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Examination of the causes of overeducation among graduate young adults in Transylvania

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Introduction

The political transformation after 1989 resulted in important changes in the socio-economical structure of Romania. One of the major changes was the massive job loss, the drastic decline of the ratio of employed population together with a high unemployment. Parallel with those started a rapid growth in attendance at graduate studies and the expansion of higher education haven’t stopped since.

In these conditions it is an important research area analyzing the possibilities of employment for the graduate population. One of the important aspects of the problem is the so called job-matching, meaning the relationship between qualification and job description where the match depends on the qualification. (Galasi, 2004a) One type of mismatch is overeducation when the employee has a higher degree than necessary for that specific job. In this paper I examine the question of overeducation among the graduate young adults in Transylvania, Romania.
Theoretical considerations

Exploring the problem of overeducation we can draw different explanations from macrostructural determinants (economical, socio-structural, cultural, historical, institutional) to individual causality. Because of that I use the rational choice theory as a starting point to analyze the mismatch between the qualification and job requirement. Using this paradigm is a new approach in explaining the causes of overeducation. Using it as a theoretical frame gives an opportunity to handle in aggregation all of the most important economical and sociological models and theories developed to explain the problem of overeducation. Another merit of the rational choice theory is the possibility of using multi leveled analysis such as collective examination of macro-micro and micro-micro mechanisms.

The macro-level approach has a starting point the growth of the graduate labor supply. Here it is important to differentiate two acting models. One is the decision of the high school graduate to pursue a higher education. The other model is the decision of the leaders of higher educational institutions regarding the numbers of accepted new students. The consequence of those two decisions is the growing number of graduate labor supply.

We can explain the effects that the growing number of highly educated labor supply has on the job matching by using the neoclassical model (Freeman, 1975), filtering/signaling approaches (Arrow, 1973; Spence, 1973; Stiglitz, 1975), the human capital theory (Becker, 1962; Mincer, 1958; Mincer, 1962; Schultz, 1998), the job-competition model (Thurow, 1975) and the assignment theory (Rosen, 1978; Sattinger, 1993).

Based on the models enumerated above - accepting Boudon’s statement (cited by Horváth D., 1991) - it can be concluded that the equalization of the inequality of accessing higher education does not solve the problem of the social or economical inequality but it pushes it on
a higher level. The decision of the individual regarding pursuing higher education if the same
decision is made by more and more people can have unwanted side effects so-called pervert
effects such as overeducation and/or graduate unemployment.

According to this it seems like the competition has moved from the school to the job market,
consequently it’s harder to find a good job. (Horváth D., 1991) In contrary with Freeman’s
prediction all of that haven’t diminished the demand for higher education in contrast it
increased that. Higher education became a defensive necessity. (Thurow, 1975)

Considering the above in this paper I will concentrate mostly on analyzing the micro level
models.

Using the theory of rational choice as a working model projected on micro level we can
conclude that the action/decision made following graduation it is a result of a two, connected
filtering procedure. Entering the labor force a newly graduate theoretically has different
choices, such is to apply for a job matching his/hers education, to apply for a job for which
he/she can be considered overeducated or facing unemployment. In reality a person could be
faced by different restrains during decision making. Those restrains act as a filter and
consequently the first choice to find a job matching the person’s education level becomes
unrealistic. The poll of choice is reduced to find a job where the person would be
overeducated or to face unemployment. At this point the rational choice as a micro
mechanism acts as a second filter. At the given circumstances being overeducated it is a
viable alternative for unemployment.

The restrains enabling a person to access a job matching his/hers level of education could be:
the deficiencies in the social capital (reconversion strategies - Bourdieu, 1978), less skills
(heterogeneous skills theory - Allen and van der Velden, 2001), the cost of the job search (job
search theory - Stigler, 1961; Büchel, 2001), and in the case of woman’s the marital status
(theory of differential overqualification - Frank, 1978). From the labour market view a restrain can be improper qualification.

Not all graduates face the restrains enumerated above. In this case I assume that the unemployment is the unrealistic option. In that case the person can choose between being overeducated or finding a matching job with his/hers education level. In this decision-making situation the typical attitude is choosing the matching job, but this may not realize after graduation, it could require a time lag.

If graduate would choose to work on a job as overeducated, it can be explained by a better job expectation (theory of career mobility - Sicherman and Galor, 1990), or by imperfect information (job matching theory - Jovanovic, 1979a; Jovanovic, 1979b), but after a period of time and changing jobs they could reach the optimal match. In this interpretation overeducation is a temporary situation in the life of newly graduate young adult.

