III. Personnel of Research and Development

III.1 R&D personnel in the Czech Republic

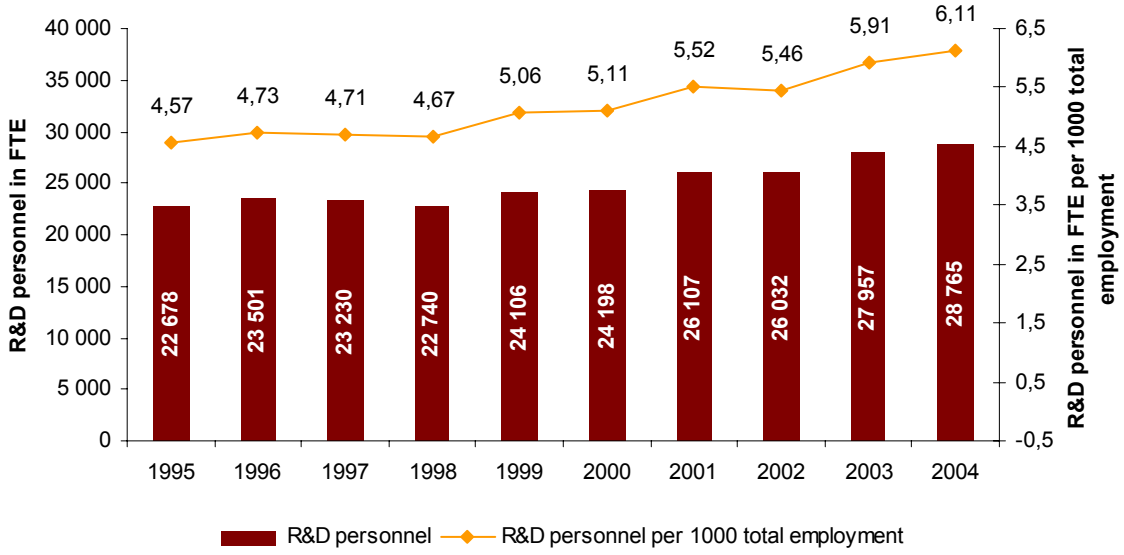
III.1.1 R&D personnel by sort of occupation

The Research and Development basis in the Czech Republic included 60 148 employees at 31 December in total, of which was 20 823 females in the year 2004.

In comparison 2004 with the previous year 2003, the number of R&D Personnel increased about 8,0 percentage points. **According the indicator FTE (see methodology), which is using for the international comparison, 28 765 employees, of which 8 808 females (30,6 %) worked in full-time equivalent of working time for R&D in the Czech Republic in the year 2004.** The among-annual growth of employees in FTE did 2,9 % share.

There were on the average 1,22 million CZK of expenditure on R&D for one employee in FTE in the year 2004.

Figure 3.1 Total number of R&D personnel in the Czech Republic (FTE), 1995-2004



In 2004, 6,1 FTE (calculation on adequate proportion of working time for Research and Development) of personnel R&D were in total national economy per 1000 employed. Per 1000 labour force was the share 5,6 employee. In comparison with the previous year 2003, values of both these indicators increased. Since the year 1995, the total growth of number of personnel R&D is recorded except light decrease in years 1997, 1998 a 2002 (the indicator FTE, see the graph). The indicator of number employees of R&D at 31 December (Headcount) noted similar development.

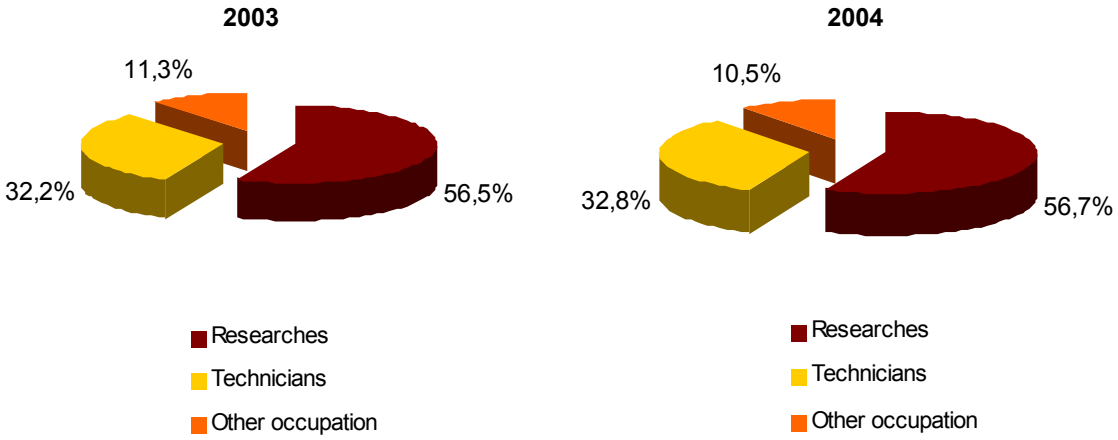
Analysis of development of number R&D personnel is recorded more detailed in the mentioned publication *„Indicators of Science and Technology in the Czech Republic in 1995-2002, CZSO 2004“*.

Table 3.1 Total number of R&D personnel in headcount and FTE in the Czech republic in 2003 and 2004

R&D PERSONNEL	2003		2004		Index 04/03	
	Total	*Females*	Total	*Females*	Total	*Females*
Registered number of employees at 31 December	55 699	*19 578*	60 148	*20 823*	1,0799	*1,0636*
No. of Short Term Contracts during the reference year	21 241	*7 934*	24 979	*8 934*	1,1760	*1,1261*
Full Time Equivalent devoted to R&D	27 957	*8 871*	28 765	*8 808*	1,0289	*0,9930*

Researchers were the major majority of total number employees of R&D. In 2004, 16 300 researchers worked on Research and Development projects (the share 56,7 % of total number employees R&D expressed by the indicator FTE, of which 4 052 females were. The share of females did 24,9 % of researchers. There were in R&D 9 446 technicians or equivalent staff, of which 3 407 females. The share of these personnel on the total personnel was 32,8 % in the year 2004. There were registered 3 020 other personnel in R&D, of which 1 348 females were. The share of other personnel R&D on the total personnel R&D reached 10,5 %.

