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Position of university graduates in the labour market of the Slovak Republic

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POSITION OF UNIVERSITY GRADUATES IN THE LABOUR MARKET OF THE SLOVAK REPUBLIC

Abstract

The paper describes and discusses current situation and possibilities of university graduates in terms of requirements and needs of the labour market in the Slovak Republic. Direction and priorities of employers are shown on the basis of surveys focused on the employer's interest in graduates. Views of former graduates are transmitted with respect to this issue. Evaluation of universities and their faculties by the Academic Ranking and Rating Agency (ARRA) forms the basis for employment of graduates by the employers. According to contribution of fundamental factors to a good position of university graduates in the labour market, results of used surveys are mainly related to the Faculty of Materials Science and Technology of the Slovak University of Technology in Bratislava (STU), because both authors work at the Faculty of Materials Science and Technology (MTF).

SYTUACJA ABSOLWENTÓW WYŻSZYCH UCZELNI NA SŁOWACKIM RYNKU PRACY

Streszczenie

W artykule przedstawiono i omówiono bieżącą sytuację i możliwości osób z wyższym wykształceniem w zakresie wymagań i potrzeb rynku pracy w Republice Słowackiej. Cele i priorytety pracodawców są opisane na podstawie badań koncentrujących się na wymaganiach pracodawców wobec absolwentów. Oceny absolwentów są przeprowadzane w odniesieniu do tej kwestii. Oceny uczelni i ich wydziałów przeprowadzane przez Academic Ranking and Rating Agency (ARRA) stanowią podstawę do zatrudniania absolwentów przez pracodawców. Wpływ podstawowych czynników na dobrą pozycję absolwentów uniwersytetów na rynku pracy był przedmiotem badań przeprowadzonych głównie na Wydziale Inżynierii Materiałowej i Technologii Słowackiego Uniwersytetu Technicznego w Bratysławie (STU), stanowiącego miejsce pracy autorów artykułu.

Introduction

The current labour market situation in the Slovak Republic is characterized by an increasing trend of unemployed graduates of bachelor and master degree. Education is still an important factor of the competitive advantage in offering graduate degree programs focused on industrial engineering. Choosing the university after graduation from high school depends on whether the university graduates are at the end of the study program employable in the labour market. Therefore, cooperation between universities and practice becomes crucial not only in

the processing of their bachelor or master work, but also in the implementation of research activities.

1. Cooperation between universities and practice

Nowadays it is necessary to establish and manage collaboration between practice and universities that have experience in science and research in order to link the verification of theoretical knowledge of the acquired professional skills in practice, to continuously improve the processes of industrial enterprises.

As a positive example can be mentioned cooperation of PSA Peugeot Citroën with the Slovak University of Technology in Bratislava. PSA Peugeot Citroën has contributed to the establishment and equipping of laboratories for the Faculty of Mechanical Engineering STU in Bratislava. Volkswagen Slovakia cofinanced building of a similar center at the Technical University in Kosice and was the initiator of creation of the Slovak Productivity Center in Zilina. Volkswagen Slovakia (its long-standing involvement in the education of qualified specialists for the automotive industry) has completed a systematic cooperation with four of Slovak universities (Slovak University of Technology in Bratislava, University of A. D. in Trencin, University of Zilina in Zilina and Technical University in Kosice). The goal of the project "IngA" (engineer in the automotive industry) is to engage teachers and their students to the conditions of the practice and demonstrate them work in a real manufacturing enterprise. Companies offer students experience, the best students are encouraged scholarships and offered a job. In this way graduates may become top employees.

2. Graduate employability

Unemployment is despite some positive trends one of the most serious economic and social problems of Slovak Republic. Currently, unemployment rate is at 11.6%, while its history over the last six years can be seen in the following table:

Tab. 1. Unemployment rate trends in the Slovak Republic[1]

Macroeconomic indicator/year	2006	2007	2008	2009	2010	2011
Unemployment rate [%]	8.0	8.0	3.5	12.1	14.5	11.6

[1] Ekonomika Slovenska 2011, Internet website Euroekonom, www.euroekonom.sk, cit. 2011-07-29.

