

## BASIC INDICATORS OF RESEARCH AND DEVELOPMENT – ANALYTICAL PART

### I. Number of reporting units performing R&D in the Czech Republic

There were 2 017 reporting units (RU) in the Czech Republic in 2005 that carried out research and development (R&D) as the main (325 responding units in NACE 73) or ancillary (1 692 RU) activity. Number of reporting units performing R&D in the Czech Republic increased by 2,9 % in 2005 compared to the Year 2004, when only 1 961 R&D reporting units were recorded or weighted using mathematical and statistical methods as non-response. Since 1995, when the measurement of R&D indicators in the Czech Republic was for the first time fully in line with the international standards set in Frascati manual, the number of R&D reporting units rises each year.

Figure 1.1 Number of responding units (RU) performing R&D in the Czech Republic by size groups; 1995-2005

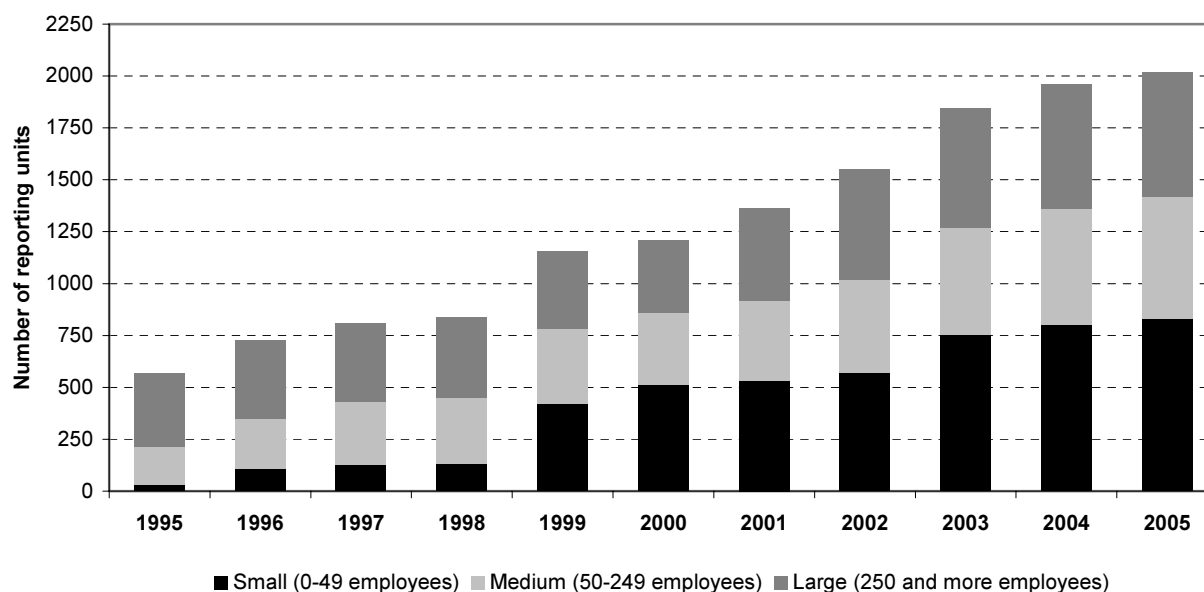


Table 1.1 Number of reporting units performing R&D according to their size group, 1995-2005

