometric analysis is to test the impact that training programmes (apprenticeship, intra-firm training, CVT, popular training) and educational level had on people's job prospects in the Regions of Northern Aegean and the Ionian islands, during the implementation of the CSF-1 (1989-93), accounting for demographic characteristics such as age, gender, marital status and area of residence. We try to see whether participation in training programmes and educational level increased the chances of finding a job. In the paper, we use a logistic regression model for studying differences between those that did participate in training programmes and those that did not. Regression models allow for group comparisons adjusting for demographic and socio-economic variables. It should be noted that regression-adjusted comparisons may still provide misleading results when other important variables that might have an effect are omitted.

The dependent variable takes two possible values (employed versus unemployed). A full description of the explanatory variables (six for 1992 and five for 1988) is given below and are among the most important variables generally acknowledged as affecting access to labour market. The participation in training courses is only available in 1992.

The effect of demographic variables such as age, gender, marital status, residence location, as well as educational level and participation in training programmes on the employment status, is investigated with a logistic regression model due to the categorical nature of the dependent variable. The logistic regression model is written as:

$$\text{logit } P(y=1 \mid x_1,\ldots,x_k) = \log\left[\frac{P(y=1 \mid x_1,\ldots,x_k)}{1-P(y=1 \mid x_1,\ldots,x_k)}\right] = \beta_0 + \sum_{k=1}^{K}\beta_k x_k \ ,$$

where $P(y=1|x_1,...,x_k)$ and $1-P(y=1|x_1,...,x_k)$ denote the conditional probability a randomly selected individual to be 'unemployed' and 'employed' respectively. The coefficient β_k denotes the effect that a unit increase in the explanatory variable x_k has on the log odds of being 'unemployed' than 'employed' controlling for all other variables in the model and β_0 is the intercept of the model and the value of the logit when all the explanatory variables take the value zero. More specifically, a unit increase in the explanatory variable x_k multiplies the odds by e^{β_k} controlling for all other variables in the model.

Solving the above formula with respect to the conditional probability we have

$$P(y=1 \mid x_1,\ldots,x_k) = \frac{e^{\beta_0+\sum_{k=1}^{K}\beta_k x_k}}{1+e^{\beta_0+\sum_{k=1}^{K}\beta_k x_k}}$$

Due to data limitations, we cannot explore the impact that the duration of courses, thematic fields, number of participants, duration of unemployment period of the trainees have on unemployment. Another limitation of the research is that the data available are cross-sectional rather than longitudinal and therefore we cannot study any population changes across time. The Greek LFS data are non-experimental.

5.2.1 Description of the variables

We define now the complete list of variables together with their coding values that we use in the model.

Dependent variable

Employment Status (STA1) (Unemployed = 1, Employed = 0)

Explanatory variables

The reference category of each variable is underlined.

1) Gender (STA 2) (Female = 1, Male = 0)

2) Marital status (STA 3) (Married, divorced or widows = 1, Non-married = 0)

3) Level of education (STA8A-STA8D)
   STA 8A = University graduates
   STA 8A1 = MSc or PhD holders
   STA 8B = Technological Educational Institutions (TEI) graduates
   STA 8C = Lyceum graduates (12 years of schooling) or not finished University
   STA 8C1 = High-school graduates (9 years-compulsory education)
   STA 8D = Primary school graduates or not finished primary school or never in school.

4) Urbanization level of settlement system (STA9C-STA9E)
   STA 9C = Urban areas
   STA 9D = Semi-urban areas
   STA 9E = Rural areas

5) Participation in the past in training course(s) (STA26A-STA26E)
   STA 26A = apprenticeship
   STA 26B = intra-firm training
   STA 26C = continuing vocational training (CVT)
   STA 26D = popular training
   STA 26E = Non-participation in the past in training course(s)

6) Age groups (STA40A-STA40E)
   STA 40A = 15-24 years old
   STA 40D = 25-34 years old
   STA 40E = 35-44 years old
   STA 40C = 45-64 years old

The base (or reference) categories are those with which the rest of the corresponding variables are compared. The reference categories are chosen so as to match the needs of the research.