Figure 3.2 Structure of R&D personnel by occupation in the Czech Republic in 2003 and 2004 (in FTE)



In comparison with the previous year 2003, the share of researchers increased light (from 56,5 % in 2003 to 56,7 % in 2004), the share of technicians and equivalent staff increased light (from 32,2 % in 2003 to 32,8 % in 2004), the share of other personnel R&D decreased light from 11,3 % in 2003 to 10,5 % in 2004. The share of technicians increased mostly (+ 4,9 %), the share of researchers increased (+3,1 %) between years 2003 and 2004.

In the case of females, the share of researchers decreased about 1,7 %. The share of this group of personnel R&D decreased from 46,5 % in 2003 to 46,0 % in 2004. Only the share of technicians in the case of females increased about o 1,8 % (index 2004/2003). Total number of females engaged in R&D decreased in total about 1% (index 2004/2003). The share of researchers – men increased from 73,9 % in 2003 to 75,1 % in 2004 and the share of researchers – women decreased (from 26,1 % in 2003 to 24,9 % in 2004).

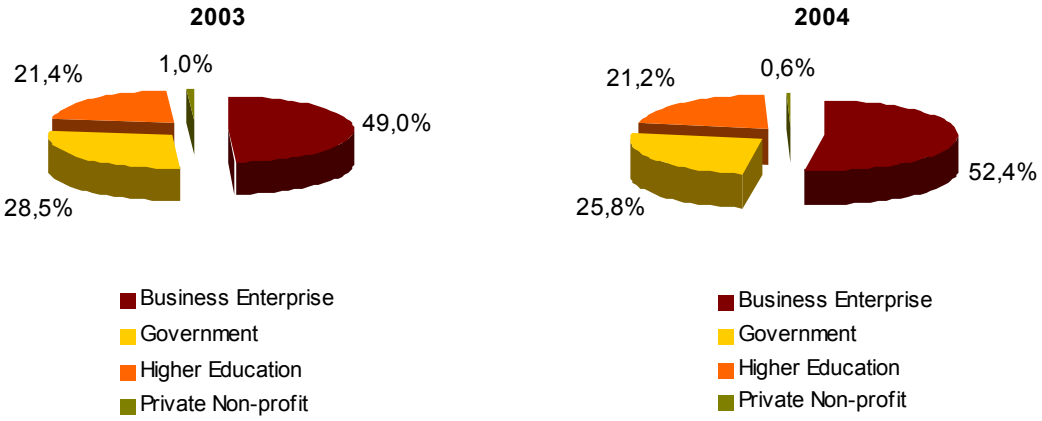
Table 3-2 R&D personnel by occupation in the Czech Republic in 2003 and 2004 (in FTE)

R&D PERSONNEL (FTE)	2003		2004		Index 04/03	
	Total	*Females*	***Total***	*Females*	***Total***	*Females*
Researches	15 809	*4 121*	16 300	*4 052*	1,0311	*0,9834*
Technicians	9 001	*3 347*	9 446	*3 407*	1,0494	*1,0181*
Other occupation	3 147	*1 402*	3 020	*1 348*	0,9596	*0,9618*
Total	**27 957**	***8 871***	**28 765**	***8 808***	**1,0289**	***0,9930***

III.1.2 R&D Personnel in the Czech Republic by sector of employment (performance)

The highest number of personnel engaged in Research and Development was in the Business Enterprise sector in the year 2004. There worked 15 064 full-time equivalent personnel in R&D, the share is 52,4 % from total personnel R&D in FTE of the Czech Republic. 3 224 females worked in the Business Enterprise sector. The number of personnel engaged in R&D was 7 422 in FTE in the Government sector; of which females were 3193. The share of R&D personnel in FTE from total personnel R&D was 25,8 % in the Government sector in the year 2004. The share of R&D personnel in FTE from total personnel R&D was 21,2 % in the Higher Education sector, there worked 6 104 personnel R&D in FTE, of which females were 2 318. The share of R&D personnel in FTE from total personnel R&D was only 0,6 % in the Private Non-Profit sector. Numbers are in the following graph 3.3 and the table 3.3.

Figure 3.3 Structure of R&D personnel by sector of employment in the CR in 2003 and 2004 (in FTE)



Methodology: Private Non-Profit sector is light regulated according Frascati manual since the year 2004.

In comparison between years 2004/2003, the highest increase of personnel R&D in FTE was recorded in the Business Enterprise sector (+ 9,9 %). The share of this sector from total number of personnel R&D in FTE increased from 49,0 % in 2003 to 52,4 % in 2004. The share of personnel engaged in R&D increased in the Higher Education sector by 2,0 %. The share of personnel R&D in the Government sector decreased inter-annually by 7,0 %. The index 2004/2003 of Private Non-Profit sector (table 3.3) is partially influenced by change of definition this sector.

The share of females engaged in R&D in FTE increased inter-annually in the Business Enterprise sector about +2,7 percentage point (from 33,9 % in 2003 to 36,6 % in 2004). The share of females engaged in R&D in FTE in the Government sector decreased from 38,9 % in 2003 to 36,2 % in 2004. The share of females in the Higher Education sector increased about only 0,2 percentage point.

Table 3.3 R&D personnel by sector of employment in the Czech Republic in 2003 and 2004 (in FTE)

SECTOR	2003		2004		Index 04/03	
	Total	*Females*	***Total***	*males*	***Tot***	*Females*
Business Enterprise	13 711	*3 010*	15 064	*3 224*	1,0987	*1,0711*
Government	7 977	*3 448*	7 422	*3 193*	0,9305	*0,9259*
Higher Education	5 987	*2 316*	6 104	*2 318*	1,0195	*1,0008*
Private Non-profit	282	*97*	175	*74*	0,6189	*0,7655*
Total	**27**	***8 8***	**28**	***8 8***	**1,0289**	***0,9930***

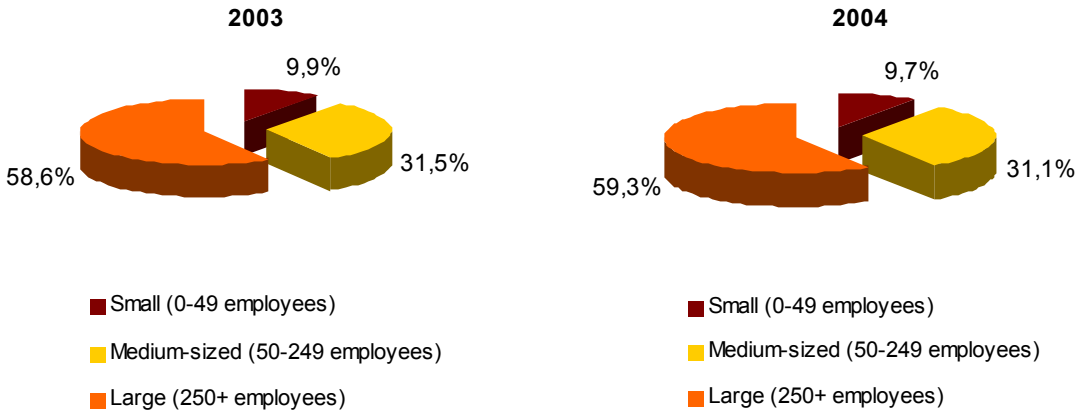
Methodology: Private Non-Profit sector is light regulated according Frascati manual since the year 2004.