**History of research in overeducation**

There is a lot of discussion in literature regarding the causes and/or consequences of job mismatch. An important part of the publications analyze the over/undereducation in connection with earnings (Chevalier, 2000; Dolton and Vignoles, 2000; Galasi, 2004), the economists emphasizes the return of the investment in education. A significant part of the literature deal with the methods of measurement overeducation/undereducation (Van der Meer, 2005; Groot and Maassen van den Brink, 2000), there is no one accepted method in the operationalization of the concept. In this category we can include those researches that use a set of methods to get a more accurate measurement (Alpin et al., 1998; Chevalier, 2000), McGoldrick and Robst; 1996 Verhaest and Omey, 2004).
In this paper I try to use a different approach to overeducation. My objective is to explain why a person would accept a job below his/hers educational level, a job which does not require any utilization of his/hers acquired skills.¹

There are several empirical researches available answering this question. Some explain the phenomena of overeducation with the effects of the family background (Battu et al., 1999 Büchel and Pollmann-Schult, 2001, Patrinos, 1995 Patrinos, 1997 Verhaest and Omey, 2004), or lack of skills (Chevalier, 2000; Dolton and Vignoles, 2000; Green et al., 1999; Robst, 1995). Others explain overeducation with the improper qualification (Allen and de Vries, 2004; le Grand et al., 2004), or that the largely available higher education is not able to compensate the existing inequalities between social groups (like male and female, whites and ethnic minorities) (Alpin et al., 1998).

Some researchers found that overeducation is a temporary mismatch. (Alba-Ramirez, 1993; Hartog, 2000) In their opinion overeducation is a growing phenomenon which is persisting but for a lot of individuals is just a temporary state. Employers as they acquire the necessary skills and gain experience will be able to improve their match.

Considering the available empirical research results I will investigate how the enumerated ideas are applicable on the community of graduate young adults in a post socialist Eastern-European country.

Based on the theoretical considerations I will try to bring different explanations in terms of incomplete social capital or the expense of job search, and I will attempt to check them. In addition I will check the adaptability of the theory of differential overqualification explaining

¹ In this paper the employer side why they would hire such workers isn’t investigated. In accordance with this I consider those papers dealing with the theoretical and empirical analysis of the formation of the phenomena of overeducation from the graduate point of standing.
the phenomena among graduate Transylvanian women. Considering the Romanian economic reality and the accumulated field experience I will make an attempt to explain overeducation as a mechanism to avoid unemployment.

In this paper I propose to answer the following questions:

1. Which socio-demographical parameters can we use to delimit the different groups of graduate young adults formed as a consequence of job matching?

2. What are those personal factors that can influence overeducation? The analysis is focused around the question that the existence of the restricting factors makes overeducation to be an alternative to unemployment.

Questions regarding the restrictive factors:

2.1. In what degree can overeducation explained by the differences in social capital existing among the graduate young adults?

2.2. Is overeducation depends on the expenses of job search?

2.3. What role the differing skill level of the graduate young adults has on overeducation?

2.4. Does differential overqualification exist?

2.5. Is overeducation the same among the different specializations?

3. If there are no restricting factors present, overeducation is a temporary phenomenon or a persisting one?

The importance of researching overeducation

Analyzing job matching is a current and important issue. Below I will summarize some of the arguments supporting that.
Analyzing overeducation is not accentuated in Romania\(^2\) nevertheless overeducation is an important factor in the current labor market. (Stanciu, 1999)

Another argument is the expansion of the phenomena. According to the 2002 census in Romania 15.8 per cent population with higher education was overeducated.\(^3\) The rate of employees with superior educational level than required by their jobs are higher then the rate of unemployment.

Overeducation is important in the context of human resources because in Romania the rate of people holding a degree is low\(^4\) and this is paralleled with an extensive emigration of the graduate young adults\(^5\). In the above circumstances not exploiting the accumulated knowledge and competences could mean a great loss.

Overeducation does not appear in unemployment statistics which shadows the issue and in the same time gives a distortional picture about the demand of the labour market.

The consequences of overeducation bear another argument in favour of researching overeducation. Overeducation can influence job satisfaction (Burris, 1983), and lower productivity, since unused competences, unfulfilled expectations can bring job dissatisfaction, health problems or inappropriate attitudes on the job (Tsang and Levin, 1985). Jovanovic (1979a) pleads that job mismatch has a high probability to end with quitting.

\(^2\) There not enough research in Romania dealing with the return of the investment in education. The first publication in this are occurred in 2004 by Andren et al.

\(^3\) Measuring overeducation was done with the job analysis method described in an upcoming part.

