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Higher Education in the Czech Republic 2008

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Preface

This publication describes in detail the current system of higher education in the Czech Republic. Over the past fifteen years there have been changes in the field of tertiary education in our country which have undoubtedly contributed to its modernization and increased the dynamics of its development. Our ambition is, however, to belong to the European elite, which we can hardly achieve if long term global trends will not be taken into account. Therefore, the Czech system of tertiary education is to be fundamentally and consequently reformed.

The starting position is clear. At present, university education is increasingly regarded as the main instrument for a successful career and one of the best investments in a lifetime. Logically, the demand for university education is growing across the nation. The long-term fundamental change defining the knowledge-based economy is based on the change of understanding tertiary education which neither is nor can be a privilege of elites, but a standard. Small countries with open economy and without significant natural resources like the Czech Republic must react to this trend with more caution than other states. Our wealth must therefore be knowledge and abilities.

Both future prosperity of individuals and the society as a whole and the issues concerning essence of social justice are at stake. It is evident that the overall openness of the education system, which is the prerequisite of successful reduction of inequalities, implies an adequate system of tertiary education. Therefore, parallel to the reform of the tertiary education, the Czech Republic must gradually increase expenditure for the tertiary education from public resources up to the level usual in the most developed countries.

The motto of the Czech Presidency of the EU is "Europe without barriers". The reform being prepared does not in fact stick to specifically Czech solutions which would have to be original at all costs. On the contrary, the reform sees our system of tertiary education against the international backdrop and is courageous

in reflecting upon both European and global trends of the past years. One of its key points is development of cooperation between schools and employers, which the process of creating the knowledge-based economy cannot do without. However, for such cooperation mutually favourable conditions need to be created.

With respect to the functioning of the „*knowledge-based Europe*“, the triangle – education – research – innovation and the openness of education institutions towards all individuals and employers must be taken into account. Emphasis must be put on promotion of the system of life-long learning which will enable everyone to increase their qualifications, improve skills and consequently find a job on the market easier. The role of universities in the field of life-long learning is fundamental. The demand for life-long learning is growing yearly, being one of the most significant trends. Universities and colleges have the necessary personnel and infrastructure and should play a much more important role in this area than before.

The tertiary education in the Czech Republic will, however, face a range of other changes. Removing barriers and creating conditions for efficient use of financial resources belong to the conditions sine qua non of the whole reform process. The description of the current system of higher education in the Czech Republic on the following pages offers a coherent picture of both advantages and disadvantages of Czech universities. At the same time it confirms that our long-term goal based on both Czech and European tradition is a university as an autonomous and self-confident entity whose influence extends over the whole society.

Ondřej Liška

Minister of Education, Youth and Sports

Ondřej Liška ”





Czech Context

The Czech Republic (further CR) is a relatively small country in Central Europe, with an area of 78,886 km². It came into existence when the Czech and Slovak Federal Republic (formerly Czechoslovakia) split into two states on 1 January 1993. Territorially, the CR is divided into 13 regions and the capital city, Prague. The official language is Czech. The unit of currency is the Czech Crown (CZK); 1 euro is about 25 CZK.

From the second half of the eighteenth century to the first half of the twentieth century, the territory of the present-day CR was well developed. It was a part of Central Europe where the processes of industrialization and urbanization and the development of a modern civic society began to take place only slightly later than in the centres of modernization in Western Europe. In the period before World War II, the former Czechoslovakia was among the ten most developed countries in the world.

The second half of the twentieth century was characterized by discontinuous socio-political development following the communist takeover in 1948. The communist regime retained almost complete control over all areas of life.

Considerable social changes have taken place since the collapse of the communist regime in November 1989. Czechoslovakia and its successor states after the split - the Czech Republic and the Slovak Republic - have experienced a development similar to that in other countries transforming from a totalitarian system with a centrally planned economy to a pluralistic democracy with a market economy.

The CR has 10.3 million inhabitants, with a population density of 131 per km². Three-quarters of the population live in urban areas. Most inhabitants are of Czech nationality; other nationalities living in the country include the Slovak (3.1 %), Polish (0.6 %), German (0.5 %) and Romany (0.3 %) minorities¹.

Even on the assumption that the minimum qualifying age for a retirement pension is raised, aging of the population will have a negative impact on many areas of the development of Czech society. The overall decrease and aging of the population in the CR could be tackled by greater immigration. In comparison with the present time, by 2015 the Czech labour market will have experienced a 7 % drop in the overall workforce, and the situation is likely to continue to deteriorate. The old-age dependency ratio (the ratio of population over 65 years of age to the population of 15-64 year olds) will triple by 2050, from the present 19.8 % to 55 % (OECD: 2005).

¹ 2001 census data, based on self-declared nationality.



Education System of the Czech Republic

The Czech education system is schematically presented in Figure 1.

Pre-primary education is offered for children from 3 to 6 years of age. It is not compulsory, but participation rates are very high. In the last pre-school year, pre-schooling has to be available for all children.

Basic education combines primary and lower secondary levels of education (ISCED 1 + 2) in a single organisational unit. Basic education is compulsory. It is nine years in duration, and is divided into a five-year first stage and a four-year second stage. Upon completion of the first stage, pupils who show interest and succeed in the admission procedure may transfer to a multi-year secondary school (gymnasium). After completing their primary and lower secondary education, the pupils attain the basic education level (ISCED 2A).

Secondary education schools deliver secondary education (upper secondary – ISCED 3) and post-secondary education (ISCED 4), which enables pupils to change or broaden their original education pathway.

Vocational secondary education (ISCED 3C) lasts 1-2 years. It is aimed above all at very practically oriented pupils whose success in basic schooling is limited.

Secondary education lasting 2-3 years (ISCED 3C) provides pupils with qualifications in manual and technical skills so that they are able to enter the employment market.

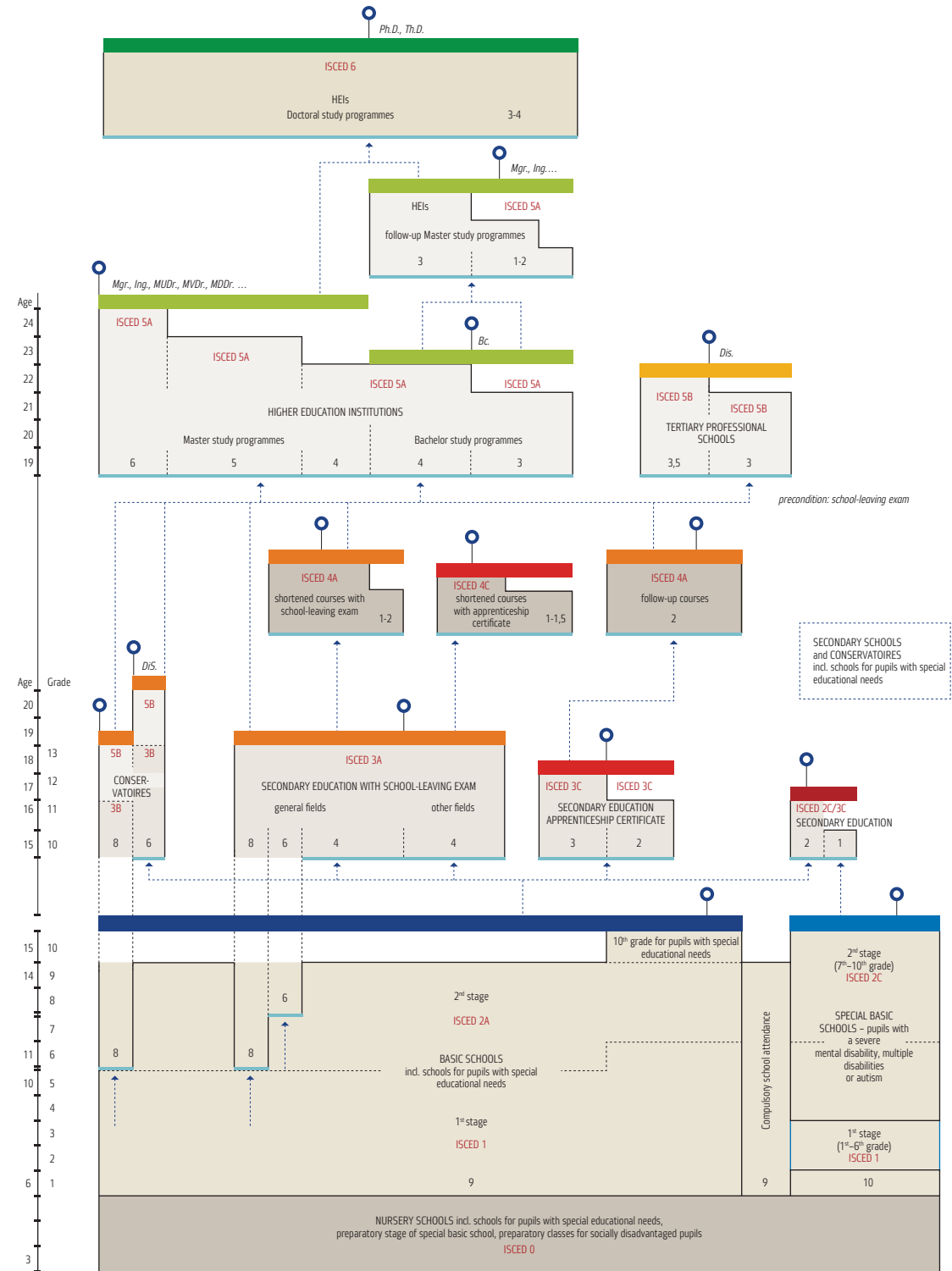
Secondary education lasting 4 years (ISCED 3A) is either of a general nature or of a vocational nature. The final certificate (maturita examination) generally enables all graduates to enter tertiary education. Vocational education at this level is usually offered by so-called secondary vocational schools. Graduates are

qualified to enter certain technical, economic and other occupations, or to take up highly-skilled technical and operative functions. A general education is provided by the type of secondary school called a gymnasium. The studies last four years (or more, in cases when they include first years of secondary education), and prepare graduates above all for tertiary education.

Tertiary education is composed of two sectors. The first, relatively small sector comprises tertiary professional schools that offer professionally-oriented courses (ISCED 5B). The duration of the studies is mostly 3 years, and graduates are awarded a diploma generally (not comparable with a Bachelor's degree). Higher education is provided by higher education institutions (further HEIs), which form the main part of tertiary education. They offer all levels of higher education degree programmes (ISCED 5A, 6). The further text focuses on higher education.

Figure 1. Czech education system

- final examination
 - final examination with apprenticeship certificate
 - school-leaving examination*
 - absolutorium
 - state examination, state rigorous examination
 - doctoral examination
 - basics of education
 - basic education
- * Pupils of conservatoires can sit for a school-leaving examination also, but no sooner than after 4th grade, in the field of dance after 8th grade.
- ⋮ next educational level
 - labour market
 - admission procedure





1.1 Brief History

The roots of the development of tertiary education in the present-day CR go back to medieval times. Charles University, the first university in the Czech lands and in Central Europe, was founded in Prague in 1348 by Czech King and Roman Emperor Charles IV. Thanks to this university, the Czech lands became an important European centre of culture and scholarship. The second university in our area was established in Olomouc in 1573.

The development of higher engineering education started with the foundation of the Engineering School in 1707, which became the Prague Polytechnic in 1806. After 1879 the Polytechnic used the name Higher Technical Institute. The statute and the name of this institution were changed to the Czech Technical University after the establishment of the Czechoslovak Republic in 1918. The roots of the Academy of Fine Arts reach back to 1799. Since 1898 it has existed in the form that we know today. The Czech-German Technical Institute, the precursor of the Technical University in Brno, was established in 1849. In the same century, the Higher Education Institute of Mining in Příbram and the Academy of Applied Arts, Architecture and Design in Prague were also founded.

In the first year of existence of the independent Czechoslovak Republic (1918-1939) three new universities were established in Brno: The Masaryk University, the University of Veterinary Medicine and the University of Agriculture. The Czechoslovakia belonged among the most developed countries in the world, with a dense network of schools at all levels. The high quality of secondary professional schools and technical universities should be mentioned.

The development of Czech tertiary education in the second half of the twentieth century has been characterized by many profound and rapid changes caused by the dramatic and discontinuous socio-political development. During the German occupation (1939 - 1945), all higher

education institutions were closed and many teachers and students were persecuted.

After the communist takeover in 1948, a new wave of persecutions hit the Czech universities: many teachers and students were put in prison or expelled; many of them emigrated. The communist regime retained almost complete control over all areas of life, including higher education. The Soviet invasion in August 1968 was also followed by expulsions and a wave of emigration.

In the period (1948-1989) several new HEIs, mostly technically oriented, were established.

Since 1989, after the "velvet revolution", the tertiary education system has changed rapidly. Extensive international contacts, exchange of students and teachers, as well as the process of transforming research and teaching were immediately started up. New disciplines and new study plans came into being. New departments and new faculties were established. New HEIs were formed on this basis, and a number of existing institutions were restructured.

Private HEIs are a new phenomenon in the Czech higher education system. Their establishment was enabled by the Higher Education Act of 1998.

At present time, there are 26 public, 2 state and 45 private HEIs in the Czech Republic. Table 1 presents a list of all HEIs and their student numbers in 2007. The detailed information about individual HEIs can be found in the Part II of this publication (CD ROM). Figure 2 and Table 2 show the distribution of the institutions in the country.



Table 1a. Public higher education institutions

Name	Abbreviation	Number of students	Percentage of total	City/Town
Akademie múzických umění v Praze The Academy of Performing Arts in Prague	AMU	1 274	0.41	Praha
Akademie výtvarných umění v Praze Academy of Fine Arts Prague	AVU	307	0.10	Praha
Česká zemědělská univerzita v Praze Czech University of Life Sciences Prague	ČZU	16 988	5.52	Praha
České vysoké učení technické v Praze Czech Technical University in Prague	ČVUT	21 973	7.15	Brno
Janáčkova akademie múzických umění v Brně Janáček Academy of Music and Performing Arts in Brno	JAMU	626	0.20	Brno
Jihočeská univerzita v Českých Budějovicích The University of South Bohemia in České Budějovice	JU	10 731	3.49	České Budějovice
Masarykova univerzita Masaryk University	MU	34 263	11.14	Brno
Mendelova zemědělská a lesnická univerzita v Brně Mendel University of Agriculture and Forestry in Brno	MZLU	9 365	3.05	Brno
Ostravská univerzita v Ostravě University of Ostrava	OU	9 239	3.00	Ostrava
Slezská univerzita v Opavě Silesian University in Opava	SU	6 101	1.98	Opava
Technická univerzita v Liberci Technical University of Liberec	TUL	8 766	2.85	Liberec
Univerzita Hradec Králové University of Hradec Králové	UHK	7 904	2.57	Hradec Králové
Univerzita Jana Evangelisty Purkyně v Ústí nad Labem University of Jan Evangelista Purkyně	UJEP	9 203	2.99	Ústí nad Labem
Univerzita Karlova v Praze Charles University in Prague	UK	45 758	14.88	Praha
Univerzita Palackého v Olomouci Palacký University Olomouc	UP	19 504	6.34	Olomouc
Univerzita Pardubice University of Pardubice	UPa	8 958	2.91	Pardubice
Univerzita Tomáše Bati ve Zlíně Tomas Bata University in Zlín	UTB	10 941	3.56	Zlín
Veterinární a farmaceutická univerzita Brno University of Veterinary and Pharmaceutical Sciences Brno	VFU	2 726	0.89	Brno
Vysoká škola báňská-Technická univerzita Ostrava VŠB-Technical University of Ostrava	VŠB-TUO	21 717	7.06	Ostrava

Name	Abbreviation	Number of students	Percentage of total	City/Town
Vysoká škola ekonomická v Praze University of Economics, Prague	VŠE	17 278	5.62	Praha
Vysoká škola chemicko-technologická v Praze Institute of Chemical Technology Prague	VŠCHT	3 858	1.25	Praha
Vysoká škola umělecko-průmyslová v Praze Academy of Arts, Architecture and Design Prague	VŠUP	464	0.15	Praha
Vysoké učení technické v Brně Brno University of Technology	VUT	20 932	6.81	Brno
Západočeská univerzita v Plzni University of West Bohemia	ZČU	16 797	5.46	Plzeň
Vysoká škola polytechnická Jihlava College of Polytechnics Jihlava	VŠPJ	1 527	0.50	Jihlava
Vysoká škola technická a ekonomická v Českých Budějovicích Institute of Technology and Business in České Budějovice	VŠTE	324	0.11	České Budějovice
Total		303 731	100.00	

Source: Ministry of Education, Youth and Sports, Annual Report, 2007

Note: The total number of students is lower than the sum of numbers of students at individual HEIs (307 524) due to the fact that some students study in more than one institution.