III.1.3 R&D personnel in the Czech Republic by size-class of R&D units

The highest number of personnel engaged in Research and Development was recorded in large economic subjects with more than 250 employees with 17 044 R&D personnel (FTE) in the year 2004, of which 5 318 females were. The share was 59,3 % from all employees R&D in FTE. 8 941 personnel R&D in FTE engaged in medium economic subjects (50-249 employees), of which 2 854 females were, the share from total number of employees reached 31,1 %. The share of personnel R&D in FTE engaged in small economic subjects was 2 780 personnel R&D (9,7 %).

There were on the average 1,32 million CZK of expenditure on R&D for one employee in FTE in large economic subjects in the year 2004, further 1,08 million CZK in medium economic subjects. Less than 1 million CZK expenditure on R&D for one employee in FTE was in the case of small economic subjects.

Figure 3.4 Structure of R&D personnel by size-class in the Czech Republic in 2003 and 2004 (in FTE)



The highest inter-annual increase of number personnel R&D was recorded at large economic subjects. The number of R&D personnel in FTE in this case increased about 4,1 %. The share of personnel R&D engaged in large economic subjects on total R&D personnel of national economy increased light (from 58,6 % in 2003 to 59,3 % in 2004). There was higher number of females, only at this size-class (about + 0,9 %). Numbers of women at other size-class of R&D units decreased. The share of R&D personnel of medium size-class of R&D units increased inter-annually about 1,4 %, the share of R&D personnel of small size-class of R&D units increased only about 0,4 %.

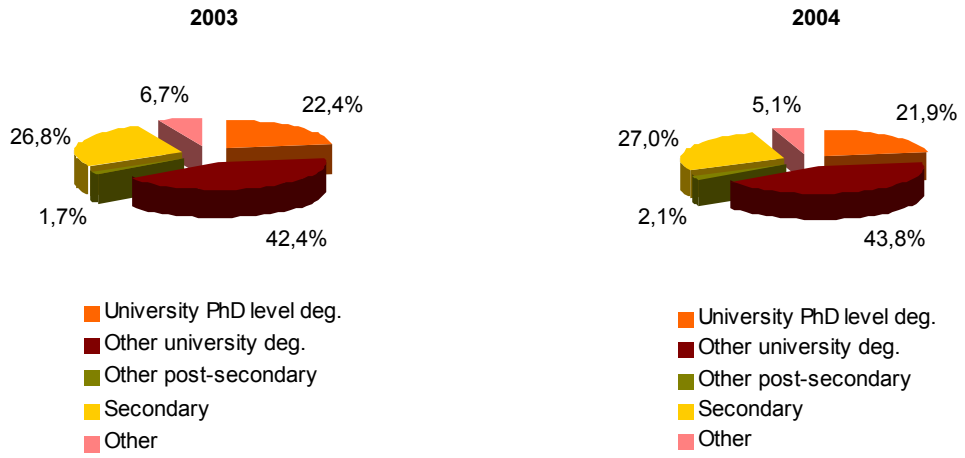
Table 3.4 R&D personnel by size-class in the Czech Republic in 2003 and 2004 (in FTE)

SIZE-CLASS	2003		2004		Index 04/03	
	Total	*Females*	Total	*Females*	Total	*Females*
Small (0-49 employees)	2 769	*723*	2 780	*637*	1,0040	*0,8811*
Medium-sized (50-249 employees)	8 814	*2 877*	8 941	*2 854*	1,0144	*0,9920*
Large (250+ employees)	16 374	*5 271*	17 044	*5 318*	1,0409	*1,0089*
Total	**27 957**	***8 871***	**28 765**	***8 808***	**1,0289**	***0,9929***

III.1.4 R&D personnel in the Czech Republic by qualification

Data on R&D personnel by attainment of qualification indicate 43,8 % R&D personnel in FTE with basic university degree below PhD level as main group in the year 2004. There were 12 595 personnel R&D in FTE, of which 3 255 females were. The share of holders PhD level was 21,9 % (6 312 personnel in FTE). 1 503 females with PhD in FTE worked in R&D in the year 2004. The share of personnel R&D with other tertiary and other post-secondary education reached 2,1 %. The share of personnel R&D with secondary education diplomas was recorded 27,0 %. It is the second highest group of personnel R&D (after personnel R&D with basic university degree), the share of females in this group is 45,1 %. The share of personnel R&D with other qualification reached 5,1 % from total number of personnel R&D.

Figure 3.5 Structure of R&D personnel by qualification in the Czech Republic in 2003 and 2004 (in FTE)



In comparison with previous year 2003, the highest increase was recorded at post-secondary group of personnel R&D in FTE (about 26,0 %). The share of personnel R&D with basic university degree increased about 6,3 %. The share of personnel R&D with PhD increased about 1 %. The share of personnel R&D with other qualification rapidly decreased about 22,0 %.

The highest increase in the case of females was recorded at post-secondary group in FTE (about 16,5 %), it is fewer than total increase of number personnel R&D of this group. More decided difference against total increase at groups by level of qualification was recorded at group of females with PhD (increase 2,5 %) and females with basic university degree (increase about 1,7 %). It was recorded decrease of number of females in total and number of females with other qualification (about 36,3 %).

