



NATIONAL VET RESEARCH REPORT

Manual 2009

INTRODUCTION – INSTRUCTIONS ON COMPLETING THE TEMPLATE

- (1) The National VET Research Report (former ERO National Research Report), to be delivered to Cedefop by **30 September 2009**, should be completed in accordance with the template provided as a separate document.
- (2) The report covers research activities and initiatives in the area of vocational education and training (VET).
- (3) The main aim of this report is to provide a critical review of VET-related research activities and initiatives within your country.
- (4) The emphasis in this report is on relevant, actuality and national research. Only the most important and relevant information should be selected for inclusion. The report should focus on research carried out in your country during the last five years (approximately between 2004 and 2009).
- (5) The report should not exceed 50 pages (up to 22.000 words/ app. 80,000 characters with spaces). The key topics (see No 2.1, 2.2, 4 and 5) should not exceed 10 pages each (up to 4,400 words/ app. 16,000 characters with spaces). For detailed information on the maximum length of each section and the formatting requirements of the template see below.
- (6) Instructions on the nature of the information to be inserted are provided in this National VET Research Report Manual. Entries in each field should be relevant and concise.
- (7) The reports will be stored in Cedefop's VETBib. Moreover, publication of the national reports on the national ReferNet homepages is welcome.
- (8) A compilation and analysis of the 2009 National Research Reports will be published online. Depending on the quality of the reports a more detailed and comparative analysis is planned to be made available to the broader public at scientific conferences .
- (9) Depending on the quality and relevance of the provided material in sections 4 and 5, an analytical summary of the reports will be included in Cedefop's 5th research report on 'The benefits of VET' (working title) to be published in 2011.
- (10) All sources or citations used in the report are to be listed with full bibliographical details in the reference sections of the report. In the main part of the report, sources are to be referred to in an abbreviated form (in line with Cedefop style manual).

- (11) All inputs are to be in the English language; however, national terms (e.g. names of institutions/references/projects) may be included in the original language additionally.

OVERVIEW OF TEMPLATE – INSTRUCTIONS AND RECOMMENDATIONS

The template includes general data (country, name of authors, date of submission) and a set of five sections for presenting the contents. The manual below follows this pattern by offering, under each heading, a brief outline of instructions and examples of good practice. The instructions explain how to prepare the text for each section of the report.

COUNTRY:	ROMANIA
NAME(S) OF AUTHOR(S):	The author of the report could be a single person or a team (please provide first and last name of each person). Additional information on the author is to be provided under references (section 8 below) CRISTINA MOCANU ANA MARIA ZAMFIR CATALIN GHINARARU
DATE OF SUBMISSION:	The date (DD/MM/YY) should refer to the actual time of submission, not the given deadline; in case of a revised version the new date concerned should be entered. 30/09/2009

ABSTRACT (UP TO 2 PAGES)

The topics selected to be extensively discussed were skills needs and transitions from school-to work, career and job transitions. In fact the emphasized put during the last years on these two topics by both Ministry of Labour and Ministry of Education and Research was due to the need of assessing the quality of VET and to provide information to decision makers in planning both initial and continuing VET.

When it comes to transition from school to work, lack of a panel survey is the most important limit of the research studies in Romania. We have to underline that this is due to the absence of a continuing and proper source of financing, as well as to the inconsistent data bases of schools and universities with respect to their graduates. So, no research institution has undertaken such studies so far. In 2000, Romanian National Institute for Statistics carried out an ad-hoc module to the Household Labour Force Survey on “Youth transition from school to work”. This year, a remake of this module is scheduled, but the results are going to be released no sooner than the end of 2009. In this context, most important research studies related to “School-to-work, career and job transitions” in Romania remain disparate ad-hoc surveys carried out by few research institutions in the field or pilot research studies of the Ministry of Education.

Also not many studies and researches are carried out on transitions, for e.g. from activity to inactivity and vice versa, between different occupational statuses, as access of researchers to micro data collected and administrated by National Institute for Statistics is still not regulated. So researchers practically have to develop each time a specific survey or statistical investigations for topics above and this leave no room for trend analyses, impact assessments or comparative studies.

Research endeavours in Romania regarding anticipating of skills need started more than 5 years ago and continued to develop and refine since then. The first studies carried out in 2002-2003 focused on matching between labour force supply and demand. Then under the technical supervision of international experts, mainly in the framework of PHARE projects, methodologies regarding skills shortages and skills gaps started to be designed and implemented. During the last two years the methodological approached were developed considering the expertise of other EU-15 countries with longer experience in assessing skills need through employer surveys. One of the most important limits of these surveys is that methodology was changed/improved every time, so no series can be

sketched.

So much emphasize is put on anticipating skills need via employer surveys as there are no data series long enough to permit macro-modelling approaches. Although, there are at least two such exercises carried out at national level in order to estimate skills need on long term in different scenarios of economic growth.

Both Ministry of Education and Ministry of Labour initiated and financed research studies on skills need in order to plan and design new policies of labour market, as well as of initial and continuing vocational education. Starting with 2005 Committees for elaborating Regional Action Plans for Technical and Vocational Education used when possible the findings of surveys and forecasts on skills need.

As said before none of these has a regular character, so they remain in fact good practices of methodological approach. Moreover assessing skills shortages were during 2007 and 2008 a research topic often associated with other phenomenon of the Romanian labour markets such as emigration, migration, innovation, wages, etc.

When it comes to benefits of education and financing mechanisms, research studies carried out in Romania usually have a pure descriptive character. Apart from the assessment of labour market policies carried out at national level, all over studies on the monetary and/or social benefits of VET and improving financing mechanisms were carried out by or even under the technical assistance provided by different international financing institutions/organizations.

Financing mechanisms of initial VET was often a subject of debate strongly linked with under-financing of education system, low quality of education and decentralization.

Please provide an abstract of the overall findings discussed in sections one to five. You may either summarize all sections as a whole or provide abstracts for each topic. This section should not exceed two pages (up to 800 words, 5000 characters including spaces).

1. OVERVIEW OF CURRENT NATIONAL VET RESEARCH.

1.1. PLEASE INDICATE THE FIVE MOST IMPORTANT CURRENT RESEARCH TOPICS

This list should not exceed five topics. However, if there are more topics that are of essential national interest, please indicate them. The topics should be chosen by using the following list and can be extended with additional topics if necessary.

The most important five topics extendedly explored and researched during the recent years and nowadays at national level are as follows (not necessarily the order reflect the importance on the agenda):

1. Effectiveness and quality assurance, strongly linked with studies on chronic sub-financing of initial and continuing VET;
2. Labour market mobility and migration (causes, consequences, estimations of the rates of migration for employment abroad, brain drain, migration and inequality, parental migration, etc.);
3. School to work, career and job transitions (labour market insertion of graduates from vocational and educational training, labour market insertion of tertiary graduates, transition from school to work/life of post-institutionalized children, etc.);
4. Labour market groups at risk (roma ethnics, youth, women, women of 45 and more, individuals from rural areas, persons with low level of education, post-institutionalized children, disabled persons, etc.);

5. Skills need (labour shortages, skills shortages, skills gaps, regional studies, sector studies, links between migration and skills shortages, designing and testing methodologies for enterprise surveys, etc.);

POLITICS OF VET AND LIFELONG LEARNING

- Effectiveness and quality assurance
- Policy tools (e.g. qualification frameworks, credit point systems)
- Governance of VET systems
- Financing mechanisms
- Articulating the respective roles of general Education and VET

TRANSITIONS, CAREER CHOICES, GEOGRAPHIC AND PROFESSIONAL MOBILITY

- School-to-work, career and job transitions
- Determinants of individuals career and labour market choices
- Labour market mobility and migration (e.g. determinants, obstacles, outcomes, side-effects)
- Relation between VET and HE

COSTS AND BENEFITS OF EDUCATION AND HUMAN CAPITAL DEVELOPMENT

- Monetary costs and benefits of VET
- Specific contribution of VET to economic growth and labour market outcomes
- Training and performance in enterprises
- Time sensitive nature of economic and social returns to VET and Lifelong Learning (short, medium, long-term)
- Approaches for managing human capital. Related impact on the development of learning organisations.

SOCIAL INCLUSION AND COHESION

- Social mobility and equity
- Inclusive education
- Labour market groups at risk (e.g. youth, older workers, migrants/ethnic minorities)
- Social justice and intercultural education

VET RESEARCH

- Research partnerships and cooperation
- Histories of VET
- Comparative VET
- Quantitative and qualitative methods (statistics) and indicators

TEACHING AND TRAINING

- Professionalisation of VET teachers and trainers
- Didactics: learning and teaching
- Educational leadership
- Intercultural learning environments
- ICT in education and training
- Open learning: media, environments and cultures
- Curriculum research and development
- Student assessment

1.2 PLEASE INDICATE THE SOURCES/METHODS USED FOR IDENTIFYING THESE TOPICS.

Main sources used in order to identify the 5 topics selected in Section 1.1 were:

1. Literature review (online research reports, activity reports for main stakeholders in the field, published research studies and articles during the last 5 years, reports of the special Presidential Commissions in the field of education and research, as well as in the field of social risks and policies)
2. Discussions with national experts (informal discussions with key experts, including members of the consortium settled down for the National Refernet)
3. Political agenda of the Ministry of Education and Research on the one hand, and Ministry of Labour and Social Protection on the other hand,
4. Own expertise, as senior researchers with significant national expertise on the topics proposed under this Research VET Report.

2. REVIEW AND CRITICAL ASSESSMENT OF VET RESEARCH. CHOOSE TWO OF THE TOPICS INDICATED IN SECTION 1.1. AND FILL IN SECTIONS 2.1 AND 2.2 SEPARATELY FOR EACH OF THE TOPICS.

2. TOPIC 1: SCHOOL-TO-WORK, CAREER AND JOB TRANSITIONS

2.1.1 WHAT ARE THE CURRENT KEY ISSUES INVESTIGATED BY RESEARCH IN RELATION TO THIS TOPIC?

Based on a literature review, please indicate the main research questions and issues that are being dealt with in relation to topic 1 (up to one page).

- (1) Research project “**Determinants of labour market insertion for graduates with tertiary education in Romania**” (*Ro. Determinanti ai insertiei pe piata muncii a absolventilor de invatamant superior in Romania*) – under the coordination of Speranta Pirciog, National Research Institute for Labour and Social Protection Romania, 2008-2009.

Main research topics addressed are as follows: Participation to education and vocational training; Experiences on the labour market (before and after graduation: type, duration and characteristics of jobs); and Job searching behaviour and intentions of migration.

- (2) **Phare Project “Integration on the labour market of youth from the child protection system”** (Ro. *Integrarea in munca a tinerilor proveniti din sistemul de protectie a copilului*) – APEL ONG, under the coordination of Iris Alexe, 2008-2009

In 2008, the project included an important research component for investigating transition to working life of youth from child protection system in Romania. The research study was carried out by the National Research Institute for Labour and Social Protection which was partner in the project, under the coordination of Speranta Pirciog.

Main research topics: Human and social capital of youth leaving the child protection system; Structure and “outcomes” of transition to work of youth from the child protection system; and Obstacles and support factors influencing transition to work of youth from the child protection system.

- (3) **Phare TVET project “Institutional development of technical and vocational education system”** (Ro. *Dezvoltarea institutionala a invatamantului profesional si tehnic*) – Romanian Ministry of Education, 2007-2008

In 2008, the project for institutional development of the Ministry of Education included a component aiming to develop and test a research methodology for monitoring the entry on the labour market of the graduates with technical and vocational education. The methodology was successfully tested in Galati county in 2007 and 2008 and in Bucharest-Ilfov region in 2008. Further, the validated methodology was included in an Order of the Ministry of Education in order to standardise future investigations at county level funded by the European Social Fund.

Main research topics: Education and vocational training for graduates with technical and vocational education; Entry on the labour market; and Job searching and participation in active labour market programs.

- (4) **Research study “Work related attitudes in Romania”** (Ro. *Atitudini fata de munca in Romania*) – Mircea Comsa, Cosima Rughinis and Claudiu Tufis with funds from the Romanian Soros Foundation, 2008.

Main research topics: Ideal vs. current job of the Romanians; Job characteristics, job mobility and career opportunities in public and private sectors; and Ethnicity and life paths with respect to education and work.

- (5) **Research study “Romanian youth: state of art and expectations”** (Ro. *Starea tineretului si asteptarile sale*) – under the coordination of Ana-Maria Dalu, Ancuta Plaesu and Gina Anghelescu, National Agency for Youth, 2008. Romanian National Agency for Youth carried out yearly diagnosis of youth’ opinions and perceptions regarding their quality of life.

Main research topics: education and work; and propensity towards migration for employment abroad.

- (6) **Research study “Job mismatch among youth in Romania”** (Ro. “Subocupare si <supra>ocupare in randul tinerilor din Romania”) – Cristina Mocanu and Ana Maria Zamfir, National Research Institute for Labour and Social Protection, 2007.

Main research topics: incidence and nature of job mismatch among youth; profile of young mismatched employees; and propensity towards mobility among young mismatched employees.

2.1.2. PLEASE PROVIDE A LITERATURE REVIEW ON CURRENT NATIONAL RESEARCH TOPICS AND KEY

FINDINGS ON THIS TOPIC.

The literature review should summarize the main findings of the most important research studies related to this topic and indicated in section 2.1.1 including information on the method, theoretical background, research hypotheses, interpretation of results etc. (as far as available).