Table 1b. State higher education institutions

Name	Abbreviation	Number of students	Percentage of total	City/Town
Univerzita obrany University of Defence	UO	1 309	33.00	Brno
Policejní akademie České republiky v Praze Police Academy of the Czech Republic	PA	2 631	67.00	Praha
Total		3 940	100.00	

Source: University of Defence, Annual Report, 2007; Police Academy of the CR, Annual Report, 2007

Table 1c. Private higher education institutions

Name	Abbreviation	Number of students	Percentage of total	City/Town
Bankovní institut vysoká škola, a.s. – Praha Banking Institute/College of Banking	BI	4 477	11.08	Praha
Evropský polytechnický institut, s.r.o. – Kunovice European Polytechnic Institute in Kunovice	EPI	1 130	2.80	Kunovice
Vysoká škola hotelová v Praze 8, s.r.o. The Institute of Hospitality Management	VŠH	2 078	5.15	Praha
Vysoká škola finanční a správní, o.p.s. – Praha The Institute of Finance and Administration	VŠFS	4 766	11.80	Praha
Vysoká škola Karlovy Vary, o.p.s. University College of Karlovy Vary	VŠKV	1 227	3.04	Karlovy Vary
Vysoká škola podnikání, a.s. - Ostrava Business School Ostrava plc	VŠP	3 063	7.58	Ostrava
ŠKODA AUTO a.s. Vysoká škola – Mladá Boleslav Škoda Auto University	ŠAVŠ	747	1.85	Mladá Boleslav
Literární akademie (Soukromá vysoká škola Josefa Škvoreckého), s.r.o. – Praha Literary Academy	LA	256	0.63	Praha
Vysoká škola cestovního ruchu, hotelnictví a lázeňství, s.r.o. - Praha College of Tourism, Hotel and Spa Management	VŠCRHL	83	0.21	Praha
Vysoká škola obchodní v Praze, o.p.s. College of Business Studies in Prague	VŠO	1 740	4.31	Praha
Akademie STING, o.p.s. - Brno Sting Academy	STING	903	2.24	Brno
Soukromá vysoká škola ekonomických studií, s.r.o. - Praha The Private College of Economic Studies	SVŠES	361	0.89	Praha
Metropolitní univerzita v Praze, o.p.s. Metropolitan University Prague	MUP	2 642	6.54	Praha
Univerzita Jana Ámose Komenského Praha, s.r.o. Jan Ámos Komenský University Prague	UJAK	6 782	16.79	Praha
Vysoká škola Karla Engliše v Brně, a.s. Karel Engliš College	VŠKE	377	0.93	Brno
Anglo-americká vysoká škola, o.p.s. – Praha Anglo-American University	AVVŠ	369	0.91	Praha
Pražská vysoká škola psychosociálních studií, s.r.o. - Praha Prague College of Psychosocial Studies	PVŠPS	160	0.40	Praha
Vysoká škola aplikovaného práva, s.r.o. – Praha University of Advanced Legal Studies	VŠAP	520	1.29	Praha
Vysoká škola ekonomie a managementu, s.r.o. - Ústí nad Labem University of Economics and Management	VŠEM	1 538	3.81	Ústí nad Labem
University of New York in Prague, s.r.o. University of New York in Prague	UNYP	457	1.13	Praha

Name	Abbreviation	Number of students	Percentage of total	City/Town
Vysoká škola manažerské informatiky a ekonomiky, a.s. - Praha College of Information Management and Business Administration Inc.	VŠMIE	978	2.42	Praha
Vysoká škola mezinárodních a veřejných vztahů Praha, o.p.s. University College of International and Public Relations Prague, o. p. s.	VŠMVV	411	1.02	Praha
Středočeský vysokoškolský institut, s.r.o. – Kladno Central Bohemian Institute of Higher Education	SVI	386	0.96	Kladno
Mezinárodní baptistický teologický seminář Evropské baptistické federace, o.p.s. – Praha The International Baptist Theological Seminary of the European Baptist Federation o.p.s.	IBTS	27	0.07	Praha
Západomoravská vysoká škola Třebíč, o.p.s. The Westmoravian College	ZMVŠ	79	0.20	Třebíč
Academia Rerum Civilium - Vysoká škola politických a společenských věd, s.r.o. – Kolín Academia Rerum Civilium	ARC-VŠPSV	487	1.21	Kolín
Vysoká škola evropských a regionálních studií, o.p.s. - České Budějovice College of European and Regional Studies	VŠERS	580	1.44	České Budějovice
Rašínova vysoká škola s.r.o. - Brno Rašín College Ltd.	RaVŠ	243	0.60	Brno
Vysoká škola regionálního rozvoje, s.r.o. – Praha University of Regional Development	VŠRR	24	0.06	Praha
Filmová akademie Miroslava Ondříčka v Písku, o.p.s. Film Academy of Miroslav Ondříček	FAMO	81	0.20	Písek
Vysoká škola tělesné výchovy a sportu Palestra, s.r.o. - Praha The College of Physical Education and Sport Palestra	VŠTVS	212	0.52	Praha
NEWTON College, a.s. - Brno Newton College	NC	314	0.78	Brno
Vysoká škola logistiky, o.p.s. - Přerov College of Logistics	VŠLG	682	1.69	Přerov
Vysoká škola zdravotnická, o.p.s. – Praha The College of Nursing	VŠZ	441	1.09	Praha
B.I.B.S., a.s. Brno International Business School	B.I.B.S.	450	1.11	Brno
Soukromá vysoká škola ekonomická Znojmo, s.r.o. The Private College of Economic Studies	SVŠE	572	1.42	Znojmo
Moravská vysoká škola Olomouc, o.p.s.	MVŠO	506	1.25	Olomouc
CEVRO Institut, o.p.s. CEVRO Institute, School of Political Studies	VŠCI	150	0.37	Praha
Unicorn College s.r.o. Unicorn College	UC	89	0.22	Praha
Vysoká škola obchodní a hotelová, s.r.o. – Brno College of Business and Hotel Management	VŠOH	–	–	Brno



Name	Abbreviation	Number of students	Percentage of total	City/Town
Vysoká škola aplikovaných ekonomických studií v Českých Budějovicích, s.r.o.	VŠAES	—	—	České Budějovice
Institut Franka Dysona - realitní vysoká škola Vzdělávací Institut Franka Dysona, s.r.o. Institute of Frank Dyson – Real Estate University	IFD	—	—	Brno
Vysoká škola sociálně-správní, Institut celoživotního vzdělávání Havířov, o.p.s. College of Social and Administration Affairs	VŠSS	—	—	Havířov
Vysoká škola cestovního ruchu a teritoriálních studií v Praze, spol. s r.o. College of Tourism and Territorial Studies	VŠCRTS	—	—	Praha
Akcent College		—	—	Praha
Total		40 939	100.00	

Source: Ministry of Education, Youth and Sports, Annual Report, 2007

Note: Private higher education institutions mentioned at the end of the table has been established recently and the statistical data about their students has not been collected in 2007.

Figure 2. Distribution of HEIs in the country



■ **Praha** - AMU - Akcent College - AVVŠ - AVU - BI - ČZU - ČVUT - IBTS - LA - PA - PVŠPS - MUP - SVŠES - UC UJAK - UK - UNYP - VSCRTS - VŠFS - VŠAP - VŠCI - VŠCRHL - VŠE - VŠH - VŠCHT - VŠMIE - VŠMVV - VŠO - VŠRR - VŠTVS - VŠUP - VŠZ ■ **Kladno** - SVI ■ **Mladá Boleslav** - ŠAVŠ ■ **Kolín** - ARC - VŠPSV ■ **Liberec** - TUL ■ **Ústí nad Labem** - UJEP - VŠEM ■ **Karlovy Vary** - VŠKV ■ **Plzeň** - ZČU ■ **Písek** - FAMO ■ **České Budějovice** - JU - VŠAES - VŠERS - VŠTE ■ **Jihlava** - VŠPJ ■ **Třebíč** - ZMVŠ ■ **Pardubice** - UPa ■ **Hradec Králové** - UHK ■ **Olomouc** - MVŠO - UP ■ **Přerov** - VŠLG ■ **Opava** - SU ■ **Ostrava** - OU - VŠB-TUO - VŠP ■ **Havířov** - VŠSS ■ **Zlín** - UTB ■ **Kunovice** - EPI ■ **Brno** - BIBS - IFD - JAMU - MU - MZLU - NC - RaVŠ - STING - UO - VŠKE - VŠOH - VFU - VUT ■ **Znojmo** - SVŠE

Source: Centre for Higher Education Studies

1.2 Legislative Development

The basis for the new development of higher education was established by Act No. 172/1990.

This act in particular reduced to a minimum the influence and control of the state over higher education, confirmed academic freedom and academic rights, and constituted institutional self-government. It further included matters regarding study and academic degrees, introduced the Bachelor's degree, established a basis for student participation in higher education governance, etc. An important issue was that this act brought research back to HEIs after the communist period.

Rapid development of higher education, changes in economic conditions and overall changes in society, development of the international situation, and new demands on harmonisation of higher education studies within Europe, and other considerable circumstances, led to the need for a new higher education act – Act No.111/1998 Coll., on Higher Education Institutions (further only Act). This Act retained the positive provisions of the previous Act No. 172/1990, while incorporating new and necessary changes to eliminate the shortcomings of the earlier Act. The implementation of the 1998 Act can be considered as next step in reforming the higher education system in the CR. Diversification of HEIs and degree programmes was introduced. The Act transformed the most of the state HEIs into the new type of legal entity – public HEIs. The most significant change was that all property of the state used by HEIs was transferred to the ownership of the public HEIs. All these institutions established Boards of Trustees (the members must be from outside the respective higher education institution). The main role of the Board is to give written agreement for managing the property in prescribed cases, prior to the rector's decision. This Act also incorporated the principles of the Lisbon Recognition Convention and introduced the Diploma Supplement, which at that time could be issued upon request.

The Act is valid until the present time, with several amendments (for the full text of the Act, see www.bologna.msmt.cz). In 2001, the structure of study programmes was brought more strictly into line with the Bologna scheme, and some amendments concerning the organisation of lifelong learning courses were introduced. In 2006, the most important changes gave greater freedom to HEIs when using public funds, and introduced state guaranteed social scholarships for economically underprivileged students. There was also a change in the provisions dealing with Diploma Supplements, which are to be issued automatically and free of charge to all graduates from 1 January 2006 onwards. The 2006 amendment also supported the award of a foreign degree, and clarified and specified the award of joint degrees, which had, however, already been possible under previous legislation. Graduates of degree study programmes offered in cooperation with foreign HEIs are awarded Czech academic titles and, in addition, under certain circumstances, an academic title of the foreign HEIs pursuant to current legislation in the relevant country. The latest amendment, which came into force on 30 December 2006, continued the trend toward greater financial autonomy of HEIs.



Higher Education System and Its Dynamics



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HEIs in the CR deliver Bachelor's and Master's degree programmes (ISCED level 5A) as well as Doctoral degree programmes (ISCED level 6). According to the way in which they have been established, they are classified as public, state (military and police HEIs), or private HEIs. Public HEIs are established by law, and are legal entities. State HEIs are also established by law; they are subordinated to the Ministry of Defence (the University of Defence) or the Ministry of the Interior (the Police Academy), which govern these HEIs like other state institutions. Private HEIs, as already mentioned, are a relatively new part of Czech higher education. The possibility to establish a private HEI was only introduced with the Act of 1998. Applicants who are legal entities may establish a private HEI only after receiving state permission granted by the Ministry of Education, Youth and Sports (further Ministry).

Another typology of HEIs stipulated by the Act refers to the prevailing level of degree programmes that they offer (at Bachelor's, Master's and Doctoral levels). Before describing the types of institutions, it is useful to point out that the Czech higher education system is not a binary system that distinguishes between professionally and academically oriented HEIs, as in some European countries. Higher education studies are not divided into professionally and academically oriented spheres, and the overall aim is to enable graduates from Bachelor's and Master's programmes to enter the labour market successfully, or to continue with their studies in line with the principles of the Bologna Process. However, this does not mean that all programmes at Bachelor's and Master's level offer the same proportion of general/academic and professionally-oriented knowledge and skills. The same holds true at the institutional level.

HEIs offering all three types of degree programmes are considered to be university-type institutions. Such HEIs are, according to the Act, required to foster "scientific, research, development, artistic, or other creative activities"

(Act: 1998). A non-university type of HEI offers mostly Bachelor's degree programmes; it can provide Master's degree programmes, but it is not allowed to offer Doctoral degree programmes. HEIs of non-university type are obliged to carry out research related to the level of the programmes that they offer – in practice this is usually applied research – and other developmental, artistic or creative activities.

In the 2007/08 academic year there were 73 HEIs – 26 public, 45 private and 2 state; 28 of them are university-type HEIs (24 public, 2 state and 2 private), 45 are non-university type (2 public and 43 private). The total number of higher education students is nearly 350 000 (see Table 3), and most of them (approx. 303 000) study at public HEIs. There are almost 41 000 students at private HEIs. The number of students at the state HEIs is stable - about 4 000 students. The statistical data on students is described in greater detail in Chapter 4.

The Bachelor's degree programmes have a standard duration of 3-4 years, with a workload of 180 – 240 ECTS credits, and lead to the degree of "bakalář" (Bc.). After graduating at Bachelor's level, students can continue their studies in Master's degree programmes. The standard length of a Master's degree programme is a minimum of one year (60 ECTS credits) and a maximum of three years (180 ECTS credits). In parallel there are still traditional long Master's degree programmes, which do not follow on from a Bachelor's programme. There are two reasons for the continuing existence of "long" programmes. Firstly, the previous accreditation may not yet have expired, but since the 2003/04 academic year no new students have been accepted for these programmes. The second reason is that the nature of the degree programme requires a long programme. Traditional long Master's degree programmes have a standard length ranging from a minimum of four years (240 ECTS credits) to a maximum of six years (360 ECTS credits). Long Master's degree programmes are

still offered in several study fields, e.g. medicine, veterinary medicine, pharmacy, law and in some other exceptions. The degree programmes in these disciplines are still under discussion. Both long and short Master's degree programmes lead to a same degree. In general, graduates are awarded a "magistr" degree (Mgr.), while in technical, agricultural and economic fields graduates are awarded an "inženýr" degree (Ing.).

Doctoral degree programmes have a standard length of 3-4 years. Admission to a Doctoral programme is conditional on completion of a Master's degree programme. Doctoral programmes are aimed at scientific research and independent creative activities in the area of research or development, or independent theoretical and creative activities in the area of the fine arts. The studies are completed by the state Doctoral examination, which includes the presentation and defence of a Doctoral thesis. The thesis must contain original and published results, or results accepted for publication (Act: 1998). Doctoral candidates have the status of students, irrespective of whether they are part-time or full-time students. Graduates of Doctoral degree programmes are awarded the degree of "doktor" (i.e. "doctor", abbreviated as "Ph.D.", used after the name), or "Doktor teologie" (abbreviated as "Th.D.", used after the name) in the field of theology. Doctoral degree programmes are delivered by all HEIs of

university type. Some universities express the work load in terms of ECTS credits, but most do not.

HEIs are free to offer not only on-site studies, but also distance studies and a combination of these types of studies. They can also offer degree programmes in foreign languages. The form of studies, as well as the language of instruction, is part of the accreditation (see Chapter 7) application and, if all requirements are met, of the accreditation decision.

