

A Transnational Analysis – Two Models: Migration and Employment across Europe. Academic Qualifications and Labor Market Needs

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***Abstract.** Supporting sustainable development should remain a permanent concern, especially focus on increasing resources efficiency should be the first priority in order to ensure balance and flexibility for growth and more and better jobs creation. Investments in human resources represent a key factor in supporting economic development. The most important investment for HRD is the investment in human capital, and, mainly, in education. The quality and labor force qualification should be promoted by encouraging people to participate in education. Education institutions should participate to the gaps identification given the labor market demands, to create an educated labor force with the right qualifications. At the same time, companies should be encouraged to invest in their employees training, through the job training or lifelong education. All these in supporting the knowledge promotion, because the knowledge, as is defined by the Nobel Price laureate, Herbert Simon, became “the element number one of economic growth ...”.*

Key words: GDP per capita; employment; migration; training; qualifications needs.

I. Migration and employment across Europe

I. 1. Introduction

One of the major objectives of the European Union is the promotion of employment, improvement of living and working conditions, proper social protection, dialogue between management and labor, the development of human resources with a view to lasting high unemployment and the combating of exclusion. All these should be regarded in connection to educational process, considering that the linkage between these two systems is essential for developing a sustainable development framework.

An important fact that should be mentioned is that the labor policies gained importance year by year; some significant facts in sustaining the previous idea could be made as follows:

- only few consideration in what regards the labor market policies were considered in The Treaty of Rome, the main accent being put on the economic policies;
- until 1972 the social policy was mainly led by the functioning of the market economy and the measures considered were pointing to the functioning of the European Social Fund;
- only in 1974 the First Programme of Social Action was adopted in the field of employment protection, health and safety and employees participation;
- The Social Charter from the early '90s represented a major moment for emphasizing the importance of the social and employment policies;

- The Treaty of Maastricht promoted this policy field as one among the major ones and a Protocol and Agreement on social policy were added to the new Treaty;
- The Amsterdam Treaty and The Nice Treaty brought more refinements in the previous actions in the field of social inclusion.

It is obvious today that the problem of employment and labor policies as well as educational policies represent major pillars around which the European Union's policies turn around.

1. 2. Migration-GDP per capita analysis

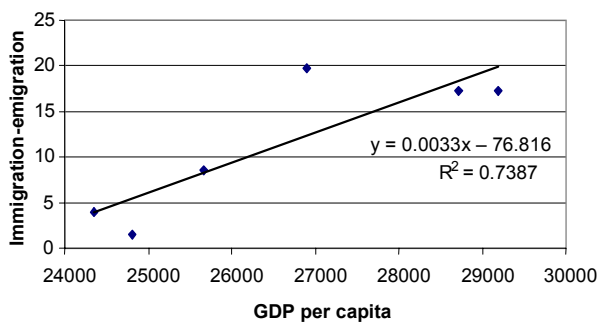
The construction of the model describing relationships between migrations and GDP was based on values of the net migration compared to GDP per capita. Unfortunately, data referring to migration processes are presented differently in studied countries. Data obtained from the same statistical methods are available only for Austria, Lithuania, Poland, Slovenia and Sweden, where the net migration indicator (named net migration in further discussion) is defined as:

$$\text{net migration} = \text{immigration} - \text{migration}$$

and refers to the same periods (net migration in a given year is equal to the difference of the immigration and the migration in this year).

With regard to the above-mentioned lack of comparable data for all European countries, it is also impossible to assign the general indicator of the migration relevant to EU-15 or EU-25 countries. Some data are accessible from 1990 to 2002 (excepting Austria: 1996-2001). The size of immigration as well as the range of migration is measured in thousands of persons and GDP per capita is quantified in USD.

The relationship between GDP per capita and net migration in Austria takes the following form (Figure 1):



Source: www.euridice.org, Eurostat.

Figure 1. The relationship between GDP per capita and net migration in Austria

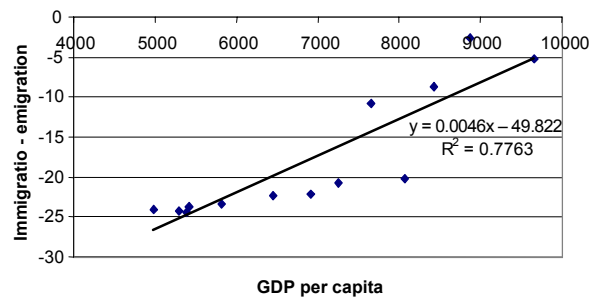
The growth of GDP per capita causes the inflow of people to Austria and the migration is overcome. According to the slope coefficient an increase in GDP per capita equal to one USD gives an average growth of net migration equal to three persons.