Particularly difficult is the situation of young people entering the labour market. Their disadvantage is mostly the lack of experience, underdeveloped work habits, resp. lack of language skills that move them into less favorable work classification. History of unemployment rates of university graduates over the last six years can be seen in the Table 2 and Figure 1.[2]

Tab. 2. Unemployment rate of university graduates[2]

Degree of Education / Year	Bachelor [%]	Master [%]
3. Q 2006	3.4	3.6
3. Q 2007	5.9	4.8
3. Q 2008	4.0	4.4
3. Q 2009	9.4	4.7
3. Q 2010	11.3	6.0

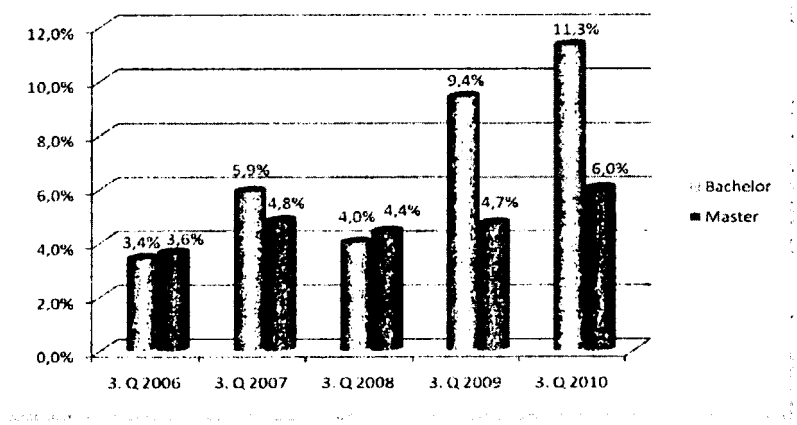


Fig. 1. Unemployment rate of university graduates (2006-2010)[2]

Feedback creation of universities, government, labour market and practice in terms of connection between preparation of students/university graduates and current, future needs of the national economy. Studies concerning graduates' job application are mainly summary statistics, which give a picture of the framework of graduates' unemployment, but they often

[2] Slovstat, Statistical Office of the Slovak Republic, www.statistics.sk/pls/elisw/vbd, cit. 2011-07-29.

do not include specifics of study programs and especially the very quality of individual groups of graduates.

Success of the university can be rated in terms of the number of potential students and also in terms of employed graduates in the labour market. Increasing number of new students depends on interest in universities. From this perspective, for reaching the success of the university (in the present and future) is very important to know, how successful graduates of specific university in practice are[3].

For this purpose, so-called coefficient of graduate employability in the labour market of specific study branch (KAP) has been defined. KAP is derived from the number of university graduates of specific study branch and the number of registered unemployed university graduates who are in evidence of more than 3 months. According to data of Central Office of Labour, Social Affair and Family of the Slovak Republic, the value of KAP of STU is 98.2 % in the area of technical sciences and applied informatics[4].

According to website Profesia.sk, employers were asked to rate their interest in graduates of Slovak universities. The highest rate reached Slovak University of Technology (50.03 %), followed by the University of Economics in Bratislava with 47.46 % and University of Zilina with 39.05 % (Table 3)[5].

Tab. 3. Interest of employers in graduates[5]

Rank	University	Index of interest [%]
1.	Slovak University of Technology in Bratislava	50.03
2.	University of Economics in Bratislava	47.46
3.	The University of Zilina	39.05
4.	The University of SS. Cyril and Methodius in Trnava	35.89
5.	The Technical University in Kosice	33.94
6.	Comenius University in Bratislava	30.69
7.	The University of Matej Bel in Banska Bystrica	30.24
8.	Academy of Performing Arts Bratislava	29.37
9.	Slovak University of Agriculture in Nitra	28.36
10.	Constantine the Philosopher University	28.07

[3] Zvalová, M.- Srnánková, Ľ.- Hrušovská, J. Uplatnenie absolventov vysokých škôl v praxi. I. Etapa, Bratislava, 2007.

[4] Central Office of Labour, Social Affair and Family, www.upsvar.sk/statistiky/nezamestnanost-mesacne-statistiky/2011.html?page_id=31010, cit. 2011-07-29.

[5] Profesia.sk, www.profesia.sk/cms/newsletter/maj-2010/zostavili-sme-rebricek-najziadanejsich-absolventov/42599cit. 2011-07-29.

According to the university major specialization, employers' interest in university graduates persists mainly in computer science, followed by construction and economy. Engineering and technology have also important role in this ranking (Table 4)[6].