- (1) **Determinants of labour market insertion for graduates with tertiary education in Romania**, National Research Institute for Labour and Social Protection, 2008

Theoretical and methodological approach:

Transition from school to work is a complex process for most young people in Romania and other European countries. In order to enter the labour market and benefit from the existing employment opportunities, young people in general and school leavers in particular have to compete with older workers with longer working experience. School to work transition refers to the time period between leaving education and entering a stable job (OECD, 1996). Due to the fact that graduates with tertiary education represent the target group of this study, it focuses on their transition to the first significant job (defined as a regular job with at least 20 hours of work per week). Also, the theoretical framework of the study includes the fact that, nowadays, we witness a shift from the classical model of the direct transition to a model of indirect and dual transition in which school and work overlap for certain periods of time. Moreover, as some researchers theorise a decline in importance of the structural factors such as gender, social class and family of origin in relation to school to work transition, the aim of the study was to identify factors influencing duration to the first significant job for graduates with tertiary education.

In order to investigate school-to-work transition of graduates with tertiary education in Romania, National Research Institute for Labour and Social Protection carried out a national survey via a face-to-face questionnaire among graduates who left school in 2003, 2005 and 2007. Therefore, the survey registered subjects' experiences on the labour market after one, three and five years since graduation.

Lack of a list with names and contact information of the graduates from the target group was the most important obstacle hindering the design and implementation of the survey. So, due to the limits of the available administrative data on graduates, the research team decided to use a quote sample. The design of the sample was based on statistical data regarding the structure of the graduates by field of education. Sample included 2100 subjects from all counties who graduated both public and private tertiary education institutions. Moreover, the projected sample included equal quotas for the three years of graduations (2003, 2005 and 2007) and proportional quotas for the seven fields of education (technical, agriculture, economical, medical, university, juridical and artistic). The final sample consisted in 2194 subjects identified via the snow-bowling technique, including 656 graduates from 2003, 723 graduates from 2005 and 815 graduates from 2007. Data was collected on December 2008.

The questionnaire included three main sections concerning education and vocational training, participation on the labour market and job searching. First section gathered information on specialisation, location and type of the graduated institution(s), participation in postgraduate studies, future intentions of enrolling in education, and participation in vocational training, type and content of the training programs. Second section was focused on subjects' experiences on the labour market (before and after graduation): duration and type of employment before graduation, occupational status in each month after graduation, number, duration and characteristics of all jobs after graduation. Third section included questions regarding the job searching behaviour and propensity toward occupational and geographical mobility. Final section gathered socio-demographical data such as gender, age, ethnicity, area of residence, education of the father, marital status, education and employment of the spouse, parental status, dwelling, perceived standard of living of the family of origin and relation with it.

Main findings:

Results of the survey show that 4.3% of the investigated graduates had no job after graduation. In fact, artistic (6.3%) and juridical fields (5.3%) register the highest shares of graduates with no working experience, while technical specialisations display the lowest figure (2.7%). As it was expected, most graduates have had one job since graduation (65.7%), around 20% two jobs, 7% three jobs and 2.4% four or more jobs. Graduates with medical specialisations are characterised by lowest job mobility due to the specificity of the domain and its regulations. Moreover, job mobility increases with number of years since graduation.

Distribution of graduates by number of jobs since graduation, year of graduation and field of education (%)

	1 job	2 jobs	3 jobs	>4 jobs	no job	Total
2003	52.9	27.6	13.3	4.6	1.7	100
2005	63.1	24.1	6.9	2.6	3.3	100
2007	78.3	12.0	2.1	0.4	7.2	100
Technical	60.4	23.8	10.4	2.7	2.7	100
Agriculture	60.0	28.0	2.7	5.3	4.0	100
Economical	64.3	22.5	5.6	2.6	5.0	100
Medical	80.0	13.3	2.1		4.6	100
University	66.3	19.1	8.2	2.4	4.0	100
Juridical	68.3	17.3	6.7	2.4	5.3	100
Artistic	57.1	25.4	9.5	1.6	6.3	100
<i>Total</i>	<i>65.7</i>	<i>20.6</i>	<i>7.0</i>	<i>2.4</i>	<i>4.3</i>	<i>100</i>

However, 12% of the investigated graduates have been working at the moment of graduation, while 43.8% entered their first significant job during the first three months after graduation and 9.4% after three to six months since graduation. Still, 14.5% of the graduates had no significant job after graduation, adding those 4.3% who had no job at all. In fact, those who entered a significant job after graduation reached such position, on average, in 4.9 months. Average duration to the first significant job peaks among those graduating juridical studies (6.3 months), while those with technical specialisations display the highest speed of entering a significant job (4.0 months).

Average duration to the first significant job, by year of graduation and field of education (number of months after graduation)

	Average duration (no. months)
2003	6.1
2005	5.7
2007	2.7
Technical	4.0
Agriculture	4.5
Economical	4.9
Medical	5.3
University	4.9

Juridical	6.3
Artistic	4.6
<i>Total</i>	<i>4.9</i>

Findings of the study indicate that most graduates entered their first job in sectors such as education (15.7%), other services (14.9%) and commerce (14%). Due to the increasing demand for labour in some economic sectors in the past years, high share of graduates with technical specialisations entered in constructions and other services, while those graduating economic studies found employment mostly in commerce and financial services. On the other hand, most graduates with juridical or university specialisations entered their first job in the public sectors, mostly in administration and education. In fact, only 68.3% of the graduates who entered labour market worked in a first job in accordance with their specialisation. Medical (90.3%) and technical specialisations (70.9%) register the highest shares of graduates with a first “adequate” job, while juridical (59.9%) and agriculture (61.1%) display the lowest figures. Moreover, 5% of graduates with tertiary education who entered the labour market worked at their first job as unskilled or skilled workers.

Distribution of the graduates by sector of their first job and field of education (%)

	technical	agriculture	economical	medical	university	juridical	artistic	Total
Agriculture	1,7	26,4	1,2	0,5	1,4	1,1	1,8	2,2
Mining	1,4		0,7		0,5		1,8	0,6
Manufacturing	15,1	8,3	4,1	0,5	2,4	1,1	3,6	5
Energy	5,3		1,6		0,5	1,1		1,6
Constructions	16,8		3,6		2,1	2,6		4,8
Commerce	13,4	26,4	22,4	6	8,4	11,6	14,3	14
Hotels, restaurants	0,3	1,4	3,2		2,5	2,1	3,6	2
Transport communication	9,2	5,6	7,3		3,8	6,3	1,8	5,6
Financial services	2,5	1,4	15,7		3	7,4		6,4
Real estates	2,2	1,4	2,8	0,5	2,1	4,2	3,6	2,4
Public administration	5,3	2,8	13,3	1,6	9,5	25,9		10,1
Education	5,3	4,2	5,9	1,1	37,7	3,2	37,5	15,7
Health	1,1	12,5	4,6	87,5	10,8	5,3	1,8	13,6
Other services	19,6	9,7	11,9	1,6	14,4	26,5	30,4	14,9
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>

Regression results show that unemployment at regional level is a key factor hindering insertion on the labour market of the graduates with tertiary education. Moreover, factors such as gender, age at graduation or area of residence don't influence duration to the first significant job, but standard of living of the family of origin do. Finally, field of education plays an important role with respect to the success and speed of school-to-work transition of those with tertiary education. Graduates with technical specialisations display the smoothest

transition, while graduates with juridical studies the most difficult one.

(2) **Integration on the labour market of youth from the child protection system, APEL ONG, 2008**

Theoretical and methodological approach:

Youth leaving the child protection system experience multiple transitions while having less human and social capital than others. Researchers distinguish between a model of linear transition from school to work and a model of non-linear transition which characterises mostly youth from disadvantaged groups, with poor socio-economic status and low level of qualification. Linear transition is “smooth” and direct, while non-linear or complex transition includes chaotic transits between different occupational statuses, multiple interruptions within the working experience, long and repeated unemployment spells, extremely high job mobility coupled with returning to school. Non-linear transition from school to work often deepens the social vulnerability of youth and generates marginalisation.

In general, youth from the child protection system display a deficit of human and social capital. Lack of support from the family of origin represents one key factor hindering their transition to adulthood and active life. Moreover, they are often discriminated in society, including on the labour market. In fact, they suffer from “multiple discrimination” as high share of youth from the child protection system are Roma or disabled. Public and private networks of social assistance try to support youth after leaving child protection institutions, but they manage to address just partly to youth’ specific needs, especially in relation with dwelling.

The methodological approach mixed quantitative and qualitative methods. First, a secondary analysis was performed on the APEL data bases containing information on profile, history and experiences of their beneficiaries who left the child protection system. Second, in-depth interviews were carried out with representatives of institutions with responsibilities in the field of social protection and youth.

The quantitative component consisted in an exploratory study based on the secondary analysis. The target group was represented by youth who have left the child protection system and live in Bucharest-Ilfov region, including boys and girls with all levels of education. Main analysed variables were as follows: human capital (education, field of qualification, participation in vocational training, income, health and disability), social capital (relation with the family of origin, marital status, parental status, number of years in protection institutions, other forms of assistance), participation on the labour market (current occupational status, working experience, participation in the informal economy, current occupation and sector of activity).

The qualitative component aimed at identifying main obstacles and support factors for transition to work of youth leaving the child protection system. 12 interviews were carried out in August 2008 with representatives of National Authority for Child Rights Protection, local authorities, National and Municipal Agency for Employment and NGOs from Bucharest-Ilfov region.

Main findings:

Results of the study show that due to low levels of education and lack of qualification, youth from the child protection system experience significant difficulties in transition to active life. In this context, they often choose to return to school in order to complete compulsory education or gain qualification and diploma. The solution of returning to school is more present among girls and younger subjects. On the other hand, boys and those aged 25 years and more are overrepresented among unemployed. As it was expected, the highest incidence of unemployment is registered among subjects with low education. In this context, the research team made recommendations for future programs of interventions via human resource development.

Although most of them have gained some experience on the labour market, almost half of the investigated youth were inactive or unemployed at the time of the research which indicates a non-linear transition to the world of work as they failed in securing an employment position. Moreover, one fifth of the investigated youth never worked after leaving school and protection institutions and so they register total failure in transiting to the working life.

At the moment of the investigation, most employed youth from the child protection system worked in positions of “personal and protective service workers” or “unskilled workers in constructions and transport”, being mostly present in sectors such as hotels and restaurants or constructions. Moreover, results highlight that a significant number of the investigated youth have connections with the informal sector of the economy which underline their vulnerable position. In conclusion, just a few young people leaving the child protection system managed to negotiate with success their transition to work, while rest of them display non-linear transitions characterised by multiple interruptions and come backs which aggravate their social vulnerabilities and risks.

Research findings substantiate several recommendations for increasing the access to labour market of young people leaving the child protection system in Romania. First, the team research supports the idea of a specialised body within the local authorities responsible for monitoring and mentoring the professional insertion of these young people on long term. Also, such a specialised body should work closely together with child protection institutions and local NGOs. Second, the research findings highlight the importance of developing quality professional guidance services within the child protection institutions. Third, programs of assistance should address more to the dwelling problem of youth leaving the child protection system as it represents a major obstacles in their socio-professional integration.

- (3) **Institutional development of technical and vocational education system**, Ministry of Education, 2007-2008

Theoretical and methodological approach:

Monitoring the entry of graduates on the labour market together with estimations of the skills need via enterprise surveys and forecasting techniques represent important tools for substantiating the annual educational plans. Therefore, Ministry of Education and its regional and local bodies need yearly detailed data regarding the entry on the labour market of the graduates at local level. Moreover, information on skills required at the workplace are needed in order to reform the curricula in the area of technical and vocational education. Beyond employment rates among graduates, there are other important dimensions which have to be taken into account when it comes to school-to-work transition. One such dimension is the match between occupation and the acquired qualification. Also, elements regarding quality of graduates’ employment need to be assessed for a proper understanding of school-to-work transition. Therefore, research studies on this topic have to offer information on the quality of the transition.

Most recent study on school-to-work transition of the graduates with technical and vocational education was carried out in Bucharest-Ilfov region in 2008 via a questionnaire based survey. The target group of the research included graduates with levels 1 and 2 of qualification who left school in 2007. A random sample of subjects was extracted from a data base with graduates from the Ministry of Education. Moreover, sample was proportionally stratified by field of education (17 fields), level of qualification (2 levels) and area of residence (urban and rural).

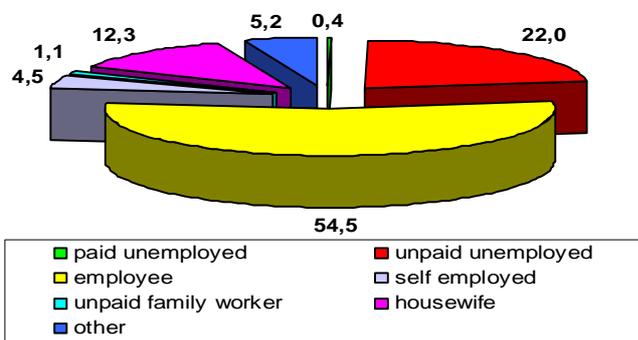
Data were gathered through face-to-face interviews carried out at the residence of the subjects. The research instrument included questions regarding job searching methods, role of active labour market programs, school performance, participation to vocational training, adequacy of the acquired skills to the requirements of the labour market, occupational status, working conditions and socio-demographic information. Data analysis permitted

calculation of a “successful transition rate” defined as share of graduates who are employers, employees or self employed and work in an occupation matching the acquired qualification, at the moment of investigation.