We have excluded the 14 and 65 year olds in order to avoid including in our analysis those who are younger than 14 and older than 65 years old.

The variable "participation in the past in training course(s)" first appeared in the 1992 questionnaire; it means that the interviewee had completed one or more training courses. This is also an indication of the attitude towards training in Greece at the beginning of the 1990s. The duration of apprenticeship and intra-firm training had to be at least one year according to the questionnaire of the Greek LFS. The term "popular training" (*laiki epimorphosi* in Greek) means training courses intended mainly for elderly people independently of their educational level, where the curriculum includes largely courses of general knowledge.

The following tables present the estimated coefficients (B) and their standard errors (S.E.) of each explanatory variable in the logistic regression for unemployment, together with the Wald test for significance, calculated as the squared ratio B/SE. The column "Sig." (level of statistical significance or p value) corresponds to the probability of the rejection area, so coefficients with a value not higher than 0.05 are highly and significantly different from zero.

5.3 Results for Northern Aegean

Tables 5 and 6 present the results of the logistic regression in Northern Aegean for 1988 and 1992. In 1992, women, non-married individuals, people who lived either in the urban areas or semi-urban areas were more likely to be unemployed than men, married people, and those in rural areas. The effect of urbanization level can be explained since in the Greek agrarian sector unemployment was not properly counted.

In 1992 all age groups are statistically non-significant. On the contrary, in 1988 people in the age group 15-24 years old were more likely to be unemployed than people in the age between 25 to 64. Also, for 1988, the variables "gender" (perhaps due to the family nature of the tourist companies) and "marital status" are statistically non-significant, whereas people who lived in the urban areas were more likely to be unemployed than in rural areas.

In addition, for 1988, significant differences in education have been found only between primary school graduates and university graduates (the reference

group), indicating that primary school graduates were less likely to be unemployed than university graduates, whereas all the rest of the educational variables are statistically non-significant. In 1992 university graduates were less likely to be unemployed compared to Polytechnic (TEI) graduates (other differences were not found significant).

Most importantly, none of the four types of training programmes seemed to reduce the odds of unemployment. The same results on training were found for other Greek regions as well (see Rodokanakis and Tryfonidis, 2008; Rodokanakis, 2009a, 2009b and 2009c; Rodokanakis and Tryfonidis, 2009; Rodokanakis, 2010). Also, the results of the logistic regression confirm the conclusions of the various studies for the limited impact of vocational training in Greece.

The little effect of high levels of education in the diminution of unemployment in this region are indeed related with the production structure, given the great dependence of the region on agriculture and tourism. Thus, the success of training policies in this Greek region should be combined with economic policies to foster high value-added services that would increase the demand of qualified workers and improve real income per capita.

TABLE 5

Results for Northern Aegean, 1988

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Gender	,518	,320	2,627	1	,105	1,679
Marital status	-,397	,412	,930	1	,335	,672
Aged 25-34	-1,108	,434	6,521	1	,011	,330
Aged 35-44	-2,142	,614	12,173	1	,000	,117
Aged 45-64	-1,061	,532	3,972	1	,046	,346
TEI graduates	,051	,613	,007	1	,933	1,053
12 years of schooling	,185	,471	,154	1	,694	1,203
9 years-compulsory education	-,040	,594	,005	1	,946	,961
Primary school graduates and below	-1,081	,530	4,152	1	,042	,339
Urban areas	1,144	,393	8,460	1	,004	3,139
Semi-urban areas	,021	,495	,002	1	,966	1,022
Constant	-1,840	,614	8,980	1	,003	,159

TABLE 6

Results for Northern Aegean, 1992
(parameter estimates b_k, standard errors (s.e.), p-value, exponent of b_k)