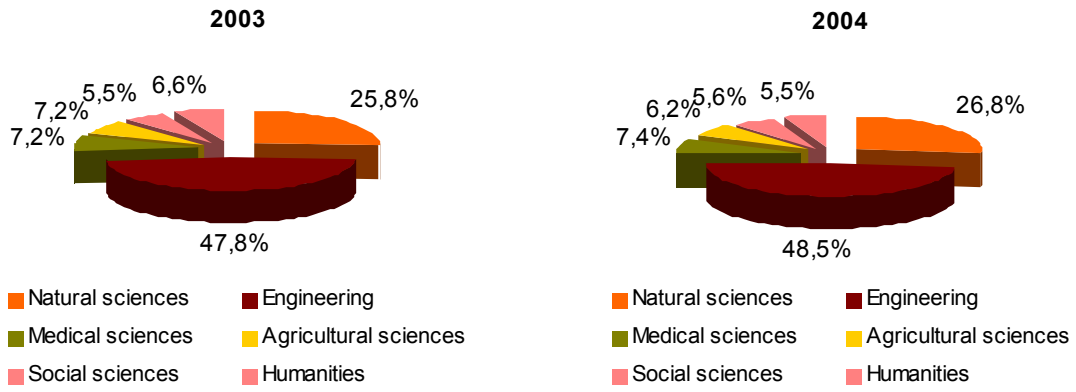
Table 3.5 R&D personnel by qualification in the Czech Republic in 2003 and 2004 (in FTE)

QUALIFICATION	2003		2004		Index 04/03	
	Total	*Females*	Total	*males*	Tot	*Females*
University PhD level deg.	6 256	*1 466*	6 312	*1 503*	1,0089	*1,0252*
Other university deg.	11 850	*3 201*	12 595	*3 255*	1,0629	*1,0170*
Other post-secondary	487	*148*	613	*176*	1,2598	*1,1946*
Secondary	7 485	*3 483*	7 781	*3 509*	1,0395	*1,0075*
Other	1 878	*572*	1 465	*365*	0,7800	*0,6378*
Total	**2**	***8***	**2**	***8***	**1,0289**	***0,9930***

III.1.5 R&D personnel in the Czech Republic by the main fields of science

The highest number of personnel R&D in FTE worked in fields of engineering and technology in the year 2004. The number of personnel R&D in FTE engaged in this area reached 13 947, it is 48,5 % from total personnel R&D in FTE. Females formed 18,5 % from total number of personnel R&D in FTE in engineering and technology. Natural sciences (the share 26,8 %) were the second highest important field of science, there were 7 719 personnel R&D, of which from 2 679 females. Females had the share 34,7 % in natural sciences. The share of personnel R&D in medical sciences reached 7,4 % from total personnel R&D in FTE, females had in this group 55,6 % share. Shares of other fields of science are in the graph 3.6.

Figure 3.6 Structure of R&D personnel by fields of science in the CR in 2003 and 2004 (in FTE)



In comparison with the previous year 2003, the highest increase of number of personnel R&D in FTE was recorded in fields of Natural sciences - about + 7,18 %. The share of this group personnel R&D on total number of personnel R&D increased from 25,8 % in 2003 to 26,8 % in 2004. There were recorded in medical sciences increase about 6,6 percentage point of number of personnel R&D. The share of total number of personnel R&D increased from 7,2 % in 2003 to 7,4 % in 2004. Engineering and technology and social sciences recorded the same increase of number of personnel R&D 4,4 percentage point. In the case of agricultural sciences and humanities there were recorded decreases of number of personnel R&D.

Number of females engaged in R&D increased interannually mostly in medical sciences about 6,0 percentage point, further in natural sciences about 4,9 percentage point. As in the case of total number of personnel R&D, the decrease of number of females engaged in R&D was recorded in fields of agricultural sciences and humanities.

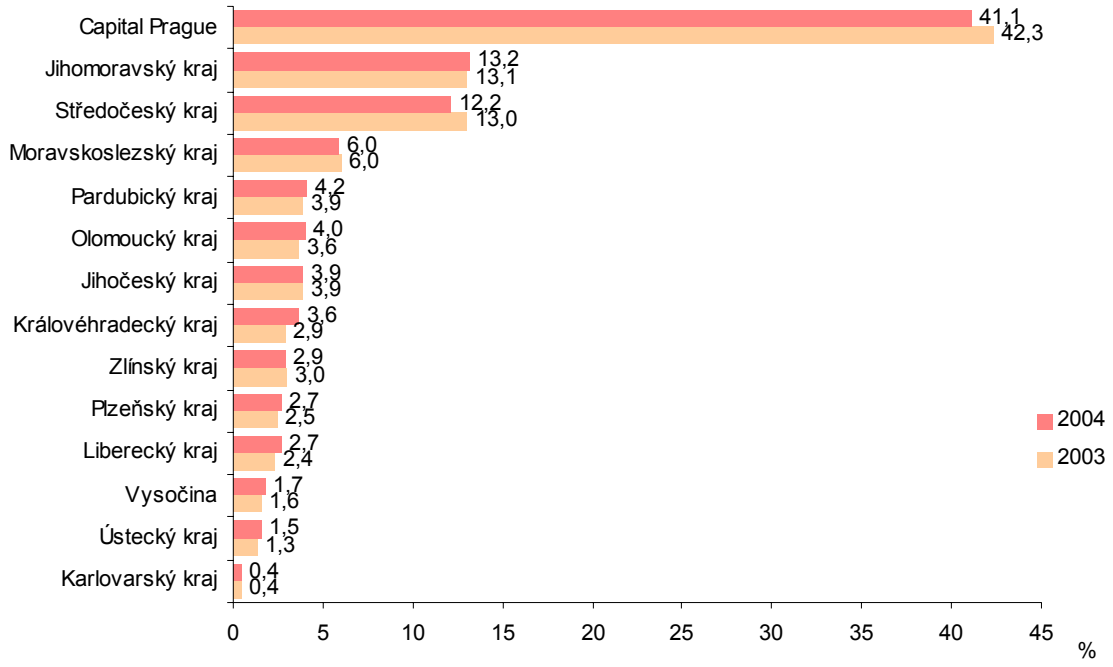
Table 3.6 R&D personnel by fields of science in the Czech Republic in 2003 and 2004 (in FTE)

FIELDS OF SCIENCE	2003		2004		Index 04/03	
	Total	*Females*	***Total***	*emales*	***Tot***	*Females*
Natural sciences	7 202	*2 555*	7 719	*2 679*	1,0718	*1,0486*
Engineering	13 366	*2 508*	13 947	*2 586*	1,0435	*1,0312*
Medical sciences	2 001	*1 119*	2 132	*1 186*	1,0656	*1,0601*
Agricultural sciences	2 005	*1 074*	1 796	*852*	0,8959	*0,7936*
Social sciences	1 533	*737*	1 600	*745*	1,0436	*1,0100*
Humanities	1 850	*878*	1 571	*760*	0,8492	*0,8656*
Total	**2**	***8***	**2**	***8***	**1,0289**	***0,9930***

