

# Vývoj trhu práce v České republice v komparaci se zaměstnatelností absolventů škol.

### Development of Labour Market in the Czech Republic in Comparison to the Employabilty of University graduates

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#### Abstract:

**Purpose of the article:** The article is to present results of the research realized in the framework of the project: CZ.1.07/2.2.00/28.0328 and IGA/FaME/2013/030. The creation of the modular system of granting of credits in the bachelor study with a view to the motivation of the student in the form of professional positioning in accordance with developments on the labor market was realized the Faculty of Management and Economics (hereafter FaME) at TBU in Zlín.

**Methodology/methods:** This paper consists of a quantitative analysis. The data was collected throughout the year 2011. During this period, FaME students filled in 718 questionnaires. The questionnaires offered 48 proffesions that were divided into 8 professional groups. The data gained from this research were analyzed and subsequently compared to vacancies data of the Ministry of Labour and Social Affairs (hereafter MoLSA) of the Czech Republic.

**Scientific aim:** The aim of this article was to prove that the increasing number of university students and university graduates is negatively influencing the Czech labour market. The questionnaire provided a list of working position that students would like to obtain after their graduation or which working positions they prefer as more perspective regarding their future employment. The purpose of this artical is the mutual comparison of working positions which are required by FaME students and on the contrary, the working positions which are demanded by the companies on the labour market. The article presents results of research focused on the professional aspirations of the students, the development of the Czech labour market after 2008 and the development of the unemployment of university graduates.

**Findings:** The article highlights the fact that rising unemployment on the Czech labour market due to economic recession began to strongly influence previously always employable university graduates. There are several causes of this situation, which are not just due to the economic recession, but also due to the lack of certain professions such as carpenters, lathemen etc. The research supports the opinion that professional neutrality of students and increasing contrast between the labour supply and labour demand cause problems on the Czech labour market. The findings of the survey indicate that companies ask for different professional aspirations than those which students are interested in. The growing number of young people who postpone their entry to the labour market through university study changes the labour market conditions. Their opportunities to find a job position corresponding to their education level are not as good as they used to be. It is because of the growing number of graduates that makes higher competition on the supply side of the labour market.

**Conclusions:** This research supports the opinion that before 2008 almost every university graduate could find a suitable working position. Nowadays, when the number of university graduates is rising constantly, this fact is mirrored in the rising unemployment among university graduates.

Keywords: Labour Market, the Czech Republic, Graduates, Unemployment and Employment

JEL Classification: J200, J210

#### Introduction

Formal education is the process of life-long learning and development of people and their skills, which orientates on the effect of forming human possibilities. This process forms the level of thinking, memory, concentration or self-expression abilities of each individual. Such education takes place in educational and accredited institutions and leads to the acquirement of certain degree of qualification or certification. Each particular level of education is interrelated and established to serve either the population as a whole or just fractions of it. According to the collective of authors (Lakes; Carter, 2004). "The obtained level of formal education serves as a criteria for implementation on the labour market, when functions, aims, resources and subjects of particular grades of education are regulated by law".

The labour market is a complexly interconnected environment with an array of factors. On one hand, economic effects, in fact the level of economy, influence labour demand. On the other hand, socialdemographic effects such as the level of education or age structure of population influence labour supply and thus represent a counterforce. Both types of effects have been currently going through a very dynamic development which is influenced by the economic crisis on one hand and by the progress in qualification needs on the other hand. As the author states in his book (Krebs, 2005) *"Education becomes a strategic component as it represents an important factor on which the economic performance and competitiveness of every country depends".* 

The structure of educational level of population in the Czech Republic develops towards a higher proportion of university graduates while the proportion of population with only minimal educational level declines. As the employment institute Socrates indicates "While in 2001 the proportion of university graduates in the economically active population reached 8.7%, in 2010 the ratio rose to 13.7%" (Sokrates 2010). Despite decreasing population size of age groups, the number of university students has been continuously increasing. This also increases the risk of university graduates unemployment as the competition on the labour market is significantly growing also due to the decreasing number of vacancies. However, university graduates have still more optimistic prospects in comparison to other graduates with lower levels of education. From 2002 to 2006 the number of unemployed university graduates rose slightly on a year-to-year basis. The average rate of university graduates unemployment, calculated from the total number of university graduates, was 1.8%. Although in 2007 and 2008 this unemployment rate declined to 1.3%, since 2009 the indicator has demonstrated an increasing trend (ČSÚ 2012). In 2010 the number of unemployed university graduates rose to 25,600, representing 2% of the aggregate number of the university graduates in the Czech Republic. To compare – the unemployment rate of secondary school graduates with graduation reached 3.4% and the unemployment rate of secondary school graduates without graduation even 5%.