The institutional landscape has been developing extensively since 1990, but with different emphasis and at different rates in the course of the last almost two decades. The increased capacity and number of faculties of HEIs (64 in 1989/90, 125 at the present time) reflect the rise in student numbers (about 110 000 in 1989/90, almost 350 000 in 2007/08).

The opening of several new HEIs in various regions in the early 1990s had a positive impact on the regional distribution of HEIs. The changes in regional distribution have led to an overall drop in the proportion of students in the traditional centres of higher education (Prague – from 46 % to 38 %; Brno – from 23 % to 21 %), and an increase in the proportion of students in the regional centres (Ostrava, Pardubice, Cheb, Jindřichův Hradec and Karviná). The absolute

Table 3. Overall size of the Czech tertiary education system in 2007/08

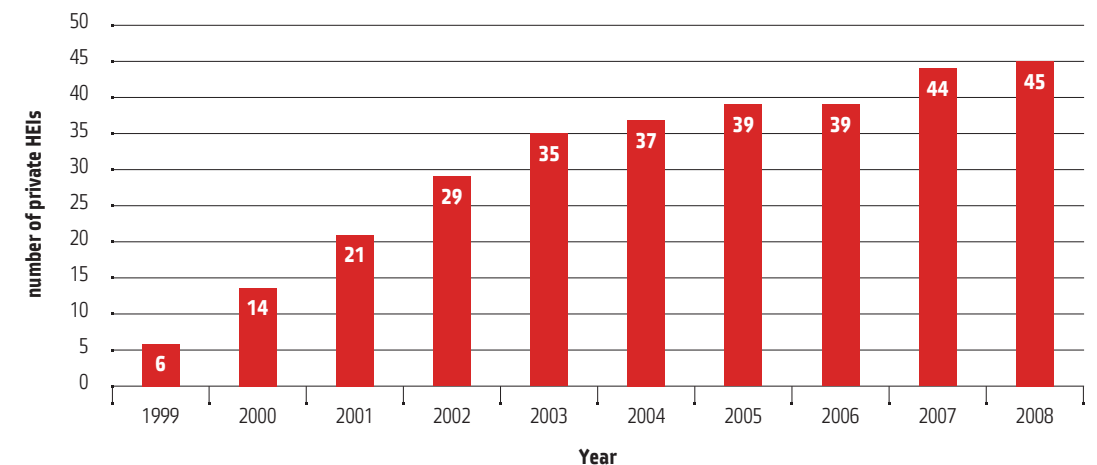
Type of institution	Number of institutions	Established by	Number of students	% of the total number of students
Public	26	Law	303 731	87.2
Private	45	Legal entity	40 939	11.7
State	2	Law	3 940	1.1
Total	73		348 610	100.0

numbers of students in higher education have grown significantly in all the cities named here.

Figure 3 shows the rapid quantitative development of private HEIs. Although the number of private HEIs is high, they are still rather small in size: their 40 939 students made up 11,9 % of the total number of students in higher education in 2007/08. This reflects the fact that they were established relatively recently, and in some cases have not even graduated their first students. Although private HEIs have been opened in 17 cities, most of them are in Prague (25), because the capital city provides a large number of available, appropriately trained personnel. The degree programmes offered by these HEIs focus on economics (53 %), law (8 %), information science and related disciplines (4 %), the arts (8 %), applied environmental science (2 %), humanities, theology, sociology and teaching (20 %) and health care (5 %).

To complete the picture of the Czech system, mention should be made here of the tertiary professional/vocational schools. These institutions provide vocationally-oriented education, mostly of 3 years duration (in health programmes, the education lasts 3.5 years). These institutions have stable number of about 30 000 students. They cooperate closely with employers, and a practical placement is part of the studies. The graduates are awarded the Diploma Specialist. This diploma is recognised as a tertiary degree, academically lower than the Bachelor's degree (ISCED 5B). Professionally, some of these degrees are given equal recognition to a Bachelor's degree, e.g. in health professions covered by the EU directive. There are numerous professional/vocational schools (about 175 institutions), but most have a relatively low number of students. Some cooperate closely with HEIs and provide Bachelor's degree programmes under the auspices of an HEI.

Figure 3. Development of private HEIs



Source: Institute for Information on Education

Academic Staff

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The academic staff in Czech HEIs are traditionally subdivided into the following ranks: professors, associate professors (docents), senior assistants, assistants, and instructors. These categories are also stated in the Act. Academic staff of all ranks teach, and also carry out research or other creative activities. The balance between the teaching and research duties of individual academic staff members can vary widely; on an average it is approximately 2:1. There is also a category of “researchers”, which usually entails very limited teaching duties. Other specialists may take part in teaching on the basis of employment contracts beyond the scope of regular employment.

The procedures for the appointment of associate professors and professors, who form the two highest categories of academic staff, are described in detail in the Act. An associate professor for a given field of study is appointed by the Rector on the basis of a procedure called habilitation. In this procedure, the scientific or artistic capacity of the candidate is verified by the presentation and defence of a habilitation thesis, and the candidate’s teaching skills by his or her previous practical experience and by delivering a special lecture. Both are assessed by the Scientific Board of a faculty. A professor is appointed by the President of the CR on the recommendation of a Scientific Board of a HEI. The right to carry out the procedures for habilitation and for appointing professors is subject to accreditation, and is not granted to all faculties and HEIs in all fields of study. In the CR, the title of professor

or associate professor thus indicates a kind of academic degree or a level of academic qualification that the holder retains for life; it does not refer to a position of the given HEI. The criteria for the procedures referred to here are generally quite strict, and it takes a relatively long time to build up an academic career.

The academic degree of Ph.D. (or its equivalent) is considered a necessary condition for the position of senior assistant (and also for higher ranks). This means that the qualification level of Czech academic staff is relatively high in comparison with other countries. Good Doctoral graduates with experience of working on projects and publishing papers in international journals should be able to proceed to habilitation. Ideally, they will pass through the habilitation procedure within five years, but it usually takes a significantly longer time. The stiff requirements often lead to habilitation being a lifelong achievement. In spite of various institutional strategies in support of more rapid career development of young staff, the situation is changing only very slowly and the average age of those appointed in the upper ranks of academic staff is still relatively high. Nevertheless, in recent years positive examples have become more frequent. In the fields of science, engineering and medicine, for example, professors are quite often appointed below the age of 50. The overall situation regarding professors appointed during the last decade is documented in Table 4.

Table 4. Numbers and age structure of newly appointed professors in the time period 1997 – 2007

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Numbers of appointed professors	179	149	89	120	149	172	182	160	158	154	155
Average age	55	55	55	55	54	54	53	54	53	54,5	53

A specific issue in the academic career structure in the CR is that most academics develop their careers at a single HEI, starting out as undergraduate students. This career is usually not interrupted by a period of time spent elsewhere, e.g., in industry or at another HEI.

Motivating and recruiting experts from outside the universities to become more involved in higher education is a fundamental but still unresolved issue. Experts from outside the universities are usually not interested in building an academic career, so they are likely not to achieve a prestigious position within the academic staff hierarchy. They are generally motivated to come to academia not by the financial rewards from teaching, but by the opportunity to share the experience and knowledge of academic experts. What is hardly acceptable in the long term is that even real experts from outside academia who teach at public HEIs remain categorized as assistants. There has been some debate about the possibility of establishing external or extra-professorial positions for these people, but so far no decision has been taken.

A shortage of professors and associate professors is a serious problem for many public HEIs and faculties (especially those outside the traditional university locations). Table 5 shows the composition of academic staff. It illustrates the very low percentage of academics in the highest positions. In contrast, senior assistants, i.e. persons with a Ph.D. qualification but

apparently not motivated to increase their qualification further, constitute the largest percentage of the total academic staff. The ranks of assistants usually include numbers of fresh Ph.D. graduates, and sometimes also those still studying in Doctoral degree programmes, who are encouraged and supported in developing their careers at most HEIs. The Annual Report on Higher Education Activities (Ministry: 2007) points out that the composition presented in Table 5 has been more or less stable for years, which confirms that the situation is changing only very slowly. The last rank of instructors is reserved for teachers of languages, laboratory demonstrators, sports specialists, etc. They usually do not plan to develop their careers as highly qualified academics.

Table 5 also shows that the percentage of highly-qualified personnel in the total academic staff is even lower in private HEIs. This is partly because these HEIs are still relatively new, and because they focus primarily on undergraduate studies partly due to the practical orientation of their degree programmes. There is a higher percentage of assistants and instructors, categories which include the staff members from outside academia, usually working as part-time teachers.

There is another problem regarding private HEIs. As already mentioned, they are mostly non-university types of institutions, which means that they are not authorised to provide Doctoral degree programmes and, as a consequence,

Table 5. Composition of the academic staff (percentage of total)

	Professors	Associate professors	Senior assistants	Assistants	Instructors
Public HEIs	11.0	20.3	52.4	9.5	3.5
Private HEIs	7.1	16.2	47.6	12.1	16.9

Source: Ministry of Education, Youth and Sports, Annual Report, 2007

also procedures for habilitation or appointment of professors. In terms of provision of academic staff and development of human resources, private HEIs are thus dependent on public and state HEIs of university type. Private HEIs tend to "solve" this situation by offering contracts to members of academic staff – especially professors and associate professors – from public HEIs.

The Accreditation Commission (see Chapter 7) requires that degree programme be supported by satisfactorily developed human resources. When providing the evaluation of a degree programme for the purposes of accreditation, the Accreditation Commission focuses very strongly on the inputs and particularly on the composition of the academic staff, with reference to senior academic ranks (professors and associate professors). This requirement has the effect of generating a high level of demand for professors and associate professors, without whom accreditation cannot be obtained. At the same time, the demanding career system of habilitation results a limited supply of those who hold this rank. In many cases, this factor contributes quite significantly to the "flying professors" phenomenon, i.e. professors who hurry from one institution to another, lending their qualifications, though perhaps not their full abilities, to several higher education institutions.

As a consequence, private HEIs, in particular, focus on systematic development of their

human resources, and facilitate conditions for involving their junior academic staff in Doctoral programmes at public HEIs.

The individual HEIs have great power when it comes to personnel matters. They can determine the number of academic staff in all ranks without any external regulation. By not explicitly defining the limits of employment contracts, the Act allows each HEI to decide whether its teachers will be employed for an indefinite time or have a fixed-term contract. The Act stipulates that academic staff positions at public HEIs must be filled on the basis of a competitive examination. It is, of course, the right of a private HEI to decide on its own personnel matters.

Table 6 shows the growth in the numbers of academic staff at public HEIs from 2000. This growth is much slower than the increase in the numbers of students. "Teaching productivity/efficiency", measured by the student/teacher ratio, has increased almost twofold in this period. The figure for 2007 is 18 030 academics for about 312 000 students, i.e. approx. 17.3 students per one academic. In 2005, the average number of higher education students per one member of academic staff in the CR was among the highest in the EU countries, along with Belgium, Greece, Italy, Poland and Great Britain (Santiago et al.: 2008). The direct teaching load of HEI academic staff is not determined by legislation, so there can be considerable differences among faculties or even departments.

Table 6. Average full-time equivalent of staff (only public HEIs)

Year	2000	2001	2002	2003	2004	2005	2006	2007
Academics	14 773	14 963	15 142	15 531	15 835	16 495	17 220	18 030
Administrative and others	11 259	11 615	11 267	11 430	11 681	12 200	12 388	12 335
Total	26 032	26 578	26 409	26 964	27 516	28 695	29 608	30 365

Source: Institute for Information on Education

Data taken from the annual reports of private HEIs for 2007 and summarised in the Annual Report on Higher Education produced by the Ministry shows that there were 3 227 academic staff members in 2007. The proportions of professors, associate professors and other academic staff are shown in Table 5. Private HEIs can claim increased “teaching efficiency” in the sense of student/teacher ratio. It can be added here that highly qualified academics at private HEIs mostly have contracts as part-time employees, which is not regarded positively by the Accreditation Commission.

The high teaching efficiency has both positive and negative consequences. It has required the development and implementation of distance education, i.e. the introduction of new information and communication technologies into the teaching process. On the other hand, it supports an anonymous relation between students and teachers, and lack of mutual communication. It is also argued that a higher work load in teaching is at the cost of adequate attention to research activities.

Individual public HEIs can also determine the salaries of their employees according to their own internal regulations. The salaries of academic staff have grown only slightly faster than the national average. If we take into account the increase in “teaching efficiency” in these years, the academic staff salary growth does not fit the increased work load.

The sociological survey of academic staff conducted in 2005 found that academic salaries are determined by three main factors: position in the academic hierarchy, research performance, and gender.

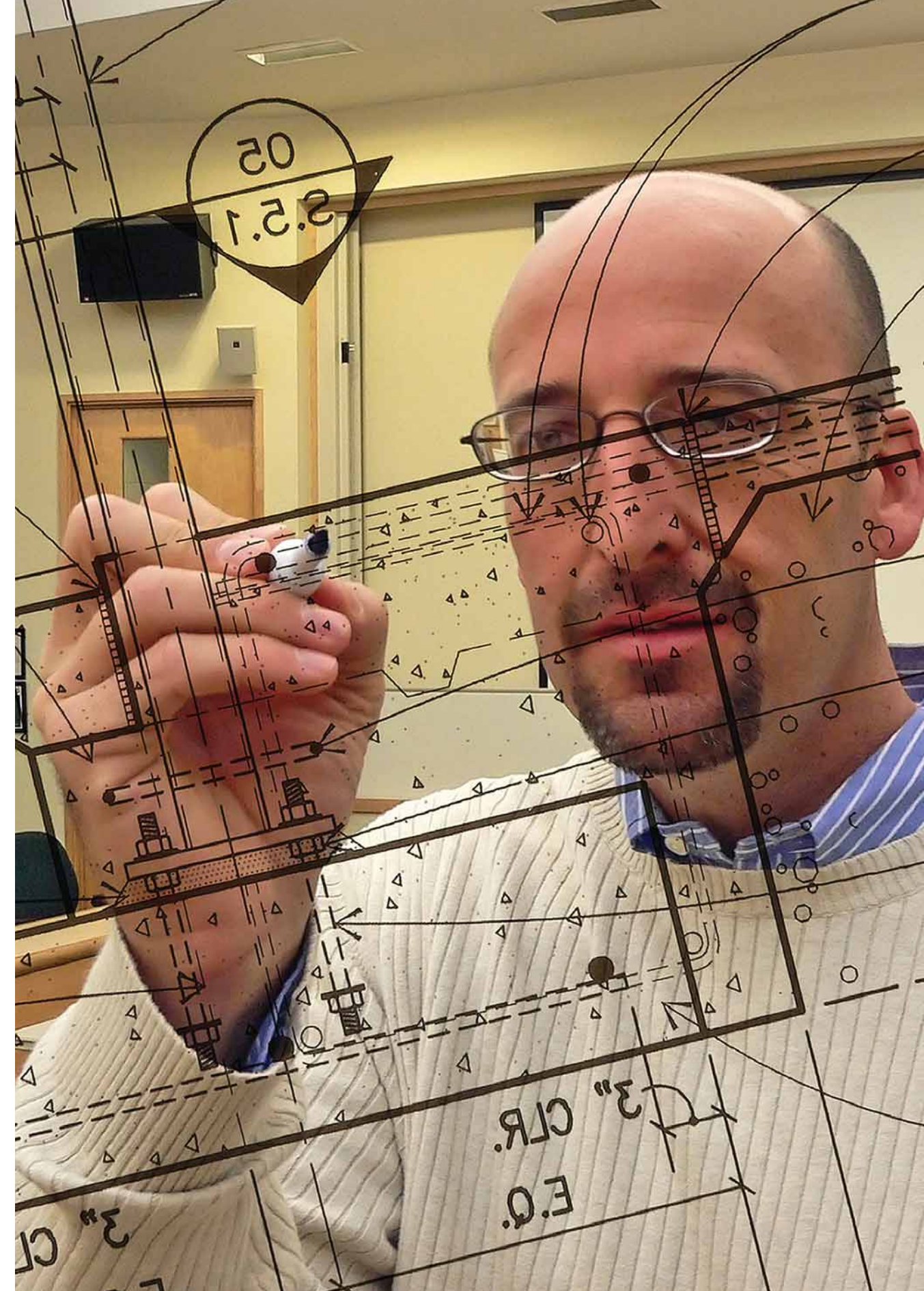
The data presented in Chapter 4 shows clearly that there is quite a good gender balance among higher education students, and in some study fields women even prevail. The situation changes

in the highest level of studies – there are slightly fewer women than men in Doctoral degree programmes - see Table 12 a), b).