Main findings:

At the moment of the survey, 54.5% of the investigated graduates were employees, while 4.5% worked as self employed. Due to the fact that Bucharest-Ilfov region includes the biggest urban centre in the country, only 1.1% of unpaid family workers were registered among the targeted graduates. However, 22.4% of graduates were unemployed and 12.3% housewives. So, one year after graduation, more than one tenth of subjects were economically inactive and almost a quarter unemployed showing a failed transition to the labour market. Data show that field of qualification influences chances of graduates to become employed. Graduates qualified in “clothing and letter industry”, “constructions” and “mechanics” display the highest shares of employees, while those qualified in “wood industry” are characterised by lowest share.

Distribution of the graduates by occupational status at the moment of the survey (%)



With respect to knowledge and skills required at the workplace, graduates declared that most important are social, problem solving and time management skills and less needed are knowledge of geography, history, physics and chemistry.

Findings of the study show that, one year after graduation, 34.4% of the employed graduates had an occupation matching his/her qualification, while rest of them worked in mismatched jobs. Highest share of matched graduates was registered by “tourism and food industry” field of education. On the other hand, graduates with qualification in the “electric” field worked in mismatched jobs in highest share. Moreover, mismatched graduates were overrepresented among girls and those from rural areas. Still, only one tenth of the employed graduates declare that they were unsatisfied by their job, while subjects working in commerce seem to be most unsatisfied ones.

The “successful transition rate” shows that 34.2% of subjects were, one year after graduation, in position of employer, employee or self employed and worked in a matching occupation. This indicator of the quality of transition registered higher figures for boys, those from urban areas and those with higher level of qualification.

“Successful transition rate” by gender, area of residence and level of qualification (%)

	Gender		Area of residence		Level of qualification		Total
	female	male	urban	rural	1st	2nd	
Successful transition rate	28,8	36,9	37,4	16,7	32,4	34,9	34,2

(4) **Work related attitudes in Romania**, Romanian Soros Foundation, 2008

Theoretical and methodological approach:

Most Romanian strategies and policies bring forward the necessity of human resources development via lifelong learning and increasing the access to employment opportunities. In this context, social norms and values regarding the importance of education and work play a key role in the process of (re)construction of socio-economic reality. Investigation of work related values and attitudes is needed in order to substantiate projection, implementation and assessment of the public policies.

The research questions of this study aim to better understanding the Romanians' perceptions, beliefs and expectations with respect to jobs and career. Moreover, the study tries to explain several career trajectories relevant for the Romanian labour market: working in private vs. public sectors, activating in the informal economy, commitment to organisations, etc.

The research methodology included two national questionnaire based surveys: one among the adult non-institutionalised population of the Romania (aged 18 years and more) and one among Roma population from Romania (aged 18 years and more). First survey was carried out on a sample of 2400 subjects, while the second investigated a sample of 1000 Roma. Data was gathered through face-to-face interviews in May 2008.

The research instruments investigated topics such as characteristics of ideal and current jobs, commitment to work and organisation, job satisfaction, working conditions, career development, professional stress, attitudes toward education and work, attitudes toward the principles of market economy, relation between ethnicity and participation in education and on the labour market.

Main findings:

Results highlight the distance between the ideal and current job of the Romanians. Most employed subjects declare that the ideal job is characterised by security, high income and advancement in career opportunities. In fact, the preference for job security and high income is higher for persons working in lower positions. On the other hand, answers of the subjects show that their current jobs are secure and useful to society, but display low levels of income and advancement opportunities. Men, older subjects, better educated ones and those from Bucharest have more positive appreciations with respect to characteristics of their current jobs. So, highest distance between the ideal and the current job is displayed with respect to the income level and advancement in career opportunities. However, most employed subjects are satisfied by their current jobs. In fact, higher levels of job satisfaction are registered among men, older workers, better educated ones and employers.

Regarding work related values, employed population seem to be slightly more committed to work than the entire adult population. With respect to company commitment, most subjects are proud to work for their organisation and available for extra work on behalf of its development, but they are not willing to keep their current job in spite of job offers with better payment.

Job tenure in the current workplace indicates important differences between career patterns in private and public sectors. Thus, subjects who have worked only in the public sector are characterised by an average job tenure of 14 years and 2 months which is double in comparison with the job tenure of the other categories. As it was expected, job mobility is extremely low in the public sector. Moreover, employees from the public sector consider that they have higher job security, better advancement in career opportunities, more interesting and useful for society work, but lower level of payment. With respect to work related values, employees from the public sector perceive work not only as a source of income in higher extent than those from the private sector. On the other hand, students display the highest propensity for entrepreneurship.

(5) **Romanian youth: state of art and expectations** , National Agency for Youth, 2008

Theoretical and methodological approach:

Youth' perceptions, opinions and experiences represent important indicators for the efficiency of the education system, paths of entry and participation on the labour market and career trajectories. The most recent yearly diagnosis among youth was carried out in 2008 via a national questionnaire based survey.

Sample included 1205 randomly selected subjects aged between 14 and 35 years old. Moreover, sample was stratified by region, size of the locality for urban areas and type of the locality for rural ones. Data was gathered in June 2008 through face-to-face interviews carried out at the residence of the subjects.

Main findings:

More than 80% of the respondents consider that access to jobs represent a problem for youth in Romania. One of the reasons for this is low adequacy of the education system to the requirements of the labour market as only 16.7% of the investigated youth consider that schools offers the needed skills. Moreover, share of subjects considering that the education system is oriented toward the needs of the labour market declines with the age and education of the subjects, except for those with post university studies which have positive appreciations in higher extent.

About half of the employed youth are satisfied with the level of payment and chances of advancement in career and 62% with the perceived job security. Moreover, more than 70% of them declare that they are using their acquired abilities and skills at the workplace.

Data show that 15% of the investigated youth participated to vocational training in the last 12 months. Participation to training programs was more present among youth aged 20-24 years old and most young people attended trainings in "business, accounting, management" and "IT" fields.

With respect to labour mobility, 12% of the investigated youth worked abroad and 29% intend to migrate for employment. Propensity for migration peaks among youth from North-East, Centre and West regions, while Bucharest region is characterised by the lowest share of youth intending to migrate for employment. Italy, Spain, Germany and United Kingdom are the most attractive destination countries for Romanian youth. On the other hand, about 11% of the investigated youth intend to migrate for study abroad.

(6) **Job mismatch among youth in Romania**, National Research Institute for Labour and Social Protection, 2007

Theoretical and methodological approach:

In those regions and sectors registering a surplus of labour force, young people are more vulnerable to unemployment and inadequate employment in relation to their qualifications. For some of them, such situations represent simple stages of their careers. However, inadequate employment has negative effects on work productivity and career development. Job-matching theory (M. Sattinger, 1993) postulates that the degree of fitting between the required and acquired skills influences productivity of workers and, subsequently, earnings in a specific job. When someone works in a non-matching job, his/her skills are underutilized. Therefore, optimal allocation of workers means that all workers are matched to jobs in which they perform better than all the other workers.

Inadequate employment can be the result of an existing mismatch between the supply of and demand for skills on

the market or simply the effect of incomplete information at the level of employers and/or job seekers. Labour market is characterised by a two-sided matching game between the employers and job seekers. Thus, inefficient formal mechanisms of labour force allocation to jobs are conducive to inadequate employment.

Obviously, education plays a key role in matching the supply of and the demand for skills. On the one hand, the inertia of the education system in meeting the requirements of the evolving labour market determines a relative low degree to which the curriculum provides the needed knowledge and skills. On the other hand, an over-supply of highly educated school leavers leads to a “bumping-down” effect on the labour market as those better-educated start to compete with those less-educated (L. Borghans and A. de Grip, 2000). Also, poor institutionalized link between the education institutions and employers hinders the access of school leavers to jobs that match their qualification.

Moreover, fluctuations in the business cycle impact the incidence of inadequate employment. School leavers who enter labour market during economic recession face a higher risk of unemployment, being more vulnerable to job mismatch. Also, economic sectors differ with respect to the share of workers activating in a non-matching job. Additionally, individual characteristics affect the likelihood of having a job mismatch as members of the disadvantaged groups are more vulnerable to inadequate employment.

For the empirical analyse, authors use data from a 2006 national representative survey among Romanian employees. Sample included only firms from private sector and was stratified by NACE, region and age of the employees. The sampling design allowed authors to study the relation between age and job mismatch as the data set includes information on education and qualification of the employees, as well as characteristics of their current jobs.

Measuring job mismatch poses important methodological issues. One method is the *objective method* (job-analyst method) in which the employees’ level of education is compared with the one requested by their occupation. The problem is to determine the level of education needed in a specific occupation. The research team has established it according to the provisions of the Romanian Occupations Framework. One limit of this method is that it doesn’t take into account any variations of the educational requirements within a given occupation due to different job levels for example. Another limit is that the required level of education is determined by job analysts or experts on the base of their knowledge with regard to the specific tasks, knowledge and skills needed for each occupation. However, these are affected by multiple and rapid changes which may lead to overestimation or underestimation of the required level of education.

Another method is the *subjective method* (self-reporting method) which takes into account answers of the employees assessing the match between their skills and skills required by their jobs. Its subjective character represents the main limit of this approach. Answers of the employees may be biased by various factors such as their job satisfaction, professional aspirations or perceptions on the existing employment opportunities on the local market.

In order to validate the findings, authors have used both described methods. However, in the interpretation of the findings, they took into account the above mentioned limits of the two methods and discuss their implications.

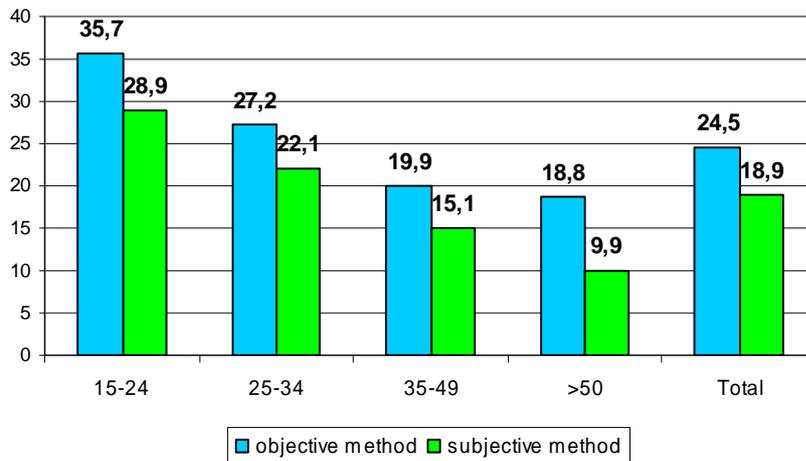
Main findings:

At national level, the objective method shows that 24.5% of the employees are characterised by inadequate employment in relation to their qualification, while the subjective one indicate a share of 18.9%. As it was expected, the results of the subjective approach underestimate in a certain extent the incidence of job mismatch. In fact, the gap between the findings of the two methods increases with the age of the employees as older subjects declare a mismatch in lower share.

However, both methods indicate that young employees are those exposed to inadequate employment in the highest

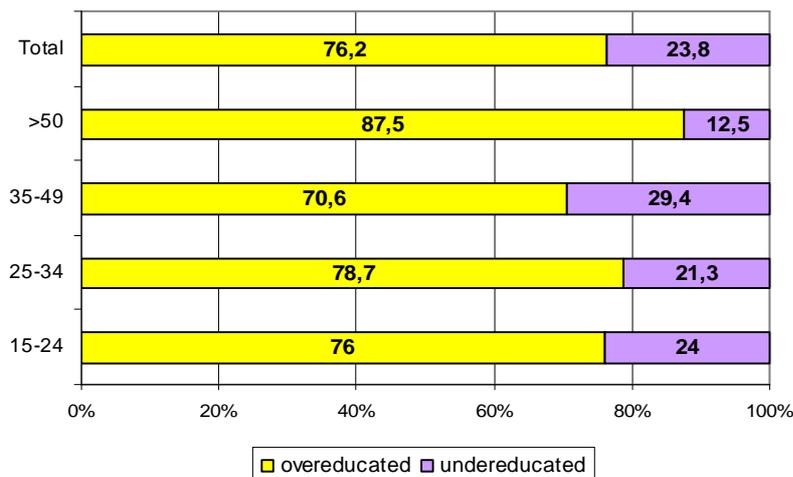
extent as incidence of job mismatch declines with age of the employees. In fact, 35.7% of the young employees (by the objective method) and 28.9% (by the subjective one) are characterised by job mismatch. Obviously, these figures highlight the vulnerable position of youth on the Romanian labour market.

Incidence of job mismatch by age (%)



By the subjective method, 76.2% of the mismatched employees are overeducated for their job and only 23.8% are undereducated. Young employees characterised by job mismatch register a similar distribution: three quarters are overeducated for their jobs, while one quarter is undereducated which points out to an oversupply of highly educated school leavers. In fact, 67% of those overeducated declare that the main factor explaining their employment situation is lack of jobs adequate for their qualification.

Type of job mismatch by age – subjective method, (%)



By the results of the objective method, medium and high educated young employees register the highest incidence of job mismatch, while the low educated ones are characterised by a very low incidence. In the same time, subjective method indicates that share of mismatched employees increases with the level of their education. As expected, all mismatched young employees with low education work in jobs requiring a higher level of education. On the other hand, around 80% of mismatched youth with medium and higher education are overeducated for their current jobs. As participation in education has increased sharply in the recent years, school leavers display higher and higher levels of education. They transit to a market which is not ready to absorb them and, therefore, they experience job mismatch in high share.