SIZE-CLASS OF R&D UNITS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Small (0- 49 employees)</b>	<b>32</b>	<b>108</b>	<b>128</b>	<b>132</b>	<b>422</b>	<b>510</b>	<b>535</b>	<b>570</b>	<b>755</b>	<b>802</b>	<b>833</b>
<i>of which NACE 73</i>	<i>19</i>	<i>21</i>	<i>24</i>	<i>27</i>	<i>64</i>	<i>98</i>	<i>109</i>	<i>156</i>	<i>166</i>	<i>165</i>	<i>190</i>
<b>Medium (50-249 employees)</b>	<b>183</b>	<b>242</b>	<b>303</b>	<b>319</b>	<b>363</b>	<b>350</b>	<b>381</b>	<b>450</b>	<b>518</b>	<b>562</b>	<b>585</b>
<i>of which NACE 73</i>	<i>100</i>	<i>97</i>	<i>100</i>	<i>92</i>	<i>92</i>	<i>91</i>	<i>103</i>	<i>103</i>	<i>102</i>	<i>100</i>	<i>101</i>
<b>Large (250 and more employees)</b>	<b>355</b>	<b>380</b>	<b>376</b>	<b>387</b>	<b>371</b>	<b>352</b>	<b>446</b>	<b>531</b>	<b>573</b>	<b>597</b>	<b>599</b>
<i>of which NACE 73</i>	<i>24</i>	<i>23</i>	<i>21</i>	<i>19</i>	<i>17</i>	<i>17</i>	<i>30</i>	<i>35</i>	<i>33</i>	<i>34</i>	<i>34</i>
<b>Total</b>	<b>570</b>	<b>730</b>	<b>807</b>	<b>838</b>	<b>1 156</b>	<b>1 212</b>	<b>1 362</b>	<b>1 551</b>	<b>1 846</b>	<b>1 961</b>	<b>2 017</b>
<i>of which NACE 73</i>	<i>143</i>	<i>141</i>	<i>145</i>	<i>138</i>	<i>173</i>	<i>206</i>	<i>242</i>	<i>294</i>	<i>301</i>	<i>299</i>	<i>325</i>

Figure 1.1 shows, that the number of reporting units performing R&D has increased more than three times since 1995. This growth was caused mainly by the transformation of large reporting units into the smaller ones (during the same period, the number of R&D employees 'in headcount' has increased from 47 500 R&D personnel in 1995 to 65 379 R&D personnel in 2005, i.e. the overall rise in number of R&D personnel by 37,6 % since 1995). Methodological changes in the statistical survey on R&D and regular updating of the database of reporting units carrying out R&D were other reasons for this recorded growth. Since 2001, mathematical and statistical methods are used for estimations of non-response units (see introduction on methodology).

*Note: these methodical changes have no significant influence on the time series of main surveyed R&D indicators.*

## I.1 Reporting units performing R&D by the sectors of performance

In 2005, the highest number of R&D reporting units in the Czech Republic was recorded in the Business enterprise sector. Total number of units engaged in research and development activities in this sector has reached 1 617 units, i.e. 80,2 % of all units carrying out research and development in the Czech Republic in 2005. From this number, 216, i.e. 13 %, R&D units performed research and development activities as their main economical activity (units from business enterprise sector belonging to the NACE 73). The second most important sector in the Czech Republic measured by number of R&D units has been government sector with the share of 9,0 % R&D responding units (182 units, from which 102 units belong to NACE 73) in total number of recorded R&D units in 2005. The same shares of the remaining two sectors were: 7,8 % in higher education sector and 3,0 % in private non-profit sector.

Table 1.2 Number of R&D units in the Czech Republic in particular sectors in 2004 and 2005

SECTOR OF PERFORMANCE	2004		2005		Index 05/04
	No. of R&D units	%	No. of R&D units	%	No. of R&D units
<b>Business enterprise sector</b>	<b>1 562</b>	<b>79,7</b>	<b>1 617</b>	<b>80,2</b>	<b>1,0352</b>
<i>of which NACE 73</i>	192	64,2	216	66,5	1,125
<b>Government sector</b>	<b>192</b>	<b>9,8</b>	<b>182</b>	<b>9</b>	<b>0,9479</b>
<i>of which NACE 73</i>	103	34,4	102	31,4	0,9903
<b>Higher education sector*</b>	<b>144</b>	<b>7,3</b>	<b>157</b>	<b>7,8</b>	<b>1,0903</b>
<i>of which NACE 73</i>	0	0	0	0	0
<b>Private non-profit sector</b>	<b>63</b>	<b>3,2</b>	<b>61</b>	<b>3</b>	<b>0,9683</b>
<i>of which NACE 73</i>	4	1,3	7	2,2	1,75
<b>Total</b>	<b>1 961</b>	<b>100</b>	<b>2 017</b>	<b>100</b>	<b>1,0286</b>
<i>of which NACE 73</i>	299	100	325	100	1,087

\* Since 2005 higher education sector includes 11 faculty hospitals.

