



# VET Research Report: Cyprus 2009





## **VET Research Report**

**Cyprus 2009** 



REFERNET

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The research report is part of a series of European country reports on vocational education and training research produced for each EU Member State plus Norway and Iceland by members of ReferNet, a network established by Cedefop (European Centre for the Development of Vocational Training). The opinions expressed in this report are not necessarily those of Cedefop.

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#### **FOREWORD**

This report was initiated by Cedefop, the European Centre for the Development of Vocational Training, and has been prepared by the Human Resource Development Authority of Cyprus, HRDA, which is the nominated National Coordinator of the European network ReferNet in Cyprus.

Cedefop established ReferNet as the European network of reference and expertise in vocational education and training. The aim of this network is to meet the growing demand for information on policies and developments in the area of vocational education and training (VET) in the European Union.

ReferNet is made up of national consortiums, each comprising organisations, which are representative of the interests of vocational education and training within each EU Member State, plus Norway and Iceland. ReferNet provides a forum for exchanging information through a decentralised approach based on the contribution of the national consortia.

The report has been prepared as part of a series of reports on VET research in European Union countries. The reports follow a common structure, which has been provided in the form of guidelines by Cedefop. The reports aim to provide information on and expertise in relevant and current research topics to support the development of a European research area.

This report is one of the key sources to identify VET research carried out at national level, the key issues investigated and its findings. A dual approach has been followed, providing reviews of national research on two topics selected by Cedefop and on two topics considered important from a national perspective. The report therefore contains four papers. The first two papers provide research activities relevant to the pre-determined topics by Cedefop: Benefits of VET and Employment-related mobility and migration. The other two topics, Anticipation of Skill Needs and Labour Market Groups at Risk, were chosen by ReferNet Cyprus, according to national priorities.

The HRDA, as the National Coordinator of ReferNet in Cyprus, wishes to acknowledge the invaluable contribution of the other members of the Cyprus consortium in the preparation of this report.

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#### **Abstract**

The VET Research Report for Cyprus was initiated by Cedefop, the European Centre for the Development of Vocational Training, and has been prepared by the Human Resource Development Authority of Cyprus (HRDA), which is the nominated National Coordinator of the European network ReferNet in Cyprus. The first two papers provide research activities relevant to two pre-determined topics by Cedefop: Benefits of VET and Employment-related mobility and migration. The other two topics, Anticipation of Skill Needs and Labour Market Groups at Risk, were chosen by ReferNet Cyprus, according to national priorities.

Research and development (R&D) in Cyprus is relatively limited and was developed mainly after the mid 90s, whereas accession to the EU was the driving force for an increased emphasis on R&D. A reason for the limited R&D is the short history of higher education. The University of Cyprus was the first to be established in 1992, the Open University followed in 2007 and the Technological University started operating in 2008. In addition, three private tertiary education institutions were upgraded in the academic year 2007-2008 to universities. Higher education institutions and research institutions have increased their research efforts and output due to increasing national and international funding opportunities. Through the process of preparing this report, it was found that research on vocational education and training (VET) forms only a limited part of the overall research activities in Cyprus.

Cyprus ranks very low among European countries in terms of R&D expenditure. However, a positive trend has been observed over the past years, attributed mainly to a considerable expansion of research activities in the public sector. Gross Domestic Expenditure on R&D (GERD) in 1998 was only 0,22% of GDP, while in 2007 this figure reached 0,45% (compared to the 1,83% EU average). Most of this (66,5%) comes from the government sector, while businesses only contribute 16,4% of overall GERD financing.

The Cypriot government has established the foundations of its own strategy in line with the National Lisbon Strategy and Barcelona Objectives. Strategic goals as reflected in the National Lisbon Strategy therefore are macroeconomic stability, viable economic development, and social cohesion. Research, development and innovation are an integral part of the economic development target.

The R&D system of Cyprus is composed of one organisation responsible for policy design (Planning Bureau, PB) and one agency responsible for implementation (Research Promotion Foundation, RPF). The Planning Bureau is of an equivalent status to a ministry and has comprehensive responsibility for overall economic policy design. The Ministry of Commerce, Industry and Tourism is responsible for industrial policy, including the promotion of technology entrepreneurship.

#### Selection of topics

This report contains four papers. The first two papers provide research activities relevant to two pre-determined topics by Cedefop: Benefits of VET and Employment-related mobility and migration. The other two topics, Anticipation of Skill Needs and Labour Market Groups at Risk, were chosen by ReferNet Cyprus, according to national priorities. The ongoing assessment of labour market skills, in order to improve the matching of labour market needs, is a policy priority that initiated the undertaking of studies for the anticipation of skill needs. Additionally, ensuring an adequate standard of living for the disadvantaged and vulnerable

groups and encouraging their integration into the labour market is another policy priority that initiated research on the issue of Labour Market Groups at Risk.

In order to select the research studies to be covered in this report, a twofold approach was followed. On one hand, organisations responsible for funding research were contacted: the Research Promotion Foundation and the Foundation for the Management of European Lifelong Learning Programmes. From these organisations, a list of research projects approved for funding during the period 2004-2008 was obtained. On the other hand, research centres were contacted, such as public and private universities, ministries and government departments and private organisations in order to collect information on VET research. Additionally, national documents were examined in order to identify references to relevant research studies.

On the basis of all this information, the relevant studies for the four research topics were identified. Thereafter, the organisations or persons who carried out research studies were contacted for obtaining the actual studies and for providing additional information when needed. This process culminated in the extraction of the research studies in Cyprus, which were included in each of the research topics.

#### Research Results

The results of the studies on Benefits of VET in Cyprus show that the implementation of the HRDA schemes contributed mostly to the upgrading of the quality of products / services, the increase in productivity, the utilisation of technology and improvements in the quality of the processes of the enterprises. The study on productivity shows that education is not considered the main factor that has a positive impact on productivity whereas training is considered to have a positive but limited impact possibly due to other characteristics of the employees, while technological change is considered to have a positive impact. The study for the reorganisation of the Secondary Technical and Vocational Education, (STVE) puts forward suggestions through an action plan for the internal organisation and the programmes of study. Finally, research on the pre-service training programme for candidate teachers, shows that teachers were generally satisfied with the content while it provides suggestions for redesigning the programme. The evaluation of some upper secondary education programmes and frameworks show that the students and teachers involved are generally satisfied.

According to the studies on the effects of migration, the increase in the number of foreign workers in Cyprus did not have a direct impact on the overall level of unemployment, or the overall participation rate, but on the contrary, it has increased the probability of part-time employment and seemed to have contributed positively to the participation of more women in the labour force. The study of the mobility of human resources found that a significant proportion of human resources change their working status from one year to another within the triangle employment, unemployment and inactivity. Another research study showed that more than ¾ of the graduates of tertiary education institutions in Cyprus entered the labour market.

The results of the studies on long term employment forecasts for the period 2008-2018 indicate that the overwhelming majority of new jobs is expected to come from the tertiary sector and the greater rates of increase of employment are expected in high level occupations. The annual study for the Identification of Training Needs for Multi-Company Initial Training Programmes provides annual estimates for the number of persons required for specific occupations by district. On the basis of these estimates, suggestions are put forward for the implementation of these programmes. The results of these studies are utilised by policy

makers in order to develop appropriate policy responses for adapting to the forecasted situation in the labour market, by public and private organisations involved in human resource planning, by people involved in counselling such as secondary education vocational guidance teachers and employment counsellors and by the public.

Research studies in Cyprus, identified as related to the issue of Labour Market Groups at Risk, refer to women, young persons, older persons and other vulnerable groups. Studies on the gender wage gap confirm the existence of a large but declining wage gap and propose measures aiming at reducing the gap further in the long term, whereas the study on the use of flexible forms of employment focuses on the potential for a wider adoption of flexible forms of employment in order to attract to the labour market unemployed or inactive women and suggests flexible forms of employment that are most likely to be successful in Cyprus. The study on strategies on the promotion of employment of young persons in the labour market suggests a new comprehensive strategy. The studies on active ageing outline a comprehensive strategy of active ageing in Cyprus and involve the development of a system on elderly care, vocational training and rehabilitation and finally the study on poverty proves that pensioners are the most vulnerable group in Cyprus experiencing a higher degree of poverty.

#### Overview

Although research on VET is limited, further research is being planned on the four topics included in this report. The establishment of the new Centre of Educational Research and Evaluation and the design of a comprehensive system evaluating the impact of the HRDA will provide additional impetus towards further research on the Benefits of VET. Research in Cyprus on VET and employment-related mobility and migration is somewhat limited and more research needs to be planned and implemented in the future, as the economy of Cyprus is characterised by a large number of foreign workers. Employment forecasts, although advanced, do not take into account the supply of human resources, an issue that should be examined for further enhancement of the provision of forecasts. Furthermore, the promotion of specific research on important emerging issues such as the green economy and occupations will further strengthen the existing research on the anticipation of skill needs. Finally, a number of research studies have been carried out on the issue of Labour Market Groups at Risk and few more have been planned, whereas there is scope for further research on this issue.

#### Theme 1: Benefits of VET

Research on the Benefits of VET in Cyprus is mainly driven by the policy priorities outlined in the National Lisbon Programme of Cyprus which include the upgrading of lifelong learning activities, the strengthening of the quality and attractiveness of Secondary Technical and Vocational Education (STVE) and the improvement of the status and skills of all teachers and trainers, including VET teachers and trainers. Evaluation of the education and training provision and its impact on the economy is seen as an important tool towards implementing these priorities. Although research on the Benefits of VET is limited, further research is being planned and the establishment of the new Centre of Educational Research and Evaluation will provide additional impetus towards that direction. Specifically, research includes evaluations of the schemes subsidised by the Human Resource Development Authority of Cyprus (HRDA), a study on the impact of education, training and technology on productivity at national level, a study for the reorganisation and development of the STVE in Cyprus and evaluations of the Pedagogical Institute (PI) concerning the pre-service training programme for secondary education teachers and various programmes offered to secondary education students. The results of the studies show that the implementation of the HRDA schemes contributed mostly to the upgrading of the quality of products / services, the increase in productivity, the utilisation of technology and improvements in the quality of the processes of the enterprises. The study on productivity shows that education is not considered the main factor that has a positive impact on productivity whereas training is considered to have a positive but limited impact possibly due to other characteristics of the employees, while technological change is considered to have a positive impact. The study for the reorganisation of the STVE puts forward suggestions through an action plan for the internal organisation and the programmes of study. Finally, research on the pre-service training programme for candidate teachers, shows that teachers were generally satisfied with the content while it provides suggestions for redesigning the programme. The evaluation of some upper secondary education programmes and frameworks show that the students and teachers involved are generally satisfied.

#### 1. Introduction

The upgrading of the lifelong learning activities through enhancements in infrastructures and content is a policy priority outlined in the National Lisbon Programme of Cyprus (Planning Bureau, 2009), as participation in lifelong learning in Cyprus is lower than EU average (8,4% compared to 9,5% in 2007 respectively).

Furthermore, in Cyprus, the attractiveness of Secondary Technical and Vocational Education, (STVE) is relatively low. During 2007/2008, only 12,6% of total enrolments in upper secondary education were students in technical schools, one of the lowest percentages among European countries (EU average in 2008 was 52%). Thus Cyprus has as a policy priority the strengthening of the quality and attractiveness of STVE in Cyprus.

Cyprus also places a high priority in improving the status and skills of teachers and trainers. The continuous development of educators is considered imperative for implementing the Education Reform, which is promoted by the government, and in particular for improving the quality of education. The Education Reform is a process that culminated in 2003 with the formation of the Education Reform Committee which conducted a study (Ministry of Education and Culture, 2004) indicating the main priority areas of reform and suggestions for the restructuring and the modernisation of the Cyprus Education System. A public dialogue was held thereafter with the involvement of social partners and VET stakeholders and a

number of working groups have been formed to prepare suggestions on concrete measures to be implemented.

In order to promote the relevant policy priorities, broad public sector bodies initiated or carried out the studies which are outlined below. It is evident from the relatively limited number of studies that more research is needed whereas further considerable research on this particular issue is either being promoted or has been planned.

• Ex-post Evaluation of the Existing Schemes of the Human Resource Development Authority

The Human Resource Development Authority (HRDA), as part of its effort to upgrade its training schemes, initiated a study which was carried out by external consultants evaluating its schemes that operated during the period 1998-2004. The schemes were classified in three broad categories: Initial Training Activities, Continuing Training Activities and Special Developmental Activities. The issue of evaluating its impact on the economy of Cyprus remains a priority for the HRDA (Human Resource Development Authority, 2009).

• Impact of training / education and technology on the productivity of the Cyprus economy

The Cyprus Productivity Centre (CPC), a dedicated centre of the Ministry of Labour and Social Insurance (MLSI), initiated a project aimed to investigate the impact of education, training and technology on productivity at national level as well as at the level of the economic sectors. The study provided information on the impact of the competences, knowledge and specialisation of the labour force on the productivity and development of various sectors of the Cyprus economy (Cyprus Productivity Centre, 2007a).