Both methods highlight high share of youth from real estates and financial intermediation working in a non-matching job. Also, high incidence of job mismatch is registered in mining and manufacturing (according to the objective method) and in constructions (by the subjective one). Both methods indicate that most young employees affected by inadequate employment activate as unskilled workers. In fact, objective method shows that almost 80% of the young employees working as unskilled workers are overeducated for their jobs.

Still, data show that young employees characterized by inadequate employment are those displaying the highest incidence of job searching behaviour. Obviously, for some young employees, job mismatch situations represent stages of their transition process from school to work.

2.1.3. REFERENCES

Please refer particularly to research material and particularly to those that has been published/produced in your country.

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Zamfir, A. and Mocanu, C., 2007, *Job mismatch among youth in Romania (Ro. Subocupare si „supra”ocupare in randul tinerilor din România)* in Youth Unemployment in the context of Romania’s accession to EU, Agora Publishing House, Calarasi.

2. TOPIC 2: SKILLS NEED

2.2.1 WHAT ARE THE CURRENT KEY ISSUES INVESTIGATED BY RESEARCH IN RELATION TO THIS TOPIC?

The most important research, studies and reports identified at national level along with their objectives and key issues are as follows:

- (1) **Provision of the development of regional labour market studies for estimation 2013 TVET supply according to demand**, carried out in 2005 by the National Research Institute for Labour and Social Protection Romania, under the coordination of Speranta Pirciog PhD; The project was developed under the PHARE RO 2002/000-586.05.01.02.01.01 Technical Assistance for the Modernization of TVET System in Romania and had as beneficiary the Romanian Ministry of Education and Research – National Centre for Technical and Vocational Education Development;

Main key issues addressed in relation to skill need were as follows: Designing, testing and caring on a survey among 2400 active companies, using a sample representative at national level, in order to investigate the employers' perceptions on the skills need on short term; and Forecasting labour demand at regional level, both on economic activities as well as on major groups of occupations using 3 scenarios of economic growth.

- (2) **Labour market projections and skills shortages on short and medium term** (*ro. Proiectia ocuparii si a deficitului de calificari pe termen scurt si mediu*), carried out in Spring 2006 by an institutional consortium with the National Research Institute for Labour and Social Protection Romania as leading partner and with Speranta Pirciog PhD as project coordinator; The project was financed under the Research of Excellence programme of the National Authority for Scientific Research, Ministry of Education and Research; The research activities were realised together with Centre for Urban and Regional Sociology – CURS;

Main key issues addressed in relation to skill need were as follows: Understanding the causes of current skills shortages existing on the Romanian labour market; Assessing skills shortages and labour demand on short term at national level; and Identifying obsolete skills and individual strategies to keep up with the professional requirements of a rapidly changing environment.

- (3) **Evolution of occupations on Romanian labour market in 2010 perspective** (*ro. Evolutia ocupatiilor pe piata fortei de munca din Romania in perspectiva anului 2010*), carried out in 2006 by National Research Institute for Labour and Social Protection Romania under the coordination of Vasilica Ciuca PhD and Speranta Pirciog PhD; The project had as beneficiary the Romanian Ministry for Labour, Social Protection and Family, and was co-financed by World Bank, from the “Social Sector Development Loan – Romania”;

Main key issues addressed in relation to skill need were as follows: Assessing the changes of content for 105 occupations, as well as the implications for the knowledge, competences/skills and abilities required in order to perform the above mentioned occupations; Assessing the Romanian business environment to create new jobs; Assessing the skills shortages and skills mismatch, as well as estimating labour demand on short term among Romanian employers; Assessing the skills (mis)match between the labour demand and supply, using the data mediated by the Public Employment Services; Vocational training in Romanian companies; and Anticipating skills need for the year 2010 in 3 scenarios of economic growth: pessimistic, moderate and optimistic.

- (4) **Labour Market and Immigration in Romania** (*ro. Piata fortei de munca in Romania si imigratia*), carried out in 2007 by Monica Serban and Alexandru Toth, under the programme “Migration and development” implemented by Soros Foundation Romania;

Main key issues addressed in relation to skill need were as follows: Assessing skills shortages in 3 economic sectors: textile and clothing, constructions and hotels services as well as the links between skills shortages and migration for employment abroad and immigration.

- (5) **Statistical Survey on Vacancies** (ro. *Cercetare statistica asupra locurilor de munca vacante*) carried out quarterly by the National Institute for Statistics starting with 2006; Based on EUROSTAT methodology, the **Statistical Survey on Vacancies** provides information with respect to skills shortages, measuring the rate of vacancies by economic activity, development region and major groups of occupations.

- (6) **Consulting Services for a Comprehensive Labour Demand Survey** (ro. *Servicii de consultanta pentru realizarea unei anchete comprehensive asupra cererii de forta de munca*), carried out in Spring 2008 by the National Research Institute for Labour and Social Protection Romania and under the coordination of Speranta Pirciog PhD; The project had as beneficiary the Romanian Ministry for Labour, Social Protection and Family, and was co-financed by World Bank, from the “Social Sector Development Loan – Romania”; Data collection was subcontracted to Centre for Urban and Regional Sociology – CURS;

Main key issues addressed in relation to skill need were as follows: Developing a comprehensive methodology, designed in accordance with the best EU practices in order to assess skills need in Romania; Identifying main changes in the occupations’ content during the last 12 months, as well as for the next 12 months; Assessing personal flows in Romanian companies; Assessing skills shortages and skills gaps in Romanian companies; Anticipating labour demand on short term (6 months); and Assessing the incidence of vocational training, reasons not to organizing vocational training and types of vocational training;

- (7) **Romanian public and private employer and labour market** (ro. *Angajatorul roman (public si privat) si piata fortei de munca*), carried out in Autumn 2008 by TNS social and politic for National Agency for Governmental Strategies, Government of Romania;

Main key issues addressed in relation to skill need were as follows: Identifying problems of the Romanian labour market; Identifying reasons for vacancies; Profiling the ideal employee for managing positions, execution positions and communication positions; and Requirements in the recruitment process.

2.2.2 PLEASE PROVIDE A LITERATURE REVIEW ON CURRENT NATIONAL RESEARCH TOPICS AND KEY FINDINGS ON THIS TOPIC.

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- (1) **Provision of the development of regional labour market studies for estimation 2013 TVET supply according to demand**, 2005, National Research Institute for Labour and Social Protection Romania;

Two different and ambitious methodological approaches were employed in order to reach the ambitious objective of estimating the labour force demand for the year 2013 at regional level. Both methodologies were applied on 7 of the 8 development regions of Romania, but to substantiate policy decision only with respect to technical and vocational education. Each regional report, and the results of each methodology applied were finally validated thorough regional meetings with the Regional Committees for elaborated Regional Action Plans. As two methodologies were developed and applied, a sociological one for an employer survey and an econometric one for forecasts on long run, we will present separately for each of them methodological approach and results. Both methodologies were “inspired” by other European countries’ experience in forecasting the labour market trends and their implications for the vocational and training experience. When it comes to Romania, these methodological approaches were a must, as during transition the economic reforms and technological changes, massive layoffs, the

reform of education system, the lack of statistical information (even the statistical support was changing and tried to keep up with the new processes affecting Romanian society), the opening of the Romanian economy and the efforts to integrate it in the global economic and commercial flows, etc.

(1.1) Anticipating skills need on short term via employer surveys;

Theoretical and methodological approach:

This component consisted in a large scale survey based on a face-to-face questionnaire on a representative sample of 2400 active companies that covered 7 of 8 development region of Romania. Bucharest-Ilfov as the most developed region of Romania was not a subject of the Technical Assistance provided under PHARE 2002.

The sample was randomly stratified one, using as stratification criteria the following: the economic activity (NACE classification, 1 digit), firm size (10-49 employees, 50-249 employees and 250 and more employees). For each county were investigated 57-58 companies, so the number of companies investigated for each of the development region depended on the number of counties under each development region. The size of the stratified sample was up to 2305 companies. A case study for micro companies (0-9 employees) was carried on 244 active companies. Surveyed companies were randomly selected from the data bases administrated by the Romanian Business Register. Data were collected by Centre for Urban and Regional Sociology CURS.

The questionnaire employed was developed under the technical supervision of the international expert and included information on the number and structure of employees, the employer estimations with respect to the total number of employees for the next 6 and 12 months, the total number of vacancies by occupations strongly connected to technical and vocational education. Data were analysed on the not-weighted sample. One of the most important limit of this survey was that a new and still changing qualification framework used by VET system was used, so only Regional Committees benefited from the findings.

What has to be emphasized is that the first conceptual approach on skills need used as proxies:

- evolutions on short time of the total number of employees
- Skill shortages made operational as the number of vacancies existing in companies for more than 6 months.

Main findings:

All 7 regions displayed an optimistic attitude with respect to the development trends of their business on short term, both for the next 6 months as well as 12 months. Companies estimated an increase with 4.6% of the total number of employees for the next 6 months, and with 6.4% for the next 12 months. South East region was an exception, as their estimations were rather moderate for the next 6 months and quite pessimistic for the next 12 months. Lower the firm size higher the degree of optimism. Public administration and health and social assistance were those estimating the highest increases of the total number of employees, while mining, constructions, agriculture and real estates were rather reserved at that moment in time, estimating a constant number of employees or even slight decreases of it.

Vacancies were defined as workplaces existing within companies during the last years and unfilled for more than 6 months. 42% of the existing vacancies during 2004 and unfilled for more than 6 months were in manufacturing, 32% in commerce and 9% in constructions.

(1.2) Anticipating skills need on medium and long term via recursive econometric models.

Methodological approach and findings:

3 scenarios were elaborated in order to forecast the evolution of regional economies on long term in sector and occupational profile:

- 1st scenario (pessimist) was based on the extrapolation of the economic trends registered during 1993-2002;

In this scenario, for 2013 was estimated a decline in the labour force demand with 24.8%. By economic activity in all regions were forecasts decreases of labour demand for mining, manufacturing, constructions, hotels and restaurants, transport, storage and communication, real estates. For 5 regions were estimated increases of labour demand in commerce, public administration and health and social assistance. Similarly, decreases were forecasts for technicians, foremen and assimilated, civil servants, artisans and handicraftsmen, operators for installations and machineries and unskilled workers in all regions. Small increases are estimated in 3 regions for legislators, clerks and managers, intellectual and scientific occupations, operative workers in services and skilled workers in agriculture.

- 2nd scenario (moderate) was based on assumptions of continuing economic growth, foreign investments, introduction of modern technologies, high increasing rhythms of productivity and decreasing rhythms of employment;

In this moderate scenario, for 2013 was estimated a decline in the labour force demand with 1.8%. By economic activity in all regions were forecasts decreases of labour demand for agriculture, public administration, education, energy, and mining; while increases were forecasted for manufacturing, hotels and restaurants, transport, storage and communications, financial intermediations and real estates. Similarly, decreases were forecasts for skilled workers in agriculture, unskilled workers and civil servants.

- 3rd scenario (optimist) was based on the assumptions of continuing economic growth, moderate increasing rhythms of productivity and slight increasing rhythms of employment.

The optimistic scenario estimated a slight increase of the labour force demand with 1.8% for 2013. By economic activity in all regions were forecasts decreases of labour demand for agriculture, public administration, and mining; while significant increases were forecasted for manufacturing, hotels and restaurants, transport, storage and communications, financial intermediations and real estates.

Main limits of the scenario-based models consisted in: the lack of inter-census data on the structure of employment by occupations, the changes of the National Framework of Occupations during different available statistical data sources, the lack of statistical data on GDP and GVA at regional level and in sector profile, short series of Labour Force Survey available at that moment of time, difficulties in using and adjusting the econometric models due to data inconsistency.

- (2) **Labour market projections and skills shortages on short and medium term** (ro. *Proiectia ocuparii si a deficitului de calificari pe termen scurt si mediu*), 2006, institutional consortium with the National Research Institute for Labour and Social Protection Romania as leading partner;

Again two different and ambitious methodological approaches were employed, on the one hand an employer survey in order to assess skills shortages on short term, and, on the other hand an employee survey in order to understand better the inadequate employment within companies. Both methodologies were designed and implemented at national level. The methodology for the employer survey continues and in-depth the methodology described above, while the employee survey was an innovative approach and remains unique in Romania since then. As done in the

section before methodology and findings will be presented for each component.

(2.1) *Skills need via employer survey;*

Theoretical and methodological approach:

This is the first methodological exercise in order to assess skills shortages at national level. So, it was designed an employer survey based on a face-to-face questionnaire on a representative sample of 1200 active companies. The survey covered all regions and counties of Romania and all economic activities (NACE classification from A to O).

The statistical unit of investigation was “enterprise with at least 1 employee”. The sampling frame was the list of active companies at the end of 2003, provided by the Romanian Business Register. The sample was a randomly stratified one, using as stratification criteria the following: firm size (0-9 employees, 10-49 employees, 50-249 employees and 250 and more employees) and 8 development regions. The tolerated error was of $\pm 2,83$ % at a confidence level of 95%. Data analyse is carried out on weighted data base for companies with 10 and more employees, while micro-firms were treated as a case study.

Face to face interviews were carried out at the companies’ headquarters with representatives of the top and middle management (heads of human resources departments and technical managers. Data were collected by Centre for Urban and Regional Sociology CURS.

Following proxies for skills need were used: the structure and dynamic of employment for the previous year (2005), estimates of its short-term evolution (next 6 months), skills shortages for the previous year (2005), skills gap and vocational training employed during the previous year.

Skills shortages are operationalized as the number of vacancies existing in companies for more than 3 months during the previous year (2005), and number of vacancies existing during the previous year and still opened at the moment of investigation (early Spring 2006). Skills gap is operationalized as (mis)matching between required and acquired skills and employers’ level of satisfaction with employees’ qualification.