Tab. 4. Interested employers of graduates by faculty focus[6]

Science Branch	Index of Interest [%]
Informatics	72.75
Construction/Architecture	45.12
Economics	38.46
Social Sciences	32.04
Technology	27.89
Engineering	27.71
Philosophy	27.47
Natural Science	26.88
Art	24.91
Sport	23.66
Health Service	21.89
Pedagogy	20.81
Law Science	19.10
Theology	17.47

3. Position of Slovak university of technology in Slovak academic environment

Slovak University of Technology defended in 2009 its status as "university. Multi-annual leadership of Slovak University of Technology (STU) in obtaining domestic and foreign research grants can be illustrated by the quality of the research. University is closely connected with industry and in the past year 2010 it dealt with 758 research projects. STU has been successfully involved in obtaining financing from structural fund and can be described as one of the most dominant universities in getting projects of calls for excellent centers (total number of projects 6), in other ones it figures as partner.

STU graduates are very good employable in practice, in the labour market. They do not burden labour offices and within a short time are immediately employed[7]. In the chart of the

[6] Profesia.sk, www.profesia.sk/cms/newsletter/maj-2010/zostavili-sme-rebricek-najziadanejsich-absolventov/42599, cit. 2011-07-29.

[7] Annual Report of Slovak University of Technology, Bratislava 2009.

Academic Ranking and Rating Agency (see Table 5), Slovak University of Technology is for a long time rated as the best university in Slovakia[8].

Tab. 5. Evaluation of technical universities (Focus of ARRA) [8]

Category: TECH	Teachers + Students (SV1-SV4)	Interest in Study Branch (SV6-8)	Publications and References (VV1-VV2)	PhD. Studies (VV4a-VV6)	Grants (VV7-VV10)	Average 2010	Rank 2009	Rank 2008	Rank 2007
1. Slovak University of Technology in Bratislava	65	61	34	51	41	50.5	1.	1.	1.
2. University of Zilina in Zilina	62	58	9	66	42	47.6	3.	4.	3.
3. Slovak University of Agriculture in Nitra	59	57	23	62	20	44.1	4.	2.	5.
4. The Technical University in Kosice	61	49	16	47	26	39.6	2.	3.	2.
5. Technical University in Zvolen	70	46	1	50	18	36.8	5.	5.	4.
6. The University of A. D. in Trencin	48	40	17	49	9	32.7	6.	6.	6.

In order to intensify placement ability of STU graduates in the labour market, to intensify cooperation with the practice, STU as the first university in Slovakia established Career Counseling Center (CKP), which serves as an information and contact center for students of STU. CKP connects companies – practice with students and exchange information of fulltime jobs, part-time jobs, scholarships, themes of graduation works and organizes workshops, discussion forums.[7]

In accordance to the mission of Slovak University of Technology, within the definition of competence in accredited areas of teaching, research and development, with priority on material science and manufacturing technologies Faculty of Materials Science and Technology (MTF):

- provides and implements university education system in all three levels of accredited programs,

[8] Report - Evaluation of universities and their faculties, ARRA, Bratislava 2010.

- disseminates, expands and develops knowledge of science and research tools,
- ensures transfer of science and research in education area,
- ensures transfer of science and research into business practice,
- protects research results,
- integrates into the university system of lifelong learning,
- contributes to the sustainable development of society.

Results of the research, development and other creative activities carried out in the complex accreditation of Faculty of Materials Science and Technology in 2009 have been focused on five areas of research, which reached an average numerical rating (3.33) and average rating B + character. The assessment made by ARRA, Faculty of Material Science and Technology reached 18th place among all the technical Slovak universities (see Table 6). The long-term leader of the group is by far the Faculty of Chemical and Food Technology, Slovak University of Technology in Bratislava. Ranking of other faculties, in order to results of the last year, has changed quite significantly. Position of 15 faculties has changed, which was given mainly by small differences in the evaluation (except the first and the last trio)[9].

The call OPVaV-2008/2.1/01-SORO of the Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic for the Structural Funds of EU (Agency) were from three applications submitted twice successful:

1. Center of excellence of 5 - axis machining (Institute of Production Technologies).
2. Center for development and application of advanced diagnostic methods in processing of metallic and nonmetallic materials (Institute of Materials Science)[9].

In terms of possibility of placing graduates of the Faculty of Materials Science and Technology into the labour market, there is a unique focus of material engineering and manufacturing technologies graduates in the practice (Figure 2). Faculty profile of its study programs tries to meet needs of practice. In order to intensify cooperation between graduates and their "alma mater" was Civic Association named ALUMNI established.