As concerns the academic staff of HEIs, the situation is not so clear. It can be observed that women are underrepresented in the two highest academic ranks, and also in the leading academic positions. The statistical data (taken from the Statistical Yearbook, Institute for Information on Education) shows that the situation is improving in the sense of gender balance, but it is still far from satisfactory. Overall, only 11.0 % of professors and 22.9 % of associate professors are women. In contrast, 54.4 % of women are ranked as instructors.

As regards academic positions, only one out of 26 public HEIs has a woman as Rector, and only 17 out of 125 Deans of the faculties of public HEIs are women. The situation seems to be slightly better in the private sector, where there are 6 female rectors out of the total of 45 rectors of private HEIs.

In summary, it is clear that the highest academic qualifications and positions are male domains, even if there has been a visible improvement during the last five years.



Students

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The number of students in higher education started to increase immediately after 1990. The first and really significant incentive for HEIs was provided by the new mechanisms for funding, which were based primarily on numbers of students. Though the funding mechanisms have been changing and have been improved in the mean time, the system of funding has remained an important support for increased numbers of students in higher education.

The extensive rise in student numbers has further been supported by the new structure of studies implemented in response to the Bologna Process. The three levels of higher education studies, characterized by Bachelor's, Master's and Doctoral degree programmes, are described in detail in Chapter 2.

The extensive growth of higher education is characterised by the growing numbers of students admitted to public and private HEIs. (The number of students admitted to the state HEIs is quite stable.) See Figure 4.

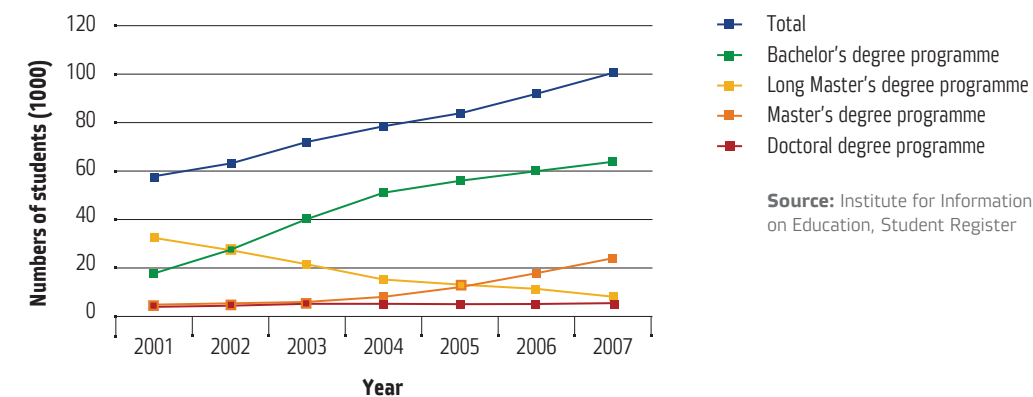
The total number of students at public and private HEIs has grown more than threefold.

The number of students at the state HEIs is more or less constant at around 4 000 students. After 10 years of existence, the proportion of students attending private HEIs has reached more than 11 %, and is still growing. See Table 7.

The impact of the Bologna Process is quite visible from Table 8, which shows the numbers of students in the three cycles at public and private HEIs.

During the last decade, the age structure of the students has been changing. Though 19-21 year-olds are still the main age cohort entering HEIs, the group of entrants aged 30-40 years and over 40 years has grown significantly, at least in relative terms. The main driving force behind this development is the need for the "older" generation to overcome the disadvantage of limited study opportunities before 1990, and to compete in the labour market. Here, the delivery of degree programmes by distance mode (and also courses leading to a certificate recognised by employers) is a great help and is of growing importance.

Figure 4. Number of students entering HEIs for the first time



Note: It is necessary to explain the differences in student numbers and numbers of graduates in several Tables in this Chapter and also in Table 3, in Chapter 2. The main source of the data presented here is the Institute for Information on Education, which is the official body responsible for collecting data and also for providing data for international databases. The Act established the Student Register, which collects information on students that is made accessible through the Institute for Information on Education or the Ministry. There are two

main kinds of data collection serving various purposes: at the end of October for funding purposes, and at the end of the year for annual reports. In addition, students in Czech higher education can study in two (or even more) degree programmes in parallel. Consequently, the total numbers of studies is higher than the numbers of physical persons (students). This explains the different total numbers presented in Tables 3 and 7. A similar difference can be found in the numbers of graduates (cf. Table 9 and Tables 10 and 11).

Table 7. Development of student numbers at public and private HEIs

Year	Private HEIs		Public HEIs		Total
	number	% of total	number	% of total	
1999/00	365	0.2	187 298	99.8	187 663
2000/01	2 002	1.0	191 502	99.0	193 504
2001/02	4 822	2.3	202 952	97.7	207 774
2002/03	8 380	3.7	216 458	96.3	224 838
2003/04	12 993	5.2	235 741	94.8	248 734
2004/05	18 465	6.8	252 837	93.2	271 302
2005/06	25 248	8.5	272 007	91.5	297 255
2006/07	30 775	9.5	293 351	90.5	324 126
2007/08	41 133	11.7	311 817	88.3	352 950

Source: Institute for Information on Education, Student Register

Table 8. Number of students by degree programmes

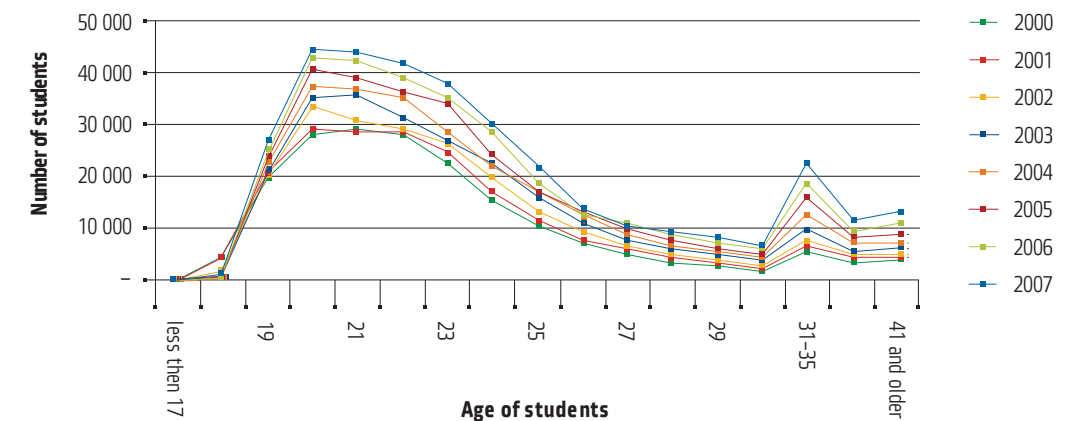
Year	Bachelor's degree programme / % of total	Long Master's degree programme / % of total	Master's degree programme / % of total	Doctoral degree programme / % of total	Total
2006	191 851 / 56.8	83 790 / 24.8	37 834 / 11.2	24 520 / 7.2	337 995 / 100
2007	220 783 / 59.7	69 343 / 18.8	54 057 / 14.6	25 353 / 6.9	369 536 / 100

Source: Institute for Information on Education, Student Register

Social support (i.e. social and health insurance and other social benefits) is made available only for students below 26 years of age. This limitation affects all students above the age of 26. On account of the growing numbers of older students (studying for the first time in their lives) and the extended standard duration of Doctoral degree studies (to 3-4 years), this age limit is considered discriminatory.

Hand in hand with growing numbers of students, the numbers of graduates have also been growing, see Table 9. This is supported by the general implementation of the 3-cycle degree structure, and by financial incentives in formula funding for graduates in degree programmes, as described in Chapter 6.

Figure 5. Age distribution of students



Source: Institute for Information on Education, Student Register

Table 9. Number of graduates from different degree programmes

Year	Bachelor's degree programme / % of total	Long Master's degree programme / % of total	Master's degree programme / % of total	Doctoral degree programme / % of total	Total
2005	24 306 / 65.5	9 010 / 24.3	1 813 / 4.9	1 971 / 5.3	37 100 / 100
2006	25 757 / 46.7	19 953 / 36.1	7 495 / 13.6	2 015 / 3.6	55 200 / 100
2007	34 703 / 51.7	18 794 / 28	11 375 / 16.9	2 257 / 3.4	67 129 / 100

Source: Institute for Information on Education, Student Register

In parallel with the growing numbers of students in higher education, the percentage of women has been growing. In 1995/96, there were 148 433 students in total at public HEIs. This number included 65 387 (44.1 %) women. Already in 2004/05, the proportion of women was 50.2 %. The proportion of women has continued to grow. In 2007/08, there were 303 731 students in total at public HEIs, of whom 161 556, i.e. 53.2 %, were women. The

statistics also show that women are also more successful in graduating, i.e., there is a lower drop-out rate, see Table 10.

The situation is similar at private HEIs. Since 2001/02 the number of female students, and also the number of female graduates, has been higher than for males and continues the growing tendency.

Table 10. Numbers of students and graduates at public HEIs

Year	Students total	Women	% of women	Graduates total	Women	% of women
2002	235 874	114 732	48.6	30 080	16 262	54.1
2003	256 408	125 743	49.0	32 244	17 313	53.4
2004	274 962	138 011	50.2	36 782	19 831	53.9
2005	271 940	139 068	51.1	41 012	22 495	54.8
2006	292 520	152 534	52.1	48 012	26 608	55.4
2007	303 731	161 556	53.2	56 629	31 124	55.0

Source: Institute for Information on Education, Student Register, Czech Statistical Office

Note: Data collection in 31.12. of relevant year

Table 11. Numbers of students and graduates at private HEIs

Year	Students total	Women	% of women	Graduates total	Women	% of women
2002	7 891	4 209	53.3	447	251	56.2
2003	13 286	7 339	55.2	735	427	58.1
2004	19 120	10 789	56.4	1 747	1 024	58.6
2005	25 801	14 882	57.8	2 948	1 811	61.4
2006	31 755	18 783	59.1	4 916	3 088	62.8

Source: Institute for Information on Education, Student Register, Czech Statistical Office

Note: Data collection in 31.12. of relevant year

The proportions of men and women differ in different fields of study. These differences are due to the different study prerequisites and the different interests of men and women. These prerequisites and interests influence the choice of study disciplines, and they will presumably change only very slowly, if at all. The goal is to leave such change to evolution brought about mainly by developments in society.

Table 12 presents the proportion of women in Doctoral degree programmes. The figures are clearly significantly lower than the figures for women in higher education as a whole. At the same time, this confirms the findings in Chapter 3 that the percentage of women decreases with the rising level of degree programmes and, in a similar manner, with the highest ranks of academic qualifications and academic positions.

However, dynamic changes are beginning to take place in the educational structure of the work force in the CR. On the one hand, there is still only a small proportion of graduates in the work force, while, on the other, there is economic growth accompanied by a demand for staff, and

a rising need for highly qualified workers. As a result, tertiary level graduates are much sought after in the employment market.

The Czech Republic is still mainly considered in OECD statistics as a country with a relatively low percentage of graduates with higher education (tertiary education, if we also take into account graduates from the tertiary vocational/professional schools). The extensive growth of students, as described above, is projected into the numbers of graduates and also into the level of education of the work force, but with several years delay. It has to be taken into account that one year of fresh graduates entering into the labour market forms less than 2.5 % of the total work force. In the course of a decade, less than 25 % of the work force is changed.

In 2007, there were 733 000 employees with tertiary education, who formed 15 % of all employees. Approximately 49 000 of them were graduates of tertiary professional schools (level of ISCED 5B), 36 000 had a Bachelor's degree (ISCED 5A short), 619 000 had a Master's degree, or equivalent (ISCED 5A long), and

Table 12 Numbers of students and graduates in Doctoral degree programmes

Year	Students total	Women	% of women	Ph.D. graduates total	Women	% of women
2001	16 488	6 012	36.5	1 088	384	35.3
2002	18 068	6 538	36.2	1 353	463	34.2
2003	20 026	7 198	36.0	1 537	548	35.6
2004	21 432	7 903	36.9	1 746	621	35.6
2005	22 333	8 531	38.2	1 942	682	35.1
2006	23 338	9 183	39.3	2 051	736	35.9
2007	24 131	9 631	39.9	2 231	836	37.5

Source: Czech Statistical Office

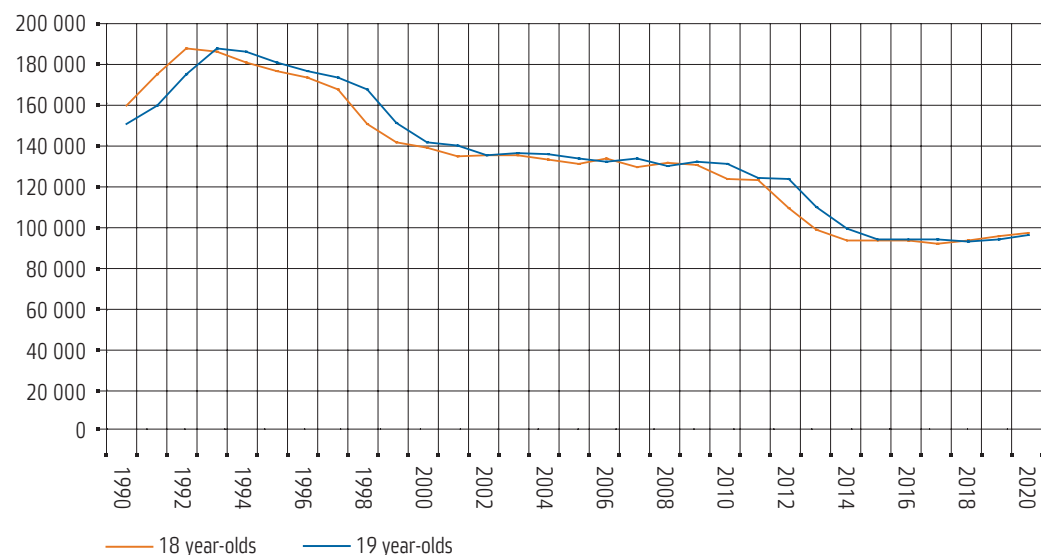
29 000 had a Doctoral degree, or equivalent (ISCED 6). In parallel, those who graduated from various levels of higher education in 2007 have a totally different educational structure. A total of 89 000 graduated, but more than 28 000, i.e. more than 30 %, were from tertiary level education. This ratio has been growing annually. Despite the dynamic growth, the labour market is still absorbing higher education (tertiary education) graduates very well, as in other European countries (e.g. Portugal and Austria) where the proportion of higher education graduates in the labour market is still low.

The most serious issue concerning the future development of the student body in higher education is the population development in the CR in the last fifteen years. Figure 6 shows

a significant decrease in the population of 19-year-olds (and consequently the numbers of fresh secondary school graduates), i.e., the primary source of higher education applicants in the near future. The rapid drop in the birth rate (around 1990-1996) has come to an end, and has stabilised for several years at a minimum of about 90 000 new-born children. There has even been a slight growth in the last five years (about 100 000 new-borns in 2007). Despite the recent trend toward a growing birth rate, the CR is a country with one of the oldest populations in Europe and in the world.

This situation needs to be taken seriously into account. It will make the HEIs think about offering a much broader range of various profession-oriented or interest-oriented lifelong learning courses. At the same time they will be

Figure 6. The demographic curve 1990 - 2020



Source: Institute for Information on Education

encouraged to develop new forms of teaching and learning (distance learning and part-time study) in order to attract applicants not only from fresh school graduates but also from those already in employment and needing to re-qualify, gain a new qualification, etc. Such a development is one of the main priorities of development programmes established annually by the Ministry. The Ministry will provide the necessary funding to support new behaviour of HEIs.