Main findings:

6.3 % companies with 10 and more employees had vacancies for more than 3 months during the previous year (2005). Rate of vacancies, calculated as the number of vacancies for more than 3 months reported to number of employees in the last day of the previous year was up to 0.9%.Rate of vacancies had the highest values in agriculture, transport, storage and communications, financial intermediation and real estates. The indicator “vacancies for more than 3 years still unfilled” was used to measure the so-called “chronicle skills shortages”. 3.5% companies had to cope with chronicle skills shortages and most of them were concentrated in textile and clothing industry.

18.4% companies reported more than half of their employees with medium education no to be employed in concordance with their qualification. Most of them were companies activating in energy, gas and water (29.6% of companies activating in this sector), real estates and financial intermediation (29.7%) and hotels and restaurants (23%). 19% companies declared than more than half of their employees with tertiary education were not employed in accordance with their specialization and this phenomenon affected mainly manufacturing and mining (25% of companies activating in this sectors), energy, gas and water (25%) and hotels and restaurants (26.9%).

Regarding micro-companies, 5.6% had vacancies for more than 3 months during the previous year, while 4.4% companies had to deal with chronicle skills shortages.

The main conclusion of the study was that 2005 was characterized by the coexistence of high labour force demand (shortages) in specific regions and sectors, and high labour force supply (redundence) in others, so, the labour

force allocation and low internal mobility seemed to be a problem of that year.

(2.2) *Obsolete skills via employees' survey.*

Theoretical and methodological approach:

The project's aim was to investigate skills gap that finally affects professional performances and firms' productivity. It measures the inadequacy between skills supply and demand inside companies and it is the main informational source for substantiating vocational training policies and labour force allocation. Analyzing skills gaps implies assessing depreciations of knowledge, skills/competences and abilities needed for carrying out a particular job. There are 4 processes of skills' depreciation. 1. Skills attrition is a natural and irreversible process due to ageing, difficult working conditions and work injuries. 2. Skills atrophy is a reversible process and usually affects (long-term) unemployed, over-educated and/or under-educated for a specific job, filling jobs that do not fully make use of employers' skills. 3. Skills erosion is also a reversible process and is due to labour market evolutions and reduction of employment for certain occupations or economic sectors. 4. Skills gap is a reversible process and is due to changes in the occupations' content, technological evolutions, etc.

A questionnaire based survey among Romanian employees was designed. Data were collected by Centre for Urban and Regional Sociology CURS. Face-to-face questionnaires were applied to 1239 employees out of 113 companies. The firms sample was a randomly stratified one, using as stratification criteria the following: 8 development regions and economic activity (1-digit NACE classification from A to N). From each development regions were selected 2-3 counties, according to their contribution to regional GDP. In each selected companies, a randomly sample of 10-20 employees was extracted from the lists with employees in execution positions. Quota on age groups were established for employees' sample: at least 10% under 25 years and at least 20% with 45 and more years old.

Main findings:

More than half of employees declared they worked in difficult conditions. Almost 70% of employees reporting work injuries declared that they activate in difficult working conditions. More than 20% of employees had inadequate qualifications to jobs performed within companies and declared that they used to a small extend their skills acquired via initial education. So, they are exposed to higher risks of skills atrophy. Highest shares of employees reporting mismatch between acquired and required skills are in agriculture (38% of employees interviewed in this sector), hotels and restaurants (26.5%) and real estates (35.9%). 75% of employees reporting mismatch are in fact under qualified for the job done. 32.7% of surveyed employees declared that they never practiced their acquired qualification during initial education. Moreover, 49.4% of employees aged 16-29 never practices their acquired qualification pointing out significant deficiencies of initial education during transition. And finally 19.8% of employees declared they had to deal with changes in their work content due to technological and organizational changes. The conclusions of the study were rather pessimistic, as 70% of employees did not participate to vocational training during the last 5 years. So, both initial and continuing vocational educations were characterized by high deficiencies at that moment of time.

- (3) **Evolution of occupations on Romanian labour market in 2010 perspective** (ro. *Evolutia ocupatiilor pe piata fortei de munca din Romania in perspective anului 2010*), 2006, National Research Institute for Labour and Social Protection Romania;

The main objective of the study was to identify the past and current occupational profile of employment in Romania, as well as key driving of change for the content of occupations. So, in accordance with ToR requirements, 4 different methodologies were employed, all of them conducing to the assessing and anticipation of

skills need in Romania. Even if every study elaborated under this project had a well defined objective, the “puzzle” image of skills needs in Romania before EU accession could be almost completed. So, the monographic approach aimed at understanding the key drivers of change in the occupations’ content, the employer survey aimed at assessing skills need, the component of matching between demand and supply using National Employment Services data bases aimed at making public services more efficient, while finally the 3 evolution scenario tried to identify predictable mutation on medium term within the occupational profile of the Romanian workforce. Data collecting again was carried out by Centre for Regional and Urban Sociology.

(3.1) Key drivers of change via monographic approach;

Theoretical and methodological approach:

The restructuring process of Romanian economy led to significant changes in its occupational structure: new occupations have emerged, and on the other hand, the content of many others has changed. In certain sectors of activity, certain occupations have taken priority, while other have become obsolete and disappeared. For an in-depth knowledge of the specific and dynamic of changes affecting Romanian occupational system, a monographic research was designed. An analytical sample of 105 occupations was selected, using the following conceptual framework. Dominant occupations are well formalized, “crystallized”, with a certain „tradition” in the structure of the occupational system of the Romanian economy, that account for significant percentages of the total number of employed persons. It can be assume also that if they disappear, the existence of other occupations placed upstream or downstream is also endangered. Occupations that have significantly changed their content were strongly affected, especially by the reorganizations of the Romanian economy in the transition years, but also by inherent processes associated with economic growth. They are mainly found in those industrial sectors strongly affected by technological or organizational changes, but also in services, where the nature of the activity has changed a lot or where new market niches appeared. Piercing/emerging occupations are new occupations, mainly associated with the emergence of new sectors and new market niches. They can have with a high added value and an increasing potential for development

The questionnaire employed aimed to make a comprehensive description of 105 significant occupations, to identify the causes that shaped the occupations’ content and also to outline several evolution trends. For designing this instrument over methodologies developed in the field were consulted, such as the one elaborated by the U.S. Department of Labor, Bureau of Labor Statistics. 1 to 5 interviews were carried out for each occupation, and where it was possible information from job descriptions were also considered. Questionnaire were addressed to technologists, department/workshop/team managers, representatives of the human resources department, technical managers, workers with selected occupations, capable of providing relevant and comprehensive information about the occupation at stake.

According to the conceptual framework used out of those 105 occupations’ monographs, 51 were for dominant occupations, 19 for piercing occupations and 35 for occupations that had significantly changed their content. In order to analyse data collected a secondary analyses was carried on all monographs completed for all selected occupations.

Main findings:

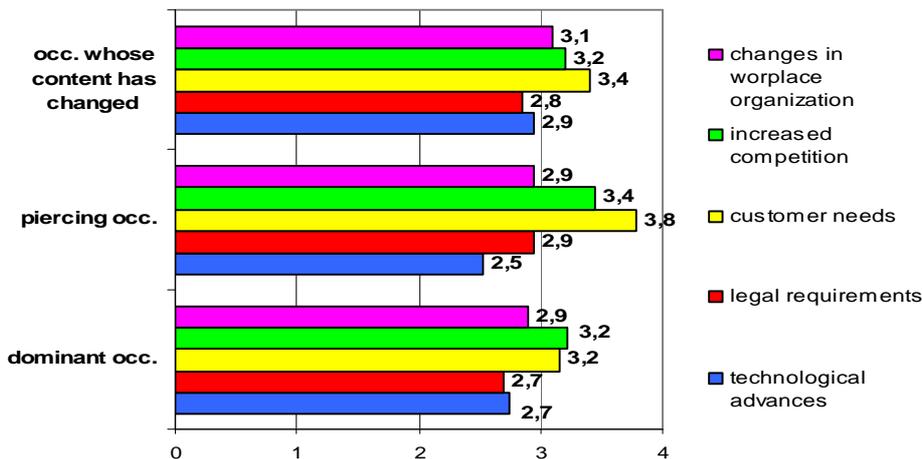
Regardless of their typology („dominant”, „piercing” and “occupations whose content has changed significantly”), most of the occupations recorded changes in their work content. Out of these, as it was predictable, the occupations „whose content has changed significantly” were those that recorded the highest levels of change, being followed by the „piercing” and „dominant” ones.

The character of Romanian economy as consisting mainly in low value added sectors is strongly correlated with the occupations’ content. For dominant occupations, the physic activities still play an important role. Piercing occupations put a premium on communication skills and intellectual activities. Also intellectual activities scores

among occupations that significantly changed their content.

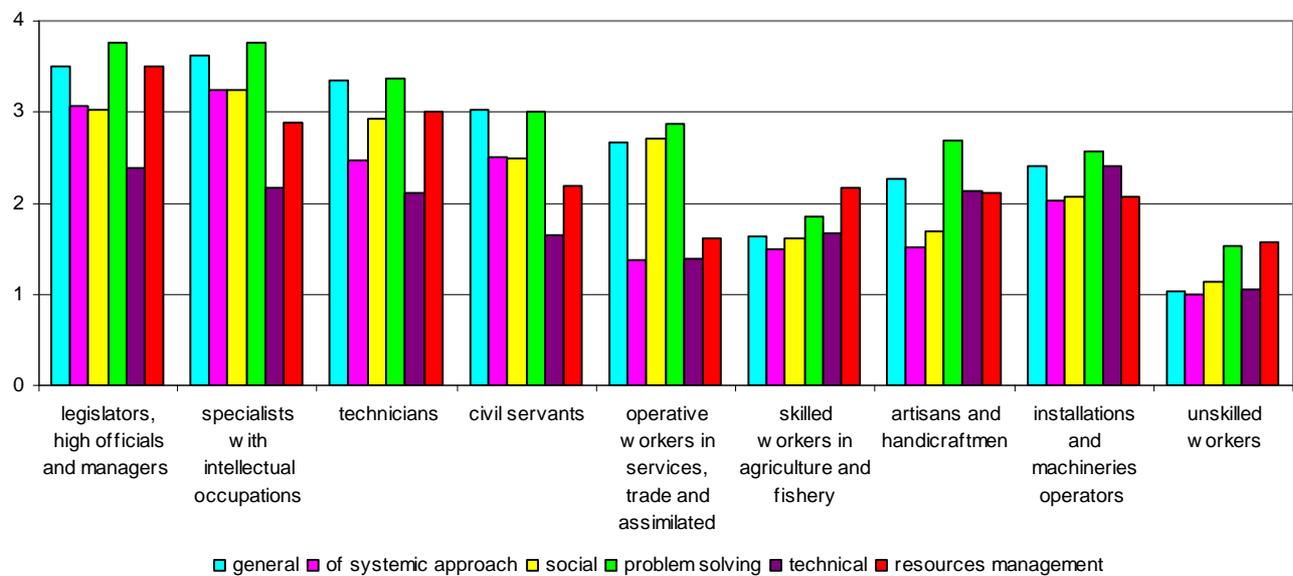
Main key drivers of change were: meeting clients' needs increased competition and technological advances. Development of the private sector and led to the development of „client orientated” policies at the level of the companies and, therefore, to the increasing role of certain factors such as „meeting the clients' needs” and „increased competition in the field”. Technological advances played a major role in redefining the content of the „dominating” occupations and of those „who's content has changed significantly” as well. In public administration, the most important role in generating changes was played by the repeated changes of the legal regulations.

Importance of key drivers of change during the last 10 years and The role of different factors in generating, during the last 10 years, changes of content for the investigated occupations (averages on a scale from 1=less important to 4=very important)



Competences mainly associated with the changes in occupations' content are: using the computer, problems solving, resources management and communication. Trans-sectors competences such as using the computer and knowledge of a foreign language (mainly English) are and remain the most important ones.

Competences necessary in performing jobs' tasks (averages on a scale from 1=very small extent to 4=very large extent)



(3.2) Skills need via employer survey;

Theoretical and methodological approach:

The conceptual framework, as well as the way they had been operationalized was pretty much similar with the one above-described (see (2.1)). The sample was of 1100 companies, with a margin error of $\pm 3\%$ at a confidence level of 95%. It was designed a stratified sample using the 8 development regions, the economic sector of activity (1-digit NACE classification) and a composite criteria incorporating the size class and the concentration of employees. The analyses were carried on non-weighted data base.

Main findings:

42% of the total number of surveyed companies generated new jobs during the previous year (2005). The sectoral analysis shows that companies activating in constructions (55.4%), transport, storage and communication (53.8%) are the most dynamic, and have an increasing employment potential. The jobs generation rate (calculated as the number of new generated jobs during 2005 divided by the number of employees at the end of 2005) was highest in the constructions (10%, almost double than the national average of 5.5%), hotels and restaurants (9.4% as opposed to a national average of 5.5%) and commerce (9.2% as opposed to a national average of 5.5%). Out of the total number of new generated jobs, most were for tailors (10.4%), security agents (9.5%), unskilled workers (8.5%), engineers (4.9%) and bricklayers (2.8%). Thus, a large share of new generated jobs are for occupations requiring a low level of qualification or are characteristic for sectors with a low value added level (i.e. textile and leather industry). Concluding, there is demand for low qualified labour force, and those sectors of the economy characterized by hard, unattractive work conditions and/or low levels of value added, generating limited possibilities for human resources motivation and retention.

