



Ministry of Education and Science
of the Russian Federation



Federal State
Statistics Service



HIGHER SCHOOL OF ECONOMICS
NATIONAL RESEARCH UNIVERSITY

Science and Technology Indicators in the Russian Federation

Data Book



Ministry of Economic Development
of the Russian Federation



Federal State
Statistics Service



HIGHER SCHOOL OF ECONOMICS
NATIONAL RESEARCH UNIVERSITY

Science and Technology Indicators in the Russian Federation

Data book

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This data book continues the series of publications on various aspects of S&T and innovation development in the Russian Federation. It presents statistical data reflecting the current state and trends in R&D and innovation. A specific chapter is devoted to international comparisons.

The publication uses information provided by the Federal State Statistics Service, the Ministry of Education and Science of the Russian Federation, Federal Service for Intellectual Property, Patents and Trademarks, CIS Statcommittee, Organisation for Economic Co-operation and Development (OECD), European Commission, Eurostat, UNESCO, World Intellectual Property Organisation as well as the results of methodological and analytical studies conducted by HSE Institute for Statistical Studies and Economics of Knowledge.

In several cases data on certain indicators improves on previous data.

CONTENTS

Main science and technology indicators	17	2.3. Percentage distribution of R&D personnel by occupation.....	37
Main indicators of innovation.....	21	2.4. R&D personnel by ownership of R&D institutions.....	38
1. Institutions.....	25	2.5. R&D personnel by organisational and legal form of institutions: 2012.....	40
1.1. R&D institutions by type.....	26	2.6. Percentage distribution of R&D personnel by organisational and legal form of institutions: 2012.....	41
1.2. Trends in the total number of R&D institutions	27	2.7. R&D personnel by economic activity	42
1.3. Percentage distribution of R&D institutions by type	28	2.8. R&D personnel by educational attainment	43
1.4. R&D institutions by ownership.....	29	2.9. Percentage distribution of R&D personnel by educational attainment.....	44
1.5. Percentage distribution of R&D institutions by ownership	31	2.10. Personnel working part-time and on contracts by category.....	45
1.6. R&D institutions by organisational and legal form: 2012	32	2.11. Researchers by gender and age group.....	46
1.7. Percentage distribution of R&D institutions by organisational and legal form: 2012.....	33	2.12. Percentage distribution of researchers by age group	48
1.8. R&D institutions by economic activity	34	2.13. Average age of researchers	49
2. R&D Personnel.....	35	2.14. Researchers with scientific degrees	50
2.1. R&D personnel.....	36		
2.2. R&D personnel by occupation	36		

2.15. Researchers with scientific degrees as a percentage of the total number of researchers.....	50
2.16. Researchers by field of science and technology.....	51
2.17. Percentage distribution of researchers by field of science and technology	52
2.18. Flows of R&D personnel	53
2.19. Trends in inflow and outflow of R&D personnel	54
2.20. Inflow of higher education graduates to R&D institutions.....	55
2.21. R&D personnel turnover.....	56
Postgraduate education	57
2.22. Main indicators of postgraduate courses' activities.....	57
2.23. Admission of higher education graduates to postgraduate courses by attendance status	60
2.24. Higher education graduates as a percentage of postgraduate courses' admission total	61
2.25. Postgraduate courses' students by gender	62
2.26. Postgraduate courses' students by gender and age group: 2012	65
2.27. Postgraduate courses' students by field of science and technology	66
2.28. Persons whose candidate degree awards were confirmed by the Ministry of Education and Science of the Russian Federation by field of science and technology	67
2.29. Main indicators of doctoral courses' activities	68
2.30. Doctoral courses' students by gender	71
2.31. Doctoral courses' students by gender and age group: 2012	73
2.32. Doctoral courses' students by field of science and technology	74
2.33. Graduates who have defended dissertations during the training term as a percentage of all graduates from postgraduate and doctoral courses by field of science and technology: 2012	75
2.34. Persons, whose doctor degree awards were confirmed by the Ministry of Education and Science of the Russian Federation by field of science and technology	76
3. R&D Funding	77
3.1. Gross domestic expenditure on R&D.....	78
3.2. Trends in gross domestic expenditure on R&D	79
3.3. Federal budget appropriations on civil S&T at current prices.....	80
3.4. Federal budget appropriations on civil S&T at current 1991 prices	81

3.5. Federal budget appropriations on civil S&T as a percentage of gross domestic product	82
3.6. Federal budget appropriations on civil S&T as a percentage of federal budget expenditure.....	83
3.7. Percentage distribution of federal budget appropriations on civil S&T by section of budget expenditure classification and type of activity	84
3.8. Gross domestic expenditure on R&D by source of funds	85
3.9. Trends in gross domestic expenditure on R&D by source of funds	87
3.10. Percentage distribution of gross domestic expenditure on R&D by source of funds	88
3.11. Grants and competitive research funding	89
3.12. Gross domestic expenditure on R&D financed from abroad.....	89
3.13. Percentage distribution of gross domestic expenditure on R&D financed from abroad	90
3.14. R&D funding by sector of performance: 2012.....	91
3.15. Gross domestic expenditure on R&D by ownership of R&D institutions.....	92
3.16. Gross domestic expenditure on R&D by organisational and legal form of institutions: 2012.....	94

3.17. Percentage distribution of gross domestic expenditure on R&D by organisational and legal form of institutions: 2012.....	95
3.18. Gross domestic expenditure on R&D by economic activity.....	96
3.19. Gross domestic expenditure on R&D by type of costs.....	98
3.20. Gross domestic expenditure on R&D by priority S&T area and source of funds: 2012.....	100
3.21. Percentage distribution of gross domestic expenditure on R&D by priority S&T area and source of funds: 2012.....	101
3.22. Gross domestic expenditure on R&D by socio-economic objective	102
3.23. Percentage distribution of gross domestic expenditure on R&D by socio-economic objective	104
3.24. Intramural current expenditure on R&D by type of activity and field of science and technology	105
3.25. Percentage distribution of intramural current expenditure on R&D by field of science and technology	107
3.26. Percentage distribution of intramural current expenditure on R&D by type of activity.....	108
3.27. Intramural current expenditure on R&D by type of activity as a percentage of gross domestic product	109

3.28. Average monthly salary of R&D personnel	110
4. R&D Fixed Assets	111
4.1. R&D fixed assets	112
4.2. Trends in value of R&D fixed assets	114
4.3. Machines and equipment as a percentage of the total value of R&D fixed assets	114
4.4. R&D fixed assets by ownership of institutions.....	115
4.5. Percentage distribution of R&D fixed assets by ownership of institutions.....	117
4.6. R&D fixed assets by economic activity.....	118
4.7. R&D intangible assets	119
4.8. Intangible assets included in R&D fixed assets	120
5. Sectors of R&D Performance	121
5.1. Aggregate indicators	122
5.1.1. R&D institutions by sector of performance	122
5.1.2. Percentage distribution of R&D institutions by sector of performance	123
5.1.3. R&D personnel by sector of performance and occupation	124
5.1.4. Percentage distribution of R&D personnel by occupation and sector of performance	125
5.1.5. R&D personnel by sector of performance and educational attainment	126
5.1.6. Percentage distribution of R&D personnel by educational attainment and sector of performance	127
5.1.7. Researchers with scientific degrees by sector of performance	128
5.1.8. Percentage distribution of researchers with scientific degrees by sector of performance.....	129
5.1.9. Researchers assigned to intern or work at foreign research institutions by sector of performance: 2012.....	130
5.1.10. Percentage distribution of researchers assigned to intern or work at foreign research institutions by sector of performance: 2012.....	130
5.1.11. Gross domestic expenditure on R&D by sector of performance	131
5.1.12. Percentage distribution of gross domestic expenditure on R&D by sector of performance	132
5.1.13. Gross domestic expenditure on R&D by sector of performance as a percentage of gross domestic product	133
5.1.14. Gross domestic expenditure on R&D by sector of performance and source of funds	134

5.1.15. Percentage distribution of gross domestic expenditure on R&D by source of funds and sector of performance	135
5.1.16. Grants and competitive research funding by sector of performance	136
5.1.17. Percentage distribution of grants and competitive research funding by sector of performance	137
5.1.18. Gross domestic expenditure on R&D by priority S&T area and sector of performance: 2012	138
5.1.19. Percentage distribution of gross domestic expenditure on R&D by priority S&T area and sector of performance: 2012	139
5.1.20. Share of sectors of performance in gross domestic expenditure on R&D by selected priority S&T area: 2012	141
5.1.21. Percentage distribution of gross domestic expenditure on R&D by priority S&T area and source of funds: 2012	143
5.1.22. Gross domestic expenditure on R&D by sector of performance and socio-economic objective	145
5.1.23. Percentage distribution of gross domestic expenditure on R&D by sector of performance and socio-economic objective: 2012	147

5.1.24. Intramural current expenditure on R&D by sector of performance and type of activity	149
5.1.25. Percentage distribution of intramural current expenditure on R&D by type of activity and sector of performance	150
5.1.26. Average monthly salary of R&D personnel by sector of performance	151
5.2. Government sector	152
5.2.1. R&D institutions in the government sector by type	152
5.2.2. R&D personnel in the government sector by type of institutions	152
5.2.3. R&D personnel in the government sector by occupation	153
5.2.4. Percentage distribution of R&D personnel in the government sector by occupation	153
5.2.5. Share of the government sector in R&D personnel total by occupation	154
5.2.6. R&D personnel in the government sector by educational attainment	155
5.2.7. Percentage distribution of R&D personnel in the government sector by educational attainment	157
5.2.8. Employees working part-time and on contracts in the government sector by occupation	158

5.2.9. Researchers in the government sector by gender and age group	159	5.2.20. Gross domestic expenditure on R&D in the government sector.....	169
5.2.10. Percentage distribution of researchers in the government sector by age group	160	5.2.21. Gross domestic expenditure on R&D in the government sector as a percentage of gross domestic product	170
5.2.11. Average age of researchers in the government sector.....	161	5.2.22. Gross domestic expenditure on R&D in the government sector by source of funds	171
5.2.12. Researchers with scientific degrees in the government sector.....	161	5.2.23. Percentage distribution of gross domestic expenditure on R&D in the government sector by source of funds	173
5.2.13. Researchers with scientific degrees as a percentage of the total number of researchers in the government sector	162	5.2.24. Share of the government sector in gross domestic expenditure on R&D by type of costs.....	174
5.2.14. Researchers in the government sector by field of science and technology	163	5.2.25. Gross domestic expenditure on R&D in the government sector by type of costs.....	175
5.2.15. Percentage distribution of researchers in the government sector by field of science and technology.....	164	5.2.26. Intramural current expenditure on R&D in the government sector by type of activity and field of science and technology.....	176
5.2.16. Flows of R&D personnel in the government sector by occupation.....	165	5.2.27. Share of the government sector in intramural current expenditure on R&D by type of activity.....	177
5.2.17. Inflow and outflow of R&D personnel in the government sector.....	166	5.2.28. Percentage distribution of intramural current expenditure on R&D in the government sector by type of activity	178
5.2.18. Inflow of higher education graduates to R&D institutions in the government sector.....	167	5.2.29. Average monthly salary of R&D personnel in the government sector.....	179
5.2.19. Gross domestic expenditure on R&D in the government sector by type of institutions	168		

State Academies of Sciences	179
5.2.30. Number of R&D institutions in state academies of sciences	179
5.2.31. R&D personnel in state academies of sciences by occupation.....	180
5.2.32. Researchers with scientific degrees in state academies of sciences	182
5.2.33. Researchers in state academies of sciences by gender and age group	183
5.2.34. Gross domestic expenditure on R&D in state academies of sciences	190
5.2.35. Gross domestic expenditure on R&D in state academies of sciences by source of funds	191
5.2.36. Grants and competitive research funding in state academies of sciences	193
5.2.37. Share of grants and competitive research funding in gross domestic expenditure on R&D by state academies of sciences: 2012	194
5.2.38. Intramural current expenditure on R&D in state academies of sciences by type of activity and field of science and technology	195
5.3. Business enterprise sector	203
5.3.1. R&D institutions in the business enterprise sector by type	203

5.3.2. R&D personnel in the business enterprise sector by type of institutions	204
5.3.3. R&D personnel in the business enterprise sector by occupation.....	204
5.3.4. Percentage distribution of R&D personnel in the business enterprise sector by occupation	205
5.3.5. Share of the business enterprise sector in total R&D personnel by occupation	206
5.3.6. R&D personnel in the business enterprise sector by educational attainment.....	207
5.3.7. Percentage distribution of R&D personnel in the business enterprise sector by educational attainment	209
5.3.8. Employees working part-time and on contracts in the business enterprise sector by occupation	210
5.3.9. Researchers in the business enterprise sector by gender and age group	211
5.3.10. Percentage distribution of researchers in the business enterprise sector by age group.....	212
5.3.11. Average age of researchers in the business enterprise sector	213
5.3.12. Researchers with scientific degrees in the business enterprise sector	214
5.3.13. Researchers with scientific degrees as a percentage of the total number of researchers in the business enterprise sector	214

5.3.14. Researchers in the business enterprise sector by field of science and technology	215	5.3.24. Share of the business enterprise sector in gross domestic expenditure on R&D by type of costs.....	226
5.3.15. Percentage distribution of researchers in the business enterprise sector by field of science and technology	216	5.3.25. Gross domestic expenditure on R&D in the business enterprise sector by type of costs	227
5.3.16. Flows of R&D personnel in the business enterprise sector by occupation	217	5.3.26. Intramural current expenditure on R&D in the business enterprise sector by type of activity and field of science and technology	228
5.3.17. Inflow and outflow of R&D personnel in the business enterprise sector	218	5.3.27. Share of the business enterprise sector in intramural current expenditure on R&D by type of activity	229
5.3.18. Inflow of higher education graduates to R&D institutions in the business enterprise sector	219	5.3.28. Percentage distribution of intramural current expenditure on R&D in the business enterprise sector by type of activity	230
5.3.19. Gross domestic expenditure on R&D in the business enterprise sector by type of institutions	220	5.3.29. Average monthly salary of R&D personnel in the business enterprise sector.....	231
5.3.20. Gross domestic expenditure on R&D in the business enterprise sector	221	5.4. Higher Education Sector	232
5.3.21. Gross domestic expenditure on R&D in the business enterprise sector as a percentage of gross domestic product.....	222	5.4.1. R&D institutions in the higher education sector by type.....	232
5.3.22. Gross domestic expenditure on R&D in the business enterprise sector by source of funds.....	223	5.4.2. R&D personnel in the higher education sector by type of institutions.....	233
5.3.23. Percentage distribution of gross domestic expenditure on R&D in the business enterprise sector by source of funds	225	5.4.3. R&D personnel in the higher education sector by occupation.....	233
		5.4.4. Percentage distribution of R&D personnel in the higher education sector by occupation.....	234

5.4.5. Share of the higher education sector in total R&D personnel by occupation	235	5.4.16. Flows of R&D personnel in the higher education sector by occupation.....	246
5.4.6. R&D personnel in the higher education sector by educational attainment.....	236	5.4.17. Inflow and outflow of R&D personnel in the higher education sector.....	247
5.4.7. Percentage distribution of R&D personnel in the higher education sector by educational attainment.....	238	5.4.18. Inflow of higher education graduates to R&D institutions in the higher education sector	248
5.4.8. Employees working part-time and on contracts in the higher education sector	239	5.4.19. Gross domestic expenditure on R&D in the higher education sector by type of institutions	249
5.4.9. Researchers in the higher education sector by gender and age group	240	5.4.20. Gross domestic expenditure on R&D in the higher education sector	250
5.4.10. Percentage distribution of researchers in the higher education sector by age group	241	5.4.21. Gross domestic expenditure on R&D in the higher education sector as a percentage of gross domestic product.....	251
5.4.11. Average age of researchers in the higher education sector	242	5.4.22. Gross domestic expenditure on R&D in the higher education sector by source of funds.....	252
5.4.12. Researchers with scientific degrees in the higher education sector	242	5.4.23. Percentage distribution of gross domestic expenditure on R&D in the higher education sector by source of funds	254
5.4.13. Researchers with scientific degrees as a percentage of the total number of researchers in the higher education sector.....	243	5.4.24. Share of the higher education sector in gross domestic expenditure on R&D by type of costs.....	255
5.4.14. Researchers in the higher education sector by field of science and technology	244	5.4.25. Gross domestic expenditure on R&D in the higher education sector by type of costs	256
5.4.15. Percentage distribution of researchers in the higher education sector by field of science and technology.....	245	5.4.26. Intramural current expenditure on R&D in the higher education sector by type of activity and field of science and technology	257

5.4.27. Share of the higher education sector in intramural current expenditure on R&D by type of activity	258
5.4.28. Percentage distribution of intramural current expenditure on R&D in the higher education sector by type of activity.....	259
5.4.29. Average monthly salary of R&D personnel in the higher education sector.....	260
6. R&D Output	261
6.1. Publications of Russian authors in scientific journals indexed in Scopus by document type.....	262
6.2. Publications of Russian authors in scientific journals indexed in Web of Science, by document type	262
6.3. Publications of Russian authors in scientific journals indexed in Scopus.....	263
6.4. Publications of Russian authors in scientific journals indexed in Web of Science	264
6.5. Share of publications of Russian authors in the global number of publications indexed in Scopus by field of science: 2012	265
6.6. Percentage distribution of publications of Russian authors in scientific journals indexed in Web of Science by field of science: 2008–2012.....	266
6.7. Patent applications and patents granted	267
6.8. Indicators of patent activity	268
6.9. Patents granted in the Russian Federation by section of the International Patent Classification.....	269
6.10. Percentage distribution of patents granted in the Russian Federation by assignee and section of the International Patent Classification: 2012.....	270
6.11. Utility model patent applications and patents granted	271
6.12. Utility model patents granted in the Russian Federation by section of the International Patent Classification	272
6.13. Registration of intellectual property in the field of Information Technology	273
6.14. Registration of internal license agreements and patent assignment contracts	274
6.15. Registration of internal license agreements and patent assignment contracts by technology field.....	275
6.16. Percentage distribution of internal license agreements and patent assignment contracts by technology field.....	276

6.17. Percentage distribution of internal license agreements and patent assignment contracts by category of partners.....	277
6.18. Technology balance of payments by category of contracts.....	278
6.19. Percentage distribution of technology exports and imports by category of contracts	280
6.20. Technology balance of payments by country	281
6.21. Percentage distribution of technology exports and imports by country groups.....	284
6.22. Technology balance of payments by sector of performance	284
6.23. Technology balance of payments by economic activity	285
6.24. Technology balance of payments by ownership of organisations.....	286
6.25. Development of advanced manufacturing technologies by type.....	287
6.26. Development of advanced manufacturing technologies by degree of novelty and type	288
6.27. Development of advanced manufacturing technologies by degree of novelty and economic activity	289
6.28. Development of advanced manufacturing technologies by degree of novelty and ownership of organisations	290

6.29. Use of advanced manufacturing technologies by type	291
6.30. Use of advanced manufacturing technologies by type and duration	292
6.31. Use of advanced manufacturing technologies by economic activity and duration	293
6.32. Use of advanced manufacturing technologies by ownership of organisations and duration	294
6.33. Use of advanced manufacturing technologies by type and source of acquisition: 2012	295
6.34. Use of advanced manufacturing technologies by economic activity and source of acquisition: 2012	296
6.35. Use of advanced manufacturing technologies by ownership and source of acquisition: 2012.....	297
6.36. Use of advanced manufacturing technologies on the basis of invention patents by type	298
7. Innovative Activity of Enterprises	299
7.1. Innovative activity of enterprises by type of innovation and economic activity.....	300
7.2. Enterprises engaged in technological innovation as a percentage of all enterprises by economic activity.....	303

7.3. Percentage distribution of enterprises engaged in technological innovation by innovative and economic activity.....305

7.4. Sales of innovative goods and services by economic activity.....311

7.5. Sales of goods and services produced with the use of marketing innovation by economic activity.....313

7.6. Expenditure on technological, organisational and marketing innovation by economic activity.....315

7.7. Percentage distribution of expenditure on technological, organisational and marketing innovation by economic activity318

7.8. Percentage distribution of expenditure on technological innovation by innovative and economic activity321

7.9. Percentage distribution of expenditure on technological innovation by source of funds and economic activity327

7.10. Intensity of expenditure on technological innovation by economic activity333

8. Public Attitudes towards Science and Technology..... 335

8.1. Sources of information about science and technology336

8.2. Involvement of the population in science and technology issues: 2011337

8.3. Public assessment of the influence of science and technology on life338

8.4. Public assessment of the effects of S&T development340

8.5. Public opinion about those responsible for the negative effects of S&T development342

8.6. Public opinion about possible prohibition of research343

8.7. Public opinion about financing research and introducing new technologies.....344

8.8. Symbols of national prestige in Russia: 2011346

9. International Comparisons..... 347

9.1. Gross domestic expenditure on R&D.....348

9.2. Gross domestic expenditure on R&D as a percentage of gross domestic product: 2012.....351

9.3. Percentage distribution of gross domestic expenditure on R&D by sector of performance: 2012352

9.4. Percentage distribution of gross domestic expenditure on R&D by source of funds: 2012.....355

9.5. Gross domestic expenditure on R&D by field of science and technology: 2012	358
9.6. Intramural current expenditure on R&D by type of activity: 2012	359
9.7. Government budget appropriations on R&D	360
9.8. R&D personnel: 2012	362
9.9. R&D personnel per 10 000 employment: 2012	365
9.10. Percentage distribution of researchers by sector of performance: 2012	366
9.11. Female proportion in the number of researchers: 2012	369
9.12. Percentage distribution of researchers in the government sector by field of science and technology: 2012	370
9.13. Percentage distribution of researchers in the business enterprise sector by field of science and technology: 2012	371
9.14. Percentage distribution of researchers in the higher education sector by field of science and technology: 2012	372
9.15. Publications and citations in scientific journals indexed in Web of Science: 2008–2012	373
9.16. Publications and citations in scientific journals indexed in Scopus: 1996–2012	376

9.17. Country shares in the total number of publications in scientific journals indexed in Web of Science: 2012	379
9.18. Country shares in the total number of publications in scientific journals indexed in Scopus: 2012	380
9.19. Country shares in the total number of citations in scientific journals indexed in Scopus: 2012	381
9.20. Publications in co-authorship with foreign researchers as a percentage of total country publications in scientific journals indexed in Scopus: 2012	382
9.21. Publications in co-authorship with Russian researchers as a percentage of total country publications in scientific journals indexed in Scopus: 2012	383
9.22. Patent applications filed by residents and non-residents at national patent agencies	384
9.23. Percentage distribution of patent applications by applicant and country: 2012	387
9.24. Patent applications filed by residents at national and foreign patent agencies	388
9.25. Triadic patent families	391
9.26. Receipts from technology exports and payments for technology imports: 2012	394
Technical notes	395

Symbols used in tables:

- ... data not available
and not included in the totals,
- data not applicable,
- 0.0 insignificant value.

In some tables, details may not add up to the total because of rounding.

MAIN SCIENCE AND TECHNOLOGY INDICATORS

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gross domestic expenditure on R&D, <i>million roubles, 1995 – billion roubles:</i>												
at current prices	12149.5	76697.1	169862.4	196039.9	230785.2	288805.2	371080.3	431073.2	485834.3	523377.2	610426.7	699869.8
at constant 1989 prices	2.49	3.32	4.80	4.61	4.55	4.94	5.58	5.49	6.07	5.72	5.78	6.11
Gross domestic expenditure on R&D:												
as a percentage of GDP	0.85	1.05	1.29	1.15	1.07	1.07	1.12	1.04	1.25	1.13	1.09	1.12
as a percentage of the previous year												
at constant 1989 prices	84.9	116.0	110.6	95.9	98.7	108.6	112.9	98.4	110.6	94.2	101.0	105.7
Gross domestic expenditure on R&D per one R&D institution, <i>thousand roubles, 1995 – million roubles:</i>												
at current prices	2993.2	18711.2	44735.9	53621.4	64718.2	79736.4	93778.2	117586.8	137396.6	149878.9	165786.7	196261.9

(continued)

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gross domestic expenditure on R&D per one R&D employee, <i>thousand roubles, 1995 – million roubles</i>	11.5	86.4	197.9	233.6	283.8	357.8	463.2	566.3	654.4	710.6	830.2	963.6
Gross domestic expenditure on R&D per one researcher, <i>thousand roubles, 1995 – million roubles</i>	23.4	180.1	414.5	488.4	590.1	742.5	944.6	1147.1	1315.8	1418.7	1628.7	1878.2
Federal budget appropriations on civil S&T, <i>million roubles, 1995 – billion roubles:</i>												
at current prices	4413.6	17091.7	41576.3	47478.1	76909.0	97363.2	132703.4	162115.9	219053.4	237644.0	313899.3	355921.1
at constant 1991 prices	2.48	2.03	3.23	3.06	4.16	4.57	5.47	5.66	7.50	7.13	8.15	8.52
Federal budget appropriations on civil S&T as a percentage of GDP	0.31	0.23	0.31	0.28	0.36	0.36	0.40	0.39	0.56	0.51	0.56	0.57

(continued)

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
R&D personnel, <i>thousand</i>	1061.0	887.7	858.5	839.3	813.2	807.1	801.1	761.3	742.4	736.5	735.3	726.3
As a percentage of the previous year	95.9	101.8	98.6	97.8	96.9	99.2	99.3	95.0	97.5	99.2	99.8	98.8
R&D personnel per one R&D institution, <i>head-count</i>	261	217	226	230	228	223	202	208	210	211	200	204
R&D personnel per 10 000 employment, <i>head-count</i>	160	138	130	126	122	120	118	111	110	109	109	107
Researchers, <i>thousand</i>	518.7	426.0	409.8	401.4	391.1	388.9	392.8	375.8	369.2	368.9	374.7	372.6
As a percentage of the previous year	98.7	101.4	98.8	98.0	97.4	99.4	101.0	95.7	98.3	99.9	101.6	99.4

(continued)

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Researchers per one R&D institution, <i>head-count</i>	128	104	108	110	110	107	99	103	104	106	102	104
Researchers per 10 000 employment, <i>head-count</i>	78	66	62	60	59	58	58	55	55	55	55	55
Patent applications filed in the Russian Federation	22202	28688	30651	30192	32254	37691	39439	41849	38564	42500	41414	44211
Patents granted in the Russian Federation	31556*	17592	24726	23191	23390	23299	23028	28808	34824	30322	29999	32880
Development of advanced manufacturing technologies	...	688	821	676	637	735	780	854	897	864	1138	1323
Use of advanced manufacturing technologies	...	70069	107015	119639	140983	168311	180324	184568	201850	203330	191650	191372
Total receipts from technology exports, <i>thousand US dollars</i>	...	203493.5	237403.9	383985.2	389396.4	533385.9	630391.6	833164.4	618184.5	627887.5	584656.9	688469.9
Total payments for technology imports, <i>thousand US dollars</i>	...	182908.0	666114.1	823030.1	954199.2	1128425.8	1426387.6	2087067.4	1619031.6	1425983.3	1862566.6	2043187.9

* Taking into account patents granted in exchange for invention certificates.

MAIN INDICATORS OF INNOVATION

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Enterprises engaged in technological innovation as a percentage of all enterprises:													
Mining and quarrying, manufacturing, electricity, gas and water supply	10.6	9.6	9.8	10.3	10.5	9.3	9.4	9.4	9.6	9.4	9.3	9.6	9.9
Communications, computer and related activities*	12.1	12.2	13.5	14.3	14.7	15.3	12.5	11.2	10.9	10.1	10.8	9.9	10.3
Innovative goods and services as a percentage of total sales:													
Mining and quarrying, manufacturing, electricity, gas and water supply	4.4	4.2	4.3	4.7	5.4	5.0	5.5	5.5	5.1	4.6	4.9	6.1	7.8
Communications, computer and related activities	16.9	6.9	2.8	8.9	8.4	8.6	8.3	4.2	4.2	3.8	4.7	4.8	3.0
Expenditure on technological innovation, <i>million roubles</i> :													
Mining and quarrying, manufacturing, electricity, gas and water supply:													
at current prices	49428.0	61312.9	86394.6	105444.7	122850.5	125678.2	188492.2	207499.2	276262.3	358861.1	349763.3	469442.2	583660.6
at constant 1995 prices	10462.7	11140.3	13590.9	14576.3	14116.7	12105.3	15760.0	15245.3	17201.2	21906.1	18695.9	21725.7	24895.5
Communications, computer and related activities:													
at current prices	11794.1	6328.6	6049.3	14782.7	19495.3	17544.4	18892.4	25125.5	24148.0	32790.9	38684.0	137754.0	83230.6
at constant 1995 prices	2496.5	1149.9	951.6	2043.5	2240.2	1689.9	1579.6	1846.0	1503.6	2001.7	2067.8	6509.9	3550.1

(continued)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Expenditure on technological innovation as a percentage of total sales:													
Mining and quarrying, manufacturing, electricity, gas and water supply	1.4	1.4	1.8	1.6	1.5	1.2	1.4	1.2	1.4	1.9	1.5	1.5	1.8
Communications, computer and related activities	11.1	4.8	3.9	6.5	5.9	3.5	2.7	2.7	2.1	2.7	2.9	8.8	4.4
Innovative activity level (enterprises engaged in technological, marketing and organisational innovation as a percentage of all enterprises):													
Mining and quarrying, manufacturing, electricity, gas and water supply	...	...	...	...	...	...	10.6	10.8	11.0	11.0	10.8	11.1	11.1
Communications, computer and related activities	...	...	...	...	...	...	15.6	13.5	13.4	13.2	13.6	12.1	11.7
Enterprises engaged in organisational innovation during the reference year as a percentage of all enterprises:													
Mining and quarrying, manufacturing, electricity, gas and water supply	...	...	...	...	...	...	3.2	3.5	3.5	3.7	3.4	3.5	3.2
Communications, computer and related activities	...	...	...	...	...	...	5.4	4.8	4.5	4.7	5.1	3.9	3.6

(continued)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Enterprises engaged in marketing innovation during the reference year as a percentage of all enterprises:													
Mining and quarrying, manufacturing, electricity, gas and water supply	...	...	...	...	...	...	2.3	2.5	2.6	2.4	2.5	2.5	2.2
Communications, computer and related activities	...	...	...	...	...	...	4.4	4.5	4.5	4.7	4.7	3.9	3.2
Expenditure on technological, organisational and marketing innovation, <i>million roubles</i> :													
Mining and quarrying, manufacturing, electricity, gas and water supply:													
at current prices	...	...	...	...	...	...	191341.5	213020.1	283194.8	365785.1	356163.5	474587.1	590341.6
at constant 1995 prices	...	...	...	...	...	...	15998.2	15650.9	17632.9	22328.7	19038.0	21963.8	25180.5
Communications, computer and related activities:													
at current prices	...	...	...	...	...	...	20010.5	26405.2	27076.7	34821.9	40223.1	146419.4	86002.9
at constant 1995 prices	...	...	...	...	...	...	1673.1	1940.0	1685.9	2125.6	2150.0	6776.3	3668.4
Expenditure on technological, organisational and marketing innovation as a percentage of total sales:													
Mining and quarrying, manufacturing, electricity, gas and water supply	...	...	...	...	...	...	1.5	1.3	1.4	1.9	1.5	1.6	1.8
Communications, computer and related activities	...	...	...	...	...	...	2.7	2.8	2.3	2.8	3.0	9.4	8.6

(continued)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Small enterprises engaged in technological innovation as a percentage of all small enterprises:													
Mining and quarrying, manufacturing, electricity, gas and water supply	1.3	1.5	...	1.6	...	1.6	...	4.3	...	4.1	...	5.1	...
Innovative goods and services as a percentage of total sales of small enterprises:													
Mining and quarrying, manufacturing, electricity, gas and water supply	0.6	0.6	...	0.3	...	0.3	...	2.0	...	1.4	...	1.5	...
Expenditure on technological innovation of small enterprises, <i>million roubles</i> :													
Mining and quarrying, manufacturing, electricity, gas and water supply:													
at current prices	867.6	997.7	...	1296.5	...	1932.7	...	10608.2	...	6793.5	...	947.3	...
at constant 1995 prices	183.7	181.3	...	179.2	...	186.2	...	779.4	...	414.7	...	447.8	...
Expenditure on technological innovation as a percentage of total sales of small enterprises:													
Mining and quarrying, manufacturing, electricity, gas and water supply	0.6	0.5	...	0.4	...	0.2	...	1.7	...	0.9	...	0.9	...

* In contrast to other service sectors, innovation in communications, computer and related activities was statistically monitored during the entire period considered.