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Gender	1,125	,329	11,689	1	,001	3,082
Marital status	-,942	,442	4,545	1	,033	,390
Aged 25-34	-,873	,459	3,615	1	,057	,418
Aged 35-44	-1,133	,610	3,454	1	,063	,322
Aged 45-64	-,977	,603	2,623	1	,105	,376
MSc or PhD holders	-17,259	2,146E4	,000	1	,999	,000
TEI graduates	1,855	,728	6,488	1	,011	6,389
12 years of schooling	1,096	,610	3,225	1	,073	2,991
9 years-compulsory education	1,017	,698	2,123	1	,145	2,766
Primary school graduates and below	1,052	,611	2,968	1	,085	2,864
Urban areas	2,103	,472	19,843	1	,000	8,194
Semi-urban areas	1,396	,521	7,183	1	,007	4,040
Apprenticeship	-16,535	4,019E4	,000	1	1,000	,000
CVT	-19,028	1,656E4	,000	1	,999	,000
Constant	-4,248	,751	31,959	1	,000	,014

5.4 Results for the Ionian islands

Tables 7 and 8 present the results of the logistic regression in the Ionian islands for 1988 and 1992. The results for gender and marital status are mixed. In both years, people in the age group 15-24 years old were more likely to be unemployed than people in the age between 35 to 64; the results are mixed for the age group 25-34.

The findings of the urbanisation level are mixed. In 1988, people who lived in the urban areas were more likely to be unemployed than in rural areas; in

this case the effect of residence location can be explained since in the Greek agrarian sector unemployment was not properly counted, because hidden unemployment is quite high. Living in semi-urban areas was not found statistically significant. In 1992, people who lived in the urban or semi-urban areas were less likely to be unemployed than in rural areas.

Concerning education, for 1988, all educational variables are statistically non-significant. On the contrary, in 1992, primary school graduates were less likely to be unemployed than university graduates; also, TEI and high-school graduates were more likely to be unemployed than university degree holders.

Furthermore, in the Region of the Ionian islands, only apprenticeship was found to be statistically significant; namely, the participants in this kind of training courses are more likely to be unemployed than those who have not participated in any type of training programmes.

TABLE 7

Results for the Ionian islands, 1988
(parameter estimates b_k, standard errors (s.e.), p-value, exponent of b_k)

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Gender	,451	,359	1,574	1	,210	1,569
Marital status	-,017	,465	,001	1	,971	,983
Aged 25-34	-,631	,481	1,717	1	,190	,532
Aged 35-44	-2,169	,702	9,537	1	,002	,114
Aged 45-64	-1,862	,656	8,048	1	,005	,155
TEI graduates	,000	1,274	,000	1	1,000	1,000
12 years of schooling	1,305	,783	2,778	1	,096	3,689
9 years-compulsory education	-17,807	4,712E3	,000	1	,997	,000
Primary school graduates and below	-,067	,818	,007	1	,935	,935
Urban areas	1,251	,423	8,746	1	,003	3,493
Semi-urban areas	,369	,544	,460	1	,497	1,446
Constant	-3,121	,892	12,255	1	,000	,044

TABLE 8

Results for the Ionian islands, 1992
(parameter estimates b_k, standard errors (s.e.), p-value, exponent of b_k)

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Gender	1,598	,056	826,509	1	,000	4,944
Marital status	-,811	,065	157,139	1	,000	,445
Aged 25-34	-,668	,064	107,193	1	,000	,513
Aged 35-44	-1,595	,085	349,328	1	,000	,203
Aged 45-64	-2,987	,133	503,260	1	,000	,050
TEI graduates	,489	,121	16,452	1	,000	1,630
12 years of schooling	-,020	,088	,054	1	,816	,980
9 years-compulsory education	,682	,099	47,620	1	,000	1,978
Primary school graduates and below	-1,032	,096	115,379	1	,000	,356
Urban areas	-,336	,060	31,731	1	,000	,714
Semi-urban areas	-,260	,075	12,061	1	,001	,771
Apprenticeship	1,538	,152	102,861	1	,000	4,654
Intra-firm training	-18,231	2,550E3	,000	1	,994	,000
CVT	-15,170	3,297E3	,000	1	,996	,000
Constant	-2,354	,105	502,858	1	,000	,095