Since 2001 the aggregate number of university students, including students of doctoral programmes, has been increasing on a year-to-year basis. The number of university students has grown by 192,800 during last ten years. While in 2001 the population of university students represented 2.4% of the economically active population, in 2010 this proportion was already 4.4% state authors Koucký a Zelenka (Koucký; Zelenka, 2010).

#### 1. The Czech labour market environment

The unemployment rate in the Czech Republic was developing in line with a positive trend in the Czech economy performance until 2007. From 2001 to 2006 the rate was at 7.8% on average. Performance growth of the Czech economy in 2007 was reflected in a significant decrease of the unemployment rate to 5.3%. In the following year the general unemployment rate decreased even lower to 4.4%. However, at the end of the year a sharp deterioration in the Czech economy performance occurred due to the overall economic recession. Since then, the number of registered unemployed began to grow. In the second half of 2008 the number of vacancies plummeted as a result of decreasing number of commissions, lower revenues and lack of work for employees (Burdová, 2011). In December 2008, the month-to--month unemployment rate in the Czech Republic grew by 6%, representing the sharpest increase on a month-to-month basis within the last ten years. In 2009 the general unemployment rate rose by 2.3% to 6.7%. Since 2005 the unemployment rate peaked at 7.3% in 2010. In 2011 the rate slightly declined by 0.6%. As the recovery of the Czech economy has proceeded with a fluctuating pace, it can be expected that the unemployment rate will further remain at high levels. According to the predictions of the Ministry of Finance, the general unemployment rate should fluctuate around 7% in the next three years.

Due to the economic recession, the labour market becomes a significant competitive environment where the quality of knowledge, skills and abilities of job applicants will play an increasingly important role. On the contrary, employers have more opportunities to find an appropriate employee.

The lack of work, missing experience or working habits have always been the main reasons why graduates represent the most risky group of active population, with the most complicated assertion on the labour market. However, young age and the lack of work experience may be offset by high flexibility and ability to learn and develop. The fact that a person who obtained a diploma had to prove his/her ability to think and communicate, a certain degree of adaptability, motivation, reliability and willingnesss to learn (Fuente, 2002) is often neglected just as far as graduates are concerned.

## 1.1 Imbalance between labour supply and labour demand

Accelerated economic growth after the integration of the Czech Republic into the European Union resulted in positive development of the Czech labour market. Not only new jobs were created but also capacities of university education were increased. As a consequence, the unemployment of secondary school graduates decreased because these had not entered the labour market. Instead, they had passed to the tertiary level of education. This transformation was further highlighted by the EU recommendations to increase the number of university graduates in the Czech Republic (Sokrates 2010). The aggregate number of the university graduates in the Czech Republic has been continually increasing, since 2006 the number has grown by 119%. However, Students staying in tertiary education, increase in their numbers, and deceleration of economy in 2009 change the structure of the Czech labour market. As shown in Figure 1, since the fourth quarter of 2008 the number of vacancies has dropped significantly but the number of job applicants has increased.

Nowadays, when the Czech economy shows slight growth, the number of vacancies rises slightly and the number of jobseekers declines.

As a result, the imbalance between the labour supply and labour demand decreases. In December 2011 the number of job applicants per vacancy fell from 18.2 to 14.2. Also the overall employment in all fields of the national economy of the Czech Republic rose by 18,800 people (Koucký, Zelenka 2009).

However, the improving situation unfortunatelly does not apply to university graduates because, as Figure 2 demonstrates, since the second quarter of 2010 the demand for vocational school graduates increases – the average total growth for this period is 298.5. vacancies. A slight growth can also be seen for graduates of bachelor programmes. However, their average total growth in this period is only 43.83 vacancies.