• Study for the Reorganisation and Development of the Secondary Technical and Vocational Education in Cyprus

The study, initiated by the Ministry of Education and Culture (MoEC) and co-financed by the European Social Fund (ESF) and the government of Cyprus, presents the findings of researchers as well as their conclusions and suggestions for a new improved system of the STVE in Cyprus (European Centre of Constitutional Law, 2007).

The study was divided into three parts. The first part provided an overview of the education system of Cyprus, an overview of the STVE, the programmes offered, the profile of the graduates and the institutional framework and presented a comparative analysis with European countries.

The second part of the study provided an assessment of the STVE in Cyprus, presenting the findings from the questionnaire responses and presenting a SWOT analysis and the third part included an action plan for an improved system of STVE in Cyprus. A SWOT analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved.

• Teacher training and upper secondary programmes evaluations

The Pedagogical Institute (PI) implements an organised policy for the training of teachers in Cyprus, including teachers and trainers in vocational education. The PI carried out research studies evaluating the pre-service training programme (PTP) offered to all candidate secondary education teachers as well as several programmes offered to secondary education

students in Cyprus. The PI, which offers in-service training programmes of public secondary education teachers and conducts research and evaluations of various programmes of the MoEC, had the responsibility for organising and implementing the pre-service training of candidate secondary education teachers from 2001 to 2008.

The PI also evaluated the programme "Action-Creativity-Social Activity" and the role of the "Head of Class Teacher" in secondary education in Cyprus, the programme "Language Labs" implemented in secondary schools in Cyprus, the "Athletic Afternoon" in secondary schools in Cyprus and the in-service training programmes.

#### 2. Data and Methodology

#### Ex-post Evaluation of the Existing Schemes of the Human Resource Development Authority

The study covered 18 schemes of the Human Resource Development Authority (HRDA) that operated during the period 1998-2004 and were classified in three broad categories: Initial Training Activities, Continuing Training Activities and Special Developmental Activities.

The study provided an overview of the issue of evaluating the impact of socio-economic initiatives, including a presentation of successful practices in the EU. Furthermore, it included desk research, mainly analysing the data in the HRDA databases and field surveys.

The method of random stratified sampling was used in the surveys, which targeted a representative sample of the population (678 enterprises, 677 persons, 88 training institutions and 10 consultancy firms) that participated in the HRDA schemes. Additionally, information was collected through questionnaires and personal interviews to 46 enterprises, 58 persons and 10 training institutions. Therefore, field surveys with questionnaires were used in eight selected schemes, while personal interviews and semi-structured questionnaires were used in the other ten schemes.

#### Impact of training / education and technology on the productivity of the Cyprus economy

The study had two major components: a qualitative survey, where the relationship between education / training and productivity was examined with a semi-structured interview and a quantitative analysis, where the same relationship was examined with the development of a theoretical model in which productivity indices for the economy and specific economic sectors were produced.

The qualitative survey was conducted by the method of stratified sampling with a semi-structured questionnaire. Samples were selected with the method of typical case sampling based on specific criteria. The sample included 32 organisations whose comments and suggestions are considered important in the formulation of policies for improving productivity, such as social partners, government ministries and departments and the HRDA as well as companies and organisations in the private and broader public sector.

The interview with representatives from each organisation was semi-structured and was divided in two parts. The first part included personal data of the interviewees and the second part was divided in four themes: education, training, technology and other factors. The interviews were recorded, transcribed, examined and analysed on the basis of key words.

The econometric model used for the quantitative analysis assessed the impact of the exogenous technological progress, the education and training on the productivity of the economy as a whole and on the economic sectors.

The data sources used for the construction of the variables were the official publications and data of the Statistical Service of Cyprus such as the Statistical Abstract, National Accounts, Labour Statistics and the annual statistics for the economic sectors.

## Study for the Reorganisation and Development of the Secondary Technical and Vocational Education in Cyprus

The methodology used in the study had the objective to collect and analyse all the basic structural data through a series of desk research and field surveys. The latter was directed towards Secondary Technical and Vocational Education (STVE) students and graduates, as well as to all other stakeholders such as parents, employers, officers of the STVE directorate, the Ministry of Labour and Social Insurance (MLSI) and the HRDA, educators and school consultants.

The study provided a detailed analysis of the STVE in Cyprus and made a special reference to the Education Reform study (Ministry of Education and Culture, 2004) and its impact on the operation of the STVE. Furthermore, in the study relevant comparisons were made with corresponding systems in selected EU countries and the achievement of the Lisbon targets.

Finally, the study composed all the findings and concluded with suggestions for the future of STVE and an improved system of operation. The study ended up with a number of implementation measures as well as monitoring and control mechanisms.

#### Teacher training and upper secondary programmes evaluations

For the evaluation of the Pre-service Training Programme (PTP), a mixed evaluation model was followed using quantitative and qualitative means of data collection. For this reason the views of all participants to the programme were collected through interviews (grouped and focused) and structured questionnaires. Firstly an investigation of the programme was made through grouped interviews of trainees, educators and coordinators of the programme. Their aim was to investigate the views of these persons for the basic issues that concern the PTP in order to develop the questionnaires that would be given to all the participants in the programme and to their mentors.

The evaluation of the programme "Action-Creativity-Social Activity" and the role of the "Head of Class Teacher" in secondary education in Cyprus, included a content analysis of the programme and interviews with the school headmasters and deputy headmasters. These formed the basis for the development of two questionnaires used for quantitative measurement, one for educators and the other for the second and third class students of the lyceum (upper secondary education).

The study for the evaluation of the afternoon "Musical Schools", whose aim is to prepare and train secondary education students who wish to pursue the subject in the technical schools, used questionnaires for the views and experiences of the students and semi-structured interviews with headmasters, educators and students. The sample included the students of the two active musical schools. The data from the interviews and questionnaires were analysed using the statistical package SPSS.

The programme "Language Labs", implemented in secondary schools in Cyprus, was evaluated during the school year 2006-2007 using two questionnaires: one for the educators and one for students. Prior to this, interviews were taken from the educators and inspectors of these lessons in order to identify the basic issues that should be included in the questionnaires.

The research for the "Athletic Afternoon" in secondary schools in Cyprus was conducted by questionnaires to all students who participated in the two classes for year 2007-2008 and by interviews to educators. The averages and deviations of the answers of students-athletes were presented for every question, the answers to open questions were analysed and finally the suggestions of educators were presented.

#### 3. Results

#### Ex-post Evaluation of the Existing Schemes of the Human Resource Development Authority

The evaluation of the Human Resource Development Authority (HRDA) activities showed a very high satisfaction of enterprises from their participation in training programmes. The implementation of the HRDA schemes contributed mostly to the upgrading of the quality of products / services, the increase in productivity, the utilisation of technology and improvement of the quality of the processes of the enterprise. Both the enterprises and the employees that participated in these schemes recognise their positive impact. The most important impact is considered to be the enrichment of their skills and knowledge, the improvement of their productivity and the development of a positive attitude towards lifelong learning.

The results show that there is a very high satisfaction of the enterprises from their participation in the HRDA continuing training programmes. The implementation of the programmes contributed mainly to the upgrading of the services/products provided, the improvement of productivity, the utilisation of new technologies and the improvement of the quality of the processes of the enterprise. A majority stated that they would implement the incompany training programmes even without the HRDA subsidisation. The employees estimated the added value of the programmes as very high, especially as to the upgrading of knowledge and skills, while over 2/3 of the training providers believe that the training programmes were implemented in a very satisfactory way. As far as the characteristics of the participants are concerned, there is a balance between men and women (55%-45%) which corresponds to the structure of the employment by gender. Additionally, there is a balance of the training participants from all occupational categories. There was a high participation of managerial staff, which indicates the thematic priority of the enterprises in more strategic issues.

As far as the initial training programmes are concerned, around half of the enterprises that participated in the scheme participated more than once, confirming the benefits of these enterprises. One in five participants were women, a low percentage but expected as most of the programmes refer to technical occupations. More than 60% of the enterprises that participated were small enterprises (1-9 persons). According to the field survey, enterprises gain from the scheme as they believe that competitiveness, productivity and profitability are enhanced, while employees that participated stated that they obtained vocational experience and improved their labour market prospects.

There are two HRDA schemes in the category of special developmental activities: the Consultancy Services Scheme and the Training Infrastructure Support Scheme. In general, the enterprises evaluated positively both these schemes, as they believed that they increased their efficiency and productivity and contributed towards the upgrading of their services / products.

#### Impact of training / education and technology on the productivity of the Cyprus economy

The results from the qualitative survey indicate that education is not considered to be the main factor that has a positive impact on productivity. Factors that limit the impact of education on productivity include organisation shortfalls (negative working conditions, incorrect structures and procedures, lack of motivation) and the weaknesses of the education system.

The training programmes are considered to contribute to the increase in the productivity of the employees and the smooth operation of the organisations. Training offers practical knowledge that is not acquired from education. The impact of training on productivity is limited due to problems that are associated with the characteristics of the employees, the training programme and the work environment. Very few organisations use any scientific methods for the evaluation of training.

Technology is considered to have a positive direct impact on productivity. The main problems limiting this positive impact are considered to be the introduction of unsuitable technology, its inappropriate utilisation, the inadequate preparation of the personnel for the proper use of the new technological equipment and finally technophobia.

It was found that employees can be productive, irrespective of their educational attainment. According to the qualitative survey, there are other factors, apart from education, training and technology that have an impact on productivity, such as organisational culture, experience, personal problems of the employees and the negative working conditions and working hours.

The results from the econometric analysis show that the productivity improvements depend mostly on the exogenous technological change in some sectors but not on the education of the employees. Training has a positive impact on productivity although it was not statistically conclusive. The qualitative survey showed that technology has a positive impact on productivity at the level of economic sectors and the level of the economy in general. The sectors of Communication and Electricity, gas and water show the highest positive impact of technology on productivity.

## <u>Study for the Reorganisation and Development of the Secondary Technical and Vocational Education in Cyprus</u>

The field surveys, which formed a basic part of the study, were analysed and the following suggestions for improving the Secondary Technical and Vocational Education (STVE) system came up:

- (a) Reduction of the number of specialisations in the branches of the Theoretical Direction;
- (b) More practical laboratory training for the students of the Practical Direction and increase of the practical training in industry for the third year students to two days a week:

- (c) Continuous training of teachers and updating of their knowledge on new technologies and organisational methods;
- (d) Harmonisation of the curriculum with the specifications of the corresponding national vocational qualifications, so that the Technical Schools operate according to the needs of the economy;
- (e) Enhancement of the links between the programmes and operation of the Technical schools and the needs and developments in the labour market;
- (f) Development of a special marketing strategy for the promotion of technical education.

From the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis of the STVE, it is shown that the strengths of the STVE include the sufficient geographical coverage, the participation of social partners to the formulation of policies and development of curricula, the sufficient proportion of number of students per teacher in a class, the existence of an institutional framework for the provision of training opportunities for teachers, the perception of students and teachers that attendance in STVE has a positive impact and generally the positive perception of enterprises for the level of knowledge and skills of STVE graduates.

Weaknesses of the STVE include the low percentage of Gross Domestic Product (GDP) that is directed towards STVE, the centralised system of decision making, the insufficient linkage of STVE system to the labour market needs, the low horizontal mobility between general secondary education and STVE, the limited number of specialisations that would attract women and finally the inadequate promotion of the offered specialisations.

Opportunities for STVE are considered to be the experience gained from STVE restructuring of 2001-2004 (support team for changes, new specialisation development), the dialogue for the Education Reform, the development of a system of vocational qualifications and the operation of the Open University and the Technological University of Cyprus.

There are some threats to STVE, such as the low percentage of investment in technical and vocational education, the low and decreasing participation of students in STVE and the insufficient interest of experienced teachers of general education to serve in STVE schools.

#### Teacher training and upper secondary programmes evaluations

The results of the evaluations of the Pre-service Training Programme (PTP) show that trainees are generally satisfied with the content of the programme and specifically for the subject of special didactics but they request better organisation of the school experience, which they consider as the most important part of the programme. On the contrary, the trainees are generally dissatisfied with their appraisal which they believe lacks uniformity in policy and criteria. The trainers, mentors and assistant headmasters were generally satisfied from the programme. However, the trainees, even though they feel that the basic objectives of the programme have been moderately achieved, find the programme demanding and generally had negative comments for the conditions that the programme is conducted (afternoon classes and exhausting hours). The trainees of the morning attendance seem more positive than the trainees of the afternoon attendance in all aspects of the programme. The participants to the summer PTP programme generally seemed satisfied with the degree of achievement of the objectives of the programme as well as with the degree the trainees developed their teaching skills. The most important negative aspect of the programme to their opinion was again the fact that the programme was demanding.

The participants to the programme "Action-Creativity-Social Activity" of upper secondary education expressed positive views. The educators and students believe that it is important that this programme should continue to be provided at the Unified Lyceum. However, they feel that it should be upgraded, as students need more help to develop initiatives and skills in order to provide their services to the local and international community. The Head of Class Teacher position was launched in 2003 and is considered to be an innovation of the new educational reform, contributing to the better operation of the school, the effective implementation of the educational targets and the improvement of communication between educators, parents and students. The educators and students feel that the "Head of Class Teacher" role in secondary education is important, serious and responsible as a communication bridge is formed between the students, the school and the parents.