Companies included in the sample estimate an increase of 2.2% in the total number of employees, at national level, in 2006 as against 2005. Most optimistic companies activate in hotels and restaurants (8.9% estimated increase for the next year), commerce (7.9% estimated increase), and real estate (6.2% estimated increase). Most pessimistic companies activate within electricity, gas and water industry (5% estimated decrease) and manufacturing industry (1% estimated increase).

Cca. 6% of Romanian companies had vacancies not filled for more than 3 months in 2005. Skills shortage, measured by job vacancies rate, is negligible – below 1%. Main cause of having vacancies is in the perception of 80% of employers the lack of adequate qualified personnel. A little more than 7% of the employers admitted that

they found persons meeting the job requirements, but the latter refused the job offer, and these companies were found exclusively in the manufacturing industry and in the „other” category, where the salary packages are less attractive.

The employers’ satisfaction with the qualification level of their employees with secondary and post-high school education has high values (i.e., over 77% declared themselves as „satisfied” and „rather satisfied”). The lowest degree of satisfaction regarding their qualification level is recorded, for the youth (i.e., employees aged 24 or younger).

(3.3) *Matching between demand for and supply of labour force at local employment services;*

Theoretical and methodological approach:

The objective of the component was to match supply and demand on the labour market as it results from analysing the records of vacancies and persons looking for employment by accessing Public Employment Services.

The method has two steps. On the one hand the authors compared the results of the data analysis regarding the number of unemployed people registered over a two week period (June 22nd – July 5th, 2006) to the results of the data analysis of what it is called the *stock* (that is the total number of unemployed registered since the beginning of the year). Thus, the degree of concordance between the structure of the *sample* - the daily records within the two week period – is similar to the structure of the *stock* is assessed. The same is done to analyse the vacancies registered at the Public Employment Services. The method has limits as public employment services does not keep track of neither the unemployed people who get a job without notifying public employment services, nor of all vacancies advertised by the employers which become no longer available. On the other hand the authors made a comparative analysis of the labour supply and demand (only for the two week period chosen for the purpose of this study (June 22nd – July 5th, 2006)).

Main findings:

At *national level* most of the unemployed for which data were collected in the two week period have the following occupational profile: 36.4% have occupations sub-summed to the 9th group of occupations, 9.9% to 8th group and 27.6% to the 7th group. Employers have vacancies for mostly the same group of occupations: 25.6% for 7th group, 15.2% for 8th group and 26.3% for 9th group.

Results of the method described before points to an exceeding demand as compared to supply. By occupation, exceeding demand is registered for 1st group of occupations (except subgroup 11), 2nd group (except subgroup 23), 4th group, 5th group and 8th group (except subgroup 81). Shortages are registered for the following groups: 3 (except subgroup 34), 6, 7 (except subgroup 71), 9 (except subgroup 91).

Results got by calculating the correspondence consistent with the first 6 digits pointed at national level that there is a shortage for the unskilled workers in packing of solid and semi-solid products/manufactured goods and for the unskilled workers in mainstreaming of roads, driveways, bridges, dams, while there is redundancy of vacancies for unskilled workers in building, brick laying, and for sellers and handlers of goods. Small or inexistent demand is registered for unskilled workers in agriculture, mechanics, carpenters and unskilled workers in packing goods made of dust. Small or inexistent supply for textiles manufacturers and assemblers, security guards, drivers, brick layers and plasterers.

(3.4) *Anticipating skills need on short term via econometric models.*

Methodological approach and findings:

3 scenarios were elaborated in order to forecast the evolution of regional economies on medium term in occupational profile:

- 1st scenario (pessimist) in two alternatives: pessimist and pessimist (that was based on the extrapolation of economic trends registered during 1996-2004) and moderate pessimist (that was based on the extrapolation of the economic trends registered during 2000-2004); the analyses were done on LFS data.

In both pessimist and pessimist scenario and moderate pessimist scenario, for 2010 were forecasted increases of total employed population up to 10-10.5 %. In occupational profile the increases were foreseen for skilled workers in agriculture, forestry and fishery. Main decreases were foreseen for unskilled workers. Obviously, this scenario was less likely to happen.

- 2nd scenario (moderate) was based on assumptions of continuing economic growth with an annual rhythm of 5.5%, increasing foreign investments with an annual rhythm of 35% and with increasing rhythms of productivity with 6%; The model is based on modelling techniques employed by ROA Netherlands.

In this moderate scenario, the structure of employment by major groups of occupations is more balanced pointing to decreases of importance for group of skilled workers in agriculture (6) and for the group of unskilled workers (9). Also, increases were foreseen for groups of artisans and handicraftsmen (7), operative workers in services, commerce and assimilated (5) and civil servants (4).

- 3rd scenario (optimist) consisted in making the following assumptions: a. the occupational structure of Romania will be the same with the one of Poland; b. the occupational structure of Romania will be the same with the one of Italy; c. the occupational structure of Romania will be the same with the one of Germany;

- (4) **Labour Market and Immigration in Romania** (ro. *Piata fortei de munca in Romania si imigratia*), 2007, Soros Foundation Romania;

Theoretical and methodological approach:

The main objective of the study was to identify employers' attitudes with respect to several solutions proposed to labour force shortages. So, in October 2007 a national representative CATI survey is carried out on the level of 3 economic sectors (constructions, textile and clothing and hotels) mainly affected by skills shortages. These sectors are identified as being affected by skills shortages on the basis of mass media reports, as well as previous studies carried out in the field. Also, textile and clothing and constructions were among first Romanian economic branches employing immigrants. A sample of 600 companies with at least 10 employees was designed, having a margin error of $\pm 4.0\%$ at a confidence level of 95%. For each sector was considered a sub-sample of 200 companies. The sectors' sub-samples were stratified by 8 development regions and 3 size classes (10-49 empl., 50-249 empl., 250 and more empl.). The allocation was proportional to the structure of the survey universe. Questionnaires were applied via telephone interviews to managers, administrators, financial managers or human resources managers. Data collection was carried out by Metro Media Transilvania in Autumn 2007.

Skills shortages are operationalized by the "indicator" job vacancies during previous (2006) and current (2007) year. Vacancies are defined as available workplaces unfilled for more than 2 months. Also job turnover phenomenon is addressed.

Main findings:

25% in 2006 and 30% in 2007 of companies from textile and clothing industry declared they had vacancies

unfilled for more than 2 months. Somehow contrary to media signals and reports only 12% in 2006 and 13% in 2007 of companies operating in constructions were affected by shortages. The shares are comparable for the sector of hotels. Cca. 40% of companies, irrespective of their economic activity had to cope with job turnover rates higher than 20% (job turnover rate was defined as outflows reported to total number of employees). 2/3 of surveyed companies declared they faced recruitment difficulties during 2007. Main causes of recruitment difficulties were low wages for textile and clothing, while lack of adequate skilled workforce explains skills shortages in constructions and hotels. For all sectors employers name emigration for employment abroad as the most important determinant of labour force shortages they had to cope with. Also low quality of skills acquired by school leavers and low wages explain, but to smaller extent skills shortages. On short term, cca.70% of employers estimated increases of skills shortages and job vacancy rate.

What are the most plausible and desirable solutions for skills shortages? Investments in (re)technologization were the main solution for skills shortages. Sub-contracting and part-time employments were other important solutions adopted by companies. 23% of companies declared they tried to employ immigrants. At that moment of time, as possible countries from which employees could have been brought were: Bulgaria, Hungary, former Yugoslavia, Moldova, Turkey, Ukraine, China, India, Pakistan, etc.

(5) **Statistical Survey on Vacancies** (ro. *Cercetare statistica asupra locurilor de munca vacante*), quarterly starting with 2006, National Institute for Statistics;

Theoretical and methodological approach:

Methodology is consistent with EUROSTAT methodological framework. Main indicators measured are: job vacancy rate, number of filled workplaces, and number of vacancies. Practically, the survey provides data on skills shortages roughly operationalized like “number of vacancies”. Main limit is due to the fact that the survey collect stock-type data, and do not collect flux-type data which are essential for a more complete picture on skills shortages and their causes. Also, another limit is that data are provided only in 1-digit sector and occupational profile and this is one major cause of their underutilisation. The sample comprises all business legal entities, irrespective of their ownership, excluding army forces and intelligence services. There are used 3 size classes in stratifying the sample (less than 10 employees, 10-49 employees, 50 and more employees). The sample volume for 2006 year was up to 18500 local units and covered all counties and implicitly development regions. In 2009 the sample was extended to 24000 local units. The questionnaire is a self-administrative one and collects information on number of vacancies and number of filled workplaces in the last day of the middle month of the quarter. The test of the methodology was carried out in 2005 but the first data are available starting with 2006.

Main findings:

Rate of jobs vacancies peaks in the quarters 2 and 3 of years 2007 and 2008 that are in fact the best years of Romanian economy during the last two decades. Starting with the last quarter of the 2008, job vacancy rate enters on a sharp decline strongly linked with the effects of financial and economic crises. Public administration and health and social assistances are sectors scoring the highest rates of job vacancies during the period reported. Also the occupation group of specialists with intellectual and scientific occupations still registers the highest job vacancies rate in occupational profile.

Rate of vacancies by economic activities for 2006-2009

Year	2006		2007				2008				2009	
Quarter	3	4	1	2	3	4	1	2	3	4	1	2
Job Vacancy rate	1.8	1.6	2.1	2.1	2.2	1.8	2.1	2	2.1	1.5	1.3	0.9

Source: EUROSTAT, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

- (6) **Consulting Services for a Comprehensive Labour Demand Survey** (ro. *Servicii de consultanta pentru realizarea unei anchete comprehensive asupra cererii de forta de munca*), 2008, National Research Institute for Labour and Social Protection Romania;

Theoretical and methodological approach:

The scope of the current project proposal was to provide the key decision makers with an in-depth and comprehensive assessment of the labour demand, by identifying both skills shortages and gaps in sectoral, regional and occupational profile. The study was based on a survey undertaken on a representative sample of 1169 companies with a tolerated error of $\pm 2.86\%$ at a confidence level of 95%.

It focuses on two main dimensions: past and future developments at enterprise level and problems in filling in the skills' need. Both of them represent important clues for finding out how the demand for labour will develop in the coming period and where the supply fails in matching the demand. Therefore, our investigation focused on employment patterns at enterprise level, recruitment practices, labour and skills shortages, as well as vocational training.

A structured questionnaire was undertaken in carrying out the survey. Face-to-face interviews addressed top-management representatives who possess a thorough, solid knowledge of human resources policies and firms' plans for growth.

The sampling universe consisted of all Romanian employers/firms with at least 1 employee and active at the end of 2006, as these were the most recent data that the National Institute for Statistics and National Register of Commerce could provide. The sample was designed for 1150 companies, but the carried out sample consisted in 1169 companies. It was used a probabilistic, stratified sampling technique, stratification criteria being: a) development regions (8 development regions); b) types of activities derived from CAEN (13 economic activities); c) firms' size/number of employees (4 categories: micro (1-9 employees), small (10-49 employees), medium (50-249 employees) and large (250 and over employees)). For size class criterion there were designed equal samples, while for the other two criteria proportional sampling was undertaken. Non-response rate was up to 43.4%.

The questionnaire was designed in multiple sections, aiming at making operational as many as possible proxies for the concept of "skill". Thus, the questionnaire consisted in the following sections: Structure and evolutions of companies' personnel; Vacancies and recruitment difficulties; Estimates for the next 6 months with respect to companies' personnel dynamic; Key drivers of change for occupations' content; Vocational training and Skills gap.

Data were processed on the data based weighted by giving to all strata their share in the sampling universe.

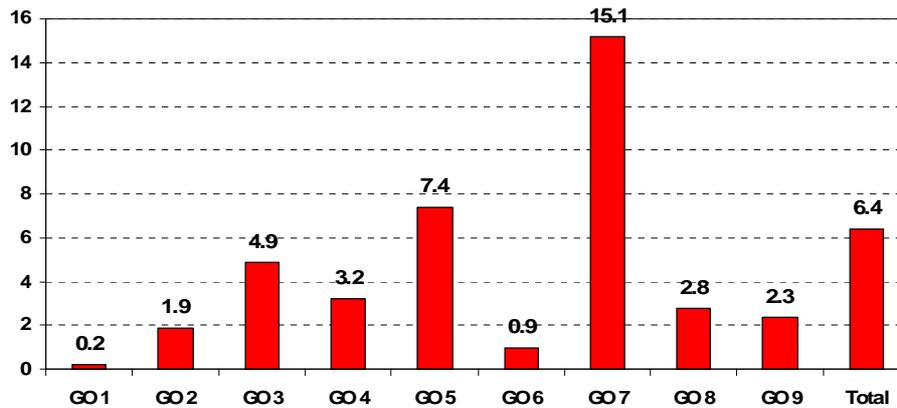
Main findings:

16.6% of companies have vacancies. Hotels and restaurants, Energy, gas and water and Constructions report the highest incidence of vacancies.

Rate of vacancies among surveyed companies reaches the high value of 6.4%. Rate of vacancies picks in

Constructions, Hotels and restaurants and health and social care. Lower the level of education required for a vacancy, higher the probability to become chronically vacant. In occupational profile, rate of vacancies peaks for the occupational group of artisans and handicraftsmen (15.1%) and operative workers in services, commerce and assimilated (7.4%).