5.5 Interaction effect among variables

Only for the 1992 sample, did we fit the interaction effects between training and urbanisation level, and between training and level of education, as well as between age group and participation in training courses; we also explored the relationship between age group and educational level. Interactions terms were not found to be statistically significant in either region. Therefore, the variable "training" does not alter the relationship between unemployment and educa-

tion, unemployment and age group, as well as unemployment and urbanisation level. In other words, the chances of finding a job do not change when we count training as an additional qualification in relation to residence location, age group and level of education.

6. Conclusions

A significant number of researchers making use of accessible data and studies to examine the potential impacts of training on employment have been referred to. In spite of being restricted to only a small number of nations, micro-economic studies of effect evaluations indicate that some programmes have managed to noticeably better employment prospects for those taking part. On the other hand, the findings include a number of programmes which appear to have had almost no effect.

Programmes with fairly specific targeting have managed positive results and this may be due to the fact that these programmes usually take account of individual requirements. However, a number of programmes that were most widely targeted have had little impact. Lastly, to establish the ways in which programmes can be made better more research is necessary.

According to the findings of the logistic regression of the variable Employment Status (1 for unemployment and 0 for employment) for the regions of Northern Aegean and the Ionian islands, the results for gender, marital status, age groups and residence location are mixed.

In Northern Aegean the level of education is statistically non-significant for 1988 and 1992, apart from primary school graduates in 1988 (less likely to be unemployed than University graduates) and TEI graduates in 1992 (more likely to be unemployed than the University graduates). In the Ionian islands the level of education is statistically non-significant in 1988; on the contrary, in 1992 the educational level is statistically significant with the exception of lyceum graduates.

All training variables are statistically non-significant for 1992 in both regions apart from the apprenticeship in the Ionian islands (as already mentioned in section 5, we cannot explore training in 1988 due to the limitations of data); so, the results of the logistic regression confirm the conclusions of the various studies for the limited impact of vocational training in Greece (see on the vocational training policies for the unemployed in Greece).

The results of educational and training variables, in these samples, are not compatible with the human capital theory, so the more educated and the more trained a person did not improve his position in the labour market, in Northern Aegean and the Ionian islands, during the time period of the CSF-1. One explanation could be the fact that the tourist sector plays a major role in the economy of the regions under examination and so very often higher education is not necessary for the local manpower to find a job. Also, the labour market of the examined regions, like most of the highly attractive Greek tourist destinations, are characterised by high levels of seasonal employment. However, in 1992 in the Ionian islands we observe that TEI and high-school graduates were exceptions to the above mentioned finding, since they were more likely to be unemployed than people with a university degree. Consequently the investigation of the subsequent years is needed in order to have a clearer picture of the 1990s given the fact that, as mentioned in the introduction, the Greek LFS micro-data are now available to researchers.

Finally, the results of the interaction effect analysis show again that training is statistically non-significant in relation to both urbanisation level and educational level in all three regions. As we have pointed out this result is conditioned to the productive structure of these regions, but economic policies addressed to foster high quality services could contribute to increase the demand of qualified workers and real income per capita.

The research would merit attention of a wider international readership, since the paper does offer results that are useful for comparative research among European regions, especially comparing CSFs. Also, the study will be valuable to those who are interested in designing and implementing training programmes for structural change investigating the deficiencies and inefficiencies which have occurred in the Greek case.

References

Aakvik A. and Dahl S. (2006), Transitions to employment from labour market enterprises in Norway, *International Journal of Social Welfare*, Vol. 15 (2), pp. 121-130.