The results of the evaluation of the "Musical School" show that the schools are successful, even though there are difficulties in the implementation. The students of the Musical School state that they are generally satisfied with the schools, which they believe are very useful and wish to continue their studies. They are also satisfied with the support from the teachers and the content of their studies. The basic problem is the timetable, as the school is an extension of the Unified Lyceum and not an autonomous school. The lack of proper infrastructure and facilities is another issue that needs to be handled.

The evaluation of the programme "Language Labs" implemented in secondary schools in Cyprus showed that educators / students have a positive attitude towards these labs and prefer to have a lesson in the labs instead of the usual classes. According to the educators and students, the targets of the Language Labs are achieved, while the lab is a pleasant environment for them. Some problems that were identified concerned inadequate operation of the equipment (computers, Internet, video projections) as well as printed material (grammar, dictionaries, magazines, newspapers) that are available in the labs. One factor that influences the effective teaching in the language labs was the number of students that participate in each class.

The research for the "Athletic Afternoon" in secondary schools in Cyprus shows that the students found the afternoons exhausting. The students as well as the educators had strong views about infrastructure issues. The lack of lockers for personal items was stressed as well as the need for enriching the schools with athletic equipment.

#### 4. Conclusions

The main conclusions of the studies on the Benefits of VET, the suggestions put forward and their impact on VET developments are described below. It has to be noted that evaluations of the impact of VET policies and reforms is somewhat limited in Cyprus. However, since Cyprus' accession to the EU and consequent co-financing by the European Social Fund (ESF), the evaluation of all the programmes / schemes that are co-financed is being promoted.

#### Ex-post Evaluation of the Existing Schemes of the Human Resource Development Authority

The study on the ex-post evaluation of the existing schemes of the Human Resource Development Authority (HRDA) proposes specific enhancements for each of the HRDA schemes that were examined and evaluated, improvements in the processes and procedures used and finally the outsourcing of some HRDA services. The study also proposes, amongst others, the computerization of the procedures for a significant improvement of time management and investigation of introducing training vouchers.

Following the study, the HRDA has upgraded almost all the existing training schemes. Additionally, a study is being conducted by external consultants for the design of a comprehensive system evaluating the impact of HRDA on the economy of Cyprus (Human Resource Development Authority of Cyprus, 2008).

#### Impact of training / education and technology on the productivity of the Cyprus economy

The study on the impact of training / education and technology on the productivity of the Cyprus economy suggests policy measures for the effective use of training / education and technology on the improvement of the productivity of the Cypriot enterprises and the economy as a whole, with emphasis on tackling identified weaknesses, so that the economy becomes competitive at international level.

The study recommends that the education system should, amongst other targets, prepare students for the labour market. The quantitative measurement of productivity could be achieved by the training of the personnel to using simple methodologies.

The utilisation of the human resources from Cypriot enterprises could be examined in order to determine and study further the problems that limit the impact of education on productivity. Furthermore, the reasons for which investment in Research and Development is low in the Cypriot enterprises should be examined and motivation for its encouragement should be given. Data should be collected that allow the estimation of training on productivity at enterprise level as well as at specific economic sectors level.

The study also advises that measures should be examined (provision of education, training, right preparation and motivation) for the maximisation of the benefit from technology. The factors that are taken into account by organisations for determining their policies for increasing their productivity should be considered and good practices could be transferred to other organisations.

### Study for the Reorganisation and Development of the Secondary Technical and Vocational Education in Cyprus

The study puts forward suggestions through an action plan with particular reference to the institutional framework, to internal organisation and to the programmes of study.

The study suggests that the introduction and operation of the new unified lyceum should proceed, which will provide sufficient technological education for everyone and prevocational training to those who choose to enter employment and an improvement in the negative picture that prevails amongst significant numbers of students and the public in general towards Secondary Technical and Vocational Education (STVE). An external evaluation of the new unified lyceum should be carried out in a time period of eight years.

Furthermore, it recommends the enhancement of tertiary vocational education, upgrading of the Apprenticeship System, creation of a credible System for the evaluation of the operation of STVE, enhancement of the links between the operation of the Technical Schools and the needs of the labour market.

Suggestions for the internal organisation of the education system include the decentralisation of responsibilities at local and school level with the possibility of adapting the programmes of study to the local needs. Additionally, a special marketing strategy should be developed for the promotion of technical education.

As far as the programmes of study are concerned, the study suggests compulsory periods of practical training in enterprises for both Theoretical and Practical Directions, reduction of the number of specialisations in the branches of the Theoretical Direction and designing common programmes in the branches of the Theoretical and Practical Directions during the first year of studies with gradual specialisation during the third year of studies. Teachers should be constantly educated so that their knowledge is updated with emphasis on new technologies and organisational methods and practices in enterprises, acquisition of competences for providing guidance and counselling services and to new pedagogical approaches and methodologies. Furthermore, the curriculum, especially that of Practical Direction should be harmonised with the specifications of the corresponding national vocational qualifications.

Based on the study and within the context of the Education Reform, a revision in the curricula of the Technical Schools programmes is underway. Specifically, the Ministry of Education and Culture (MoEC) has formed various Working Groups who revised the curricula of the Practical Direction. The objective of the curricula revision was to reduce the number of the specialties offered by the STVE, as the study implied, thus providing the students with the opportunity to acquire the key competences needed to make them more competitive when they enter the labour market. The revised curricula of the Practical Direction are expected to be implemented by the end of 2009. Their implementation will be evaluated and will form the basis for the revision of the curricula of the Theoretical Direction. Furthermore, in order to improve both the quality and attractiveness of STVE, the MoEC continues its policy of developing the infrastructure of technical schools and also of introducing Modern Technology in the STVE curricula.

#### Teacher training and upper secondary programmes evaluations

Studies for the evaluation of the Pre-service Training Programme (PTP) for public secondary school teachers suggested that the redesign of the programme was required, so that special education subjects are included and infrastructure is improved.

The study for the evaluation of the programme "Action-Creativity-Social Activity" and the role of the "Head of Class Teacher" in secondary education in Cyprus propose the restructuring of the programme. It is considered necessary to have autonomy in every school to coordinate the programme and train all people involved, such as headmasters, deputy headmasters and educators. The study advises that the "Head of Class Teacher" in secondary education should be selected according to specific criteria, the bureaucratic process in the class should be decreased by computerisation of the forms, there should be more qualitative communication between the teacher and students and the teacher should have meetings with the parents of the students.

An important suggestion with respect to the "Musical School" is that afternoon musical classes should be incorporated in the unified lyceum all-day school. There should be investments in infrastructure and equipment. Another suggestion is that the educators should constantly be trained and developed in issues concerning their specialisation and teaching methodology.

The study for the evaluation of the programme "Language Labs" implemented in secondary schools in Cyprus advises that the number of students should be reduced and teachers should have more training in the use of the Language Labs, more material (CDs, DVDs, worksheets, lesson plans) as well as more sample teachings in the labs. The survey showed that the labs operated better in schools that had more than one Language Lab. As far as the students are concerned, their attitude was more positive the more they participated in the Language Labs.

Finally, the evaluation of the "Athletic Afternoon" in secondary schools in Cyprus puts forward the suggestions mainly from educators responsible but also from students that the afternoon classes should be reduced or become optional and the morning training should be increased from two to three times a week.

The restructure of the Pedagogical Institute (PI) and the establishment of a new Centre of Educational Research and Evaluation (CERE) is a policy priority promoted by the education reform outlined in the National Lisbon Programme (Planning Bureau, 2009). The aim is to further upgrade the quality of the in-service training of teachers and to carry out more and deeper applied research into educational issues and practices as well as objective evaluation of education programmes, to be used as a basis for the formulation and implementation of evidence-based education policy.

The Centre of Educational Research and Evaluation, which will be under the authority of the PI, will be responsible to conduct research and evaluations of the activities of the directorates of the MoEC at all levels of education.

#### Overview

Enhancing the provision of lifelong learning activities, increasing the quality and attractiveness of VET and improving status and skills of all teachers and trainers remain policy priorities of the Cyprus government. Evaluation of the education and training provision and its impact on the economy is seen as an important tool towards implementing these priorities. Although research on the Benefits of VET is limited, further research is being planned and the establishment of the new Centre of Educational Research and Evaluation will provide additional impetus towards that direction.

#### 5. References

#### **Sources:**

Cyprus Productivity Centre (2007a): Impact of training / education and technology on the productivity of the Cyprus economy.

Cyprus Productivity Centre (2007b): National Productivity Strategy 2007-2013.

European Centre of Constitutional Law (2007): Study for the Reorganisation and Development of the Secondary Technical and Vocational Education (STVE) in Cyprus.

European Commission (2009): ERAWATCH Country Report 2009.

Human Resource Development Authority (2006): Ex-post Evaluation of the Existing Schemes of the Human Resource Development Authority.

Human Resource Development Authority (2008): Annual Targets 2009.

Dr Michaelidou - Evripidou, A.; Dr Papasolomondos, C.; Vlami, S; Efthimiou, I. (2004): Evaluation of the 2003-2004 Pre-service Training Programme for Candidate secondary Education Teachers.

Efthimiou, I.; Dr Nicolaidou, M.; Hadjigeorgiou, E. (2005): Study for the Evaluation of the summer course of 2005 for the Pre-service Training Programme for Candidate secondary Education Teachers.

Vlami, S.; Hadjichristou, C. (2007): Evaluation of the implementation of the programme "Action-Creativity-Social Activity" and the role of the "Head of Class Teacher" in secondary education in Cyprus.

Efthimiou, I.; Stavrou, T. (2007): Evaluation of the Language Labs in the unified Lyceum.

Dr Nicolaidou, M.; Dr Petridou, A. (2008): Evaluation of the Musical Schools of secondary education.

Dr Loukaides, K. (2008): Evaluation of the Athletic School of the first and second class of upper secondary education.

Ministry of Education and Culture (2004): Education Reform.

Ministry of Finance (2005): National Lisbon Programme.

Ministry of Finance (2006): National Reform Programme of Cyprus – Progress Report.

Planning Bureau (2008): National Reform Programme of Cyprus 2008-2010 – Progress Report.

Planning Bureau (2009): National Reform Programme of Cyprus – Progress Report.

#### Websites:

Cyprus Productivity Centre, www.mlsi.gov.cy/kepa

Education Reform, www.paideia.org.cy

Human Resource Development Authority, www.hrdauth.org.cy

Ministry of Education and Culture, <a href="www.moec.gov.cy">www.moec.gov.cy</a>

Ministry of Labour and Social Insurance, www.mlsi.gov.cy

Planning Bureau, www.planning.gov.cy

Pedagogical Institute www.pi.ac.cy

ReferNet Cyprus, www.refernet.org.cy

## Theme 2: VET and employment-related mobility and migration

In Cyprus, there is a significant number of foreign workers, particularly in unskilled or low-skilled occupations. For the orderly and effective management of foreign worker issues, a strategy has been prepared, evaluated and revised to take into account the current changes in the labour market and particularly the effects of the global economic crisis. However, research in Cyprus on Vocational Education and Training (VET) and employment-related mobility and migration is somewhat limited. The studies that were selected to be included in this paper focused on examining the effects of migration, the mobility of the human resources in the labour market of Cyprus and the transition of graduates from tertiary education institutions in Cyprus to the labour market. According to the studies on the effects of migration, the increase in the number of foreign workers in Cyprus did not have a direct impact on the overall level of unemployment, or the overall participation rate, but on the contrary, it has increased the probability of part-time employment and seemed to have contributed positively to the participation of more women in the labour force. The study of the mobility of human resources found that a significant proportion of human resources change their working status from one year to another within the triangle employment, unemployment and inactivity. Another research study showed that more than 3/4 of the graduates of tertiary education institutions in Cyprus entered the labour market.

#### 1. Introduction

A basic characteristic of the labour market in Cyprus is the employment of a large number of foreign workers, particularly in unskilled or low-skilled occupations. According to Social Insurance data, foreign workers, including EU-27 nationals, represented 25,6% of total employment in 2008. The employment of foreign nationals plays a key role in addressing the immediate needs of the labour market and hence in maintaining high growth rates (Planning Bureau, 2009).

For the orderly and effective management of issues on foreign workers and in order to serve the economic and social needs of the country, a new immigration law has been prepared providing a comprehensive framework for immigration policy. Additionally, a new strategy was prepared covering the period 2007-2008, which was evaluated in early 2009, and a revised policy paper was prepared. Moreover, a policy framework was established and an action plan was designed with regard to the integration of migrants in the Cypriot society.

Research on Vocational Education and Training (VET) and employment-related mobility and migration studies in Cyprus is limited and may be categorised into three types: a series of research studies which examine the effects of migration on labour market participation, unemployment and part-time employment, a study on the mobility of the human resources in the labour market of Cyprus and a study on the transition of graduates from tertiary education institutions in Cyprus to the labour market. These studies are the following:

#### • Effects of migration

The Economic Research Centre of the University of Cyprus (UCY) conducted a series of research studies on the effects of migration:

(a) The effects of migration on the participation of women in the labour market;

(b) The effects of immigration on unemployment, part-time employment and labour force participation;

The main purpose of the first study (Michael et al, 2008a) was to investigate the factors that determine the participation of women in the labour market in Cyprus and in particular, whether the possibility of employing domestic helpers contributes to the increase of participation of married women in the workforce. The main purpose of the second study (Michael et al, 2008b) was to identify whether the increase of foreign workers in Cyprus has affected unemployment, labour force participation and part-time employment of Cypriots.