Rate of vacancies by groups of occupations (%)



where:

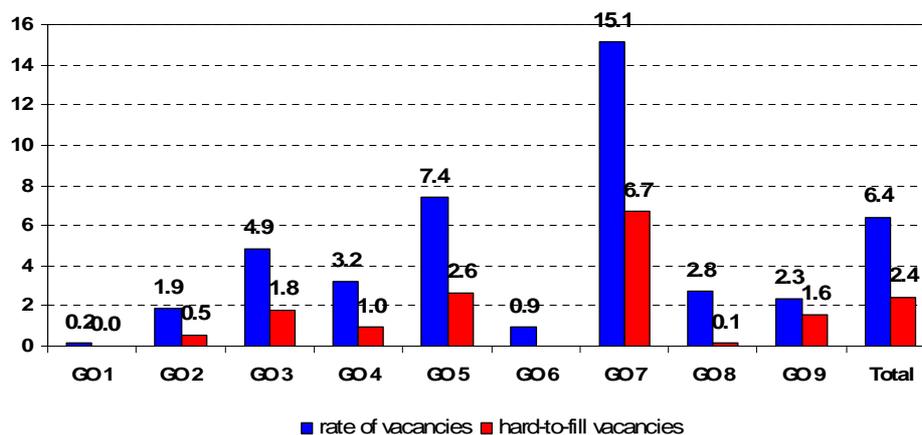
GO 1 = Legislators, senior officials and managers
 GO 2 = Professionals
 GO 3 = Technicians and associated professions
 GO 4 = Clerks

GO 5 = Service workers and shop and market sell workers
 GO 6 = Skilled agricultural and fishery workers
 GO 7 = Craft and related trade workers
 GO 8 = Plant and machine operators and assemblers
 GO 9 = Elementary occupations

Main reasons for having vacancies are labour shortages (explaining 23.7% of vacancies), skills shortages (explaining 32.7% of vacancies), poor working conditions (explaining 14.1% of vacancies) and the employee's turnover (explaining 12.1% of vacancies).

One third of vacancies are the so called "hard-to-fill" vacancies. The hard-to-fill vacancies are more probable to be found in Hotels and restaurants, Manufacturing, Agriculture, forestry and fishing and Constructions. It is more probable to have hard-to-fill vacancies for same occupation groups for which rata of vacancies peaks.

Rate of vacancies and hard-to-fill vacancies by economic activity (%)



Out of the total number of surveyed companies, only 13.5% of companies declared that they had organised/financed Vocational Training for the employees during the last 2 years. Analysis by company size class shows that only 10.5% of micro companies (0-9 employees) and 32.0% of small companies (10-49 employees)

organised Vocational Training during the last 2 years. Both medium companies (50-250 employees) and large companies (over 250 employees) declared that in the last 2 years they had largely organised Vocational Training, 57.7% of the medium companies and 73.0% of the large companies.

At national level, the main reason for which employers did not organise/finance vocational training during the last 2 years was „I'm satisfied with my workers' knowledge and skills": 46.3% of employers mentioned this reason as a core one.

With respect to future skills needs, real estates and constructions display a significant labour demand for the period to come. However, their capacity to estimate their future needs is highly damaged by the volatility of their market.

In terms of education, the highest labour demand will come in the next 6 months for workers with medium level of education. This will include the labour demand for seasonal activities (summer and autumn).

(7) **Romanian public and private employer and labour market** (ro. *Angajatorul roman (public si privat) si piata fortei de munca*), 2008, National Agency for Governmental Strategies, Government of Romania;

Theoretical and methodological approach:

The study investigated the employers opinions and attitudes with respect to labour market evolutions: type of labour contracts, employees' skills level, causes of vacancies, ideal candidate, hiring procedures, etc. the sample was of 1212 companies/organizations, from private and public sector. The sector was proportional stratified by size class.

Main findings:

The most important advantages/qualities of the Romanian labour force, as identifies by surveyed employers/organizations are for 24% of respondents the level of education/qualification, 12% of them values the still exceeding the labour supply and 12% the fact that the labour supply is adequately qualified to the labour market demand. At the opposite pole, the most important advantages/"imperfections" of the Romanian labour force are labour force shortages (49%), the lack of motivation to work among employees (19%), and the migration for working abroad (10%).

Respondents appreciate that the most important problems of the Romanian labour market were in Autumn 2008 the lack of skilled workforce (62%), the labour force shortages (38%), the prevalence of undeclared labour (42%) and the employees' turnover (42%).

When employers/organizations recruit new employees the following are considered:

- for managing positions: previous working experience (is most important for 42% of employers), past performances/portfolio (for 39% of employers), tested skills (30% of employees), having a diploma certifying their skills (26%) and their intelligence (25%)
- for positions of execution: previous working experience (is most important for 50% of employers), skills (47%), knowledge (32%), past performances (30%) and physic abilities (23%).

The ideal employee for managing positions has to have organizational skills, strong professional training and

capacity to take decisions. As regarding the position of execution, the vocational training, the responsibility and the capacity to handle with teamwork.

When recruiting employees, 40% of employers/managers ask for elementary skills of using computers, 62% as for advanced skills of using computers, 59% for the skills of communicate in a foreign language, 50% ask for driving licence and 57% for availability to travel for business interests

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3. RESEARCH ISSUES THAT SHOULD BE ADDRESSED IN THE FUTURE.

Even if important steps have been made with respect to research on labour market insertion and skills needs using the non-reimbursable funds from World Bank, EC, or any other financial institutions/organizations, not even one

activity and research endeavours presented above (except Statistical Survey on Vacancies, NIS which is in fact carried out on a EUROSTAT methodology) became a regular, annual activity. Due to fact that different decisions' makers asked for these studies in order to respond to a specific policy need, the findings of these studies are hardly comparable, and no evolution trend could be designed. So, having a statistical investigation on a regular basis on topics like skills needs and transition from school to work is a must for a rapidly changing economy.

Also, with respect to transition from school-to-work, developing a longitudinal study is a necessity, but deeply depends on the capacity of Ministry of Education to provide comprehensive data bases with graduates of different vocational paths.

In-depth studies have to be carried out on how technical and vocational training and higher education could be better articulated. Also, with respect to technical and vocational education, studies on how VET contributes to growth and labour market outcomes are still needed. Until now, impact assessment of VET and labour market outcomes were done for active labour market programs, but they need to be extended. Even it is widely recognized that VET contributes to increases of productivity and economic growth; still there is only a scant supply of studies on this topic (amongst the few on the issue being Ghinararu C., 2007, Autumn Review of the European Employment Observatory, <http://www.eu-employment-observatory.net/resources/reviews/EEOAutumnReview2007.pdf>). Also, more importance has to be put on the quality of staff/teachers competences of VET system. Labour market is changing, skills needs are changing, so also the technical skills of teachers have to be regularly assessed and updated.

Many occupations have seen their content radically changed, other occupations have a "blurred" content so much emphasis has to be put on the evolution of occupations and skills required for them. Also, the changing legal framework extensively affected career in public administration so studies on this topic can make contributions to a more and efficient public administration reform.

Labour market groups at risk also have been subject of different studies and researches, but less importance was accorded to social stratification and to social mobility and equity. Also, not many studies were done on the labour market insertion, skills capital of those graduating the educational system in minority languages.

With respect to teaching and training, more studies have to be done on learning and teaching of elderly or other vulnerable groups of the labour market, in order to provide adequate CVTS. Much also have to be done on standardization of pupils/student assessment, so in-depth studies are needed.

Romania is currently through the National Research Institute for Labour and Social Protection an active part of CEDEFOP led initiative geared towards the anticipation of the medium term demand and supply of skills in Europe. In recognition of previous individual contributions to the CEDEFOP researches on demand anticipation and supply anticipation at European level, the Romanian research group conducted by Dr. C. Ghinararu is responsible for the entire area of Central and Eastern Europe plus Greece in terms of country data validation. Access to this important pan-European tool will greatly boost the capabilities of Romanian research in the field and might prove a milestone in developing future researches on the topic using both econometric tools, as well as national established approach which emphasizes firms' surveys.

4. BENEFITS OF EDUCATION AND TRAINING

4.1 WHAT ARE THE CURRENT KEY ISSUES OR PROBLEMS INVESTIGATED BY RESEARCH IN RELATION TO "THE BENEFITS OF EDUCATION AND TRAINING"?

This section is dedicated to research on the economic and social benefits of education and training, a current priority topic for Cedefop. The purpose of this section is to summarise research available at

national level to complement the new research undertaken in parallel by Cedefop on the topic.

Research on the benefits of education and training investigates the relationship between education, training and skills - i.e. of human capital - and various benefits for the individual, the enterprise or the economy or society more generally. The benefits studied include monetary returns (wages) as well as economic (e.g. employment, productivity, growth) and social benefits (e.g. health, social cohesion, trust).

Research to be summarised in this section should deal with education and training in a broad sense (general education, IVT, CVT, active labour market policies with a training component, adult learning, skills or educational level). However, research that focuses specifically on the benefits of VET – IVT or CVT - is very welcome (if available in your country).

According to the situation in your country (and depending on the research available) you may focus on one of the following topics:

- Monetary costs and benefits of education and training (private and social rates of returns)
- Specific contribution of education to economic growth
- Training and performance of enterprises (survival, productivity, profitability, innovativeness)
- Labour market outcomes of education, VET or active labour market policies with a training component (e.g. employment, careers)
- Determinants, trajectories and outcomes of LLL for individuals
- Social benefits of learning
- etc.

Please indicate if there is no research on the benefits of education and training in your country.

Main topics related to the benefits of education and training investigated in Romania refer mostly to its economic benefits and monetary returns. Thus, research studies carried out on effects of training focus on:

- Impact of active labour market policies on employment
- Impact of active labour market policies on wages
- Effects of education on poverty risk
- Effects of education on employment.

4.2 PLEASE PROVIDE A LITERATURE REVIEW ON CURRENT NATIONAL RESEARCH TOPICS AND KEY FINDINGS ON THE BENEFITS OF EDUCATION AND TRAINING.

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- (1) **Research study - Impact of active labour market programs in transition economies** (ro. *Impactul programelor active de ocupare in economiile aflate in tranzitie*), Vasilica Ciuca and Raluca Branza, National Research Institute for Labour and Social Protection Romania, 2006

Theoretical and methodological approach:

The research study aims to assess the impact of the training component of the active labour market programs on employment. The methodological approach is based on the propensity score matching technique which permits comparing outcomes for two groups: one group of individuals who attended training programs organised by the public employment agencies and one control group. Due to anticipation of a low response rate, all individuals who registered at the County Agency for Employment in Brasov and participated to training programs between 1st of January 2001 and 1st of July 2002 were investigated, representing a group of 500 subjects. Data was collected in March 2004 via face-to-face interviews. Only 253 of total participants to training responded to the survey and constituted the investigated sample. Additionally, a second sample of non-participants to training was selected among individuals who registered in the same period to the County Agency for Employment in Brasov. The comparison sample included 349 individuals who responded to the same questionnaire as those participating to training.

In order to correct the selection bias and to increase the similarity between the two groups, the research methodology included estimation of a propensity score for participating to the training programs. Then, the technique matches individuals from the two groups based on their propensity scores and other covariates, eliminating those who are non-matched. Finally, two similar groups were obtained; one with participants and other with non-participants in training. The result of the propensity score matching technique is that the outcome differences between the two groups are given by participation or non-participation to training.

Main findings:

Results show that participation in training programs had a positive and significant impact on employment. In fact, participants to training registered a probability of being employed at the moment of the survey higher with 15 percent points and a probability of being employed in 2002-2003 higher with 13.9 percent points. Additionally, results of the impact analysis indicate a positive effect on probability of being unemployed in 2002-2003. The impact of training on probability of being employed at the moment of the survey reached 17.2%, while the impact on probability of being employed in 2002-2003 was 16.8%. On the other hand, participation to training had a negative impact on the monthly wage at the moment of the survey.

Impact of participation in the training program

	Participants	Non-participants	Difference	Impact
Probability of being employed at the moment of the survey	73.9%	58.9%	15%	17.2%***
Probability of being employed in 2003-2003	76.7%	62.8%	13.9%	16.8%***
Probability of being unemployed in 2002-2003	40.7%	58.1%	-17.4%	-18%*
Wage	38.3%	61.7%	-23.4%	-7.3%*

***significant at 1%, **significant at 5%,*significant at 10%

Moreover, the calculated impact of training on employment was weaker for men and more important for women. This result was obtained for both the probability of being employed at the moment of the survey and in 2002-2003. By age, participation to training had a stronger positive impact for individuals aged 24 years or less and 35-44 years and a weaker effect for individuals aged 25-34 years (for individuals aged 45 years and more the impact couldn't be calculated due to small number of cases). Also, the impact of training varies with the education of the subjects. Participation to training had a positive impact for individuals with low and medium education and a negative one for those with higher education. On the other hand, the impact was stronger for individuals with working experience of 10 years and more or less than 1 year.

- (2) **Research study - Impact of active labour market programs on the Romanian labour market** (ro. *Impactul programelor active de ocupare pe piata muncii in context socio-economic romanesc*), Vasilica Ciuca, Aniela Alexandrescu and Andra Bertha Sanduleasa, National Research Institute for Labour and Social Protection Romania, 2006

Theoretical and methodological approach:

The present study aims to assess the efficacy of the active labour market programs in Centre and North-East regions. Selection of the regions was based on level and nature of unemployment and on the requests of the beneficiary, namely the National Agency for Employment. In fact, the Centre region was chosen due to massive lay offs in the period of the investigation and the North-East due its high unemployment rate.