The situation of people with only primary education and with practice worsened significantly compared to 2008. However, according to the MoLSA data, the number of vacancies for this level of education still exceeds the number of vacancies for bachelor and master programmes graduates. Also the demand for students of doctoral programmes deteriorated significantly in comparison to the first quarter of 2008. Nevertheless, as shown in Figure 2, the demand of companies has a dynamic development. It can be said that the average quarterly demand for students of doctoral programmes amounts to 23 people (MoLSA, 2012).



Figure 1. Comparison of the number of vacancies to number of jobseekers. Source: own work.



Figure 2. Availability of vacancies according to the level of education (labour demand). Source: MoLSA, 2012.

The data from 2012 are not currently available to date due to ther extensiveness.

### 2. The unemployment of university graduates

An unemployed graduate is the one "who is registered at the Labour Office as a jobseeker and whose time since graduation has not exceeded 2 years" (Koucký, Zelenka, 2009). The unemployment of university graduates has a cyclical development over the year – the highest growth appears in September when fresh graduates enter the labour market and make their unemployment rate grow. Then during the year the labour market absorbs this strong growth and the unemployment of fresh graduates decreases gradually.

The unemployment rate of university graduates had been developing positively until 2008. However, since 2008, due to economic recession, this positive development has changed and the unemployment rate has been rising in every level of education.

In 2008, 28,109 students graduated from bachelor programmes in the Czech Republic. A year later this number exceeded 30 thousands as it reached 32.223 students. In 2010, 33,827 students graduated from bachelor programmes, 79% of them continued in follow-up master programmes. The average annual growth in the number of bachelor programmes graduates has increased by 2,859 students a year within last three years. The growing number of bachelor level graduates reflects on higher registration at the Labour Office. In the second half of 2008, 968 bachelor level graduates were registered at the Labour Office, standing for 3.5% of the total number of bachelor level graduates. In 2009 this was already 4% and in the second half of 2010 the bachelor level unemployment rate reached 6% of the total number of graduates from this educational level (ČSÚ, 2012).

The strong growth in the number of university graduates does not apply to bachelor programmes graduates only. The number of master programme graduates increases rapidly as well. In 2008, 25,362 students graduated from master programmes. In the following year the number of such graduates increased to 25,966 and 27,683 students graduated from master programmes in 2010. The ration of master programme graduates registered at the Labour Office to the total number of people with this educational level reached 10% in 2008. The ratiowas 12% in 2009 and 14% in the second half of 2010. Thus the average annual growth comes to 1.2%.

500 students graduated from doctoral programmes in 2008. A year later it was 541 students. In 2010 the number of graduates declined by 65 to 476. The proportion of doctoral programme graduates to the total number of graduates was 2.5% in 2010. Nevertheless, even in this educational level the number of unemployed rises.

3,098 students graduated from all faculties at Tomas Bata University in Zlín in 2010, 50% of them continued in their studies and 6% (87 students) did not find a job. The highest unemployment rate applied to the graduates of the Faculty of Technology. 519 students graduated from this faculty in 2010 and 372 of them, i.e. 72%, continued in their studies, 147 entered the labour market and 30 students, i.e. 20%, did not find a job. 854 students graduated from the Faculty of Management and Economics in 2010, 376 of them, i.e. 44%, continued in their studies, 478 graduates entered the labour market and 29 students, i.e. 6%, did not find a job. 364 students of the faculty of Multimedia Communications were granted diplomas, 182 of them, i.e. 50%, continued their studies, 182 students entered the labour market and 7 of them, i.e. 4%, did not find a job. 386 students graduated from the Faculty of Applied Informatics in 2010, 218 students, i.e. 57%, continued their studies, 168 students entered the labour market and 14 of them, *i.e.* 8%, did not find a job. And finally, 975 students graduated from the Faculty of Humanities, 398 of them, i.e. 41%, continued their studies, 577 graduates entered the labour market and 7 of them, *i.e.* 1.2%, did not find a job (Sokrates, 2010).

