

**Report**  
**Assessment of higher education institutions and their faculties**  
**(2008)**

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**TREND**

The authors of the updated 2008 report thank members of the Slovak academic community and academic officials who pointed out possible inaccuracies in the report to the Academic Ranking and Rating Agency (hereinafter “ARRA”). After a detailed examination, some of them turned out to be justified while several were imaginary. We also thank the members of the Board of Advisors of ARRA, in particular the chairperson Prof. Ivan Štich, the members of the Board of Trustees and other collaborators for their comments, discussions, analyses and reviews.

In two cases, the inaccuracies were reflected in the calculation of faculties’ scores. In these cases, they were without impact on their final ranking. In the third case of the SV2 indicator of the TECH group, the point values were changed for Technical University of Košice’s Faculty of Metallurgy and Slovak University of Technology’s Faculty of Chemical and Food Technology (FCHPT STU). The correction resulted in Technical University of Košice’s Faculty of Metallurgy moving from fifth to seventh position in the final ranking of faculties in the TECH group. For FCHPT STU this meant an even greater lead on the second best faculty in the group and strengthening its first position.

The criteria and assessment methodology are analogous to previous ARRA reports<sup>1</sup> which provide more detailed description and justification thereof. Discussions with Don Thornhill and Lewis Purser, the World Bank experts, contributed significantly to methodology specification and dividing the faculties into six groups. The information about faculties’ scientific production has been obtained using the method developed by Prof. Vladimír Kellő in collaboration with Prof. Miroslav Urban. The collection and initial analysis of data should be credited to doc. Neva Pišútová. This and other work was significantly contributed to by ARRA Executive Director, Michal Považan, and ARRA Project Managers, Katarína Tichá Hudecová and Mária Páleníková.

ARRA uses data from the reports of the Ministry of Education of the Slovak Republic and from the Institute of Information and Prognoses in Education. For humanities and social science faculties of the group, this data was combined with data of their publications not included in international databases that were obtained from these higher education institutions’ annual reports.

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<sup>1</sup> All reports are published at [www.arra.sk](http://www.arra.sk), Ranking section.

## 1. About ARRA

ARRA is an independent civil association established in 2004 by Prof. Ferdinand Devínsky, Prof. Ján Pišút, Renáta Králiková, and Juraj Barta with the objective of assessing the quality of Slovak higher education institutions. In the course of its existence, it prepared and published four reports assessing Slovak higher education institutions. In its beginnings, ARRA was assisted by dr. Don Thornhill and dr. Lewis Purser, World Bank experts. After their departure, ARRA continued its international collaboration and was at the birth of an informal group of ranking agencies, International Ranking Experts Group (IREG). At the annual meeting of the Group in Shanghai in October 2007, ARRA became a founding member of the International Observatory on Academic Ranking, a formalised grouping, and ARRA representative, Prof. Ferdinand Devínsky, was elected a member of its Steering Committee. Later on, Michal Fedák and doc. Ivan Ostrovský became members of ARRA and have been making significant contributions to its work. ARRA relies on the professional knowledge and extensive experience of personalities associated in the Board of Advisors chaired by Prof. Ivan Štich. The quality of ARRA is contributed to by the Board of Trustees led by Jozef Kollár, the members including important personalities from the non-academic environment.

## 2. THE AUTHORS

- Mgr. Juraj Barta
- Dr. h. c. prof. Ing. Ferdinand Devínsky, DrSc.
- Mgr. Michal Fedák
- doc. RNDr. Ivan Ostrovský, CSc.
- Mgr. Mária Páleníková
- prof. RNDr. Ján Pišút, DrSc.
- Mgr. Michal Považan
- prof. Ing. Ivan Štich, DrSc.
- Mgr. Katarína Tichá Hudecová

### 3. Summary

ARRA presents the fourth assessment of Slovak higher education institutions which relies on a detailed analysis of publicly available and verifiable data on their scientific activity, teachers, financial management, grants, and PhD studies.

The main finding is that Slovak higher education institutions are mostly stagnating; in many cases their results deteriorate, particularly in comparison with the best ranking faculties in individual groups. This is reflected in a generally lower point score for most of the faculties assessed.

The scientific production of Slovak higher education institutions is increasing only slightly. What is alarming is the partial comparison of Slovak higher education institutions with the Czech ones that until recently formed a single education system. Only few Slovak faculties compare favourably; in several areas the differences are enormous. Noteworthy is Slovak University of Technology's Faculty of Chemical and Food Technology ("FCFT STU") that not only compares favourably even to Czech technical universities but exceeds the best Czech technology faculty by more than a third in an especially important criterion concerning citations per creative worker. All other faculties lag behind.

Institutions that depart from this unflattering trend and that are succeeding in substantially changing their situation should be recognised. Comenius University's Faculty of Economic and Social Sciences, Trenčín University of Alexander Dubček's Faculty of Industrial Technologies, and University of SS Cyril and Methodius' Faculty of Natural Sciences gradually change their profiles from predominantly educational institutions with a minimum, rather random scientific production, and achieve success as measured by Slovak standards. It can be shown by a more detailed examination that they succeed in doing so also thanks to collaboration with important scientific institutions. We believe that this example will attract other faculties as well. There is a moderate growth in scientific production among traditionally strong faculties, for example, at Comenius University's Faculty of Mathematics, Physics and Informatics, where this is attributable to collaboration too, but at an international level and in major projects.

Conversely, the promising development of certain faculties of Trnava University, which was pointed out by the 2007 report, failed to be maintained. The lead these faculties gained on other newly created institutions has been eliminated to a considerable extent.

It can generally be concluded that globally, there is a correlation between the size of the scientific production and PhD studies. Scientifically successful academicians establish their scientific schools by guiding PhD students. As can be seen on the example of J. Selye University's Faculty of Reformed Theology, apart from some exceptions, this correlation does not apply to Slovakia at all. The exceptions quite certainly include Slovak University of Technology's Faculty of Chemical and Food Technology that has been ranking first among technical science faculties since ARRA started its assessments, the number of its publications in scientific journals and their citations being complemented by the number of PhD students and PhD graduates at the faculty.

An unambiguously positive trend in several faculties is the growing number of foreign students. The strong growth can be seen particularly at Comenius University's Jessenius Faculty of Medicine, Faculty of Medicine, and Faculty of Pharmacy, and Slovak University of Technology's Faculty of Mechanical Engineering and Faculty of Civil Engineering. There is a steady high percentage of foreign students – about 20% – at the University of Veterinary Medicine.

For the first time, a private higher education institution was subject to a full-fledged assessment. Among faculties of medicine and healthcare, St. Elizabeth University of Health and Social Sciences reached very good results in several criteria and is comparable to faculties of public higher education institutions. The assessment also included nine more faculties of public higher education institutions that have existed for three years and satisfy the condition of at least one completed cycle of a bachelor degree programme.

This year, problems with credibility of data collected by the Ministry of Education of the Slovak Republic (the “MoEdu SR”) occurred. An additional check using other sources showed that not all data obtained by the MoEdu SR was collected precisely and that there were differences between reality and MoEdu SR's data. This was the case particularly for Comenius University's Faculty of Philosophy (“FiF UK”). Due to lack of time between the finding and the publishing of the assessment report, these differences were not reflected. Should the deficiencies in MoEdu SR's data affect the ranking of faculties, ARRA will inform about the changes.

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#### **4. Introduction – changes, additions, findings**

ARRA is submitting the fourth report assessing higher education institutions and their faculties. The assessment was made on the basis of information for 2007. Thanks to already four continuous years of assessment, in this report, ARRA examines also the basic trends in higher education in Slovakia. Another view has been added to this analysis, in which the best faculties of Slovakia's higher education institutions are compared to similar faculties in the Czech Republic. ARRA will prepare a more detailed comparison in the following year, however, the initial findings in most cases are not encouraging for Slovakia's education system.

ARRA's ambition is to include private higher education institutions in the assessment. In the 2007 report already, St. Elizabeth University of Health and Social Sciences was assessed in certain selected criteria as a pilot. In this report, this university is subject to full-fledged assessment, being included in the group of medical and healthcare faculties, and not scoring poorly at all among them. ARRA plans to assess all private higher education institutions and compare them to the public ones; it even considers this to be one of the fundamental objectives of its activity. However, private institutions are not obliged to publish information to such an extent as public higher education institutions. Therefore they mostly do not satisfy the basic condition of public availability and verifiability of data used in the assessment. St. Elizabeth University of Health and Social Sciences, however, satisfied this condition and is a proof that these difficulties can be overcome. Private higher education institutions simply have to provide more information about themselves to the public.

The list of institutions under assessment was further extended by as many as nine faculties of public higher education institutions. After satisfying the condition of at least three years' existence, the assessment included three faculties of J. Selye University in Komárno, the PU Faculty of Management, the PU Faculty of Sports, the KU Faculty of Health in Ružomberok, the UKF Faculty of Central European Studies, the STU Faculty of Informatics and Information Technology, and the TU Košice Faculty of Aeronautics.

Since the very formation of ARRA, there were discussions about the assessment of humanities and social science faculties. Many pedagogues and scientists from these areas were pointing out that they were discriminated against in their faculties' quality assessment, as information on publications was accepted exclusively from WoK. Again, ARRA assesses social science and humanities faculties using a slightly modified methodology, taking into consideration, in criterion VV1, also the publications of authors from these faculties that are not covered by international databases. This modification does not affect their ranking significantly, but it enables distinguishing among faculties with zero records in international databases. ARRA continues to work on enhancements to an assessment method for social science and humanities faculties, but this is a very challenging task that will require more time and discussions. Publication and citation traditions of other faculty groups are such that the WoK database sufficiently covers the quality



and quantity of their publications and citations, therefore ARRA uses only data from the WoK database.

As in the previous year, the ARRA report is divided into two parts, particularly due to the fact that it is extensive. The first part includes an overview of the most important results of this year's assessment as well as news and additional views described above. In the second part, there are detailed assessments of individual groups, details of the methodology used, and other appendices intended more for the professional public.

## 5. Brief overview of the assessment methodology

The procedure that ARRA used in assessing Slovak higher education institutions in 2008 is identical to that used in 2007.

Similarly as in the previous assessments, the higher education institution assessment procedure consists in the following steps in this report:

- the selection of indicators for the quality of education and research in individual universities and the assignment of a certain number of points to each faculty for the performance in the particular indicator (indicators are arranged into groups and each group of indicators gained a certain number of points),<sup>2</sup>
- the division of faculties into six groups according to the so-called Frascati Manual in order to compare only faculties that have the same orientation and similar working conditions,
- assigning point scores to faculties (the ranking of faculties in individual groups according to the Frascati Manual is based on average points score in individual groups of indicators),
- calculating point scores for the higher education institutions in individual Frascati groups (the ranking of the institution in the given group is given by the average assessment of all its faculties included in that group).

The most recent version of the Frascati Manual of 2002<sup>3</sup> divides subjects of higher education research and studies into 6 groups:

- natural sciences,
- engineering and technology,
- medical sciences,
- agricultural sciences,
- social sciences,
- humanities.

From 1 June 2005 this division will be included in Slovak law<sup>4</sup>, i.e. also in the Slovak research community.<sup>5</sup>

ARRA does not prepare a cumulative table ranking all Slovak public higher education institutions. It is also true that the quality of a higher education institution is determined by the quality of its faculties (except for the University of Veterinary Medicine the Academy of Fine Arts, and St. Elizabeth University of Health and Social Sciences, which have no faculties and are

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<sup>2</sup> In 2007, indicators were used that were slightly modified as compared to those of 2006.

<sup>3</sup> Frascati Manual, 6<sup>th</sup> Edition, OECD 2002, Paris, p. 67.

<sup>4</sup> Act No. 172/2005 on the Organisation of State Support for Research and Development and Additions to Act No. 575/2001 on the Organisation of Government Activities and the Organisation of the Central State Administration as amended.

<sup>5</sup> A more detailed breakdown is given in the International Standard Classification of Education (ISCED) 1997, UNESCO, November 1997, and is described below in the text.

therefore assessed as a whole). ARRA, therefore, offers a ranking of higher education institutions in groups of subjects on the basis of the prevailing orientation in accordance with the Frascati Manual.