• Mobility of the Human Resources in the Labour Market of Cyprus

This study entitled "Mobility of the Human Resources in the Labour Market of Cyprus", conducted by the Human Resource Development Authority of Cyprus (HRDA), analyses the mobility of the human resources during the period 2000-2004 and its effects on employment, unemployment and inactivity (Human Resource Development Authority, 2005).

• Tertiary Education and the Labour Market

The study entitled "Tertiary Education and the Labour Market – Career Paths", which was conducted by the Council for Educational Evaluation-Accreditation, (CEEA) and financed by the Research Promotion Foundation, examined the transition of the graduates from tertiary education institutions in Cyprus to the labour market (Council for Educational Evaluation-Accreditation, 2008).

#### 2. Data and Methodology

#### Effects of migration

The study "The effects of migration on the participation of women in the labour market", completed in 2008, utilised data from the Household Budget Surveys for the periods 1996/97 and 2002/03, which were the latest available data, for the estimation of an econometric model. The econometric model consists of a system of Structural Equation Modelling (SEM) in a probit form and its estimate was performed in two stages. The SEM is a statistical technique for testing and estimating causal relationships using a combination of statistical data and qualitative causal assumptions. The first equation describes the possibility of a woman participating in the labour market. Similarly, the second equation describes the possibility of employing domestic helpers. The model estimates were performed separately for the two periods 1996/97 and 2002/03 and it was observed that the results for the two periods differ considerably for the domestic helper factor.

The study "The effects of immigration on unemployment, part-time employment and labour force participation", completed in 2008, used data from the Labour Force Surveys (LFS) and with scientific methods and statistical data aimed to identify the effects of the considerable increase of foreign workers in Cyprus, for the period 1999 to 2005, on unemployment, labour force participation and part-time employment of Cypriots. This has been examined both in total and in various groups, in relation to age and education level. Firstly, an econometric model in binary probit was used to estimate the possibility of a Cypriot in the labour force

becoming unemployed. Furthermore, the possibilities of participation in the labour force and of being in part-time employment were estimated, using the same econometric model.

#### Mobility of the Human Resources in the Labour Market of Cyprus

Using data from the LFS for the period 2000-2004, the effects of the mobility of the human resources on employment, unemployment and inactivity were estimated. Mobility is defined as the change in the working status (employment, unemployment and inactivity) of the human resources from one year to the next. For example, the number of persons in employment in 2004 who were inactive one year before comprises the mobility of inactivity to employment for the period 2003-2004. This number is calculated as a percentage of the total inactive population of 2003. This percentage is called the mobility rate. Numbers and mobility rates were calculated for all the years of the period 2000-2004 as well as average mobility numbers and rates for the whole period.

#### Tertiary Education and the Labour Market

The study examined the transition of the graduates from tertiary education institutions in Cyprus, including vocational education institutions, to the labour market. The research was divided in two phases: prior to completing their studies and after the acquisition of their degree and entering the labour market.

All the public and private tertiary education institutions in Cyprus during the academic year 2002-2003 were included. The population of the research included all the Cypriots expected to graduate in 2003 from tertiary education institutions in Cyprus in all courses and programmes of study.

During the first phase of the research a detailed questionnaire was distributed to the participants of the survey, while these were at the final year of their studies during the spring semester of the academic year 2002-2003. The questionnaire included questions for their socioeconomic background, the quality of their studies and their future plans. The participation rate was high (64%). The results were inserted in a database and were undergone statistical analysis. The profile of the students who study at the tertiary education institutions of Cyprus was outlined and their future plans and aspirations were determined.

The second phase of the study concentrated on the transition from tertiary education to the workplace. It was completed one and a half years after their graduation, with the distribution of a second questionnaire concerning the experiences of the new graduates from their career pathway. The variables used included the occupational status and earnings of the new graduates, the job benefits, the professional use of the knowledge and skills acquired at the studies and their job satisfaction. The participation rate in this phase was also high (81% of the participants in the first phase and 52% of the total number of graduates).

On the basis of data analysis from the questionnaire in the second phase, a representative sample was selected from those who were already in the labour market. Personal interviews were conducted with the employers of those graduates, during which the practices, requirements and expectations of the employers were examined in depth, as well as their perceptions with regard to the efficiency of educational investment. The employers were asked to provide the selection criteria for their employees, to evaluate the importance of specific vocational knowledge, skills and personality characteristics and to estimate the degree that the acquired knowledge and skills prepare the students for the workplace. In addition, they were asked to state whether their enterprise offers training opportunities to new

employees and to suggest ways through which tertiary education could contribute to the smooth integration in the workplace.

The data were analysed through suitable descriptive and quantitative statistical methods. In order to present a complete view of the pathway of the graduates after their studies, only the data for the new graduates that participated in both phases were used. The statistical model used, which is the multi-logistic regression method, reflects the complicated parameters through which people acquire skills, experience and qualifications that contribute to the possibility of employment and successful professional career.

#### 3. Results

#### Effects of migration

Data from the studies showed that the percentage of legal foreign workers in Cyprus reached 21,6% of the gainfully employed population in 2007. During the period 1997-2007 the average annual growth rate of legal foreign workers was 15,4%.

According to the study "The effects of migration on the participation of women in the labour market", the factor "domestic assistance" has increased the likelihood of women's participation in the labour force. Women who have "domestic assistance" are 20,5% more likely to participate in the labour market than those who don't. Therefore, the possibility of acquiring "domestic assistance" increases the labour supply of women and encourages women who are not participating, to enter the labour market.

According to the study "The effects of immigration on unemployment, part-time employment and labour force participation", the considerable increase in the number of foreign workers in Cyprus did not have a direct impact on the overall level of unemployment, or the overall participation rate. On the contrary it appears to have increased the probability of part-time employment.

Results from the estimation of the effects of foreign workers in Cyprus on the probability of unemployment for various groups show that the presence of foreign workers has positively affected the probability of unemployment at the 20-24 and 25-29 age groups, thus affecting younger persons. Furthermore, the probability of unemployment is not related to the education level in these particular age groups, with the exception of persons with college education, whose probability of unemployment is not affected at all. On the other hand, the probability of unemployment of older persons was not influenced, regardless of their education level.

The presence of foreign workers has decreased the probability of participation in the workforce, of persons aged 20-24, 25-29 and 30-39 with primary education. At the same time, it increased this probability for persons aged 20-24 with college and university education and for persons aged 25-29 with university education.

Finally, foreign workers increased the probability of part-time employment for younger persons, regardless of their education level. In particular, the younger a person is – between 20 and 39 years of age – the bigger the probability of part-time employment. The probability

of part-time employment was also increased for people between 60 and 64 having college and university education.

#### Mobility of the Human Resources in the Labour Market of Cyprus

A significant proportion of the human resources, change their working status from one year to another within the triangle employment, unemployment and inactivity. The highest percentage of the average mobility rate during the period 2000-2004 concerns the mobility of the unemployed to employment (59,7%). In other words, more than half of the unemployed find a job within a year. During the period 2000-2004, on average, 3,3% of the employed became inactive, thus leaving the labour market for various reasons, hence creating a need for their substitution. This percentage was higher amongst the employed women (4,5%). Most of the unemployed who managed to find a job during the period 2000-2004 were employed as unskilled workers (28,9%) and as service and sales workers (19,2%). Most of the inactive who moved to employment were also employed as unskilled workers (28,5%) and as service and sales workers (19,1%). Only 26,0% of the inactive persons who wanted to find a job applied to the government district labour offices.

From the analysis of the impact of mobility during the period 2000-2004, it was concluded that employment and inactivity were influenced positively while unemployment was not influenced at all. This was reflected in the significant increase of the employment rate of the population aged 15-64 from 65,4% in 2000 to 69,4% in 2004.

#### Tertiary Education and the Labour Market

From the results of the survey, it is concluded that the student population who study in Cyprus have very specific characteristics. The student population in its great majority is of young age and comes from mainly medium or low income background. Most students do not work during their studies and even when they work, they receive very low income, therefore the main form of funding are the parents and state subsidy. Even though most parents have medium educational background (just 15% of the participants have a parent with post-secondary education), they invest a significant part of their earnings to their children's studies.

Most students participate in three or four year courses but a greater percentage of women are enrolled in one and two year vocational programmes. The majority of the graduates that participated in the survey (76%) entered the labour market after graduation. The main reasons for not participation were the continuation of their studies or their military service.

The unemployment rate of the graduates that participated in the labour market was high (13%) in comparison with the overall unemployment rate which was around 4%.

Most graduates of the public schools of tertiary education were employed in their field straight after graduation, mostly in the public sector and they generally had the highest earnings and lowest unemployment rate of the population. The women that were employed in the private sector had the lowest earnings and were concentrated in female-dominated occupations such as nursery school teachers and aesthetics.

A high percentage of frictional unemployment was observed during the first year after graduation, mostly for those that possess academic qualifications in theoretical subjects. The University of Cyprus graduates, many of which attended theoretical subjects, were faced with

greater difficulty of absorption in the labour market, since 21% needed more than one year after graduation to secure a job.

The majority of the graduates stated that they utilised to a great degree the knowledge and skills that they acquired in their studies. However, the self-employed believed that they utilised in a greater degree the knowledge and skills acquired as opposed to those employed in a semi-government organisation or a bank.

#### 4. Conclusions

The orderly management of foreign workers issues to serve the economic and social needs of the country is a policy priority promoted by the government. A strategy has been prepared and revised for the effective management of foreign workers. However, VET and employment related mobility is an issue with limited research. The main conclusions of the studies on VET and employment related mobility and migration, the suggestions put forward, their impact on VET developments and future policies are described below.

#### Effects of migration

Studies on the effects of migration examine the effects of the increased employment of foreign workers in Cyprus. According to the studies on the effects of migration which refers to the employment of foreign workers, the increase in the number of foreign workers in Cyprus is not related to the level of total unemployment, or to the overall participation rate. On the contrary, it has increased the probability of part-time employment. Furthermore, the availability of immigrants as domestic helpers in private households seems to have contributed positively to the participation of more women in the labour force and helped towards increasing the female participation rate.

Policy measures on the issue of migration involved the preparation of a strategy for the effective management of the employment of foreign workers, covering the period 2007-2008 and a new immigration law in 2009 providing a comprehensive framework for immigration policy. The strategy was evaluated in early 2009. A revised policy paper was prepared, presented and approved by the social partners. The revision of the strategy involved the downward revision of the upper quotas for the number of foreign workers employed taking into consideration the increase in unemployment and the availability of local labour force especially in the sectors of construction, manufacturing and trade. A new measure in response to the crisis is the setting up of an inspection mechanism in order to combat illegal employment.

#### Mobility of the Human Resources in the Labour Market of Cyprus

The study for the Mobility of the Human Resources in the Labour Market of Cyprus suggested measures and actions to increase the participation of women in the labour market of Cyprus, to increase labour supply and extend the working life of persons in employment, to promote lifelong learning, to promote modern and flexible forms of employment and to enhance and modernise the Public Employment Services of the Ministry of Labour and Social Insurance.

#### Tertiary Education and the Labour Market

The study on Tertiary Education and the Labour Market acknowledges that in Cyprus there is a considerable investment in education aiming at creating a competent and efficient human resource. The economy of Cyprus which is service-oriented is dependent on the quality of human resources and the ability of its utilisation, in order to be productive, efficient and competitive. The smooth transition and rapid entrance of new tertiary education graduates in the labour market as well as the training opportunities are important parameters which determine the rate of growth. Finally, the study noted some obstacles in the transition to the labour market and the utilisation of the new graduates.

#### Overview

The economy of Cyprus is characterised by a large number of foreign workers. For the orderly and effective management of foreign worker issues, a strategy has been prepared, evaluated and revised to take into account the current changes in the labour market and particularly the effects of the global economic crisis. Research studies have tried to address the effects of migration on employment, unemployment and the participation rates. However, research on VET and employment-related mobility and migration is somewhat limited and more research needs to be planned and implemented in the future.

#### 5. References

#### **Sources:**

Council for Educational Evaluation-Accreditation (2008): Tertiary Education and the Labour Market – Career Paths.

Human Resource Development Authority (2005): Mobility of the Human Resources in the Labour Market of Cyprus 2000-2004.

Michael, M.; Christofides, L.; Hadjiyiannis, C.; Clerides, S. (2008a): The effects of migration on the participation of women in the labour market.

Michael, M.; Hadjiyiannis, C.; Stephanides, M.; Christofides, L.; Clerides, S. Michalopoulou, M. (2008b): The effects of immigration on unemployment, part-time employment and labour force participation.

Ministry of Finance (2005): National Lisbon Programme.

Ministry of Finance (2006): National Reform Programme of Cyprus – Progress Report.

Planning Bureau (2008): National Reform Programme of Cyprus 2008-2010 – Progress Report.