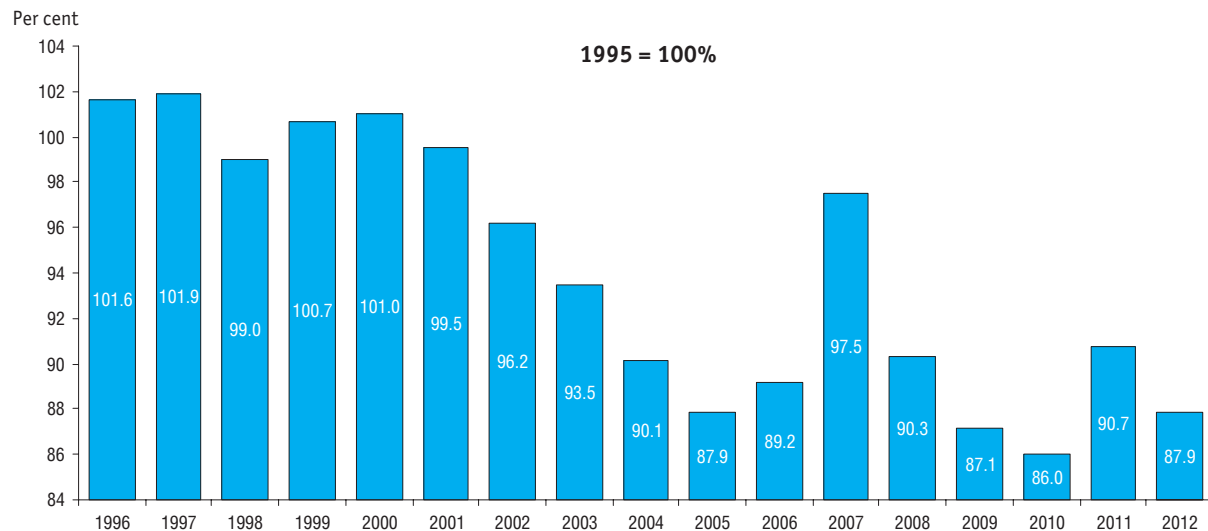
1. Institutions

1.1. R&D INSTITUTIONS BY TYPE

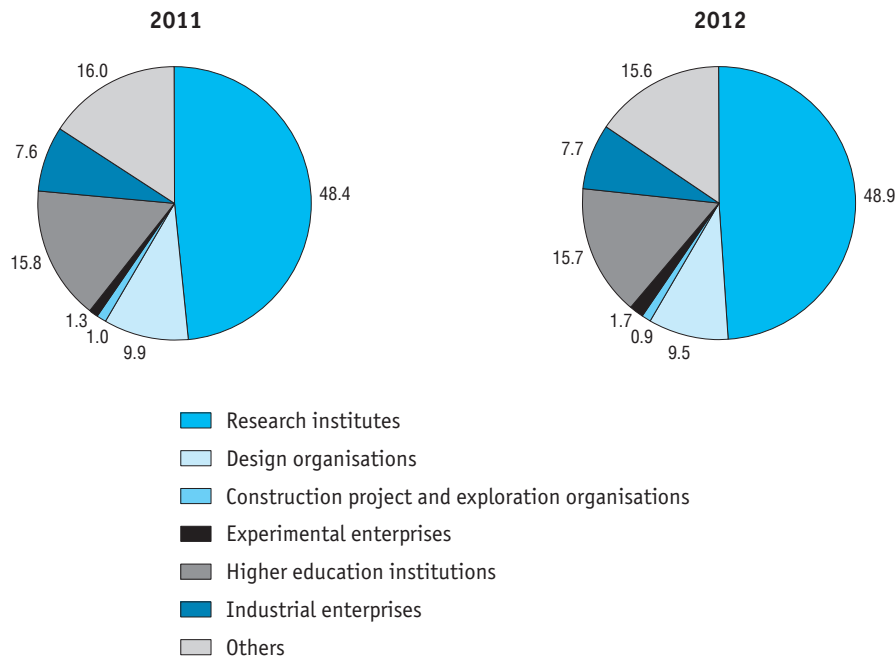
	1995	2000	2002	2003	2004	2005*	2006*	2007*	2008*	2009*	2010*	2011*	2012*
Total	4059	4099	3906	3797	3656	3566	3622	3957	3666	3536	3492	3682	3566
Research institutes	2284	2686	2630	2564	2464	2115	2049	2036	1926	1878	1840	1782	1744
Design organisations	548	318	257	228	194	489	482	497	418	377	362	364	338
Construction project and exploration organisations	207	85	76	68	63	61	58	49	42	36	36	38	33
Experimental enterprises	23	33	34	28	31	30	49	60	58	57	47	49	60
Higher education institutions	395	390	390	393	402	406	417	500	503	506	517	581	560
Industrial enterprises	325	284	255	248	244	231	255	265	239	228	238	280	274
Others	277	303	264	268	258	234	312	550	480	454	452	588	557

* In 2005, the classification of types of R&D institutions was changed due to the abolition of the 'Russian Classifier of Economy Branches'.

1.2. TRENDS IN THE TOTAL NUMBER OF R&D INSTITUTIONS



1.3. PERCENTAGE DISTRIBUTION OF R&D INSTITUTIONS BY TYPE



1.4. R&D INSTITUTIONS BY OWNERSHIP

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	4059	4099	3906	3797	3656	3566	3622	3957	3666	3536	3492	3682	3566
Russian ownership	4034	4035	3841	3740	3599	3513	3572	3895	3613	3483	3436	3614	3506
Public ownership	2979	2938*	2817	2760	2675	2632	2652	2821	2716	2655	2610	2670	2561
Federal	2783	2755	2644	2599	2524	2483	2508	2650	2562	2503	2467	2493	2390
Provincial	196	181	173	161	151	149	143	166	148	146	140	176	170
Municipal ownership	9	11	7	8	7	6	9	13	13	14	14	18	14
Ownership of voluntary associations	16	60	31	28	25	27	29	36	30	26	28	27	25
Private ownership	198	388	456	434	420	422	505	638	508	475	470	532	545
Ownership of Russian citizens permanently living abroad	...	...	...	...	...	...	...	...	...	...	...	1	1
Ownership of consumer cooperatives**	...	3	2	2	4	4	4	3	2	3	4	4	2
Joint ownership	832	635	528	508	468	422	373	384	344	310	304	337	298
Joint ownership with a part of public ownership	...	...	...	...	...	...	...	...	...	...	268	296	247
Other	...	...	...	...	...	...	...	...	...	...	...	41	51
Ownership of state corporations	...	...	...	...	...	...	...	...	...	...	6	25	60
Foreign ownership	1	6	8	6	6	7	6	11	13	14	16	21	16
Joint ownership (with both Russian and foreign participation)	24	58	57	51	51	46	44	51	40	39	40	47	44

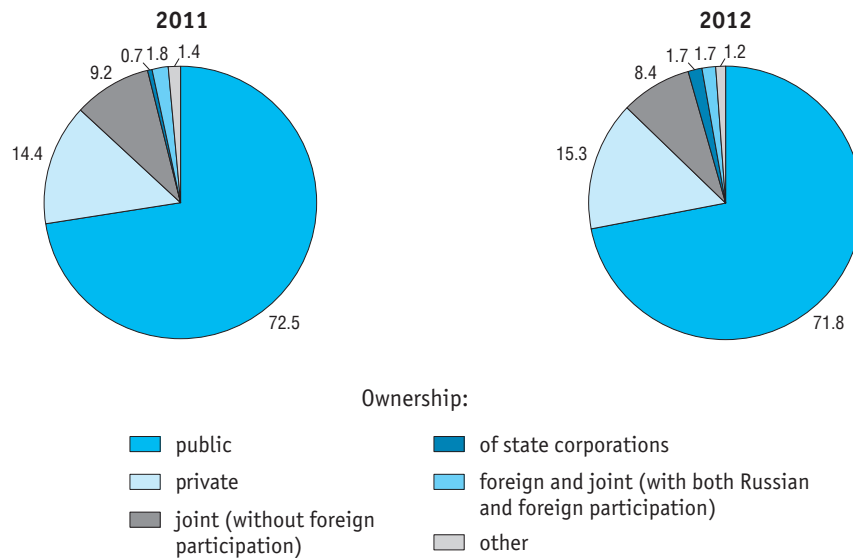
(continued)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total, per cent	100	100	100	100	100	100	100	100	100	100	100	100	100
Russian ownership	99.4	98.4	98.3	98.5	98.4	98.5	98.6	98.4	98.6	98.5	98.4	98.2	98.3
Public ownership	73.4	71.7	72.1	72.7	73.2	73.8	73.2	71.3	74.1	75.1	74.7	72.5	71.8
Federal	68.6	67.2	67.7	68.4	69.0	69.6	69.2	67.0	69.9	70.8	70.6	67.7	67.0
Provincial	4.8	4.4	4.4	4.2	4.1	4.2	3.9	4.2	4.0	4.1	4.0	4.8	4.8
Municipal ownership	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.4
Ownership of voluntary associations	0.4	1.5	0.8	0.7	0.7	0.8	0.8	0.9	0.8	0.7	0.8	0.7	0.7
Private ownership	4.9	9.5	11.7	11.4	11.5	11.8	13.9	16.1	13.9	13.4	13.5	14.4	15.3
Ownership of Russian citizens permanently living abroad	...	...	...	...	...	...	...	...	...	...	...	0.03	0.03
Ownership of consumer cooperatives**	...	0.07	0.05	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Joint ownership	20.5	15.5	13.5	13.4	12.8	11.8	10.3	9.7	9.4	8.8	8.7	9.2	8.4
Joint ownership with a part of public ownership	...	...	...	...	...	...	...	...	...	...	7.7	8.0	6.9
Other	...	...	...	...	...	...	...	...	...	...	...	1.1	1.4
Ownership of state corporations	...	...	...	...	...	...	...	...	...	...	0.2	0.7	1.7
Foreign ownership	0.02	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.4
Joint ownership (with both Russian and foreign participation)	0.6	1.4	1.5	1.3	1.4	1.3	1.2	1.3	1.1	1.1	1.1	1.3	1.2

* Details may not add up to the total because of shared ownership at some institutions.

** Until 2000, registered within institutions of private and joint Russian ownership.

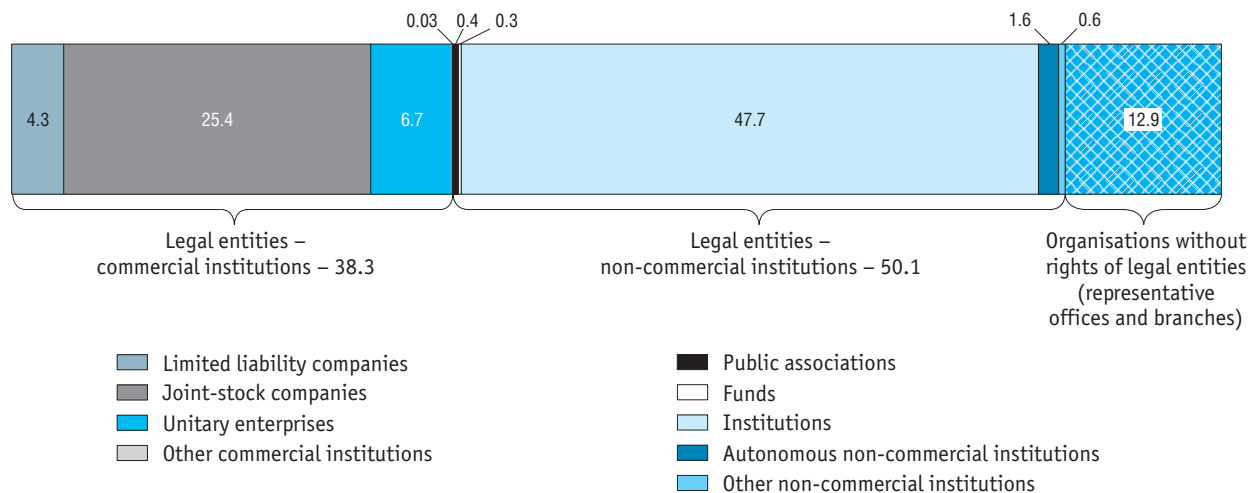
1.5. PERCENTAGE DISTRIBUTION OF R&D INSTITUTIONS BY OWNERSHIP



1.6. R&D INSTITUTIONS BY ORGANISATIONAL AND LEGAL FORM: 2012

Total	3566	Legal entities – non-commercial institutions	1803
Legal entities – commercial institutions	1302	Public and religious associations	13
Economic partnerships and associations	1062	Funds	10
Limited liability companies	154	Institutions	1701
Additional liability companies	1	Private institutions	46
Joint-stock companies	907	Public institutions	1576
Open joint-stock companies	769	Autonomous institutions	58
Closed joint-stock companies	138	Public establishments	21
Unitary enterprises	240	Non-commercial partnerships	13
Unitary enterprises based on the operative administration law	11	Autonomous non-commercial institutions	56
Unitary enterprises based on the economic management law	229	Associations of legal entities	7
		Other non-commercial institutions	3
		Organisations without rights of legal entities (representative offices and branches)	461

1.7. PERCENTAGE DISTRIBUTION OF R&D INSTITUTIONS BY ORGANISATIONAL AND LEGAL FORM: 2012



1.8. R&D INSTITUTIONS BY ECONOMIC ACTIVITY

	2005	2007	2008	2009	2010	2011	2012
Total	3566	3957	3666	3536	3492	3682	3566
Agriculture, hunting and forestry	24	41	39	39	35	34	31
Fishing, aquaculture and service activities incidental to fishing	1	1	–	1	1	–	–
Mining and quarrying	8	6	3	1	1	2	4
Manufacturing	241	304	274	268	276	317	323
Electricity, gas and water supply	–	1	2	1	1	1	1
Construction	–	1	–	–	–	–	1
Hotels and restaurants	–	–	–	–	–	–	1
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	–	3	1	–	–	2	–
Transport and communications	1	3	3	3	3	4	7
Real estate, renting and business activities	2757	2875	2629	2517	2456	2526	2389
Research and development	2628	2702	2484	2395	2331	2398	2257
Other business activities	117	121	103	93	95	93	88
Public administration and defence; compulsory social security	–	1	–	–	–	–	–
Education	428	544	543	541	549	620	632
Higher education	425	530	532	532	543	611	619
Health and social services	11	23	24	21	24	26	29
Other community, social and personal service activities	95	154	148	144	146	150	148
Recreational, cultural and sporting activities	90	146	141	137	140	143	139



2. R&D Personnel

2.1. R&D PERSONNEL (head-count)

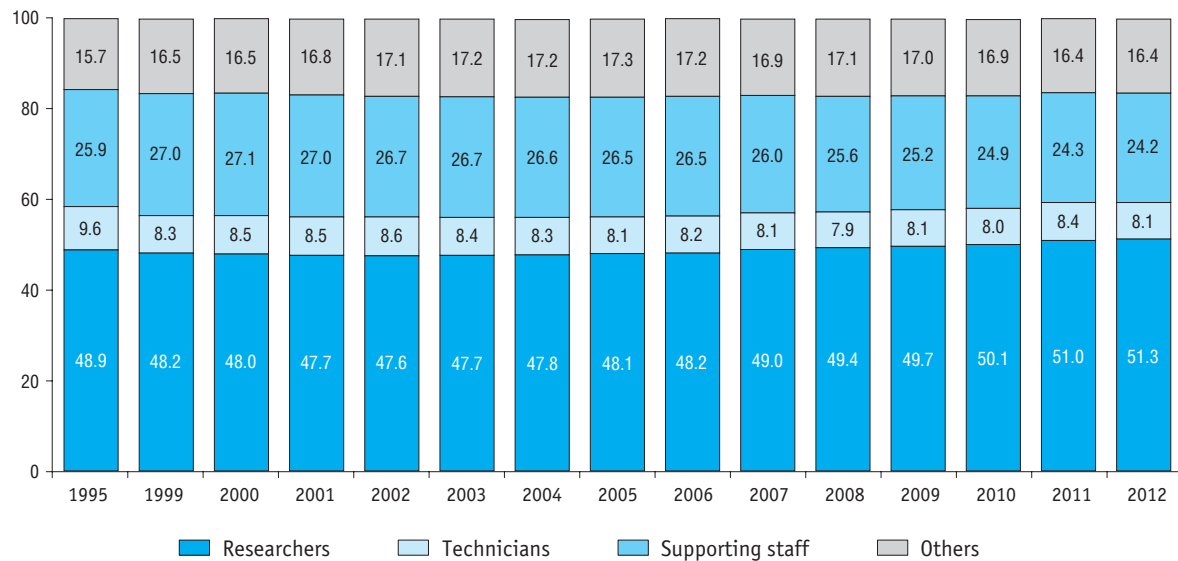
	1995	2000	2002	2003	2004	2005*	2006*	2007*	2008*	2009*	2010*	2011*	2012*
Total	1061044	887729	870878	858470	839338	813207	807066	801135	761252	742433	736540	735273	726318
Research institutes	753253	718434	719876	716362	700308	510523	499856	474985	454938	443702	435304	420031	430677
Design organisations	129689	56488	51627	42138	41713	184785	172521	179862	167517	163764	157146	159620	138295
Construction project and exploration organisations	20870	6811	7480	6583	6261	5443	7356	8406	7446	6738	6324	6466	6772
Experimental enterprises	13640	6145	7056	6870	4605	1232	6696	3528	1544	1588	1558	1817	2330
Higher education institutions	40015	31110	31053	31774	32105	33942	35179	40440	40003	41767	46776	53944	53586
Industrial enterprises	89030	54721	42446	43657	42192	43524	59856	56759	52042	49042	51807	52004	52071
Others	14547	14020	11340	11086	12154	33758	25602	37155	37762	35832	37625	41391	42587

* In 2005, the classification of types of R&D institutions was changed due to the abolition of the 'Russian Classifier of Economy Branches'.

2.2. R&D PERSONNEL BY OCCUPATION (head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	1061044	887729	870878	858470	839338	813207	807066	801135	761252	742433	736540	735273	726318
Researchers	518690	425954	414676	409775	401425	391121	388939	392849	375804	369237	368915	374746	372620
Technicians	101371	75184	74599	71729	69963	65982	66031	64569	60218	60045	59276	61562	58905
Supporting staff	274925	240506	232636	229214	223356	215555	213579	208052	194769	186995	183713	178494	175790
Others	166058	146085	148967	147752	144594	140549	138517	135665	130461	126156	124636	120471	119003

2.3. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL BY OCCUPATION



2.4. R&D PERSONNEL BY OWNERSHIP OF R&D INSTITUTIONS

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Head-count													
Total	1061044	887729	870878	858470	839338	813207	807066	801135	761252	742433	736540	735273	726318
Russian ownership	1060480	866386	853468	841901	822749	797394	792009	785560	746412	734405	726234	723642	715691
Public ownership	816799	673658*	664944	663943	646727	641310	631694	622602	595458	585675	575035	559339	536212
Federal	795299	657696	651940	652364	635449	629207	621732	610145	584117	574697	564238	547922	525200
Provincial	21500	15957	13004	11579	11278	12103	9855	11979	10861	10503	10450	11355	10947
Municipal ownership	738	725	121	147	85	77	189	207	186	180	170	229	142
Ownership of voluntary associations	1036	1207	365	272	208	231	304	376	460	474	512	531	600
Private ownership	26238	53408	65536	64868	62862	58480	73478	79876	73509	69167	66906	74795	73260
Ownership of Russian citizens permanently living abroad	...	...	...	...	...	...	...	...	...	...	...	23	25
Ownership of consumer cooperatives**	...	16	13	11	27	27	24	10	10	253	268	308	2
Joint ownership	215669	137372	122489	112660	112840	97269	86320	82489	76789	78656	78464	78756	82862
Joint ownership with a part of public ownership	...	...	...	...	...	...	...	...	...	...	66574	65362	59406
Other	...	...	...	...	...	...	...	...	...	...	...	13394	23456
Ownership of state corporations	...	...	...	...	...	...	...	...	...	...	4879	9661	22588
Foreign ownership	—	146	159	468	337	1145	624	835	699	553	1130	1358	1233
Joint ownership (with both Russian and foreign participation)	564	21197	17251	16101	16252	14668	14433	14740	14141	7475	9176	10273	9394

(continued)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Per cent												
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Russian ownership	99.9	97.6	98.0	98.1	98.0	98.1	98.1	98.1	98.1	98.9	98.6	98.4	98.5
Public ownership	77.0	75.9	76.4	77.3	77.1	78.9	78.3	77.7	78.2	78.9	78.1	76.1	73.8
Federal	75.0	74.1	74.9	76.0	75.7	77.4	77.0	76.2	76.7	77.4	76.6	74.5	72.3
Provincial	2.0	1.8	1.5	1.3	1.3	1.49	1.2	1.5	1.4	1.4	1.4	1.5	1.5
Municipal ownership	0.07	0.08	0.01	0.02	0.01	0.01	0.02	0.03	0.02	0.02	0.02	0.03	0.02
Ownership of voluntary associations	0.1	0.1	0.04	0.03	0.02	0.028	0.04	0.05	0.1	0.1	0.1	0.1	0.1
Private ownership	2.5	6.0	7.5	7.6	7.5	7.19	9.1	10.0	9.7	9.3	9.1	10.2	10.1
Ownership of Russian citizens permanently living abroad	...	...	...	...	...	...	...	...	...	...	...	0.003	0.003
Ownership of consumer cooperatives**	...	0.002	0.001	0.001	0.003	0.003	0.003	0.001	0.001	0.03	0.04	0.04	0.0
Joint ownership	20.3	15.5	14.1	13.1	13.4	11.96	10.7	10.3	10.1	10.6	10.7	10.7	11.4
Joint ownership with a part of public ownership	...	...	...	...	...	...	...	...	...	...	9.0	8.9	8.2
Other	...	...	...	...	...	...	...	...	...	...	...	1.8	3.2
Ownership of state corporation	...	...	...	...	...	...	...	...	...	...	0.7	1.3	3.1
Foreign ownership	–	0.02	0.02	0.05	0.04	0.14	0.08	0.1	0.1	0.1	0.2	0.2	0.2
Joint ownership (with both Russian and foreign participation)	0.05	2.4	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.0	1.2	1.4	1.3

* Details may not add up to the total because of shared ownership at some institutions.

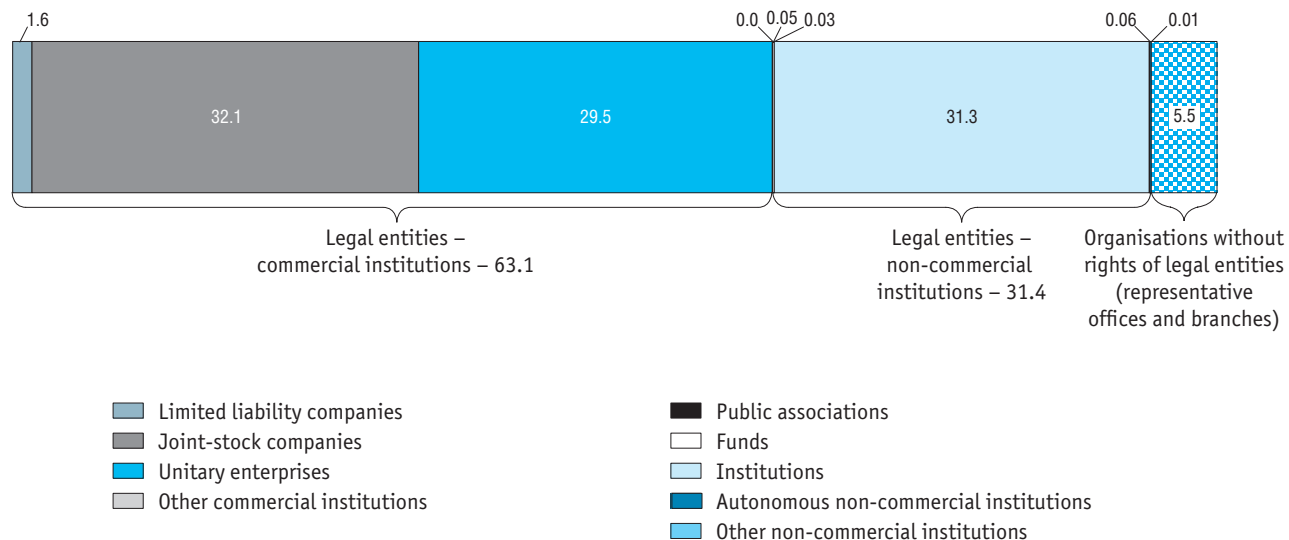
** Until 2000, registered within institutions of private and joint Russian ownership.

2.5. R&D PERSONNEL BY ORGANISATIONAL AND LEGAL FORM OF INSTITUTIONS: 2012

(head-count)

Total	726318		
Legal entities – commercial institutions	446666	Legal entities – non-commercial institutions	235606
Economic partnerships and associations	286841	Public and religious associations	427
Limited liability companies	12130	Funds	170
Additional liability companies	3	Institutions	234002
Joint-stock companies	274708	Private institutions	1101
Open joint-stock companies	260628	Public institutions	222270
Closed joint-stock companies	14080	Autonomous institutions	7349
Unitary enterprises	159825	Public establishments	3282
Unitary enterprises based on the operative administration law	4957	Non-commercial partnerships	46
Unitary enterprises based on the economic management law	154868	Autonomous non-commercial institutions	913
		Associations of legal entities	30
		Other non-commercial institutions	18
		Organisations without rights of legal entities (representative offices and branches)	44046

2.6. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL BY ORGANISATIONAL AND LEGAL FORM OF INSTITUTIONS: 2012



2.7. R&D PERSONNEL BY ECONOMIC ACTIVITY

(head-count)

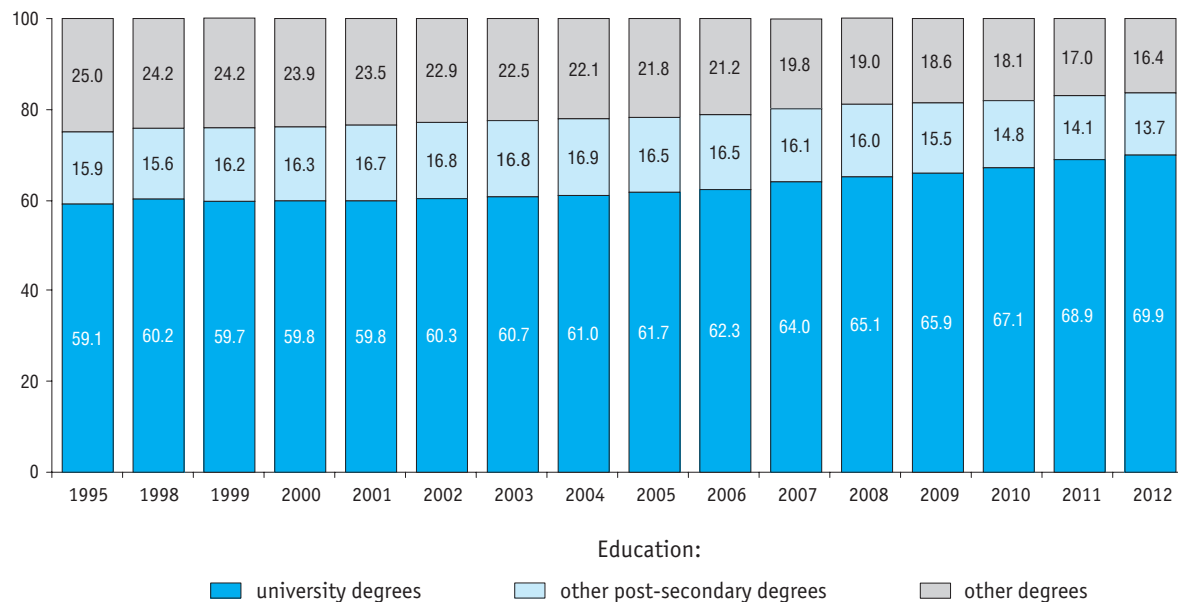
	R&D personnel			Researchers		
	2010	2011	2012	2010	2011	2012
Total	736540	735273	726318	368915	374791	372620
Agriculture, hunting and forestry	1131	940	1018	457	339	348
Fishing, aquaculture and service activities incidental to fishing	1	—	—	—	—	—
Mining and quarrying	66	64	29	64	62	28
Manufacturing	34661	36605	42708	18474	20892	24885
Electricity, gas and water supply	22	20	—	9	9	—
Construction	—	—	105	—	—	51
Hotels and restaurants	—	—	715	—	—	571
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	—	7	—	—	7	—
Transport and communications	318	410	1191	200	253	689
Real estate, renting and business activities	644893	633901	614147	310354	309006	299697
Research and development	635059	623807	601598	304081	302371	291425
Other business activities	6997	7500	8611	4410	4913	5785
Public administration and defence; compulsory social security	—	—	—	—	—	—
Education	47257	54386	56823	35172	39971	42113
Higher education	47180	54266	56642	35113	39861	41951
Health and social services	2819	2781	2900	1557	1549	1639
Other community, social and personal service activities	5371	6159	6682	2628	2703	2599
Recreational, cultural and sporting activities	5354	6142	6667	2615	2691	2586

2.8. R&D PERSONNEL BY EDUCATIONAL ATTAINMENT

(head-count)

	Total	Higher education	Secondary vocational education	Other
1995	1061044	626979	168999	265066
1996	990743	589480	156762	244501
1997	934637	559118	147149	228370
1998	855190	514539	133287	207364
1999	872363	520438	141220	210705
2000	887729	530649	144503	212577
2001	885568	529905	147604	208059
2002	870878	525145	146052	199681
2003	858470	521137	144197	193136
2004	839338	511778	141682	185878
2005	813207	501718	134222	177267
2006	807066	502657	133454	170955
2007	801135	513099	129360	158676
2008	761252	495255	121508	144489
2009	742433	489076	115042	138315
2010	736540	493852	109158	133530
2011	735273	506330	103873	125070
2012	726318	508057	99503	118758

2.9. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL BY EDUCATIONAL ATTAINMENT



2.10. PERSONNEL WORKING PART-TIME AND ON CONTRACTS BY CATEGORY

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Head-count													
Total	225224	182068	179429	172222	165680	159337	169852	177164	172639	165274	163774	165953	168468
Researchers	133818	118693	116472	115589	111588	108335	116686	122825	119285	114454	114486	116263	117594
Technicians	19915	12756	14701	13826	13737	12390	12949	13384	14428	12845	13459	13012	14705
Supporting staff	39344	27296	26869	23839	22239	20895	22546	21985	21083	19142	18761	18987	18334
Others	32147	23323	21387	18968	18116	17717	17671	18970	17843	18833	17068	17691	17835
Per cent													
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Researchers	59.4	65.2	64.9	67.1	67.4	68.0	68.7	69.3	69.1	69.3	69.9	70.1	69.8
Technicians	8.8	7.0	8.2	8.0	8.3	7.8	7.6	7.6	8.4	7.8	8.2	7.8	8.7
Supporting staff	17.5	15.0	15.0	13.8	13.4	13.1	13.3	12.4	12.2	11.6	11.5	11.4	10.9
Others	14.3	12.8	11.9	11.0	10.9	11.1	10.4	10.7	10.3	11.4	10.4	10.7	10.6

2.11. RESEARCHERS BY GENDER AND AGE GROUP

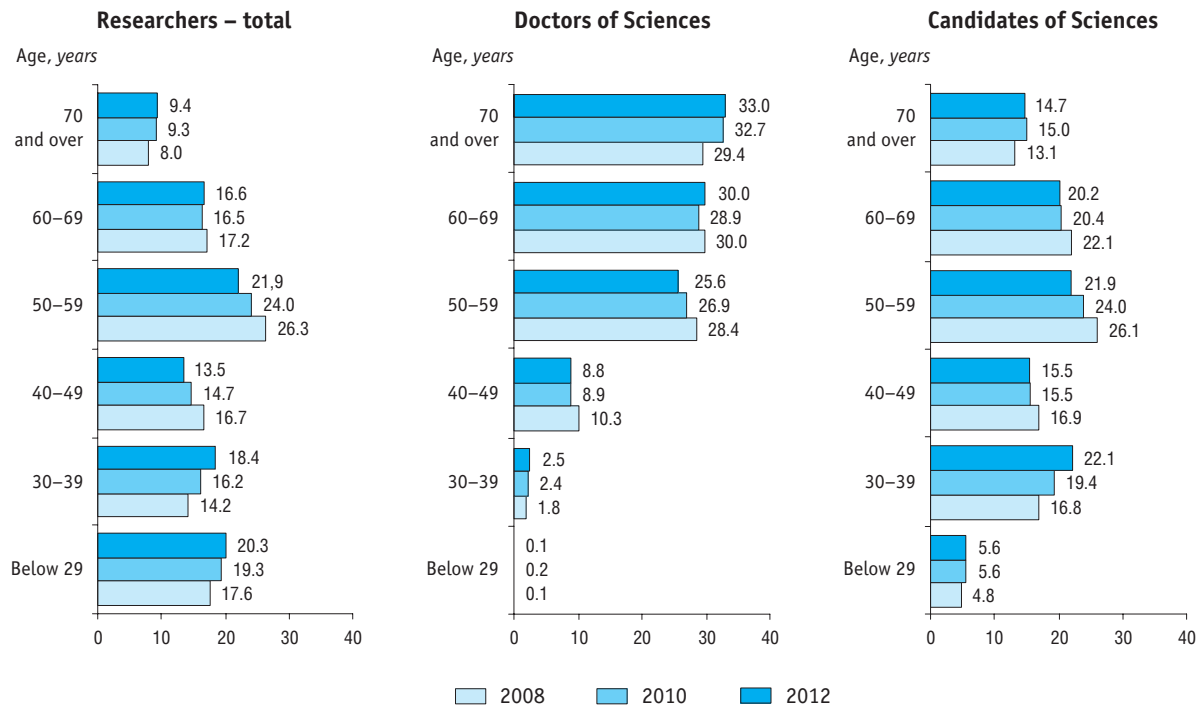
(head-count)