#### 3. Research of professional orientation of students of Tomas Bata University in Zlín

Tomas Bata University in Zlín (hereafter TBU) counts among young but fast-growing universities in the Czech Republic. It was established as an independent body in 2000. TBU includes the Faculty of Management and Economics, Faculty of Tech-

nology, Faculty of Applied Informatics, Faculty of Multimedia Communications, Faculty of Humanities and the Faculty of Logistics and Crisis Management. 13,113 students studied at these faculties in the academic year 2010/2011, 7,345 of them were full-time students and 5,768 studied as part-time students All faculties had 5344 full-time students in bachelor study programmes and 1803 full-time students in masters study programmes The Faculty of Management and Economics had 3123 students, 1357 of them studied full-time in bachelor study programmes and 1051 in full-time masters study programmes.

In 2011 a primary survey took place in the segment of students of bachelor and master programmes of the FaME. The survey objective was to gather information about professional aspirations of students regarding their future assertion on the Czech labour market.

#### 3.1 Methodology of the survey

The questionnaire survey in the segment of university students was performed during autumn 2011 through printed questionnaires. The survey was anonymous and pedagogues prepared for students a presentation with information about the current working structure in the Czech Republic. The questionnaire comprised 48 professions across all 8 professional groups of the Roe's classification (Roe, 1954). These, however, corresponded only to university qualification (occupations with lower than university educational degree were not included). Students were allowed to select more professions which all of them did. The Roe's two-dimensional classification system takes into account the level of skills and knowledge in one dimension and in the second dimension it divides professions into eight groups which cover the entire spectrum of the economic activities in the economy:

- 1. Services.
- 2. Trade.
- 3. Organization.
- 4. Technique and Technology.
- 5. Outdoor Activities.
- 6. Science.
- 7. General Culture.
- 8. Arts and Entertainmen.

There were two specific questions in the questionnaire survey: What occupations are they interested in or what profession they already have experience with. The students could choose the occupation from the evidence of 48 professions further divided into 8 smaller profession groups in which they were interested in, in terms of their future employment. Students were allowed to select more professions which all of them did.

The survey results were compared to the MoL-SA data as of the third quarter of 2011. The classification structure of vacancies follows CZ - ISCO, which is based on the methodological principles of the international classification ISCO-08 (International Standard Classification of Occupation). This is based on the type of the work performed and the level of skills. On the contrary, the classification of professions offered to the students was segmented according to the Roe's classification as it turned out that the ISCO classification was not comprehensible for this segment of respondents. Only the first three main classes were selected from the CZ-ISCO classification structure, namely the class 1, 2 and 3, as just these classes correspond to the level of knowledge gained by university education. For mutual comparison of the data, the professional structure according to Roe 1954 was transferred into the CZ-ISCO classification structure.

#### 3.2 The survey results

718 students of the Faculty of Management and Economics at TBU participated in the survey. 509 of them were first year students of bachelor programmes (*i.e.* 38%) and 209 studied their first year of master programmes (*i.e.* 20%). Bachelor programmes students were included in the survey in a higher proportion. The results of the students' selection are shown in the Figure 3.

To the eight fields of economic activities of national economy various professional aspirations were assigned from which respondents selected based on their ideas of future fulfilment on the labour market. *Services*. In the field of Services the students were offered 11 professional aspirations. These were all categorized by the authors to the main class 1 of the ISCO classification structure as they represented managerial functions. According to the primary research, 352 students of bachelor programmes chose at least one of the offered positions in the field of Services. 117 students of master programmes would choose at least one professional aspiration offered in the field of Services.

*Trade.* 3 professional aspirations were offered to students from the field of Trade. They were categorized to the classes 1, 2 and 3 of the ISCO classification structure. According to the primary survey, 382 students would choose at least one of the offered professions. 295 of them studied bachelor programmes and 111 of were students of master programmes.

*Organization.* 6 professions, categorized by the authors to the classes 2 and 3 of the ISCO classification structure, were offered to students from the field of Organization. 514 students would choose at least one of the professions offered from the field of Organization. 372 of them studied bachelor programmes and 144 studied master programmes.

*Technology.* 8 professions from the field of Technique and Technology, categorized by the authors the classes 1, 2 and 3 of the ISCO classification structure, were offered to the students. 368 students would choose at least one profession offered in the field of Technology. 260 of them studied bachelor programmes and 109 studied master programmes.