Planning Bureau (2009): National Reform Programme of Cyprus – Progress Report.

Statistical Service of Cyprus (2003): Household Budget Survey.

Statistical Service of Cyprus (1999-2005): Labour Force Survey.

#### **Websites:**

Economic Research Centre, <a href="www.erc.ucy.ac.cy">www.erc.ucy.ac.cy</a>

Human Resource Development Authority, <a href="www.hrdauth.org.cy">www.hrdauth.org.cy</a>

Ministry of Education and Culture, www.moec.gov.cy

Ministry of Labour and Social Insurance, www.mlsi.gov.cy

Planning Bureau, www.planning.gov.cy

ReferNet Cyprus, www.refernet.org.cy

 $Statistical\ Service\ of\ Cyprus,\ \underline{www.mof.gov.cy/mof/cystat}$ 

#### Theme 3: Anticipation of skill needs

The provision of forecasts in economic sectors and occupations, including both expansion and replacement demand, is a research area in which Cyprus is particularly advanced, as this is a policy priority. For the systematic employment forecasting and the identification of skills gaps, research studies are providing long and short term employment forecasting. The employment forecasts studies provide 10-year employment forecasts on a regular basis every 2 to 3 years. The studies for the period 2008-2018 indicate that the overwhelming majority of new jobs is expected to come from the tertiary sector and the greater rates of increase of employment are expected in high level occupations. The annual study for the Identification of Training Needs for Multi-Company Initial Training Programmes provides annual estimates for the number of persons required for specific occupations by district. On the basis of these estimates, suggestions are put forward for the implementation of Multi-Company Initial Training Programmes. The results of these studies are utilised by policy makers in order to develop appropriate policy responses for adapting to the forecasted situation in the labour market, by public and private organisations involved in human resource planning, by people involved in counselling such as secondary education vocational guidance teachers and employment counsellors and by the public.

#### 1. Introduction

The ongoing assessment of labour market needs is a policy priority for Cyprus, outlined in various national documents, including the National Lisbon Programme (Planning Bureau, 2009). The provision of long-term employment forecasts in sectors of economic activity and occupations has become an established activity of the Human Resource Development Authority (HRDA). Employment forecasts in economic sectors and occupations are provided at a detailed level of analysis, including both expansion and replacement demand.

For the systematic employment forecasting and the identification of skills gaps, the HRDA conducts the following research studies:

#### • Long term employment forecasting in Cyprus

The HRDA provides 10-year employment forecasts on a regular basis every 2 to 3 years. The latest set of employment forecasts for Cyprus cover the period 2008-2018 and were completed in 2007 (Human Resource Development Authority, 2007a, 2007b, 2007c). Thus, forecasts of employment, expansion and replacement demand are provided for 43 sectors of economic activity and for around 200 occupations, which cover the whole spectrum of the Cyprus labour market. The methodologies used by the HRDA for providing employment forecasts are similar to methodologies of other European countries. Furthermore, the HRDA participates actively in initiatives and actions that are promoted at European level in the framework of the European network Skillsnet for skill needs forecasting.

#### • Identification of Training Needs for Multi-Company Initial Training Programmes

This study (Human Resource Development Authority, 2009a) provides annual estimates for the number of persons required for specific occupations by district. On the basis of these estimates suggestions are put forward for the implementation of Multi-Company Initial Training Programmes. In the study, the views of Employers' organisations, Trade Unions,

District Labour Offices of the Ministry of Labour and Social Insurance (MLSI) and the Cyprus Tourism Organisation (CTO) are collected and analysed through a specially designed questionnaire. On the basis of these estimates, the forecasts of employment needs for those specialisations which were provided by the HRDA and other relevant information and data, the study puts forward suggestions for the implementation of Multi-Company Initial Training Programmes. The aim of these programmes is to meet needs in occupations where there are significant labour shortages. Training programmes are organised in cooperation with the Cyprus Productivity Centre (CPC), the Higher Hotel Institute of Cyprus (HHIC) and other institutions.

#### 2. Data and Methodology

#### Long term employment forecasting in Cyprus

The forecasts of employment, expansion and replacement demand are provided for 43 sectors of economic activity and for around 200 occupations, which cover the whole spectrum of the Cyprus labour market. These forecasts are contained in three research studies (Human Resource Development Authority, 2007a, 2007b, 2007c).

The Statistical Service of Cyprus provided the necessary data which were used at the various stages of the forecasting exercise, and were extracted from the Census of Population (carried out every 10 years, the last one conducted in 2001), the Labour Force Surveys, LFS (conducted on an annual basis from 2000 to 2003 and from 2004 onwards on a quarterly basis), the annual Labour Statistics and the National Accounts.

The methodology used for the long term forecasting of skill needs in Cyprus is divided into the following seven main stages:

• Stage 1: Forecasts of total employment 2007-2018 (full-time equivalent persons)

The forecasts of total employment (full-time equivalent persons) were provided by dividing the forecasts of total value added with the forecasts of total productivity. Productivity is defined as total value added divided by total employment (full-time equivalent persons).

• Stage 2: Forecasts of total employment 2007-2018 (LFS Persons)

In order to transform the forecasts of total employment (full-time equivalent persons) into forecasts of total employment (LFS persons), the ratio of total employment (LFS persons) to total employment (full-time equivalent persons) was forecasted.

• Stage 3A: Employment forecasts by economic sector 2007-2018

In order to allocate the forecasts of total employment (LFS persons) to the economic sectors, the employment shares by economic sector were forecasted. Four different models were used to forecast employment shares by economic sector. For each sector, the model that provided the best fit on the actual data was chosen. In some occasions where two or more models provided similar fits on the actual data, an average of the forecasts provided by these models was used.

• Stage 3B: Employment forecasts by occupation 2007-2018

This stage is divided in two different parts. The first part concerns the provision of employment forecasts in 3 broad occupational groups, in 10 main occupational groups and in 25 occupations at the 2<sup>nd</sup> level of analysis, while the second part concerns the provision of forecasts in 85 occupations at the 3<sup>rd</sup> level of analysis and in 147 occupations at the 4<sup>th</sup> level of analysis.

• Stage 3B – Part 1: Employment forecasts in 3 broad occupational groups, in 10 main occupational groups and in 25 occupations at the 2nd level of analysis 2007-2018

As in the case of economic sectors, in order to allocate the forecasts of total employment (LFS persons) to the occupations, the employment shares by occupation were forecasted. Four different models were used to forecast employment shares by occupation. For each occupation, the model that provided the best fit on the actual data was chosen. In some occasions where two or more models provided similar fits on the actual data, an average of the forecasts provided by these models was used.

• Stage 3B – Part 2: Employment forecasts in 85 occupations at the 3rd level of analysis and in 147 occupations at the 4th level of analysis 2007-2018

In order to forecast employment (LFS persons) in these occupations the structure of employment by occupation from the Census of Population (Statistical Service of Cyprus, 2001) was used for all the years of the period 2007-2018. This method was considered satisfactory, as the structure of employment by occupation at the 3<sup>rd</sup> and 4<sup>th</sup> levels of analysis was not expected to change in any significant way. Additionally, any possible changes in the structure of employment by occupation were taken into account at the 1<sup>st</sup> and 2<sup>nd</sup> levels of analysis of occupations where forecasts of the structure of employment were made.

• Stage 4A: Forecasts of expansion demand by economic sector 2007-2018

Expansion demand is defined as the change in the number of employees from one year to another and is derived from the employment forecasts by economic sector provided in Stage 3A.

• Stage 4B: Forecasts of expansion demand by occupation 2007-2018

Expansion demand is defined as the change in the number of employees from one year to another and is derived from the employment forecasts by occupation provided in Stage 3B.

• Stage 5: Forecasts of total replacement demand 2007-2018

In order to forecast total replacement demand for each year of the period 2007-2018, the total replacement rate was forecasted on the basis of the replacement rate for the period 2000-2006. Total replacement rate is derived from the division of the total number of withdrawals from the labour market with the total number of employees, using LFS data. It is noted that only permanent withdrawals are taken into account and these refer to three reasons: retirement, personal or family responsibilities and own illness or disability. The four different models that were used provided more or less the same fit on the actual data and thus an average of the forecasts provided by these models was used.

• Stage 6A: Forecasts of replacement demand by economic sector 2007-2018

This stage is divided in two different parts. The first part concerns the provision of forecasts of replacement demand in 3 broad economic sectors and in 17 main economic sectors at the 1<sup>st</sup> level of analysis, while the second part concerns the provision of forecasts in 32 economic sectors at the 2<sup>nd</sup> level of analysis.

• Stage 6A – Part 1: Forecasts of replacement demand in 3 broad economic sectors and in 17 main economic sectors at the 1st level of analysis 2007-2018

In order to provide forecasts of replacement demand in these economic sectors the replacement demand shares by economic sector were forecasted. These shares were estimated by applying the ratio "Average replacement demand shares / Average employment shares" by economic sector based on LFS data for the period 2000-2006 and using the forecasted employment shares by economic sector as these were derived in Stage 3A. The same ratio was used for each year of the period 2007-2018 assuming that there are no significant variations of this ratio, which is proven by available data.

• Stage 6A - Part 2: Forecasts of replacement demand in 32 economic sectors at the 2nd level of analysis 2007-2018

In order to forecast replacement demand in these economic sectors, the replacement demand shares by economic sector were forecasted. Having evaluated all available data, it seemed reasonable to assume that the replacement demand shares are identical to the employment shares as these were derived in Stage 3A.

• Stage 6B: Forecasts of replacement demand by occupation 2007-2018

This stage is divided in two different parts. The first part concerns the provision of forecasts of replacement demand in 3 broad occupational groups and in 10 main occupational groups, while the second part concerns the provision of forecasts in 25 occupations at the 2<sup>nd</sup> level of analysis, 85 occupations at the 3<sup>rd</sup> level of analysis and 147 occupations at the 4<sup>th</sup> level of analysis.

• Stage 6B – Part 1: Forecasts of replacement demand in 3 broad occupational groups and in 10 main occupational groups 2007-2018

In order to provide forecasts of replacement demand in these occupations, the replacement demand shares by occupation were forecasted. These shares were estimated by applying the ratio "Average replacement demand shares / Average employment shares" by occupation, based on LFS data for the period 2000-2006 and using the forecasted employment shares by occupation, as these were derived in Stage 3A. The same ratio was used for each year of the period 2007-2018 assuming that there are no significant variations of this ratio, which is proven by available data.

 Stage 6B - Part 2: Forecasts of replacement demand in 25 occupations at the 2nd level of analysis, 85 occupations at the 3rd level of analysis and 147 occupations at the 4th level of analysis 2007-2018

In order to forecast replacement demand in these occupations the replacement demand shares by occupation were forecasted. Having evaluated all available data, it seemed reasonable to assume that the replacement demand shares are identical to the employment shares as these were derived in Stage 3B.

• Stage 7A: Forecasts of total employment demand by economic sector 2007-2018

In order to forecast total employment demand by economic sector, the expansion demand was added to the replacement demand due to permanent withdrawals from the labour market in each economic sector as these were derived in Stages 4A and 6A respectively.

• Stage 7B: Forecasts of total employment demand by occupation 2007-2018

In order to forecast total employment demand by occupation, the expansion demand was added to the replacement demand due to permanent withdrawals from the labour market in each occupation as these were derived in Stages 4B and 6B respectively.

#### <u>Identification of Training Needs for Multi-Company Initial Training Programmes</u>

The annual study for the Identification of Training Needs for Multi-Company Initial Training Programmes with the involvement of the Social Partners provides annual estimates for the number of persons required for specific occupations by district. The estimates of the needs in specialisations for the implementation of the Multi-company Initial Training Programmes in 2010, were collected by sending a specially designed questionnaire to employers' organisations, Trade Unions, District Labour Offices (DLO) of the Ministry of Labour and Social Insurance (MLSI) and the Cyprus Tourism Organisation (CTO). All these estimates were recorded and analysed.

Other parameters that were examined are:

- (a) Forecasts of employment needs by the HRDA for selected occupations, in which the stakeholders suggested there is a need to implement initial training programmes;
- (b) Forecasts of replacement demand for 2010 for the selected occupations;
- (c) Forecasts of unemployment for 2009 for the selected occupations;
- (d) Vacant job positions for the period 2007-2008;
- (e) Multi-Company Initial Training Programmes organised during the period 2004-2008;
- (f) Multi-Company Initial Training Programmes cancelled during the period 2004-2008.

On the basis of the estimates and the above mentioned relevant information and data, suggestions are put forward for the implementation of Multi-Company Initial Training Programmes for the year ahead.

#### 3. Results

#### Long term employment forecasting in Cyprus

The average annual increase of employment for the period 2008-2018 is expected to reach approximately 9.700 persons whereas the average annual rate of increase of employment will reach 2,3%.

The overwhelming majority (79%) of new jobs is expected to come from enterprises of the tertiary sector. As a result, the employment share of the tertiary sector is expected to increase at the expense of the employment shares of the primary and secondary sectors. The expected employment shares for 2018 are 74,6% for the tertiary sector, 21,9% for the secondary sector and 3,5% for the primary sector. The sectors which are forecast to create most of the new jobs are:

- Construction (1.398 persons per year);
- Other business activities (1.377 persons per year);
- Education (1.063 persons per year).