ARRA assigns compensation points in certain criteria to faculties existing less than 10 years. These are criteria where parameter value depends on time (ten years' period is examined, while faculties exist for less than ten years). A list of faculties with modified assessment including the compensation factors for 2007 and 2008 is given in Table 1.

**Table 1: Faculties assigned compensation points in the 2008 Report (the last column shows the last year's compensation factor in brackets)**

<i>University</i>	<i>Faculty of Social and Economic Sciences</i>	<i>Established</i>	<i>Compensation factor</i>
Comenius University	Faculty of Social and Economic Sciences	2002	10/6 (10/5)
Prešov University	Faculty of Health Care	2002	10/6 (10/5)
Catholic University	Faculty of Philosophy	2002	10/6 (10/5)
Catholic University	Faculty of Theology	2003	10/5 (10/4)
Catholic University	Faculty of Education	2002	10/6 (10/5)
Constantine the Philosopher University	Faculty of Social Work and Health	2002	10/6 (10/5)
Trnava University	Faculty of Law	1999	10/9 (10/8)
Technical University of Košice	Faculty of Arts	1999	10/9 (10/8)
Žilina University	Faculty of Special Engineering	2002	10/6 (10/5)
University of Economics	Faculty of International Relations	2000	10/8 (10/7)
Slovak University of Agriculture	Faculty of Biotechnology and Food Sciences	2002	10/6 (10/5)
Slovak University of Agriculture	Faculty of European Studies and Regional Development	2002	10/6 (10/5)
J. Selye University	Faculty of Education	2004	10/3 (-/-)
J. Selye University	Faculty of Economics	2004	10/3 (-/-)
J. Selye University	Faculty of Reformed Theology	2004	10/3 (-/-)
Slovak University of Technology	Faculty of Informatics and Information Technologies	2004	10/3 (-/-)
Technical University of Košice	Faculty of Aeronautics	2004	10/3 (-/-)
Prešov University	Faculty of Management	2004	10/3 (-/-)
Prešov University	Faculty of Sports	2004	10/3 (-/-)
Catholic University	Faculty of Health Care	2004	10/3 (-/-)
Constantine the Philosopher University	Faculty of Central European Studies	2004	10/3 (-/-)

## 6. Main results of the assessment

### 6.1 Universities and faculties of the AGRO group

AGRO		Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	University of Veterinary Medicine	89	97	74	63	91	<b>83,8</b>	83,4	81,6	81,1
2	Technical University in Zvolen	71	51	36	58	58	<b>54,8</b>	63,2	52,3	54,5
3	Slovak University of Agriculture	60	61	20	73	45	<b>51,8</b>	53,4	55,6	53,7

AGRO			Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	University of Veterinary Medicine	University of Veterinary Medicine	94	97	74	63	91	<b>83,8</b>	83,8	81,6	81,1
2	Faculty of Forestry	Technical University in Zvolen	80	45	63	66	66	<b>64,0</b>	65,5	57,0	59,9
3	Faculty of Biotechnology and Food Sciences	Slovak University of Agriculture	66	57	41	63	44	<b>54,5</b>	41,3	62,4	62,6
4	Faculty of Horticulture and Landscape Engineering	Slovak University of Agriculture	50	62	2	88	50	<b>50,5</b>	57,1	47,5	47,3
5	Faculty of Agrobiology and Food Resources	Slovak University of Agriculture	66	62	17	67	41	<b>50,4</b>	61,6	53,8	51,3
6	Faculty of Wood Sciences and Technology	Technical University in Zvolen	62	57	9	51	49	<b>45,5</b>	55,5	50,6	49,2

The order in this group changes only negligibly. The University of Veterinary Medicine has a convenient lead on other faculties in the group. It can therefore be assumed that it will maintain the very good results in the assessment in the long term.

Among other faculties, the situation is much more levelled. After two years, Zvolen University of Technology's Faculty of Forestry managed to regain the second rank at the expense of the SPU Faculty of Biotechnology and Food Sciences. Compared to the last year, Zvolen University of Technology's Faculty of Forestry improved by 5 points, while the SPU Faculty of Biotechnology and Food Sciences lost 7 points. Zvolen University of Technology's Faculty of Forestry achieved a more significant improvement in citations of its publications, including in the VV3a criterion, i.e., in the number of publications with at least 25 citations per creative worker. This qualitative shift is expressed in the high increase of grant funding from the Slovak Research and Development Agency ("APVV").

Year-on-year differences among faculties are not significant; these may represent fluctuations. Another trend is the falling performance of the TU Zvolen Faculty of Wood Sciences and the SPU Faculty of Agrobiology and Food Resources. Although the TU Zvolen Faculty of Wood Sciences appears on the last place for the first time, the continued falling trend in the past years is more worrying than the position in the table.

## 6.2 Universities and faculties of the HUM group

HUM		Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	J. Selye University	72	55	0	67	0	<b>38,6</b>	n.a.	n.a.	n.a.
2	Academy of Music and Dramatic Arts	74	54	2	38	15	<b>36,7</b>	48,2	41,7	42,0
3	Academy of Fine Arts and Design	62	70	1	24	17	<b>34,6</b>	52,3	39,6	39,5
4	Comenius University	53	40	22	41	5	<b>32,5</b>	47,5	36,7	40,6
5	Academy of Arts	67	53	2	13	15	<b>30,0</b>	37,4	28,2	27,0
6	Prešov University	41	34	31	28	16	<b>29,9</b>	46,2	36,6	32,6
7	Trnava University	50	34	15	29	11	<b>28,0</b>	51,6	39,9	40,0
8	Catholic University	33	34	6	21	28	<b>24,3</b>	30,9	22,2	19,3
9	University of Constantine the Philosopher	34	41	0	22	10	<b>21,5</b>	38,9	24,8	27,9
10	Technical University of Košice	42	58	0	0	4	<b>20,7</b>	27,6	36,6	22,3
11	Matej Bel University	34	25	11	19	5	<b>18,9</b>	28,8	22	20,4
12	University of St. Cyril and Methodius	33	31	6	0	6	<b>15,4</b>	27,7	20,1	18,1

HUM			Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	Faculty of Humanities and Natural Sciences	Prešov University	42	32	70	12	40	39,3	53,0	47,6	47,6
2	Faculty of Reformed Theology	J. Selye University	72	55	0	67	0	38,6	n.a.	n.a.	n.a.
3	Faculty of Performing Arts	Academy of Arts	87	54	0	15	34	37,9	47,1	34,6	34,1
4	Faculty of Music and Dance	Academy of Music and dramatic Arts	86	59	1	41	1	37,6	42,6	43,3	42,6
5	Faculty of Theatre Arts	Academy of Music and dramatic Arts	57	51	4	34	40	37,2	49,0	39,3	42,3
6	Faculty of Film and Television	Academy of Music and dramatic Arts	80	51	1	40	4	35,2	47,9	42,7	41,3
7	Academy of Fine arts and Design	Academy of Fine arts and Design	62	70	1	24	17	34,6	50,1	39,6	39,5
8	Faculty of Arts	Comenius University	54	41	33	35	5	33,6	64,7	44,9	51,0
9	Roman Catholic Theological Faculty of St. Cyril and Methodius	Comenius University	48	39	20	47	10	32,7	42,0	28,8	31,5
10	Evangelical Theological Faculty	Comenius University	59	40	13	43	0	31,1	42,3	36,5	39,4
11	Faculty of Arts	Catholic University	35	37	6	23	52	30,5	26,5	22,2	20,0
12	Ortodox Theological Faculty	Prešov University	39	30	18	60	3	30,0	43,4	35,2	31,3
13	Faculty of Arts	Prešov University	40	43	25	22	13	28,6	53,8	42,6	32,2
14	Theological Faculty	Trnava University	53	36	8	36	9	28,4	44,7	42,5	46,3
15	Faculty of Fine Arts and Design	Academy of Arts	54	57	2	24	4	28,0	34,6	24,7	30,3
16	Faculty of Arts	Trnava University	47	32	23	23	14	27,6	51,0	37,3	33,8
17	Faculty of Dramatic Arts	Academy of Arts	60	50	5	0	6	24,1	32,4	25,3	23,5
18	Greek Catholic Theological Faculty	Prešov University	45	31	11	16	6	21,7	27,9	21,0	19,4
19	Faculty of Arts	University of Constantine the Philosopher	34	41	0	22	10	21,5	35,3	24,8	27,9
20	Faculty of Arts	Technical University in Košice	42	58	0	0	4	20,7	28,0	36,6	22,3
21	Faculty of Humanities	Matej Bel University	34	25	11	19	5	18,9	35,2	27,1	25,5
22	Theological Faculty	Catholic University	31	32	5	18	4	18,0	n.a.	n.a.	18,6
23	Faculty of Arts	University of St. Cyril and Methodius	33	31	6	0	6	15,4	27,4	20,1	18,1

As of this year, the assessment includes J. Selye University's Faculty of Reformed Theology ("FRT UJS") that assumed the second rank. This is a first-time assessed faculty which satisfied ARRA's condition for inclusion in the assessment, i.e., at least three years of existence. On the one hand, the faculty has zeros in the criteria of scientific production and grants obtained; on the other hand, it has the highest number of full-time PhD students per professor and associate professor. There is usually a correlation between scientific production and PhD studies. Scientifically successful academicians establish their scientific schools by guiding PhD students. Using the example of this faculty it can be concluded that apart from some exceptions, this correlation does not apply to Slovakia at all.

FRT UJS saw a high percentage of foreign students – as many as 46%. This is a consequence of the faculty's geographic position, its language of instruction, and of the fact that only a small percentage of Slovakia's population professes to the reformed church while in Hungary, this church has a high share. And it is Hungary that an overwhelming majority of the faculty's foreign students come from.

Prešov University's Faculty of Humanities and Natural Sciences is a special case. This is a faculty whose name already indicates humanities and natural science components. The faculty's performance in the quantity of publications and citations in the WoK database is significantly influenced by the existence of the natural science part of the faculty. The faculty's specialisation ranges somewhere between natural science and humanities faculties. ARRA classifies it among faculties of humanities. ARRA perceives the classification of certain faculties with different orientations to be an issue and intends to examine this in the future.

A significant change was Comenius University's Faculty of Philosophy ("FiF UK") being ranked down to eight. ARRA analysed the causes of this shift including in contact with faculty's representatives. ARRA obtains data from publicly available and verifiable sources, particularly from the Ministry of Education of the Slovak Republic (the "MoEdu SR"). A detailed analysis of the data showed that MoEdu SR's data is not fully reliable in this case concerning the records of grant funds allocated by the Research and Development Support Agency ("APVV"). ARRA is presently ascertaining the actual amount of grant funds allocated to FPh CU from the APVV where discrepancies occurred. Should the differences found affect the ranking of faculties, ARRA will inform about these changes.



### 6.3 Universities and faculties of the MED group

MED		Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	Comenius University	84	87	70	35	50	<b>65,3</b>	71,5	73,5	63,3
2	Pavol Jozef Šafárik Univesity	69	59	62	31	62	<b>56,5</b>	70,7	54,4	53,5
3	Trnava University	60	42	68	68	8	<b>44,1</b>	n.a.	n.a.	60,7
4	St. Elizabeth University of Health and Social Sciences	36	48	29	69	32	<b>42,7</b>	n.a.	n.a.	45,1
5	Univesity of Constantine the Philosopher	38	54	2	36	37	<b>33,5</b>	n.a.	n.a.	32,9
6	Prešov University	27	51	2	0	37	<b>23,4</b>	n.a.	n.a.	17,7
7	Catholic Univesity	26	31	0	0	11	<b>13,7</b>	n.a.	n.a.	n.a.