The methodological approach aims at assessing the net impact of active labour market programs and is based on the propensity score matching technique. As said before, such technique permits selection of two similar groups of participants and non-participants to the active labour market programs for comparison with respect to the outcome variables. Impact was estimated in relation to four active measures: training, business start up consultancy, stimulating labour mobility and subsidised employment (fixed term employment). For each of the two analysed regions, two groups of subjects were selected: one with participants and one with non-participants to the active labour market programs. Totally, 1021 individuals were investigated in North-East region and 1154 in Centre region. Data was collected in July 2005 through face-to-face interviews. The measured economic and monetary outcomes are: probability of being employed at the moment of the survey, probability of being employed in 2004, probability of being unemployed at the moment of the survey, probability of belonging to a certain wage category.

Main findings:

In both investigated regions, the impact assessment indicate that all the analysed active labour market programs had a significant positive impact on the probability of being employed in 2004 and at the moment of the survey, except for the subsidised employment program which registered a significant negative impact. Moreover, training and stimulating labour mobility programs had a stronger impact for men, while business start up consultancy registered a stronger effect in the case of women.

Also, results show that non-participants to the subsidised employment program from both regions are more likely to be long term unemployed at the moment of the survey as against the participants. In Centre region, participation to business start up consultancy and stimulating labour mobility have a positive impact on wage levels, while beneficiaries of subsidised employment are more likely to have low wages.

Type of impact of active labour market programs on several economic outputs

	Training	Business start up consultancy	Stimulating labour mobility	Subsidized employment
NORTH-EAST REGION				
Probability of being employed in 2004	+	+	+	-
Probability of being employed at the moment of the survey	+	+	+	-
Probability of being long term unemployed at the moment of the survey				-
Probability of having the wage level:				
< 300 RON		-	-	+
300 – 450 RON		-	-	-

>450 RON		+	+	-
CENTRE REGION				
Probability of being employed in 2004	+		+	-
Probability of being employed at the moment of the survey	+	+	+	-
Probability of being long term unemployed at the moment of the survey				-
Probability of having the wage level:				
< 300 RON				-
300 – 450 RON			+	
>450 RON		-		

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- (3) **Research study - Monitoring a sample of employers who employed beneficiaries of the active labour market programs** (*ro. Urmarierea unui esantion de angajatori care au incadrat in munca someri participanti la programul de masuri active*), Daniela Pasnicu, Vasilica Ciuca, Andra Bertha Sanduleasa, Aniela Alexandrescu and Liliana Grecu, National Research Institute for Labour and Social Protection Romania, 2006

Theoretical and methodological approach:

The research study aimed to investigate the qualitative impact of active labour market programs. Three target groups were investigated: enterprises which employed beneficiaries of the active labour market programs in 2004, enterprises in general and individuals who benefited by the business start up consultancy program. Beneficiaries and enterprises which employed beneficiaries were randomly selected from the data base of the National Agency for Employment, while enterprises in general were randomly selected from the data base of Registry of Commerce. Thus, 900 enterprises which employed beneficiaries of active labour market programs, 151 beneficiaries of the business start up consultancy program and other 450 enterprises irrespective of their connection with the active measures were investigated. Data was gathered via face-to-face interviews in February 2006.

Main findings:

Most employers consider that the active labour market programs represent good incentives for job creation and hiring unemployed. Still, according to their opinions, some of the active measures have low utility and durability of the outcomes, especially when it comes to subsidised employment.

79.2% of employers which employed beneficiaries of training were fully satisfied and satisfied by the qualification level of those employed and 76.9% considered that skills of the employed beneficiaries match with job requirements. So, one can say that the training component of the active labour market programs had positive effects at the level of skills and qualification of the beneficiaries.

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- (4) **Research report - Romania: Poverty assessment**, World Bank, 2003

Theoretical and methodological approach:

In 2003, the World Bank carried out a poverty assessment analysis in order to meet needs of the Romanian

Government which wanted to better understand the poverty profile in Romania. Therefore, the report is highly focused on “who are the poor?” and on the impact of public policies on poverty. One important topic of the assessment is the relationship between poverty and other variables, including education. Analysing characteristics of the poor in Romania, the methodological approach investigates effects of education of the household head on poverty risk.

Main findings:

Regarding the profile of the poor, correlates of poverty include household size, Roma ethnicity, rural residence, residence in North-East region, as well as several characteristics of the household head. Households headed by women, individuals with low education, unemployed or self employed are more likely to be poor.

So, results of the assessment indicate that the risk of poverty declines significantly with more education. In fact, if one household head has no schooling, the probability of being poor is near 67%. Moreover, most of the poor live in households whose head graduated at most middle or vocational school.

In order to assess the independent effect of the correlates of poverty, a multivariate analysis of the predictors of per adult equivalent consumption was performed. The regression results clearly show that level of education of the household head impact independently of other variables the consumption level. Thus, for households headed by individuals who graduated at most middle school (grades 5-8), the effect on per adult equivalent consumption is negative, while for rest of them the effect is positive. Moreover, for households whose head has higher education, the effect on consumption display an ascendant trend in the period 1997-2002. So, the effect of higher education tends to increase in time.

(5) **Research report - Romania: Poverty monitoring analytical and advisory assistance program,**
World Bank, 2007

Theoretical and methodological approach:

This research report represents the joined work of the World Bank, Romanian Ministry of Labour and Romanian Institute for Statistics, aiming to monitor the level and profile of poverty in Romania. It tries to assess the impact of good years of economic growth on poverty indicators, as well as to identify the nature and location of those “hard to reach” pockets of poverty.

Main findings:

Since 2000, years of rapid economic growth has determined an important decline in absolute poverty, from 35.9% in 2000 to 13.8% in 2006. Also, Romania has displayed a moderate level of inequality which is comparable with average level of inequality of EU-25 and EU-15. However, despite this positive evolution, deep pockets of poverty still remain. Thus, those from rural areas, Roma, youth, those with low education, unemployed and self employed are much more likely to be poor. So, low education continues to determine a higher risk of poverty.

Analysis clearly demonstrates that, in Romania, education is one of most powerful correlates of welfare. Thus, the risk of poverty declines significantly with more schooling, reaching near zero for individuals with higher education. In fact, 70% of total poor adults have graduated at most 8 grades. Highest poverty risk is displayed by those with no formal education.

Interestingly, vocational school graduates had a much higher incidence of poverty than individuals who graduated general high school. This finding seems to show that graduates of the vocational school experience difficulties on the labour market, respectively in obtaining a job or a adequate wage level.

Poverty rate by education level (%)

	2003	2006
higher education	2.0	0.7
post-secondary or foremen's school	5.2	1.2
highschool	13.3	6.1
vocational/apprentice	23.4	11.1
middle school (grades 5-6)	33.8	20.1
primary school (grades 1-4)	40.5	25.9
no formal schooling	59.0	43.5

A multivariate analysis was performed in order to assess the effect of various factors on consumption level, respectively on poverty risk. The dependent variable in the regression model is (log) consumption per equivalent adult. As compared to the graduates of vocational school, those with middle, primary or no school at all display a lower consumption level, while those with high school, post-secondary and higher education have higher levels of consumption. In fact, graduates of higher education register a 43% gain in consumption as against individuals with vocational school. On the other hand, those with primary or no education display a loss of 22% in the consumption level. Moreover, as compared to 2003, the relationship between education and welfare became stronger in 2006.

(6) **Research report - Romania: Poverty monitoring analytical and advisory assistance program: Labour market vulnerabilities**, World Bank, 2008

Theoretical and methodological approach:

This report analysis the influence of labour market regulations, aging and education on poverty and employment outcomes, including labour force participation, long term unemployment and labour mobility. In spite of the steady economic growth, Romanian labour market is far from being efficient and display serious deficiencies which have to be addressed by public policies. Such policies include education reforms oriented toward enhancing life long learning, on-the-job training and toward reforms of the vocational education.

Main findings:

Longitudinal data show that better educated individuals are less likely to be poor. Moreover, households headed by graduates with low or no education have a smaller probability to move out of poverty in a three-year period than the others. Also, individuals with tertiary education have earnings 55% higher than those who completed basic education. However, individuals from rest of the educational groups have much lower “gains” as against those with basic education or less.

Returns to schooling in urban Romania

	1998	2003	2004	2005	2006
Returns to one year of schooling					
Years of schooling	0.058***	0.042***	0.042***	0.050***	0.052***
Returns to different levels of schooling (comparison group is basic education or less)					
General secondary	0.180***	0.120***	0.159***	0.182***	0.167***
Specialised secondary	0.149***	0.099***	0.131***	0.152***	0.159***
Tertiary	0.537***	0.431***	0.451***	0.536***	0.545***
Observations	17,064	17,510	20,755	20,501	20,332
R-squared	0.30	0.23	0.21	0.21	0.21

***significant at 1%

With respect to the sector of employment, more education increases the probability of being employed in the service sector, while it decreases the likelihood of being employed in the agriculture sector. Higher level of education is associated with higher probability of being employee. Another important finding is that individuals with higher education have lower probability of being unemployed or out of the labour force, as compared with the reference category: those with none or less than basic education.

Moreover, impact of education on labour force participation varies with gender. For women, graduating tertiary education is associated with a significant reduction of the probability of being out of the labour force. However, lower levels of schooling have no influence on the likelihood of being out of the labour force for them.

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5. FINANCING OF VET (INITIAL AND CONTINUING VET)

Examples:

- Evaluation/impact of type of financing on participation
- Direct and indirect costs of VET
- Specific financing arrangements for disadvantaged groups on the labour market

5.1 WHAT ARE THE CURRENT KEY ISSUES OR PROBLEMS INVESTIGATED BY RESEARCH IN RELATION

TO “THE FINANCING OF VET”?

Current key topics investigated in relation to the financing of VET include:

- Cost of vocational training programs in Romanian enterprises
- Decentralization and increasing the quality of education

5.2 PLEASE PROVIDE A LITERATURE REVIEW ON CURRENT NATIONAL RESEARCH TOPICS AND KEY FINDINGS ON THE FINANCING OF VET.

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- (1) **Report - Features of vocational training in Romanian enterprises** (*ro. Caracteristici ale formarii profesionale in intreprinderile din Romania*), National Institute for Statistics, 2007

Theoretical and methodological approach:

The report elaborated by the National Institute for Statistics aimed to inform on type and participation to vocational training in Romanian enterprises. Data was collected via a national enterprise survey which covered all NACE divisions, except for agriculture, hunting and forestry, fisheries, public administration and defence, education, health and social assistance. Sample included enterprises with 10 employees and more. Data was gathered in the period April – June 2006.

One of the main topics of the survey was represented by the costs of the continuing and initial vocational training in enterprises. Costs of continuing vocational training includes: tax and payments to the training providers, costs for the transport, daily allowance and accommodation of the participants, labour costs for inside trainers and staff involved in organising the training and costs with the location, equipments and materials used in training. On this ground, average costs of training per participant and per hour were computed. The study also reports labour cost of the participants to training computed as total labour costs of the participants divided by the number of worked hours and weighted with number of hours in training. So, total cost of the continuing vocational training programs includes cost of the training and labour cost of the participants.

Main findings:

Per total, labour costs of the participants to vocational training programs represent 46.6% of total costs of the continuing vocational training programs, while costs of the training count for the rest of 53.4%. Highest shares of cost with the training are registered by mining, other services and commerce, while highest shares of labour costs of the participants are displayed by energy, hotels and restaurants. Also, findings of the report show that share of labour costs of the participants increases with the class size of the enterprise.

Total cost of vocational training programs by components, NACE and size class (%)

	Labour costs of participants	Cost of training programs	Total
Mining	30.2	69.8	100
Manufacturing	48.0	52.0	100
Energy	57.1	42.9	100
Constructions	56.0	44.0	100
Commerce	40.0	60.0	100

Hotels and restaurants	57.6	42.4	100
Transport, storing and communications	52.8	47.2	100
Financial activities	46.7	53.3	100
Real estates	40.6	59.4	100
Other services	32.7	67.3	100
10-49 employees	35.5	64.5	100
50-249 employees	43.9	56.1	100
250 employees and more	48.1	51.9	100
TOTAL	46.6	53.4	100

Additionally, highest average cost of continuing vocational training per participant is registered in mining and the lowest in constructions. Also, highest average cost of continuing vocational training per hour characterises mining industry, while constructions display the lowest cost. Similar results were obtained for average total cost of continuing vocational training programs per participant and per hour by NACE.

 (2) **Research report “Romania: public expenditure and institutional review”**, World Bank, 2006

Theoretical and methodological approach:

During transition, the Romanian education system has experienced several major reforms regarding the governance of the system and curricula. However, important deficiencies remain, mirroring problems of efficiency and efficacy of the resources use. The report elaborated by the World Bank aims to analysis features of the education system in Romania with focus on expenditure, budget and financing process and policies. The assessment points out that the system is under-funded and inefficient. So, an education financial impact simulation model was developed for estimating education cost needed for improved educational outcomes and increased efficiency of service delivery.

Main findings:

Under-funding of the education system is coupled with the inefficiency of resources spending, determining low quality of its results. Moreover, design of the budget processes doesn't provide the needed flexibility in the field. So, increasing funding is needed, but also factors underlying inefficiency of resources allocation and spending have to be corrected. Data analysis in a comparative perspective with other countries highlights the necessity of the increase in pre-university teacher salaries. Also, the report points out to large discrepancy between proposed and executed budgets which make planning very difficult. Also, local authorities are reluctant to increase their responsibility within the educational system as long as they have little control on the teachers' salaries negotiations.

One simulation model was developed in order to estimate the financial developments in the public education sector, covering all levels of education. Results predict a decline in enrolments for most of the levels of education, with a loss of 800,000 students by 2013. Such loss would produce a decline in number of teachers with 50,000. Results of the model recommend giving to local governments full responsibility for setting the school budgets.

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