Research and Development

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Research and development (R&D) in the Czech Republic is carried out by higher education institutions, institutes of the Academy of Sciences of the CR, and by other research institutions. Total R&D expenditures in 2007 were 1.54 % of GDP, and public funding amounted 0.63 % of GDP. The HEIs consume approximately 40 % of the public funding provided for R&D. The Act requires that educational activities should be connected with a kind of research and development. This is valid for all types of HEIs, i.e. both university and non-university types.

The system of state funding for R&D that crystallized in the 1990s was formulated in the Act on the Support of Research and Development from Public Funds (No. 130/2002 Coll.). This Act distinguishes between targeted and institutional expenditures. Until now, public support has in practice meant support from the state budget (support from the regional and local authorities is negligible). The expenditure from the state budget are distributed according to the recommendation of the Research and Development Council (an advisory body to the Czech Government) via ministries or central offices. The greatest amount is distributed by the Ministry, the Academy of Sciences, the Czech Science Foundation, and the Ministry of Industry and Trade.

%

5.1 General Statistical Information

The following tables show the sources of funding for R&D in the Czech Republic in 2006 and 2007 (Table 13), and also the sectors into which financial resources for R&D flowed (Table 14).

Of the total sum invested in R&D by the business sector, 97,3 % is used for R&D carried out in companies, and only 0,2 % is used for R&D at universities.

Table 13. Expenditure on R&D in 2006 and 2007 by source of funding

Source of funding	2006			2007		
	In millions CZK	%	% GDP	In millions CZK	%	% GDP
Business sector ²	28 399	56.90	0.88	29 289	53.96	0.83
Public funds	19 445	39.00	0.60	22 361	41.19	0.63
HEIs (own resources)	521	1.00	0.02	420	0.77	0.01
Private non-profit sector	5	0.00	0.00	2	0.00	0.00
Foreign sources	1 529	3.10	0.05	2 209	4.07	0.06
Gross domestic expenditure on R&D, total ³	49 900	100.00	1.55	54 284	100.00	1.54

Source: Czech Statistical Office: Research and Development Indicators 2006, the Budget of Chapter 333 Ministry of Education, Youth and Sports for 2006, 2007

Table 14. Expenditure on R&D in the CR by sector of performance

Sector of performance	2006		2007	
	In millions CZK	%	In millions CZK	%
Business sector	33 023	66.18	34 648	63.83
Public sector	8 755	17.55	10 278	18.93
HEIs	7 918	15.87	9 158	16.87
Private non-profit sector	204	0.41	200	0.37
Gross domestic expenditure on R&D, total	49 900	100.00	54 284	100.00

Source: Czech Statistical Office: Research and Development Indicators 2006, the Budget of Chapter 333 Ministry of Education, Youth and Sports for 2006, 2007

² Financial expenditure that the business sector invests in R&D

³ GERD: total expenditure on research and development (in all sectors): this comprises total expenditure (recurring and capital) designed for in-house R&D carried out in business entities on the territory of a given state, regardless of the source of funding.

5.2 National Research Programmes

In connection with the expected accession of the CR to the EU, the National Research and Development Policy was formulated in 2000. One of its main goals was to increase the state expenditures for R&D to 0.7 % of GDP by 2002; however, in reality the amount was only 0.63 %. On the basis of the National Research and Development Policy, National Research Programme I for the period 2004-2009 was launched in 2003. It contained five main thematic programmes: Quality of Life, The Information Society, Competitiveness and Sustainable Growth, Energy for the Economy and Society, and Modern Society and its Changes.

These programmes will run until 2009, with total financial support from public funds expected to amount to 16 962 million CZK.

In 2004, a new document entitled National Research and Development Policy in the CR from 2004 to 2008 was approved. Increased state support for R&D was planned in this document. However, the "Barcelona" goal of 2002 (to increase R&D expenditures to 3 % of GDP by 2010, with 2 % from private sources and 1 % from public sources) seems hard to achieve.

In 2005, approval was given to National Research Programme II (for the period 2006-2011), which is more oriented to applied research.

5.3 Operational Programmes

With its accession to the EU, the CR aligned itself with the member countries that make use of targeted support in the framework of European regional policy. In accordance with its aims, one of the priorities of the CR is to raise the competitiveness of the state and its orientation toward a knowledge economy. The operational programmes provide significant support for achieving these aims.

In 2007 and 2008, the European Commission approved operational programmes for the CR that will be funded from EU structural funds in the 2007-2013 period and will support the development of higher education, as regards both teaching and R&D: OP Education for Competitiveness (EfC) and OP Research and Development for Innovation (R&Dfi). In OP EfC, emphasis is placed on a comprehensive system of lifelong learning and the development of an environment conducive to research, development and innovation activities, and encouragement of cooperation between educational institutions, research and the user sector.

The overall aim of OP R&Dfi will be fulfilled in the framework of four priority axes: European Centres of Excellence, Regional R&D Centres, Commercialisation and Popularisation of R&D, and Infrastructure for University Teaching in Connection with Research.

The programme above all enables universities to improve the quality of their material background, both for their own research purposes and for educating students in Master's and Doctoral degree programmes, and in general for using and linking research and development with educational activities. Use by the private sector of the capacities that are built up will lead to an increase in the funding that flows into R&D from the private sector.

5.4 Research and Development at Higher Education Institutions

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R&D is carried out predominantly at public and state HEIs. Private HEIs, mostly of non-university type, carry out very limited research activities, and the financial support provided for it is less than 0.2 % of the total R&D expenditure at HEIs.

Total expenditure on R&D at HEIs in 2007 (the sum total of all sources of funding – private, public, own, non-profit sector, foreign) amounted 9 158 mil. CZK, which is 16.9 % of total R&D expenditure in the Czech Republic. See Table 15.

Of this amount, the business sector provided 0.73 %, the public sector 91.6 %, HEIs own resources amounted to 3.2 % and foreign sources were 4.5 %.

This data confirms, in particular, the low level of funding of R&D at HEIs from private business sector sources.

There are several reasons for this. In the structure of Czech industry, branches with a high share of GDP do not need much R&D (e.g. the building industry). Until recently, foreign investors mostly profited from the Czech “low-cost economy”, and

had little need for research results. Indirect tools supporting R&D are almost non-existent: only since 2005 has it been possible to write off R&D expenditures from the tax base. This situation is closely linked to the low level of innovations.

Table 16 sums up the total expenditure on R&D from the state budget in 2006 and 2007, and the proportion obtained by HEIs.

The level of funding of research and development at HEIs is expected to grow – both funding from the state budget and, particularly, funding from private (business) sources and foreign sources, in line with the Lisbon strategy and the Barcelona objectives.

HEIs can obtain both institutional and targeted financial support for R&D.

Public HEIs obtain their institutional support for R&D from the Ministry in two main forms:

- institutional support, based on five- to seven-year **research plans**. These plans are presented by individual HEIs to the Ministry (other research institutions present their plans to other ministries or to the Academy of Sciences in a similar fashion). The first period

Table 15. Overall sources of financing of R&D carried out at HEIs in 2006 and 2007

Source of financing	2006		2007	
	In millions CZK	%	In millions CZK	%
Business sector	55	0.70	67	0.73
Public funds	7 165	90.50	8 387	91.58
Own resources of HEIs	344	4.30	293	3.20
Foreign sources	354	4.50	411	4.48
Total	7 918	100.00	9 158	100.00

Source: Czech Statistical Office: Research and Development Indicators 2006, the Budget of Chapter 333 Ministry of Education, Youth and Sports for 2006, 2007

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Table 16. Expenditure on R&D in 2006-2008

Year	Total expenditure on R&D from the state budget	Institutional support for HEIs	Targeted support for HEIs
	in millions CZK	%	%
2006	18 372 ⁴	19.4	16.8
2007	25 100 ⁵	16.1	10.5

Source: Czech Statistical Office: Research and Development Indicators 2006, the Budget of Chapter 333 Ministry of Education, Youth and Sports for 2006, 2007

for research plans ran from 1999 to 2004; in 2003, for example, public HEIs obtained 1 326 million CZK, and in 2004 they received 1 565 million CZK. For the next period (2005-2011), funding for this purpose has been substantially increased (to 3 040 million CZK in 2005), and the research plans have been rather strictly assessed. The peer review method has been used, but without any coordination of the (especially foreign) peers and their criteria. Only around 50 % of the research plans submitted by HEIs were approved;

- support for **specific research**, i.e. research connected with providing Master's and Doctoral degree programmes. The total amount did not grow considerably – it was 1 044 million CZK in 2004 and 1 244 million CZK in 2007. The money is allocated to HEIs according to a formula that includes quality indicators such as the amount of targeted expenditures obtained by the HEI in the previous two years, the number of professors and associate professors, and the number of students in Master's and Doctoral

programmes⁶. Individual HEIs can distribute this money to their faculties according to their own decision, but in doing so they usually follow the formula mentioned above.

Support for some selected activities in international cooperation can also be provided in the form of institutional support.

All HEIs can apply for **targeted** support (grants) from various agencies and programmes:

- The most important programme administered by the Ministry is the Research Centres programme, which aims to concentrate the research capacities of various institutions on current problems. One important rule is that the research teams should be composed of experienced researchers and also Doctoral students from the HEI. The programme had two categories: category A for basic research, and category B for applied research. The total expenditures for the period 2005-2008 should comprise approximately 1 700 million CZK in category A and 3 260 million CZK in category B.

⁴ Total real expenditure on R&D from the state budget

⁵ Total approved state budget expenditure on R&D for 2007 (including expenditure on programmes co-funded from the budget of the European Union worth 3.6 billion CZK)

⁶ Only HEIs are eligible for this type of financial support, and only public HEIs managed to fulfil the criteria.

5.5 Human Resources

- The most important agency allocating money for basic research is the Czech Science Foundation. In 2007, the public HEIs received 510.9 million CZK (without post-doc and Doctoral projects). This amounted to 42 % of all expenditures on standard projects. The Czech Science Foundation does not lay down any research priorities - the main evaluation criterion is scientific excellence.
- Public HEIs also compete successfully for grant-funded projects at other ministries (the Ministries of Health, Agriculture, Industry and Trade, and the Environment). The grant programmes of these ministries support both basic and applied research in accordance with the thematic programmes of National Research Programmes I and II. The Academy of Sciences has its own grant agency, which is also open to researchers from HEIs.
- A considerable portion of the targeted support flows to public HEIs from international cooperation in R&D, i.e. the 6th and 7th Framework Programmes of the EU and other international programmes such as the European Education Campaign, COST, EUROCORES, etc. Fees paid from the state budget to international research institutions such as CERN and the European Molecular Biology Organization also represent major indirect support for research at HEIs.

The growth in funding from the EU Operational Programmes will also contribute significantly to supporting the research and development activities of HEIs.

The research capacity of HEI staff is limited by their teaching duties. The balance of teaching and research duties of the staff is on an average approximately 2:1. If the size of the academic staff at the public HEIs is taken as 18 030 FTE (full-time equivalent) in 2007, we obtain the (theoretical) number of 6 000 FTE researchers. This research staff capacity is higher than that of the Academy of Sciences, and accounts for about 30 % of the total number of researchers in the CR.



5.6 Doctoral Studies

An important way to promote R&D at HEIs is by supporting Doctoral studies. In the mid-1990s, the Ministry began to allocate special funds to HEIs for Doctoral scholarships. As can be seen from Table 12, the number of Doctoral students has increased 1.5-fold in the past eight years (more rapidly than the total number of students), the number of Ph.D. graduates has doubled. Nevertheless the number of Ph.D graduates is still low, with the time to degree ranging from five to eight years (instead of the standard length of three or four years). Many students drop out. This is an undesirable state of affairs, but on the other hand it indicates that Doctoral studies in the CR are rather demanding and that the requirements for the thesis in most fields of study are relatively high. At the beginning of the new millennium, the Ministry started to exert pressure on HEIs to encourage students to finish Doctoral studies sooner. The number of Doctoral graduates became an important indicator in quality assessment, in the allocation of institutional expenditures for R&D and in the formula funding of teaching activities. Funds for Doctoral scholarships and for Doctoral programmes began to be allocated only according to the number of students who did not exceed the standard length of study. Table 12 shows that the number of Ph.D graduates is slowly approaching 5 % of all graduates, which is considered to be a normal and sound proportion.

5.7 Latest Development

In the last two years, the Research and Development Council has been preparing a **reform of research, development and innovation** in the Czech Republic. The reform was approved by the government in March 2008. It will be implemented gradually over several years.

The objectives concerning HEIs are as follows:

- Linking financial support for research and development to the results of basic and applied research at a given higher education institution.
- The institutional support provided until now under the heading "specific research at public HEIs" will be replaced by targeted financing. This funding method should support participation of Doctoral candidates in research, development and innovation activities of the relevant higher education institution. Moreover, this concept of funding should promote the training of a new generation of scientists at HEIs for research purposes.
- Strengthening cooperation between HEIs and the Academy of Sciences (a public research institution) in the development of Doctoral degree programmes.
- Supporting mobility of academic staff (between countries and between various sectors of institutions and with employers, etc.).
- Cooperation between institutions and business entities concerning Doctoral degree programmes and projects.
- Strengthening cooperation with the user sector in the development of innovation centres and technology structures, in funding R&D projects with the involvement of private business resources.
- Increasing the so far very low level of funding of R&D at HEIs from private business sector resources.
- Increasing the so-called "third role" of a higher education institution, while strengthening links to the region and cooperation with the private and public sectors; a shift towards an entrepreneurial culture at some HEIs as they carry out the basic tasks in education, research and development.



6.1 Governance at the System Level

The distribution of competencies and responsibilities among particular state bodies, on the one hand, and HEIs, on the other, has become relatively stable in the last ten years.

The system is regulated by the Act, which has demarcated the ministerial competencies and has “moved the system from a full institutional focus to a more mixed and balanced state-institution-market focus” (File, Goedegebuure: 2003).

In reality, the steering tools at the central level applied to public HEIs are basically indirect. For implementing the strategic goals and for developing higher education (system steering), the Ministry has two important tools: the distribution of financial support from the state budget to the HEIs, and quality assurance through the awarding or withholding of accreditation following the expert opinion of the Accreditation Commission (degree programmes, the habilitation procedure and the procedure for appointing professors are subject to obligatory accreditation, see Chapter 7). As concerns the private HEIs, the interventions of the state are limited to quality assurance, applied through the Accreditation Commission (including state permission as a necessary condition for establishing a private HEI – see also Chapter 7), unless state financing is involved, which at present occurs only very rarely.

The important and powerful (though not all-powerful) “buffer body” between the Ministry and the HEIs is composed of representatives of the academic community. It comprises two parts. The first, the Czech Rectors' Conference, exists in a more or less similar form in most European countries, while the second, the Council of HEIs, serves as an expression of democratic principles at the national level,

and also as a means of protecting them. The Council of HEIs is composed of representatives of the Academic Senates of public HEIs and the Academic Senates of their faculties (for more detail, see Section 6.3). In addition, there are representatives nominated by private HEIs (though they mostly do not have a body equivalent to an academic senate). It is worth pointing out here the importance of the Students' Chamber of the Council of HEIs, which enables students to have an influence on strategic issues at the national level. After long-term experience, the required consultations on important measures undertaken by the state administration with the representatives of the academic community have come to be viewed as a useful necessity, rather than as a legal obligation.



6.2 Funding

Funding as a Tool for Steering Public HEIs

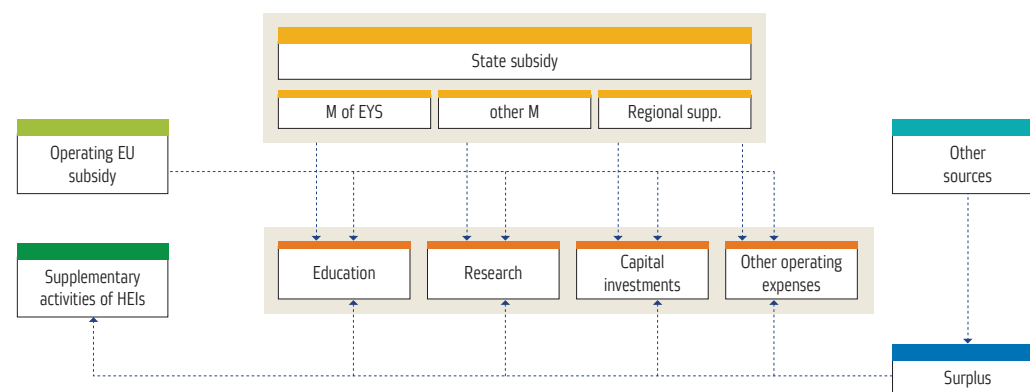
The basic part of the budget of public HEIs is composed of a state subsidy, but at the same time HEIs are expected to diversify their financial sources, and gain other funding from supplementary activities (see Figure 7).