MED			Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	Jessenius Faculty of Medicine	Comenius University	93	87	56	39	75	<b>70,0</b>	72,3	78,8	69,2
2	Faculty of Pharmacy	Comenius University	72	89	97	25	52	<b>66,8</b>	79,3	78,5	64,6
3	Faculty of Medicine	Comenius University	86	84	58	43	25	<b>59,0</b>	63,0	63,3	56,0
4	Faculty of Medicine	Pavol Jozef Šafárik University	69	59	62	31	62	<b>56,5</b>	70,7	54,4	53,5
5	Fakulta zdravotníctva a sociálnej práce	Trnava University	60	42	42	68	8	<b>44,1</b>	n.a.	n.a.	60,7
6	<b>St. Elizabeth University of Health and Social Sciences</b>	St. Elizabeth University of Health and Social Sciences	36	48	29	69	32	<b>42,7</b>	n.a.	n.a.	45,1
7	Faculty of Social Sciences and Health	University of Constantine the Philosopher	38	54	2	36	37	<b>33,5</b>	n.a.	n.a.	32,9
8	Faculty of Health Care	Prešov University	27	51	2	0	37	<b>23,4</b>	n.a.	n.a.	17,7
9	Faculty of Health Care	Catholic University	26	31	0	0	11	<b>13,7</b>	n.a.	n.a.	n.a.

Faculties of medicine and healthcare now include the Catholic University's Faculty of Health and private St. Elizabeth University of Health and Social Sciences ("St. Elizabeth University") assessed experimentally in the previous year.

The resulting tables show a moderate decline in the ranking of Trnava University's Faculty of Health and Social Work whose percentage of associate professors and professors relative to the number of teachers is continuously decreasing year-on-year and the number of publications and citations per creative worker and the number of PhD graduates per authorised supervisor are in decline.

Better results in several indicators were achieved by Comenius University's Jessenius Faculty of Medicine. The percentage of teachers with PhD increased year-on-year by about 20% and the percentage of associate professors and professors by about 10%. The number of foreign students at the faculty reached 19.2%. A similar pronounced increase in this indicator was seen in Comenius University's Faculty of Pharmacy and Faculty of Medicine. For Jessenius Faculty of Medicine, the number of citations per publication as well as per creative worker increased too, as did the number of publications with at least 5 citations per creative worker. These changes are reflected in a significant increase of grant funds per creative worker at the faculty in Martin.

What is worth mentioning is the fourfold increase of the number of publications with at least 25 citations per creative worker at the UPJŠ Faculty of Medicine, however, these are still small figures (from 0.02 to 0.07 publications per creative worker).

Faculties of healthcare failed to achieve a more significant improvement and lag behind faculties of medicine and faculties of pharmacy in the group. What stands out is the improved ability to obtain grant funding from abroad for Prešov University's Faculty of Health. The drop of Trnava University's Faculty of Health and Social Work is intriguing. ARRA will continue monitoring it and examining its causes.

## 6.4 Universities and faculties of the NAT group

NAT		Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	Comenius University	93	63	74	95	71	79,3	77,6	81,9	77,5
2	Pavol Jozef Šafárik University	100	51	64	60	53	65,5	67,2	65,4	61,7
3	University of Constantine the Philosopher	58	67	15	49	31	44,2	46,3	50,1	46,4
4	Technical University of Zvolen	63	74	14	51	14	43,3	48,5	46,2	48,4
5	Matej Bel University	49	42	14	30	27	32,4	40,9	34,1	30,2
6	University of St. Cyril and Methodius	60	41	14	8	9	26,3	28,5	23,9	25,1
7	Žilina University	37	67	2	14	10	26,1	37,1	27,8	24,3

NAT			Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	Faculty of Mathematics, Physics and Informatics	Comenius University	97	56	100	89	91	86,5	82,3	82,5	80,5
2	Faculty of Natural Sciences	Comenius University	90	71	49	100	51	72,0	72,0	81,2	74,5
3	Faculty of Natural Sciences	Pavol Jozef Šafárik University	100	51	64	60	53	65,5	68,2	65,4	61,7
4	Faculty of Natural Sciences	University of Constantine the Philosopher	58	67	15	49	31	44,2	44,9	50,1	46,4
5	Faculty of Ecology and Environmental Sciences	Technical University in Zvolen	63	74	14	51	14	43,3	47,0	46,2	48,4
6	Faculty of Natural Sciences	Matej Bel University	49	42	14	30	27	32,4	37,1	34,1	30,2
7	Faculty of Natural Sciences	University of St. Cyril and Methodius	60	41	14	8	9	26,3	25,8	23,9	25,1
8	Faculty of Natural Sciences	Žilina University	37	67	2	14	10	26,1	35,4	27,8	24,3

The PRIR group has been led by Comenius University's Faculty of Mathematics, Physics and Informatics ("FMFI UK"). Since the beginning of assessments, it holds the first rank. In this year, FMFI UK reached the highest number of points since ARRA started the evaluations and has increased its lead in the group. Otherwise the ranking in the group remains unchanged and stable. Individual faculties oscillate around their average values with minimal fluctuations and the faculties also keep their ranking.

The bottom end of the ranking shows a minimum half-point difference between University of SS Cyril and Methodius' Faculty of Natural Sciences (UCM) and Žilina University's Faculty of Natural Sciences (ŽU). At ŽU Faculty of Natural Sciences, the number of students per teacher and professor is continuously increasing while, on the other hand, the percentage of teachers with PhD and professors and associated professors of the total number of teachers is decreasing. ARRA classifies faculties in individual groups also according to their names that should, according to Act on Higher Education Institutions, reflect the orientation of the faculty. This is not the case of ŽU Faculty of Natural Sciences. For example, scientific mathematics is taught at the faculty but most of the bachelor programmes indicate rather a faculty of pedagogical orientation.

The growth of scientific production at the UCM Faculty of Natural Sciences is a positive trend. The number of scientific publications per creative worker has doubled since the last year.

Comenius University's Faculty of Natural Sciences faces a significantly lower interest among prospective students with a drop of as many as 50% against the last year. The deteriorating situation is underlined by the fact that the ratio between the registered and the admitted is only 40%. A very positive trend at this faculty is the growing number of PhD graduates. Although the faculty still holds the second position in ARRA's ranking, the lead on Pavol Jozef Šafárik University's Faculty of Natural Sciences decreases every year. This is the result not only of Comenius University's Faculty of Natural Sciences drop in certain criteria but also of an upward trend of Pavol Jozef Šafárik University. This faculty achieved a significant increase in grant funds, thus its further growth in scientifically oriented criteria can be expected.

Comenius University's Faculty of Mathematics, Physics and Informatics also did well in obtaining grant funding. A marked improvement was achieved by Matej Bel University's Faculty of Natural Sciences, particularly in obtaining grant funds from abroad.

## 6.5 Universities and faculties of the SOC group

SOC		Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	Technical University of Košice	70	38	17	32	100	51,2	49,0	46	47,5
2	Žilina University	71	65	1	59	11	41,5	45,2	39,7	40,6
3	Comenius University	70	46	16	58	10	40,2	41,5	37,6	39,6
4	Trnava University	71	31	45	34	13	38,9	51,2	47	43,6
5	University of Economics	66	35	16	61	11	37,7	36,6	34,8	39,7
6	Slovak University of Agriculture	59	47	8	41	27	36,3	43,0	40,9	44,7
7	Matej Bel University	65	34	8	39	7	30,7	31,1	28,6	31,1
8	Prešov University	57	39	1	25	17	27,7	35,5	24,6	22,9
9	Pavol Jozef Šafárik University	57	36	6	19	5	24,8	30,7	27,5	25,3
10	Catholic University	50	34	7	23	6	23,9	34,4	23,8	23,1
11	University of St. Cyril and Methodius	41	61	0	11	6	23,9	25,9	22,3	22,8
12	University of Constantine the Philosopher	51	31	2	24	6	22,9	30,0	32,4	32,5
13	J. Selye University	55	40	0	0	12	21,2	n.a.	n.a.	n.a.
14	Alexander Dubček University in Trenčín	33	36	1	0	2	14,5	27,6	27,3	18,5

SOC			Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	Faculty of International Relations	University of Economics	70	64	20	93	10	51,3	40,4	48,8	58,8
2	Faculty of Economics	Technical University in Košice	70	38	17	32	100	51,2	47,5	46,0	47,5
3	Faculty of Physical Education and Sports	Comenius University	83	39	28	84	20	50,9	51,9	47,5	49,1
4	Faculty of Social and Economic Sciences	Comenius University	76	54	36	59	17	48,5	40,6	35,6	47,3
5	Faculty of Education	Trnava University	76	24	88	32	15	46,9	37,6	39,0	48,9
6	Faculty of Economics and Management	Slovak University of Agriculture	73	57	12	67	20	45,9	46,6	44,2	43,0
7	Faculty of Operation and Economics of Communication	Žilina University	71	65	1	59	11	41,5	39,9	39,7	40,6
8	Faculty of national Economics	University of Economics	73	30	27	54	13	39,3	36,7	34,8	37,2
9	Faculty of Education	Matej Bel University	68	40	23	40	14	37,1	30,2	29,4	33,4
10	Faculty of Commerce	University of Economics	60	31	14	64	11	36,0	35,6	37,8	39,3
11	Faculty of Law	Comenius University	63	50	2	50	10	35,0	36,8	33,7	33,7
12	faculty of Sport	Prešov University	88	37	0	38	10	34,6	n.a.	n.a.	n.a.
13	Faculty of Management	Comenius University	55	54	9	52	2	34,5	32,7	34,4	38,1
14	Faculty of Business Economics	University of Economics	59	29	15	54	13	33,9	32,2	28,9	39,0
15	Faculty of Political Sciences and International relations	Matej Bel University	84	31	1	46	3	33,1	30,1	28,0	38,4
16	Faculty of Business Management	University of Economics	73	28	6	49	10	33,1	32,8	29,5	31,1
17	Faculty of Economic Informatics	University of Economics	60	26	16	53	9	32,8	31,8	29,1	32,6
18	Faculty of Education	Comenius University	74	32	7	44	4	32,1	40,1	37,0	30,0
19	Faculty of Law	Pavol Jozef Šafárik University	72	37	2	38	6	31,1	32,5	27,9	29,8
20	Faculty of Education	University of Constantine the Philosopher	58	37	3	48	9	30,9	35,7	31,8	32,5
21	Faculty of Law	Trnava University	66	37	2	37	12	30,9	34,4	37,4	38,4
22	Faculty of Education	Prešov University	49	32	2	26	34	28,7	33,0	39,0	22,9
23	Faculty of Economics	Matej Bel University	61	29	7	38	5	28,1	32,9	32,6	27,6
24	Faculty of Education	J. Selye University	71	44	0	0	23	27,5	n.a.	n.a.	n.a.
25	Faculty of European Studies and Regional Development	Slovak University of Agriculture	45	38	3	14	34	26,7	34,1	37,7	46,5
26	Faculty of Law	Matej Bel University	46	37	2	32	6	24,4	28,6	24,4	25,2
27	Faculty of Education	Catholic University	50	34	7	23	6	23,9	31,9	23,8	23,1
28	Faculty of Mass Media Communication	University of St. Cyril and Methodius	41	61	0	11	6	23,9	25,0	22,3	22,8
29	Faculty of Management	Prešov University	33	48	1	10	7	19,9	n.a.	n.a.	n.a.
30	faculty of Public administration	Pavol Jozef Šafárik University	42	35	11	0	5	18,6	30,0	37,1	20,9
31	Faculty of Economics	J. Selye University	38	36	0	0	0	14,8	n.a.	n.a.	n.a.
32	Faculty of Central European Studies	University of Constantine the Philosopher	45	25	2	0	2	14,8	n.a.	n.a.	n.a.
33	Faculty of Social and Economic Realtions	Alexander Dubček University in Trenčín	33	36	1	0	2	14,5	26,1	27,1	18,5

At first sight a significant change in the SPOL group is the University of Economics' Faculty of International Relations moving down from first to third position. However, the differences among the first three faculties are very close. University of Economics' Faculty of International Relations, Comenius University's Faculty of Physical Education and Sports, and Košice University of Technology's Faculty of Economics achieved very close results in the final assessment.

For example, Comenius University's Faculty of Physical Education and Sports is very strong in the criterion of the percentage of teachers with PhD. As many as 94.6% of faculty's teachers have a PhD degree. It improved significantly in the criterion of the number of citations per publication and it is one of only three faculties in the SPOL group that have at least one publication cited more than 5 times.