The relationship between the two discussed indicators in Lithuania is presented in Figure 2. In Lithuania the relationship between variables is also positive (like in Austria) but the values of the net migration are negative, i.e. the migration exceeded the immigration in the whole analyzed period. Another rule appears: the larger GDP per capita the smaller the difference between the immigration and migration. According to the slope coefficient an increase in GDP per capita equal to one USD causes an average growth of net migration equal to almost five persons.

The dependence between GDP of the migration was also analyzed for Poland (Figure 3).

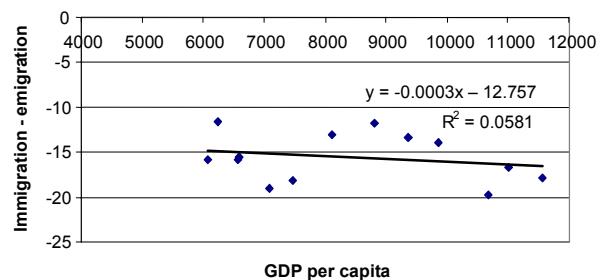
According to data from years 1990-2002 a constant tendency towards the migration exists in Poland irrespective of changes in GDP per capita. The migration exceeds the immigration in all studied years.

A similar situation was observed in Slovakia - Figure 4.



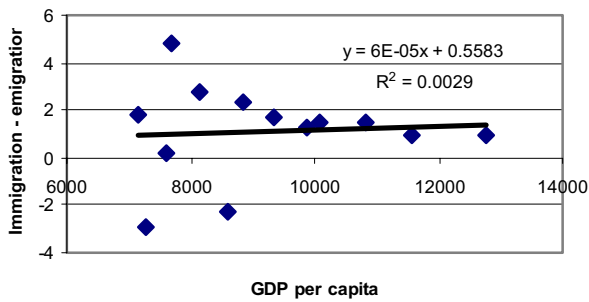
Source: www.euridice.org, Eurostat.

Figure 2. The relationship between GDP per capita and net migration in Lithuania



Source: www.euridice.org, Eurostat.

Figure 3. The relationship between GDP per capita and net migration in Poland

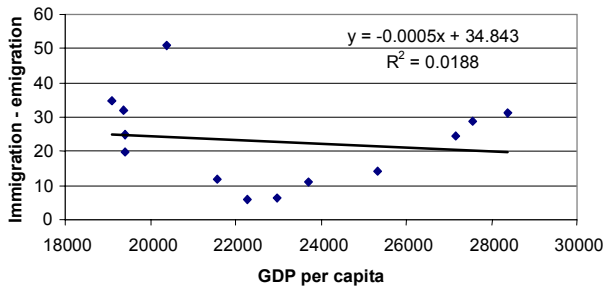


Source: www.euridice.org, Eurostat.

Figure 4. The relationship between GDP per capita and net migration in Slovakia

The size of the immigration is higher than the size of the migration in Slovakia in all years.

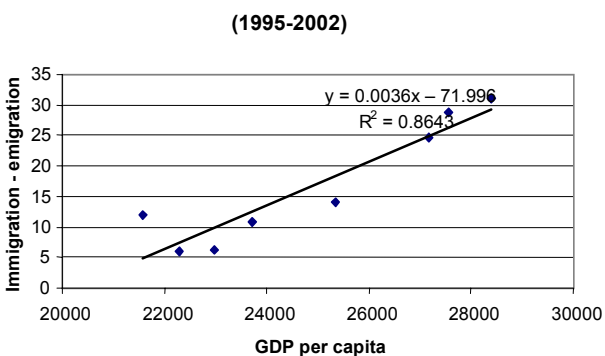
In Sweden the rise of GDP per capita is followed by the drop in migration (Figure 5).



Source: www.euridice.org, Eurostat.

Figure 5. The relationship between GDP per capita and net migration in Sweden (all observations)

After rejecting the observations from first years, i.e. 1990-1994, when minimum values of GDP per capita occurred in Sweden, a relationship can be derived (Figure 6) reflecting a higher inflow of people exceeding the migration.



Source: www.euridice.org, Eurostat.

Figure 6. The relationship between GDP per capita and net migration in Sweden (chosen observations)

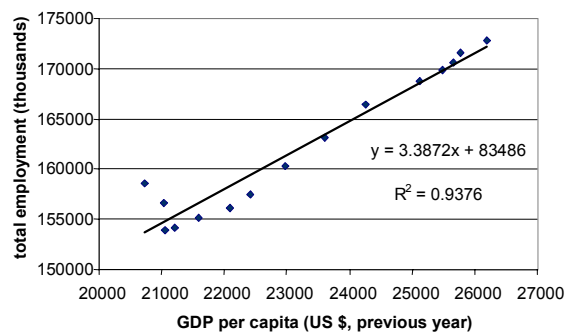
I.3. Employment and GDP per capita analysis

The relationship between the size of employment and GDP per capita was studied assuming that the effects caused by changes of GDP are not immediately perceptible. The dependence was analyzed on condition that the earliest changes are noticeable after one year from recording a particular value. Let Y_t denote total employment (t is the current period) and X_t denote GDP per capita, the proposed model is represented by the following equation:

$$Y = f(X_{t-1}, \varepsilon)$$

where ε denotes the disturbance.