Albrecht J., van den Berg G.J. and Vroman S. (2005), The knowledge lift: The Swedish Adult Education Program that aimed to eliminate low worker skill levels, IZA Discussion Paper 1503, Bonn.

Arellano F.A. (2005), Do training programmes get the unemployed back to work? A look at the Spanish experience, Working Paper 5-25, Economics Series 15, Departamento de Economia, Universidad Carlos III de Madrid.

Balourdos D. and Chryssakis M. (1998), Programmes of continuing vocational training: Statistical indications, evaluation and perspectives (in Greek), in Maratou-Alipranti L. and Hatzigianni A. (Eds.), *Unemployment, employment, education-training in Greece and France*. Proceedings of the Franco-Hellenic Colloquium, EKKE, Athens, pp. 133-150.

Bell B., Blundell R. and van Reenen J. (1999), Getting the unemployed back to work: The role of targeted wage subsidies, *International Tax and Public Finance*, 6(3), pp. 339-360.

Bjorklund A. and Regner H. (1996), Experimental evaluation of European labour market policy, in Schmid G., O'Reylly J. and Schomann K. (Eds.), *International Handbook of Labour Market Policy and Evaluation*, Edward Elgar, Cheltenham.

Bonnal L., Fougere D. and Serandon A. (1994), L'impact des dispositifs d'emploi sur le devenir des jeunes chomeurs: Une evaluation econometrique sur donaces longitudinales, Economie et Prevision, 115, pp. 1-28.

Brandsma J., Kessler F. and Munch J. (1995), Berufliche Weiterbildung in Europa, Stand und Perpsektiven, Bielefeld.

Brodaty T., Crepon B. and Fougere D. (2001), Using matching estimators to evaluate alternative youth employment programs: Evidence from France, 1986-1988, in Lechner M. and Pfeiffer F. (Eds.), *Econometric evaluation of labour market policies*, Physica, Heidelberg.

Calmfors L. (1994), Active labour market policy and unemployment: A framework for the analysis of crucial design features, OECD Economic Studies, No. 22, spring, pp. 7-47.

Calmfors L. (1995), What can we expect from active labour market policy?, The Institute for International Economic Studies, reprint series, No. 546, University of Stockholm.

Calmfors L. and Skedinger P. (1995), Does active labour-market policy increase employment? Theoretical considerations and some empirical evidence from Sweden, *Oxford Review of Economic Policy*, Vol. 11, No. 1, pp. 91-109.

Card D. and Sullivan D. (1988), Measuring the effect of subsidized training programs on movements in and out of employment, *Econometrica*, 56, pp. 497-530.

Cavaco S., Fougere D. and Pouget J. (2005), Estimating the effect of a retraining program for displaced workers on their transition to permanent jobs, IZA Discussion Paper 1513, Bonn.

CEDEFOP (1996), Evaluation of European Training, Employment and Human Resource Programmes, CEDEFOP, Thessaloniki, Brussels/Luxembourg.

CEDEFOP (1997), Education, training and work. Research findings and conclusions, CEDEFOP Panorama, Seminar Papers, Thessaloniki, Brussels/Luxembourg.

CEDEFOP (1998), Vocational choice, transitions, continuing training and disadvantaged groups, in *Training for a changing society*, A report on current vocational education and training research in Europe, Part III, reference document, Thessaloniki, Brussels/Luxembourg, pp. 117-169.

Centeno L., Centeno M. and Novo A.A. (2005), Evaluating the impact of a mandatory job search program: Evidence from a large longitudinal data set (mimeo).

Chletsos M. (1998), The education as an active employment policy: Limits and preconditions of implementation. The case of Greece (in Greek), in Maratou-Alipranti L. and Hatzigianni A. (Eds.), *Unemployment, employment, education-training in Greece and France*. Proceedings of the Franco-Hellenic Colloquium, EKKE, Athens, pp. 151-179.

Christodoulakis N. and Kalyvitis S. (1995), Likely effects of the CSF 1994-1999 on the Greek Economy, Discussion Paper No. 46, KEPE, Athens.