Košice University of Technology's Faculty of Economics is very successful in obtaining grants for its scientific and educational activity. Measured by the total number of grants obtained per creative worker, it acquired three times more than the second best faculty – more than SKK 350,000 per creative worker.

Prešov University's Faculty of Education is successful in obtaining foreign grants. It significantly exceeds other faculties in this criterion.

J. Selye University's Faculty of Economics is on the opposite side with no grant funds obtained; therefore it is quite improbable that it will be capable of significant scientific production.

Prešov University's Faculty of Management is characterised by a high interest among prospective students that exceeds the faculty's capacity ten times; however, only 38% of students admitted actually start the studies. It can therefore be assumed that this institution serves rather as the second option for people not admitted to more preferred faculties – as a so called safety.

In general, a certain stagnation can be seen with respect to the number of points obtained by faculties in this and previous years. However, there are exceptions here as well that, after several years of capacity building, can shuffle the ranking.

## Universities and faculties of the TECH group

<b>TECH</b>		Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	<b>Average</b>	Average 2004	Average 2005	Average 2006
1	Slovak University of Technology	69	59	29	52	47	<b>51,3</b>	51,9	51,5	49,7
2	Slovak University of Agriculture	66	51	12	45	27	<b>40,2</b>	42,0	33,8	29,8
3	Technical University of Košice	57	45	10	53	33	<b>39,5</b>	47,5	41,3	37,9
4	Žilina University	63	50	4	52	24	<b>38,6</b>	40,1	34,6	35,2
5	Technical University in Zvolen	69	41	0	51	17	<b>35,7</b>	55,5	39,9	31,0
6	Alexander Dubček University in Trenčín	54	39	9	39	12	<b>30,8</b>	40,1	21,4	29,5



TECH			Teachers and Students (SV1-SV4)	Application for Study (SV6-SV8)	Publication and Quotations (VV1-VV3a)	PhD. Study (VV4 - VV6)	Grants (VV7-VV10)	Average	Average 2004	Average 2005	Average 2006
1	Faculty of Chemical and Food Technology	Slovak University of Technology	100	36	100	77	90	80,5	80,4	82,5	84,1
2	Faculty of Electrical Engineering	Slovak University of Technology	79	48	38	49	63	55,4	58,6	61,1	57,1
3	Faculty of Mechanical Engineering	Žilina University	83	38	7	73	60	51,9	49,8	46,9	48,6
4	Faculty of Civil Engineering	Slovak University of Technology	70	75	19	50	34	49,5	47,2	41,3	39,5
5	Faculty of Mechanical Engineering	Slovak University of Technology	71	74	12	42	36	46,9	45,5	46,6	43,8
6	Informavtion Technologies	Slovak University of Technology	49	50	25	49	59	46,6	n.a.	n.a.	n.a.
7	Faculty of Metallurgy	Technical University in Košice	77	41	15	63	30	45,2	51,7	48,4	42,2
8	Faculty of Civil Engineering	Technical University in Košice	57	51	18	69	29	44,8	44,5	38,3	35,9
9	faculty of Mining, Ecology, Process Control and Geotechnology	Technical University in Košice	51	48	12	71	36	43,8	53,4	46,2	43,4
10	Faculty of Industrial Technologies	Alexander Dubček University in Trenčín	62	42	26	70	17	43,5	48,4	43	41,5
11	Faculty of Architecture	Slovak University of Technology	69	75	1	56	14	43,0	45,6	47,1	41,8
12	Faculty of Mechanical Engineering	Technical University in Košice	55	43	6	54	46	40,9	50,4	38,8	35,3
13	Faculty of Electrical Engineering	Technical University in Košice	68	38	12	42	41	40,4	49,9	39,8	36,4
14	Faculty of Mechanical Engineering	Slovak University of Agriculture	66	51	12	45	27	40,2	41,1	33,8	29,8
15	Faculty of Manufacturing Technologies	Technical University in Košice	49	47	3	52	48	39,6	38,2	36,6	34,4
16	Faculty of Material Sciences and Technology	Slovak University of Technology	46	55	10	43	31	37,0	33,1	30,4	32,0
17	Faculty of Electrical Engineering	Žilina University	73	48	6	36	22	36,9	39,3	35,2	32,9
18	Faculty of Special Engineering	Žilina University	47	58	0	64	11	36,0	35,7	35,9	28,4
19	Faculty of Enviromental and Manufacturing Technology	Technical University in Zvolen	69	41	0	51	17	35,7	39,9	54,5	31,0
20	Faculty of Manafement Science and Informatics	Žilina University	53	52	8	49	11	34,6	n.a.	32,2	30,0
21	Faculty of Civil Engineering	Žilina University	58	53	0	40	17	33,7	34,8	32,9	36,0
22	Faculty of Mechatronics	Alexander Dubček University in Trenčín	41	39	2	27	14	24,5	28,3	19,5	21,4
23	Faculty of Special Technology	Alexander Dubček University in Trenčín	60	37	0	21	5	24,4	33,4	31,8	25,5
24	Faculty of Aeronautics	Technical University in Košice	40	48	0	20	3	22,1	n.a.	n.a.	n.a.

The ranking of universities in the TECH group of faculties is relatively stable but there is a perceptible trend of decline in the amount of points obtained for most of the group's faculties. The ranking does not change significantly. Although there are several faculties that improved their point scores more markedly, in general, individual faculties' point scores decrease rather than increase.

Faculties of the TECH group have the potential to improve in gaining foreign students. The fastest growth was seen in Slovak University of Technology's Faculty of Mechanical Engineering (10.6% of foreign students with an increase of about 7%) and Faculty of Civil Engineering (8.3% foreign students with an increase of 7% as well).

Trenčín University of Alexander Dubček's Faculty of Industrial Technologies and Slovak University of Agriculture's Mechanisation Faculty can be mentioned as positive examples. As the only one in the group, the Faculty of Industrial Technologies grows more significantly in the criterion of the number of publications per creative worker and also in the PhD studies. The Mechanisation Faculty, among other indicators, saw a more significant increase in the number of citations per publication.

Faculties of the TECH group maintain their marked research potential and there are signals that along with traditionally high-quality faculties, additional ones that put emphasis on research will come to the forefront.

## 7. Comparison of Slovakia and the Czech Republic in the area of science

Until 1993, Slovak and Czech education and scientific systems formed a single common entity. Since the break-up of Czecho-Slovakia, both systems underwent many changes. While in 1993, both countries were essentially on the same “starting line”, after 15 years, the results of both countries in science and education differ. These development paths can be illustrated by the fact that Slovakia, as opposed to the Czech Republic, has no representative among the 500 best universities according to the Shanghai ranking or the Top 500 World Universities compiled by QS and THE.

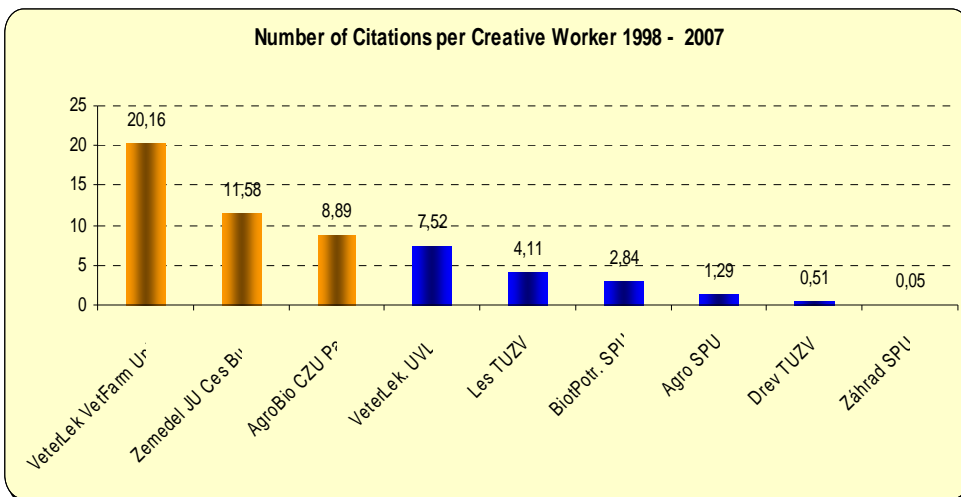
In the past year, ARRA established collaboration with the Navigátorka company of the Czech Republic whose objective is to assess the quality of higher education institutions similarly as ARRA. This collaboration also resulted in a comparison of Slovak higher education institutions in individual groups with the best Czech faculties.

In this section, we will only deal with the quantity of citations per creative worker, as we consider this criterion to be one of the indicators with the greatest informative value. Rather than describing the inputs to the system, it illustrates its outputs from the perspective of the broad scientific community. ARRA intends to make a more comprehensive assessment in several criteria in the forthcoming period.

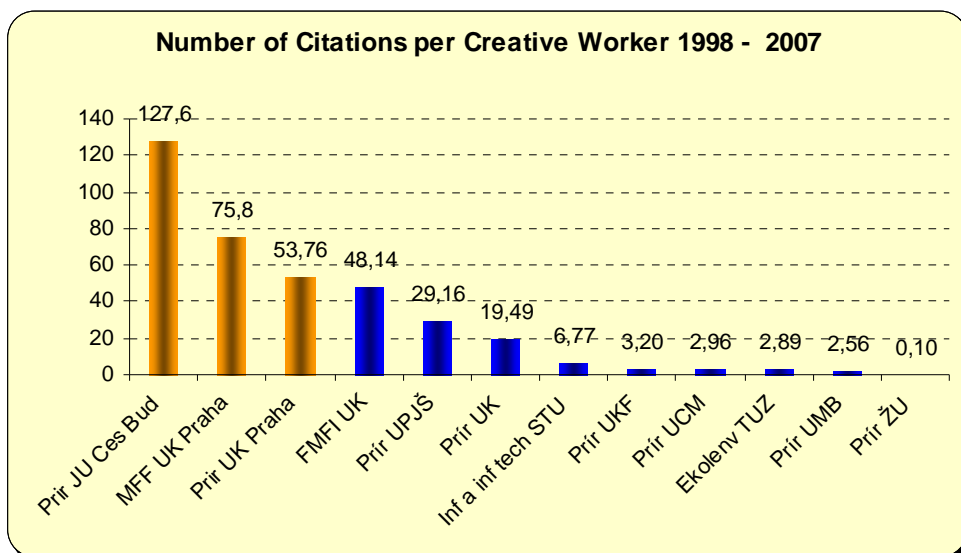
The “success rate” of scientific production of both countries’ best institutions is best reflected by the tables, therefore we will limit ourselves to only several remarks in the accompanying text.

Faculties are divided into six groups according to the Frascati Manual and the three best Czech faculties are assigned to Slovak faculties. Apart from universities of technology, Czech faculties always take the first rank and even in the TECH group, all the three best Czech faculties outperform all Slovak institutions except one. Interesting situation is in the AGRO, MED, and SPOL groups, where all the three best Czech faculties leave behind all Slovak institutions. These results fully reflect the fact that between 1995 and 2006, scientific production in Slovakia increased by 34%, while in the Czech Republic it rose by 122%. When the results of 2005 are expressed relative to populations we find that still in 2005, Slovakia had better results than the Czech Republic. However, in 2006 the situation is substantially different and Slovakia is lagging behind the Czech Republic more and more.