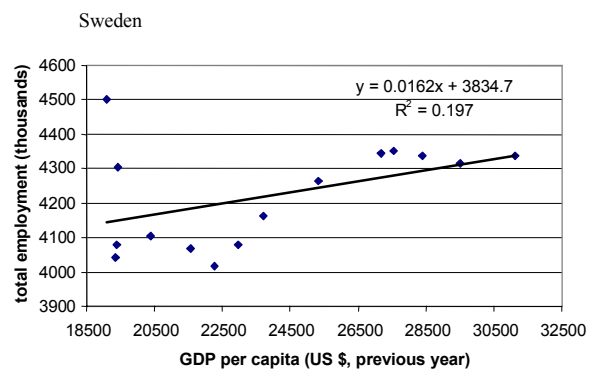
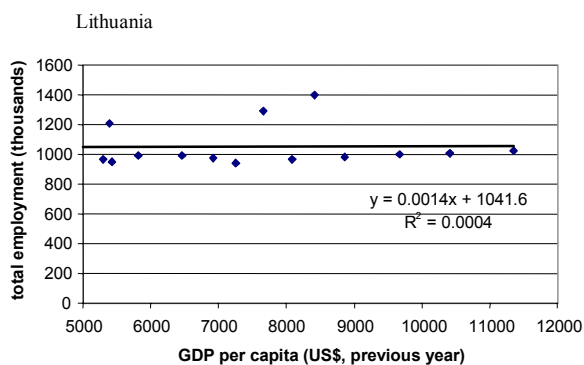
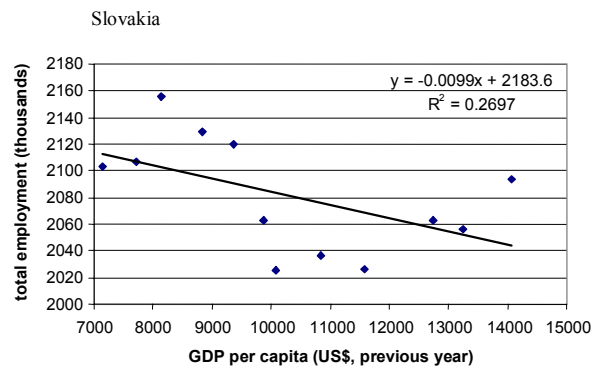
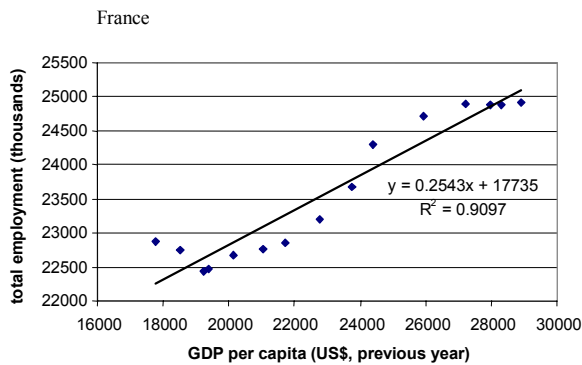
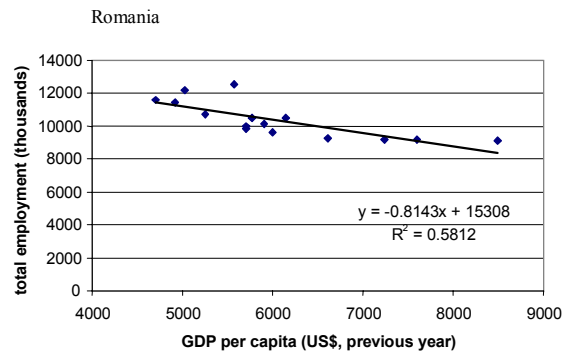
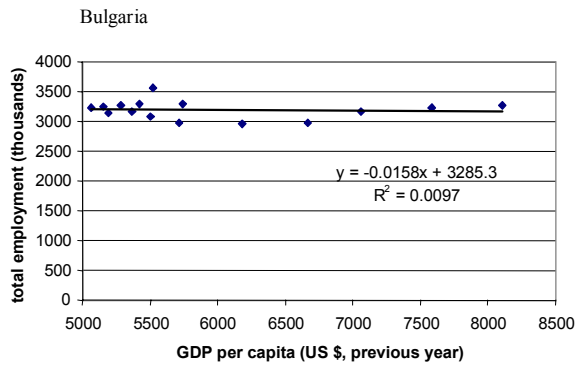
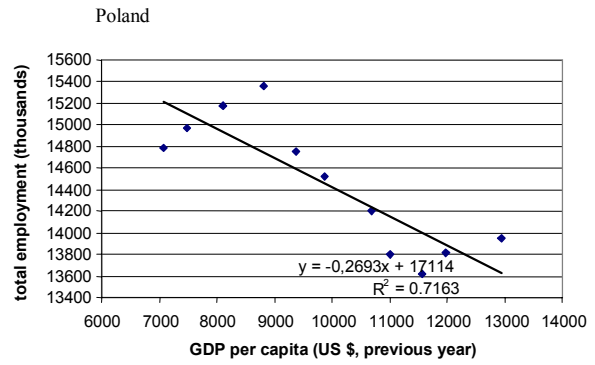
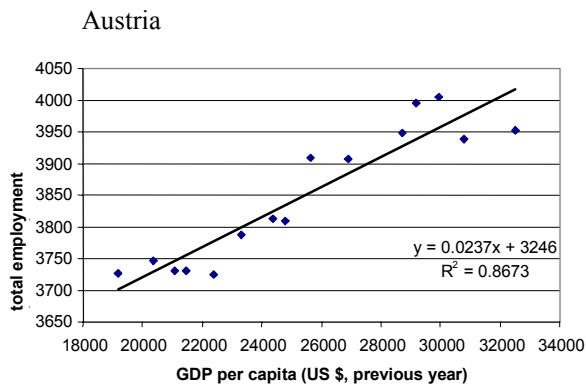
The linear dependence of variables was imposed on all models in order to compare conclusions drawn from observed relationships. The choice of the function was made after finding the best mapping with respect to the goodness of fit for EU-15 model. The increase in size of employment accompanying the growth GDP per capita (in the previous period) was revealed in the group of EU-15 countries (Figure 7).