On the contrary, Manufacture of textiles, Water transport, Insurance and Manufacture of leather and leather products are expected to exhibit the biggest job losses.

The sectors with the highest yearly rates of increase of employment are:

- Computer and related activities (6,6%);
- Real estate activities (5,6%);
- Research and development (4,9%).

On the contrary, the highest rates of decrease in employment are expected in:

- Manufacture of textiles and textile products (-6,6%);
- Manufacture of leather and leather products (-3,9%);
- Water transport (-3,2%).

Employment is expected to increase in all three broad occupational categories. About half of the persons in employment will be employed in middle level occupations. An increase in the employment share of high and low level occupations is expected at the expense of the employment share of middle level occupations. The expected employment shares for 2018 are 50,1% for middle level occupations, 32,1% for high level occupations and 17,8% for low level occupations.

The majority of the new job positions are expected in:

- Sales and services elementary occupations (1.553 persons);
- Other associate professionals (1.357 persons);

- Office clerks (1.140 persons);
- Extraction and building trades workers (1.069 persons).

On the other hand, the greater job losses are forecasted in Machine operators and assemblers and in Skilled agricultural and fishery workers.

The highest annual rates of increase of employment are expected in high level occupations. Significant rates of increase of employment are expected in:

- Legislators and senior officials (4,4%);
- Other professionals (3,8%);
- Life science and health professionals (3,5%).

On the contrary, the highest rates of decrease of employment are forecasted in:

- Machine operators and assemblers (-1,6%);
- Managers of small enterprises (-0,9%);
- Teaching associate professionals (-0,6%).

The majority of occupations with the best prospects for employment increase are to be found in high level occupations.

#### Identification of Training Needs for Multi-Company Initial Training Programmes

The study put forward the suggestion that the Multi-Company Initial Training Programmes for specialisations that were implemented during 2009 should also continue in 2010. Therefore, the study suggested the implementation of 25 training programmes for the training of 358 persons in the specialisations:

- Cooks (5 programmes);
- Waiters (5 programmes);
- Construction Workers (6 programmes);
- Plumbers (2 programmes);
- Welders (4 programmes);
- Carpenters / Furniture Makers (3 programmes).

Furthermore, the study identified the need to promote 32 Multi-Company Initial Training Programmes for the training of 412 persons during 2010 for the specialisations of:

- Computer assistants (3 programmes);
- Office / secretarial staff (4 programmes);
- Hotel housekeepers (2 programmes);

- Furniture Fitters (2 programmes);
- Electromechanical hotel installations workers (1 programme);
- Iron benders (1 programme);
- Building electricians (2 programmes);
- Varnishers (1 programme);
- Sheet metal workers (3 programmes);
- Aluminium technicians (3 programmes);
- Lift mechanics and fitters (1 programme);
- Heating and cooling systems installations technicians (4 programmes);
- Cabinet makers and related workers (6 programmes).

Finally, the study also identified the need to implement 64 Multi-Company Initial Training Programmes for the training of 880 persons for a variety of other specialisations.

#### 4. Conclusions

The provision of forecasts in economic sectors and occupations, including both expansion and replacement demand, is a research area in which Cyprus is particularly advanced. The methodologies used by the Human Resource Development Authority (HRDA) for providing employment forecasts are similar to methodologies of other European countries. The HRDA participates actively in initiatives and actions that are promoted at European level in the framework of the European network Skillsnet for skill needs forecasting.

The employment forecasts studies, carried out every two to three years, are utilised by policy makers in order to develop appropriate policy responses for adapting to the forecasted situation in the labour market, public and private organisations involved in human resource planning, people involved in counselling such as secondary education vocational guidance teachers and employment counsellors and by the public (more specifically parents and students wishing to choose an occupation or to pursue further studies). For this purpose, research studies, upon completion are disseminated to a wide audience of prominent stakeholders. Special lectures are organised for secondary school guidance counsellors and employment counsellors, parents, as well as to students during the "Annual Careers Fair". Additionally, the HRDA maintains a website (<a href="www.hrdauth.org.cy">www.hrdauth.org.cy</a>) with information on approved training opportunities. The HRDA also displays its research studies in a downloadable form. A special section in the website contains the latest available occupational employment forecasts for all the occupations of the labour market in Cyprus.

The findings of the research studies are also taken into account by the HRDA for choosing the Standards of Vocational Qualifications to be developed in the System which is being established and implemented and will be incorporated into the National Qualifications Framework.

Finally, the study for the identification of initial training needs puts forward suggestions for the implementation of Multi-company Initial Training Programmes of the HRDA. The study is an ongoing activity which will continue in the future, as the results are important for the planning of HRDA activities.

#### Overview

The ongoing assessment of labour market needs is a policy priority for Cyprus and research includes the provision of long term as well as short term employment forecasts. The long term provision of forecasts in economic sectors and occupations takes into account both expansion and replacement demand. Research on employment forecasts will continue in the future and in fact, the next set of research studies which are expected to be completed in 2010 will cover the period 2010-2020 and will incorporate the effects of the current economic crisis. However, employment forecasts do not take into account the supply of human resources in the labour market, an issue that is important in identifying skill shortages and mismatches. This is a research issue that should be examined for further enhancement of the provision of forecasts. Furthermore, the promotion of specific research on important emerging issues such as the green economy and occupations will further strengthen the existing research on the anticipation of skill needs.

#### 5. References

#### **Sources:**

Human Resource Development Authority (2009a), "Identification of Initial Training Needs for Multi-Company Initial Training Programmes for 2010".

Human Resource Development Authority (2009b), "VET in Europe – Cyprus 2009".

Human Resource Development Authority (2008), "The Vocational Education and Training System of Cyprus: Initial Vocational Education and Training 2007".

Human Resource Development Authority (2008), "The Vocational Education and Training System of Cyprus: Skills and Competences Development and Innovative Pedagogy 2007".

Human Resource Development Authority (2007a), "Employment Forecasts in the Cyprus Economy 2008-2018".

Human Resource Development Authority (2007b), "Forecasts of Employment Needs in High Level Occupations in Cyprus 2008-2018".

Human Resource Development Authority (2007c), "Forecasts of Employment Needs in Middle Level Occupations in Cyprus 2008-2018".

Ministry of Finance (2005): National Lisbon Programme.

Ministry of Finance (2006): National Reform Programme of Cyprus – Progress Report.

Planning Bureau (2008): National Reform Programme of Cyprus 2008-2010 – Progress Report.

Planning Bureau (2009): National Reform Programme of Cyprus – Progress Report.

Statistical Service of Cyprus (2001): Census of Population.

Statistical Service of Cyprus (1995-2006): Labour Statistics.

Statistical Service of Cyprus (2000-2006): Labour Force Survey.

Statistical Service of Cyprus (1995-2006): National Accounts.

#### **Websites:**

Human Resource Development Authority, www.hrdauth.org.cv

Planning Bureau, www.planning.gov.cy

ReferNet Cyprus, www.refernet.org.cy

Skillsnet – Cedefop, <u>www.trainingvillage.gr/etv/Projects\_Networks/skillsnet/</u>

Statistical Service of Cyprus, <a href="https://www.mof.gov.cy/mof/cystat">www.mof.gov.cy/mof/cystat</a>

### Theme 4: Labour Market Groups at Risk

Ensuring an adequate standard of living for the disadvantaged and vulnerable groups and encouraging their integration into the labour market and the promotion of gender equality, flexible employment and active ageing are policy priorities, outlined in various national documents. In order to promote these priorities, a number of research studies have been carried out and few more have been planned, whereas there is scope for further research on this issue. Research studies in Cyprus, identified as related to the issue of Labour Market Groups at Risk, refer to the following groups: Women (Gender Wage Gap and Flexible Forms of Employment), Young persons (Promotion of employment), Older persons (Active Ageing) and Other Vulnerable Groups (Poverty in Cyprus). Studies on the gender wage gap confirm the existence of a large but declining wage gap and propose measures aiming at reducing the gap further in the long term, whereas the study on the use of flexible forms of employment focuses on the potential for a wider adoption of flexible forms of employment in order to attract to the labour market unemployed or inactive women and suggests flexible forms of employment that are most likely to be successful in Cyprus. The study on strategies on the promotion of employment of young persons in the labour market suggests a new comprehensive strategy. The studies on active ageing outline a comprehensive strategy of active ageing in Cyprus and involve the development of a system on elderly care, vocational training and rehabilitation and finally the study on poverty proves that pensioners are the most vulnerable group in Cyprus experiencing a higher degree of poverty.

#### 1. Introduction

Ensuring an adequate standard of living for the disadvantaged and vulnerable groups and encouraging their integration into the labour market, the promotion of gender equality, the promotion of flexible employment and the promotion of active ageing are policy priorities, outlined in various national documents, including the National Lisbon Programme of Cyprus (Planning Bureau, 2009).

Cyprus is implementing a set of measures aiming at tackling gender inequality in the labour market by reducing the gender wage gap, promoting awareness raising activities and organising training seminars for the Equality Inspectors.

Flexible employment is being promoted through subsidy schemes aiming to attract unemployed women or economically inactive persons to the labour market, to assist persons who need flexibility for family reasons to remain in the labour market and to help companies introduce and apply flexicurity policies.

Furthermore, various schemes are being implemented in order to build employment pathways for vulnerable groups such as unemployed, inactive and young people. These are schemes for the promotion of training and employability and for fostering entrepreneurship.

In accordance with the policy priority for the promotion of active ageing, a scheme was implemented in order to increase the retirement age of civil servants from 60 to 63 years. The increase of the retirement age in the broader public sector is also promoted and most semi-government organisations attained this target.

In order to promote the relevant policy priorities several research studies have been carried out, which were mainly initiated by public sector bodies. In particular, five main types of

studies have been identified as related to the issue of Labour Market Groups at Risk. These studies refer to the following groups: Women (Gender Wage Gap and Flexible Forms of Employment), Young persons (Promotion of employment), Older persons (Active Ageing) and Other Vulnerable Groups (Poverty in Cyprus).

• The Gender Wage Gap in Cyprus

Two studies have been conducted on the issue of the gender wage gap in Cyprus:

- (a) A study entitled "The Gender Wage Gap in Cyprus" conducted by the Economic Research Centre of the University of Cyprus (Christophides and Vrachimis, 2007), whose objective was to examine the gender wage gap in Cyprus and its change over time. The study confirmed the existence of a large wage gap in 1990/91 which declined by 2002/03. The large reduction was, in part, due to an improvement in the productivity characteristics (specifically education) of female employees. The study concluded that the pay gap improved throughout the wage distribution, except in the highest wages, which show a large wage gap in all three periods.
- (b) A second study "Analysis on the Gender Pay Gap in Cyprus and Practical Suggestions for Reducing the Gap" was conducted by the Institute of Social Innovation on behalf of the Department of Labour Relations of the Ministry of Labour and Social Insurance (MLSI). The study (Institute of Social Innovation, 2007) aimed to examine the issue and put forward appropriate policies for the reduction and finally elimination of the gender pay gap.
- Promotion of Modern and Flexible Forms of Employment for the Promotion of Access of Women to the Labour Market

Within the framework of the government policy to promote the access of women to the labour market, the Cyprus Productivity Centre (CPC) implemented a pilot project of promoting flexible forms of employment, co-financed by the European Social Fund (ESF). The project aimed to attract to the labour market unemployed or inactive women who wish to work on the basis of flexible work arrangements, and who remain unemployed or inactive due to lack of appropriate opportunities. The project comprises a diagnostic study and a pilot implementation. The objective of the diagnostic study entitled "Survey on the use and potential use of Flexible Forms of Employment in Cyprus" (Cyprus Productivity Centre, 2006) was to identify the needs and possibilities for implementing flexible forms of employment in Cyprus and to indicate the adjustments that need to be made at legislative, socioeconomic and enterprise levels for the effective and smooth implementation of such forms of employment in Cyprus.

• Strategies on the promotion of employment of young persons in the labour market

The study entitled "Strategies on the promotion of employment of young persons in the labour market" (Tziortzi and Micharikopoulos, 2008) has been carried out on behalf of the MLSI and is related to an action co-financed by the ESF on the enhancement and modernisation of the Public Employment Services (PES) during the period 2005-2008. The study focuses on the analysis of labour market data and an evaluation of current policies, measures and actions in Cyprus in relation to the employment of young persons aged 15-24 and on the investigation of the views of unemployed and employed young persons as well as employers. Furthermore, the study identifies the EU interventions on the promotion of the employment of young

persons within the framework of the revised Lisbon strategy, refers to international good practices and suggests a new comprehensive strategy for the promotion of employment of young persons.