In accordance with the Act, the public HEIs can carry out supplementary activities subject to payment and related to their main (educational, scientific, research, developmental, artistic or other creative) activities. Revenues from supplementary activities, any gifts, donations and bequests provide financial resources that have to go towards additional funding of their main and supplementary activities. The total share of extra-budgetary revenues varies greatly among HEIs. Generally, the proportion of total extra-budgetary revenues is still increasing. In 2007, the proportion was around 24 % (see Table 17).

There are several universal sources of these revenues:

- Study-related fees: Higher education provided by public HEIs is in general free of charge. The HEIs cannot collect tuition fees from students in regular study programmes offered in the Czech language if they are completed within the standard duration plus one year. They can, however, charge what are referred to as study-related fees. These include fees for studies taught in a foreign language (the cost of which is not limited by the Act), for an extension of the standard length of studies, and for studies in a second degree programme at the same level;
- Revenues from services for students: Revenues from accommodation, catering and other services for students (including revenues from the publication and sale of study materials) form an important part of the revenues of public HEIs.
- Other incomes from educational activities: HEIs may provide, either free of charge

Figure 7. Flow of money in public HEIs



- or subject to payment, lifelong learning programmes within the framework of their educational activities and beyond the scope of their regular programmes;
- Revenues from property. HEIs own the "assets needed to provide activities within their primary objectives" (Act: 1998). The main source of these revenues is from renting land and property. Different institutions have very different opportunities to raise this type of revenue. How they use their assets is limited by the Act and supervised by the Board of Trustees see Section 6.3.
- Revenues from R & D activities and services carried out on a commercial basis (not supported from public sources).

Table 17 shows the overview of funds received by the public HEIs from public and private sources, and the ratio of public sources to GDP. It is clear that private sources have been increasing during the monitoring period, and in 2007 they account for about one quarter of the total sum of financial sources.

Mechanisms for allocating the state subsidy

The Act explicitly states that the state subsidy of public HEIs is dependent on the types and financial requirements of their accredited degree programmes and lifelong learning programmes, the number of students, and the results achieved in educational, scientific, research, developmental, artistic or other creative activity and their demands. The mechanisms for distributing the state subsidy to the HEIs are based on mutual agreement between the Representative Commission and the Ministry; the details of the mechanisms, and modifications to it, are discussed annually. The Representative Commission is composed of representatives of the Czech Rectors' Conference, the Council of HEIs, the HEI Registrars, and a representative of the labour union.

The total state subsidy for a particular institution is based primarily on its teaching and research performance.

Table 17. Overview of financial sources of public HEIs

Year	Total resources of public HEIs (in millions CZK)	Total state subsidy to public HEIs (in millions CZK)	Ratio of private incomes of public HEIs towards the total resources (%)	GDP (in billions CZK)	Total state subsidy to public HEIs – percentage of GDP
2002	22 654	18 222	19.57	2 464	0.739
2003	25 337	19 807	21.83	2 577	0.769
2004	27 526	21 729	21.06	2 817	0.771
2005	33 262	25 954	21.97	2 994	0.867
2006	37 167	28 815	22.47	3 220	0.895
2007	40 163	30 508	24.04	3 417	0.893

Source: Ministry of Education, Youth and Sports

a) Funding of teaching activities

The main portion of the grant for teaching activities is based on a performance formula (it is expected that this will remain the major constituent for several years), and the smaller portion is based on "contracts" emerging from long-term plans of the Ministry and particular HEIs (for details, see below). This latter part is allocated according to other (not formula-based) rules. The composition of the total grant for teaching is shown in Figure 8.

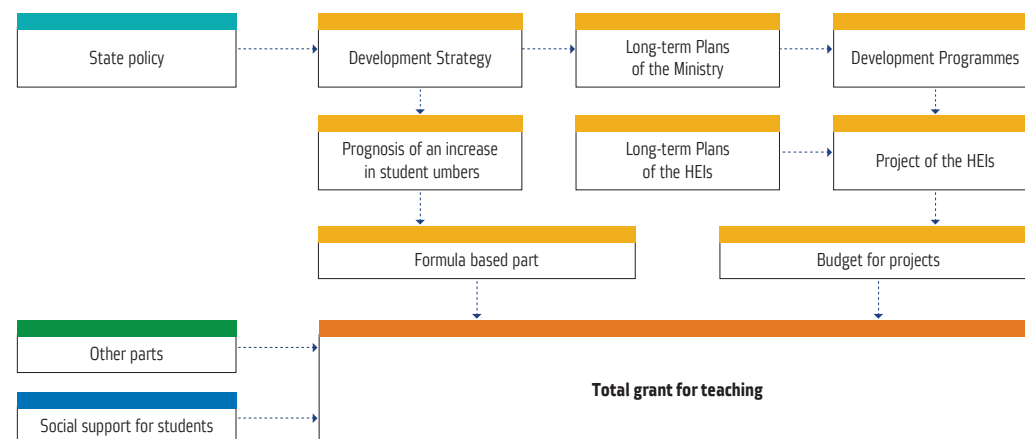
i) Formula funding

The amount of money allocated is derived from the volume of teaching activities. The total sum for each HEI is calculated as the sum of the product of the number of students and the financial assessment of each accredited programme. Since 2005, the number of graduates has also been included in the formula, thus enhancing the output orientation of the funding system.

As the financial resources of the state budget are limited and the increase has only been gradual, the Ministry decided to negotiate annual increases in newly enrolled students with the representation of HEIs, as described above. The agreed year-to-year increase in the number of students has been somewhere between 3-5 % on an average, and it is applied in accordance with the available capacity of the higher education system and the available state budgetary resources in such a way as to ensure that the average amount of financing per student remains at an acceptable level. Unfortunately, in 2007 the real average amount per one student decreased and this trend seems also to have continued in 2008.

The limited quotas are therefore not a numerus clausus set up by the government on a centralized basis, but rather the result of discussions between the Ministry and the Representative Commission. This does not in any way limit individual HEIs from deciding on the actual number of students admitted. HEIs

Figure 8. Structure of the grant for teaching activities



have the right to decide on an increase in the number of students they admit beyond the number that have been agreed, while utilizing the resources allocated effectively (or possibly other types of financial resources). Until recently, HEIs have used this latter option only rarely, and the resulting number of students admitted has usually been based on the amount of available state funding.

ii) Contractual principle

Although the total amount of money allocated on the basis of contracts is significantly lower than the amount allocated through the formula, it is considered as an important tool for implementing state strategy within the environment of highly autonomous public HEIs. The Act obliges the Ministry to elaborate a Long-term Plan for Educational, Scientific, Research, Development, Artistic and Other Creative Activities of Higher Education Institutions for 2006 – 2010 (further Long-term Plan of the Ministry), where the main aims and priorities for developing the higher education system are formulated, taking into account the international situation, above all the Bologna Process and other European activities. Similarly, each HEI is required to elaborate its own long-term plan. The mutual debate on harmonizing the conceptual plans at both institutional and national levels contributes to a better understanding of aims and ideas on both sides. The plans of the institutions, and also the plan of the Ministry, should be updated annually.

The Ministry annually announces the Development Programmes which include the priorities of the Long-term Plan of the Ministry and the relevant yearly updates. The HEIs are invited to submit projects that fit in with the priorities of the Development Programmes. Thus, the financial support for successful projects allocated on the basis of specific contracts enables state priorities to be implemented through funding. It is important to stress that the eligibility of any

particular project for funding is examined by expert teams consisting of members of the Council of HEIs and representatives of the Ministry.

The possibilities of funding from EU sources (structural funds or the Socrates and Leonardo da Vinci EU educational programmes, since 2007 the integrated Lifelong Learning Programme, and the EU research and development programme (6th and 7th Framework Programmes)) are also included in the Long-Term Plans at both ministerial and institutional levels.

iii) Other means of funding

The grant for teaching activities includes several other items, as follows:

- Scholarships for Doctoral students;
- grants covering the expenses of foreign students studying in the CR within the framework of international agreements, and grants for Czech students studying abroad within the framework of various programmes (Socrates, Aktion, CEEPUS);
- grants from the Educational Policy Fund. These grants are designed for development projects involving more than one HEI that are in compliance with the plans of the Ministry; decisions on the grants are the Minister's prerogative;
- grants from the Higher Education Development Fund, which is designed to support projects focused on various educational development topics. This fund is jointly managed by the Ministry and the Council of HEIs. Priorities are set in the relevant thematic fields, and the projects are evaluated in collaboration between these two bodies;
- a fund for meeting any types of extraordinary expenses;
- grants for students' accommodation and meals. Public HEIs used to be provided with grants for students' accommodation and meals. Recently, however, the allocation of the accommodation part was changed. From now

on, the money will be distributed in the form of scholarships directly to students, who are entitled to use it to procure accommodation in institutional residences or elsewhere.

b) Funding of research activities

Support for research from the state budget takes in principle two forms: institutional and targeted, and it is described in detail in Chapter 5. In contrast to funding for teaching, the private HEIs have the right to win grants from these sources, provided that they are able to prove the required quality of their research.

c) Capital investments

Investments in new assets, and reconstruction and renewal of assets, are distributed after an assessment of detailed projects. Decisions on the allocation of funds made by the Ministry or by the government (according to the size of the project) are based upon the priorities of the state and on the Long-term Plans of the Ministry and the particular institution. Only public HEIs are eligible institutions.

Funding of Private HEIs

Private HEIs are bound by the Act to provide their own financial sources for their teaching, scholarly, scientific, research, development, artistic and other creative activities (Act:1998).

The Ministry may provide a private HEI with a state subsidy only if it operates as a public benefit association. It may also offer a private institution subsidies for scholarships for students who qualify for supplementary child support according to a special regulation. If a private HEI is eligible for state support, the conditions for granting the support and its use and settlement are subject to the general regulations on the use of financial resources from the state budget (Act:1998).

The current situation shows that state support for private HEIs is provided only in exceptional cases. The main funding for their activities comes from students' fees.



6.3 Governance at Institutional Level (HEIs)

Each HEI is fully responsible for establishing and profiling its degree programmes (which are subject to accreditation), for determining research priorities and for recruiting its own staff. The HEI sets its mission and goals in its Long-term Plan, while details and/or modifications are specified in the annual updates.

The governing bodies at public and state HEIs, their nature, composition, methods of operation, rights and duties are defined by the Act. Detailed descriptions and the working methods of these bodies are set out in the internal regulations of the institutions, which must be registered at the Ministry (which has the expertise to decide whether or not they are at variance with the law and legal regulations) (Sebkova et al.: 2006).

The Rector of a public HEI is formally in charge of the whole institution, and acts and decides in its name; however, the Act grants a number of fundamental decision-making powers to the Academic Senate. The Academic Senate decides on the institutional budget, the Long-term Plan, the annual report on activities, the annual report on financial management, internal regulations and the establishment (or closure, merging or division) of parts of the HEI, and selects a nominee for the position of Rector. The members of the Academic Senate are elected from the institution's academic community. As mentioned above with respect to the Council of HEIs, the students are also important partners in institutional government. They form at least one-third and at most one-half of the membership of the whole Academic Senate.

Another governing body is the Scientific Board. Its responsibilities lie especially in the procedures for habilitation and for appointing professors, and in preparing proposals for study programmes and research plans. The Scientific Board is composed of acknowledged personalities in the fields of study and research offered by the HEI. At least one-third of the Board's members come from outside the institution.

The third body at public HEIs is the Board of Trustees, introduced by the Act for the first time in 1999. The primary reason for including this new body was the transfer of state property to the ownership of the individual HEIs. The Board is expected to ensure proper use and maintenance of the newly obtained assets. Another important reason for its creation was to support the involvement of external ideas into HEIs, and vice versa. The Board is therefore invited to express its standpoint on all important activities provided by the HEI. The members of the Board of Trustees (completely from outside the institution) are appointed by the minister after discussion with the Rector (Sebkova et al: 2006).

The governance of the faculties of public HEIs is to a large extent similar to the governance at institutional level; they have no Board of Trustees.

In the case of private HEIs, their internal structure and their internal governance are not regulated by the Act. This means that the institution has the right to manage these issues on its own.

Public and private HEIs have their own internal salary regulations, which are not subject to any state limitations. The Act stipulates the obligation of HEIs to provide an annual report on their activities, and also a report on their financial management, to submit the reports to the Ministry and to make the reports public, reflecting a belief in the importance and effectiveness of public accountability of HEIs. The requirement to prepare and publish an annual report on their activities also concerns private HEIs. However, a report on financial management is required by law only if a private HEI is in receipt of a state subsidy (which so far has occurred only in exceptional cases). State HEIs are financed by the Ministry of Defence and the Ministry of Interior, which can thus promote their own priorities.



7.1 The Accreditation Commission and its Activities

The objectives of the national policy on quality assurance in higher education are formulated in the Long-term Plan, which states, in a general sense, that successful implementation of policy priorities depends on the high quality of all academic activities. For this purpose, a quality assurance system has been developed to ensure a quality culture within higher education institutions.

Taking institutional self-evaluation as a point of departure, the underlying assumption of the Long-term Plan is that an improvement-oriented self-evaluation of institutional activities helps in attaining institutional excellence along the lines set in the mission statement, which is elaborated upon in the institutional Long-term Plan. The Long-term Plan also emphasises the importance of assuring the quality of higher education by external evaluation processes, complemented by internal evaluations at institutional level, stating that, “in order to ensure the quality of studies a system of comprehensive external evaluation will gradually be built up, in addition to systematic support for internal evaluation of institutions” (Ministry:2005).

The external quality evaluation processes, in accordance with the objectives of the Long-term Plan, should serve the purposes of both accreditation and ongoing improvement of all activities provided by higher education institutions. To that end, it explicitly mentions the responsibilities of the Accreditation Commission, the agency legally responsible for external quality assurance at the system level.

The Act requires the Accreditation Commission (AC) to be an independent expert body, and determines the composition of the AC and the procedure for appointing its members. With its expenses covered from the budget of the Ministry and organisational support provided by the Secretariat⁷, the AC is composed of 21 members appointed by the Czech government on the basis of a proposal by the Minister. The members of the AC “must be persons of good character and good repute and widely regarded as authorities in their fields” (Act: 1998, § 83). They are appointed for a six-year term with the possibility of one re-appointment.

The Act further determines the basic activities of the AC (see below), while the Statute, which is approved by the Czech Government, specifies the details of the AC’s activities.

The members of the AC are selected with the aim that their qualifications should cover all study fields provided by higher education institutions. The majority of the 21 members are academics from public HEIs of university type (12), five are experts from the Academy of Sciences of the Czech Republic, and three members represent foreign higher education institutions; the only one comes from professional practice.

The AC is entitled by the Act to establish work groups to prepare the documentation that serves as the basis for the AC’s expert decisions. The work groups are composed of specialists in the particular study field, and the expert who is a member of the AC is normally the chairperson. Like the AC itself, the work groups are composed mostly of academic members. Only a minority of the members of work groups represent other stakeholders in higher education (employers, students), or come from abroad.

⁷ The Secretariat of the AC, which is responsible for supporting the AC in administrative, organisational, technical, and economic matters, operates as a section of the Higher Education Department within the Ministry. Currently composed of 4 members, the Secretariat of the AC is directed by the Secretary to the Commission, who is appointed and dismissed by the Minister upon a proposal from the Chair of the Commission (Statute: 2004).