Source: www.euridice.org, Eurostat.

Figure 7. Dependence of total employment from GDP per capita in EU-15, 1990-2005

The linear relationship between regarded variables is not the best solution for all examined countries (Figure 8). It would be very difficult to determine any other function in case of Bulgaria and Lithuania, because the impact of changes of GDP per capita on employment is not detectable. A worrying tendency could be identified in Poland, Romania and Slovakia as the increase of GDP per capita in a particular period does not have positive influence on the size of employment in the next period (the decline is discerned).



Sursa: www.euridice.org, Eurostat.

Figure 8. Dependence of total employment from GDP per capita in chosen European countries

I.4. Conclusions

The present paper tries to offer an overview on employment in the European Union, the relation between employment and GDP per capita and the relation between migration and GDP per capita. Another step for further

research will be to realize the connection between these two analyses in order to develop an integrated econometric model which will be able to analyze the relationship between migration employments across Europe.

II. Academic qualifications and labor market needs

II.1. Introduction

The general objective of the research was to establish the special demanded needs of the labor market regarding the visible results of the national educational systems through qualifications.

The present proposal makes an original contribution to the present status at national level, by developing both bottom-up and top-down research in Europe in order to identify a common denominator for the process of ensuring Transparency of Academic Qualifications and Competences (TAQC) in connection to Mobility of Labor in Europe (MOLE). Another original contribution is that of bringing together not only specialists from the Ministries for Education, but also to involve in the process researchers in the field, representatives of students, graduates, unemployed on the one hand and representatives of European and international organizations in the field of employment, SMEs organizations representatives because we consider that ensuring the transparency of TAQC is unfeasible unless we involve the representatives from the labour market in the research process for identifying the correct needs for high-skilled labour force at European level.

II.2. Description of the methodology

A questionnaire was design in order to obtain adequate data concerning the general structure of a qualification in the partners' countries. The questions refer to the basic components of the qualification, in various fields of training and activity, according to the new initiatives at European level, namely the ones referring to European Qualification Framework. The scope is to identify the essential characteristics of a qualification, which will permit, by generalization, the transparency and its general acceptance from the labor market.

The questionnaire does not address the specific knowledge or competences of a sector or an activity following the general principles or features that must govern the issue of a valid qualification. This research aims to identify a general, common structure of a qualification, existed or required, adequate for all areas and for all countries involved in this project and not to identify some specific training elements that are missing from a qualification.

In this way the information gathered offers an image of the state of art of a qualification, the adjustments required by the labor market and the essentials characteristics of qualification in all countries participant to the research.

Most of the questions of this questionnaire are pair-questions addressed in the same time to the employees and employers in order to observe the differences or the similarities. The pair-questions will give the opportunity to analyze the same matter from two different sides: the point of view of the offer – education and the opinion of the demand – labor market.

There were two different interview templates addressed to each group of respondents:

- A. Graduates, employees of a company (450 answers);
- B. Employers, companies' owners (450 answers).

II.3. Qualifications needs

The information is presented starting from the four elements of the qualification definition of the European Commission document referring to European Qualification Framework: knowledge, general competences, professional competences and personal skills development which cover the entire area of competences that a person must obtain in order to perform an activity.