\(^4\) According to the 2002 census in Romania the rate of the population 20 years old or over with a higher educational degree is 8.5 per cent. Source: own calculation based on data from CNS (2003).

\(^5\) Even if there is no exact available data there are related empirical researches available to prove that. Bálint D. Gy. (2004) examines the emigrational aspiration of the young adults population of Szeklerland. In Transylvania we can refer to Kiss and Csata (2004) who overviews the results of analysis of more research aimed to investigate the emigrational potential, Gödri (2004) examines the characteristics of population immigrated to Hungary. This is sustained by Pănescu’s (xxxx) analysis related to Romania where he attracts our attention to the phenomena of so called brain-drain.
The importance of investigating overeducation is supported by expected future trends, labor market experts project that overeducation in Romania will grow further. (Hritcu, 2008)

In conclusion the importance of analyzing overeducation is relevant and opportune; the relevance of working knowledge of the issue in this region in the upcoming years is expected to grow.

Methodology

Measuring overeducation

The definition of overeducation/undereducation in literature is based on the match between the highest acquired educational level and a highest required educational level to perform a job. This definition sets a couple of problems originated from the ambiguity of rating the necessary educational level for performing a job.

In order to measure that researchers developed alternative possibilities.

a) Some researchers prefer the self assessment („subjective” method) method. (Alba-Ramirez, 1993]; Allen and van der Velden, 2001]; Alle and Vries, 2004; Büchel and Mertens, 2004]; Battu et al., 1999; Dolton and Siles, 2001; Dolton and Vignoles, 2000]; Green et al., 1999]; Hersch, 1995; Robst, 1995; Sicherman, 1991; Sloane et al., 1999; Vahey, 2000). In this method the person taking part of the research assesses the lowest educational level necessary to perform his/her own job.

b) The so called „objective” methods use the occupation to describe the educational level necessary for a job (job analysis model), based on the assumption that different occupational aggregates have set required educational levels. This method was used by: Berg, 1970; Lucas, 1977; Rumberger, 1981; Burris, 1983.
c) The third method was developed by Verdugo and Verdugo (1989). The core of the method that they use the mean or the mode of completed years of schooling for each occupational category to assess the necessary educational level for a job and a deviation from this is considered over/undereducated. (Clogg and Shockey, 1984; Groot, 1993; Patrinos, 1997; Rubb, 2003; Galasi, 2004a).

Next to the three basic methods there is an alternative method use by Gottschalk - Hansen (2003). Developed from the idea that a job requires a higher educational level if the workers with higher educational level earn better salaries. This method is used by Péter Galasi (2004b). Using this method based on salaries in Romania, would engage us in validity issues (at the time of this research there was no guaranteed graduate minimal salary, part of the graduates work in the public sector having relatively modest salary (Preotesi, 2004), graduates working in public schools earn a modest pay (Stoica, 2006). Because of that to assess to educational level required for a job I use the job analysis method.

Starting from the definition of occupation I assess the educational level required to perform a job with the occupations6, given that in Romania the hierarchy of occupations include the hierarchy of the educational levels as well. (Veres, 2003)

The job analysis method has its barriers - same like the other methods in use - but the available data does not permit the use of another method.

The advantage of the method is in its objectivity (Dolton and Siles, 2001), and reliability.7

6 This approach is popular in the literature. According to Galasi (2004b) a job requirement can be defined with the occupation.

7 There are advantages to this method. Chevalier (2000) for example develops a new method to calculate overeducation which is based on the satisfaction/dissatisfaction regards the match between occupation and education. The method developed by him had the same results as the job analysis method measuring the expansion of the phenomena. The correlation was the highest between those two methods regards the formation of over/undereducated groups. Verhaest and Omey (2004) tested several methods and found this method as being the most appropriate. According to their results comparing different methods the job analysis gave the most coherent results.
Measuring the mismatch is usually depends on the available data, but if the researcher has total freedom planning the data collection the job analysis method is still advisable. The advantages of the method depend on the aggregation level of the occupations, the time lag and the precision of the measurement. (Hartog, 2000) I consider that I fulfilled those criteria.

**Data collection and analysis**

The level of education ideally has a positive effect on the success in the job market. In Romania the more skilled workers have greater chances to compete with success then their less or none educated pears.8 Researches show a growing demand for highly educated workers in Romania. Higher education means higher wages and better outlook for job search. Having higher education means better chance to get employed (Dostie and Sahn, 2006) and has pay advantages and this is not influenced by the fact that the labour supply of graduate workers is growing. The return of the investment in higher education does not depend on the industry sector it is a widely spreading and growing tendency. (Andren et al., 2004)9 Even so the job outlook is better for the young adults with higher education some of them hold jobs which do not require a higher educational level.