	2010			2011			2012		
	Researchers	Of whom		Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Total	368915	26789	78325	374746	27675	81818	372620	27784	81546
Age, years:									
below 29	71194	52	4354	75612	28	4894	75498	26	4584
30–39	59910	632	15229	64970	719	17503	68415	692	18052
40–49	54113	2394	12157	52168	2514	12734	50122	2444	12640
50–54	42853	3086	8807	41291	3129	8734	39622	3018	8506
55–59	45509	4125	9998	43958	4141	9671	41990	4097	9325
60–69	60997	7743	16001	61173	7935	16004	61863	8337	16464
70 and over	34339	8757	11779	35574	9209	12278	35110	9170	11975
Male	215052	20676	47427	219456	20968	48811	218926	20843	48211
Age, years:									
below 29	43973	47	2708	46893	21	2999	47021	21	2765
30–39	34132	450	8185	37374	483	9133	39858	483	9461
40–49	27271	1637	6432	26426	1666	6516	25425	1582	6306
50–54	22601	2237	5152	21676	2183	5105	20681	2083	4904
55–59	25191	3036	6339	24235	2959	6048	23135	2867	5739
60–69	37253	6263	10609	37305	6308	10644	37714	6490	10923
70 and over	24631	7006	8002	25547	7348	8366	25092	7317	8113

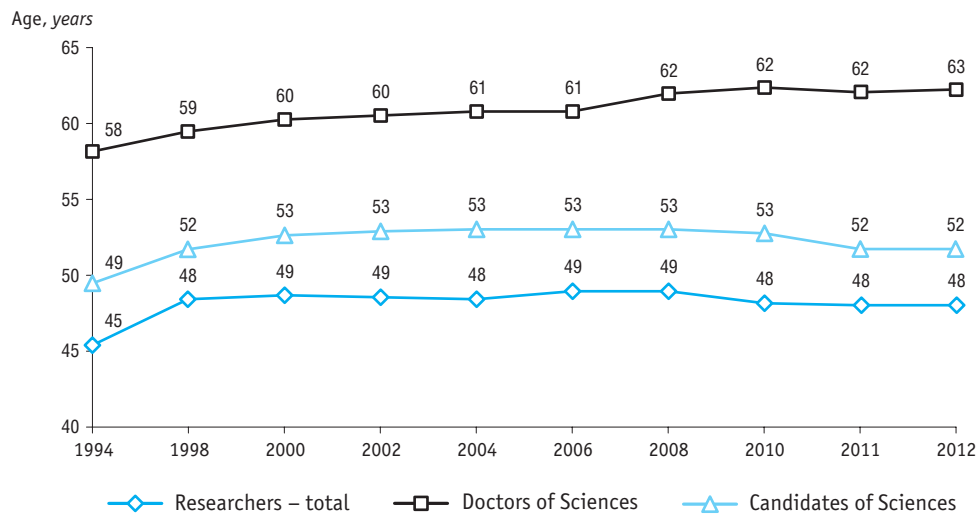
(continued)

	2010			2011			2012		
	Researchers	Of which		Researchers	Researchers		Of which	Researchers	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Female	153863	6113	30898	155290	6707	33007	153694	6941	33335
<i>Age, years:</i>									
below 29	27221	5	1646	28719	7	1895	28477	5	1819
30–39	25778	182	7044	27596	236	8370	28557	209	8591
40–49	26842	757	5725	25742	848	6218	24697	862	6334
50–54	20252	849	3655	19615	946	3629	18941	935	3602
55–59	20318	1089	3659	19723	1182	3623	18855	1230	3586
60–69	23744	1480	5392	23868	1627	5360	24149	1847	5541
70 and over	9708	1751	3777	10027	1861	3912	10018	1853	3862

2.12. PERCENTAGE DISTRIBUTION OF RESEARCHERS BY AGE GROUP



2.13. AVERAGE AGE OF RESEARCHERS

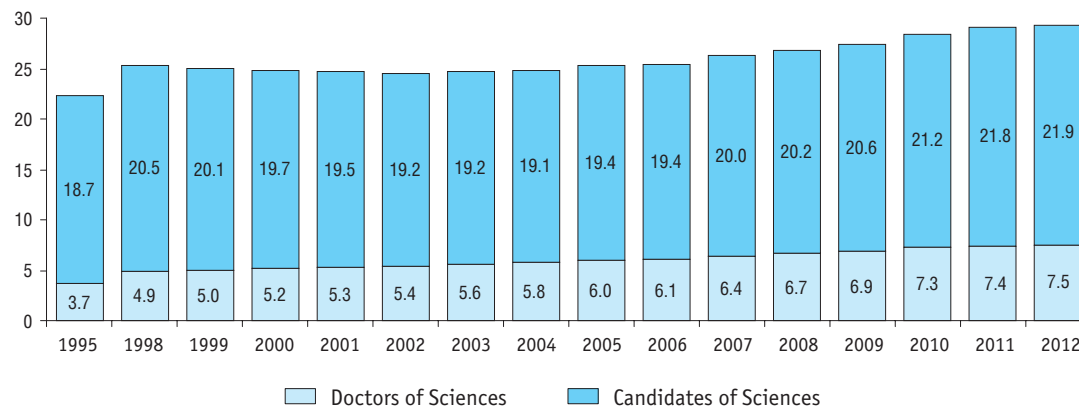


2.14. RESEARCHERS WITH SCIENTIFIC DEGREES

(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Researchers with scientific degrees	116465	105911	102346	101806	99910	99428	99507	103725	101049	101275	105114	109493	109330
Doctors of Sciences	19330	21949	22571	22936	23102	23410	23880	25213	25140	25295	26789	27675	27784
Candidates of Sciences	97135	83962	79775	78870	76808	76018	75627	78512	75909	75980	78325	81818	81546

2.15. RESEARCHERS WITH SCIENTIFIC DEGREES AS A PERCENTAGE OF THE TOTAL NUMBER OF RESEARCHERS



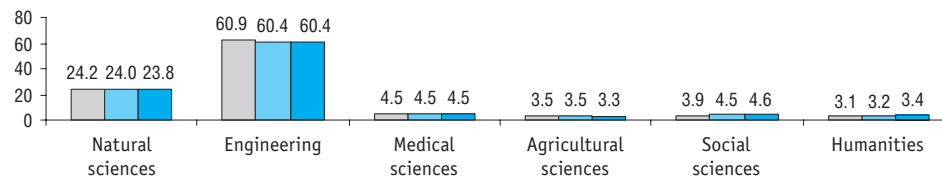
2.16. RESEARCHERS BY FIELD OF SCIENCE AND TECHNOLOGY

(head-count)

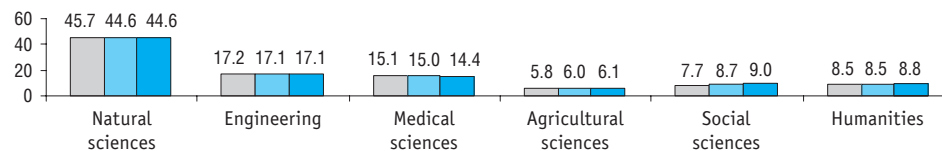
	2005			2009			2010			2011			2012		
	Research- ers	Of whom		Research- ers	Of whom		Research- ers	Of whom		Research- ers	Of whom		Research- ers	Of whom	
		Doctors of Sciences	Candida- tes of Sciences		Doctors of Sciences	Candida- tes of Sciences		Doctors of Sciences	Candida- tes of Sciences		Doctors of Sciences	Candida- tes of Sciences		Doctors of Sciences	Candida- tes of Sciences
Total	391121	23410	76018	369237	25295	75980	368915	26789	78325	374746	27675	81818	372620	27784	81546
Natural sciences	91570	10738	32969	89856	11520	32692	89375	12251	33664	89733	12345	34289	88704	12397	34068
Engineering	249358	4495	23677	227403	4612	21851	224641	4620	21260	226492	4737	21740	225118	4757	21325
Medical sciences	15672	3715	6791	16652	3988	7552	16516	4045	7475	16793	4158	7536	16595	4001	7200
Agricultural sciences	13724	1356	4922	13217	1547	5006	12734	1542	5004	12933	1663	5248	12288	1688	5038
Social sciences	12497	1336	4158	13272	1706	4982	14347	2057	5861	16967	2410	7573	17284	2501	7941
Humanities	8300	1770	3501	8837	1922	3897	11302	2274	5061	11828	2362	5432	12631	2440	5974

2.17. PERCENTAGE DISTRIBUTION OF RESEARCHERS BY FIELD OF SCIENCE AND TECHNOLOGY

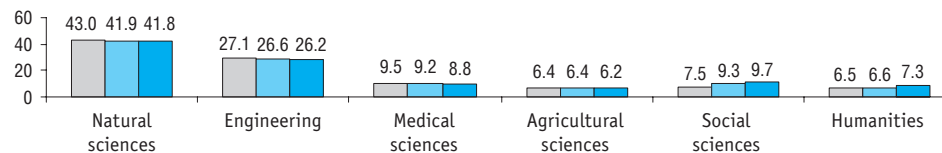
Researchers – total



Doctors of Sciences



Candidates of Sciences

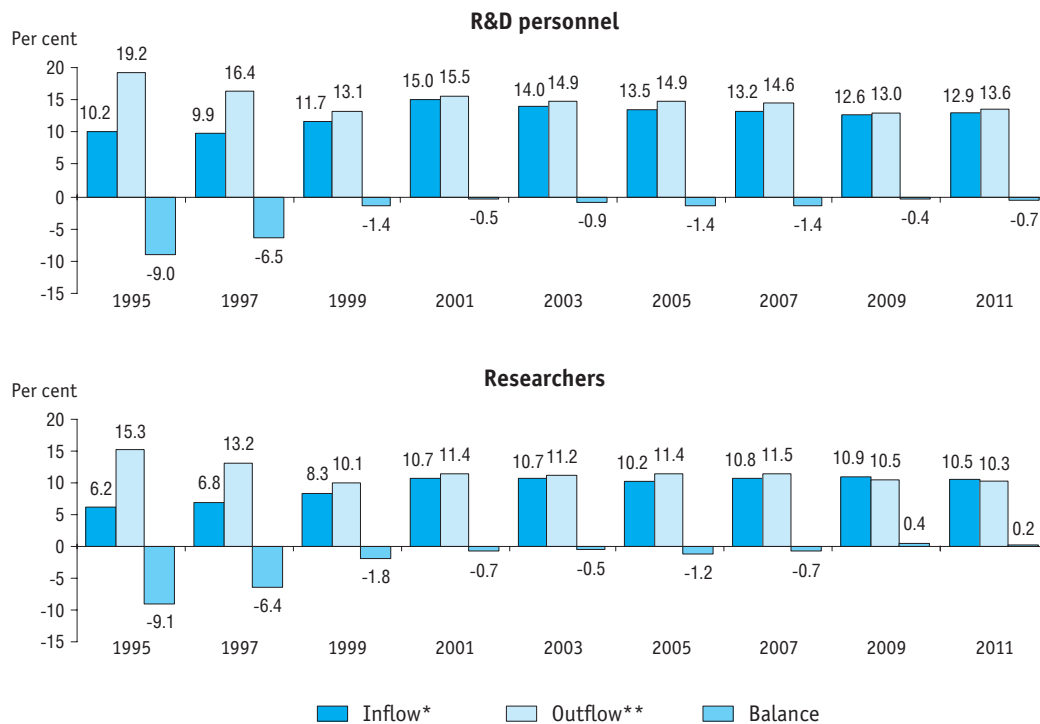


2010 2011 2012

2.18. FLOWS OF R&D PERSONNEL (head-count)

	Number at the beginning of the reference year	Inflow				Outflow				Number at the end of the reference year
		Total	Graduates from higher education institutions	From other research institutes	Others	Total	Voluntary turnover	Due to staff reduction	For other reasons	
1995	1179294	108335	6498	23402	78435	226585	141776	29747	55062	1061044
1996	1075752	92905	6447	19628	66830	177914	105992	24820	47102	990743
1997	1007043	92587	6433	17368	68786	164993	97163	26950	40880	934637
1999	886477	101951	9393	17956	74602	115978	72764	9516	33698	872363
2001	890718	132757	14122	21549	97086	137932	93587	3542	40803	885568
2003	867456	120298	13777	20702	85819	129284	89513	5917	33854	858470
2005	826007	109973	13495	15618	80860	122773	81623	6598	34552	813207
2007	814329	105758	14150	19778	71830	118952	80536	4617	33799	801135
2009	745978	93526	13235	13529	66762	97071	58295	5776	33000	742433
2011	741183	94939	13725	11881	69333	100849	62848	2973	35028	735273

2.19. TRENDS IN INFLOW AND OUTFLOW OF R&D PERSONNEL

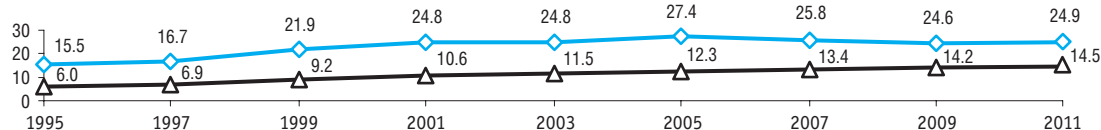


* The ratio of the R&D personnel admitted during the year to the number of employees at the end of the year.

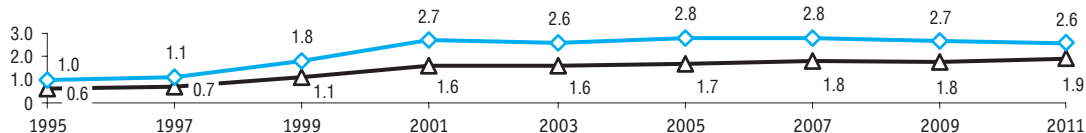
** The ratio of the R&D personnel having resigned during the year to the number of employees at the beginning of the year.

2.20. INFLOW OF HIGHER EDUCATION GRADUATES TO R&D INSTITUTIONS

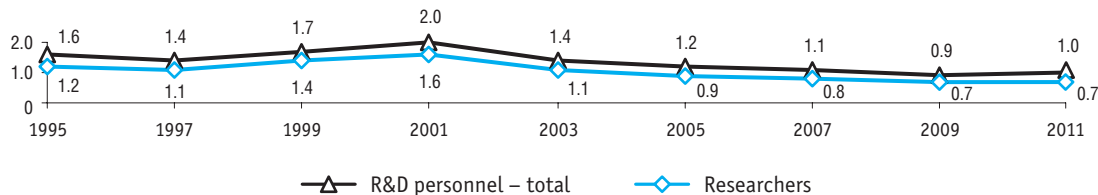
Higher education graduates as a percentage of the inflow to R&D institutions



Higher education graduates as a percentage of R&D personnel*



Inflow of higher education graduates to R&D institutions as a percentage of total higher education graduates**



—△— R&D personnel – total —◇— Researchers

* The ratio of the higher education graduates admitted during the year to the number of employees at the end of the year.

** Including private higher education institutions.

2.21. R&D PERSONNEL TURNOVER

	1995	1996	1997	1999	2001	2003	2005	2007	2009	2011
R&D personnel turnover ratio, by inflow*	0.099	0.093	0.098	0.119	0.152	0.142	0.138	0.135	0.131	0.135
R&D personnel turnover ratio, by outflow**	0.207	0.177	0.175	0.135	0.158	0.153	0.154	0.152	0.136	0.144
Workforce replacement ratio***	0.478	0.522	0.561	0.879	0.962	0.930	0.896	0.889	0.963	0.941

* The ratio of the R&D personnel admitted during the year to the average number of employees.

** The ratio of the R&D personnel having resigned during the year to the average number of employees.

*** The ratio of persons hired during the year to the number of persons having retired during the same period.

Postgraduate education

2.22. MAIN INDICATORS OF POSTGRADUATE COURSES' ACTIVITIES

	Number of institutions (at the end of the year)	Enrolment, head-count (at the end of the year)	Entrants, head-count	Graduates, head-count	Of whom with defended dissertations, head-count
Total					
1995	1334	62317	24025	11369	2609
1998	1338	98355	34351	17972	4691
1999	1357	107031	37666	21982	5953
2000	1362	117714	43100	24828	7503
2001	1393	128420	45241	25696	6172
2002	1416	136242	46935	28101	7411
2003	1441	140741	47803	30799	8378
2004	1452	142662	47687	32595	10256
2005	1473	142899	46896	33561	10650
2006	1493	146111	50462	35530	11893
2007	1490	147719	51633	35747	10970
2008	1529	147674	49638	33670	8831
2009	1547	154470	55540	34235	10770
2010	1568	157437	54558	33763	9611
2011	1570	156279	50582	33082	9635
2012	1575	146754	45556	35162	9195

(continued)

	Number of institutions (at the end of the year)	Enrolment, head-count (at the end of the year)	Entrants, head-count	Graduates, head-count	Of whom with defended dissertations, head-count
Research institutes					
1995	828	11488	4024	2814	596
1998	800	15771	5411	3140	665
1999	804	15420	5322	3516	691
2000	797	17502	6075	3813	873
2001	806	17784	6092	3859	685
2002	818	18323	6026	4205	851
2003	827	18959	6335	4336	841
2004	831	19654	6620	4656	1002
2005	833	19986	6577	4806	1009
2006	820	19542	6330	4865	852
2007	799	18346	6072	4847	895
2008	811	17397	5381	4781	715
2009	800	16549	5549	4359	734
2010	809	16936	5655	4335	729
2011	805	15865	4784	4028	693
2012	820	14823	4555	4101	655

(continued)

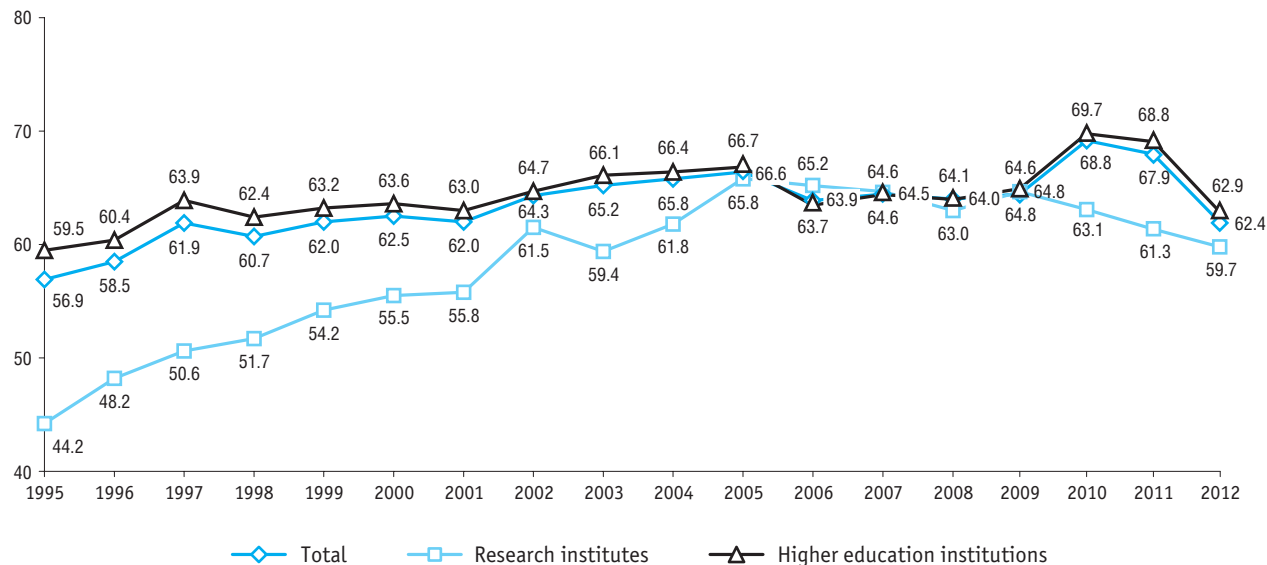
	Number of institutions (at the end of the year)	Enrolment, head-count (at the end of the year)	Entrants, head-count	Graduates, head-count	Of whom with defended dissertations, head-count
Higher education institutions					
1995	506	50829	20001	8555	2013
1998	538	82584	28940	14832	4026
1999	553	91611	32344	18466	5262
2000	565	100212	37025	21015	6630
2001	587	110636	39149	21837	5487
2002	598	117919	40909	23896	6560
2003	614	121782	41468	26463	7537
2004	621	123008	41067	27939	9254
2005	640	122913	40319	28755	9641
2006	673	126569	44132	30665	11041
2007	691	129373	45561	30900	10075
2008	718	130277	44257	28889	8116
2009	730	137068	49736	29678	9996
2010	748	139908	48748	29268	8854
2011	750	139542	45561	28847	8869
2012	740	131226	40802	30885	8480
Institutions for non-formal education/training					
2009	17	853	255	198	40
2010	11	593	155	160	28
2011	15	872	237	207	73
2012	15	705	199	176	60

2.23. ADMISSION OF HIGHER EDUCATION GRADUATES TO POSTGRADUATE COURSES BY ATTENDANCE STATUS

(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	13673	26926	30178	31168	31371	31211	32232	33341	31756	35855	37528	34326	28411
Full-timers	11215	22076	24674	24956	25621	25535	26022	27210	24827	28487	28507	24754	21528
Part-timers	2458	4850	5504	6212	5750	5676	6210	6131	6929	7368	9021	9572	6883
Research institutes	1777	3370	3705	3763	4090	4328	4124	3918	3391	3595	3569	2933	2718
Full-timers	1340	2677	2825	2987	3169	3439	3262	3167	2723	2896	2877	2379	2226
Part-timers	437	693	880	776	921	889	862	751	668	699	692	554	492
Higher education institutions	11896	23556	26473	27405	27281	26883	28108	29423	28365	32223	33955	31356	25671
Full-timers	9875	19399	21849	21969	22452	22096	22760	24043	22104	25564	25628	22347	19298
Part-timers	2021	4157	4624	5436	4829	4787	5348	5380	6261	6659	8327	9009	6373
Institutions for non-formal education/ training	—	—	—	—	—	—	—	—	—	37	4	37	22
Full-timers	—	—	—	—	—	—	—	—	—	27	2	28	4
Part-timers	—	—	—	—	—	—	—	—	—	10	2	9	18

2.24. HIGHER EDUCATION GRADUATES AS A PERCENTAGE OF POSTGRADUATE COURSES' ADMISSION TOTAL*



* Graduates of the reference year. Data on admission to institutions for non-formal education/training: 2009 – 14.5%, 2010 – 2.6%, 2011 – 15.6%, 2012 – 11.1%.

2.25. POSTGRADUATE COURSES' STUDENTS BY GENDER

(head-count)

	Enrolment (at the end of the year)			Entrants			Graduates			Of whom with defended dissertations		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
2005												
Total	142899	81147	61752	46896	28825	18071	33561	19222	14339	10650	5571	5079
Research institutes	19986	11933	8053	6577	4267	2310	4806	3034	1772	1009	555	454
Higher education institutions	122913	69214	53699	40319	24558	15761	28755	16188	12567	9641	5016	4625
2008												
Total	147674	81801	65873	49638	28257	21381	33670	19938	13732	8831	4550	4281
Research institutes	17397	9981	7416	5381	3177	2204	4781	3020	1761	715	401	314
Higher education institutions	130277	71820	58457	44257	25080	19177	28889	16918	11971	8116	4149	3967
2009												
Total	154470	83619	70851	55540	31518	24022	34235	20182	14053	10770	5617	5153
Research institutes	16549	9429	7120	5549	3301	2248	4359	2717	1642	734	402	332
Higher education institutions	137068	73945	63123	49736	28153	21583	29678	17383	12295	9996	5198	4798
Institutions for non-formal education/training	853	245	608	255	64	191	198	82	116	40	17	23

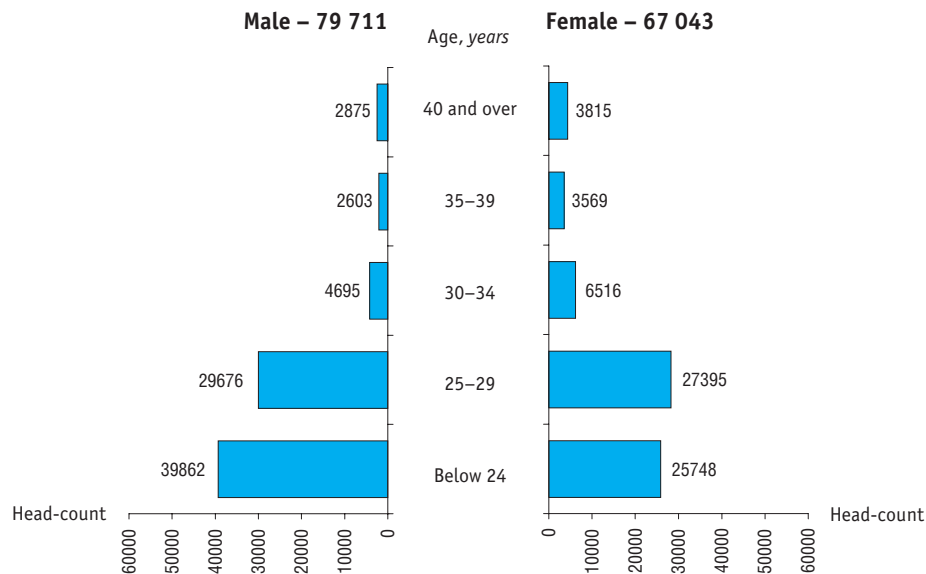
(continued)

	Enrolment (at the end of the year)			Entrants			Graduates			Of whom with defended dissertations		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
2010												
Total	157437	84672	72765	54558	31451	23107	33763	19838	13925	9611	5114	4497
Research institutes	16936	9411	7525	5655	3339	2316	4335	2659	1676	729	407	322
Higher education institutions	139908	75089	64819	48748	28064	20684	29268	17117	12151	8854	4691	4163
Institutions for non-formal education/training	593	172	421	155	48	107	160	62	98	28	16	12
2011												
Total	156279	84621	71658	50582	29067	21515	33082	18681	14401	9635	4925	4710
Research institutes	15865	8916	6949	4784	2790	1994	4028	2399	1629	693	349	344
Higher education institutions	139542	75499	64093	45561	26161	19400	28847	16222	12625	8869	4548	4321
Institutions for non-formal education/training	872	256	616	237	116	121	207	60	147	73	28	45

(continued)

	Enrolment (at the end of the year)			Entrants			Graduates			Of whom with defended dissertations		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
2012												
Total	146754	79711	67043	45556	26368	19188	35162	19746	15416	9195	4687	4508
Research institutes	14823	8411	6412	4555	2775	1780	4101	2469	1632	655	328	327
Higher education institutions	131226	71117	60109	40802	23530	17272	30885	17220	13665	8480	4337	4143
Institutions for non-formal education/training	705	183	522	199	63	136	176	57	119	60	22	38

2.26. POSTGRADUATE COURSES' STUDENTS BY GENDER AND AGE GROUP: 2012 (at the end of the year)



2.27. POSTGRADUATE COURSES' STUDENTS BY FIELD OF SCIENCE AND TECHNOLOGY

(head-count)

	Enrolment (at the end of the year)		Entrants		Graduates		Of whom with defended dissertations	
	2011	2012	2011	2012	2011	2012	2011	2012
Total	156279	146754	50582	45556	33082	35162	9635	9195
Physics and Mathematics	8388	7974	2809	2686	1910	2106	476	472
Chemistry	3480	3202	1099	973	806	935	283	259
Biology	7044	6726	2305	2088	1750	1763	469	442
Engineering*	40448	39230	14505	12977	7547	8491	1963	1945
Agriculture**	5171	4858	1723	1476	1074	1188	385	386
History	4559	4240	1412	1250	1003	1074	319	263
Economics	25939	22932	7820	6695	5507	5800	1676	1690
Philosophy	3035	2758	956	828	669	719	209	179
Philology	6640	6323	2002	1871	1509	1516	522	515
Law	11268	10220	3413	3009	2494	2309	555	457
Pedagogics	9821	8959	2898	2682	2084	2202	643	647
Medicine***	11495	11634	3526	3484	2865	2671	1175	1009
Arts	2370	2134	821	588	431	569	46	60
Psychology	3786	3515	1148	1087	735	854	214	193
Sociology	2907	2595	858	780	633	634	180	162
Politics	2082	2036	687	669	497	456	146	101
Earth and related environmental sciences****	6013	5699	2003	1835	1111	1422	256	307
Others	1833	1719	597	578	457	453	118	108

* Including Architecture.

** Including Veterinary.

*** Including Pharmacy.

**** Including Geology, Mineralogy and Geography.

2.28. PERSONS WHOSE CANDIDATE DEGREE AWARDS WERE CONFIRMED BY THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION BY FIELD OF SCIENCE AND TECHNOLOGY

(head-count)

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	11553	23075	25315	26054	30118	30650	30577	24805	24618	24343	22438	20842
Physics and Mathematics	1059	1354	1187	1246	1201	1453	1473	1052	1301	1227	1233	813
Chemistry	462	664	620	681	678	682	766	582	736	657	767	667
Biology	811	1333	1366	1393	1462	1606	1487	1070	1565	1419	1242	1385
Engineering	2563	4781	4334	4050	5125	4804	5277	3366	4410	4025	3930	4084
Agriculture	354	674	667	771	781	757	700	546	717	701	529	332
History	502	829	958	906	1116	1276	1052	707	849	839	628	939
Economics	870	2709	4318	3853	4537	4723	5638	5150	2983	4081	3893	3004
Philosophy	301	550	552	627	662	665	780	511	519	526	486	346
Philology	506	1115	1063	1342	1648	1545	1447	1947	1448	1332	1283	924
Law	250	1084	1459	1820	2300	2336	2221	1629	1597	1445	1195	1427
Pedagogics	734	2167	2295	2367	2794	2746	2658	2413	1931	1912	2084	1406
Medicine	1944	3429	4222	4434	4794	4929	4104	3675	3973	3767	2854	3435
Pharmacy	76	86	89	103	105	110	120	101	93	96	89	126
Veterinary	96	199	243	210	222	208	189	153	188	138	183	144
Arts	81	114	91	158	185	171	178	135	226	172	183	112
Architecture	29	30	37	28	33	33	42	14	43	32	29	31
Psychology	198	508	490	621	730	807	784	553	633	519	516	460
Sociology	144	421	427	582	605	617	547	389	445	415	342	273
Politics	56	202	275	284	349	439	412	330	311	408	410	399
Earth and related environmental sciences*	258	441	363	380	421	421	376	230	373	353	262	282
Other	259	385	259	198	370	322	326	252	277	279	300	253

* Including Geology, Mineralogy and Geography.