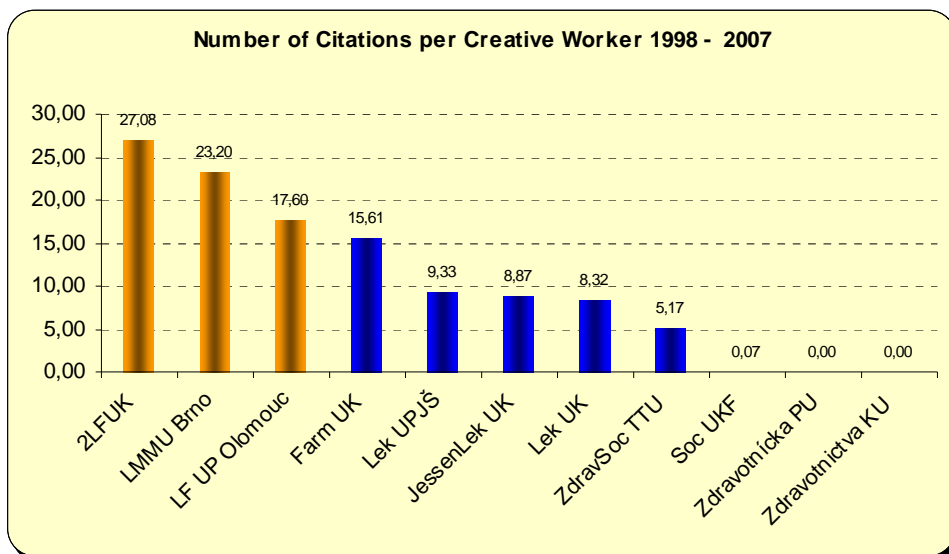
### AGRO group



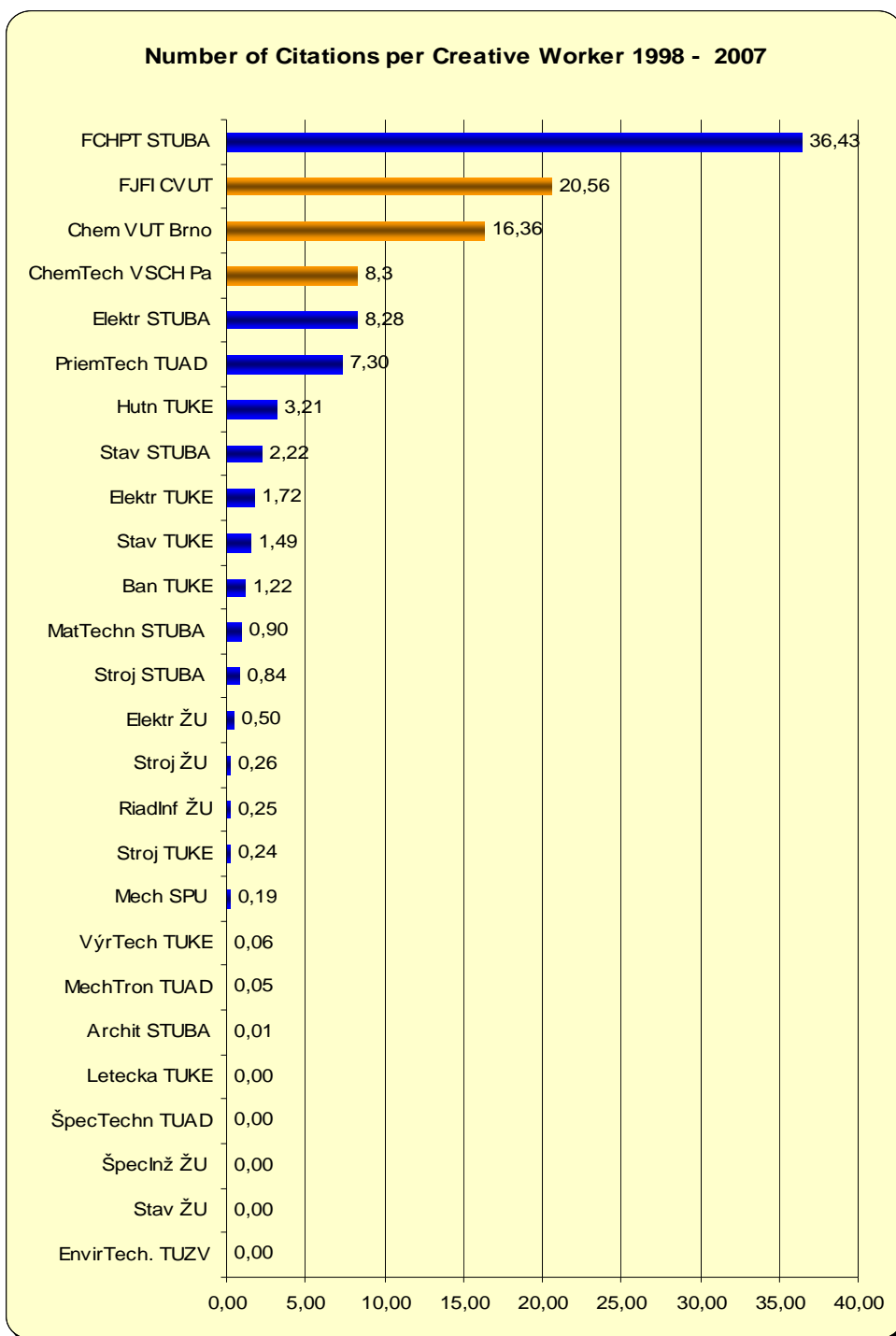
### PRIR group



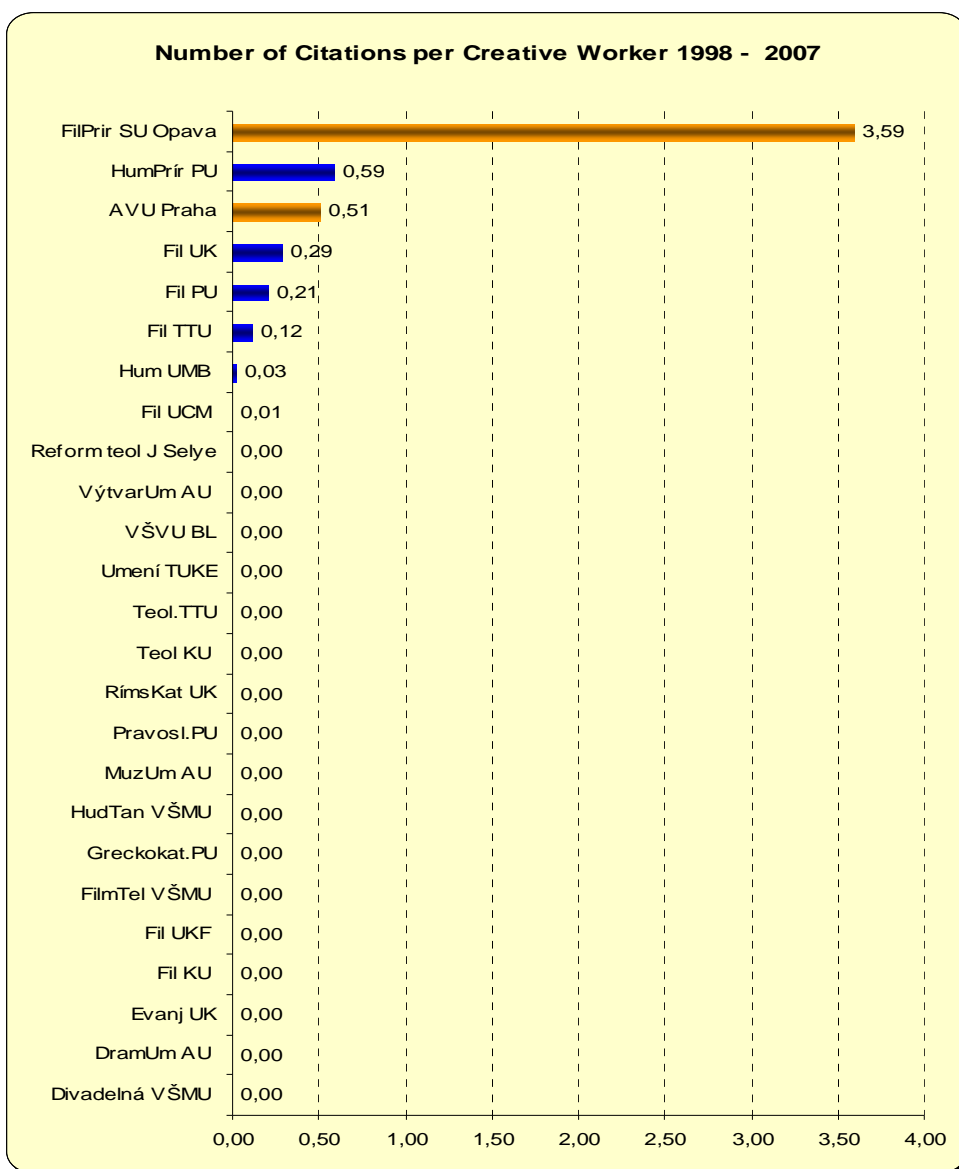
### MED group



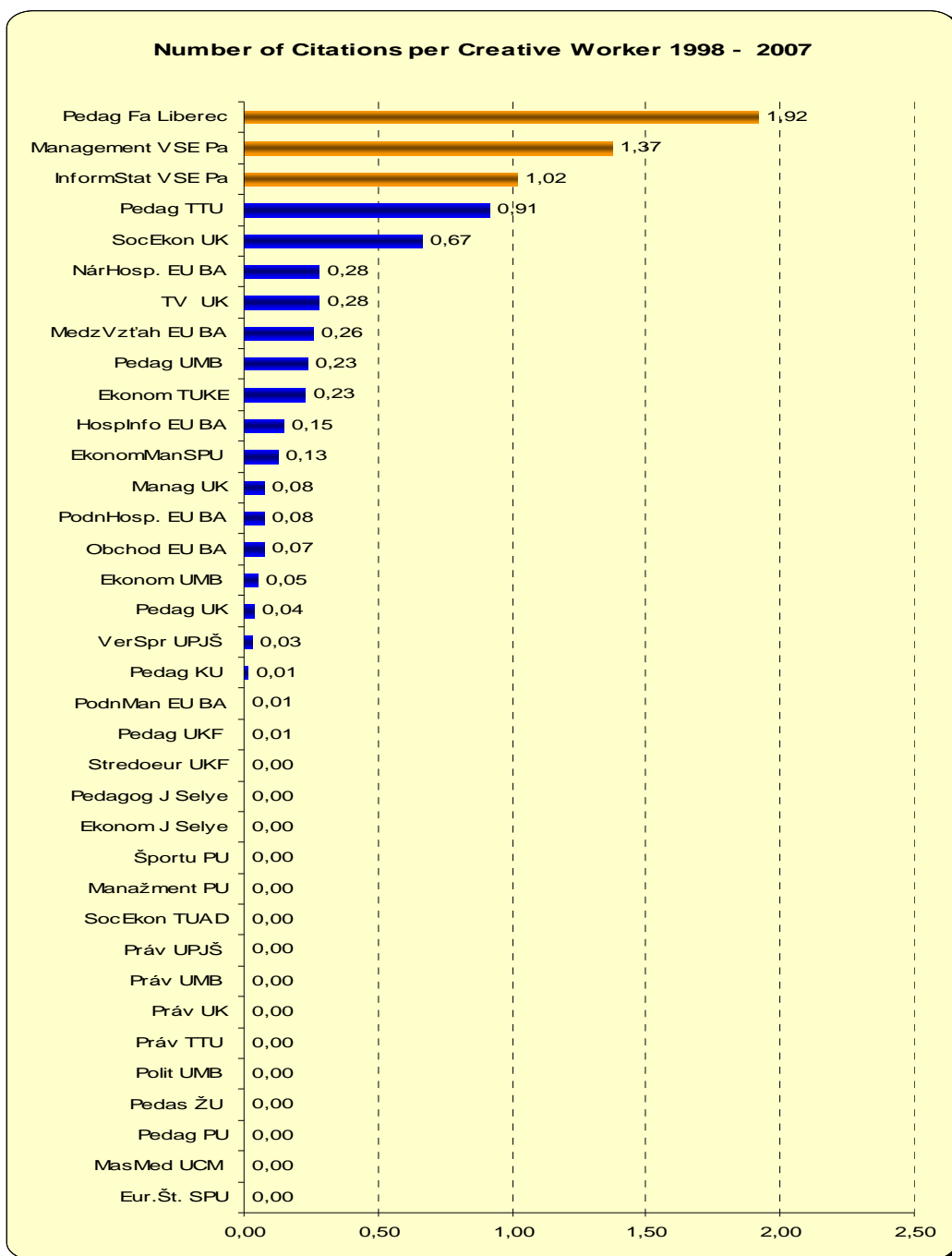
## TECH group



## HUM group



## SPOL group

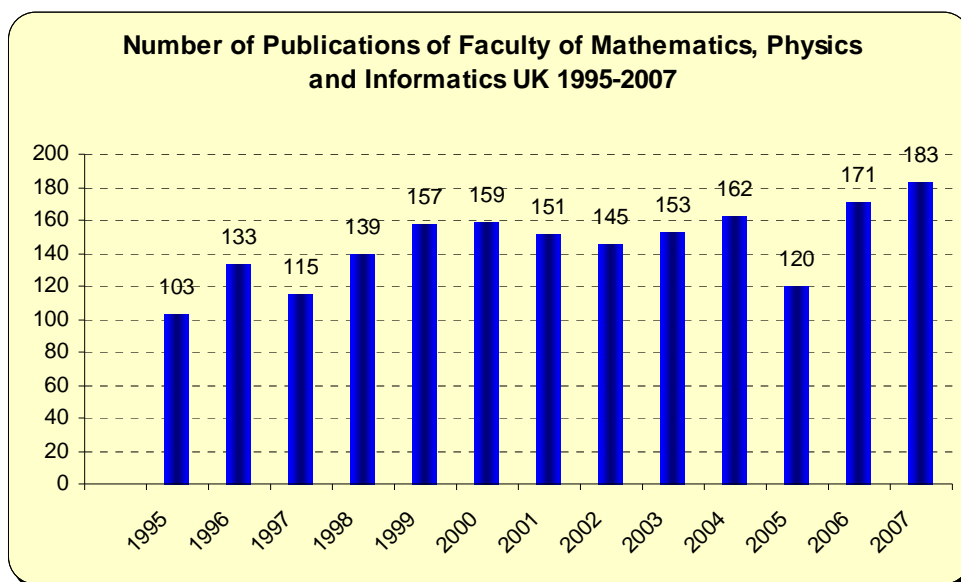


## 8. Trends in the number of publications at several selected faculties of public higher education institutions in the Slovak Republic

We examined the period of 1995 to 2007. In the next section, we chose only several faculties from all groups (except for humanities where the WoK database is insufficient to map the trends). The selected faculties contribute relatively high numbers to the total number of publications or they have only been established recently and therefore faster changes can be expected. In our opinion, a comparison so designed is interesting and captures the situation and changes throughout the Slovak higher education system. More detailed information will be published in the forthcoming period at [www.arra.sk](http://www.arra.sk).

The results suggest that “major contributors” maintain a high and relatively constant level of the number of publications per year and that some of the younger faculties have growing annual numbers of publications. These are usually connected with the development of collaboration with strong domestic and foreign institutions, which is certainly encouraging. Experience of academic officials, teachers, and scientific workers of these faculties could indeed be an inspiration for faculties that failed to show indications of growing scientific productivity so far. ARRA will examine the reasons for this development and differences among faculties in a greater detail and create room for the transfer of opinions and experience from representatives of the most successful faculties.

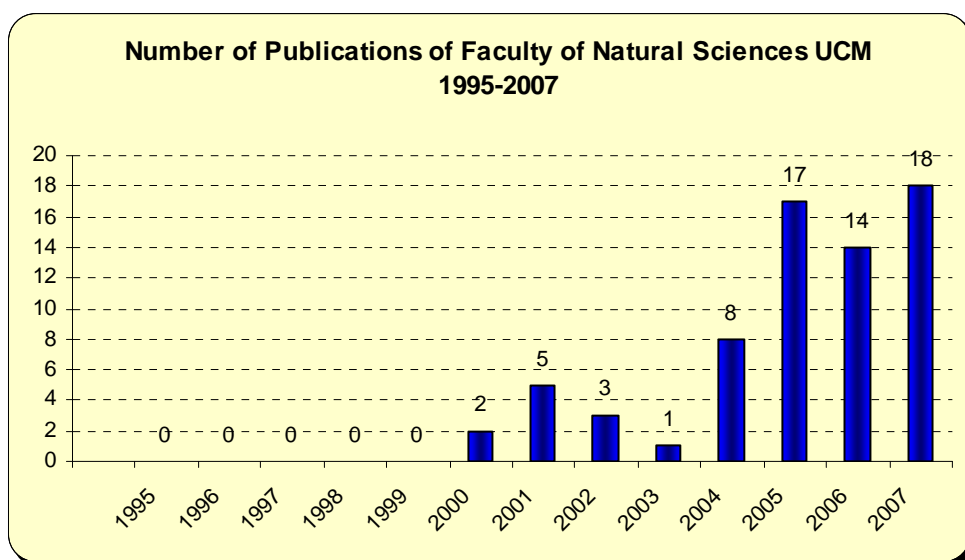
### PRIR group



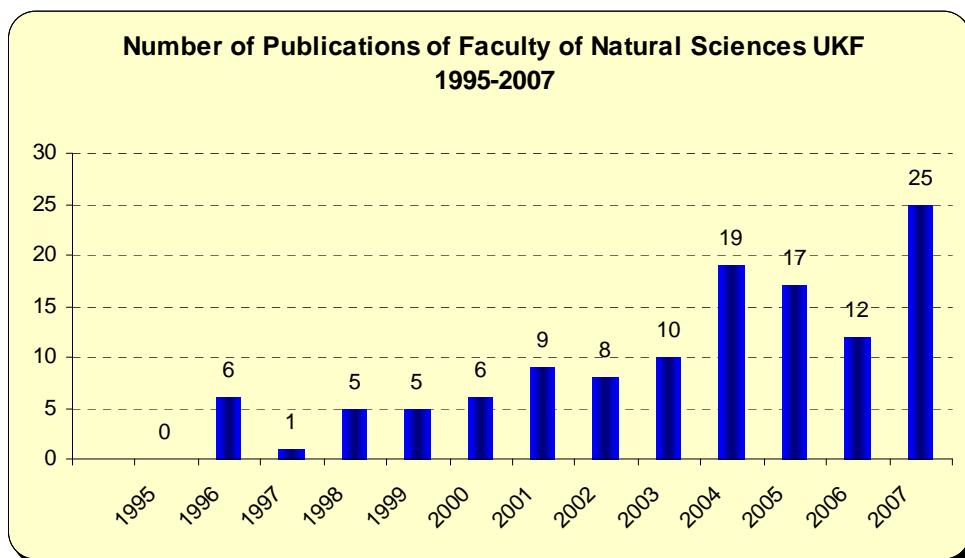
Numbers of publications show a moderate increase. Part of faculty’s publications is related to the work of groups in experimental particle (subnuclear) physics. A fast increase can be expected for these groups in the forthcoming future related to the launch of the LHC (Large