Cockx B. (2003), Vocational training of unemployed workers in Belgium, Applied Economics Quarterly, 49 (1), pp. 23-48.

Cueto B. and Mato F.J. (2009), A non-experimental evaluation of training programmes: Regional evidence for Spain, *The Annals of Regional Science*, Vol. 43, No. 2, pp. 415-433.

Dedoussopoulos A., Kafkalas G., Getimis P. and Kazantzopoulos G. (1995), Comparative study (Central Macedonia, South Wales and Lower Saxony) on regional systems for the anticipation of skill needs and the design, implementation and evaluation of training programmes, Vol. 4, Synthesis Report – Executive Summary, prepared for DGXXII, URDP, October.

Economic and Social Committee of Greece (1998), Opinion of Initiative for the "Vocational Training", Athens, June (in Greek).

Economou D. (1997), The impact of the first Community Support Framework for Greece: The anatomy of failure, *European Urban and Regional Studies*, Vol. 4 (1), pp. 71-84.

ESYE (National Statistical Service of Greece, 1988-2003), Statistical Yearbook and Labour Force Survey.

EUROSTAT (1995), Education and employment prospects.

Fay R. (1996), Enhancing the effectiveness of active labour market policies: Evidence from programme evaluations in OECD countries, *Labour Market and Social Policy occasional papers*, No. 18, OECD, Paris.

Felstead A., Green F. and Mayhew K. (1998), Interpreting training statistics in Europe: Issuing a health warning, *European Journal of Vocational Training*, No. 14, pp. 62-69.

Fitzenberger B. and Speckesser S. (2005), Employment effects of the provision of specific pro-

fessional skills and techniques in Germany, Department of Economics, Goethe-University Frankfurt (mimeo).

Gerfin M. and Lechner M. (2000), Micro-econometric evaluation of the active labour market policy in Switzerland, IZA Discussion paper No. 154, Bonn.

Gravaris D. (1991), The politico-economic foundations of employment policies (in Greek), Topos: Review of Urban and Regional Studies, No. 4, Athens.

Graversen B. (2004), Employment effects of active labor market programs: Do the programs help welfare benefit recipients to find jobs?, PhD thesis, Department of Economics, University of Aarhus.

Graversen B. and Jensen P. (2004), A re-appraisal of the virtues of private sector employment programs, Chapter 3 in Graversen B.

Gritz M.R. (1993), The impact of training on the frequency and duration of employment, *Journal of Econometrics*, 57(1-3), pp. 21-52.

Ham J.C. and LaLonde R.J. (1991), Estimating the effect of training on employment and unemployment durations: Evidence from experimental data, Working Paper No. 3912, NBER, Cambridge, MA.

Hämäläinen K. and Ollikainen V. (2004), Differential effects of Active Labor Market Programmes in the early stages of young people's unemployment, VATT Research Reports 115, Helsinki.

Heckman J.J., LaLonde R.J. and Smith J.A. (1999), The economics and econometrics of active labour market programs, in Ashenfelter O. and Card D. (Eds.), *Handbook of Labor Economics*, volume 3A, Elsevier, Amsterdam, pp. 1865-2097.

Hogelund J. and Holm A. (2005), Returning the long-term sick-listed to work: The efforts of educational measures and employer separations in Denmark, in Saunders P. (Eds.), *Welfare to Work in Practice. Social Security and Participation in Economic and Social Life*, International Studies on Social Security, Vol. 10, Aldershot, Ashgate.

Hujer R., Thomsen S. and Zeiss C. (2004), The effects of vocational training programmes on the duration of unemployment in Eastern Germany, IZA Discussion Paper 1117, Bonn.

Iliades N. (1995), Continuing vocational training in Greece, National Report (in the context of FORCE), National Institute of Labour, January (in Greek).