2.29. MAIN INDICATORS OF DOCTORAL COURSES' ACTIVITIES

	Institutions (at the end of the year)	Enrolment, head-count (at the end of the year)	Entrants, head-count	Graduates, head-count	Of whom with defended dissertations, head-count
Total					
1995	384	2190	904	464	137
1998	452	3684	1473	821	312
1999	476	3993	1466	1033	356
2000	492	4213	1637	1251	486
2001	510	4462	1630	1257	397
2002	531	4546	1579	1267	411
2003	543	4567	1611	1385	414
2004	533	4466	1567	1451	505
2005	535	4282	1457	1417	516
2006	548	4189	1499	1383	450
2007	579	4109	1520	1320	429
2008	593	4242	1517	1216	297
2009	598	4294	1569	1302	435
2010	602	4418	1650	1259	336
2011	608	4562	1696	1321	382
2012	597	4554	1632	1371	394

(continued)

	Institutions (at the end of the year)	Enrolment, <i>head-count</i> (at the end of the year)	Entrants, <i>head-count</i>	Graduates, <i>head-count</i>	Of whom with defended dissertations, <i>head-count</i>
Research institutes					
1995	167	483	197	128	41
1998	170	446	161	159	55
1999	173	447	182	146	54
2000	178	505	192	151	63
2001	181	485	183	138	38
2002	189	517	194	140	35
2003	195	515	184	154	47
2004	179	481	156	155	52
2005	173	445	147	148	48
2006	178	426	142	139	35
2007	201	358	118	116	33
2008	205	336	111	123	23
2009	204	327	114	107	23
2010	192	299	100	95	20
2011	192	303	106	100	17
2012	183	254	87	99	16

(continued)

	Institutions (at the end of the year)	Enrolment, head-count (at the end of the year)	Entrants, head-count	Graduates, head-count	Of whom with defended dissertations, head-count
Higher education institutions					
1995	217	1707	707	336	96
1998	282	3238	1312	662	257
1999	303	3546	1284	887	302
2000	314	3708	1445	1100	423
2001	329	3977	1447	1119	359
2002	342	4029	1385	1127	376
2003	348	4052	1427	1231	367
2004	354	3985	1411	1296	453
2005	362	3837	1310	1269	468
2006	370	3763	1357	1244	415
2007	378	3751	1402	1204	396
2008	388	3906	1406	1093	274
2009	391	3962	1454	1193	412
2010	407	4116	1548	1162	316
2011	412	4256	1589	1220	365
2012	410	4296	1543	1271	378
Institutions for non-formal education/training					
2009	3	5	1	2	–
2010	3	3	2	2	–
2011	4	3	1	1	–
2012	4	4	2	1	–

2.30. DOCTORAL COURSES' STUDENTS BY GENDER

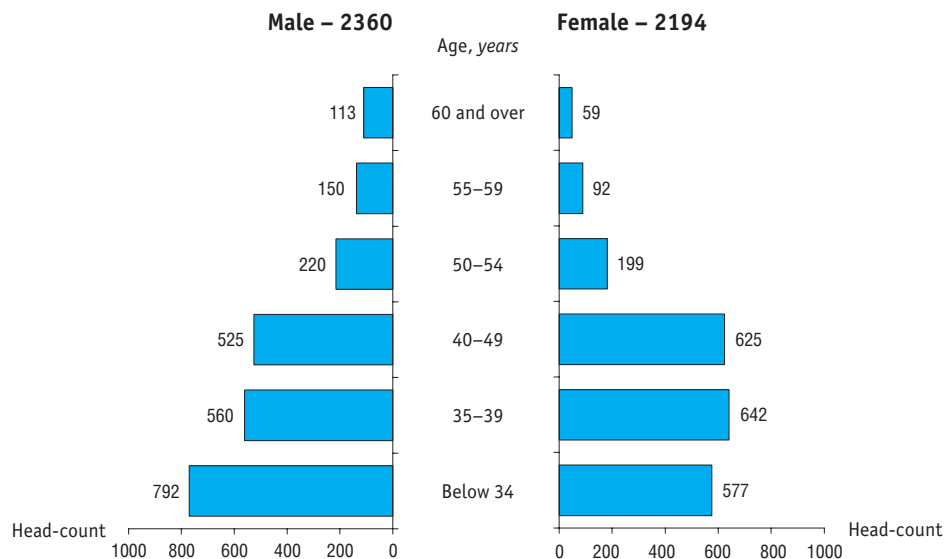
(head-count)

	Enrolment (at the end of the year)			Entrants			Graduates			Of whom with defended dissertations		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
2005												
Total	4282	2357	1925	1457	859	598	1417	1855	562	516	306	210
Research institutes	445	260	185	147	100	47	148	97	51	48	34	14
Higher education institutions	3837	2097	1740	1310	759	551	1269	758	511	468	272	196
2008												
Total	4242	2242	2000	1517	835	682	1216	703	513	297	166	131
Research institutes	336	178	158	111	57	54	123	73	50	23	18	5
Higher education institutions	3906	2064	1842	1406	778	628	1093	630	463	274	148	126
2009												
Total	4294	2276	2018	1569	855	714	1302	715	587	435	213	222
Research institutes	327	168	159	114	54	60	107	57	50	23	16	7
Higher education institutions	3962	2104	1858	1454	801	653	1193	657	536	412	197	215
Institutions for non-formal education / training	5	4	1	1	–	1	2	1	1	–	–	–

(continued)

	Enrolment (at the end of the year)			Entrants			Graduates			Of whom with defended dissertations		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
2010												
Total	4418	2315	2103	1650	887	763	1259	721	538	336	190	146
Research institutes	299	136	163	100	44	56	95	69	26	20	17	3
Higher education institutions	4116	2178	1938	1548	842	706	1162	651	511	316	173	143
Institutions for non-formal education / training	3	1	2	2	1	1	2	1	1	–	–	–
2011												
Total	4562	2358	2204	1696	922	774	1321	747	574	382	207	175
Research institutes	303	140	163	106	53	53	100	49	51	17	5	12
Higher education institutions	4256	2217	2039	1589	869	720	1220	698	522	365	202	163
Institutions for non-formal education / training	3	1	2	1	–	1	1	–	1	–	–	–
2012												
Total	4554	2360	2194	1632	881	751	1371	766	605	394	239	155
Research institutes	254	123	131	87	44	43	99	52	47	16	8	8
Higher education institutions	4296	2236	2060	1543	837	706	1271	714	557	378	231	147
Institutions for non-formal education / training	4	1	3	2	–	2	1	–	1	–	–	–

2.31. DOCTORAL COURSES' STUDENTS BY GENDER AND AGE GROUP: 2012 (at the end of the year)



2.32. DOCTORAL COURSES' STUDENTS BY FIELD OF SCIENCE AND TECHNOLOGY

(head-count)

	Enrolment (at the end of the year)		Entrants		Graduates		Of whom with defended dissertations	
	2011	2012	2011	2012	2011	2012	2011	2012
Total	4562	4554	1696	1632	1321	1371	382	394
Physics and Mathematics	347	318	115	118	87	119	23	30
Chemistry	141	137	54	41	50	39	13	8
Biology	169	156	57	45	55	57	8	5
Engineering*	1234	1262	474	464	345	364	103	112
Agriculture**	108	106	41	34	37	35	11	16
History	206	221	77	79	62	64	12	15
Economics	536	512	201	186	163	169	66	65
Philosophy	165	162	68	52	48	44	9	18
Philology	339	321	112	108	89	104	24	22
Law	117	133	46	50	32	30	13	3
Pedagogics	455	445	171	168	110	129	31	37
Medicine***	276	274	92	90	88	85	25	24
Arts	21	30	8	16	6	4	2	1
Psychology	93	98	39	29	21	25	4	6
Sociology	109	114	44	36	29	28	9	8
Politics	43	63	18	35	28	10	12	4
Earth and related environmental sciences****	122	123	44	53	46	39	10	9
Other	81	79	35	28	25	26	7	11

* Including Architecture.

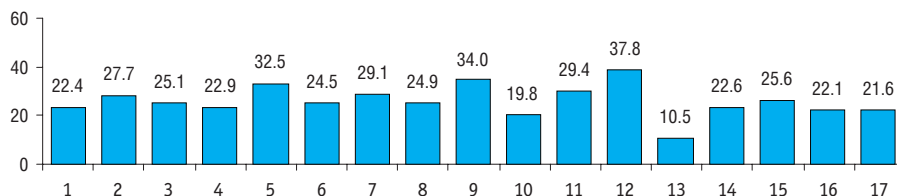
** Including Veterinary.

*** Including Pharmacy.

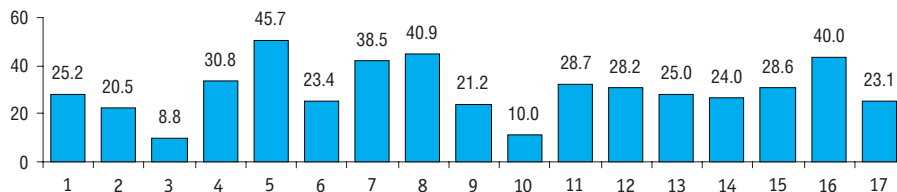
**** Including Geology, Mineralogy and Geography.

2.33. GRADUATES WHO HAVE DEFENDED DISSERTATIONS DURING THE TRAINING TERM AS A PERCENTAGE OF ALL GRADUATES FROM POSTGRADUATE AND DOCTORAL COURSES BY FIELD OF SCIENCE AND TECHNOLOGY: 2012

Postgraduate courses



Doctoral courses



1 – Physics and Mathematics
 2 – Chemistry
 3 – Biology
 4 – Engineering*
 5 – Agriculture**
 6 – History

7 – Economics
 8 – Philosophy
 9 – Philology
 10 – Law
 11 – Pedagogics
 12 – Medicine***

13 – Arts
 14 – Psychology
 15 – Sociology
 16 – Politics
 17 – Earth and related
 environmental sciences****

* Including Architecture.

** Including Veterinary.

*** Including Pharmacy.

**** Including Geology, Mineralogy and Geography.

2.34. PERSONS, WHOSE DOCTOR DEGREE AWARDS WERE CONFIRMED BY THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION BY FIELD OF SCIENCE AND TECHNOLOGY

(head-count)

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	2760	4592	3329	3796	4182	3963	3917	2914	2936	3291	3214	2408
Physics and Mathematics	344	391	259	308	347	313	288	246	264	285	346	173
Chemistry	101	127	96	103	94	117	96	95	85	78	79	85
Biology	174	278	197	246	269	286	270	198	227	221	207	164
Engineering	702	1092	691	708	878	742	755	536	530	580	522	534
Agriculture	92	131	92	122	119	123	112	72	83	95	79	58
History	122	191	113	160	191	163	177	106	118	145	107	113
Economics	156	366	361	416	389	434	535	333	327	474	426	282
Philosophy	86	161	117	115	118	131	146	86	77	120	104	98
Philology	97	224	148	157	179	164	212	160	117	156	212	69
Law	52	109	131	137	165	144	137	94	84	108	85	118
Pedagogics	103	257	254	231	248	196	218	190	160	156	179	71
Medicine	510	855	594	766	793	775	657	562	612	628	580	414
Pharmacy	4	13	10	15	21	14	12	8	9	14	12	9
Veterinary	26	41	19	22	43	32	20	17	22	11	33	13
Arts	21	21	17	25	23	25	25	11	19	18	30	9
Architecture	5	9	5	8	8	6	4	5	2	1	–	–
Psychology	31	64	47	50	44	54	46	29	30	41	39	49
Sociology	15	62	46	55	73	64	55	49	41	34	47	38
Politics	17	43	34	49	44	48	35	24	38	45	50	41
Earth and related environmental sciences*	79	104	70	85	91	97	73	65	50	56	58	31
Other	23	53	28	18	45	35	44	28	41	25	19	39

* Including Geology, Mineralogy and Geography.



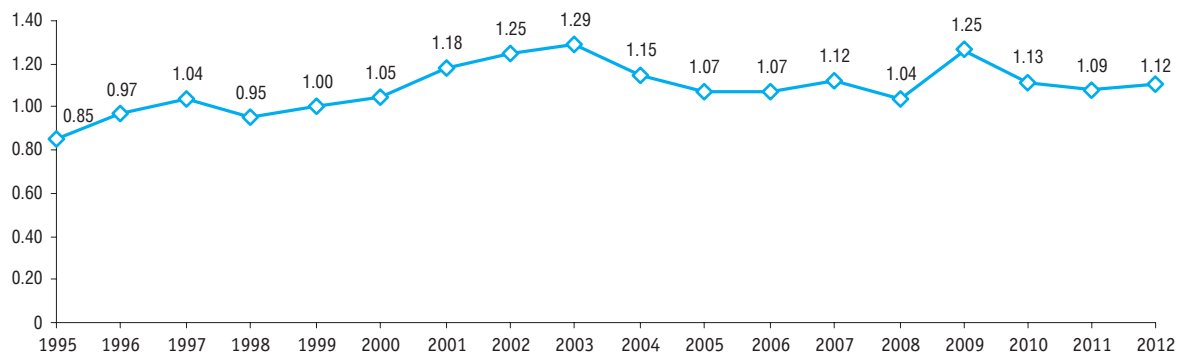
3. R&D Funding

3.1. GROSS DOMESTIC EXPENDITURE ON R&D

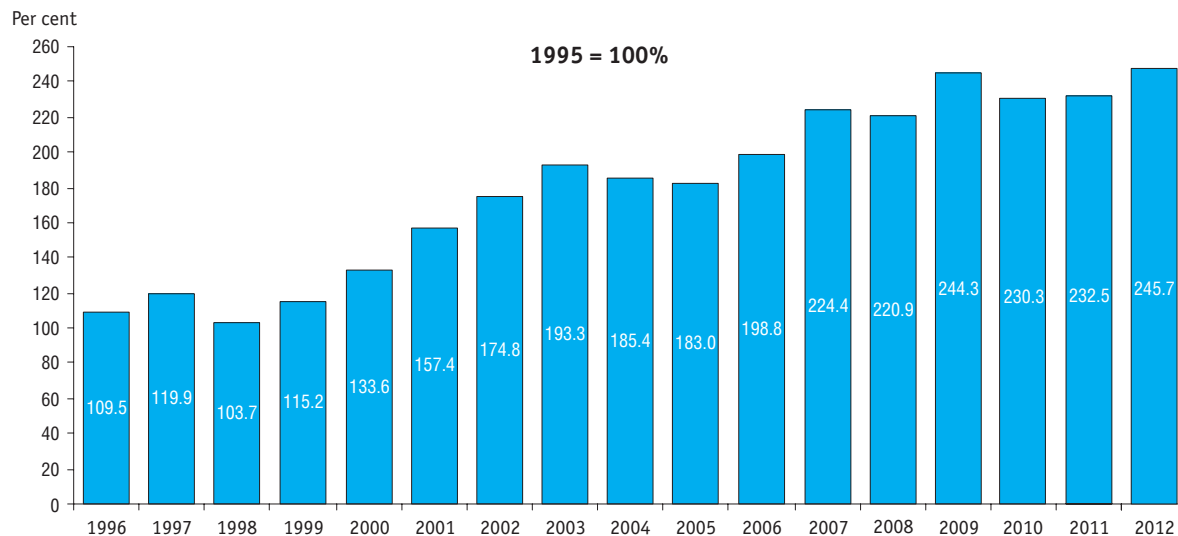
(thousand roubles, before 1998 – million roubles)

	1995	2000	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gross domestic expenditure on R&D:											
at current prices	12149458.6	76697100.5	196039870.2	230785150.3	288805211.5	371080327.1	431073185.2	485834338.2	523377233.9	610426680.6	699869784.8
at constant 1989 prices	2485.4	3321.2	4608.4	4547.5	4939.9	5577.5	5490.8	6067.0	5723.2	5779.3	6107.0

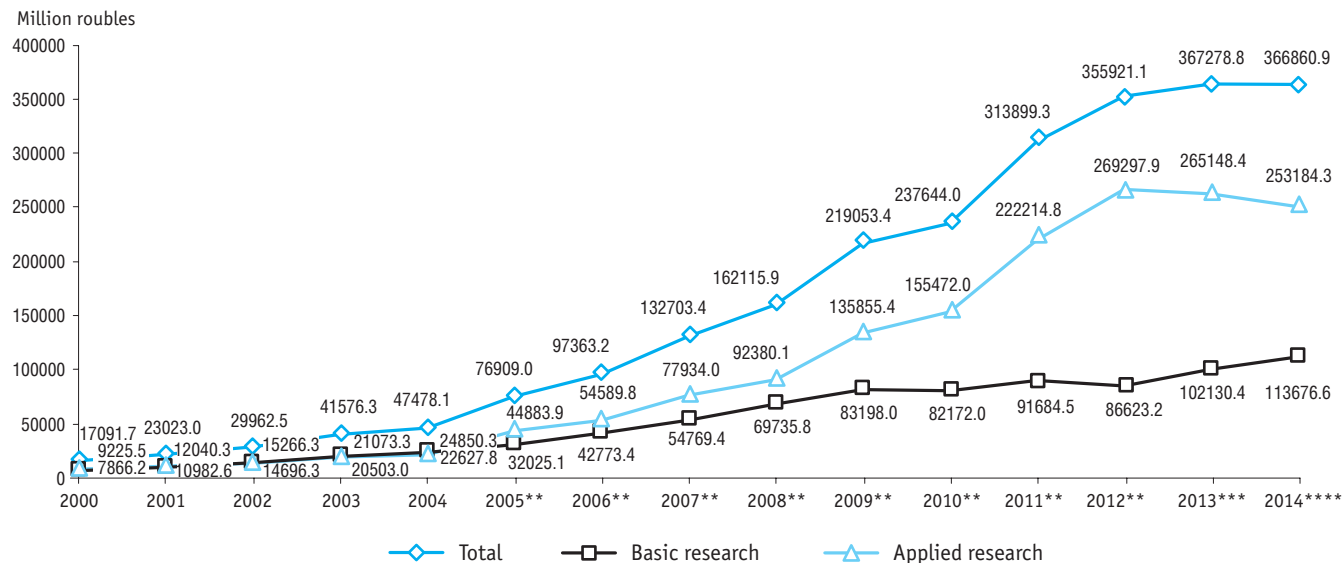
**Gross domestic expenditure on R&D
as a percentage of gross domestic product**



3.2. TRENDS IN GROSS DOMESTIC EXPENDITURE ON R&D (at constant 1989 prices)



3.3. FEDERAL BUDGET APPROPRIATIONS ON CIVIL S&T AT CURRENT PRICES*



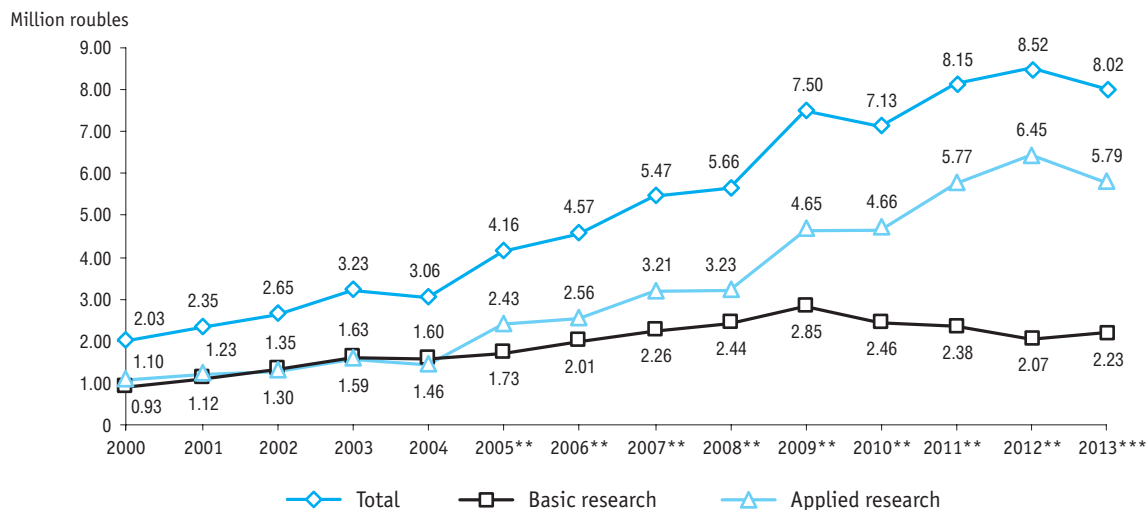
* 2000–2004: appropriations in Section 06 'Basic Research and Promotion of Science and Technology Progress' of the federal budget and its subsections.

** Source for 2005–2011: reports on the implementation of the consolidated budget and budgets of the state non-budget funds (data is provided by the Federal Treasury).

*** According to the Federal law 'About Federal budget for 2013 and for the planned period 2014–2015' (with changes and additions).

**** According to the Federal law 'About Federal budget for 2014 and for the planned period 2015–2016'.

3.4. FEDERAL BUDGET APPROPRIATIONS ON CIVIL S&T AT CURRENT 1991 PRICES*

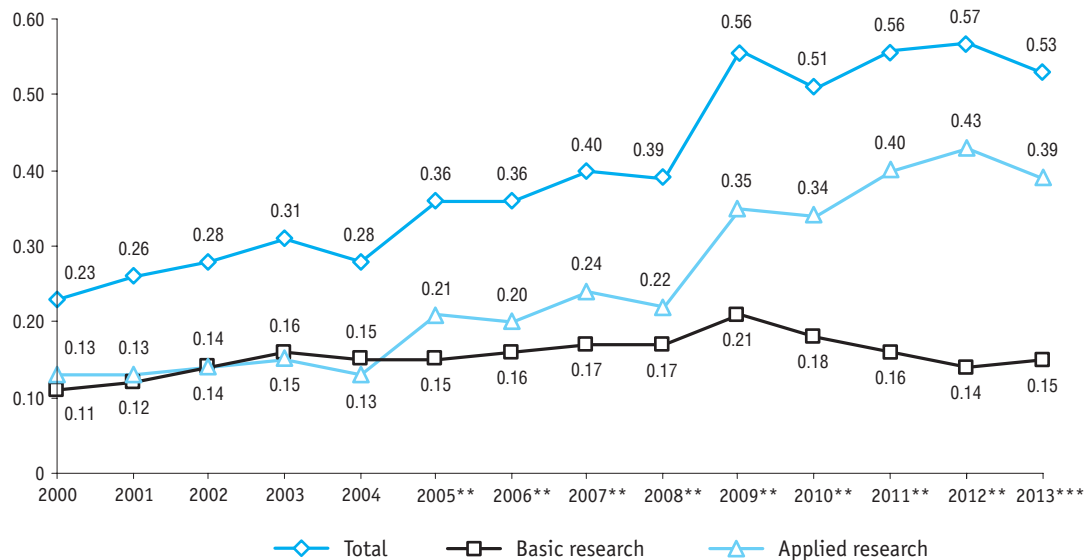


* 2000–2004: appropriations in Section 06 ‘Basic Research and Promotion of Science and Technology Progress’ of the federal budget and its subsections.

** Source for 2005–2012: reports on the implementation of the consolidated budget and budgets of the state non-budget funds (data is provided by the Federal Treasury).

*** According to the Federal law ‘About Federal budget for 2013 and for the planned period 2014–2015’ (with changes and additions).

3.5. FEDERAL BUDGET APPROPRIATIONS ON CIVIL S&T AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT*

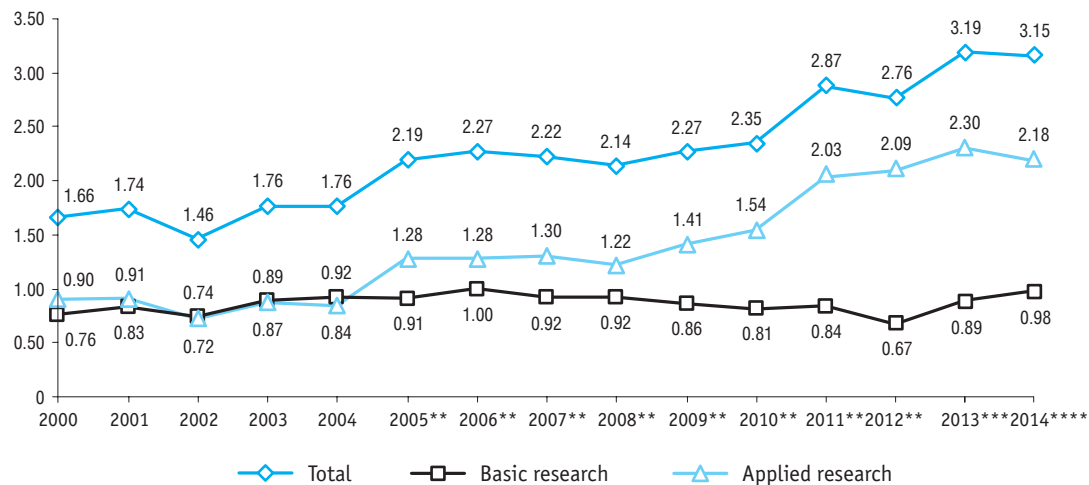


* 2000–2004: appropriations in Section 06 ‘Basic Research and Promotion of Science and Technology Progress’ of the federal budget and its subsections.

** Source for 2005–2012: reports on the implementation of the consolidated budget and budgets of the state non-budget funds (data is provided by the Federal Treasury).

*** Estimates.

3.6. FEDERAL BUDGET APPROPRIATIONS ON CIVIL S&T AS A PERCENTAGE OF FEDERAL BUDGET EXPENDITURE*



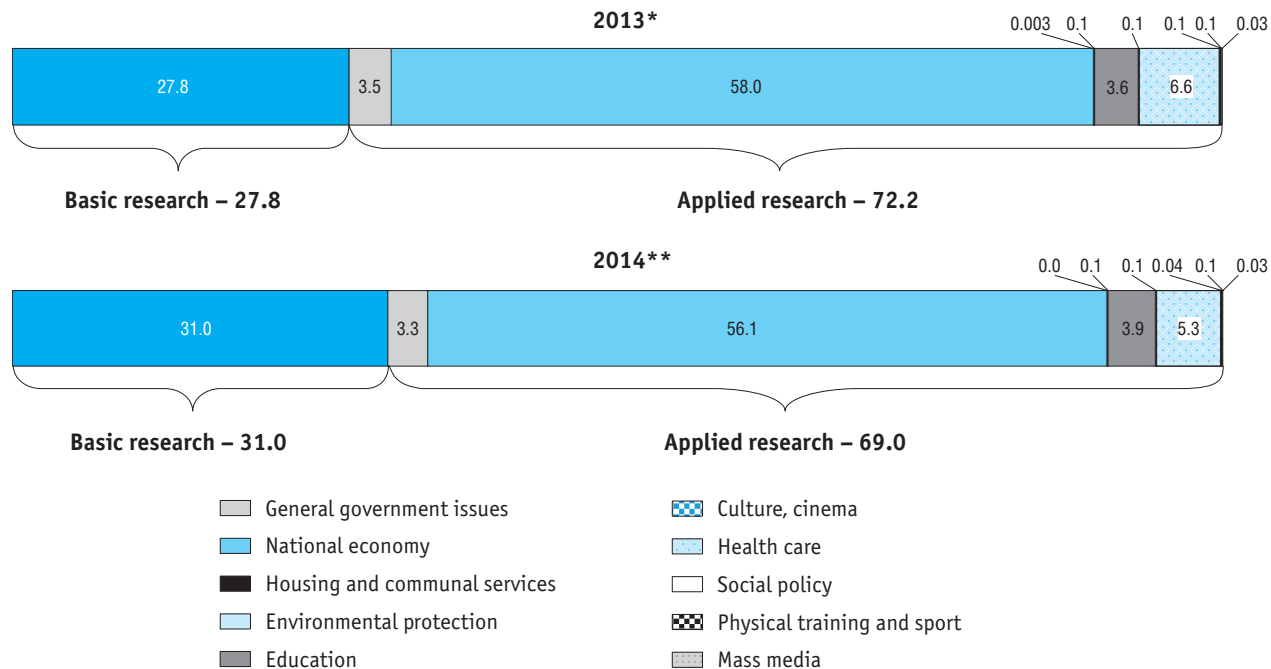
* 2000–2004: appropriations in Section 06 ‘Basic Research and Promotion of Science and Technology Progress’ of the federal budget and its subsections.

** Source for 2005–2012: reports on the implementation of the consolidated budget and budgets of the state non-budget funds (data is provided by the Federal Treasury).

*** According to the Federal law ‘About Federal budget for 2013 and for the planned period 2014–2015’ (with changes and additions).

**** According to the Federal law ‘About Federal budget for 2014 and for the planned period 2015–2016’.

3.7. PERCENTAGE DISTRIBUTION OF FEDERAL BUDGET APPROPRIATIONS ON CIVIL S&T BY SECTION OF BUDGET EXPENDITURE CLASSIFICATION AND TYPE OF ACTIVITY



* According to the Federal law 'About Federal budget for 2013 and for the planned period 2014–2015' (with changes and additions).

** According to the Federal law 'About Federal budget for 2014 and for the planned period 2015–2016'.

3.8. GROSS DOMESTIC EXPENDITURE ON R&D BY SOURCE OF FUNDS

	Gross domestic expenditure on R&D	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
At current prices, thousand roubles, before 1998 – million roubles						
1995	12149458.6	7476767.6	4076707.0	30543.0	3672.1	561768.9
1996	19393891.5	12040307.8	6112237.6	52232.4	107186.5	1081927.2
1997	24449691.2	14899937.7	7487191.8	50442.6	203702.5	1808416.6
1998	25082065.6	13435867.0	8755162.2	86546.1	231318.4	2573171.9
1999	48050525.0	24570856.4	15171014.9	178657.5	23620.7	8106375.5
2000	76697100.5	42035655.1	25208436.5	212990.3	67641.5	9172377.1
2001	105260731.6	60228854.3	35394269.5	359916.1	205512.5	9072179.2
2002	135004491.9	78883876.7	44699518.7	426216.0	134353.6	10860526.9
2003	169862369.1	101252097.2	52256884.6	807293.0	277916.5	15268177.8
2004	196039870.2	118867302.8	61528028.1	692412.1	98631.6	14853495.6
2005	230785150.3	142960799.1	69244740.5	983242.0	68412.2	17527956.5
2006	288805211.5	176457427.8	83197909.8	1652533.1	296869.8	27200471.0
2007	371080327.1	232364775.8	109265410.0	2276881.0	377417.8	26795842.5
2008	431073185.2	278992303.3	123695707.2	1993888.9	768479.1	25622806.7
2009	485834338.2	322889237.6	129170972.3	1896167.0	471799.6	31406161.7
2010	523377233.9	368191779.8	133498976.0	2436564.1	682378.0	18567536.0
2011	610426680.6	409449448.8	168957596.6	4664465.3	1209661.5	26145508.4
2012	699869784.8	474789779.0	190545904.2	5905489.1	877937.6	27750674.9

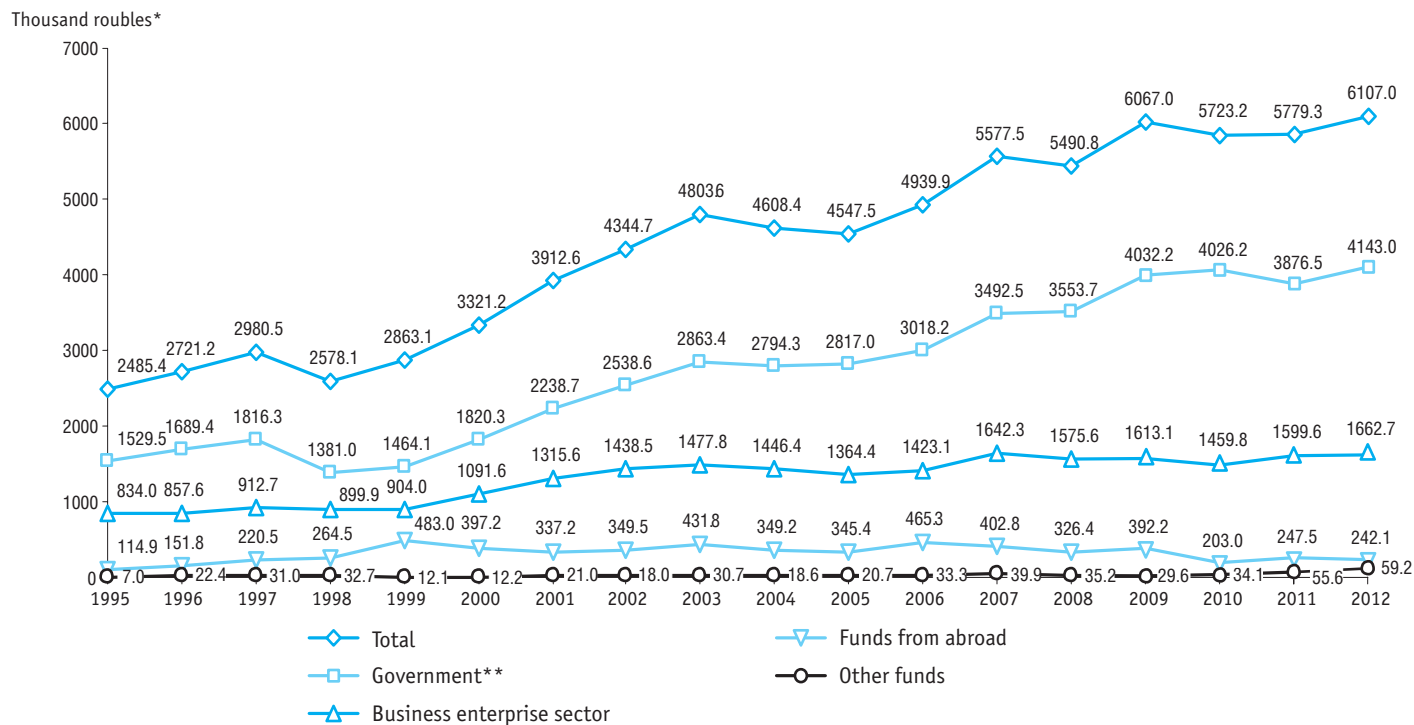
(continued)

	Gross domestic expenditure on R&D	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
Per cent						
1995	100	61.5	33.6	0.3	0.03	4.6
1996	100	62.1	31.5	0.3	0.6	5.6
1997	100	60.9	30.6	0.2	0.8	7.4
1998	100	53.6	34.9	0.3	0.9	10.3
1999	100	51.1	31.6	0.4	0.05	16.9
2000	100	54.8	32.9	0.3	0.09	12.0
2001	100	57.2	33.6	0.3	0.2	8.6
2002	100	58.4	33.1	0.3	0.1	8.0
2003	100	59.6	30.8	0.5	0.2	9.0
2004	100	60.6	31.4	0.4	0.05	7.6
2005	100	61.9	30.0	0.4	0.03	7.6
2006	100	61.1	28.8	0.6	0.1	9.4
2007	100	62.6	29.4	0.6	0.1	7.2
2008	100	64.7	28.7	0.5	0.2	5.9
2009	100	66.5	26.6	0.4	0.1	6.5
2010	100	70.3	25.5	0.5	0.1	3.5
2011	100	67.1	27.7	0.8	0.2	4.3
2012	100	67.8	27.2	0.8	0.1	4.0

* Including federal budget appropriations, general university funds, and funds of government sector institutions (e.g. own funds of institutions).