7.2 Control of Quality Assurance Processes

The competencies and responsibilities of the AC include the basic rationales of quality assurance i.e. accountability (accreditation, state permission) and also quality improvement (evaluation of higher education institutions/faculties). In accordance with the Act, the activities of the AC can be grouped as follows:

- a) To care for the quality of higher education in general, i.e. to evaluate all activities carried out by higher education institutions, to give recommendations for improvements and to publish the evaluation results, to respond to requests from the Minister to assess issues in higher education, and to express the appropriate expert standpoint.
- b) To express an expert standpoint concerning requests for the accreditation of study programmes, for the authorization to carry out procedures for habilitation and for appointing professors, to grant state permission to operate a private higher education institution, to determine the type of higher education institution, and to establish, merge, split or dissolve a faculty of a public higher education institution.

The accountability-driven activities listed under b) lead to a decision. The AC itself has only a limited decision-making power, deciding on the type of an institution (typically granting approval to a new institution). As concerns faculties (establishment, merger, splitting, or dissolution), the decision is within the responsibility of the academic senate of the respective higher education institution, while the standpoint of the AC is a necessary precondition.

It is within the responsibility of the Ministry to decide about accreditation of a degree programme, authorization to conduct procedures for habilitation and for appointing professors. It is also within the responsibility of the Ministry to grant state permission to establish a private higher education institution. In all cases, the Ministry is bound by the expert standpoint of the AC. It cannot award accreditation (state

permission) if the expert standpoint of the AC is negative. If the AC expresses a positive standpoint, the Ministry can refuse accreditation (state permission) only on grounds listed by the Act.

Thus, responsibility in the field of external quality assurance is shared between the AC and government authority, represented by the Ministry, while responsibility for internal/institutional quality assurance is retained by the HEIs themselves.



7.3 Areas Covered by Quality Assurance

Each HEI should regularly provide an internal evaluation and publish its results. This general obligation is stipulated by the Act, but further details are left to the internal institutional regulations.

The organisation of external quality assurance is essentially national in scope, and the activities of the AC cover the whole higher education system. The evaluation procedures leading to the decision to accredit degree programmes, authorize habilitation procedures and procedures for the appointment of professors, and state permission to establish a private HEI are all obligatory. Improvement-oriented evaluations (evaluations of institutions and/or evaluations of accredited activities) are based on a selection made by the AC, usually initiated with regard to findings from accreditation-based procedures.

The scope of AC activities is complemented by some supranational elements. These include EUA evaluations (undertaken by several Czech higher education institutions), US accreditation of Faculties of Medicine, professional evaluations of HEIs focusing on agriculture, economics, business, and veterinary medicine, the participation of faculties of technology in FEANI (European Federation of National Engineering Associations) quality procedures, etc.

7.4 Uses of Quality Assurance

As concerns their internal evaluation processes, HEIs are completely free to decide on the use and the consequences of the results.

The purpose and effects of degree programme accreditation (and similarly authorization to provide habilitation procedures and procedures for the appointment of professors) are clearly defined in the Act and are publicly available. The restrictions regarding accreditation made by the Ministry in the case of a negative standpoint of the AC, i.e. a ban on admitting new applicants or termination of accreditation, have a direct implication for the institutional budget. A significant part of the institutional budget is allocated on the basis of formula funding. Hence, if a study programme does not receive accreditation, the institution is not allowed to admit students and the institutional budget is commensurately decreased. It should be noted that decisions (on accreditation or on state permission) are not necessarily final and conclusive. Improvements can be undertaken, and the applicant is free to resubmit the application.

The outcomes resulting from an evaluation of accredited activities or from an evaluation of an institution are, in principle, used for improvements. In practice, they can also sometimes influence accountability-driven processes, so the purpose of these activities and consequently the uses of the outcomes are not always perfectly clear.



7.5 International Activities

The international cooperation of the AC is a strong point. Being a member agency of ENQA, CEEN, and INQAAHE, the AC stresses the importance of cooperation especially with ENQA, leading, among other things, toward greater professionalisation of the AC's activities. In recent years, the AC has implemented the European Standards and Guidelines elaborated by ENQA and its partners on the request of ministers responsible for higher education, agreed at their meeting in 2005 in Bergen. Due to the AC's long term experience in the field of quality assurance, a significant percentage of the Standards had already been fully or at least partially implemented. Collaboration with the Slovak Accreditation Commission seems to be in general very helpful. This collaboration has been developing in recent years through a pilot project in support of an internal and external evaluation of both agencies.





8.1 Tempus, Socrates - Erasmus and the Lifelong Learning Programme (LLL)

There were four main drivers of change in Czech Higher Education after the “Velvet Revolution”: new legislation, the use of funding as a tool for steering, the input of reform-minded managers, administrators and academics at the universities, and internationalisation. The Czech Republic has participated in the Bologna Process since the very beginning. Since 2004, the CR has been a member of the European Union. However it had been cooperating with the EU within the Tempus programme since the early 1990s. This cooperation deepened in 1997-98, when the CR started to cooperate with the EU countries within the Community educational programmes. This cooperation was an organic, pioneering part of the integration process into the European Union. From the end of 1997, especially through the Socrates and Leonardo da Vinci programmes, we gained a quite complex set of instruments for use in developing the educational system.

In higher education, Socrates - Erasmus, became the main instrument for developing mobility schemes. The Erasmus sub-programme was understood as a complex instrument in higher education, at national and also at international (European) level. This can be seen quite clearly from the development of higher education in Europe driven by the so-called Bologna process, which aims to establish a European Higher Education Area by 2010.

The Czech Republic co-operates with many important international organisations. The most significant co-operation is with the Organisation for Economic Co-operation and Development (OECD). The OECD has carried out analyses of the Czech educational system, and has submitted a number of recommendations concerning further developments (“Country Notes 2006” provided within the OECD project “Thematic Review of Tertiary Education”). There has also been fruitful co-operation with UNESCO and the Council of Europe, especially in the 1990s in the Legislation Reform Programme project and within the Steering Committee for Higher Education and Research projects.

The first important step was made by the Tempus programme. It aimed to have a long-term influence on higher education. It contributed to promising developments in the system of higher education in the country, and supported the mutual co-operation between the CR and the other Central and Eastern Europe countries, on the one hand, and the European Community, on the other. It also supported cooperation among Czech institutions and modernisation of the infrastructure.

The Socrates programme provided quite a complex instrument for use in the whole sphere of education, including adult education. The Eurydice and NARIC sub-programmes opened platforms for exchange of information on educational systems and recognition issues. For higher education, Erasmus was of particular importance. The CR took advantage of these programmes to implement national goals, mainly mobility of students and academics, and in this way to implement one of the main goals of the Sorbonne and Bologna declarations. Another important aspect, from the very beginning, was the involvement of a wide range of stakeholders.

As mentioned in Chapter 6, the Ministry has a system of Long-term Plans and Development Programmes to promote its strategic objectives. Internationalisation is a firm part of the strategy:

“Internationalisation is present in all major areas of higher education institutions’ activities – education, research and development, creative and artistic activities and all other activities which, in general, contribute to the development of society. Internationalisation will be more evident in specific sub-areas such as innovation, human resources development and co-operation as part of international programmes. The capacity to take part in international competitions and tenders constitutes a fundamental pillar for building competitive higher education institutions, and it is closely linked to the possible use of resources from the European Union.” (Ministry: 2005,17).

It is important that the mobility programmes (Community programmes, regional international programmes, development programmes, etc.) are used in a systemic way, to complement each other. They form an integral part of the Long-term Plans of the Ministry and also of the Long-term Plans of the HEIs. Two concrete important aims of the Long-term Plan of the Ministry are, firstly, to enable each student who expresses an interest and has the necessary competences to spend a period of studies abroad, and, secondly, to increase the number of foreign students at Czech HEIs to 10 % of the overall student body (Ministry: 2005). This is directly connected with other goals concerning the language skills of students and staff (academic and administrative), the delivery of degree programmes in foreign languages, mainly English, and opportunities for interested institutions to establish a scholarship scheme to attract gifted foreign students.

International activities are co-funded from the state budget via Development Programmes and a specific co-funding scheme for the Erasmus programme. The CR was one of the first countries to introduce a system of co-funding from national sources in order to bridge the financial gap between the CR and the European Union countries. With some minor amendments, this scheme still continues to serve the Erasmus programme.

Table 18 shows how this co-financing policy has influenced student and teacher mobility. State funding has accounted for about two-thirds of the funding spend on Erasmus outgoing mobilities. The table provides numbers for the period 1998/99 – 2006/07.

Table 18. Mobility of higher education students and teachers

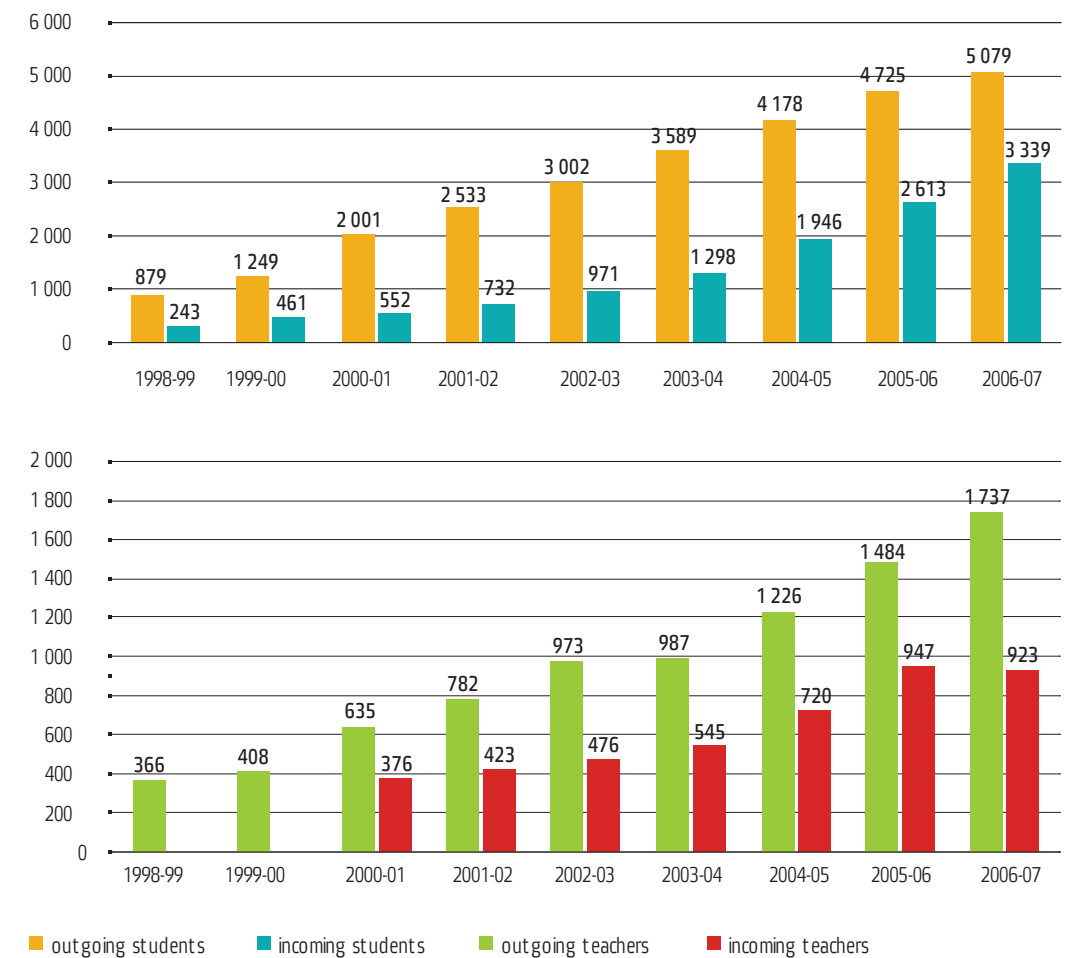
Year	Outgoing				Incoming	
	Students	Months	Teachers	Weeks	Students	Teachers
1998/1999	879	4 130	366	531	243	
1999/2000	1 249	5 980	408	729	461	
2000/2001	2 001	10 481	635	800	552	376
2001/2002	2 533	14 355	782	890	732	423
2002/2003	3 002	17 384	973	1 062	971	476
2003/2004	3 589	21 487	987	1 482	1 298	545
2004/2005	4 178	25 306	1 226	1 851	1 946	720
2005/2006	4 725	28 814	1 484	2 125	2 613	947
2006/2007	5 079	30 929	1 737	2 489	3 339	923

Source: National Agency for European Educational Programmes

The Figures 9 - 11 show the destinations that are most often visited by students and academics under the Erasmus programmes. Among the so called "old" EU member countries, students most often spend their period abroad in Germany, France, U.K. and Spain. Poland, Slovakia, Norway, Slovenia

and Turkey are the most popular destinations among the non-EU countries that participate in the Erasmus programme and the countries that newly joined the EU in 2004. The favourite destinations for outgoing teachers and for outgoing students more or less correspond.

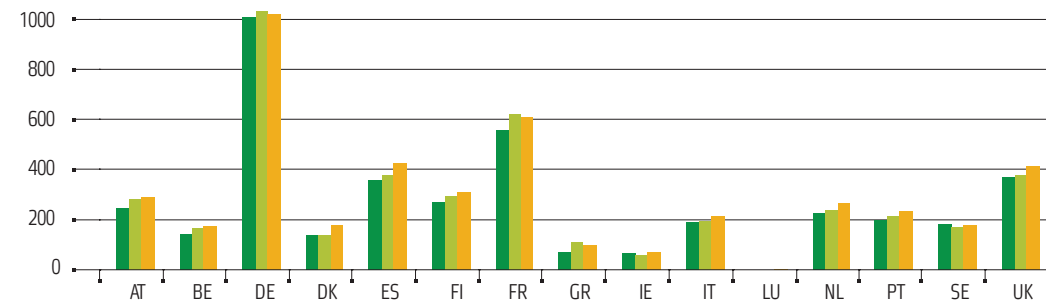
Figure 9 a), b). Trends of outgoing and incoming students and academics



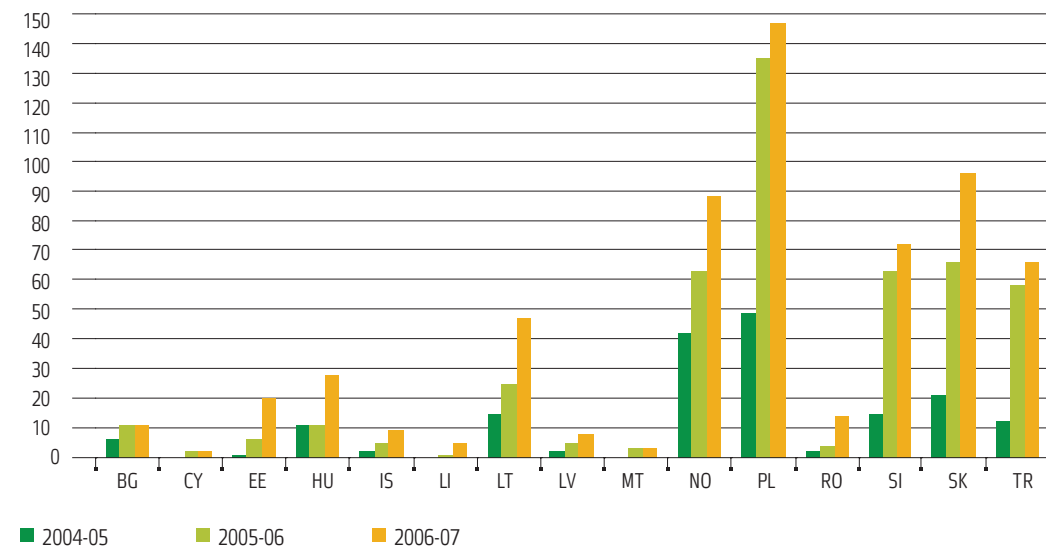
Source: National Agency for European Educational Programmes