III.1.6 R&D personnel in the Czech Republic by regions (NUTS 3)

The largest number of personnel R&D in FTE was recorded in Capital Prague in the year 2004. Their number was 11 832 FTE, it represents the share 41,1 % from total number of personnel R&D in FTE. Jihomoravský kraj with the share 13,2 % was the second region with higher number of personnel R&D in FTE, further Středočeský kraj was with the share 12,2 %. The smallest number of personnel R&D in FTE was reported in Karlovarský kraj with a share 0,4 %. The structure of females engaged in R&D is the same as the structure of total number of personnel R&D in FTE by region. The highest number of females in R&D worked in Capital Prague, 4 215 females in FTE worked in Capital Prague, Jihomoravský and Středočeský kraj were following regions with higher number of females. The smallest number of females in R&D was registered in Karlovarský kraj (49 females in FTE).

Figure 3.7 R&D personnel by regions (NUTS3) in the Czech Republic in 2003 and 2004 (in FTE)



The stagnation of number of personnel R&D was registered in Capital Prague in comparison with previous year 2003. Number of personnel R&D was increased in Jihomoravský kraj (+3,8 %), this indicator decreased in Středočeský kraj (-3,8 %). The highest increase of number of females was registered in Královéhradecký kraj (+54,6 %).

Table 3.7 R&D personnel by regions (NUTS3) in the Czech Republic in 2003 and 2004 (in FTE)

REGIONS (NUTS 3)	2003		2004		Index 04/03	
	Total	*Females*	***Total***	*Females*	***Total***	*Females*
Capital Prague	11 831	*4 355*	11 832	*4 215*	1,0002	*0,9678*
Středočeský kraj	3 637	*914*	3 498	*818*	0,9616	*0,8956*
Jihočeský kraj	1 103	*401*	1 111	*387*	1,0072	*0,9659*
Plzeňský kraj	694	*141*	776	*142*	1,1180	*1,0064*
Karlovarský kraj	121	*47*	115	*49*	0,9507	*1,0350*
Ústecký kraj	370	*139*	438	*156*	1,1822	*1,1236*
Liberecký kraj	665	*124*	767	*142*	1,1530	*1,1449*
Královéhradecký kraj	800	*207*	1 050	*320*	1,3117	*1,5457*
Pardubický kraj	1 102	*269*	1 201	*275*	1,0903	*1,0215*
Vysočina	438	*74*	498	*84*	1,1371	*1,1403*
Jihomoravský kraj	3 652	*1 236*	3 791	*1 173*	1,0379	*0,9494*
Olomoucký kraj	1 015	*379*	1 145	*448*	1,1288	*1,1834*
Zlínský kraj	844	*143*	829	*161*	0,9824	*1,1192*
Moravskoslezský kraj	1 684	*443*	1 714	*439*	1,0177	*0,9917*
Total	**27 957**	***8 871***	**28 765**	***8 808***	**1,0289**	***0,9930***

III.2 Researchers in the Czech Republic

III.2.1 Researchers in the Czech Republic (main figures)

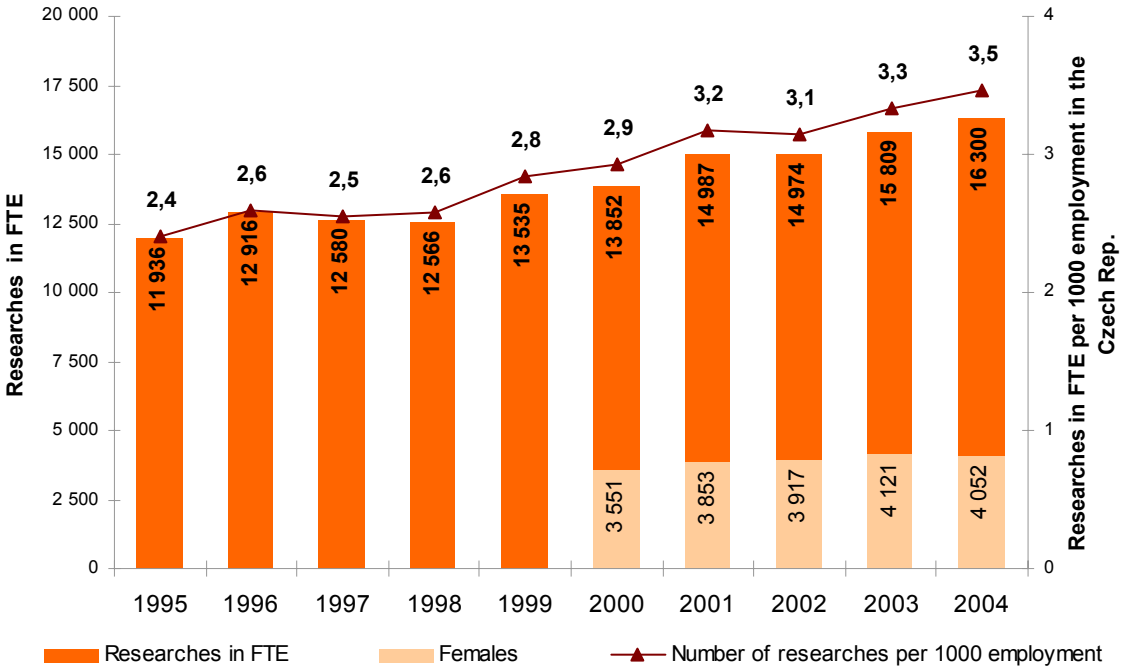
Researchers form the most important group of qualified human resources engaged in Research and Development. Researchers have job research description, there are mainly professionals engaged in the conception or creation of knowledge, products, processes, methods and systems and also in the management of the projects concerned. It is reason for surveying this indicator from Regulation (753/2004), international institutions and councils.

As it was said, in 2004, there were 16 300 researchers in FTE in the Czech Republic, this number represents the share 56,7 % on total number of R&D personnel. Number of females was 4 052 (the share 24,9 %). Males – researchers have the majority with share of 75,1 %.