3.9. TRENDS IN GROSS DOMESTIC EXPENDITURE ON R&D BY SOURCE OF FUNDS

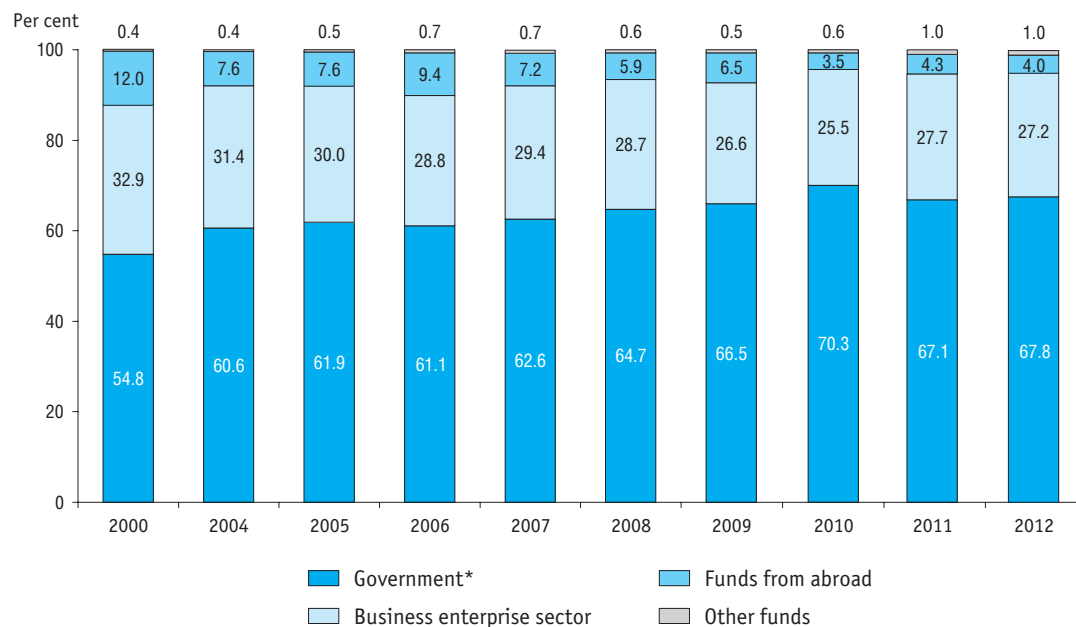
(at constant 1989 prices)



* Before 1998 – million roubles.

** Including federal budget appropriations, general university funds and funds of government sector institutions (e.g. own funds of institutions).

3.10. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY SOURCE OF FUNDS



* Including federal budget appropriations, general university funds and funds of government sector institutions (e.g. own funds of institutions).

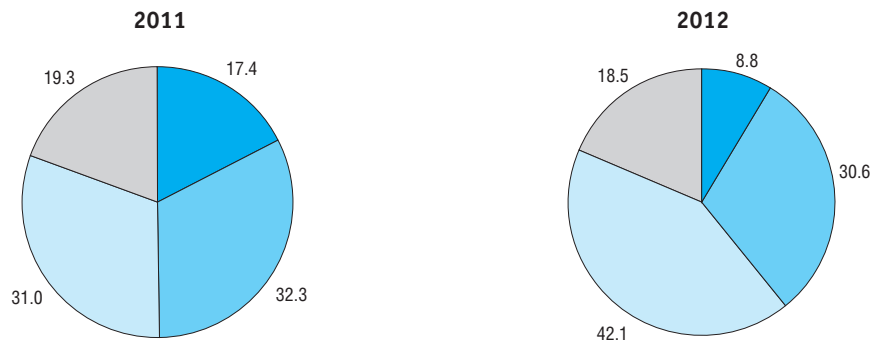
3.11. GRANTS AND COMPETITIVE RESEARCH FUNDING

	2010		2011		2012	
	Total, <i>thousand roubles</i>	Percentage of gross domestic expenditure on R&D	Total, <i>thousand roubles</i>	Percentage of gross domestic expenditure on R&D	Total, <i>thousand roubles</i>	Percentage of gross domestic expenditure on R&D
Grants	7229208.6	1.4	14240100.9	2.3	19758073.7	2.8
Competitive research funding	49583862.2	9.5	70441797.9	11.5	100108235.1	14.3

3.12. GROSS DOMESTIC EXPENDITURE ON R&D FINANCED FROM ABROAD (thousand roubles)

	2009	2010	2011	2012
Gross domestic expenditure on R&D financed from abroad – total	31406161.7	18567536.0	26145508.4	27750674.9
International organisations	4553354.8	3682117.0	4545277.8	2455666.6
Government organisations of foreign countries	9152681.5	5747982.3	8437766.1	8494449.1
Business enterprises of foreign countries	6895296.3	7893309.1	8107379.1	11674853.5
Other foreign organisations (educational institutions, funds, non-profit organisations)	10804829.1	1244127.6	5055085.4	5125705.7

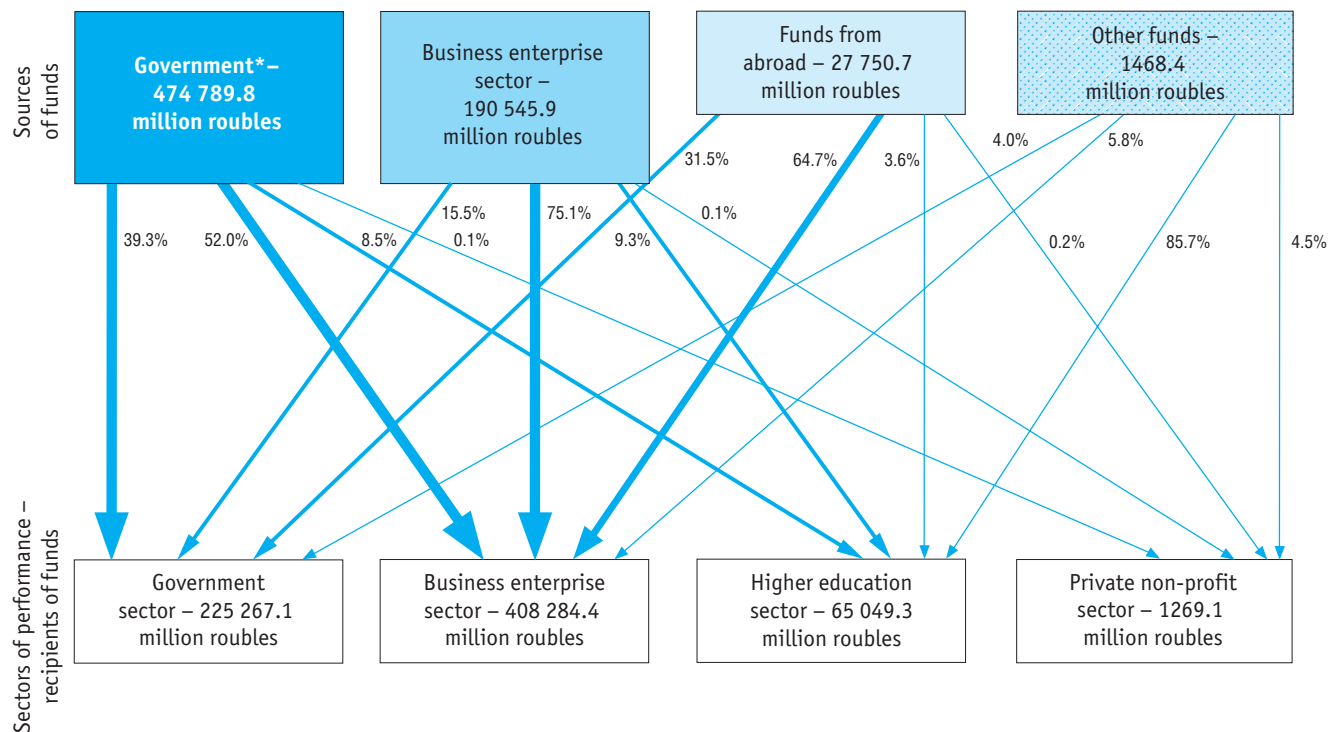
3.13. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D FINANCED FROM ABROAD



Funds from abroad:

- international organisations
- government organisations of foreign countries
- business enterprises of foreign countries
- other foreign organisations

3.14. R&D FUNDING BY SECTOR OF PERFORMANCE: 2012



* Including federal budget appropriations, general university funds and funds of government sector institutions (e.g. own funds of institutions).

3.15. GROSS DOMESTIC EXPENDITURE ON R&D BY OWNERSHIP OF R&D INSTITUTIONS

	1995	2000	2004	2005	2006	2007	2008	2009	2010	2011	2012
<i>At current prices, thousand roubles, before 1998 – million roubles</i>											
Total	12149458.6	76697100.5	196039870.2	230785150.3	288805211.5	371080327.1	431073185.2	485834338.2	523377233.9	610426680.6	699869784.8
Russian ownership	12137095.6	74254897.9	192681287.9	226582085.6	283277704.3	362788255.0	422024862.3	478787821.5	514058161.4	598027432.9	685495275.4
Public ownership	9303329.4	56254567.1	143215332.4	171855852.1	214273392.5	268054481.0	315468440.4	362864344.6	394615118.0	448854863.1	495689326.0
Federal	9047499.6	55150426.2	141004351.3	168986692.6	210972918.2	263267216.7	310681404.3	358511516.2	389105256.8	441676795.3	487535217.5
Provincial	255829.8	1099762.3	2210981.1	2869159.5	3284661.9	4674078.0	4675955.0	4181193.6	5396479.0	7152191.4	8124552.8
Municipal ownership	15214.6	50381.9	22113.1	17253.5	34690.6	38024.6	58426.2	52807.3	50304.2	74152.5	65889.2
Ownership of voluntary associations	35640.0	209229.3	144342.7	339129.1	435221.6	589456.4	610938.9	525257.1	525085.2	711349.2	915629.8
Private ownership	265827.3	4948266.7	18668329.9	20957744.5	35484593.7	51427162.7	63511011.8	66857001.6	60263592.5	69577239.4	80608901.3
Ownership of Russian citizens permanently living abroad	...	...	...	...	...	...	...	...	...	21631.3	6949.0
Ownership of consumer cooperatives*	...	1095.2	3301.8	4354.5	3624.3	2635.3	2515.4	35877.1	36590.0	39286.2	2468.5
Joint ownership	2517084.3	12791357.7	30627868.0	33407751.9	33046181.6	42676495.0	42373529.6	48452533.8	55954325.1	69203059.8	83947440.0
Joint ownership with a part of public ownership	...	...	...	...	...	...	...	...	49557690.9	62421583.0	62059799.4
Other	...	...	...	...	...	...	...	...	...	6781476.8	21887640.6
Ownership of state corporations	...	...	...	...	...	...	...	...	2613146.4	9545851.4	24258671.6
Foreign ownership	336.7	117265.0	216749.1	697993.4	517669.7	675533.7	711942.6	778685.9	1390905.3	1780045.0	2683049.2
Joint ownership (with both Russian and foreign participation)	12026.3	2324937.6	3141833.2	3505071.3	5009837.5	7616538.4	8336380.3	6267830.8	7928167.2	10619202.7	11691460.2

(continued)

	1995	2000	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Per cent										
Total	100	100	100	100	100	100	100	100	100	100	100
Russian ownership	99.9	96.8	98.3	98.2	98.1	97.8	97.9	98.5	98.2	98.0	97.9
Public ownership	76.6	73.3	73.1	74.5	74.2	72.2	73.2	74.7	75.4	73.5	70.8
Federal	74.5	71.9	71.9	73.2	73.1	70.9	72.1	73.8	74.3	72.4	69.7
Provincial	2.1	1.4	1.1	1.2	1.1	1.3	1.1	0.9	1.0	1.2	1.2
Municipal ownership	0.1	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ownership of voluntary associations	0.3	0.3	0.07	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Private ownership	2.2	6.5	9.5	9.1	12.3	13.9	14.7	13.8	11.5	11.4	11.5
Ownership of Russian citizens permanently living abroad	...	...	...	...	...	...	...	...	...	0.004	0.001
Ownership of consumer cooperatives*	...	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.006	0.0
Joint ownership	20.7	16.7	15.6	14.5	11.4	11.5	9.8	10.0	10.7	11.3	12.0
Joint ownership with a part of public ownership	...	...	...	...	...	...	...	...	9.5	10.2	8.9
Other	...	...	...	...	...	...	...	...	...	1.1	3.1
Ownership of state corporations	...	...	...	...	...	...	...	...	0.5	1.6	3.5
Foreign ownership	0.002	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4
Joint ownership (with both Russian and foreign participation)	0.1	3.0	1.6	1.5	1.7	2.1	1.9	1.3	1.5	1.7	1.7

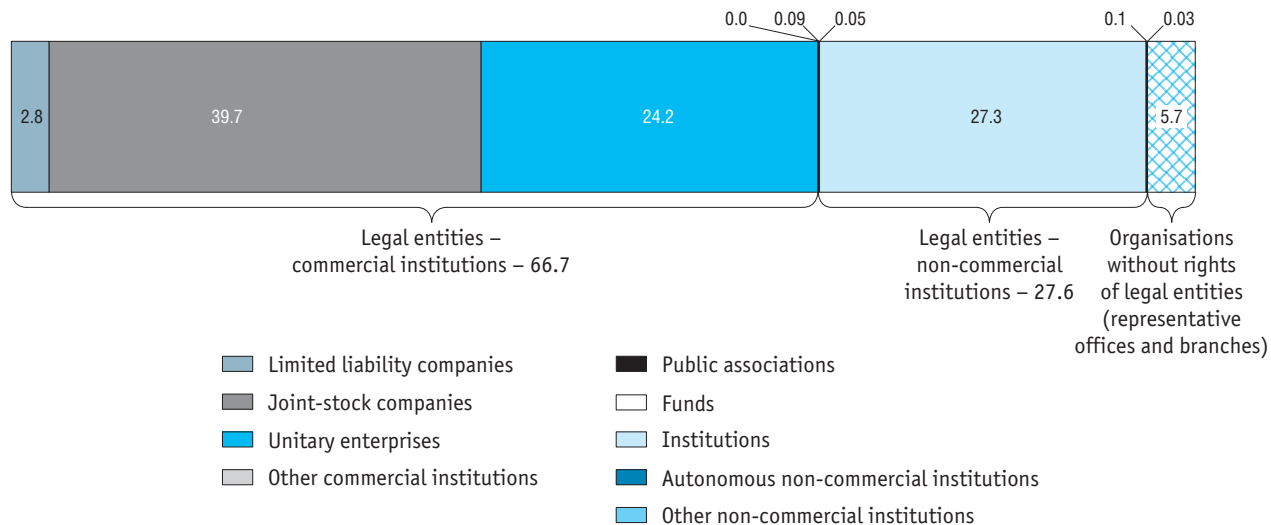
* Until 2000, registered within institutions of private and joint Russian ownership.

3.16. GROSS DOMESTIC EXPENDITURE ON R&D BY ORGANISATIONAL AND LEGAL FORM OF INSTITUTIONS: 2012

(thousand roubles)

Total	699869784.8	Legal entities – non-commercial institutions	192973486.1
Legal entities – commercial institutions	466774454.2	Public and religious associations	608193.9
Economic partnerships and associations	297652279.4	Funds	349676.7
Limited liability companies	19945300.2	Institutions	191163232.8
Additional liability companies	34.2	Private institutions	419859.0
Joint-stock companies	277706945.0	Public institutions	176578523.9
Open joint-stock companies	258942815.4	Autonomous institutions	11736088.5
Closed joint-stock companies	18764129.6	Public establishments	2428761.4
Unitary enterprises	169122174.8	Non-commercial partnerships	62349.2
Unitary enterprises based on the operative administration law	3159963.5	Autonomous non-commercial institutions	674947.7
Unitary enterprises based on the economic management law	165962211.3	Associations of legal entities	25926.3
		Other non-commercial institutions	89159.5
		Organisations without rights of legal entities (representative offices and branches)	40121844.5

3.17. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY ORGANISATIONAL AND LEGAL FORM OF INSTITUTIONS: 2012



3.18. GROSS DOMESTIC EXPENDITURE ON R&D BY ECONOMIC ACTIVITY

(thousand roubles)

	2005	2007	2008	2009	2010	2011	2012
Total	230785150.3	371080327.1	431073185.2	485834338.2	523377233.9	610426680.6	699869784.8
Agriculture, hunting and forestry	146783.8	234711.8	216759.4	247724.7	253871.9	289856.1	286476.4
Fishing, aquaculture and service activities incidental to fishing	5559.6	4815.9	–	2890.8	485.2	–	–
Mining and quarrying	584953.6	520979.7	227950.7	79238.0	55728.0	54729.0	42282.0
Manufacturing	10631526.1	17388637.3	17425481.7	17009365.1	21372426.7	23051252.7	33489559.2
Electricity, gas and water supply	–	1253.0	2367.0	10085.0	8234.0	8654.0	–
Construction	–	7280.0	–	–	–	–	35200.7
Hotels and restaurants	–	–	–	–	–	–	1074534.1
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	–	28904.0	29469.6	–	–	5468.0	–
Transport and communications	29750.3	92908.4	106528.9	117993.5	143777.6	190798.7	6704377.7

(continued)

	2005	2007	2008	2009	2010	2011	2012
Real estate, renting and business activities	207643389.9	330188298.2	384699057.6	433962004.3	455185374.4	530882724.2	591315932.3
Research and development	204907680.4	324567876.3	376609160.0	425872251.2	447596655.1	520913787.4	576874368.1
Other business activities	2469504.1	4127632.5	6447839.7	6434826.7	5464671.8	7513061.1	9712021.4
Public administration and defence; compulsory social security	—	850.4	—	—	—	—	—
Education	11076460.7	20479152.8	25502783.6	31254495.1	39254089.2	50880815.2	61985553.1
Higher education	11071971.7	20441343.1	25455288.1	31224588.5	39220988.4	50849957.2	61929787.4
Health and social services	71943.4	742646.0	1121528.7	1080303.2	4758071.7	2082060.2	1961525.5
Other community, social and personal service activities	594782.9	1389889.6	1741258.0	2070238.5	2345175.2	2980322.5	2974343.8
Recreational, cultural and sporting activities	574352.3	1365064.4	1724918.2	2032341.9	2331388.6	2930451.3	2963837.0

3.19. GROSS DOMESTIC EXPENDITURE ON R&D BY TYPE OF COSTS

	2004	2005	2006	2007	2008	2009	2010	2011	2012
<i>At current prices, thousand roubles</i>									
Gross domestic expenditure on R&D	196039870.2	230785150.3	288805211.5	371080327.1	431073185.2	485834338.2	523377233.9	610426680.6	699869784.8
Intramural current expenditure	187210461.2	221119537.6	277784757.3	352917701.2	410864983.6	461006216.2	489450798.7	568386749.7	655061743.4
Salaries	77739627.5	94274453.3	119354664.7	157514386.8	193344895.7	217897038.1	241472234.1	275925134.3	307881674.7
Of which for R&D personnel*	68863831.4	83218561.7	103821166.7	137956617.2	170633861.4	189457703.8	211660690.5	239162179.8	268058587.8
Social security payments	23439789.6	22597417.5	28352943.9	34565859.1	40020294.9	43723470.6	47904606.9	68647474.6	75417597.8
Equipment	7800356.4	9936177.7	12417625.9	14027427.5	14604195.2	16144658.7	18067655.4	20065178.2	25365780.5
Fixed assets	3564222.5	4349636.2	5406455.5	5866364.7	6669261.8	7973703.9	6839036.4	8231253.4	7407585.8
Other material costs	45299285.1	51304357.4	66886839.9	83426976.6	72945529.7	89861803.2	89279048.7	101591855.4	123689963.6
Other current costs	32931402.6	43007131.7	50772682.9	63383051.2	89950068.1	93379245.6	92727253.6	102157107.2	122706726.8
Capital expenditure	8829409.0	9665612.7	11020454.2	18162625.9	20208201.6	24828122.0	33926435.2	42039930.9	44808041.4
Land and buildings	1190433.5	1647639.4	1993820.7	3577647.3	5474654.9	4298550.9	8077521.7	8421252.7	11692714.0
Equipment	5511877.3	5818068.7	6715748.3	11689028.2	10775180.6	15438763.7	19887596.3	23968272.7	25459703.1
Other capital expenditure	2127098.2	2199904.6	2310885.2	2895950.4	3958366.1	5090807.4	5961317.2	9650405.5	7655624.3

(continued)

	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Per cent								
Gross domestic expenditure on R&D	100	100	100	100	100	100	100	100	100
Intramural current expenditure	95.5	95.8	96.2	95.1	95.3	94.9	93.5	93.1	93.6
Salaries	39.7	40.8	41.3	42.4	44.9	44.9	46.1	45.2	44.0
Of which for R&D personnel*	35.1	36.1	35.9	37.2	39.6	39.0	40.4	39.2	38.3
Social security payments	12.0	9.8	9.8	9.3	9.3	9.0	9.2	11.2	10.8
Equipment	4.0	4.3	4.3	3.8	3.4	3.3	3.5	3.3	3.6
Other material costs	23.1	22.2	23.2	22.5	16.9	18.5	17.1	16.6	17.7
Other current costs	16.8	18.6	17.6	17.1	20.9	19.2	17.7	16.7	17.5
Capital expenditure	4.5	4.2	3.8	4.9	4.7	5.1	6.5	6.9	6.4
Land and buildings	0.6	0.7	0.7	1.0	1.3	0.9	1.5	1.4	1.7
Equipment	2.8	2.5	2.3	3.1	2.5	3.2	3.8	3.9	3.6
Other capital expenditure	1.1	0.95	0.8	0.8	0.9	1.0	1.1	1.6	1.1

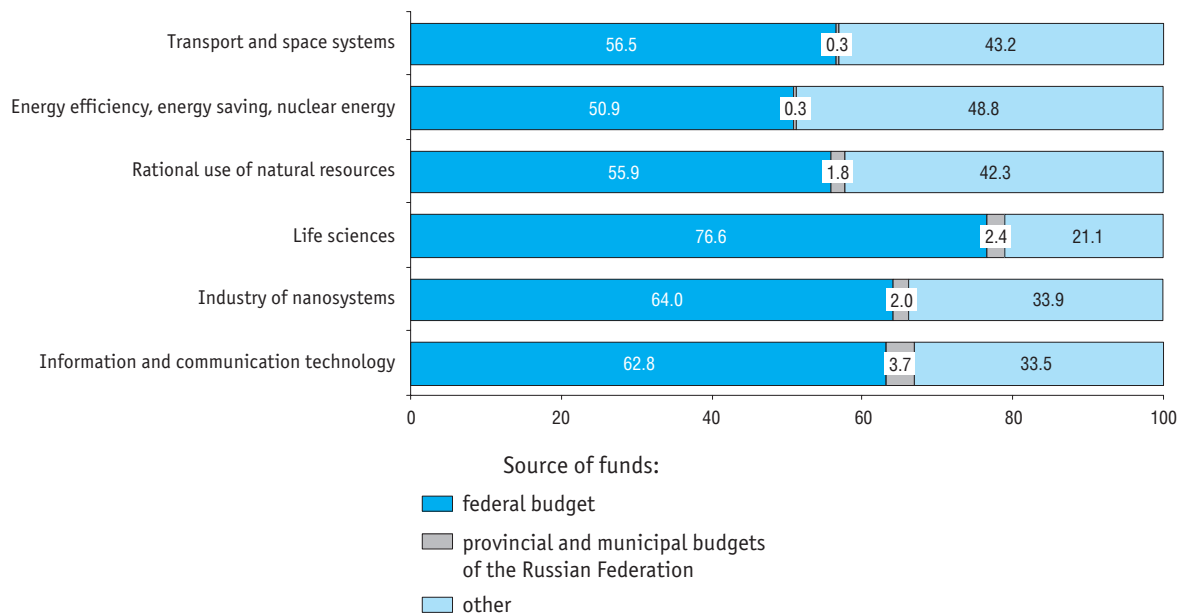
* Excluding those employed on a plural basis and under contracts.

3.20. GROSS DOMESTIC EXPENDITURE ON R&D BY PRIORITY S&T AREA AND SOURCE OF FUNDS: 2012

(thousand roubles)

	Total	Information and communication technology	Industry of nanosystems	Life sciences	Rational use of natural resources	Energy efficiency, energy saving, nuclear energy	Transport and space systems
Gross domestic expenditure on R&D by priority S&T area	472811294.7	61966025.4	24427634.0	25235983.1	31574595.0	75063412.7	171616319.0
Federal budget	277895502.0	38927259.9	15638359.4	19319494.4	17645466.0	38191139.6	96946376.6
Provincial and municipal budgets of the Russian Federation	5484399.2	2278450.9	498977.4	603907.6	563821.9	232401.3	595541.2
Other sources	189431393.5	20760314.6	8290297.2	5312581.1	13365307.1	36639871.8	74074401.2

3.21. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY PRIORITY S&T AREA AND SOURCE OF FUNDS: 2012 (thousand roubles)



3.22. GROSS DOMESTIC EXPENDITURE ON R&D BY SOCIO-ECONOMIC OBJECTIVE

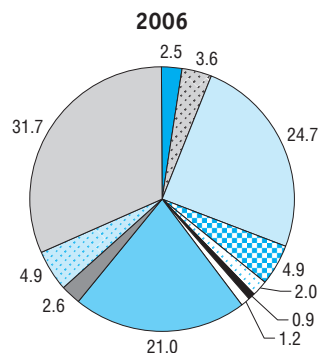
(thousand roubles)

	2006	2008	2009	2010	2011	2012
Gross domestic expenditure on R&D	288805211.5	431073185.2	485834338.2	523377233.9	610426680.6	699869784.8
Economic development	103033497.6	157814603.7	169117727.8	183113782.3	231941668.2	295901906.0
Agriculture, hunting and forestry	7248977.0	11198584.3	13065634.0	12090814.9	15011619.7	16151602.6
Production, distribution and rational use of energy	10267046.6	18583742.6	19690591.5	19174764.6	19913673.7	30798200.6
Industry	71319151.3	108227204.7	118806663.3	126029410.7	156695798.9	200459644.4
Increasing of economic efficiency and technological level of industry	8331516.8	15344911.2	12590931.7	14916168.9	19904782.4	22472542.8
Extraction and processing of non-energy minerals	628547.3	1019563.3	958185.2	1279265.4	1359844.0	1863605.2
Manufacture of chemicals and chemical products	4194564.2	5382152.9	6099362.6	5839135.5	6835610.4	9155732.6
Manufacture of motor vehicles and other transport equipment	14450931.1	20101084.3	19308677.6	21495410.4	25640612.6	32391176.2
Electronics, manufacture of radio, television and communication equipment and apparatus	9281563.7	12307384.7	14509018.6	13389386.0	17546855.7	26449997.0
Software development	3355339.6	7291337.9	7196829.9	6740442.6	7701782.0	8932282.7
Manufacture of electrical machinery and apparatus	1292927.0	2589759.5	2057059.8	2879253.1	3179319.1	5235647.6
Manufacture of instruments	6600437.6	12682004.6	10399399.1	13466912.8	20205983.0	29563984.4
Manufacture of other machinery and equipment	6965389.1	10595335.5	12612240.5	13654259.2	15485756.9	15781575.2
Manufacture of textiles, clothing, and leather	54077.2	105239.8	52464.5	97483.3	106648.1	254582.3
Manufacture of food products and beverages	296729.6	432249.3	1047231.1	565348.2	565873.8	758191.9
Other sectors of industry	15867128.1	20376181.7	31975262.7	31706345.3	38162730.9	47600326.5

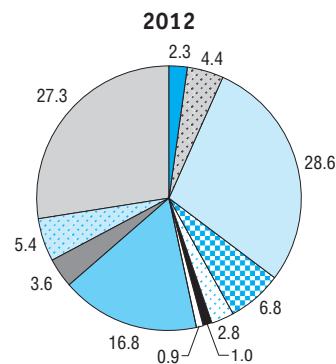
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	2006	2008	2009	2010	2011	2012
Construction	2697184.2	5569314.7	3514829.4	5513681.4	7294997.0	8504203.4
Transport	9011178.7	10419270.0	8862627.7	12686004.3	22041615.8	23986235.6
Communications	1709581.2	2354882.8	4466744.0	6704734.7	9211899.0	14147246.2
Infrastructure and general planning of land use	430140.7	726580.4	380775.6	354546.0	916966.4	912451.2
Services sector	350237.9	735024.2	329862.3	559825.7	855097.7	942322.0
Social objectives	11954593.3	17735503.9	23520636.0	24966176.4	29640390.9	33070785.7
Control and care of the environment	2595076.2	4365560.7	5563877.5	5950018.6	6638173.2	6972125.5
Protection and improvement of human health	5897030.0	9869611.2	13006918.4	14373675.7	17100379.3	19694713.1
Social structures and relationships	3462487.1	3500332.0	4949840.1	4642482.1	5901838.4	6403947.1
General advancement of research	60629124.4	110853857.1	114239973.1	104294714.1	111947458.3	117873370.5
Exploration and exploitation of the Earth and atmosphere	7577493.4	12601082.0	15248532.6	19821817.2	20390660.8	25474648.5
Civil space	14018574.9	13810148.3	25872001.8	27503697.9	35752455.2	37558965.0
Other	91591927.9	118257990.2	137835466.9	163677046.0	180754047.2	189990109.1

3.23. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY SOCIO-ECONOMIC OBJECTIVE



- Agriculture
- Energy industry
- Industry
- Other economic objectives
- Human health
- Control and care of the environment



- Social development
- General advancement of research
- Exploration and exploitation of the Earth and atmosphere
- Civil space
- Other