#### • Active Ageing

One study and a Leonardo da Vinci project have been completed on the issue of active ageing:

- (a) The study entitled "Institutional Context and Policies for Active Ageing: European Practices and Challenges for the Labour Market in Cyprus" (Sakellis et al, 2009) recognises the interest of policymakers towards the implications of demographic ageing on employment and social protection and has been carried out on behalf of the MLSI. It outlines a comprehensive strategy of active ageing for Cyprus, drawing upon international good practices and the role of social dialogue. It aims to act as a guide for researchers and policymakers in the fields of employment policy and social security interested in the formulation of programmes aimed at promoting older persons participation in the labour market.
- (b) Elderly Care Vocational Training and Rehabilitation System (ECV): This Leonardo da Vinci project embraces the humanitarian, social and professional processes which are necessary for providing care to the elders. The social and employment requirements in this field are expanding as a result of the ageing of the population all over Europe and are augmented by the increasing trend of elderly individuals in seeking professional care in replacement of the traditionally provided child-to-parent assistance.
- Poverty in Cyprus: 1991-2003

The study entitled "Poverty in Cyprus: 1991-2003" (Pashiardes et al, 2007), examined the evolution of poverty in Cyprus during the period 1991-2003. The analysis showed that pensioners are the most vulnerable group of the population experiencing a considerably higher degree of poverty in comparison to other groups, reaching poverty rates up to 74% for single pensioners. Other vulnerable groups consist of single parent families, unemployed, individuals with low educational attainment, people with disabilities, women and, to a lesser degree, families with many children.

### 2. Data and Methodology

#### Gender Wage Gap

(a) The Gender Wage Gap in Cyprus

The study used data from the Cyprus Household Budget Surveys of 1990/91, 1996/97 and 2002/03, which provided the best and latest available information on the income and expenditure of Cypriot households. While the focus of the study was on the process of wage determination by gender, the variables collected in the survey made it likely to understand the wage determination process and hence identify the contribution of characteristics such as experience and education.

The "working sample" consisted of individuals aged sixteen to seventy-five, who have declared their education level and for whom other reliable data were available. Thus individuals who were allowed to work were included, while individuals who were not capable of working were excluded. Also, in the sample only households containing first degree relatives were included, i.e. the head of household, his/her partner and their children. The aim of this restriction was to more accurately assign family income, which is only available at the household level, to each member of the household. The "selected" sub-sample of the working sample consisted of individuals who had paid employment and a non-zero wage.

The characteristics of each individual were then analysed, including age, education, number of children, marital status, working status and wages. Decompositions of the gender wage gap were calculated for each year and changes to them over time, along with the possible reasons for these changes, were then studied using an econometric model. The methodology decomposed the total differences between genders into a portion attributable to differences in the average value of the productivity characteristics (the explained part) and a portion attributable to differences in productivity characteristics (the unexplained part).

## (b) Analysis on the Gender Pay Gap in Cyprus and Practical Suggestions for Reducing the Gap

The study used data from the Labour Force Surveys and detailed micro-data from the Survey on Earnings of the Statistical Service of Cyprus. The latter provides combined data of employers and employees for year 2002 which is the latest available, such as the wages and characteristics of employees and their enterprises. The pay gap was analysed using an econometric model for determining the effect of each variable on the formation of the pay gap. Independent sample t tests were performed to the hypothesis that the differences of the mean of the variables were important and it was concluded that all the differences were statistically important with the exception of the percentage of concentration in the public sector. The statistical data used in the study show that the pay gap continues to remain at a relatively high level.

## <u>Promotion of Modern and Flexible Forms of Employment for the Promotion of Access of</u> Women to the Labour Market

The study entitled "Survey on the use and potential use of Flexible Forms of Employment in Cyprus" (Cyprus Productivity Centre, 2006) was assigned to a consortium of companies and was completed in October 2006. It focused on the specific context of Cyprus and the potential for a wider adoption and implementation of flexible forms of employment.

The study primarily aimed to present the context within which flexible forms of employment are to be implemented in Cyprus through an analysis and description of the labour market, the legislation governing the implementation of flexible forms of employment and the views of the major stakeholders (inactive and unemployed women as well as employees and employers) regarding the prospects for a wider implementation of flexible employment practices. Moreover, the report aimed to provide well documented and concrete proposals regarding the potential of flexible work practices in Cyprus and their implementation on a pilot basis.

The study used the findings of two field surveys, one covering unemployed and employed persons, and the other employers. Other sources used are official statistics, international bibliography and macroeconomic data.

The field surveys were conducted between May and June 2006. The first covered a sample of 599 unemployed, inactive and employed women and the second a sample of 202 enterprises. The data was analysed by the statistical package SPSS which extracted tables of simple distributions and crossings. The analysis of the findings showed the views of the labour force and the employers towards the flexible forms of employment. Moreover, the research team recorded the views of the major social partners in Cyprus, through interviews with their leaders and top level executives.

Apart from the diagnostic study, it was considered necessary to study the impact on the economy and the labour market of the use of flexible forms of employment in Cyprus. The findings of the study contribute to the formulation of policies on flexible forms of employment, help to verify the decisions taken at planning level or indicate the need for adjustments to the original plan.

#### Strategies on the promotion of employment of young persons in the labour market

The study used the findings of a field survey covering unemployed and employed young persons and enterprises. Through this survey their attitudes / expectations for their entry to the labour market and the outline of the employers' views on the employment of young persons were collected, as these are considered necessary in the process of formulating new employment strategies.

The survey covered geographically all the regions of Cyprus and was conducted through the use of semi-structured questionnaires in selected categories of unemployed and employed young persons and in enterprises. The sample was selected using random stratified sampling. The unemployed were selected from the population of young unemployed persons aged 15-27 that were registered in the Public Employment Services, weighted by gender, educational status, age and place of living and the employees were selected from the population of young persons aged 15-27. The employers were selected by using stratified sampling from the Census of Establishments from enterprises employing at least five persons and weighted by sector of economic activity, size and district.

#### Studies on Active Ageing

(a) Institutional Context and Policies for Active Ageing: European Practices and Challenges for the Labour Market in Cyprus

The study provided an overview of EU interventions and responses to active ageing and older workers as well as international good practices on the prolongation of working life. Furthermore, it analysed the situation in Cyprus with regard to older workers in the labour market, the pension system and employment policy. The study used data from the Labour Force Surveys and the Labour Costs Surveys of Eurostat.

#### (b) Elderly Care Vocational Training and Rehabilitation System

This Leonardo da Vinci project aimed to produce a Self Training Computer Software, a Textbook, a Competence Accreditation methodology and a Social Relations Guide. These products are promoted through a network of institutions aiming to meet the training

requirements and to merge the employment desires of certified elderly-care-workers with the needs of the elderly-care-taking providers.

The project has undertaken a front-end research that identified the socially and scientifically recommended physical requirements of the elderly, the skills, qualities and employment limits of the care-taking workers, and the ergonomics of the corresponding processes with particular focus on non-invasive techniques.

The defined requirements were consolidated into a vocational scenario which was translated in the languages of the participating countries. The scenario was extended into processes which were converted to a self learning electronic training and validation software incorporating comprehensive audiovisual material (video clips, animations, close-up simulations, intelligible scripts) and validation exercises suitable for initial training of secondary school leavers as well as for re-training of qualified medical assistants and experienced elderly care workers.

#### Poverty in Cyprus: 1991-2003

The study used microeconomic data drawn from the Cyprus Household Budget Surveys 1990/91, 1996/97 and 2002/03, conducted every 5 years by the Statistical Service of Cyprus. The poverty gap ratio was computed for selected groups susceptible to poverty in order to analyse the evolution of the depth of poverty throughout the years.

Econometric analysis was conducted in order to estimate the possibility of a household being poor based on various demographic, educational and economic characteristics.

The study proposed measures for alleviating poverty, which will better target the groups of the population in real need for benefit assistance. For this purpose, the study used the microeconomic tax-benefit simulation model for the Cyprus economy, designed by the Economics Research Centre, in order to simulate the effects of reforms to the child benefit, students grant, income tax as well as the social pension reforms on child poverty, student poverty, pensioner poverty and on the overall poverty rate of the economy.

#### 3. Results

#### The Gender Wage Gap in Cyprus

#### (a) The Gender Wage Gap in Cyprus

The study, which compared results from surveys of 1990/91, 1996/97 and 2002/03 confirmed the existence of a large wage gap in 1990/91 (0,572 ln wage points) that declined in 1996/97 (0,313 ln wage points) and declined further in 2002/03 (to 0,26 ln wage points). The large reduction by 1996/97 was, in part, due to an improvement in the productivity characteristics (specifically education) of female employees. However, by the 1996/97 survey, no scope for further reductions in the gap due to improved characteristics was possible, leaving the observed gap of 0,313 ln wage points unexplained and due either to unobserved characteristics or discrimination. This also holds for the observed gap of 0,26 points in 2002/03.

The results of the study also show that the percentage of female employees that received higher wages has increased and that the improvement of the wage gap was observed throughout the wage distribution, except in the highest wages, which show a large wage gap in all three periods.

### (b) Analysis on the Gender Pay Gap in Cyprus and Practical Suggestions for Reducing the Gap

The study showed that the gender pay gap improved during the second half of the 1990s decade. Since then, it was stable to 24% of the male remuneration. This was analysed in average hourly wages so as to determine the factors and the degree that each of this factor contributes to the formation of the gap. It was found that women have a marginally higher educational level. Their previous work experience was 1,5 years less than that of men. Just 3,1% were employed in semi-government organisations, as opposed to 5,4% of men, while 61,7% of women were employed in organisations where most of the employees were covered by collective agreements, as opposed to 67,5% of men. Managerial occupations are male dominated as 6,4% of men possess managerial positions, while the respective percentage for women is just 1,6%. A higher percentage of women, 4,2% of the total number of employed were partly employed, while the respective percentage for men was just 2,1%.

The differences in the characteristics of men and women can explain part of the gender pay gap. Another part can be explained by the different remuneration that the employers give to men and women with the same characteristics, but also by the "clear discrimination" against women, i.e. a "premium" paid to men just for their gender and independent of their characteristics.

# <u>Promotion of Modern and Flexible Forms of Employment for the Promotion of Access of Women to the Labour Market</u>

The study showed that even though 2 out of the 3 persons interviewed do not have the opportunity to choose their working hours, just 40% state that they would desire a greater flexibility of the working time. The unemployed and the inactive would not object to working less time, even with lower earnings. The new forms of employment such as temporary employment, telework, job sharing and partial retirement are not well known in Cyprus, as opposed to part-time and seasonal employment or jobs with piecework. Telework is the least acceptable form of entry to the labour market as it is just accepted by 16% of the population.

From the field study to the employers, it was stated that 23% of the employees of the sample enterprises were employed on some form of flexible employment mainly on seasonal or temporary employment, or on project contract. Furthermore, 6 out of 10 enterprises already implement some policy of flexible forms of employment, mainly the flexible working hours, seasonal or part-time employment. The employees who are employed on part-time or seasonal employment are mostly low skilled, with very few cases of managers or professionals. Even though the impact of the implementation of flexible forms of employment is positive, their future implementation is just considered by a small number of enterprises, while the flexible working time is the only attractive choice to enterprises. The issue of combining family and working life is not on the enterprises agenda, as most do not implement any policies or practices to facilitate employees with children or directly dependent persons. Finally, especially for the facilitation of entry of inactive to paid employment, the majority of enterprises are not willing to adopt new initiatives.

#### Strategies on the promotion of employment of young persons in the labour market

The field survey showed that one in two young employees works in the services sector, while two out of ten work in the trade sector. One in two works in office while one in three holds a technical or professional position. The share of skilled workers is low (12,8%) while the share of unskilled workers is even lower (6,2%). The majority of the employees (45,5%) found their job with the help of family and friends. This percentage is higher between young persons aged 15-20 (62,2%) and lower between young persons with university education (31,2%). Six out of ten have a full time job and the majority (73,9%) have a permanent job. A high percentage (73,5%) stated that their qualifications are suitable for their job position, while one in four interviewees believed that they possess more qualifications than the position requires (i.e. that they are over-qualified) which increased to one in two in the case of professionals. Two out of three stated that through their job they have opportunities for further education.

The majority of the unemployed young persons that were interviewed (60%) were women who were mostly university graduates. On the contrary, the majority of men unemployed under 27 (60,7%) have completed secondary education and just 20,5% were tertiary education graduates. The majority (69%) remained unemployed for a maximum of six months, while 20% remained unemployed for a period of six months to one year. The educational status is an important factor for the duration of unemployment since the percentage of tertiary education graduates that remain unemployed for more than six months is lower than that of young persons with primary or secondary education. Around 75% of the unemployed stated that they have previous work experience, while just 30% get unemployment benefit, mainly due to the fact that they had quit their previous job. The great majority of unemployed young persons that are registered in the Public Employment Services stated that they actively seek employment. The majority (90%) stated that their qualifications are suitable for the needs of the labour market, while one in ten do not believe that they will find a job within the next six months. Most of them prefer the services sector and one in two actively seek employment in this sector. The majority (79,4%) seek full-time employment.