[9] Annual Report of Slovak University of Technology, Bratislava 2009.

Tab. 6. Evaluation of Technical Faculties (Focus of ARRA)[10]

Category: TECH		Teachers + Students (SV1-SV4)	Interest in Study Branch (SV6-8)	Publications/ References (VV1-VV2)	PhD. Studies (VV4a-VV6)	Grants (VV7-VV10)	Average 2010	Rank 2009	Rank 2008	Rank 2007
1.	Faculty of Chemical and Food Technology	99	55	100	74	90	83,4	1.	1.	1.
2.	Faculty of Mechanical Engineering	82	48	10	83	90	62,5	4.	3.	3.
3.	Faculty of Electrical Engineering and Information Technology	77	50	40	48	61	55,3	3.	2.	2.
18.	Faculty of Materials Science and Technology	52	58	19	44	16	37,8	18.	16.	16.

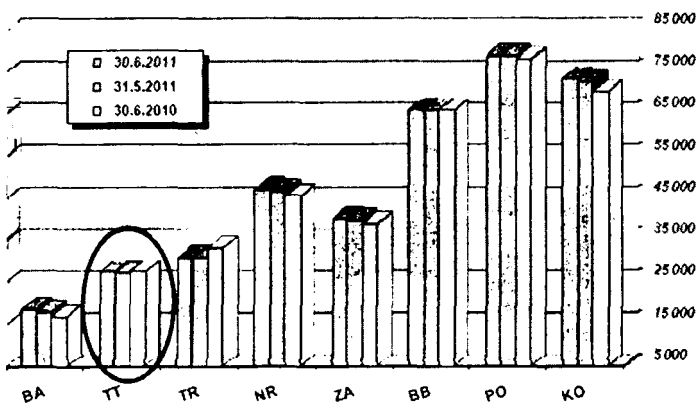


Fig. 2. Number of Unemployed Graduates in Main Regions of Slovakia[11]

Note: Regions of Slovakia: BA – Bratislava, TT – Trnava, TR – Trencin, NR – Nitra, ZA – Zilina, BB – Banska Bystrica, PO – Presov, KO – Kosice.

[10] Report - Evaluation of universities and their faculties, ARRA, Bratislava 2010.

[11] Central Office of Labour, Social Affair and Family, www.upsvar.sk/statistiky/nezamestnanost-mesacne-statistiky/2011.html?page_id=31010, cit. 2011-07-29.

5. Graduate's point of view

In December 2009 was published notice about the evaluation of higher education by graduates. The survey was conducted on a sample of 3929 graduates by the GfK Customer Research for Academic Ranking and Rating Agency (ARRA). Although students reported that they have been working while studying, only some of them found a job after finishing their studies. 17% of students had the opportunity to gather experience in practice while studying at the university, 37% partially and 46% did not. According to the research, graduates of technical faculties want to work in the area they graduated from. Students reported that they have chosen present university/faculty according to its quality (49.2 %) and also to employability of graduates in the labour market (40.8 %). Students of Slovak University of Technology said (according to the survey) that their knowledge and skills were useful in varying degrees in practice: 8.7 % fully exploited, well utilized 43.5 %, 37.7 % partially usable, hardly ever or only a few usable 10.1 %. The majority of them would (reselect) choose the same university they did years ago; they were generally satisfied with the study at chosen university (Figure 3)[12].