3.24. INTRAMURAL CURRENT EXPENDITURE ON R&D BY TYPE OF ACTIVITY AND FIELD OF SCIENCE AND TECHNOLOGY

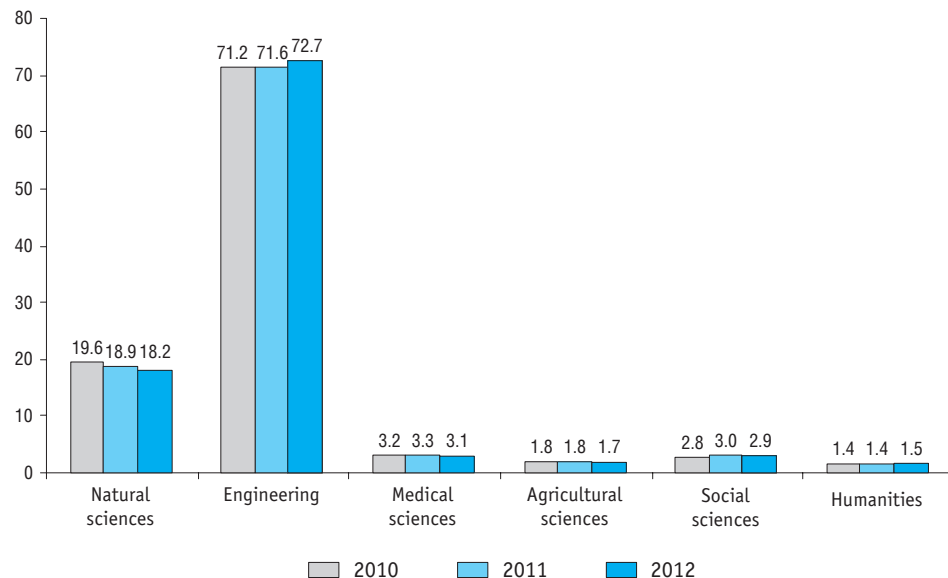
(thousand roubles)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2005							
Intramural current expenditure on R&D	221119537.6	34579040.8	171109626.3	4571313.8	4159368.3	4628535.6	2071652.8
Basic research	31022855.8	19345182.8	4579039.5	1865239.8	1947227.1	1723405.3	1562761.3
Applied research	36360266.9	8860755.5	21725918.2	2051910.3	1409317.9	1957292.2	355072.8
Development	153736414.9	6373102.5	144804668.6	654163.7	802823.3	947838.1	153818.7
2008							
Intramural current expenditure on R&D	410864983.6	78078037.1	296901936.2	11382107.9	8339624.5	10482105.9	5681172.0
Basic research	77121264.3	45590599.9	14552606.2	4300297.3	4366212.4	3972507.2	4339041.3
Applied research	79885835.9	19007488.9	46977376.5	5769410.3	2226959.9	5105301.5	799298.8
Development	253857883.4	13479948.3	235371953.5	1312400.3	1746452.2	1404297.2	542831.9
2009							
Intramural current expenditure on R&D	461006216.2	86633250.8	333327965.5	13794449.8	9569659.4	11804063.6	5876827.1
Basic research	96809127.3	52252859.5	22653573.5	6418092.0	5378449.3	5288288.4	4817864.6
Applied research	92557125.5	20782035.6	56915796.5	6418162.5	2629331.9	4948142.5	863656.5
Development	271639963.4	13598355.7	253758595.5	958195.3	1561878.2	1567632.7	195306.0

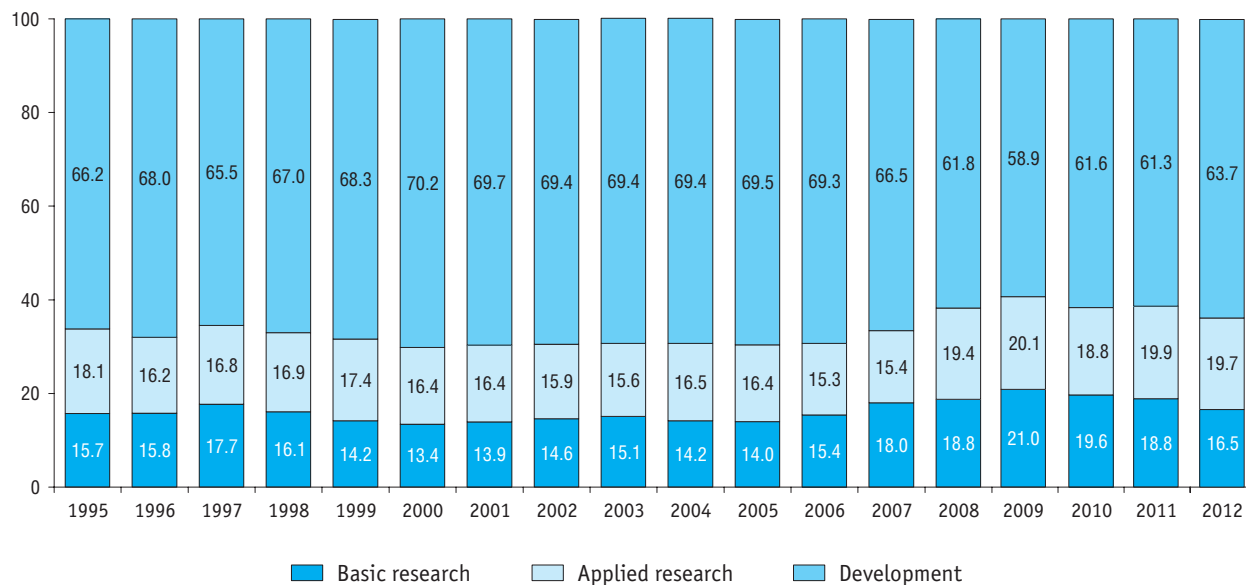
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	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2010							
Intramural current expenditure on R&D	489450798.7	96010015.2	348621966.4	15462300.4	8887624.5	13752461.7	6716430.5
Basic research	95881364.3	50550000.6	22866475.2	6378644.4	4766037.6	6074153.0	5246053.5
Applied research	92010677.2	27202686.8	46841680.2	7900476.3	2582521.1	6199410.7	1283902.1
Development	301558757.2	18257327.8	278913811.0	1183179.7	1539065.8	1478898.0	186474.9
2011							
Intramural current expenditure on R&D	568386749.7	107163564.9	406785676.0	18745756.1	10455768.3	17007802.7	8228181.7
Basic research	106923986.6	58539607.1	22922743.3	7245779.3	5282967.4	6330795.2	6602094.3
Applied research	113096800.2	32019059.7	58033819.9	9856051.9	3396085.1	8564175.2	1227608.4
Development	348365962.9	16604898.1	325829112.8	1643924.9	1776715.8	2112832.3	398479.0
2012							
Intramural current expenditure on R&D	655061743.4	118944091.0	476478373.9	20242776.7	10855458.7	18732780.1	9808263.0
Basic research	108160904.7	62038278.0	20496211.5	7623680.5	4587407.0	6563320.3	6852007.4
Applied research	129304402.1	32656475.6	69302228.8	10852676.9	4503917.6	9824213.5	2164889.7
Development	417596436.6	24249337.4	386679933.6	1766419.3	1764134.1	2345246.3	791365.9

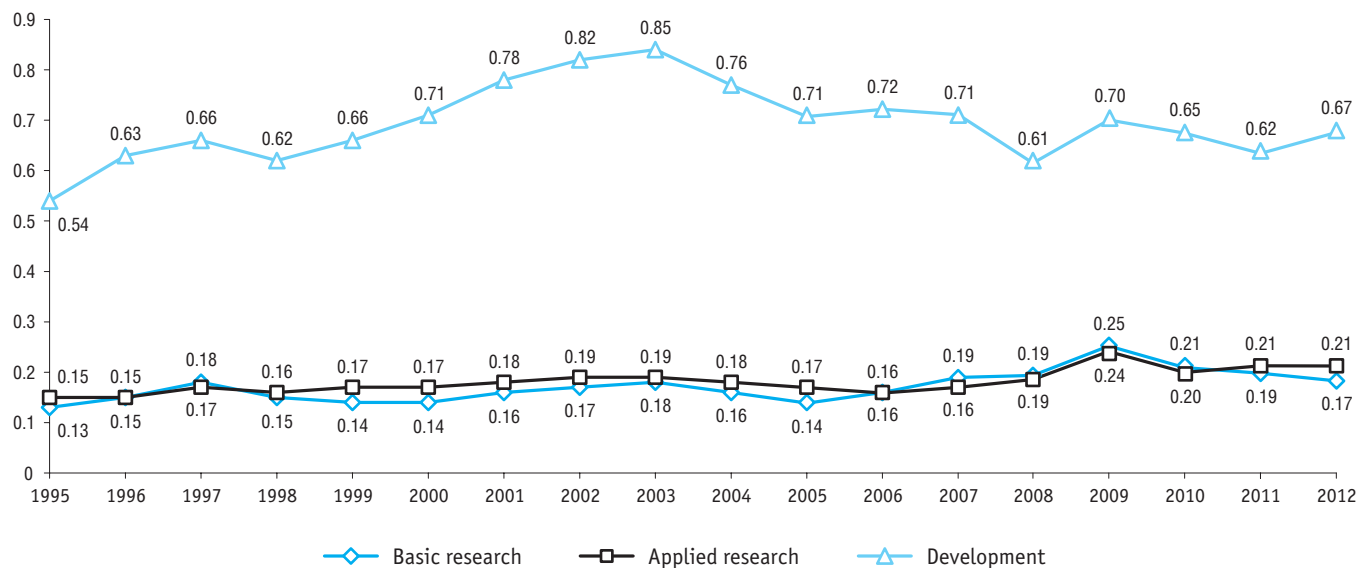
3.25. PERCENTAGE DISTRIBUTION OF INTRAMURAL CURRENT EXPENDITURE ON R&D BY FIELD OF SCIENCE AND TECHNOLOGY



3.26. PERCENTAGE DISTRIBUTION OF INTRAMURAL CURRENT EXPENDITURE ON R&D BY TYPE OF ACTIVITY



3.27. INTRAMURAL CURRENT EXPENDITURE ON R&D BY TYPE OF ACTIVITY AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT



3.28. AVERAGE MONTHLY SALARY OF R&D PERSONNEL

	1995	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Average monthly salary, roubles, 1995 – thousand roubles	305.3	5712.8	6918.4	8672.0	10840.9	14683.4	19263.3	22104.3	25043.5	28387.5	32539.9
As a percentage of that:											
in the national economy (=100%)	64.6	103.9	102.7	101.4	101.9	108.0	111.4	118.6	119.5	121.5	121.3
in manufacturing (=100%)	67.3	102.0	101.0	103.0	106.3	114.0	120.0	133.3	131.3	130.3	132.9
in construction (=100%)	52.0	92.5	94.7	95.9	99.7	102.4	103.7	122.0	118.3	119.9	123.1



4. R&D Fixed Assets

4.1. R&D FIXED ASSETS

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
At current prices													
Fixed assets – total, million roubles, 1995 – billion roubles	85087.6	237564.4	252318.1	348418.0	362421.8	399515.9	509336.8	581965.9	612318.3	705048.1	741512.1	859318.0	914572.2
Per one employee, thousand roubles, 1995 – million roubles	80.2	267.6	289.7	405.9	431.8	491.3	631.1	726.4	804.4	949.6	1006.8	1168.7	1259.2
Per one researcher, thousand roubles, 1995 – million roubles	164.0	557.7	608.5	850.3	902.8	1021.5	1309.6	1481.4	1629.4	1909.5	2010.0	2292.8	2454.4
Machines and equipment, million roubles, 1995 – billion roubles*	26505.8	66938.3	77868.9	105739.9	120533.3	142154.7	159452.5	196844.6	226391.7	288345.5	300165.9	348511.4	398562.4
Per one employee, thousand roubles, 1995 – million roubles	25.0	75.4	89.4	123.2	143.6	174.8	197.6	245.7	297.4	388.4	407.5	474.0	548.7
Per one researcher, thousand roubles, 1995 – million roubles	51.1	157.1	187.8	258.0	300.3	363.5	410.0	501.1	602.4	780.9	813.6	929.9	1069.6

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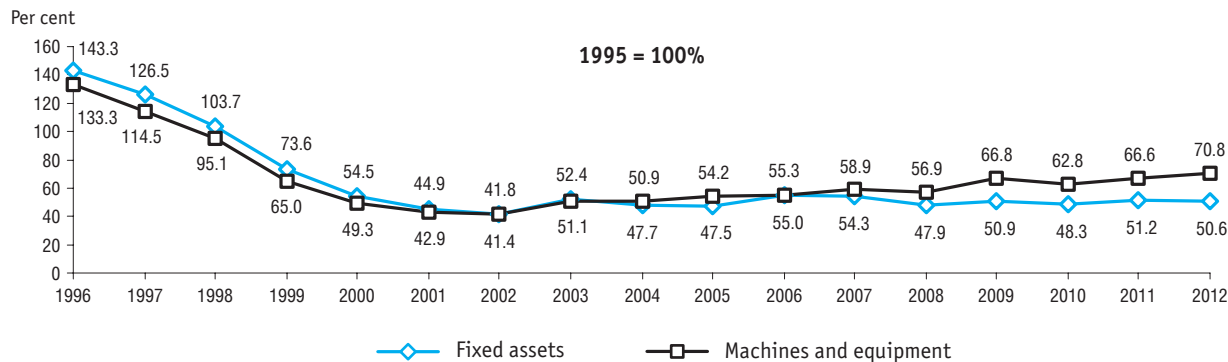
	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
At constant 1995 prices**													
Fixed assets – total, million roubles, 1995 – billion roubles	85087.6	46336.0	35572.8	44600.4	40589.3	40383.7	46805.4	46184.1	40766.9	43302.3	41103.8	43540.6	43067.1
Per one employee, thousand roubles, 1995 – million roubles	80.2	52.2	40.8	52.0	48.4	49.7	58.0	57.6	53.6	58.3	55.8	59.2	59.3
Per one researcher, thousand roubles, 1995 – million roubles	164.0	108.8	85.8	108.8	101.1	103.3	120.3	117.6	108.6	117.3	111.4	116.2	115.6
Machines and equipment, million roubles, before 1998 – billion roubles	26505.8	13056.0	10978.3	13535.6	13499.1	14369.2	14652.9	15621.3	15072.7	17709.5	16638.9	17658.7	18768.2
Per one employee, thousand roubles, 1995 – million roubles	25.0	14.7	12.6	15.8	16.1	17.7	18.2	19.5	19.8	23.9	22.6	24.0	25.8
Per one researcher, thousand roubles, 1995 – million roubles	51.1	30.7	26.5	33.0	33.6	36.7	37.7	39.8	40.1	48.0	45.1	47.1	50.4

* In 2012, the value of machines and equipment no older than 5 years was 169757.0 million rubles, or 42.6% of their total cost.

** Calculated on the basis of deflators for gross fixed capital formation.

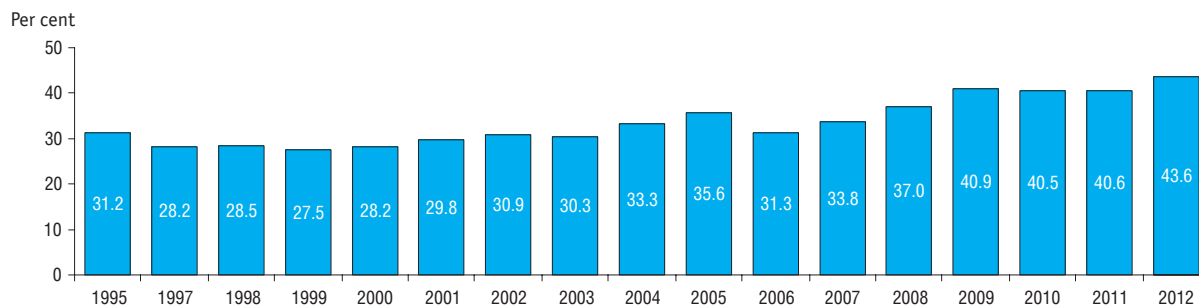
4.2. TRENDS IN VALUE OF R&D FIXED ASSETS*

(at constant 1995 prices)



* Calculated on the basis of deflators for gross fixed capital formation.

4.3. MACHINES AND EQUIPMENT AS A PERCENTAGE OF THE TOTAL VALUE OF R&D FIXED ASSETS



4.4. R&D FIXED ASSETS BY OWNERSHIP OF INSTITUTIONS

(million roubles, 1995 – billion roubles)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Fixed assets													
Total	85087.6	237564.4	252318.1	348418.0	362421.8	399515.9	509336.8	581965.9	612318.3	705048.1	741512.1	859318.0	914572.2
Russian ownership	85081.2	232793.0	247059.1	342981.0	356206.2	393181.0	503968.3	570760.1	600596.0	696133.5	725165.1	847942.2	897838.2
Public ownership	71686.4	194659.0*	205543.4	298313.1	311757.9	344693.4	442539.7	504967.3	537366.1	619151.2	635491.6	736631.7	757157.9
Federal	70561.9	191972.3	202272.0	292911.8	304821.5	336223.9	430165.8	486643.7	518920.0	574713.9	617118.2	712172.1	733671.7
Provincial	1124.5	2686.3	3271.4	5401.3	6936.4	8469.5	11898.5	17526.8	17479.4	43454.1	18110.1	24452.1	23477.9
Municipal ownership	190.0	541.7	10.8	25.6	3.9	28.2	22.0	32.9	34.7	40.7	35.9	74.7	17.3
Ownership of voluntary associations	77.5	221.8	31.3	34.1	34.1	38.9	43.3	90.0	85.4	82.4	82.1	98.7	164.4
Private ownership	1306.4	10499.1	12416.6	12068.4	10468.3	17478.8	24052.8	25338.8	26957.6	30709.8	43615.5	49833.4	56938.0
Ownership of Russian citizens permanently living abroad	...	...	...	...	...	...	...	...	...	...	...	18.1	17.0
Ownership of consumer cooperatives**	...	0.09	0.9	0.9	1.0	0.9	0.06	0.9	0.9	1.6	1.7	5.5	–
Joint ownership	11820.9	26871.3	29056.2	32538.9	33941.0	30940.7	37310.4	40330.3	36151.4	46147.9	42862.9	52606.5	59170.5
Joint ownership with a part of public ownership	...	...	...	...	...	...	...	...	...	...	38571.0	47524.3	47722.7
Other	...	...	...	...	...	...	...	...	...	...	...	5082.1	11447.8
Ownership of state corporations	...	...	...	...	...	...	...	...	...	...	3075.4	8673.7	24373.1
Foreign ownership	0.04	49.0	81.2	59.6	75.5	114.9	126.0	225.1	216.2	124.3	1131.5	1063.7	1177.8
Joint ownership (with both Russian and foreign participation)	6.4	4722.4	5177.8	5377.4	6140.1	6220.1	5242.5	10980.6	11506.0	8790.3	15215.5	10312.1	15556.2

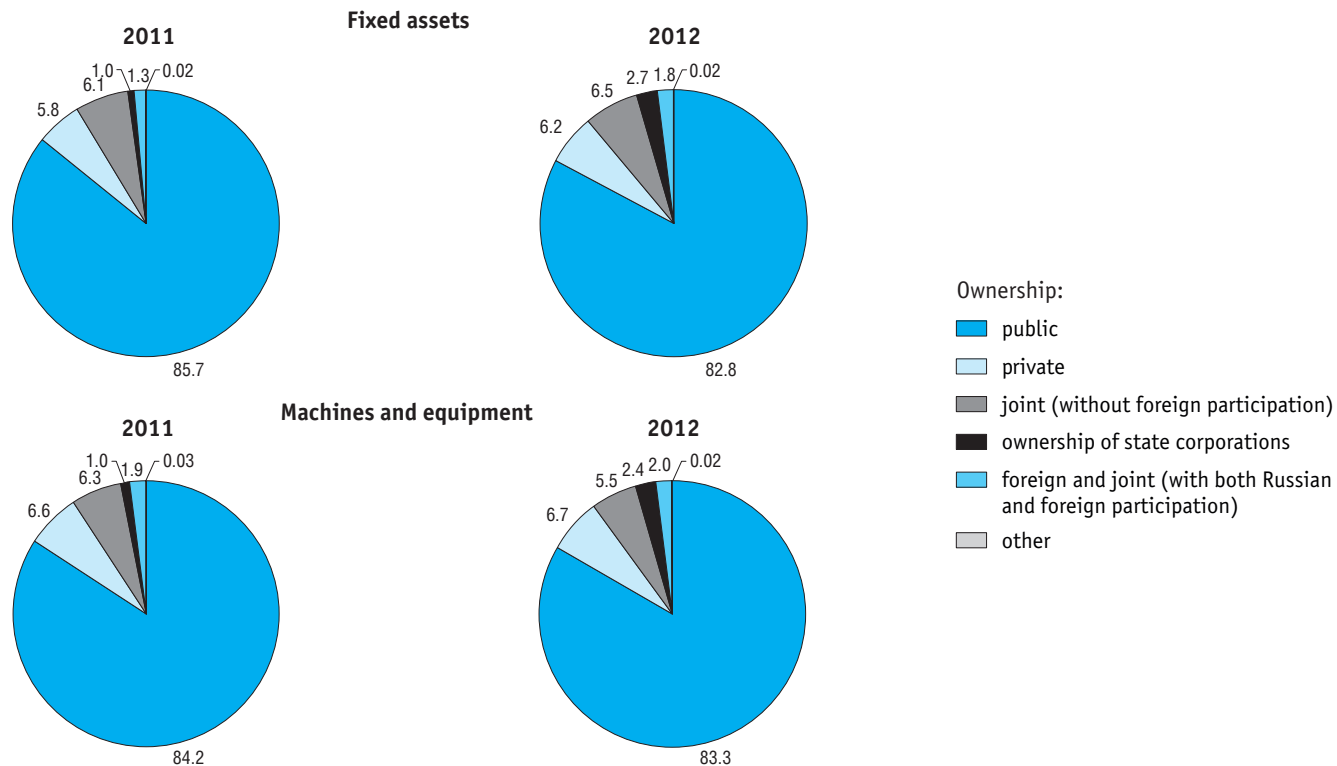
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	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Machines and equipment													
Total	26505.8	66938.3	77868.9	105739.9	120533.3	142154.7	159452.5	196844.6	226391.7	288345.5	300165.9	348511.4	398562.4
Russian ownership	26503.0	65631.5	76403.8	103958.6	118511.7	140294.5	157833.3	191984.4	221221.1	283264.4	290440.4	341846.2	390464.6
Public ownership	21632.0	53434.4*	62198.4	87983.1	102288.6	121662.2	134545.8	164900.6	194059.9	250646.7	256172.4	293528.4	332053.6
Federal	21340.3	52750.5	61150.5	85871.5	98656.7	117529.4	129240.8	156807.8	185556.4	215954.3	248766.8	284876.3	323644.7
Provincial	291.7	683.5	1047.9	2111.7	3631.9	4132.8	5304.1	8038.5	8379.1	34654.2	7284.9	8645.6	8401.9
Municipal ownership	113.0	176.0	10.5	24.5	2.8	4.7	3.8	7.6	11.3	25.5	6.2	17.0	4.4
Ownership of voluntary associations	32.3	41.6	15.5	26.4	20.2	20.4	32.0	61.7	56.2	47.0	49.5	69.9	62.6
Private ownership	353.5	4235.7	4901.5	4866.8	4297.6	8094.0	10567.1	10656.1	12278.4	15307.8	17150.5	22907.4	26610.2
Ownership of Russian citizens permanently living abroad	...	...	...	...	...	...	...	...	...	...	...	17.0	16.0
Ownership of consumer cooperatives**	...	0.09	0.2	0.2	0.2	0.2	0.06	0.2	0.2	0.9	1.0	4.2	—
Joint ownership	4372.2	7743.7	9277.8	11057.6	11902.3	10513.1	12684.7	16358.2	14815.2	17236.5	15944.0	21883.9	22090.9
Joint ownership with a part of public ownership	...	...	...	...	...	...	...	...	...	...	13870.9	19476.7	16689.3
Other	...	...	...	...	...	...	...	...	...	...	...	2407.1	5401.6
Ownership of state corporations	...	...	...	...	...	...	...	...	...	...	1116.7	3418.5	9627.0
Foreign ownership	0.03	48.2	81.1	51.3	57.2	61.0	77.6	128.3	119.6	83.7	630.0	611.0	438.0
Joint ownership (with both Russian and foreign participation)	2.8	1258.6	1384.0	1729.9	1964.4	1792.2	1541.6	4731.9	5050.9	4997.4	9095.5	6054.2	7659.8

* Details may not add up to the total because of shared ownership at some institutions.

** Until 2000, registered within institutions of private and joint Russian ownership.

4.5. PERCENTAGE DISTRIBUTION OF R&D FIXED ASSETS BY OWNERSHIP OF INSTITUTIONS



4.6. R&D FIXED ASSETS BY ECONOMIC ACTIVITY

(million roubles)

	Fixed assets			Machines and equipment		
	2010	2011	2012	2010	2011	2012
Total	741512.1	859318.0	94572.2	300165.9	348511.4	398562.4
Agriculture, hunting and forestry	807.4	877.4	670.4	183.7	216.9	158.9
Fishing, aquaculture and service activities incidental to fishing	1.3	–	–	0.5	–	–
Mining and quarrying	138.4	165.6	77.1	134.7	157.6	71.3
Manufacturing	45024.7	42135.9	59123.8	24122.8	23250.7	30407.5
Electricity, gas and water supply	–	–	–	–	–	–
Construction	–	–	39.9	–	–	33.5
Hotels and restaurants	–	–	1922.2	–	–	1461.5
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	–	0.3	–	–	0.05	–
Transport and communications	325.3	288.5	665.5	169.4	138.5	382.0
Real estate, renting and business activities	538758.2	619299.3	698326.7	227097.5	274921.4	309145.8
Research and development	529566.7	610259.5	681070.6	222192.7	271233.0	302177.6
Other business activities	5084.9	6559.8	11396.2	2408.0	2668.0	4318.0
Public administration and defence; compulsory social security	–	–	–	–	–	–
Education	140372.7	173320.6	128199.8	42532.7	42833.3	48319.8
Higher education	140371.8	173241.0	128179.5	42531.8	42800.4	48315.8
Health and social services	13845.1	14356.8	17851.6	5652.3	6070.5	7666.5
Other community, social and personal service activities	2239.0	8873.6	7695.2	272.4	922.4	915.6
Recreational, cultural and sporting activities	2229.7	8863.1	7682.6	263.2	911.9	905.6

4.7. R&D INTANGIBLE ASSETS

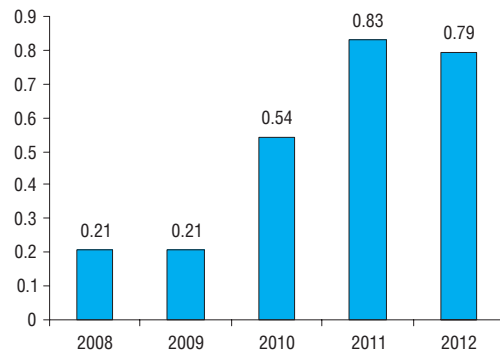
(million roubles)

	2006	2007	2008	2009	2010	2011	2012
At current prices							
Intangible assets – total	19295.5	19376.6	20579.8	21336.7	24695.2	32392.6	36384.6
Of which those included in fixed assets	...	...	1277.0	1448.6	3976.0	7154.0	7218.9
At constant 1995 prices*							
Intangible assets – total	1773.2	1537.7	1370.2	1310.4	1368.9	1641.3	1713.3
Of which those included in fixed assets	...	...	85.0	89.0	220.4	362.5	339.9

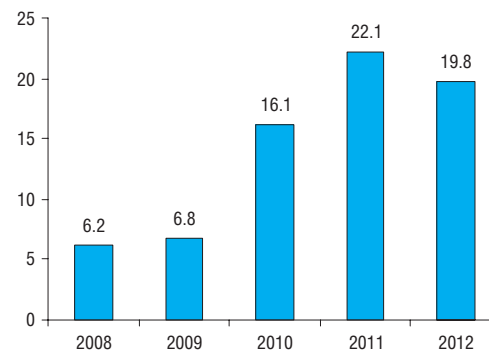
* Calculated on the basis of deflators for gross fixed capital formation.

4.8. INTANGIBLE ASSETS INCLUDED IN R&D FIXED ASSETS

**Intangible assets included in fixed assets
as a percentage of the average annual value
of R&D fixed assets**



**Intangible assets included in fixed assets
as a percentage of the average annual value
of R&D intangible assets**





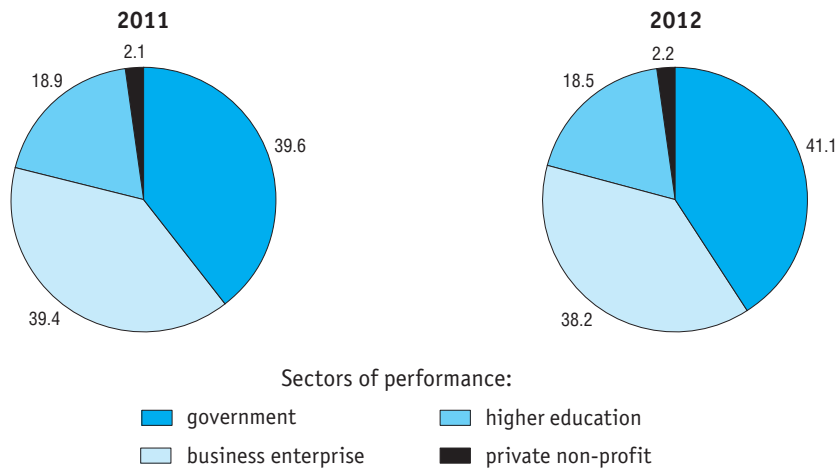
5. Sectors of R&D Performance

5.1. Aggregate Indicators

5.1.1. R&D INSTITUTIONS BY SECTOR OF PERFORMANCE

	Total	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
1995	4059	1193	2345	511	10
1996	4122	1202	2351	548	21
1997	4137	1223	2336	543	35
1998	4019	1212	2238	531	38
1999	4089	1221	2305	529	34
2000	4099	1247	2278	526	48
2001	4037	1248	2213	529	47
2002	3906	1218	2110	531	47
2003	3797	1233	1990	526	48
2004	3656	1230	1851	533	42
2005	3566	1282	1703	539	42
2006	3622	1341	1682	540	59
2007	3957	1483	1742	616	116
2008	3666	1429	1540	603	94
2009	3536	1406	1446	603	81
2010	3492	1400	1405	617	70
2011	3682	1457	1450	696	79
2012	3566	1467	1362	660	77

5.1.2. PERCENTAGE DISTRIBUTION OF R&D INSTITUTIONS BY SECTOR OF PERFORMANCE

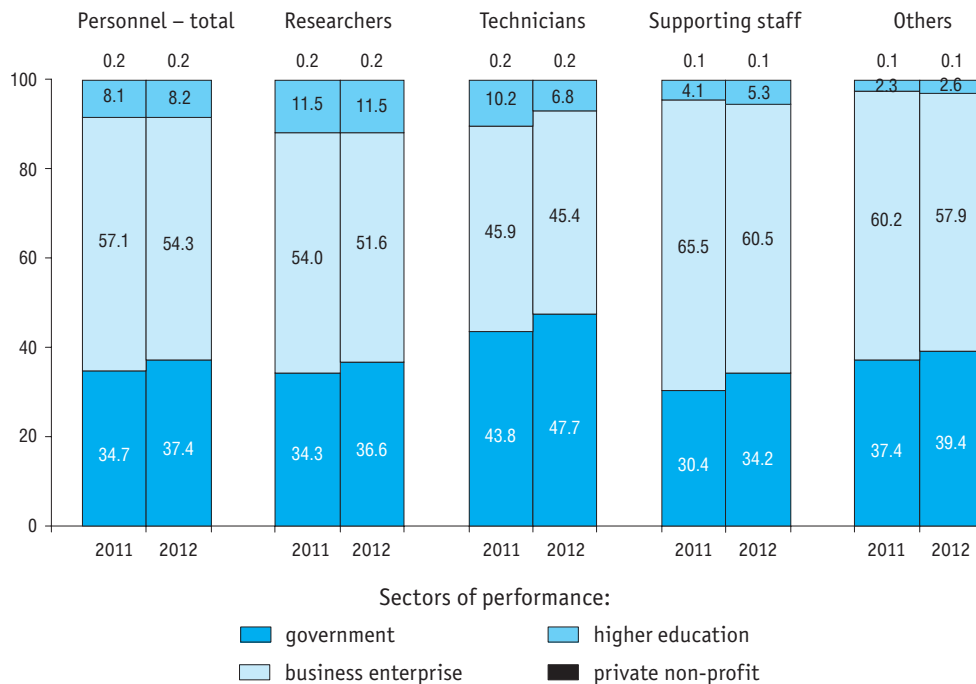


5.1.3. R&D PERSONNEL BY SECTOR OF PERFORMANCE AND OCCUPATION

(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	1061044	887729	870878	858470	839338	813207	807066	801135	761252	742433	736540	735273	726318
Researchers	518690	425954	414676	409775	401425	391121	388939	392849	375804	369237	368915	374746	372620
Technicians	101371	75184	74599	71729	69963	65982	66031	64569	60218	60045	59276	61562	58905
Supporting staff	274925	240506	232636	229214	223356	215555	213579	208052	194769	186995	183713	178494	175790
Others	166058	146085	148967	147752	144594	140549	138517	135665	130461	126156	124636	120471	119003
Government sector	282166	255850	257462	256098	258078	272718	274802	272255	260854	260360	259007	254896	271579
Researchers	146342	129725	131607	131906	132350	139378	138728	138169	132261	132955	131734	128672	136521
Technicians	27178	25085	26281	25083	25223	25462	25667	26545	24531	24554	24009	26960	28103
Supporting staff	66226	59706	56396	55782	57057	61448	62482	61031	58591	56846	56530	54176	60077
Others	42420	41334	43178	43327	43448	46430	47925	46510	45471	46005	46734	45088	46878
Business enterprise sector	726568	590646	568628	558668	537473	496706	486613	478401	451532	432415	423112	419752	394182
Researchers	336671	267640	252990	248232	239172	221445	218702	219632	209579	201668	197785	202185	192285
Technicians	70180	46535	44501	43137	41171	36837	36315	33340	31230	30613	30063	28235	26720
Supporting staff	201122	175261	169465	166620	159650	147980	144966	140507	129496	123814	120485	116829	106306
Others	118595	101210	101672	100679	97480	90444	86630	84922	81227	76320	74779	72503	68871
Higher education sector	52065	40787	44135	43120	43414	43500	44473	49059	47595	48498	53290	59454	59356
Researchers	35508	28325	29583	29346	29670	30111	30793	34162	33160	33847	38640	43121	43024
Technicians	4010	3509	3771	3434	3534	3658	3972	4606	4349	4778	5095	6256	3989
Supporting staff	7520	5463	6717	6695	6607	6098	5945	6282	6520	6198	6564	7345	9254
Others	5027	3490	4064	3645	3603	3633	3763	4009	3566	3675	2991	2732	3089
Private non-profit sector	245	446	653	584	373	283	1178	1420	1271	1160	1131	1171	1201
Researchers	169	264	496	291	233	187	716	886	804	767	756	768	790
Technicians	3	55	46	75	35	25	77	78	108	100	109	111	93
Supporting staff	57	76	58	117	42	29	186	232	162	137	134	144	153
Others	16	51	53	101	63	42	199	224	197	156	132	148	165