Figure 10 a), b). Mobility of students by destination countries

Outgoing student mobility - destination countries - "old" EU member states



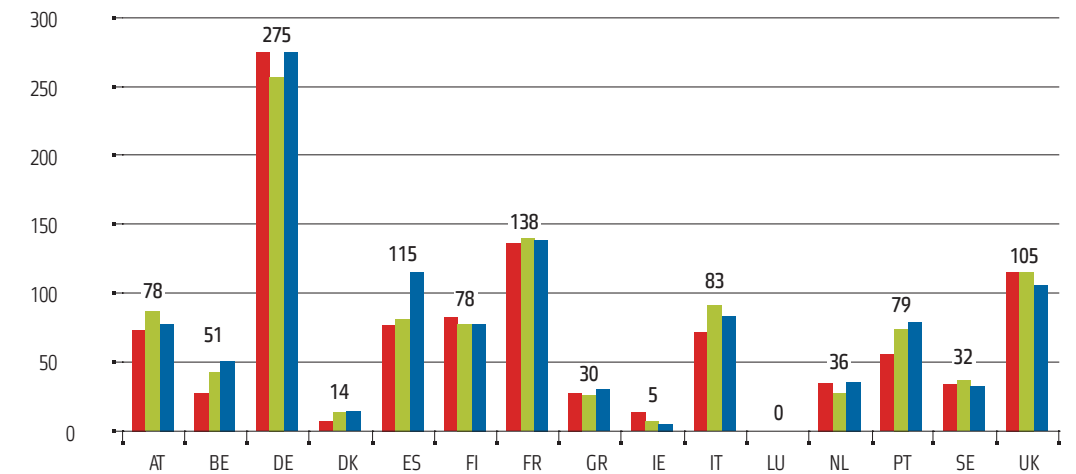
Outgoing student mobility - destination countries - other countries



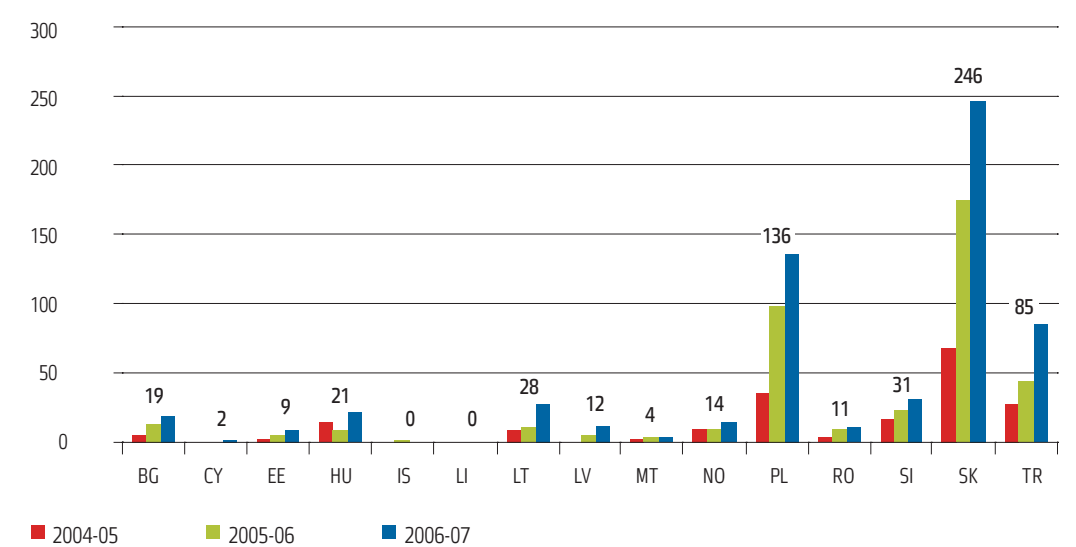
Source: National Agency for European Educational Programmes

Figure 11 a), b). Mobility of academics by destination countries

Outgoing teacher mobility - destination countries - "old" EU member states



Outgoing teacher mobility - destination countries - other countries



Source: National Agency for European Educational Programmes

Table 19. ERASMUS student and teacher mobility – Incoming Flows

Student mobility		AT	BE	BG	DE	DK	EE	ES	FI	FR	GR	HU	IE	IS	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI	SK	TR	UK	LI	CY	MT	EUI	Total
1998/1999		7	14		46	3		17	21	37	0		2		11		0		14			10	15				46						243
1999/2000		14	17		81	8		47	54	69	10		9		15		0		31			16	19				71						461
2000/2001		20	22		117	11		62	53	63	20		15		34		0		34			15	13				73						552
2001/2002		24	28		139	10		84	62	107	32		14		50		0		35			44	30				73						732
2002/2003		24	35		175	16		120	91	157	48		19		75		2		37			53	25				94						971
2003/2004		51	51		207	19		169	126	206	63		26		86		2		44			103	38				107						1 298
2004/2005		68	65	9	310	20	2	222	158	264	90	5	28	1	87	24	2	2	59	34	84	151	2	41	13	36	35	133	0	0	0	1	1 946
2005/2006		81	72	24	374	24	4	317	144	311	111	14	13	3	115	42	1	8	55	33	247	205	12	51	35	98	118	99	0	1	1	2 613	
2006/2007		103	82	35	415	21	13	396	154	379	136	42	32	12	149	60	0	18	49	16	360	258	15	40	45	164	222	119	0	3	1	3 339	
Total																																	12 155

Teacher mobility		AT	BE	BG	DE	DK	EE	ES	FI	FR	GR	HU	IE	IS	IT	LT	LU	LV	NL	NO	PL	PT	RO	SE	SI	SK	TR	UK	LI	CY	MT	EUI	Total		
1998/1999																																			
1999/2000																																			
2000/2001		26	12		98	3		37	29	46	11		2		19		0		19			12	18				44							376	
2001/2002		30	25		91	8		30	28	68	10		2		18		0		25			17	12				59							423	
2002/2003		33	24		127	6		27	25	68	4		7		27		0		28			23	21				56							476	
2003/2004		42	32		121	13		28	40	102	8		3		21		0		29			29	17				60							545	
2004/2005		40	28	6	165	6	1	31	35	87	11	5	7	0	28	13	0	3	34	13	26	19	1	16	7	38	35	63	0	0	2	0	720		
2005/2006		46	35	15	146	5	5	61	51	97	18	9	3	0	26	15	0	5	32	7	96	30	6	15	8	89	46	78	0	0	3		947		
2006/2007		45	18	14	100	12	9	43	40	96	11	10	4	3	33	22	0	11	16	4	102	41	8	11	8	125	78	58	0	0	1		923		
Total																																		4410	

Source: National Agency for European Educational Programmes

8.2 Outgoing mobility

The table 19 shows that the largest numbers of students come to Czech HEIs from Germany, Spain, France and Poland, followed by Portugal and Turkey. The largest numbers of teachers arrive from Slovakia, Poland and Germany, followed by France and Turkey.

Apart from the support for the Erasmus programme, described above, there is a specific, annually-introduced Development Programme in support of student mobility. This programme leaves HEIs virtually free to decide which students will be awarded the grant, and to which country they are sent. The only conditions are that the period of study abroad has to be recognised, and that the amount of money delivered to students is on an average 15 000 CZK (i.e. 600 EUR) per one student-month. The HEIs are invited to differentiate the grants according to the costs in particular countries. Under the Development Programmes, approx. 50 mil. CZK (i.e. 2 mil. EURO) is invested in student mobility every year.

The HEIs are free to develop their own scholarship programmes. Many students receive financial support from the institutional scholarship programmes of their own HEI or faculty.

From the very beginning, the CR has been active in implementing the core policies of the emerging European Higher Education Area. In 2001, it hosted the Ministerial meeting that following up the Bologna conference. The efforts have continued, and the Bologna process has become an organic part of the Long-term Plan of the Ministry. Internationalisation is considered one of the three main priorities in the development of Czech higher education.

Outgoing students are about 4 % of the total student body, a proportion that we do not consider enough. The main programme enabling students to spend a period of study abroad is the Erasmus programme, see above. For mobilities in Europe there are also CEEPUS, Aktion and the Action Plan for Cooperation with Norway, cooperation programmes with DAAD, etc. Mobilities with non-EU countries are covered by the Development Programmes mobility scheme. In recent years, it seems that the offer for study places abroad and the demand from students are almost balanced. In some cases, more places are offered than students want to take up.

The CR does not have a mobility support scheme for students wishing to take an entire study programme abroad. Nevertheless, there are about 1 500 students who apply for at least indirect support. Students studying abroad have the same status as domestic students, and have the same rights and advantages concerning social benefits (e.g. health insurance, tax deductibility etc.) However, they cover all the direct expenses connected to their studies abroad themselves.



8.3 Incoming mobility

Incoming students at the Czech HEIs now account roughly 9 % of the total number of students. Under the Development Programmes, the Ministry supports the preparation of joint degree programmes, including the preparation of Erasmus Mundus programmes. The Development Programmes also support improving the conditions for foreign experts at Czech HEIs, including visiting professors. The HEIs are also supported in their efforts to gain foreign students, especially at master and doctoral levels, and in setting up their own scholarship schemes. The HEIs can also prepare development projects aimed at setting up degree programmes delivered in a foreign language. The aim of the Long-term Plan of the Ministry is to increase the number of foreign students at Czech HEIs to 10 % of the overall student body by 2010. This is a realistic aim. While the majority of foreign students are Slovaks, there has also been a significant growth of other foreign students.

Student “buddy” clubs help the incoming students to overcome the problems they face when they come to study in a foreign country. One of the best is the International Student Club (ISC) at the Czech Technical University in Prague. It is a member of the Erasmus Student

Network, and successfully organised the ESN annual conference in Prague in March 2007. ESN has been creating a network of student (buddy) clubs at Czech HEIs and has in this way been establishing a student platform for exchange of experiences and practices.

Despite the good achievements mentioned above, there is still much space for improvement. The initiative taken by the Socrates National Agency (and later by the National Agency for European Educational Programmes - NAEP) and various HEIs to develop marketing approaches and improve the quality of promotion materials is promising, but not yet on the highest international level. Despite the good number of degree programmes accredited in foreign languages, only a few really have students. However, there are some examples of good practice, at most faculties of medicine and arts, and some at faculties of engineering, where whole programmes and individual courses are offered in two languages (usually Czech and English) in parallel for incoming international students. These HEIs/ faculties are also successful in recruiting foreign students.

The Ministry introduced a Development Programme under which the HEIs are eligible for

funding to improve their implementation of ECTS to European standards (ECTS Label). A full list of courses and courses taught in foreign languages should be available, and web pages should be transparent, well-structured, easily accessible and user-friendly. Improvement of the Diploma Supplement (to DS Label standards) is also encouraged.

Recognition is considered an important priority. The ENIC/NARIC centre works with HEIs, provides methodological as well professional advice, organises regular meetings and seminars. The Ministry seeks incentives to motivate the HEIs to change some still existing bad practices and to help them to create internal systems that implement the principles of the Lisbon Recognition Convention. The right to appeal to the Ministry is part of the official recognition procedure.

Table 20. Foreign students studying at Czech public and private HEIs

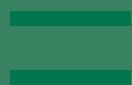
	2003/04	2004/05	2005/06	2006/07	2007/08
Total number of students	248 734	271 302	297 255	324 126	352 950
Foreign students	13 414	17 223	21 334	26 790	31 559
% of total number	5.4	6.4	7.2	8.2	8.8
Slovak students	8 722	11 613	14 575	16 427	19 032
Non-Slovak foreign students	4 692	5 610	6 759	10 363	12 527

Source: National Agency for European Educational Programmes



Latest Trends and Trends for the Future

9



Since 2007, several important actions have influenced the development of the Czech higher education system, including finalisation of the OECD project "Thematic Review of Tertiary Education". This project set out important recommendations on the further development of HEIs (end of 2006), and has stimulated efforts to reform higher education in the CR. Together with these recommendations, the final study "Tertiary Education for the Knowledge Society, OECD Thematic Review of Tertiary Education: Synthesis Report" formed the background for analytical documents and for a series of seminars for academics in 2007 and 2008 on topics including quality assurance, management of higher education institutions, and academic careers.

Building on these findings, reforms in tertiary education and in the research, development and innovation system in the CR have been prepared. The Ministry has been drawing up a White Paper on Tertiary Education since 2007. The text is currently undergoing national public discussions, where experts are invited to make comments. The Paper should be presented to the government in January 2009, and a new law on tertiary education, which will cover the whole tertiary education system including already existing tertiary professional schools should be prepared by the end of 2009. The legal changes would follow with a law on financial support for students.

The elimination of social and other barriers to access to tertiary education, and creation of conditions for effective use of financial sources including the limitation of study drop-out will be one of the most important aim in the near future. The existing system of financial assistance in the CR appears to be only marginally effective in providing more equality of opportunity of access to tertiary and especially higher education. There are only limited financial and other measures aimed at increasing the participation of groups that are still disadvantaged. The fundamental part of the reform concerns student financing.

There are proposals for a transformation from predominantly indirect support to direct support. First and foremost, the introduction of study grants and changes to the administration of social scholarships, i.e. the introduction of a universal study grant, is being considered. Secondly, low-interest loans will be provided by the state for costs related to studies. The third important change in funding students will be to make occasional student jobs more advantageous through a waiver of health insurance and social security insurance up to a limit that will be automatically adjusted and from which the state will pay the health insurance for the students.

Another significant proposed changes aim to find the proper balance between high level of autonomy and accountability of HEIs. It will lead to a change of powers and responsibilities in the management and mode of financing HEIs, with a focus on attracting increased financial resources from the private sector.

The larger flow of financial resources into the tertiary sector will be connected with the proposed emphasis on closer cooperation with employers and other stakeholders. The cooperation will focus on innovations of degree programmes which will contribute to the better employability of graduates as well as to the quality of higher education in general.

Reform of the research, development and innovation system in the Czech Republic was approved by the Czech government at the end of March 2008. The reform will be gradually implemented in the upcoming years. The essence of the reform in the area of higher education is to support excellence in R&D at HEIs and at other R&D institutions, and to support their mutual cooperation (particularly cooperation between HEIs and the Academy of Sciences of the CR), as well as cooperation with R&D institutions in the private sector. The objective is therefore to develop a clearly and transparently structured system for

funding R&D from public funds (and linking it to the outcomes of basic and applied research of the HEI, with an emphasis on targeted funding), and to support R&D funding at HEIs from private sources. Another objective of the reform is to establish conditions for enhancing transfer of knowledge, commercialisation of research results and intellectual property protection. The reform steps also require HEIs to be responsible for the quality of their work, for setting up research teams based on proven high quality results, and for building excellence in this area.

Both of these major reforms will be supported by EU structural funds. In 2007 and 2008, the European Commission approved operational programmes for the CR that will be funded from EU structural funds in the 2007-2013 period. Two of them should support the development of higher education and its professionalization, as regards both teaching and also research and development: OP Education for Competitiveness, and OP Research and Development for Innovation. These operational programmes form a consistent whole that contributes to the development of human resources via education in all its diverse forms. Emphasis is placed on a comprehensive system of lifelong learning, including the establishment of a national qualification framework and a system for recognising prior learning, the development of an environment conducive to research, development and innovation activities, and encouragement for cooperation between educational institutions, research institutes and the user sector. Successful use of financial resources from the two operational programmes will play an important role in the implementation of reforms.

The National Qualification Framework for the tertiary sector will be introduced as an organic part of the National Qualification Framework (for education as a whole). Work on this has started under the umbrella of the Long-term Plan of the

Ministry, especially for 2008 and with greater urgency for 2009. The Ministry has been preparing an individual national project within OP Education for Competitiveness. HEIs can utilize a new methodology under individual projects submitted into the same operational programme or, if they are not eligible for funding from the Operational Programme, under the specifically designed Development Programme.

The work on a national qualification framework for tertiary education will involve representatives of HEIs, tertiary professional schools, employers, the Accreditation Commission for higher education and for tertiary professional schools, and others. For citizens, this framework will be mainly a source of information, while for the HEIs it will be a guide for innovation, for newly-developed degree programmes and study modules. The opportunity offered by the qualification frameworks methodology will be used, and experience will be gained on how to write and build on learning outcomes (including profiles and competencies), and how to relate ECTS credits to learning outcomes. The national framework will take into account the existing overarching European frameworks and will complement them at national level. On the basis of defined learning outcomes, systems for recognising prior learning can be established, and in this way "flexible learning paths" can be designed. Qualifications based on learning outcomes should thus be less dependent on how they were achieved, and the quality of qualifications will become less questionable. The qualification framework will become a concrete, important and dynamic instrument for developing the tertiary sector of education.



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