Hadron Collider) in the European Centre for Nuclear Research (CERN, Geneva) in 2009. Many of the papers were published in international cooperation.



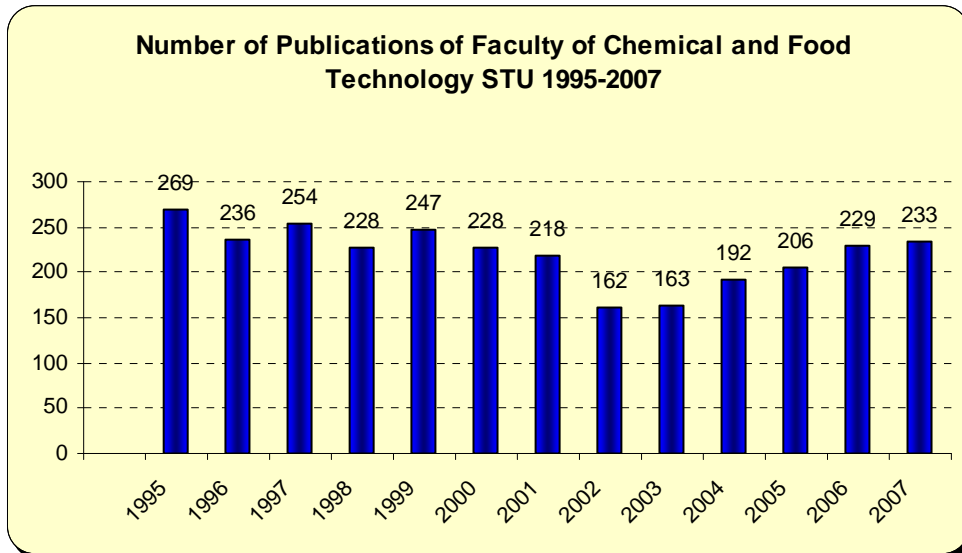
Despite certain fluctuations, the data shows a marked increasing trend. This trend is not a coincidence. Most of the papers have teams of authors comprising not only employees of the faculty but also those of strong domestic institutions (Slovak Academy of Science’s Institute of Oncology, Slovak Academy of Science’s Institute of Inorganic Chemistry, Slovak University of Technology’s Faculty of Chemical and Food Technology, Institute of Preventive and Clinical Medicine, Comenius University’s Faculty of Medicine) and foreign institutions (Karl Franzens Universität Graz, Austria; Juniata College, USA; and others). In a certain sense, this faculty can serve as a model for faculties of the younger universities.



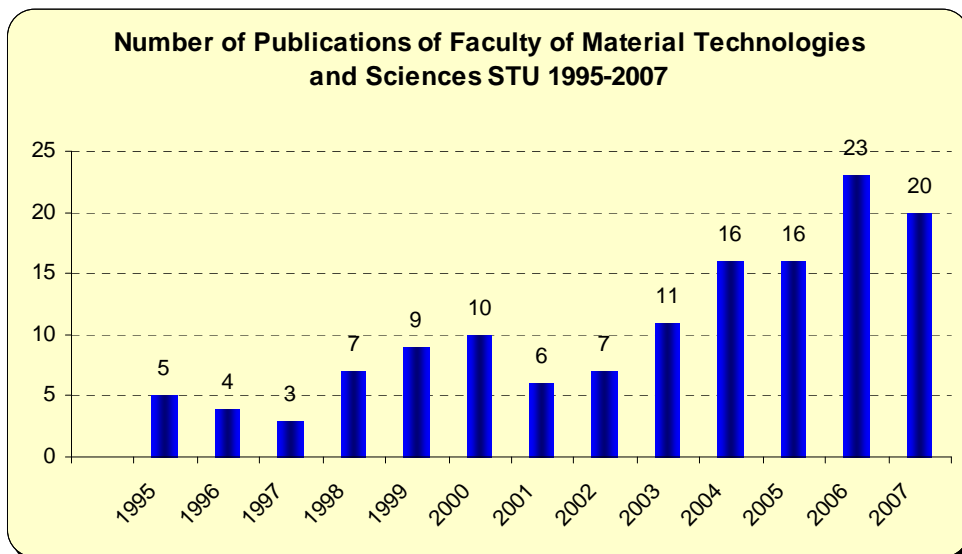
Despite fluctuations, a growing trend can be observed in this case as well. And in this case too, it is related to the cooperation with strong Slovak and foreign institutes and faculties – in the field of biology and medical sciences with the University of South Bohemia in České Budějovice

and with institutes in Ireland, the Netherlands, Austria, and France and in the field of physics with the FRG. This is a model example of successful development too.

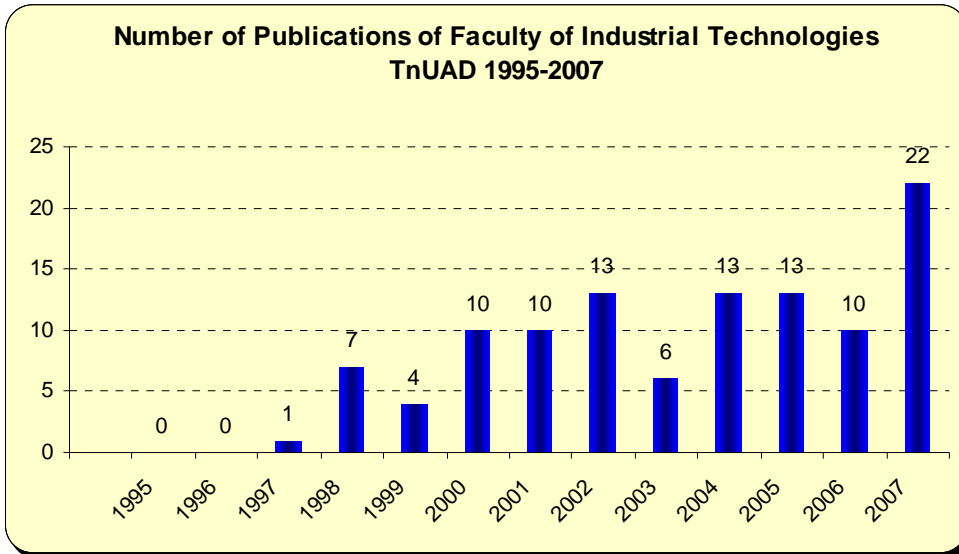
**TECH group**



In ARRA’s rankings, this faculty has traditionally been the most successful one in the field of science and research in the TECH group. Its success is related to intensive collaboration with top domestic and foreign institutions. Data shows a stable trend with a certain decline in the period 2001 – 2005. We believe that this decline was caused by the fact that older but still very efficient workers left the faculty. Many of them joined other institutions where they made substantial contributions to scientific production. After some time, FChPT STU reached approximately the same level of publication activity.