5.1.4. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL BY OCCUPATION AND SECTOR OF PERFORMANCE

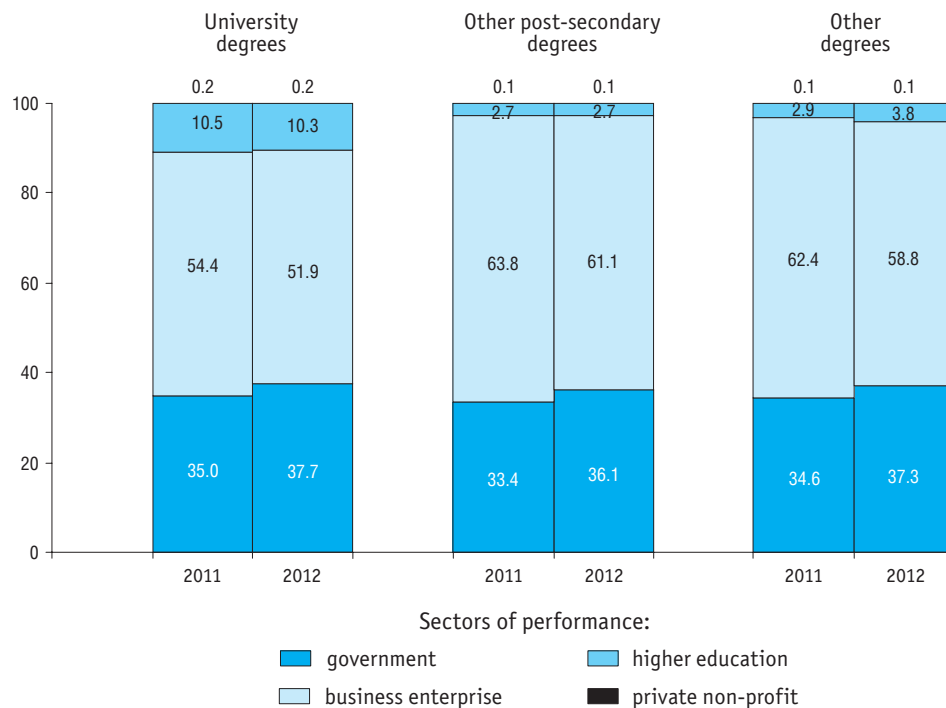


5.1.5. R&D PERSONNEL BY SECTOR OF PERFORMANCE AND EDUCATIONAL ATTAINMENT

(head-count)

	Total	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
R&D personnel					
2005	813207	272718	496706	43500	283
2008	761252	260854	451532	47595	1271
2009	742433	260360	432415	48498	1160
2010	736540	259007	423112	53290	1131
2011	735273	254896	419752	59454	1171
2012	726318	271579	394182	59356	1201
University degrees					
2005	501718	177676	288649	35159	234
2008	495255	175017	280083	39160	995
2009	489076	177254	270449	40456	917
2010	493852	178026	268821	46112	893
2011	506330	176984	275431	52965	950
2012	508057	191303	263555	52224	975
Other post-secondary degrees					
2005	134222	40495	89265	4430	32
2008	121508	38221	78622	4523	142
2009	115042	37439	73054	4424	125
2010	109158	36091	69552	3394	121
2011	103873	34687	66267	2811	108
2012	99503	35961	60764	2670	108
Other degrees					
2005	177267	54547	118792	3911	17
2008	144489	47616	92827	3912	134
2009	138315	45667	88912	3618	118
2010	133530	44890	84739	3784	117
2011	125070	43225	78054	3678	113
2012	118758	44315	69863	4462	118

5.1.6. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL BY EDUCATIONAL ATTAINMENT AND SECTOR OF PERFORMANCE

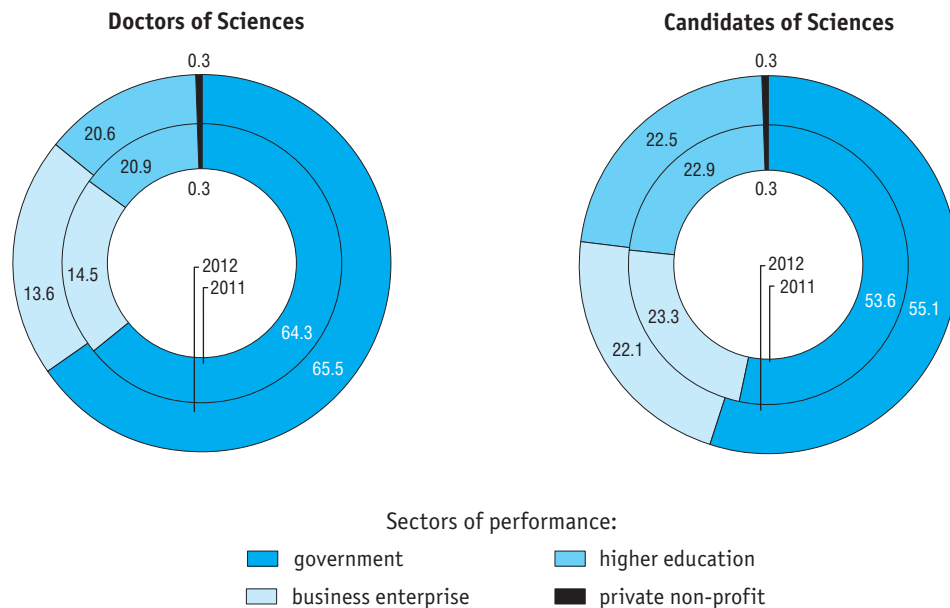


5.1.7. RESEARCHERS WITH SCIENTIFIC DEGREES BY SECTOR OF PERFORMANCE

(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Researchers with scientific degrees	116465	105911	102346	101806	99910	99428	99507	103725	101049	101275	105114	109493	109330
Doctors of Sciences	19330	21949	22571	22936	23102	23410	23880	25213	25140	25295	26789	27675	27784
Candidates of Sciences	97135	83962	79775	78870	76808	76018	75627	78512	75909	75980	78325	81818	81546
Government sector	61062	58901	57938	58774	58568	60066	60054	61707	60369	61309	61194	61605	63148
Doctors of Sciences	13358	14987	15420	15885	16031	16511	16766	17415	17326	17554	17646	17789	18205
Candidates of Sciences	47704	43914	42518	42889	42537	43555	43288	44292	43043	43755	43548	43816	44943
Business enterprise sector	41207	34775	31732	30507	29048	26661	25958	26257	24844	23861	23169	23045	21758
Doctors of Sciences	4348	4806	4691	4583	4511	4222	4108	4446	4284	4093	3987	4018	3767
Candidates of Sciences	36859	29969	27041	25924	24537	22439	21850	21811	20560	19768	19182	19027	17991
Higher education sector	14162	12113	12530	12432	12212	12618	13153	15330	15479	15774	20423	24502	24088
Doctors of Sciences	1617	2120	2425	2447	2538	2654	2924	3252	3439	3568	5068	5774	5729
Candidates of Sciences	12545	9993	10105	9985	9674	9964	10229	12078	12040	12206	15355	18728	18359
Private non-profit sector	34	122	146	93	82	83	342	431	357	331	328	341	336
Doctors of Sciences	7	36	35	21	22	23	82	100	91	80	88	94	83
Candidates of Sciences	27	86	111	72	60	60	260	331	266	251	240	247	253

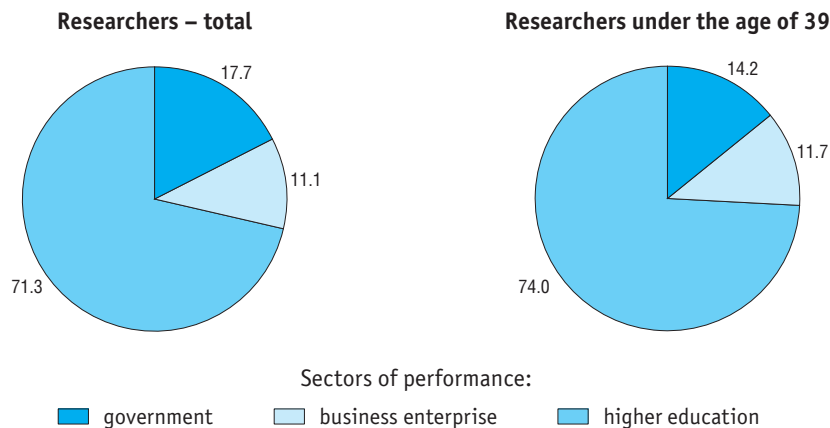
5.1.8. PERCENTAGE DISTRIBUTION OF RESEARCHERS WITH SCIENTIFIC DEGREES BY SECTOR OF PERFORMANCE



5.1.9. RESEARCHERS ASSIGNED TO INTERN OR WORK AT FOREIGN RESEARCH INSTITUTIONS BY SECTOR OF PERFORMANCE: 2012

	Total	Government sector	Business enterprise sector	Higher education sector
Institutions having assigned researchers to foreign research institutions	219	78	35	106
Researchers assigned to foreign research institutions for an internship or work, <i>head-count</i>	2637	466	292	1879
Of which those under the age of 39	1583	225	186	1172

5.1.10. PERCENTAGE DISTRIBUTION OF RESEARCHERS ASSIGNED TO INTERN OR WORK AT FOREIGN RESEARCH INSTITUTIONS BY SECTOR OF PERFORMANCE: 2012

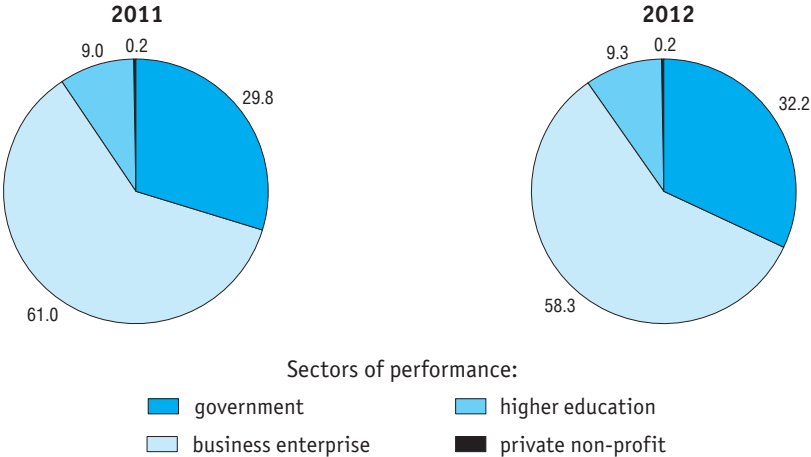


5.1.11. GROSS DOMESTIC EXPENDITURE ON R&D BY SECTOR OF PERFORMANCE

(thousand roubles, 1995 – million roubles)

	1995	2000	2004	2005	2006	2007	2008	2009	2010	2011	2012
At current prices											
Gross domestic expenditure on R&D	12149458.6	76697100.5	196039870.2	230785150.3	288805211.5	371080327.1	431073185.2	485834338.2	523377233.9	610426680.6	699869784.8
Government sector	3165439.4	18748588.2	49545237.7	60158166.6	77950634.9	107984917.2	129871228.3	147023165.7	161988411.4	182135309.9	225267055.5
Business enterprise sector	8323907.6	54288781.4	135408690.9	156880029.0	192484851.0	238386207.4	271206280.5	303051131.5	316701679.9	372088873.4	408284378.5
Higher education sector	657374.0	3489342.2	10696125.8	13337987.1	17639173.8	23471870.9	28868566.7	34642216.7	43714007.3	55134893.9	65049265.8
Private non-profit sector	2737.6	170388.7	389815.8	408967.6	730551.8	1237331.6	1127109.7	1117824.3	973135.3	1067603.4	1269085.0
At constant 1989 prices											
Gross domestic expenditure on R&D	2485.4	3321.2	4608.4	4547.5	4939.9	5577.5	5490.8	6067.0	5723.2	5779.3	6107.0
Government sector	647.6	811.9	1164.7	1185.4	1333.3	1623.1	1654.3	1836.0	1771.4	1724.4	1965.7
Business enterprise sector	1702.8	2350.9	3183.1	3091.2	3292.4	3583.0	3454.5	3784.5	3463.2	3522.8	3562.6
Higher education sector	134.5	151.1	251.4	262.8	301.7	352.8	367.7	432.6	478.0	522.0	567.6
Private non-profit sector	0.6	7.4	9.2	8.1	12.5	18.6	14.4	14.0	10.6	10.1	11.1

5.1.12. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D
BY SECTOR OF PERFORMANCE



5.1.13. GROSS DOMESTIC EXPENDITURE ON R&D BY SECTOR OF PERFORMANCE AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT

	Total	Government sector	Business enterprise sector	Higher education sector
1995	0.85	0.22	0.58	0.05
1996	0.97	0.25	0.67	0.05
1997	1.04	0.29	0.69	0.06
1998	0.95	0.25	0.66	0.05
1999	1.00	0.25	0.70	0.05
2000	1.05	0.26	0.74	0.05
2001	1.18	0.29	0.83	0.06
2002	1.25	0.31	0.87	0.07
2003	1.29	0.33	0.88	0.08
2004	1.15	0.29	0.80	0.06
2005	1.07	0.28	0.73	0.06
2006	1.07	0.29	0.72	0.07
2007	1.12	0.32	0.72	0.07
2008	1.04	0.31	0.66	0.07
2009	1.25	0.38	0.78	0.09
2010	1.13	0.35	0.68	0.09
2011	1.09	0.33	0.67	0.10
2012	1.12	0.36	0.65	0.10

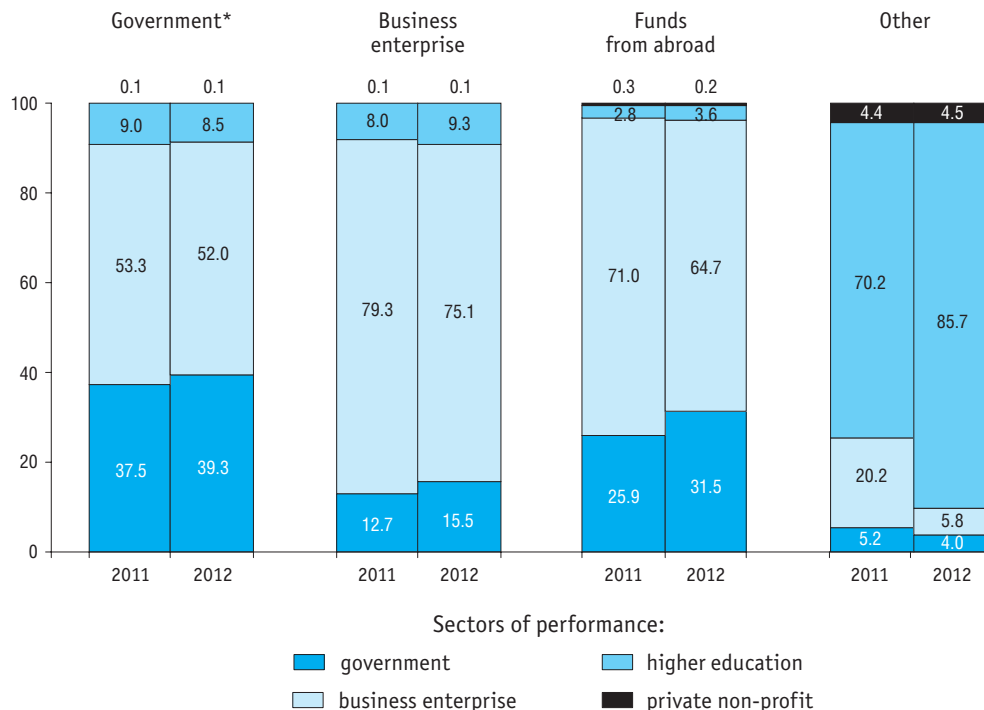
5.1.14. GROSS DOMESTIC EXPENDITURE ON R&D BY SECTOR OF PERFORMANCE AND SOURCE OF FUNDS

(thousand roubles)

	Total	Funds of the government sector*	Funds of the business enterprise sector	Funds of the higher education sector	Funds of the private non-profit sector	Funds from abroad
2010						
Gross domestic expenditure on R&D	523377233.9	368191779.8	133498976.0	2436564.1	682378.0	18567536.0
Government sector	161988411.4	134275595.6	20873979.0	205154.5	73117.4	6560564.9
Business enterprise sector	316701679.9	203267110.6	101760706.5	75409.3	427247.1	11171206.4
Higher education sector	43714007.3	30017817.7	10724045.9	2154774.3	55055.8	762313.6
Private non-profit sector	973135.3	631255.9	140244.6	1226.0	126957.7	73451.1
2011						
Gross domestic expenditure on R&D	610426680.6	409449448.8	168957596.6	4664465.3	1209661.5	26145508.4
Government sector	182135309.9	153529403.4	21528707.1	244802.6	61568.4	6770828.4
Business enterprise sector	372088873.4	218291814.8	134043614.4	376915.9	806970.4	18569557.9
Higher education sector	55134893.9	37047554.1	13224580.6	4030900.0	93584.3	738274.9
Private non-profit sector	1067603.4	580676.5	160694.5	11846.8	247538.4	66847.2
2012						
Gross domestic expenditure on R&D	699869784.8	474789779.0	190545904.2	5905489.1	877937.6	27750674.9
Government sector	225267055.5	186798862.0	29459319.3	197336.7	75635.7	8735901.8
Business enterprise sector	408284378.5	246761318.2	143181603.7	240986.2	152505.3	17947965.1
Higher education sector	65049265.8	40518331.2	17709405.2	5441235.5	371292.2	1009001.7
Private non-profit sector	1269085.0	711267.6	195576.0	25930.7	278504.4	57806.3

* Including federal budget appropriations, general university funds and funds of government sector institutions (e.g. own funds of institutions).

5.1.15. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY SOURCE OF FUNDS AND SECTOR OF PERFORMANCE



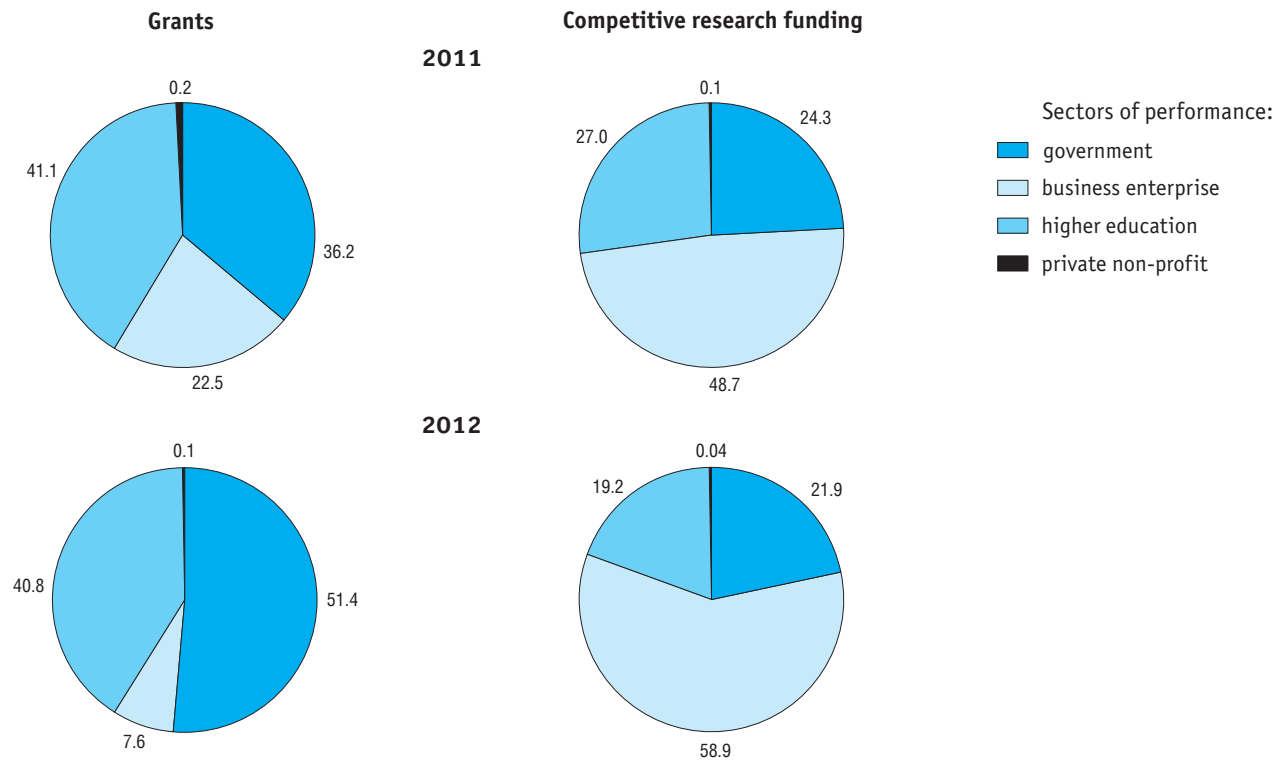
* Including federal budget appropriations, general university funds and funds of government sector institutions (e.g. own funds of institutions).

5.1.16. GRANTS AND COMPETITIVE RESEARCH FUNDING BY SECTOR OF PERFORMANCE

(thousand roubles)

	Total	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
Grants					
2010	7229208.6	3904467.5	899087.6	2366320.8	59332.7
2011	14240100.9	5158842.5	3198334.7	5858977.3	23946.4
2012	19758073.7	10152902.5	1508997.6	8068571.6	27602.0
Competitive research funding					
2010	49583862.2	11182780.8	24623093.5	13726017.8	51970.1
2011	70441797.9	17099699.4	34297320.7	18984549.9	60227.9
2012	100108235.1	21884015.4	59013008.9	19171619.8	39591.0

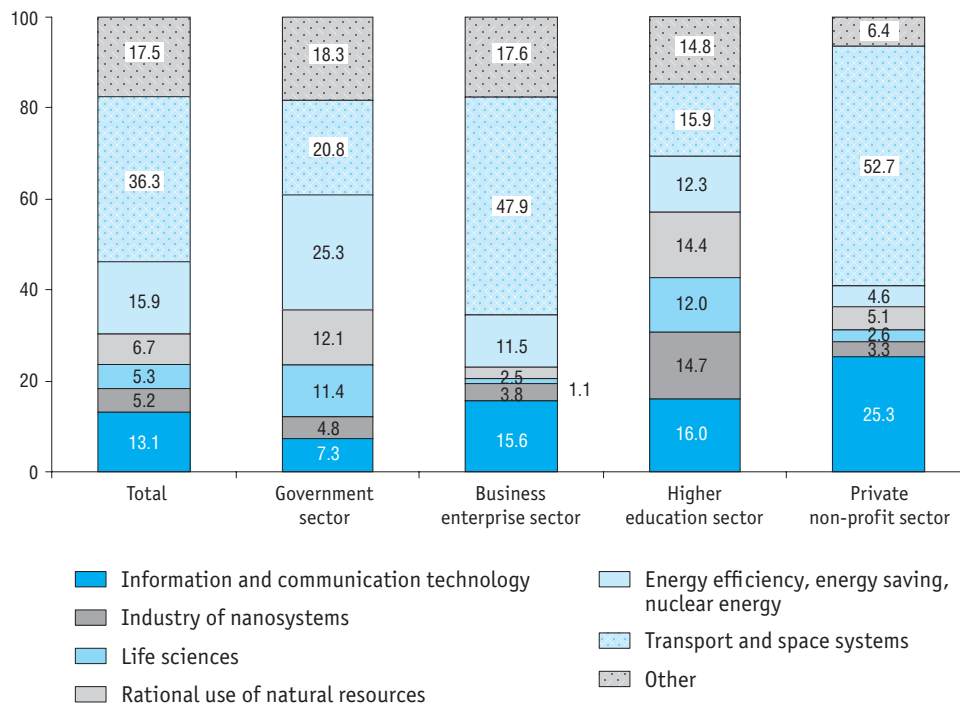
5.1.17. PERCENTAGE DISTRIBUTION OF GRANTS AND COMPETITIVE RESEARCH FUNDING BY SECTOR OF PERFORMANCE



5.1.18. GROSS DOMESTIC EXPENDITURE ON R&D BY PRIORITY S&T AREA AND SECTOR OF PERFORMANCE: 2012
(thousand roubles)

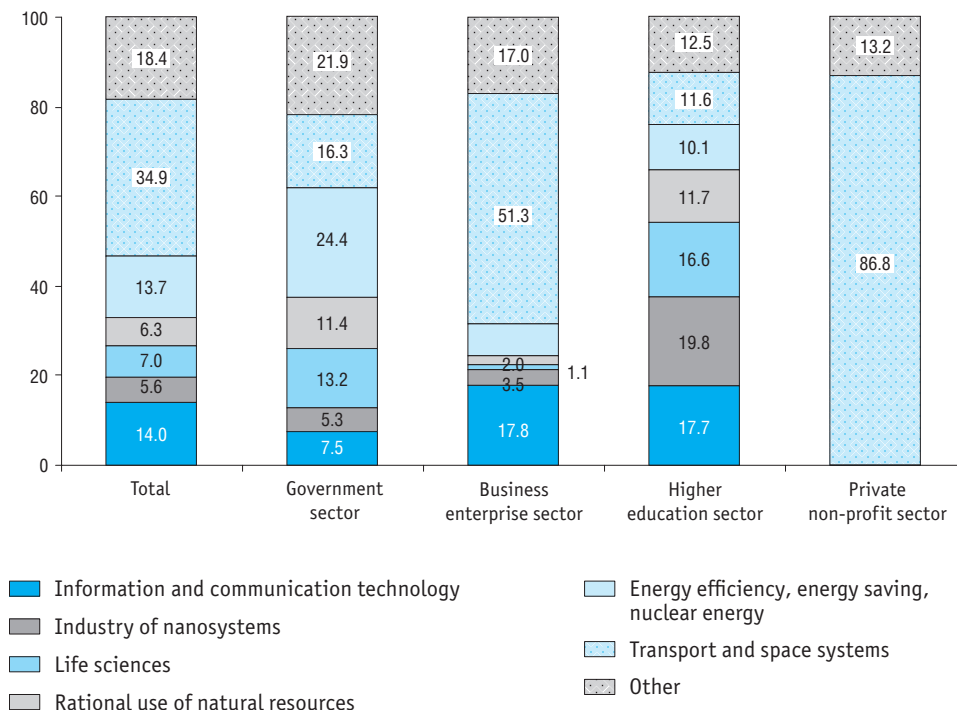
	Total	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
Gross domestic expenditure on R&D by priority S&T area	472811294.7	147260339.6	278435558.7	46559451.0	555945.4
Information and communication technology	61966025.4	10821985.0	43544050.8	7459148.5	140841.1
Industry of nanosystems	24427634.0	7135308.6	10447568.3	6826396.5	18360.6
Life sciences	25235983.1	16722913.5	2928034.5	5570676.5	14358.6
Rational use of natural resources	31574595.0	17797291.8	7050672.2	6698463.4	28167.6
Energy efficiency, energy saving, nuclear energy	75063412.7	37208959.0	32087300.8	5741823.0	25329.9
Transport and space systems	171616319.0	30576343.1	133365737.7	7381157.3	293080.9
Of which financed from the federal budget	277895502.0	102177644.0	150366810.1	25078867.0	272180.9
Information and communication technology	38927259.9	7674032.0	26820263.3	4432964.6	–
Industry of nanosystems	15638359.4	5367397.0	5305245.4	4965717.0	–
Life sciences	19319494.4	13457341.3	1701938.7	4160214.4	–
Rational use of natural resources	17645466.0	11693402.6	3018075.3	2933988.1	–
Energy efficiency, energy saving, nuclear energy	38191139.6	24921112.7	10729644.6	2540382.3	–
Transport and space systems	96946376.6	16654644.2	77156335.2	2899022.5	236374.7

5.1.19. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY PRIORITY S&T AREA AND SECTOR OF PERFORMANCE: 2012

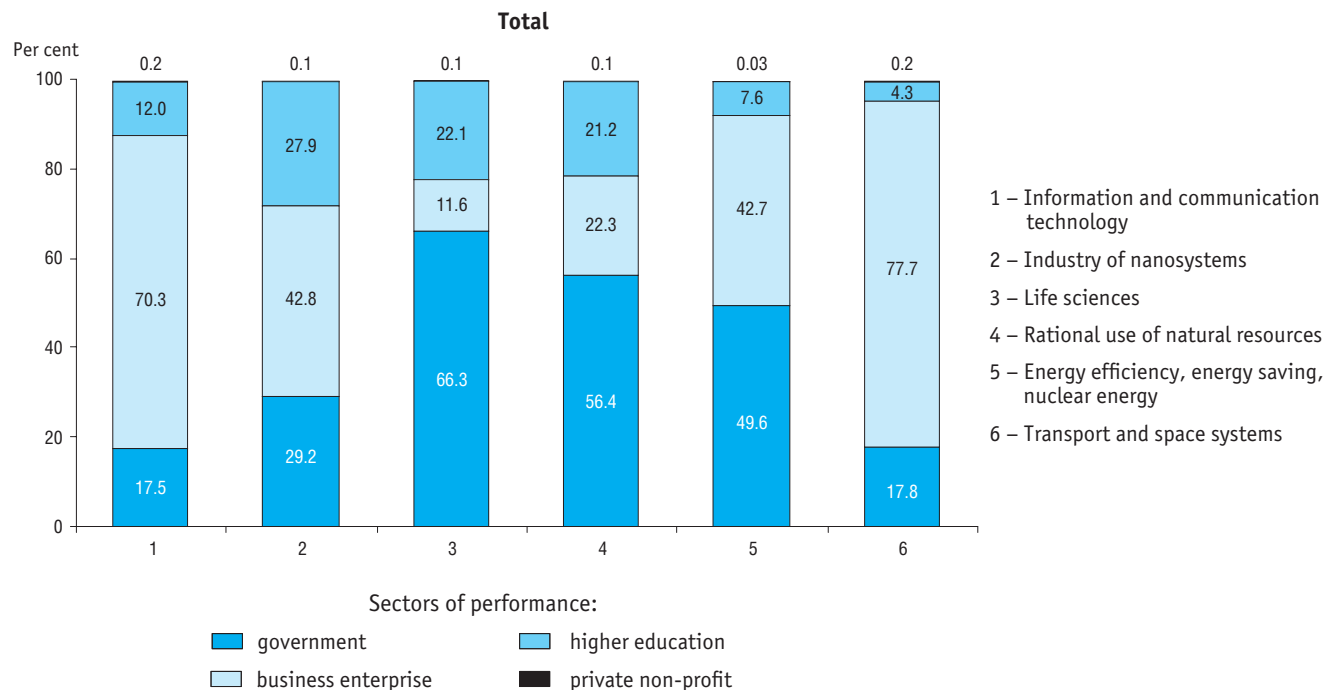


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Percentage distribution of gross domestic expenditure on R&D
financed from the federal budget