The majority of enterprises from the sample (78,5%) have employed during the last five years young persons under 27 years old, the vast majority of employers (92,6%) stated that they are satisfied or almost satisfied and 74,5% stated that they trust the young persons. The most important criterion for employing a person is consistency and responsibility of the candidate for the position. Two thirds of the employers stated that they have not adopted any specific practice or in-company policy for the support of the young persons they employ, while about half implement in-company training programmes for them. The majority of employers employing young persons (64%) offer additional rewards, the most popular (77,7%) being bonus based on performance. The existence of incentives (such as subsidies) for employing young persons is considered as an especially favourable situation by 2/3 of the employers and they believe that it will contribute to the decision to employ them. The majority of employers (83,9%) are not informed of existing schemes providing incentives for employing young persons. Furthermore, from the enterprises that are aware of the incentives, a low percentage (24,2%) have utilised these. However, just 12,5% of these enterprises would not have employed young persons if there was no scheme, while the vast majority would have employed them even if the persons did not participate in a scheme.

#### **Active Ageing**

(a) Institutional Context and Policies for Active Ageing: European Practices and Challenges for the Labour Market in Cyprus

The study found that by adopting an active ageing approach the goal of a sustainable social protection system can be achieved. This means that there is a need to concentrate on the employment of older people and the contribution that the public employment service, employers, the pension system and the social welfare system can make to achieve high levels of employment in old age. Thus, the study sets out to outline a comprehensive strategy of active ageing for Cyprus, drawing upon international good practices and social dialogue.

(b) Elderly Care Vocational Training and Rehabilitation System

#### The main outcomes of the project are:

- (i) An e-learning software suitable for initial training and re-training in the elderly care vocation. The system resides on a contemporary personal computer with appropriate data storage, fast retrieval technology and advanced audiovisual media which are adequate to support an electronic learning environment. The software stipulates the e-learning concept through screen text reading, video clips showing ergonomic processes, close-up simulations, intelligible scripts and validation exercises. The trainees can learn the Elderly Care Vocations (ECV) modules of: Vocational Awareness, Basic Ageing Pathology, Environmental Care, Basic Body Care, Hygiene, Nursing, Handling Incontinence, First Aids, Physiotherapy, Mobility and Entertainment, Tools and Materials.
- (ii) The trainees have the option to apply for validation of their skills and award of the Certificate of ECV knowledge through the appropriate mechanism of the ECV network.
- (iii) The ECV members operate an electronic platform, which aims to bring together organisations and individuals sharing common interest in the elderly care vocation.
- (iv) The ECV Social Relations Guide addressing the implicit establishment of the appropriate employment strategies and practices that are necessary to maintain a stable work environment for this delegate vocation.

#### Poverty in Cyprus: 1991-2003

The study showed that pensioners are the most vulnerable group of the population experiencing a considerably higher degree of poverty in comparison to other groups. Other vulnerable groups consist of single parent families, the unemployed, individuals with low educational attainment, people with disabilities, women and, to a lesser degree, families with many children.

The results of the simulation model show that:

(a) Introducing income criteria for eligibility for child benefit (i.e. giving benefit only to lower income or poor families) greatly decreases child poverty in comparison to the current child benefit system (which is based on the number of children in the family);

- (b) An income-tested student grant greatly decreases student poverty (grant given according to income criteria) and
- (c) By not increasing the income tax shield and allocating saved revenue (from a possible increase in the income tax shield) to social pension, decreases pensioner poverty and overall poverty to a considerable degree.

These results were used to suggest poverty combating measures.

#### 4. Conclusions

Promoting the integration of vulnerable groups into the labour market is a policy priority in Cyprus. These groups include women, young persons and older persons. In the case of women the employment rate could increase by tackling gender inequality such as the gender wage gap and by introducing flexible forms of employment. Young persons graduating from secondary and tertiary educational establishments could be helped towards securing employment and thus reducing their relatively higher unemployment rate. Finally, in order to alleviate the problems of the pension system, to reduce the dependence on foreign workers and to deal with demographic changes older persons are encouraged to remain in the labour market and pursue an active ageing approach.

The main conclusions of the studies on Labour Market Groups at Risk, the suggestions put forward, their impact on VET developments and future policies are described below.

#### The Gender Wage Gap in Cyprus

Both studies confirmed the existence of a large wage gap which declined in the later years. Drawing on these results, the Ministry of Labour and Social Insurance prepared a comprehensive proposal of measures aiming at addressing the causes of the gap and aiming at actually reducing the gender pay gap in the long term. The proposal consists of a broad mix of measures, and includes specialised training programmes for inspectors, with the purpose of establishing an effective inspection mechanism for the enforcement of equal pay legislation, financing equality schemes of enterprises, the establishment of a gender equality Certification Body, training programmes for trade unions and employers associations representatives, as well as measures for eliminating occupational and sectoral segregation which include interventions in education issues. Lastly, the proposal includes campaigns for raising awareness on equal pay and also the development of manuals, guides, self-assessment tools, codes of practice and job evaluation tools for managers / human resource professionals.

# <u>Promotion of Modern and Flexible Forms of Employment for the Promotion of Access of Women to the Labour Market</u>

The "Survey on the use and potential use of Flexible Forms of Employment in Cyprus" (Cyprus Productivity Centre, 2006) concludes that the flexible forms of employment that are most likely to be successfully implemented are part-time employment, independent or free-lance employment, telework, flexible working time and paid leave (sabbatical) which can be combined with job rotation. In addition, the report lists the recommendations on the structure and content of the pilot implementation of flexible forms of employment within the context of measures co-financed by the European Social Fund.

Following the study, the Cyprus Productivity Centre implemented a pilot subsidy scheme aiming at the promotion of flexible forms of employment in order to attract unemployed or economically inactive women into the labour market, during which 193 women were placed in 145 different companies / organisations. The project was evaluated to determine the degree of achievement of the objectives originally set, as well as the effectiveness of the initial recommendations made regarding the implementation of flexible forms of employment in Cyprus. This evaluation gave the green light for the development of the statutory framework regulating their actual implementation in the future.

During the programming period 2007-2013, two schemes will be implemented for the promotion of flexible forms of employment, which will be co-financed from the ESF. One scheme will provide subsidies for the promotion of flexible forms of employment, for attracting and assisting economically inactive persons and persons who need flexibility for family reasons to remain in the labour market. The scheme will be launched by the end of 2009.

The second scheme will provide subsidies and support to companies / organisations in order to develop and implement integrated flexicurity policies. It will be launched by the end of 2010.

#### Strategies on the promotion of employment of young persons in the labour market

The study proposes a new policy model for the promotion of the employment of young persons in Cyprus. This includes the basic principles for the development and implementation of targeted programmes for the employment of young persons, policy priorities and the promotion of new strategy through the formation of a coordinating body.

#### **Active Ageing**

On the basis of the analysis of the situation in Cyprus and the demographic prospects, and having considered experiences in other countries, the study "Institutional Context and Policies for Active Ageing: European Practices and Challenges for the Labour Market in Cyprus" (Sakellis et al, 2009) proposes actions on:

- (a) Changing the conditions of the pension system to reduce opportunities for early retirement,
- (b) Tackling the problem of skill obsolescence by improving opportunities for people to improve their capabilities and change occupations and
- (c) Increasing the provision of child- and eldercare services to enable more (and possibly older) women to participate in the formal labour market.

It is noted that a scheme was implemented as from 1/7/2005 in order to increase the retirement age of civil servants from 60 to 63 years. The measure was completed in 2008, except for the teachers in primary and secondary education, the police and the army. The increase of the retirement age in the broader public sector from 60 to 63 years is also promoted and most semi-government organisations completed the measure.

Furthermore, the Government of Cyprus established the National Agency for Demography and Family Policy with a decision of the Council of Ministers in 2009. Among the Agency's responsibilities are the assessment of the current situation, the undertaking of studies on

demographic and family issues, the preparation of action plans for the development of different strands of policy and the promotion of public debate. The Agency will also be responsible for conducting a study for the formulation of demographic policy and the identification of areas for intervention, with emphasis on family policies.

On the other hand, the Leonardo da Vinci project on Elderly Care Vocational Training and Rehabilitation System addresses the current status and the trends of the training, social and employment rehabilitation needs of the Elderly Care in Europe for vocationally skilled elderly care workers, transparency of competencies and acceptance of the employment and service structures by the social partners.

#### Poverty in Cyprus: 1991-2003

The study proposes measures for alleviating poverty that aim at better targeting the groups of the population in real need for benefit assistance. Poverty combating measures are the increase of the labour force participation of the unemployed, the low-skilled, the disabled and women and especially mothers single or otherwise. To this end, measures already undertaken, or scheduled, by the authorities should be enhanced and further promoted. These measures include employment and training programmes targeting the unemployed and socially excluded individuals, provision of equal opportunities to education, the promotion of life-long education, elimination of women discrimination at work, introduction of more flexible forms of employment, improved child care services and improved infrastructure for the disabled.

#### Overview

Ensuring an adequate standard of living for the disadvantaged and vulnerable groups and encouraging their integration into the labour market, the promotion of gender equality, the promotion of flexible employment and the promotion of active ageing are policy priorities, outlined in various national documents. In order to promote these priorities a number of research studies have been carried out whereas more research is being planned for the next years. Based on the available research, various schemes have been implemented or are being designed. Further research on this issue includes a study for the formulation of demographic policy and a study for the modernisation of public assistance legislation, evaluating and improving existing practices for lone parents. However, there is scope for further research on labour market groups at risk.

#### 5. References

#### **Sources:**

Cyprus Productivity Centre (2006): Survey on the use and potential use of flexible forms of employment in Cyprus.

Tziortzi, L.; Micharikopoulos, D. (2008): Strategies on the promotion of employment of young persons in the labour market.

Christophides, L.; Vrachimis, K. (2007): The gender wage gap in Cyprus.

Institute of Social Innovation (2007): Analysis on the gender pay gap in Cyprus and practical suggestions for reducing the gap.

Ministry of Finance (2005): National Lisbon Programme.

Ministry of Finance (2006): National Reform Programme of Cyprus – Progress Report.

Planning Bureau (2008): National Reform Programme of Cyprus 2008-2010 – Progress Report.

Planning Bureau (2009): National Reform Programme of Cyprus – Progress Report.

Pashiardes, P.; Hadjispirou, S.; Nicolaidou, N. (2007): Poverty in Cyprus.

Sakellis, I.; Casey, B.; Micharikopoulos, D.; Yiallouros, P.; Ioakimoglou, E. (2009): Institutional Context and Policies on Active Ageing – European Practices and Challenges for the Cypriot Labour Market.

Statistical Service of Cyprus (2003): Household Budget Survey.

Statistical Service of Cyprus (2003): Labour Cost Survey.

Statistical Service of Cyprus (2003): Labour Force Survey.

#### **Websites:**

Economic Research Centre, www.erc.ucy.ac.cy

Elderly Care Vocational Training and Rehabilitation System, www.ecvleonardo.com

Flexible forms of employment - Cyprus Productivity Centre, <a href="www.eveliktes.kepa.mlsi.gov.cy">www.eveliktes.kepa.mlsi.gov.cy</a>

Ministry of Labour and Social Insurance, www.mlsi.gov.cy

Planning Bureau, www.planning.gov.cy

Statistical Service of Cyprus, <a href="www.mof.gov.cy/mof/cystat">www.mof.gov.cy/mof/cystat</a>

ReferNet Cyprus, www.refernet.org.cy

#### ANNEX 1: MEMBERS OF THE CYPRUS CONSORTIUM

#### 1. NATIONAL COORDINATOR

1.1. Human Resource Development Authority of Cyprus (www.hrdauth.org.cy)

#### 2. <u>MINISTRIES/GOVERNMENT DEPARTMENTS</u>

- 2.1. Planning Bureau (www.planning.gov.cy)
- 2.2. Ministry of Labour and Social Insurance/Department of Labour (www.mlsi.gov.cy/dl)
- 2.3. Ministry of Education and Culture (<u>www.moec.gov.cy</u>)
- 2.4. Statistical Service of Cyprus (www.mof.gov.cy/cystat)
- 2.5. Cyprus Academy of Public Administration (CAPA) (www.mof.gov.cy)
- 2.6. Pedagogical Institute (www.pi.ac.cy)
- 2.7. Cyprus Productivity Centre (www.mlsi.gov.cy/kepa)

#### 3. SOCIAL PARTNERS: EMPLOYER AND TRADE UNION ORGANISATIONS

- 3.1. Cyprus Employers and Industrialists Federation (<a href="www.oeb-eif.org">www.oeb-eif.org</a>)
- 3.2. Cyprus Chamber of Commerce and Industry (www.ccci.org.cy)
- 3.3. Cyprus Workers' Confederation (<u>www.sek.org.cy</u>)
- 3.4. Pancyprian Federation of Labour (<u>www.peo.org.cy</u>)
- 3.5. Democratic Labour Federation of Cyprus (www.deok.org.cy)
- 3.6. Cyprus Union of Bank Employees (<u>www.etyk.org</u>)

#### 4. OTHER ORGANISATIONS/NON-PROFIT MAKING ORGANISATIONS

- 4.1. University of Cyprus (www.ucy.ac.cy)
- 4.2. Research Promotion Foundation (www.research.org.cy)

# 5. <u>NATIONAL AGENCIES/UNITS FOR MANAGING EUROPEAN PROGRAMMES/INITIATIVES</u>

- 5.1. Foundation for the Management of European Lifelong Learning Programmes (www.llp.org.cy)
- 5.2. National Eurydice Unit (www.eurydice.org)