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8 The statement has a questionable value today as internationally highly educated workers loose their share of the labor market. According to Róbert (2004a) it is not definite that a higher education means better chances on the market, but in Hungary a higher education means not only better salaries but a better chance and more job security for entrants. Between groups of people entering the job market the university and college graduates have the best chances when the persistent unemployment is threatening most the un-/ nonqualified workers. (Vámos, [2000])

Researches proved that in Hungary the value of a higher educational degree is not depreciating. (Galasi, 2004b) in contrast some researches show the appreciating value of holding a degree. (Kertesi and Köllö, 2005) Economist proved that in Hungary a higher degree is correlated with a higher salary. (Galasi, 2004a; Kézdi et al., 2004; Kertesi- and Köllö, 2005)

Researches done at the turning of the century all over Eastern-Europe showed an appreciation of the higher educational degree. (Kertesi and Köllö, 2005) A different opinion if formulated by Polónyi (2000) who talks about the depreciation of the degrees compensated by second or third degrees.

9 The advantages of higher education in Romania are reported by Voicu (2004), and Paternostro and Sahn (1999).
In this paper I try to examine the causes affecting the development of this situation based on the data from the MOZAIK\textsuperscript{\textregistered}2001 research\textsuperscript{10} regards to the Transylvanian young adults as well as based on the data of the BBTE research.\textsuperscript{11}

In order to answer my questions formulated above I used a set of methods. I used bivariate analysis to compare the overeducated/suitably educated based on socio-demographical characteristics. The analysis is an examination of the relations of association between the qualitative variables; and between the qualitative and quantitative variables comparing the variables using mean values. To examine the combined effect of factors influencing job match I used a compilation of indexes with principal component analysis; and binominal logistical regression is used to evaluate the factors affecting the formation of overeducation.

**Results**

The paper is aimed to analyze the problem of overeducation among the graduate young adults. During this research I tried to frame factors influencing the occurrence of overeducation.

1. According to the results of the MOZAIK\textsuperscript{\textregistered}2001 research women are more likely to become overeducated then men. The binominal logistical regression analysis showed that the chances of men to avoid overeducation are two times bigger than women’s are. An

\textsuperscript{10} The data is part of a four country comparative research. The research title was: Hungarian young adults in the Carpathian-Basin. Scientific co-ordination: Nemzeti Ifjúságkutató Intézet (Hungary). Data collection: October–December 2001. The subjects were young adults between 15–29 years. The survey was based on a questionnaire including topics like material wealth, cultural background, lifestyle, value system.

\textsuperscript{11} The research is a comprehensive research between the graduates of Babeş-Bolyai University. The data collection is carried out at the time of receiving the graduation diploma in a form of written questionnaire. The data used in this analysis is referring to the graduates who got their graduation diploma between June 2005 and June 2006.
explanation for this is given by Athey and Hautaluoma (1994) as being sexual discrimination, a phenomena existing in the Romanian job-market too. (NDHR, 2007, Pîrciog et al., 2006).

- Considering the age differences in job matching there were no detectable differences, which could be explained with all of the subjects were young adults and there were fairly small age differences between the examined populations.

- The hypothesis regarding the place of residence could not be proved based on the MOZAIK© 2001 data. The secondary analysis of the BBTE research had an unexpected result: young adults residing in urban areas are more likely to be overeducated than their counterparts from rural areas. Based on Csata et al. (2007) I explain this phenomena as being a risk aversion attitude. I projected the attitude framed by the researchers on overeducation and I formulated a new hypothesis explaining the phenomenon. The results of the research supports the assumed explanation; accordingly I would encourage testing this new hypotheses during future studies.

- The results (BBTE research) showed higher rate of young adults belonging to the romanian ethnic group becoming overeducated compared with the young adults from the hungarian ethnic group. This is in contradiction with the literature; there is a widely accepted view that overeducation is typical for people belonging to minorities. I explained the findings with the same risk aversion attitude. The rate of the hungarian nationals on properly matched jobs isn’t a result of their better outlook on the job market, more likely the risk aversion is more accentuated among them. The results of the analysis support the findings. That could prompt researchers to further test the hypothesis.

- Analyzing overeducation I found that the sector (private versus public) of the economy has an important role: according to the data of the BBTE research overeducation is more typical in the private sector.
2. Examining overeducation from the aspect of the graduate young adult we can differentiate two separate decision-making situations. The importance of differentiation it is in the difference in the underlying rationality behind the two decision-making situations. Finding a job matching the educational level can be restricted by several factors.