By 31 December 2004, the number of researchers in headcount reached in the Czech republic 34 152 persons of which 9 730 females.

In 2004, 3,5 researchers in FTE were per 1000 employed in total national economy and 3,2 researchers in FTE per 1000 labour force.

Figure 3-8 Total number of researches in the Czech Republic (FTE), 1995-2004



Number of researchers in FTE increased about 3,1 percentage point from 15 809 in 2003 to 16 300 in 2004. Number of researchers at 31 December (Headcount) increased about 8,7 percentage point (from 31 421 in 2003 to 34 152 in 2004).

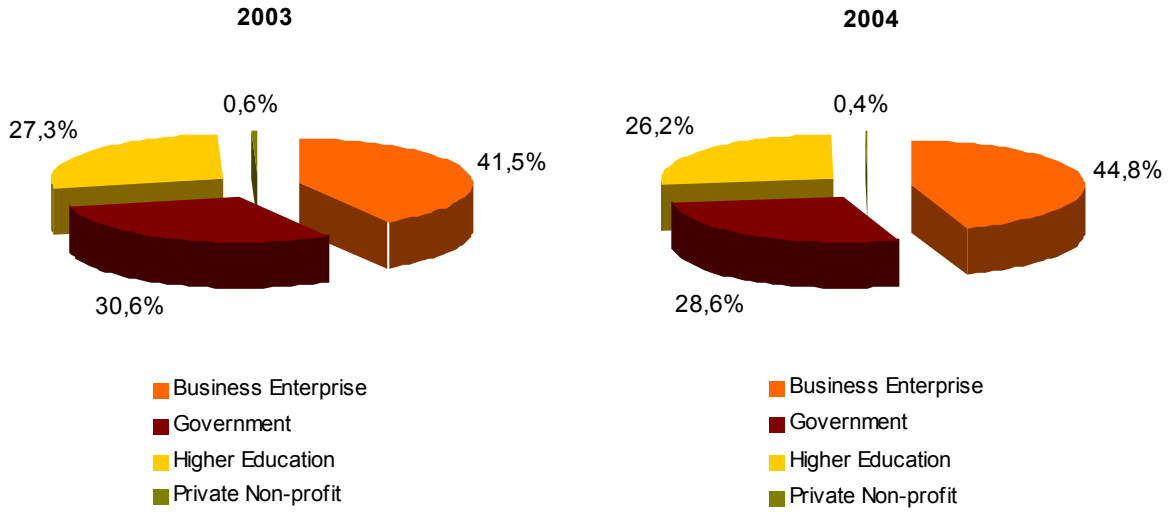
Number of females - researchers in FTE inter-annually decreased from 4 121 in 2003 to 4 052 in 2004. The share of females decreased from 26,1 % in 2003 to 24,9 % in 2004. And vice versa the share of males increased from 73,9 % in 2003 to 75,1 % in 2004.

III.2.2 Researchers in the Czech Republic by sector of employment (performance)

In 2004, the largest number of researchers in FTE was engaged in Research and Development projects in the Business Enterprise sector. There worked 7 297 full-time equivalent persons, it represents the share 44,8 % from total number of researchers. Government sector was the second important sector of R&D employment with the 28,6 % share in total number of researchers in the Czech Republic. In 2004, number of researchers reached 4 661 (in FTE) in this sector. Government sector includes research institutions of Academy of Science of the Czech Republic, resort research institutions of ministries, etc. Researchers in FTE (the share 26,2 %) worked in the Higher Education sector. Researchers in FTE (the share 0,4 %) worked in the Private Non-Profit sector.

The highest number of females – researchers was recorded in the Government sector (1 591 persons in FTE), it was the share 39,3 % from total number of researchers. The share of females did 34,1 % and the share of males did 65,9 %. Higher Education sector was the second important sector with number of females (1 324 persons in FTE, the share 32,7 %). 1 116 females – researchers worked in the Business Enterprise sector (the share 27,5 % from total of females – researchers).

Figure 3.9 Structure of researches by sector of employment in the CR in 2003 and 2004 (in FTE)



Methodology: Private Non-Profit sector is light regulated according Frascati manual since the year 2004.

The highest increase of number of researchers in FTE was recorded in the Business Enterprise sector with comparison with the previous year 2003 – about 11,3 %. And vice versa decrease of of number of researchers in FTE was recorded in other sectors in comparison 2004/2003. The share of decrease 3,6 percentage point was recorded in the Government sector, the share of decrease 1,1 percentage point was recorded in the Higher Education sector.

Similar changes were recorded in numbers of females – researchers in FTE in sectors of performance as in the case of numbers of researchers in FTE in comparison 2004/2003.

Table 3.8 Researches by sector of employment in the Czech Republic in 2003 and 2004 (in FTE)

SECTOR	2003		2004		Index 04/03	
	Total	*Females*	***Total***	*Females*	***Total***	*Females*
Business Enterprise	6 558	*1 051*	7 297	*1 116*	1,1127	*1,0623*
Government	4 833	*1 633*	4 661	*1 591*	0,9644	*0,9743*
Higher Education	4 318	*1 412*	4 274	*1 324*	0,9898	*0,9379*
Private Non-profit	100	*25*	67	*21*	0,6726	*0,8298*
Total	**15 809**	***4 121***	**16 300**	***4 052***	**1,0310**	***0,9834***

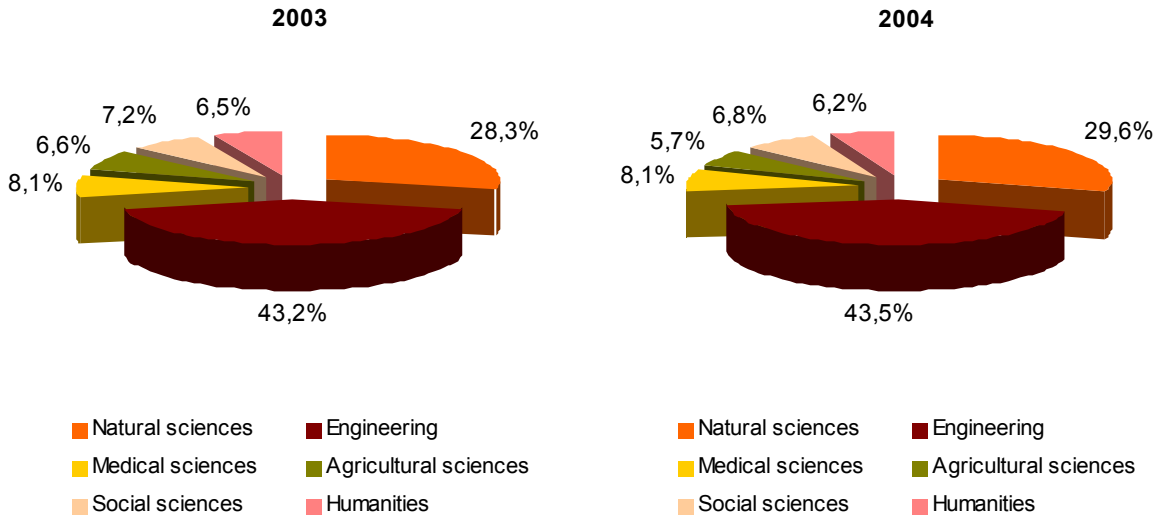
Methodology: Private Non-Profit sector is light regulated according Frascati manual since the year 2004.