IN.E./GSEE (Institute of Labour/General Confederation of Workers of Greece) – ADEDY (Civil Servants' Supreme Administrative Council) (1999), The Greek economy and the employment, Annual Report, Reports No. 1, Athens, August (in Greek).

Jackman R. (1995), What can active labour market policy do?, Discussion Paper No. 226, CEP, LSE.

Jackman R., Layard R. and Nickell S. (1996), Combating unemployment: Is flexibility enough?, Discussion Paper No. 293, CEP, LSE.

Kaitz H.B. (1979), Potential use of Markov process models to determine program impact, in Bloch F.E. (Eds.), Research in labour economics, JAI Press, Greenwich, CT.

Katsikas Ch. (2005), Studies-Vocation and labour market, Atrapos (in Greek).

Kluve J. and Schmidt C.M. (2002), Can training and employment subsidies combat European unemployment?, Economic Policy: A European Forum, issue 35, October, pp. 411-448.

Kluve J., Lehmann H. and Schmidt C.M. (1999), Active labour market policies in Poland: Human capital enhancement, stigmatization, or benefit churning?, *Journal of Comparative Economics*, Vol. 27 (1), pp. 61-89.

Kluve J., Lehmann H. and Schmidt C.M. (2005), Disentangling treatment effects of Active Labor Market Policies: The role of labor force status sequences, RWI Essen (mimeo).

Larsson L. (2000), Evaluation of Swedish youth labour market programmes, Working paper No. 6, Department of Economics, Uppsala University.

Lechner M. (2000), An evaluation of public sector sponsored continuous vocational training programs in East Germany, *Journal of Human Resources*, Vol. 35, pp. 347-375.

Lechner M., Miquel R. and Wunsch C. (2005), Long run effects of public sector sponsored training in West Germany, CEPR Discussion Paper 4851.

Lechner M., Miquel R. and Wunsch C. (2007), The curse and blessing of training the unemployed in a changing economy: The case of East Germany after unification, *German Economic Review*, Vol. 8, November, pp. 468-509.

Leetmaa R. and Vörk A. (2004), Evaluation of Active Labor Market Programmes in Estonia, PRAXIS Tallinn (mimeo).

Linardos-Rylmon P. (1998), Vocational training and labour market: Indispensable changes into the function of the continuing training system in Greece (in Greek), in Maratou-Alipranti L. and Hatzigianni A. (Eds.), *Unemployment, employment, education-training in Greece and France*. Proceedings of the Franco-Hellenic Colloquium, EKKE, Athens, pp. 233-236.

Lorentzen T. and Dahl E. (2005), Active labour market programmes in Norway: Are they helpful for social assistance recipients?, *International Journal of Social Welfare*, Vol. 14 (2), pp. 86-98.

Malmberg-Heimonen I. and Vuori J. (2005), Activation or discouragement - The effect of enforced participation on the success of job-search training, *European Journal of Social Work*, 8 (4), pp. 451-467.

Mato F.J. and Cueto B. (2008), *Un analisis de los effectos de las politicas de formacion a desempleados, Rev. Econ. Apl.* http://www.revecap.com/revista/aceptados/matocueto.pdf (in press).

Meghir C., Ioannides Y. and Pissarides C. (1989), Female participation and male unemployment duration in Greece, *European Economic Review*, 33, pp. 395-406.

OECD (1990), *Employment Outlook*, OECD, Paris.

OECD (1993a), Active labour market policies: Assessing macro-economic and micro-economic effects, *Employment Outlook*, ch. 2, OECD, Paris, pp. 39-80.

OECD (1993b), *Employment Outlook*, OECD, Paris.

OECD (1999), *Employment Outlook*, OECD, Paris.

Papakonstantinou G. (1998), Education-training as factors of investment in human capital (in Greek), in Maratou-Alipranti L. and Hatzigianni A. (Eds.), *Unemployment, employment, education-training in Greece and France*. Proceedings of the Franco-Hellenic Colloquium, EKKE, Athens, pp. 125-132.