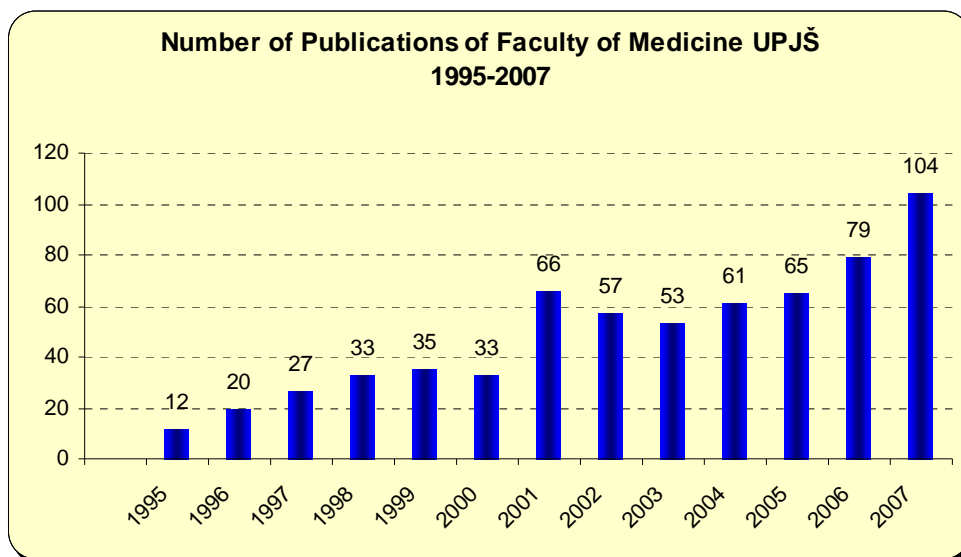


Faculty’s numbers of publications show a gradual increase. In this case as well, the increase is related to the collaboration with strong domestic (Slovak Academy of Science’s institutions, FChPT and others) and with foreign (Polish, Austrian, Russian) partners.

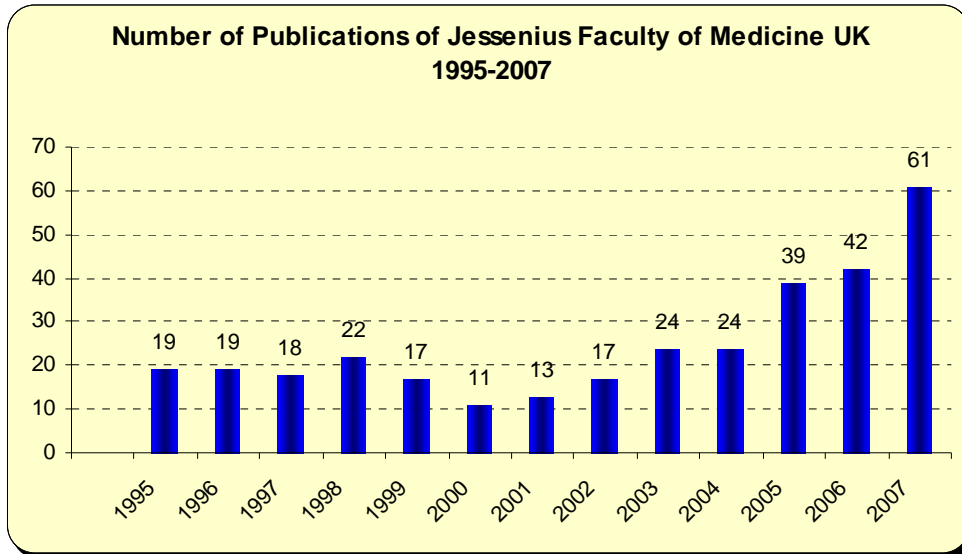


Number of publications shows a gradual increase. The faculty has many common publications with FChPT STU Bratislava, with several top institutes of Slovak and Czech Academy of Sciences, and with other foreign institutions. The increase in the number of publications is a model example of good scientific strategy and policy.

#### **MED group**



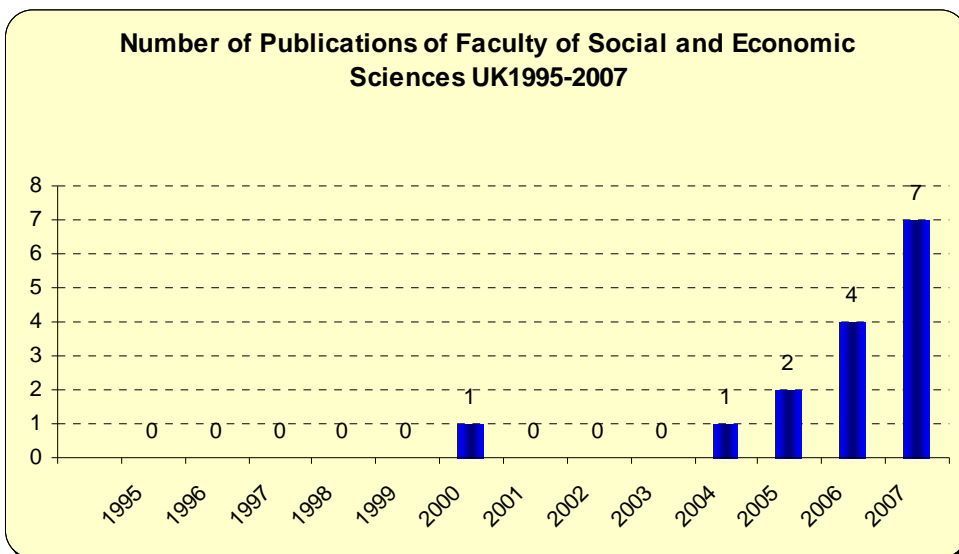
The faculty shows a gradual increase in the number of publications per year. As in other cases, this is related to collaboration with high-quality domestic institutions and with those from abroad.



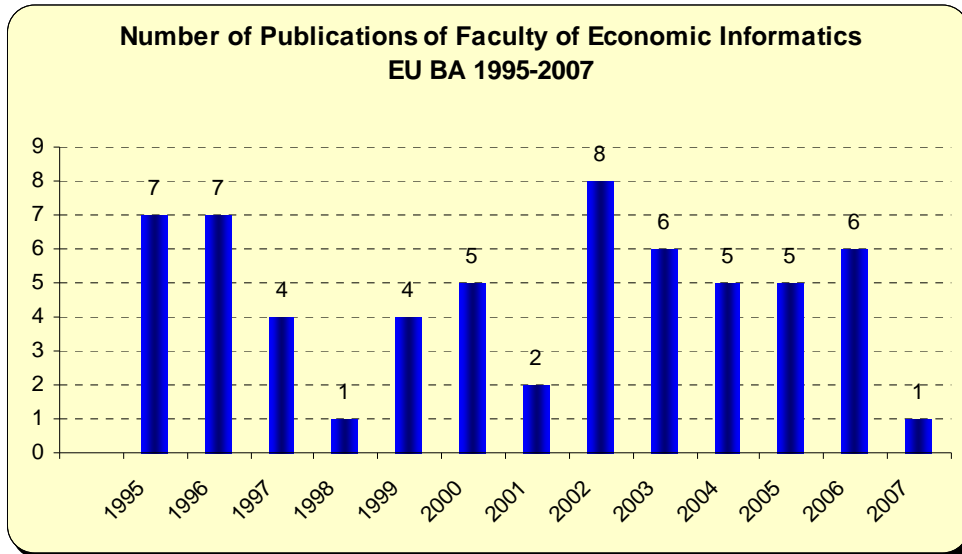
Jessenius

Faculty of Medicine, too, has a systematic increase in the number of publications per year. In the period 1995 – 2002, the annual numbers of publications were relatively constant and there is a significant increase only between 2002 and 2007.

### SPOL group



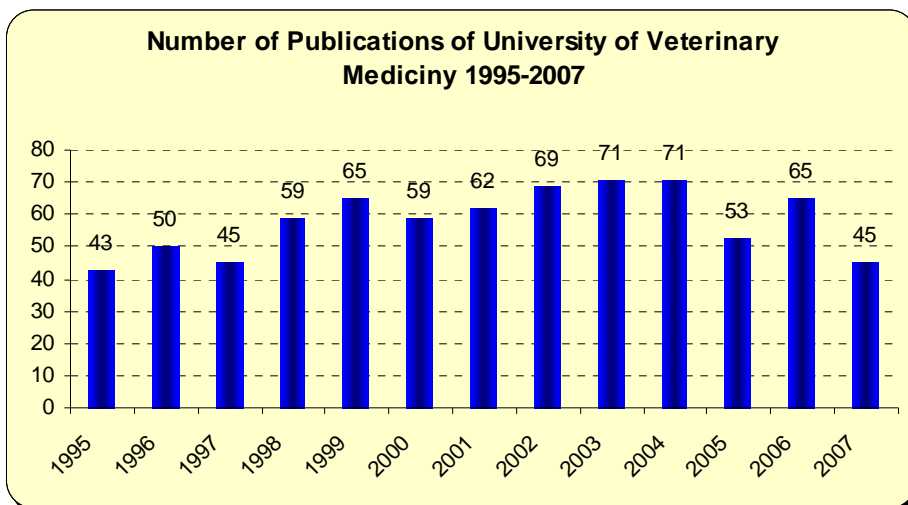
Annual numbers of publications are growing fast and systematically. If this pace can be maintained, the faculty, with a relatively small number of teachers, will get near the leading position in the SPOL area in Slovakia.



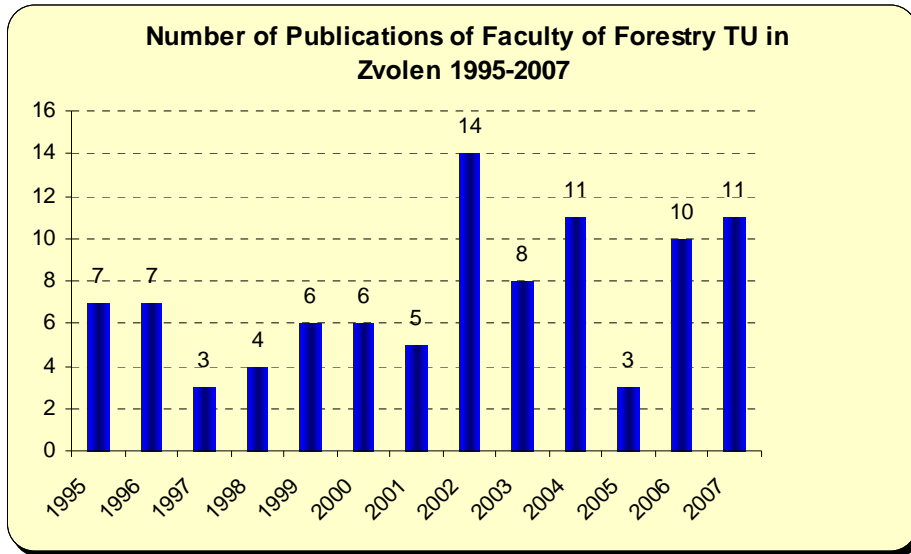
With

relatively low numbers of publications per year, great fluctuations are no surprise. The data suggest rather a persisting situation rather than an increase or decrease in the number of publications per year.