II.3.1. The general importance of the education level

Below, there is presented a general opinion of respondents on the received level of education comparing to the one required on the labor market. The following pair-questions were asked:

- *“For your job position, the degree or qualification that you obtain during your education is mandatory?/This specific job position requires the degree or the qualification that your employee attended during the education period?”*
- *“How you will appreciate the relevance of your qualification for performing the actual job?/ How you will appreciate the degree in which your employee qualification corresponds to his/her job?”*
- *“Have you taken into consideration other documents referring to the educational background of the employee?”*

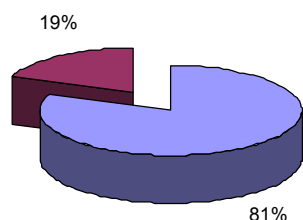
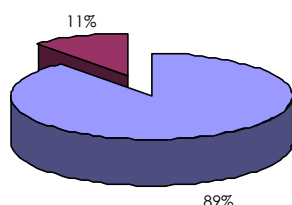
For the first pair of questions the answers of employers/ companies' owners and of the employees are quite similar. Both groups recognize the importance of the degree as a mandatory condition for acceding to a job and a need for a rather high level of general knowledge and competences. More company owners demanded for employees with better degree.

The respondents appreciated that there is conditionality between the qualification obtained during the education and a specific job position.

The mandatory aspects

Table 1
%

Country	Graduates' answers	Employers' answers
Austria	75	93,5
Bulgaria	74	90
France	76,5	92,4
Lithuania	73	73
Romania	97,3	100
Slovakia	89,3	86,7

Chart 1. *Employees- mandatory aspects*Chart 2: *Employers – mandatory aspects*

In the Chart 1, 81% of interviewed employees appreciate as mandatory for their actual job position the qualification degree that they have obtained.

In the Chart 2, 89% of the interviewed employers recognize that the qualification obtained during the educational system guide them to choose their staff. Even if they mentioned in various occasions that the “diploma” is not a key factor, only 11% do not take into consideration this aspect when decides to employed a person.

From the table it is obvious that in all partners, from Eastern countries or from Western group of partners, the employers and employees are agreeing with respect to the importance of an adequate qualification/diploma for acceding to a job. The minor difference in figures between the two groups of respondents has in reality a meaning more profound. Even both groups express dissatisfaction of the current level and way of organization of the educational system in the country and its relevance to the changed needs of the labor market, the labor market is relying on the educational system in almost 90% being in fact the central element on which depend the professional lives of a graduate. On the other hand, the employees seemed not to be entirely aware of the degree in which their diplomas have decided their acceptance for a job.

The question referring to the relevance of the education acquired for the current job revealed other differences between employees and employers.

In total, the number of employers appreciating as relevant the formation of their employees is bigger than the number of the employees who consider their formation relevant for the activities they have to perform. Like in the case of previous question, it seemed that the employees are not aware of their value on the labor market, the percentages indicating an undervaluation of their qualifications relevance for the actual job position.

If we analyze the answers on the 1-5 scale the situation changes: the employers seemed to be satisfied with the qualifications of their employees at an average level while employees consider the relevance of their qualification as rather high and very high.

II.3.2. Detailed analysis of the qualifications needs

Apart from the general question concerning the qualification status there is a need for an in-depth analyze of the competences needs and the gap between their level offered by the education system and the one required by the labor market. One of the most important questions from the questionnaire refers to the assessment of the qualification level (acquired or needed) from the point of view of its four components: knowledge, general competences, professional competences and personal skills development.

The following pair-questions were asked:

- “What level of qualification did you acquired during your education program?/Please, try to assess what level of needed qualification you think your employee acquired during the education program?”
- ”How big is the gap, in each of the qualification element, between what is required of you to know in your current job and what you learned during your education period?/How big is the gap, in each of the qualification element, between what is required of employee to know in his/her current job and what he or she learned during your education period?”

There are obvious national differences reflecting the characteristics of national education systems and the specificity of the requirements of the labor markets.

In general, knowledge and general competences are the elements often mentioned at “rather high” and “very high” level, while professional competences and personal development are in the average level.

The first element – the Knowledge

More than 70% of employers appreciate the knowledge of their employees at “very high” and “rather high” level while only 60% of interviewed employees shared the same opinion.

We have to mention Lithuania, where 100% of the employers are very satisfied with the knowledge acquired by their employees. It is followed by Bulgaria with 76% of employers appreciating a “very high” level of the knowledge of their employees and by Slovakia with 56%.

In Austria and France case the answers are more moderate the majority indicating a “rather high” level and Romania with an “average” level.

For all the level the percentages indicate that the employees wanted more from the education system in terms of knowledge even if their employers are rather satisfied.