Raaum O. and Torp H. (2002), Labour market training in Norway: Effect on earnings, *Labour Economics*, Vol. 9 (2), pp. 207-247.

Regner H. (2002), A non-experimental evaluation of training programmes for the unemployed in Sweden, *Labour Economics*, Vol. 9 (2), pp. 187-206.

Ridder G. (1986), An event history approach to the evaluation of training, recruitment and employment programmes, *Journal of Applied Econometrics*, 11, pp. 109-126.

Rodokanakis S. (2009a), Investigating the unemployment risk in Greece from the LFS individual anonymised records: The case of Central Macedonia, *The Empirical Economics Letters*, Vol. 8, No 1, January, pp. 35-43.

Rodokanakis S. (2009b), Comparing the probability of unemployment in Southern Greece vis-à-vis the entire country, *Bulletin of Geography – Socio-economic Series*, No. 12, pp. 17-43.

Rodokanakis S. (2009c), The dynamics of regional labour markets and training programmes: Greek Evidence, *European Spatial Research and Policy*, Vol. 17, No. 1, pp. 93-115.

Rodokanakis S. (2010), The effect of education and training on the employment prospects in the Aegean islands vis-à-vis the whole of Greece, European Education (forthcoming).

Rodokanakis S. and Tryfonidis D. (2008), The probability of being unemployed in the three Northern Greek regions during the CSF-1: Econometric analysis of the LFS micro-data, Journal of European Economy, Vol. 7, special issue (following a selection of papers presented at the International Conference on Applied Economics (ICOAE) 2008, Kastoria, Greece, 15-17 May, pp. 332-347.

Rodokanakis S. and Tryfonidis D. (2009), Unemployment hazard in the Aegean islands: Econometric analysis of the LFS micro-data, in Brox J. A. and Baltas N. (Eds.), *The global economics of a changing environment: Studies in the structure, performance and reform of economics, organizations and business throughout the globe*, chapter 14, North Waterloo Academic Press, Waterloo, Canada, June, pp. 211-224.

Rosholm M. and Skipper L. (2003), Is labour market training a curse for the unemployed? Evidence from a social experiment, IZA Discussion paper No. 716, Bonn.

Rosholm M. and Svarer M. (2004), Estimating the threat effect of Active Labor Market Programs, Working Paper No. 6, *Department of Economics*, University of Aarhus.

Stanley M., Katz L. and Krueger A.B. (1999), Impacts of employment and training programs: The American experience, Harvard University (mimeo).

Steiger H. (2005), Is less more? A look at non-participation in Swiss active labor market programmes, University of St. Gallen (mimeo).

Stenberg A. (2005), Comprehensive education for the unemployed - Evaluating the effects on unemployment of the Adult Education Initiative in Sweden, Labour, 19, pp. 123-146.

Torp H. (1994), The impact of training on employment: Assessing a Norwegian labour market programme, *Scandinavian Journal of Economics*, 96, pp. 531-550.

van Lith U. (1998), Costs and benefits of vocational training, in *Vocational education and training – the European research field*, background report, vol. 1, reference document, CEDEFOP, Thessaloniki, Brussels/ Luxembourg, pp. 157-193.

van Ours J.C. (2001), Do active labour market policies help unemployed workers to find and keep regular jobs?, in Lechner M. and Pfeiffer F. (Eds.), *Econometric evaluation of labour market policies*, Physica, Heidelberg.

Weber A. and Hofer H. (2003), Active job-search programs a promising tool? A micro-econometric evaluation for Austria, IHS working paper, Economic Series 131, Vienna.

Winter-Ebmer R. (2006), Coping with a structural crisis: Evaluating an innovative redundancy-retraining project, *International Journal of Manpower*, 27 (8), pp. 700-721.

Zweimuller J. and Winter-Ebmer R. (1996), Manpower training programmes and employment stability, *Economica*, 63 (249), pp. 113-130.