### AGRO group



Data suggest a certain indistinct maximum in the period 2002 – 2004 but in general, it corresponds to a persisting situation without significant increases or decreases.



With low numbers of publications, relatively high fluctuations are not surprising. However, the data indicates a moderate increase.

## 9. LIST OF ABBREVIATIONS USED

AGRO – faculties of agricultural sciences

HUM – faculties of humanities

MED – faculties of medical and health sciences

NAT – faculties of natural sciences

SOC – faculties of social sciences

TECH – faculties of technical sciences

1LF UK Praha – 1<sup>st</sup> Faculty of Medicine, Charles University in Prague

2LF UK Praha – 2<sup>nd</sup> Faculty of Medicine, Charles University in Prague

Agro SPU – Faculty of Agrobiological and Food Resources, Slovak University of Agriculture

AgroBio CZU Pa – Faculty of Agrobiological, Food and Natural Resources, Czech University of Life Sciences in Prague

APVV – Research and Development Support Agency

Archit STUBA – Faculty of Architecture, Slovak University of Technology

ARRA – Academic Ranking and Rating Agency

AU – Academy of Arts in Banská Bystrica

AVU Praha – Academy of Fine Arts in Prague

Ban TUKE – Faculty of Mining, Ecology, Process Control and Geotechnology, Technical University of Košice

BiotPotr. SPU – Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture

ČAV – Czech Academy of Sciences

Divadelná VŠMU – Theatre Faculty, Academy of Music and Performing Arts

DramUm AU – Faculty of Dramatic Arts, Academy of Arts

Drev TU Zvolen – Faculty of Wood Sciences, Technical University in Zvolen

Ekolenv TU Zvolen – Faculty of Ecology and Environmental Sciences, Technical University in Zvolen

Ekonom J Selye – Faculty of Economics, J. Selye University

Ekonom TUKE – Faculty of Economics, Technical University of Košice

Ekonom UMB – Faculty of Economics, Matej Bel University

EkonomMan SPU – Faculty of Economics and Management, Slovak University of Agriculture

Elektr STUBA – Faculty of Electrical Engineering and Informatics, Slovak University of Technology

Elektr TUKE – Faculty of Electrical Engineering and Informatics, Technical University of Košice

Elektr ŽU – Faculty of Electrical Engineering, Žilina University

EnvirTech TU Zvolen – Faculty of Environmental and Manufacturing Technology, Technical University in Zvolen

EU – University of Economics in Bratislava

Eur.Št. SPU – Faculty of European Studies and Regional Development, Slovak University of Agriculture  
Evanj UK – Evangelical Theological Faculty, Comenius University  
Farm UK – Faculty of Pharmacy, Comenius University  
Farm UK Hradec – Faculty of Pharmacy, Charles University in Hradec Králové  
FCHPT STUBA – Faculty of Chemical and Food Technology, Slovak University of Technology  
Fil KU – Faculty of Philosophy, Catholic University  
Fil PU – Faculty of Philosophy, Prešov University  
Fil TTU – Faculty of Philosophy, Trnava University  
Fil UCM – Faculty of Philosophy, SS Cyril and Methodius University  
Fil UK – Faculty of Philosophy, Comenius University  
Fil UK Praha – Faculty of Philosophy, Charles University in Prague  
Fil UKF – Faculty of Philosophy, Constantine the Philosopher University  
Fil UMB – Faculty of Philology, Matej Bel University  
Fil UPJŠ – Faculty of Philosophy, Pavol Jozef Šafárik University  
FilmTel VŠMU – Film and Television Faculty, Academy of Music and Performing Arts  
FilPrir SU Opava – Faculty of Philosophy and Science, Silesian University in Opava  
FilUni Hradec – Faculty of Arts, University of Hradec Králové  
Financi VSE Pa – Faculty of Finance and Accounting, University of Economics in Prague  
FJFI ČVUT – Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague  
FMFI – Faculty of Mathematics, Physics, and Informatics, Comenius University  
GreckoKat PU – Faculty of Greek Catholic Theology, Prešov University  
HospInfo EU BA – Faculty of Economic Informatics, University of Economics  
HudTan VŠMU – Faculty of Music and Dance, Academy of Music and Performing Arts  
HumPrir PU – Faculty of Humanities and Natural Sciences, Prešov University  
Hum UMB – Faculty of Humanities, Matej Bel University  
Hutn TUKE – Faculty of Metallurgy, Technical University of Košice  
Chem VUT Brno – Faculty of Chemistry, Brno University of Technology  
ChemTech VSCH Pa – Faculty of Chemical Technology, University of Pardubice  
Inf a inf tech STU – Faculty of Informatics and Information Technologies, Slovak University of Technology  
InformStat VSE Pa – Faculty of Informatics and Statistics, University of Economics in Prague  
IREG – International Ranking Experts Group  
JessenLek UK – Comenius University's Jessenius Faculty of Medicine in Martin  
KU – Catholic University in Ružomberok  
Lek UK – Faculty of Medicine, Comenius University  
Lek UPJŠ – Faculty of Medicine, Pavol Jozef Šafárik University  
Les TU Zvolen – Faculty of Forestry, Technical University in Zvolen  
Letecká TUKE – Faculty of Aeronautics, Technical University of Košice



LF UP Olomouc – Faculty of Medicine and Dentistry, Palacký University in Olomouc  
LMMU Brno – Faculty of Medicine, Masaryk University in Brno  
Manag UK – Faculty of Management, Comenius University  
Management VSE Pa – Faculty of Management, University of Economics in Prague  
Manažment PU – Faculty of Management, Prešov University  
MasMed UCM – Faculty of Mass Media Communication, SS Cyril and Methodius University  
MatTechn STUBA – Slovak University of Technology's Faculty of Material Sciences and  
Technology in Trnava  
Mech SPU – Mechanisation Faculty, Slovak University of Agriculture  
MedzVzťah EU BA – Faculty of International Relations, University of Economics  
MechTron TUAD – Faculty of Mechatronics, Trenčín University of Alexander Dubček  
MFF UK Praha – Faculty of Mathematics and Physics, Charles University in Prague  
MoEdu SR – Ministry of Education of the Slovak Republic  
MuzUm AU – Faculty of Music, Academy of Arts  
NárHosp EU BA – Faculty of National Economy, University of Economics  
Obchod EU BA – Faculty of Business, University of Economics  
Pedag Fa Liberec – Faculty of Natural Sciences and Humanities and Faculty of Education,  
University of Technology in Liberec  
Pedag Fa Uni Hradec – Faculty of Education, University of Hradec Králové  
Pedag KU – Faculty of Education, Catholic University  
Pedag PU – Faculty of Education, Prešov University  
Pedag TTU – Faculty of Education, Trnava University  
Pedag UK – Faculty of Education, Comenius University  
Pedag UKF – Faculty of Education, Constantine the Philosopher University  
Pedag UMG – Faculty of Education, Matej Bel University  
Pedagog J Selye – Faculty of Education, J. Selye University  
Pedas ŽU – Faculty of Operation and Economics of Transport and Communications, Žilina  
University  
PodnHosp EU BA – University of Economics' Faculty of Business Economics in Košice  
PodnMan EU BA – Faculty of Business Management, University of Economics  
Polit UMB – Faculty of Political Sciences and International Relations, Matej Bel University  
Pravosl PU – Faculty of Orthodox Theology, Prešov University  
Práv TTU – Faculty of Law, Trnava University  
Práv UK – Faculty of Law, Comenius University  
Práv UMB – Faculty of Law, Matej Bel University  
Práv UPJŠ – Faculty of Law, Pavol Jozef Šafárik University  
PriemTech TUAD – Faculty of Industrial Technologies, Trenčín University of Alexander Dubček  
in Púchov  
Prír JU CesBud – Faculty of Science, University of South Bohemia in České Budějovice  
Prír UCM – Faculty of Natural Sciences, SS Cyril and Methodius University

Prír UK – Faculty of Natural Sciences, Comenius University  
Prír. UK Praha – Faculty of Science, Charles University in Prague  
Prír UKF – Faculty of Natural Sciences, Constantine the Philosopher University  
Prír UMB – Faculty of Natural Sciences, Matej Bel University  
Prír UPJŠ – Faculty of Natural Sciences, Pavol Jozef Šafárik University  
Prír ŽU – Faculty of Natural Sciences, Žilina University  
PU – Prešov University in Prešov  
Reform Teol J Selye – Faculty of Reformed Theology, J. Selye University  
RiadInf ŽU – Faculty of Management Science & Informatics, Žilina University  
RímsKat UK – Roman Catholic Faculty of Theology of Cyril and Methodius, Comenius University  
FRT UJS – Faculty of Reformed Theology, J. Selye University  
SAV – Slovak Academy of Sciences  
SocEkon TUAD – Faculty of Social and Economic Relations, Trenčín University of Alexander Dubček  
SocEkon UK – Faculty of Social and Economic Sciences, Comenius University  
Soc UKF – Faculty of Social Sciences and Healthcare, Constantine the Philosopher University  
SPU – Slovak University of Agriculture in Nitra  
Stav STUBA – Faculty of Civil Engineering, Slovak University of Technology  
Stav TUKE – Faculty of Civil Engineering, Technical University of Košice  
Stav ŽU – Faculty of Civil Engineering, Žilina University  
StredoEur UKF – Faculty of Central European Studies, Constantine the Philosopher University  
Stroj STUBA – Faculty of Mechanical Engineering, Slovak University of Technology  
Stroj TUKE – Faculty of Mechanical Engineering, Technical University of Košice  
Stroj ŽU – Faculty of Mechanical Engineering, Žilina University  
STUBA – Slovak University of Technology in Bratislava (other – STU)  
ŠpecInž ŽU – Faculty of Special Engineering, Žilina University  
ŠpecTechn TUAD – Faculty of Special Technology, Trenčín University of Alexander Dubček  
Športu PU – Faculty of Sports, Prešov University  
Teol KU – Faculty of Theology, Catholic University in Košice  
Teol TTU – Faculty of Theology, Trnava University in Bratislava  
TTU – Trnava University in Trnava (other – TVU)  
TUAD – Trenčín University of Alexander Dubček in Trenčín  
TUKE – Technical University in Košice  
TU Zvolen – Technical University in Zvolen  
TV UK – Faculty of Physical Education and Sports, Comenius University  
UCM – SS Cyril and Methodius University  
ÚIPŠ – Institute of Information and Prognoses in Education  
UJS – J. Selye University in Komárno  
UK – Comenius University in Bratislava

UKF – Constantine the Philosopher University in Nitra  
UMB – Matej Bel University in Banská Bystrica  
Umeni Ostrava – Faculty of Fine Arts, Ostrava University in Ostrava  
Umení TUKE – Faculty of Arts, Technical University of Košice  
UPJŠ – Pavol Jozef Šafárik University in Košice  
UVL – University of Veterinary Medicine in Košice  
VerSpr UJPŠ – Faculty of Public Administration, Pavol Jozef Šafárik University  
VeterLek. UVL – University of Veterinary Medicine in Košice  
VeterLek VetFarm Un – Faculty of Veterinary Medicine, University of Veterinary and  
Pharmaceutical Science in Brno  
VSZASPB – St. Elizabeth University of Health and Social Sciences in Bratislava  
VŠMU – Academy of Music and Performing Arts in Bratislava  
VŠVU – Academy of Fine Arts and Design in Bratislava  
VýrTech TUKE – Faculty of Manufacturing Technologies, Technical University of Košice in  
Prešov  
VýtvarUm AU – Faculty of Fine Arts, Academy of Arts  
WoK – Web of Knowledge  
Zahrad. SPU – Faculty of Horticulture and Landscape Engineering, Slovak University of  
Agriculture  
Zdravotnicka PU – Faculty of Health, Prešov University  
Zdravotnictva KU – Faculty of Health, Catholic University  
ZdravSoc TTU – Faculty of Health and Social Work, Trnava University  
Zemedel JU CesBud – Faculty of Agriculture, University of South Bohemia in České Budějovice  
ŽU – Žilina University in Žilina