2.1. The deficiencies in the social capital constitute an important factor (reconversion strategies - Bourdieu (1978)). Results from the MOZAIK®2001 research partially confirmed this hypothesis. The family background had no direct effect, but the frequency of visiting different institutions and religious organizations (as an indicator of the social capital) has a positive effect on overeducation. It wasn’t possible to test the criteria of time order on those latest variables. Declining the hypotheses is supported by the difficulty of the operationalization and conceptualization of human capital, the secondary analysis of the data making the process even more difficult.

2.2. The long and expensive job search could acts as a restrictive factor in finding a matching job (job search theory – Stigler, 1961; Büchel, 2001). Starting from the job search theory I tested the hypothesis which states that after a long, expensive job search the outcome of finding a matching job is higher, because a longer job search creates opportunities to find matching job offers. My results were opposite to this theory: the time spent with job search haven’t increased the chance of finding a matching job, more likely decreased that possibility.

2.3. I assumed that finding a matching job is influenced by the level of skills (heterogeneous skills theory – Allen and van der Velden, 2001). I proved that theory being partially valid. According to my data better educational credentials bring higher chances in avoiding overeducation.

2.4. The fact of marriage can be a restrictive factor of finding a job matching the acquired educational level (theory of differential overqualification – Frank, 1978). Results
show that the theory does not gives a satisfactory explanation for the phenomena of overeducation among the graduate Transylvanian young females.

2.5. I found that there is a difference in the rate of overeducation among the educational specializations. The fact that the labour market demand and the offering of educational institutions are not in synch which contributes to the problem of overeducation.

I assumed that overeducation is an alternative to unemployment. Testing the hypothesis was not possible; I analyzed instead if the experience of unemployment has a negative effect on the job mismatch. Based on my data past unemployment enhances the risk of overeducation among the graduate young adults in Transylvania.

The new interpretation as a cause of overeducation is in concordance with the Romanian economic reality (the conserved occupational structure of the sixties, the inexistent development plan, accentuated competition for jobs, the difficulty of finding matching job and the hardship of professional integration) together with the mentalities governing the region (anxiety over employability, the negative attitude toward unemployed persons, endeavour of security). The framed interpretation is in accordance with the Romanian specialists’ opinion that the atypical employment forms do not mean new possibilities in Romania more likely they give alternatives to unemployment. (Neagu, 2004; Stânculescu and Berevoescu, 2004)

3. I formulated an alternative hypothesis against the one above: transition hypothesis. This states that overeducation is a transitional phase in the lives of graduate young adults which with time - with job mobility - can be changed. The results does not support this hypothesis, overeducation is not just a temporary state but a persistent one which is hard to overcome.
Analyzing overeducation it is significant for several reasons. We can highlight the negative effects of overeducation which affects not only the individual productivity but has implications on the job satisfaction too. Our results show (BBTE research) that job mismatch has a high probability to result in quitting the job.

Testing the hypothesis had his challenges. It was difficult to use the database of the MOZAIK research but being a comprehensive survey it was acceptable to be used for analyzing overeducation among the graduate young adults. The case number was one of the major problems given that the survey was developed for young adults without taking in consideration the educational level. The purpose of the survey was broad including the economical, cultural resources of young adults together with lifestyle choices and their system of values but wasn’t specifically targeted to the factors of job search and labour market. I have to mention the problems deriving from the secondary analysis before rejecting the hypotheses regarding the social capital and heterogeneity of graduates. The negative effects of the reduced social capital and the heterogeneity of graduate young adults on job mismatch were partially proved, but the operationalization of the concepts isn’t satisfactory. Using a survey targeted to the problems of job mismatch I believe would prove the positive effects of extensive social capital and better skills on avoiding overeducation. This could be a new direction in analyzing overeducation among Romanian young adults.

There were 11 hypotheses formulated based on literature from which 4 hypothesis were proved, 2 partially proven, 2 unproved, and 3 defended. These results are ambiguous which brings forward the question of validity of the hypotheses formulated in Western-European countries or North-America, in post-socialist Eastern–Europe. The transformations in progress in the post-socialist region could influence the answers that are formulated to the
challenges of the labor market. According to the results I would encourage the use of
distinctive approaches during the examination of overeducation of the graduate Transylvanian
young adults including the risk aversion attitude. The new hypothesis framed in this paper
could give an alternative path for the research of overeducation among graduate young adults.

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12 Gábor Kálmán (2005) has a similar argument. He states that we have to take in consideration the attributes of
socialist society expanding from the monolithic culture to state structures when we are planning researches for
young adults.


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