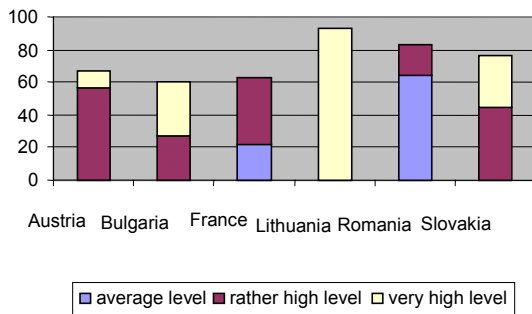


Chart 3. Employees – knowledge level

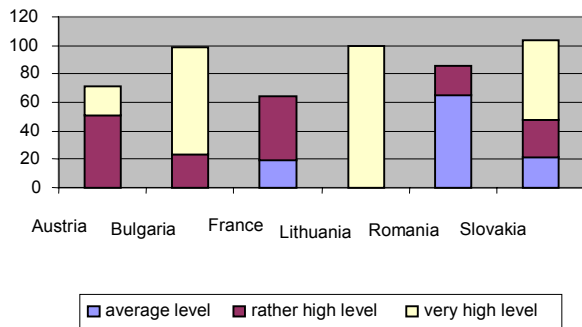


Chart 4. Employers – knowledge level

The second element - General competences

For this component of a qualification the percentages indicate a similar trend towards the “rather high” and “very high” levels with the difference that the biggest percentage indicates the “rather high” level and only in the second position the “very high” level.

The national disparities are not so important and the gap between percentages is more reduced. Except Bulgaria, where the majority of both groups indicated the “very high” level, and Romania, with an “average” level, the countries’ respondents appreciated a “rather high” level of the general competences followed by important numbers for the “average” level.

As in the previous case, the employers have a better opinion than their employees on the level of general competences. This survey detected a positive trend with regard to the knowledge and general potential of the labor force.

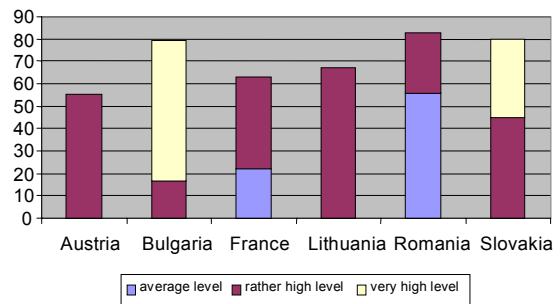


Chart 5. Employees – general competences level

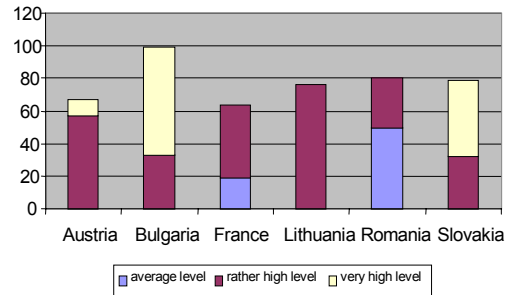


Chart 6. Employers – general competences level

The third element - Professional competences

The survey revealed the fact that professional competences are not the strong elements of an acquired qualification. Only 30% considered as attain a “very high” level of professional competences, approximately 25% “rather high” while 20% indicate an “average” level.

The national differences are again very well underlined (Lithuania with 91% of employees and 96% of employers declaring a “very high” level of professional competences or Romania with 56%, respectively 40% indicating an “average” level).

In total, both employees and employers shared the same opinion regarding this set of competences. Even if the number of employers surpasses the one of the employees on every level the difference is negligible.

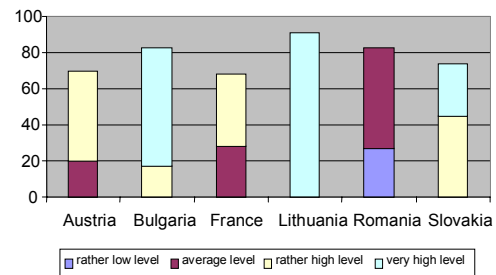


Chart 7. Employees – professional competences level

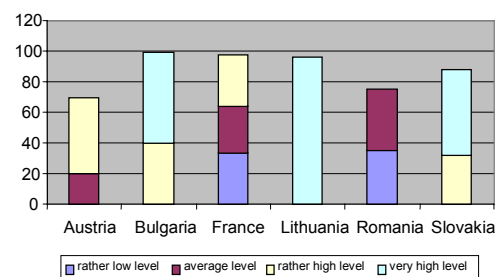


Chart 8. Employers – professional competences level

The fourth element - Personal skills development

The figures demonstrate that the adjustments in response to the new business environment requirements, especially in recent years, were less developed by the educational systems. It is obvious that this element of a qualification is less acquired/accomplished, from both point of view of employees and employers. The smaller percentages, except employees from Bulgaria, indicated for “very high” level sustains this idea.

This type of competences of labor force is recognized as insufficient and inappropriate for the existing demands. The opinions are divided between “average” level and “rather high” level: employees 31%, respectively 30%, and employers 23%, respectively 39%.