III.2.3 Researchers in the Czech Republic by main field of science

The highest number of researchers in FTE worked as in the case of personnel R&D in fields of engineering and technology in the year 2004. Number of researchers in this area reached 7 083 persons in FTE, it did the share 43,5 % from total number of researchers in FTE. Natural sciences were the second important area with higher number of researchers in FTE, there worked 4 822 researchers in FTE. The share on total number of researchers in FTE reached 29,6 %. Lower numbers of researchers in FTE than 10 % were recorded in other fields of science (graph 3-10). The smallest number of researchers in FTE worked in fields of agricultural sciences (the share 5,7 %).

The highest number of females – researchers in FTE was registered in the area of natural sciences (1 252 persons in FTE), it represents the share 31,0 % from total number of females - researchers. The structure of researchers in this field of science was by gender following: the share of females was 26,0 % and the share of males was 74,0 %. The share 24,2 % of females – researchers from total number of females - researchers worked in engineering and technology. There were recorded the share 13,8 % of females and the share 86,2 % of males in engineering and technology. Agricultural sciences were the third important field of science, there was recorded the share 14,7 % of females from total number of females – researchers.

Figure 3.10 Structure of researches by fields of science in the CR in 2003 and 2004 (in FTE)



The highest increase of number researchers in FTE was recorded in the area of natural sciences in comparison with the previous year 2003 – about +7,6 percentage point (p.p.). Numbers of researchers in FTE increased in engineering and technology (+3,6 p.p.) and in medical sciences (+ 3,1 p.p.). Decreases of numbers of researchers in FTE were recorded in other sciences, par example, mostly in the case of agricultural sciences (- 10,4 p.p.) inter-annually.

Numbers of females – researchers increased mostly in natural sciences (+6,8 p.p.), further in medical sciences (+2,2 p.p.). Numbers of females – researchers decreased in other fields of sciences, mostly in agricultural sciences (-21,8 p.p.). Number of females – researchers decreased in engineering and technology about 2,8 p.p.

Table 3.9 Researches by fields of science in the Czech Republic in 2003 and 2004 (in FTE)

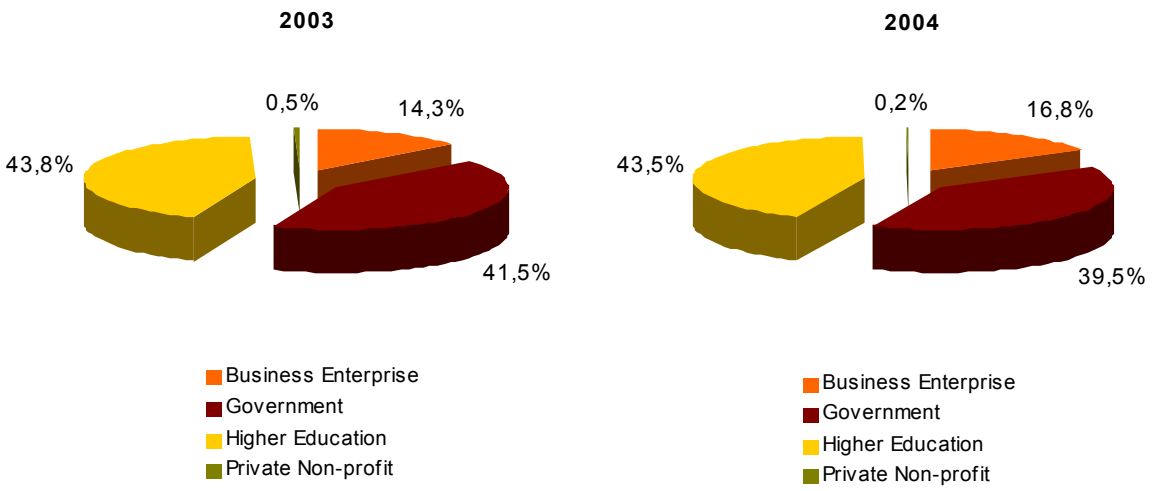
FIELDS OF SCIENCE	2003		2004		Index 04/03	
	Total	Females	Total	emales	To	Females
Natural sciences	4 481	*1 172*	4 822	*1 252*	1,0761	*1,0684*
Engineering	6 836	*1 002*	7 083	*980*	1,0361	*0,9779*
Medical sciences	1 288	*583*	1 328	*596*	1,0307	*1,0218*
Agricultural sciences	1 043	*458*	935	*358*	0,8962	*0,7823*
Social sciences	1 136	*483*	1 115	*453*	0,9813	*0,9377*
Humanities	1 024	*423*	1 017	*413*	0,9931	*0,9778*
Total	**1**	***4***	**1**	***4***	**1,0311**	***0,9834***

III.2.4 Researchers in the Czech Republic with PhDs degrees

In the year 2004, 5 454 researchers in FTE were holders of doctorate degrees (PhDs) from total number of 16 300 researchers in FTE in the Czech Republic, it represents the share 33,5 %. There were recorded 1 303 females – researchers in FTE with PhDs degrees. The share of females – researchers with PhDs in FTE did the share 23,9 %, males did the share 76,1 %.

There were surveyed 1 109 researchers with PhDs in FTE aged 25-34 from total number of 5 454 researchers, 326 females – researchers with PhDs in FTE aged 25-34 was recorded. There were recorded 271 newly qualified PhDs researchers in FTE aged 25-34 in 2004, of which from this total 103 females were in the Czech Republic.