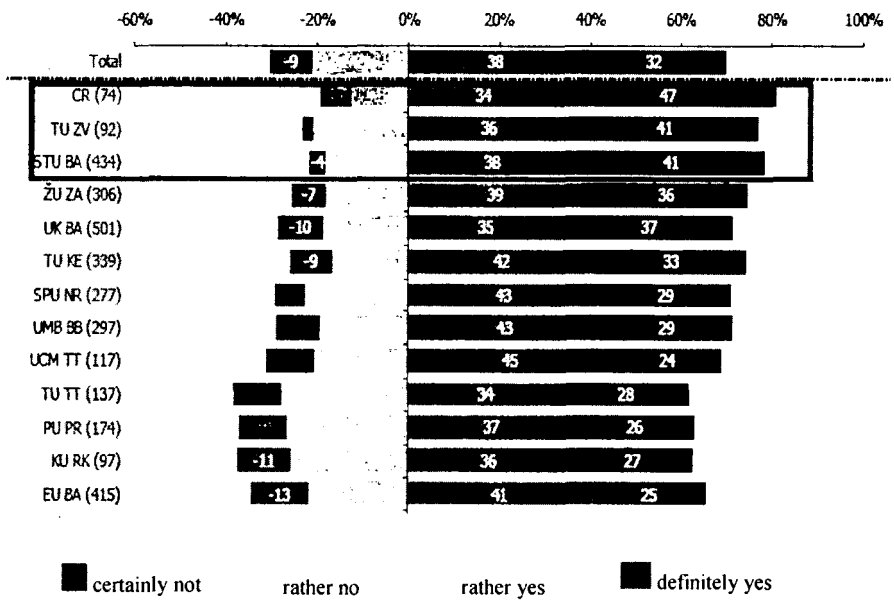
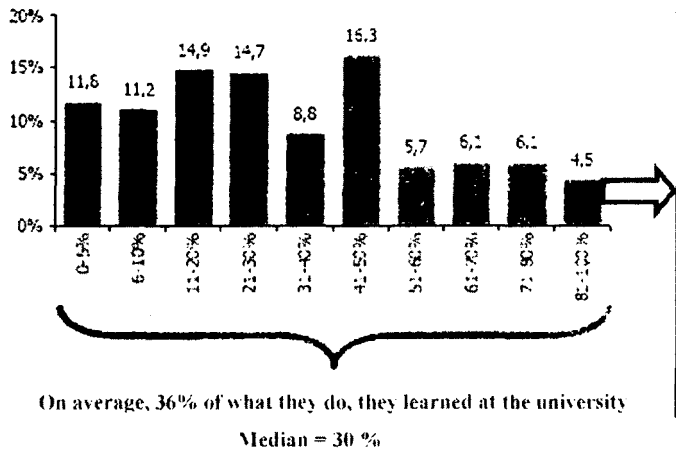


Fig. 3. Re-selection of the university type[12]

Note: CR – Czech Republic, TU ZV – Technical University in Zvolen, STU BA – Slovak University of Technology in Bratislava.

[12] GfK Slovakia, Hodnotenie kvality vysokých škôl absolventmi [online]. Pre Akademickú rankingovú a ratingovú agentúru (ARRA). 2009, www.gfk.sk, cit. 2011-07-29.

Students in the survey evaluated factors that have increased level of quality or study comfort at selected faculty. Among the responses which rated the university, it can be concluded, that the respondents would appreciate computer facilities and Internet access, while they feel lack of commitment to scholarship programs. General intelligence was important for respondents in getting job, then personal characteristics, language skills, study stays abroad and of course a certain level of assertiveness. Previous work experience and knowledge gathered during study at university was another important factor in getting a job[12].



Art Faculties	53.9
Health Service Faculties	44.9
Faculties of Law	42.7
Faculties of Pedagogy	39.4
Technical Faculties	38.0
Faculties of Agriculture	36.5
Faculties of Economics	33.7
Faculties of Philosophy	33.6
Faculties of Natural Sciences	33.0
Faculties of Social Arts	29.1
Faculties of Theology	21.0

Fig. 4. Knowledge utilization rate gathered during university studies [13]

Finally, respondents noted that in current work they use 36 % of what they have learned during university studies. Higher values were reached by responses of graduates of faculties of arts 53.9 %, medical and law sciences (more than 40 % - Figure 4) [13].

Conclusion

Universities are primarily centers of science and research, lifelong education, human capital and human potential, which are needed to be effectively used and evaluated. It is very necessary that higher education institutions become flexible mechanisms that would be able to

[13] GfK Slovakia, Hodnotenie kvality vysokých škôl absolventmi [online]. Pre Akademickú rankingovú a ratingovú agentúru (ARRA). 2009, www.gfk.sk, cit. 2011-07-29.

respond on demand of young people for obtaining quality education, demand for lifelong education, for scholarships programs and growing demand of business-oriented research and development. For any ranking of quality is necessary to determine what criteria are to be compiled. The fact that university did not reach certain place in ranking, it must not mean that this university has got no quality study program, because the focus and objectives of that institution may be different from those reflected in ranking criteria.

Employers that need highly skilled workforce should establish cooperation with universities and accurately define requirements of graduates to help them with professional practice. Likewise, universities should not educate students with too limited specialization that enables them to employ themselves just in a small group in the national economy. In fact, study specialization should enable immediate ability of graduates to perform professional work to which they have appropriate education.

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