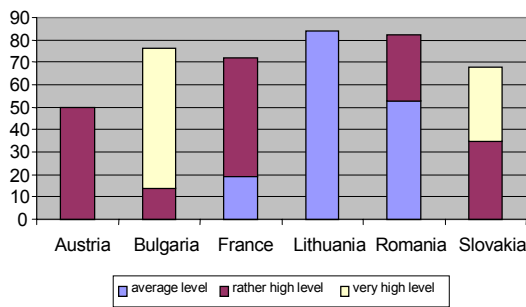


Chart 9. Employees – personal skills level

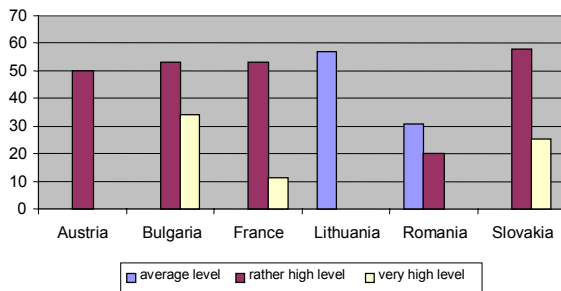


Chart 10. Employers – personal skills level

Except Lithuania, with a “very high” gap in the case of personal skills development, the respondents do not underline the existence of very important gaps for none of the four component elements of a qualification. Even in Romania’s case, with an “average” level of satisfaction concerning the qualification level, the gaps do not exceed the 25% for a “rather high” gap for knowledge and 49% “average” gap for personal skills development.

Slovakia states that there is a relationship between the qualification for the labor market and the field of study confirming the existing discrepancies that can be explained only by national differences or, inside an education system, by differences of competences for various field of activity.

Majority of education systems laid stress on knowledge and general competences of students but they did not pay enough attention on the last two elements: professional

competences and personal development. Professional competences and personnel skills are mentioned as less proved by the graduates or young employers.

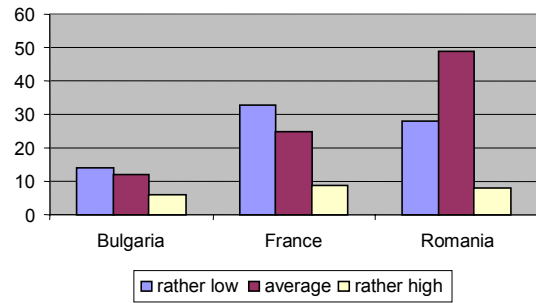


Chart 11. Gaps for personal skills

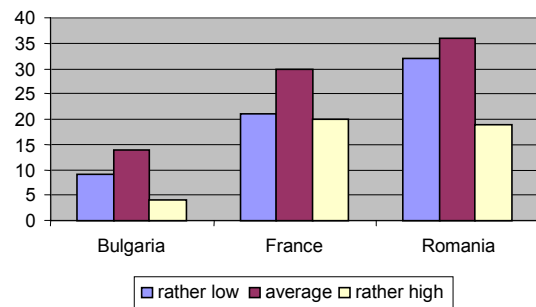


Chart 12. Gaps in professional competences

II.3.3. The most necessary personal and professional skills

The evaluation of qualification level was made in principal in accordance with the level of comfort in performing specific job activities and performance achievements in this job, followed by level of performance in specific courses.

Romania also mentioned (28%) the feedback from previous jobs.

It is worth mentioning also the France case, where the HR opinion is crucial for evaluating the qualification level of an employee and increasing the importance of the professional and personal skills development as ability to integrate into a team, sense of autonomy and responsibility, ability to integrate and acquire new skills.

Group A: Graduates, young employees

According to the respondents the most necessary personal skills is *communication* and *responsibility*. Personal characteristics which are also important are: flexibility and teamwork capacity. Such person should also have the leadership ability, persevering and rigorous person and be able to take decision in short time.

The most important professional skills are: *language knowledge* and *computing competences*. There were also mentioned such traits as leadership, education profile and communication skills, conflict management.

Also, in terms of professional skills the most common were knowledge in a field. It seems that those who are preparing the students underestimate the management skills in comparison to others. In general the skills possessed by most of respondents were on average level.

Group B: Employers, company owner

From the companies' owners' point of view the employee should be: *communicative, open minded, ambitious, and well-organized.*

As far as the professional skills of such person are concern, the most often mentioned were: *knowledge and good professional qualifications, able to analyze, sense of synthesis and discernment.*

In companies' owners' opinion, their young employees possess the highest level of knowledge (70%) and the lower level of personal skills.

To sum up the level of competences possess by young employees, their level of qualification is a bit higher than the average level. The competences which are more developed were knowledge and general competences, while both young employees and employers considered having small access to professional and personal skills.

II.4. Training of graduates/ young employees

Group A:

Almost 66% respondents have participated in the professional training and more that 75% declared acquiring additional knowledge. Among those who have taken part in such trainings the most popular ones were: informal or formal on the job training with an accent on specific courses provided by the company, management trainings, administration courses.