*Outdoor Activities.* 4 professions from the field of Outdoor Activities, categorized by the authors to the classes 1, 2 and 3 of the ISCO classification structure,



Figure 3. Respondents' selection of professional aspiration categorized by the fields of national economy. Source: own work.

were offered to the students. Only 46 students would choose at least one profession offered in the field of Outdoor Activities. 36 of them studied bachelor programmes and 15 studied master programmes.

*Science.* 6 professions from the field of Science, categorized by the authors to the classes 1, 2 and 3 of the ISCO classification structure, were offered to the students. 192 students would choose at least one profession offered in the field of Science. 149 of them studied bachelor programmes and 42 studied master programmes.

*General Culture.* 5 professions from the field of General Culture, categorized by the authors to the classes 1 and 2 of the ISCO classification structure, were offered to the students. 233 students would choose at least one profession offered in the field of General Culture. 194 of them studied bachelor programmes and 39 studied master programmes.

*Arts and Entertainment.* 5 professions from the field of Arts and Entertainment, categorized by the authors to the classes 1, 2 and 3 of the ISCO classification structure, were offered to the students. 369 students would choose at least one profession offered in the field of Arts and Entertainment. 268 of them studied bachelor programmes and 101 studied master programmes.

#### 4. Imbalance between professional aspirations of university graduates and the real development of the Czech labour market's needs

Based on the MoLSA data, the creation of the following numbers of vacancies for university graduates, according to professional groups, was achieved during the year 2011, see Figure 4. The first part of Figure 5 not only shows the most attractive choices of professions from the student point of view, but also presents the interest from the companies' perspective in certain professions. The second part of Figure 5 shows the most demanded professions from the companies' point of view and presents TBU students' interest in those professions.

Services. According to the MoLSA data, 259 workers were demanded for professional aspirations in the field of Services. This number comprised 236 job positions in Services marketing. However, only 191 students expressed their interest in this professional profile and 74% of them were students of bachelor programmes. On the contrary, the respondents mostly chose the professional aspiration of a Tourism services manager, namely 220 students, *i.e.* 31%. Nevertheless, only 9 workers were demanded for this job position. The respondents expressed the lowest interest in the field of social area services, especially in the position of a Fundraiser. The least interesting job positions within the field of Services were those in non-profit sector.

*Trade.* 804 workers were demanded for professions in the field of Trade in the third quarter, based on the MoLSA data. However, 750 job positions were demanded in Financial and insurance industry. Only 106 students were interested in this field. 79 of them studied bachelor programmes and 27 studied master programmes. On the other hand, the respondents were most frequently interested in the position of a Trade company manager, namely 354 students. Nevertheless, only 54 workers of this professional aspiration were demanded on the labour market.

*Organization.* 1065 workers were demanded on the labour market out of 6 professional aspirations which were offered to students within the field of Organization. 742 of these vacancies were the posi-



Figure 4. Creation of vacancies according to professional groups. Source: MoLSA, 201.



Figure 5. The comparison of compan's demand and professional aspirations of students in Zlin according to the field of national economy. Source: own work.

tions of a Broker and a banker (in the group of the  $2^{nd}$  and the  $3^{rd}$  class). However, only 296 students were interested in these positions. 75% were bachelor programmes students and the proportion of interested master programmes students was 25%. The most interesting position in the field of Organization for respondents was the position of an Accountant – on aggregate 303 students were interested in this position.

*Technology*. From 8 professions offered within the field of Technology 370 job positions were demanded on the labour market. The most vacancies were offered for the position of a Production company manager, namely 107 vacancies. 207 students expressed their interest in this position. 146 of them studied bachelor programmes and 61 were master programmes students. From the students' point of view, the least interesting profession was the one of a Building company budget and price designer. Only 21 people were interested in this job. To compare, 17 workers were demanded for this position on the labour market.

*Outdoor Activities.* As for the field of Outdoor Activities, the labour demand was represented by 83 vacancies. However, this field was the least interesting for the students. Employees were mostly demanded for Marketing and trade positions in agricultural and Forestry companies, namely 55 vacancies. Nevertheless, only 25 students would like to work on this position. 5 of them studied master programmes and 20 studied bachelor programmes. The most preferred profession in the field of Outdoor

Activities from the students' perspective was the one of a Forestry company manager -24 students chose this position. However, only three workers for job positions of this type were demanded by companies in the class 1 and three workers in the class 3.