## I.2 R&D units by the main field of science and technology (FOS)

The largest number of reporting units according to the fields of science was registered in 2005 in engineering and technology (60,2 %), where the crucial the business enterprise sector played an important role. Engineering and technology is the most important field of science and technology (FOS) for research and development in the Czech Republic. The second most important field of science measured by the number of responding units carrying out R&D activities was natural science, where the government sector played an important role. The lowest share of reporting units was recorded in the field of medical sciences (4,8 %) followed by agricultural sciences (4,9 %) and humanities (6,8 %). R&D in the field of science humanities is mostly concentrated in the government sector.

Table 1.3 Number of R&D units in the Czech Republic in main field of science (FOS) in 2004 and 2005

FIELDS OF SCIENCE	2004		2005		Index 05/04	No. of R&D units
	No. of R&D units	%	No. of R&D units	%		
<b>Natural sciences and engineering</b>	<b>1 724</b>	<b>87,9</b>	<b>1 766</b>	<b>87,6</b>		<b>1,0244</b>
Natural sciences	347	17,7	357	17,7		1,0288
Engineering and technology	1 173	59,8	1 214	60,2		1,0350
Medical sciences	112	5,7	97	4,8		0,8661
Agricultural sciences	92	4,7	98	4,9		1,0652
<b>Social sciences and humanities</b>	<b>237</b>	<b>12,1</b>	<b>251</b>	<b>12,4</b>		<b>1,0591</b>
Social sciences	110	5,6	137	6,8		1,2455
Humanities	127	6,5	114	5,7		0,8976
<b>Total</b>	<b>1 961</b>	<b>100,0</b>	<b>2 017</b>	<b>100,0</b>		<b>1,0286</b>

Note: see table 1 for breakdown of number of reporting units in R&D by sectors of performance and field of science during 2004 and 2005.

### I.3 R&D units by regions (at NUTS 3 level)

In 2005, the largest number of R&D reporting units was recorded in the capital city – Prague (29,3 %). The lowest number of subjects carrying out research and development was recorded in Karlovarský kraj (0,8 %). The highest number of reporting units carrying out R&D is mainly concentrated in Prague due to a high number of here registered universities and government research institutions but also enterprises performing R&D. The second largest number of R&D reporting units was recorded in Jihomoravský kraj (14,5 %).

Table 1.4 Number of R&D units in the Czech Republic in regions (at NUTS 3 level) in 2004 and 2005

Region (NUTS 3)	2004		2005		Index 05/04 R&D units
	No. of R&D units	%	No. of R&D units	%	
Capital city Prague	557	28,4	591	29,3	1,0610
Středočeský kraj	164	8,4	162	8,0	0,9878
Jihočeský kraj	89	4,5	92	4,6	1,0337
Plzeňský kraj	73	3,7	74	3,7	1,0137
Karlovarský kraj	20	1,0	16	0,8	0,8000
Ústecký kraj	70	3,6	71	3,5	1,0143
Liberecký kraj	74	3,8	73	3,6	0,9865
Královéhradecký kraj	98	5,0	97	4,8	0,9898
Pardubický kraj	91	4,6	88	4,4	0,9670
Vysočina	62	3,2	69	3,4	1,1129
Jihomoravský kraj	292	14,9	292	14,5	1,0000
Olomoucký kraj	97	4,9	98	4,9	1,0103
Zlínský kraj	114	5,8	118	5,9	1,0351
Moravskoslezský kraj	160	8,2	176	8,7	1,1000
<b>Total</b>	<b>1 961</b>	<b>100,0</b>	<b>2 017</b>	<b>100,0</b>	<b>1,0286</b>

Note: see table 2 for breakdown of number of reporting units in R&D by regions and sectors of performance during 2004 and 2005.