The most often mentioned reasons why people didn't participate in the trainings were: the incipient stage of their activity in the company.

It seems that among the respondents there is a rather high need for trainings. The gaps mentioned by this group underline *the highest need for those contents in the trainings from the area of: personal skills development, professional competences but general competences as well* (please see the Table 4 for details). As far as the *needs of training are concerned*, more than 50% of the respondents mention to acquire additional knowledge relevant for their job position.

Group B:

Most of the companies' owners have organized professional training for their employees. The content of the trainings was diverse and referred to the specific of the company, management, use of the ICT etc.

Both groups see the advantages which came with the participation in the training.

The average participation in training of the competences is higher than the average estimation of existing gaps. There were some skills, which – in employers' opinion – they had in lower level so the offer for training those skills was bigger. The highest discrepancies, which can be interpreted as *the need for training those skills, were in the professional competences and personal skills development.*

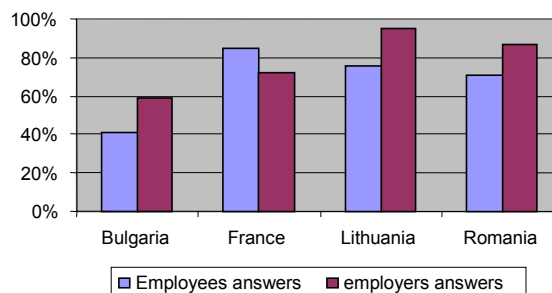


Chart 13. Participation in trainings

II.5. Educational system

Despite the appreciation concerning some of the competences of their employees, in general, the employers are satisfied with the overall preparation of their employees.

Every country mentioned as the most "critical" problems of national education systems *"to cross over theory to reach practice"* or *"connecting theory with practice"*.

Other issues were:

- To train students in team management;
- To develop communicative skills;
- To develop the students' sense of analyze, foreign languages;
- Management skills, planning skills.

There is a growing concern of the employers to encourage the personal skills development of their employees, the majority wishing that higher education will focus on personal skills also.

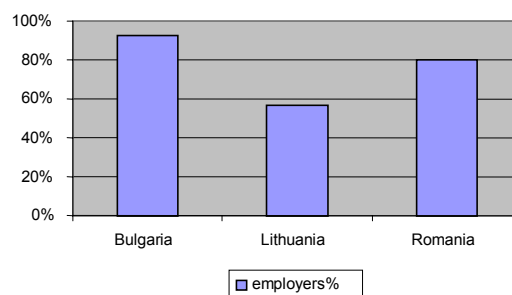


Chart 14. General opinion

Both groups express dissatisfaction of the current level and way of organization of the educational system in the country and its relevance to the changed needs of the labor market, in particular to obtaining practical skills and the

so called 'soft skills' (for example, the skills to communicate effectively with colleagues and managers, to work as part of a team, to present ideas and arguments in a clear, grounded and unbiased way), as well as business skills (such as entrepreneurial skills, performance management, awareness and understanding of market trends, etc.). At the same time, there were expressed opinions about the fact that the system of education and training is proved to be very difficult to influence, neither directly or indirectly, and to foster the change and adaptation of curricula and the quality of service delivered.

II.5. Conclusions

The level of employee qualification has an important impact on the quality of both the company and employee job performance. From this point of view awareness of a company's competences need is a starting point for the design of labor force development strategies.

The present survey focuses on more detailed analysis of graduate competences in terms of how they are obvious for possible employers and how they are actually taken into account in the workplace. The majority of the employers stated that personal skills of an employee play in our present a crucial role in the labor market.

Almost 80% of employers considered the continuous development of competences as a company responsibility, investing in training and acquisition of supplementary competences of their staff. The percentage of employers assuming the responsibility for staff training is significant. Still, the employers believe that skill development must

be also a responsibility of education system. Nevertheless, private employers rely on the educational system and on the employees' qualifications. The „official” documents of a qualification being „mandatory” for a job position in many fields of activities.

The main finding of this survey is that labor force has confidence and relies on national education system. Often, employers do not require additional documents, certificates basing their decision on the relevance of different diplomas. There is obvious a discrepancy between the perceptions of employers on the one hand and graduates/employees on the other hand concerning the levels of different elements of a qualifications. The need of better visibility of the learning results may be a key factor for bringing together the two groups and diminishing the gaps between the expectations of each other.

In all cases, both surveyed groups feel the pressure of an increased competition is a globalized economy and the necessity to learn more and be more flexible and adaptable to different cultures and mentalities and market demands. This also entails the necessity of building team-playing skills and a sense of corporate identity through communicating of ideas and sharing common development goals.

The long-term objective of the survey and the project as a whole is communicating the findings and make a positive change in order to fill the gap between the higher education and the labor market.

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