*Science.* As for the field of Science, 116 job positions were demanded on the labour market. Employers were mostly interested in workers on the positions of Marketing and trade in software and hardware companies, namely 30 vacations. 54 students would like to work on this position – 8.4% from them studying bachelor programmes and 5.2% of them studying master programmes. On the contrary, the position of a Software company manager was found by students as the most lucrative job – 72 students were interested. 24 workers were demanded for this position.

*General Culture*. Students were further offered 5 professional aspirations in the field of General Culture. 331 vacancies were offered in this field, most of them for the position of Marketing and trade of a law office, namely 230. 72 students were interested in this position. On the contrary, the majority of students wanted to work on the position of a Law office manager, namely 101 students.

Arts and Entertainment. 355 vacancies were offered in this field in the third quarter of 2011. The most demanded job position in this group was the one of an Advertising agency manager – 230 vacancies. 214 students, 32% of bachelor programmes and 26% of master programmes, expressed their interest in this position. The least interest was expressed by students in the position of Marketing and trade of culture facilities, where companies demanded 28 workers.

#### Conclusions

The position of university graduates on the Czech labour market undergoes a dynamic development. On the one hand, the increasing number of university graduates contributes to the economic growth of a given country, on the other hand, overeducation of the population arises, meaning that for university graduates it is increasingly difficult to find a job corresponding to their level of education. The growing number of young people who postpone their entry to the labour market through university study changes the labour market conditions. Their opportunities to find a job position corresponding to their level of education worsen as the growing number of graduates makes the competition on the supply side of the labour market grow. Nowadays more and more companies claim that current university graduates have the same skills, abilities and knowledge as secondary schools graduates. Results of the expert study performed by the Education Policy Centre of the Charles University in 2009 indicate that in 2 or 3 years university graduates will represent a half of all labour market newcomers. Companies are forced to employ university graduates also to positions requiring lower level of education. This causes decrease in the number of secondary schools graduates entering the labour market as these increasingly pass to the tertiary level of education. Consequences of this fact will fully affect the labour market with 3 or 5-year delay. The unemployment rate growth will shift from the level of secondary school graduates to the level of university graduates.

A modern phenomenon of "*degree-mania*" motivates students to further study at higher level. Almost 80% of all bachelor graduates in the Czech Republic continue in a two-year follow-up study. However, this does not solve the problem of the university graduates unemployment. It only causes that increasing rate of unemployment shifts from graduates of bachelor programmes to graduates of master programmes. It should be noted that although graduates in the Czech Republic are nowadays going through the unemployment crisis, the demand for vocational schools graduates is still the largest.

Professional neutrality of students and increasing contrast between the labour supply and labour demand causes also another problem of the Czech labour market. Results of the survey indicate that companies demand different professional aspirations than those in which students are interested. The most significant conflict was observed in the field of Trade. In this field job positions in finance and insurance industry were created on the Czech labour market, but majority of university students aspire to the position of a trading company manager.

The labour supply and labour demand are balanced only in the field of Arts and Entertainment, on the position of an advertising agency manager. This raises the question whether students are willing to abandon their ideas of managerial positions as in seven out of eight fields students were interested in managerial positions. However, due to the labour demand, their high ambitions will probably run up against problems after entering the labour market.

Professional specialization of students or graduates still plays an important role on the Czech labour market. Some traditional crafts are preferred as well as certain industrial disciplines or traditional services. Taking a synergic effect into account, it can be assumed the just these professions (corresponding to the secondary school education) will be highly demanded by companies, as with increasing shift into tertiary education, these students will become "shortage goods". One must be then very sceptical when considering substitutability of these specialized students with university graduates.

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Doručeno redakci: 25. 10. 2013 Recenzováno: 13. 5. 2013 Schváleno k publikování: 21. 6. 2013

#### Acknowledgements

This paper is one of the research outputs of the project "The creation of the modular system of granting of credits in the bachelor study with a view to the motivation of the student in the form of professional positioning in accordance with developments on the labor market." registered at ESF OPVK CZ.1.07/2.2.00/28.0328 and IGA/FAME/2013/030.

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