Figure 3.11 Structure of researches with PhDs degree by sectors in the CR; 2003 and 2004 (in FTE)



The highest number of researchers in FTE with PhDs was recorded in the Higher Education sector in the year 2004, there was the share 43,5 % from total number of researchers with PhDs. The share of researchers with PhDs was 39,5 % in the Government sector. The share of researchers with PhDs was 16,8 % in the Business Enterprise sector. Increase about 5,6 p.p. was recorded in comparison of total number of researchers with PhDs with previous year 2003, it did increase 6,4 p.p. for females, number of females – researchers with PhDs increased more than number of males – researchers with PhDs, mostly in the Business Enterprise sector (table č. 3.10).

Data of researchers with PhDs aged 24-35 is similar as data without numbers of age. There were mostly in the Higher Education sector - 506 persons in FTE, of which from this total were 159 females. There were 420 persons in FTE in the Government sector, of which from this total were 133 females. 179 researchers with PhDs in FTE aged 25-34 (of which 33 females) worked in the Business Enterprise sector. Number of researchers with PhDs in FTE aged 24-35 increased interannually about 30,3 percentage point.

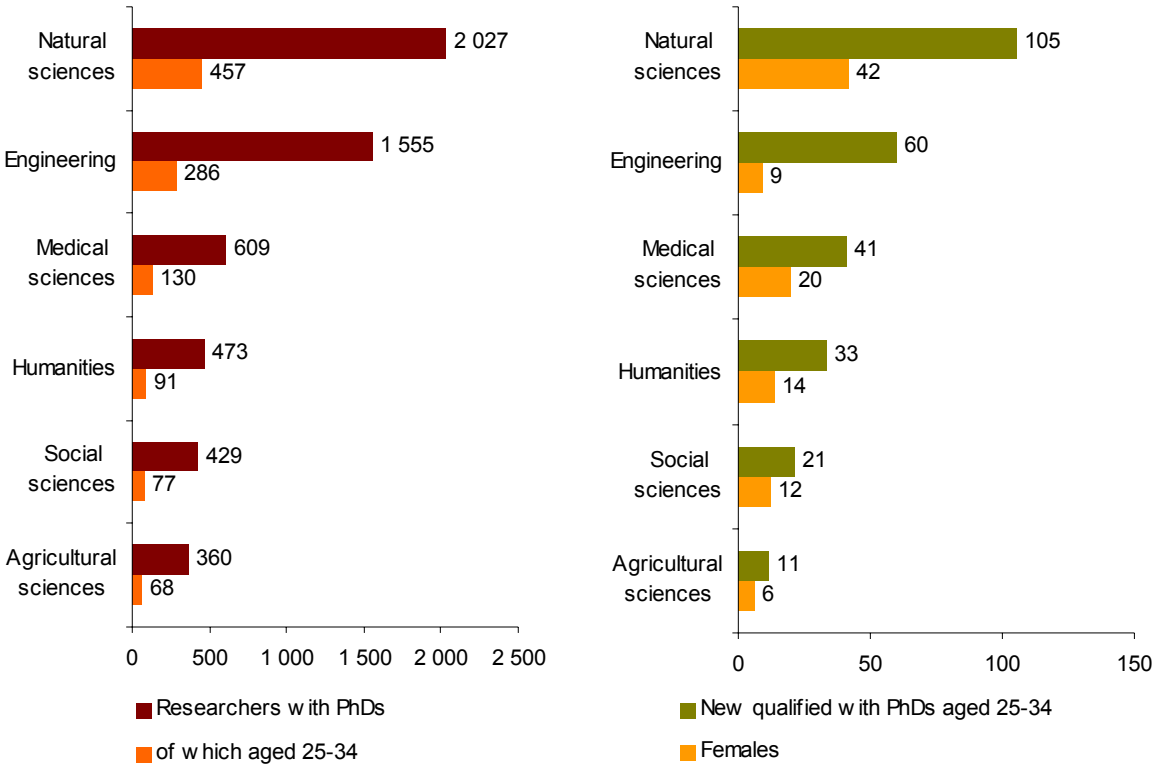
New qualified researchers with PhDs aged 24-35 were mostly recorded in the Higher Education sector (139 persons in FTE, of which 56 females), further in the Government sector (95 persons in FTE, of which 41 females). There were 36 persons in FTE (of which 5 females) in the Business Enterprise sector.

Table 3-10 Researches with PhDs degrees by sectors in the Czech Republic in 2003 and 2004 (in FTE)

SECTOR	2003		2004		Index 04/03	
	Total	*Females*	***Total***	*Females*	***Total***	*Females*
Business Enterprise	736	*127*	917	*166*	1,2453	*1,3010*
Government	2 143	*495*	2 154	*499*	1,0051	*1,0088*
Higher Education	2 261	*598*	2 371	*635*	1,0486	*1,0614*
Private Non-profit	24	*4*	12	*2*	0,4775	*0,6368*
Total	**5 165**	***1***	**5 454**	***1***	**1,0559**	***1,0637***

The highest number of researchers in FTE with PhDs - 2 027 persons worked in the area of natural sciences in the year 2004. The share of females did 21,3 %. There was also the highest number of researchers in FTE with PhDs aged 25-34 in total 457 persons in natural sciences, of which 123 females. 105 persons, of which 42 females in natural sciences were newly qualified researchers in FTE with PhDs aged 25-34 in the year 2004. Engineering and technology were the second important fields of science with higher number of researchers in FTE with PhDs, there were recorded 1 555 persons, of which 207 females (the share 13,3 %). 286 researchers in FTE with PhDs aged 25-34 worked in engineering and technology, of which 49 females. 60 researchers was recorded as newly qualified researchers in FTE with PhDs in this age group (of which only 9 females). The complete view brings graph 3.12.

Figure 3-12 Researches with PhDs degrees by fields of science in the Czech Republic in 2004 (in FTE)



Data of researchers with PhDs at 31 December (Headcount) are published in table annex (tables 48 and 50). Sorting by sectors is in the case of researchers in Headcount similar as about indicator FTE. Sorting by field of science indicates some differences between indicators FTE and Headcount (HC), par example the highest number of researchers with PhDs at 31 December was recorded in engineering and technology.

Figure 3.13 Researchers new qualified with PhDs degrees aged 25-34 in the Czech Republic (headcount)