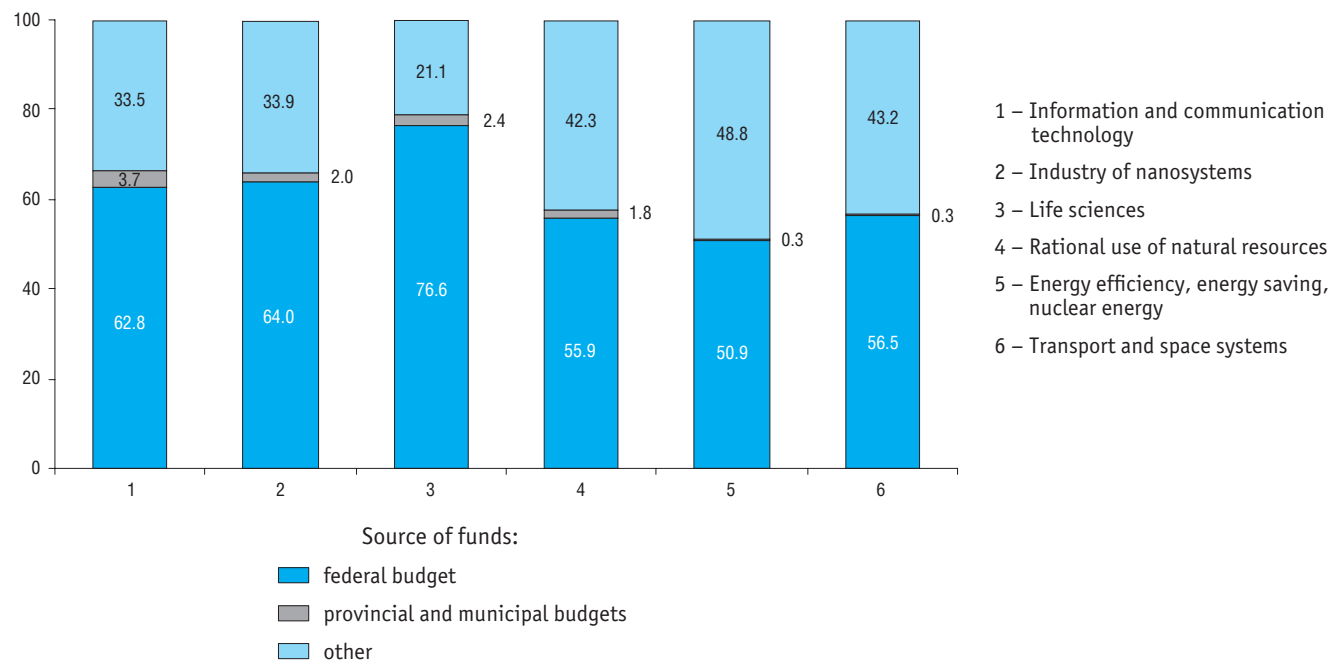


5.1.20. SHARE OF SECTORS OF PERFORMANCE IN GROSS DOMESTIC EXPENDITURE ON R&D BY SELECTED PRIORITY S&T AREA: 2012

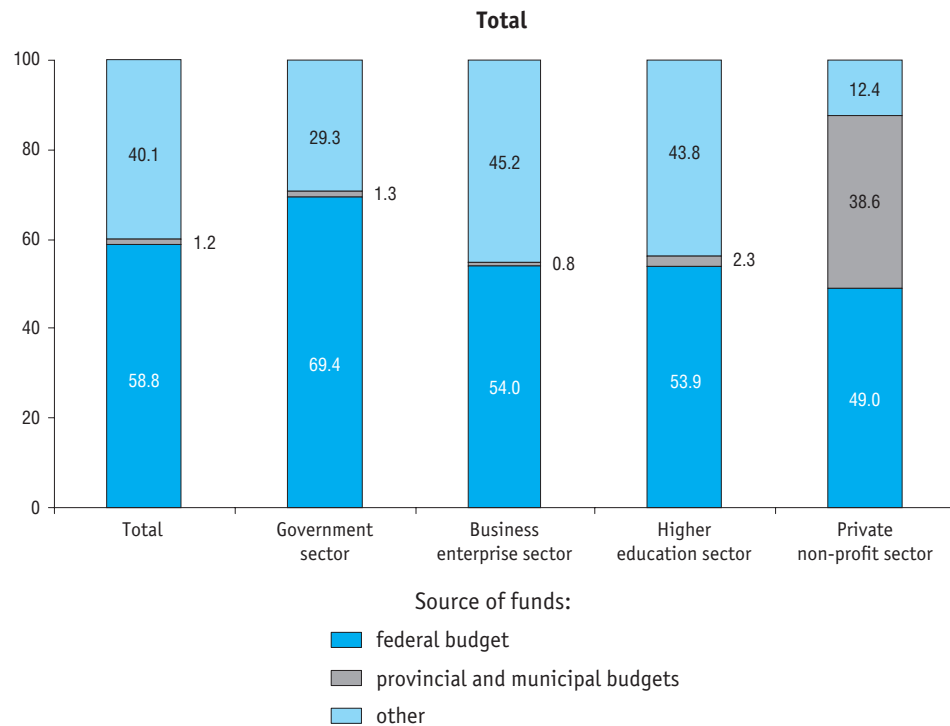


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Percentage distribution of gross domestic expenditure on R&D
by selected priority S&T area and source of funds

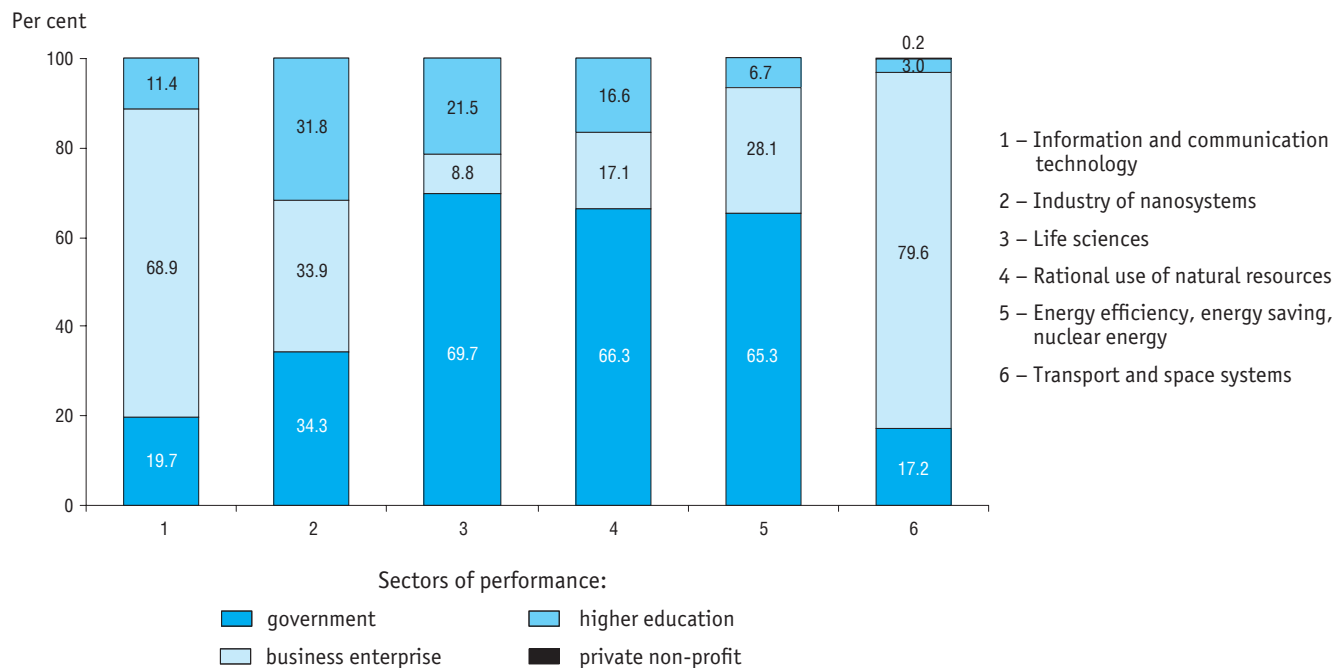


5.1.21. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY PRIORITY S&T AREA AND SOURCE OF FUNDS: 2012



(continued)

Share of sectors of performance in gross domestic expenditure on R&D
financed from the federal budget



5.1.22. GROSS DOMESTIC EXPENDITURE ON R&D BY SECTOR OF PERFORMANCE AND SOCIO-ECONOMIC OBJECTIVE

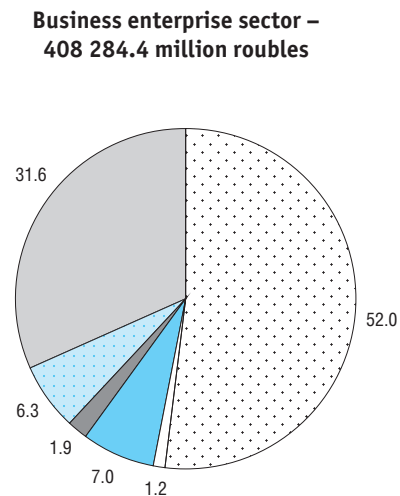
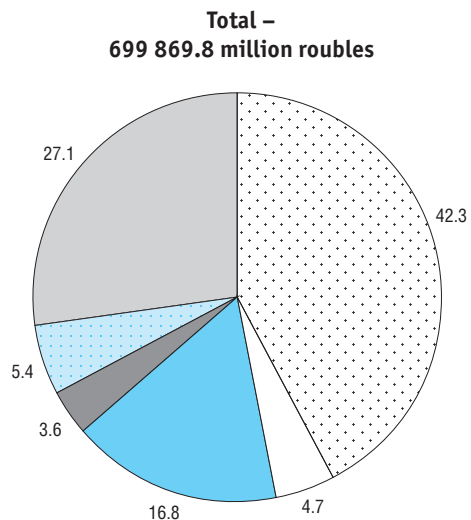
(thousand roubles)

	Total	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
2009					
Gross domestic expenditure on R&D	485834338.2	147023165.7	303051131.5	34642216.7	1117824.3
Economic development	169117727.8	25587588.1	131860762.0	11580045.6	89332.1
Social objectives	23520636.0	13796328.2	5194538.4	4402823.1	126946.3
General advancement of research	114239973.1	59185031.3	39545144.2	15051470.5	458327.1
Exploration and exploitation of the Earth and atmosphere	15248532.6	9276605.0	4737759.1	1137086.6	97081.9
Civil space	25872001.8	5939260.4	19467394.7	381592.3	83754.4
Other	137835466.9	33238352.7	102245533.1	2089198.6	262382.5
2010					
Gross domestic expenditure on R&D	523377233.9	161988411.4	316701679.9	43714007.3	973135.3
Economic development	183113782.3	27363386.8	137277406.4	18388324.5	84664.6
Social objectives	24966176.4	15678573.3	3428751.4	5715218.0	143633.7
General advancement of research	104294714.1	60344393.8	29350303.3	14265983.6	334033.4
Exploration and exploitation of the Earth and atmosphere	19821817.2	10992645.7	7298359.0	1425201.8	105610.7
Civil space	27503697.9	7745311.8	18981106.6	763424.2	13855.3
Other	163677046.0	39864100.0	120365753.2	3155855.2	291337.6

(continued)

	Total	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
2011					
Gross domestic expenditure on R&D	610426680.6	182135309.9	372088873.4	55134893.9	1067603.4
Economic development	231941668.2	37298989.6	169331843.7	25175184.0	135650.9
Social objectives	29640390.9	18275876.7	4224886.0	7012531.8	127096.4
General advancement of research	111947458.3	67584899.6	26713553.5	17227621.4	421383.8
Exploration and exploitation of the Earth and atmosphere	20390660.8	12525500.2	5824163.0	1932518.8	108478.8
Civil space	35752455.2	9370439.0	25516406.5	849056.0	16553.7
Other	180754047.2	37079604.8	140478020.7	2937981.9	258439.8
2012					
Gross domestic expenditure on R&D	699869784.8	225267055.5	408284378.5	65049265.8	1269085.0
Economic development	295901906.0	55032357.1	212179260.2	28615008.6	75280.1
Social objectives	33070785.7	19664943.3	5033592.1	8281242.3	91008.0
General advancement of research	117873370.5	67507463.6	28688459.8	21042287.8	635159.3
Exploration and exploitation of the Earth and atmosphere	25474648.5	15629075.7	7772629.1	1957383.8	115559.9
Civil space	37558965.0	10910796.0	25723269.3	901131.6	23768.1
Other	189990109.1	56522419.8	128887168.0	4252211.7	328309.6

5.1.23. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY SECTOR OF PERFORMANCE AND SOCIO-ECONOMIC OBJECTIVE: 2012

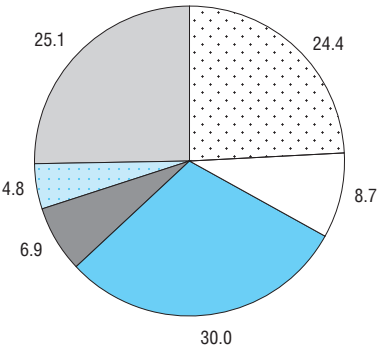


 Economic development
 Social objectives
 General advancement
of research

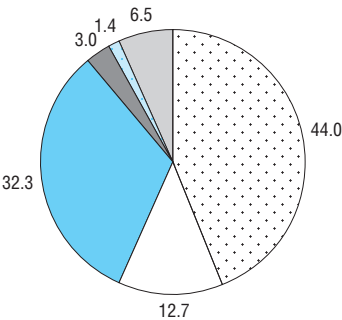
 Exploration and exploitation
of the Earth and atmosphere
 Civil space
 Other

(continued)

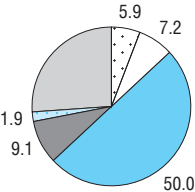
**Government sector –
225 267.1 million roubles**



**Higher education sector –
65 049.3 million roubles**



**Private non-profit sector –
1269.1 million roubles**



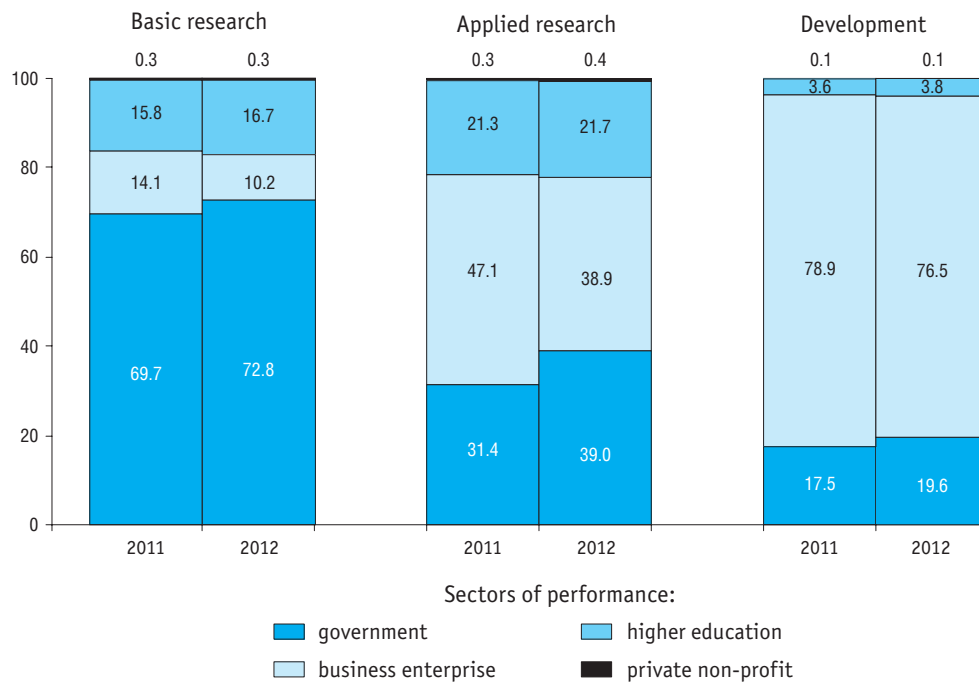
- Economic development
- Social objectives
- General advancement of research
- Exploration and exploitation of the Earth and atmosphere
- Civil space
- Other

5.1.24. INTRAMURAL CURRENT EXPENDITURE ON R&D BY SECTOR OF PERFORMANCE AND TYPE OF ACTIVITY

(thousand roubles)

	Total	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
Intramural current expenditure on R&D					
2005	221119537.6	56342327.7	151228693.6	13144292.5	404223.8
2008	410864983.6	122630304.7	258764246.7	28355126.5	1115305.7
2009	461006216.2	138303922.9	287718749.5	33871885.4	1111658.4
2010	489450798.7	151825126.6	294103827.7	42552245.4	969599.0
2011	568386749.7	170811017.0	343121369.6	53389079.3	1065283.8
2012	655061743.4	210844599.2	380968190.9	61983505.1	1265448.2
Basic research					
2005	31022855.8	24586195.8	2591506.7	3841327.6	3825.7
2008	77121264.3	55980558.1	11469378.1	9500293.6	171034.5
2009	96809127.3	63843573.1	17916877.3	14799057.5	249619.4
2010	95881364.3	65041375.9	16935403.4	13647906.8	256678.2
2011	106923986.6	74527944.1	15100475.9	16943421.4	352145.2
2012	108160904.7	78707119.3	11034975.2	18085591.1	333219.1
Applied research					
2005	36360266.9	10603039.3	20026408.8	5405410.3	325408.5
2008	79885835.9	22831808.4	44593566.0	11789234.9	671226.6
2009	92557125.5	26135931.3	54351166.0	11450223.9	619804.3
2010	92010677.2	30948555.6	42872394.0	17804762.0	384965.6
2011	113096800.2	35457277.1	53220149.5	24053848.5	365525.1
2012	129304402.1	50400053.9	50351025.6	28053049.3	500273.3
Development					
2005	153736414.9	21153092.6	128610778.1	3897554.6	74989.6
2008	253857883.4	43817938.2	202701302.6	7065598.0	273044.6
2009	271639963.4	48324418.5	215450706.2	7622604.0	242234.7
2010	301558757.2	55835195.1	234296030.3	11099576.6	327955.2
2011	348365962.9	60825795.8	274800744.2	12391809.4	347613.5
2012	417596436.6	81737426.0	319582190.1	15844864.7	431955.8

5.1.25. PERCENTAGE DISTRIBUTION OF INTRAMURAL CURRENT EXPENDITURE ON R&D BY TYPE OF ACTIVITY AND SECTOR OF PERFORMANCE



5.1.26. AVERAGE MONTHLY SALARY OF R&D PERSONNEL BY SECTOR OF PERFORMANCE

(roubles, before 1998 – thousand roubles)

	Total	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
1995	305.3	330.5	297.6	280.1	164.2
1996	550.9	555.5	557.1	441.4	587.5
1997	746.5	790.1	740.8	575.2	572.8
1998	836.0	814.2	861.3	624.9	581.0
1999	1432.6	1355.2	1491.1	1098.7	930.2
2000	2322.9	2015.6	2519.9	1400.3	1836.1
2001	3348.9	2870.5	3630.1	2383.8	2619.8
2002	4552.1	3970.4	4893.6	3476.9	4770.2
2003	5712.8	4969.6	6124.3	4749.1	5654.7
2004	6918.4	5958.7	7525.0	5088.8	6575.0
2005	8672.0	7220.9	9599.6	7042.0	5767.4
2006	10840.9	9678.8	11744.8	8348.7	9409.1
2007	14683.4	14208.3	15203.6	12233.1	13237.3
2008	19263.3	19561.0	19345.3	16812.7	21161.2
2009	22104.3	22979.7	21674.1	21191.5	24253.8
2010	25043.5	24792.1	25359.7	23716.4	24438.5
2011	28387.5	27869.4	29174.9	24963.9	25956.5
2012	32539.9	32031.0	33165.2	30715.1	25983.7

5.2. Government Sector

5.2.1. R&D INSTITUTIONS IN THE GOVERNMENT SECTOR BY TYPE

	2005	2007	2008	2009	2010	2011	2012
Total	1282	1483	1429	1406	1400	1457	1467
Research institutes	1145	1153	1128	1126	1124	1109	1114
Design organisations	62	94	73	60	61	65	64
Construction project and exploration organisations	6	4	5	5	5	6	6
Experimental enterprises	14	40	37	35	30	33	37
Others	55	192	186	180	180	244	246

5.2.2. R&D PERSONNEL IN THE GOVERNMENT SECTOR BY TYPE OF INSTITUTIONS (head-count)

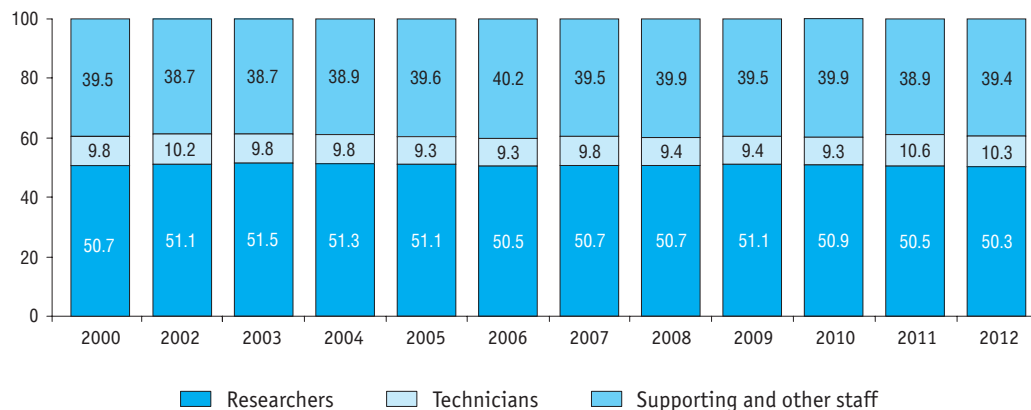
	2005	2007	2008	2009	2010	2011	2012
Total	272718	272255	260854	260360	259007	254896	271579
Research institutes	248214	232732	223190	223922	222613	219220	232655
Design organisations	21499	29725	27021	26507	26473	23290	26084
Construction project and exploration organisations	159	1405	1442	1418	1419	1390	1370
Experimental enterprises	367	873	694	648	631	957	1375
Others	2479	7520	8507	7865	7871	10039	10095

5.2.3. R&D PERSONNEL IN THE GOVERNMENT SECTOR BY OCCUPATION

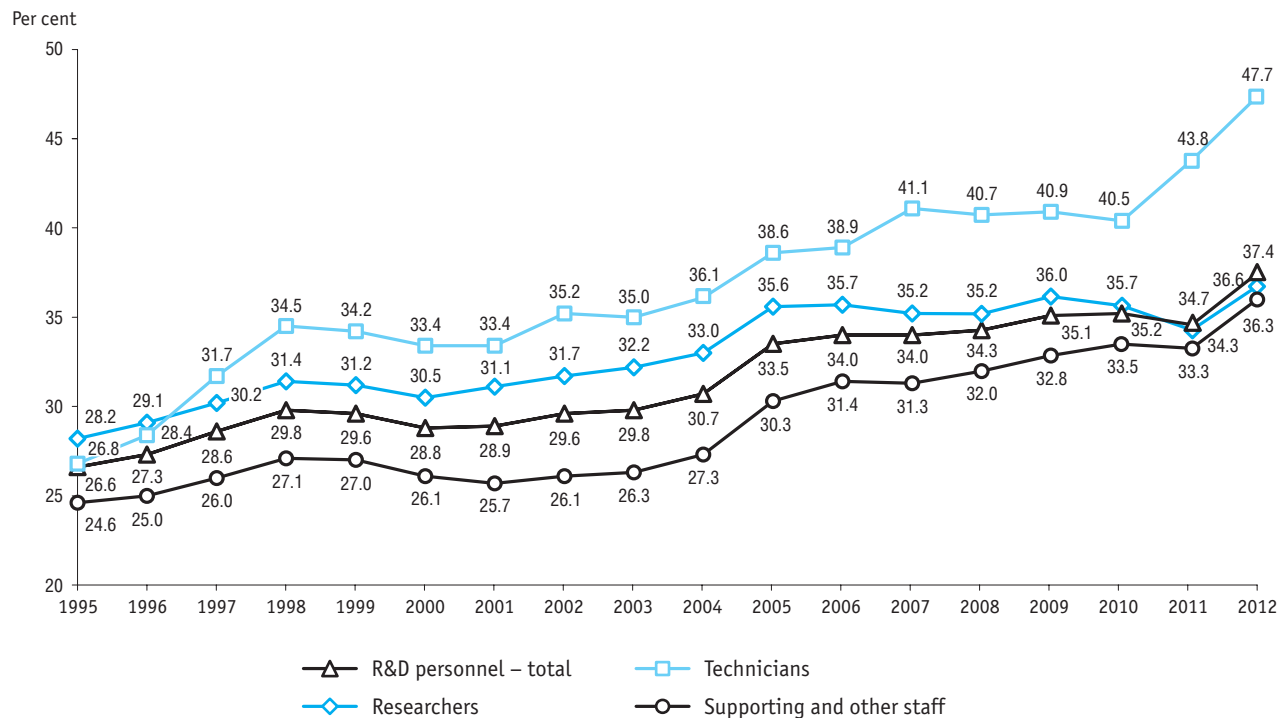
(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	282166	255850	257462	256098	258078	272718	274802	272255	260854	260360	259007	254896	271579
Researchers	146342	129725	131607	131906	132350	139378	138728	138169	132261	132955	131734	128672	136521
Technicians	27178	25085	26281	25083	25223	25462	25667	26545	24531	24554	24009	26960	28103
Supporting staff	66226	59706	56396	55782	57057	61448	62482	61031	58591	56846	56530	54176	60077
Others	42420	41334	43178	43327	43448	46430	47925	46510	45471	46005	46734	45088	46878

5.2.4. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL IN THE GOVERNMENT SECTOR BY OCCUPATION



5.2.5. SHARE OF THE GOVERNMENT SECTOR IN R&D PERSONNEL TOTAL BY OCCUPATION



5.2.6. R&D PERSONNEL IN THE GOVERNMENT SECTOR BY EDUCATIONAL ATTAINMENT

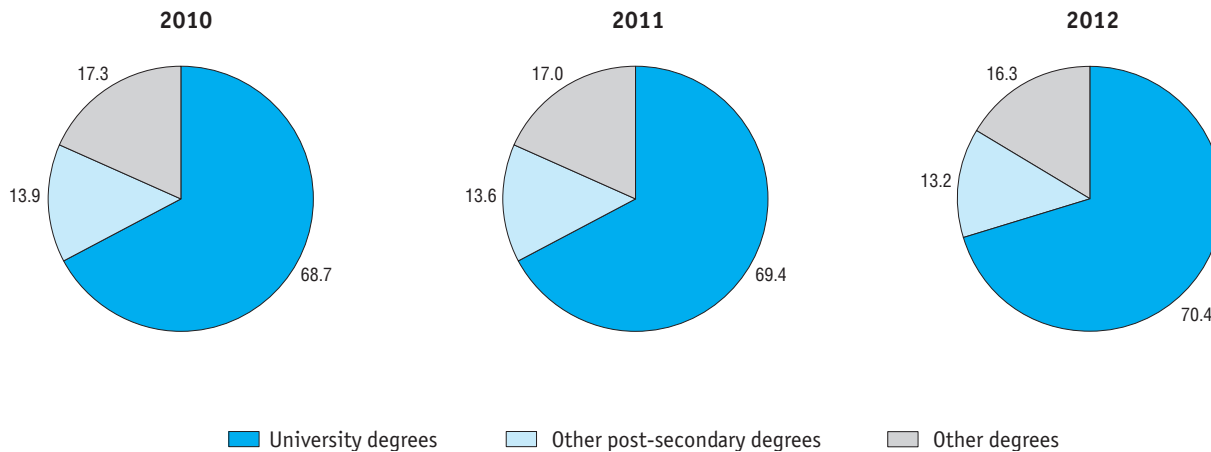
(head-count)

	Total	University degrees	Other post-secondary degrees	Other degrees
R&D personnel				
2005	272718	177676	40495	54547
2008	260854	175017	38221	47616
2009	260360	177254	37439	45667
2010	259007	178026	36091	44890
2011	254896	176984	34687	43225
2012	271579	191303	35961	44315
Researchers				
2005	139378	139378	–	–
2008	132261	132261	–	–
2009	132955	132955	–	–
2010	131734	131734	–	–
2011	128672	128672	–	–
2012	136521	136521	–	–
Technicians				
2005	25462	7802	12177	5483
2008	24531	8197	11231	5103
2009	24554	8633	10889	5032
2010	24009	9110	10155	4744
2011	26960	10736	10629	5595
2012	28103	11963	10844	5296

(continued)

	Total	University degrees	Other post-secondary degrees	Other degrees
Supporting staff				
2005	61448	19119	15834	26495
2008	58591	21161	15143	22287
2009	56846	21472	14633	20741
2010	56530	21762	14287	20481
2011	54176	21669	12916	19591
2012	60077	24647	13977	21453
Others				
2005	46430	11377	12484	22569
2008	45471	13398	11847	20226
2009	46005	14194	11917	19894
2010	46734	15420	11649	19665
2011	45088	15907	11142	18039
2012	46878	18172	11140	17566

5.2.7. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL IN THE GOVERNMENT SECTOR BY EDUCATIONAL ATTAINMENT



5.2.8. EMPLOYEES WORKING PART-TIME AND ON CONTRACTS IN THE GOVERNMENT SECTOR BY OCCUPATION

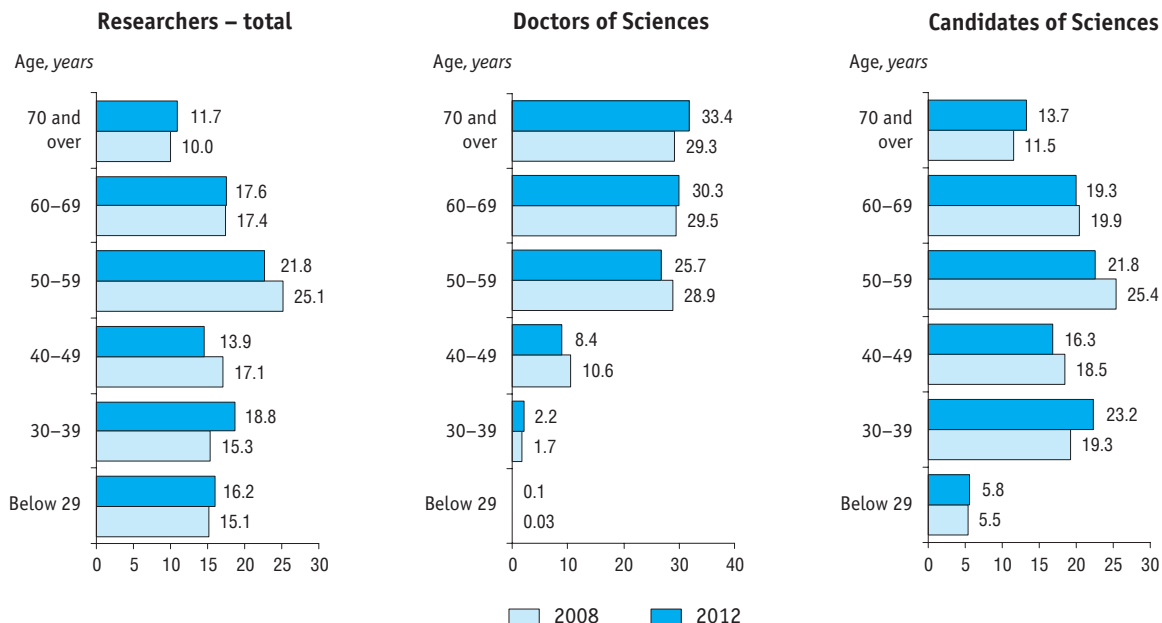
	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Head-count													
Total	35991	32209	34872	33723	35461	35248	37168	38102	36273	37455	35226	33956	36074
Researchers	17001	18501	20533	21253	22063	22653	24245	23966	21884	21596	21361	19943	21808
Technicians	4054	2296	2664	2397	2458	2323	2410	2638	2365	2763	2610	2666	2749
Supporting staff	7847	4978	5096	4743	4776	4968	4958	5122	5162	4838	4622	4693	4945
Others	7089	6434	6579	5330	6164	5304	5555	6376	6862	8258	6633	6654	6572
Per cent													
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Researchers	47.2	57.4	58.9	63.0	62.2	64.3	65.2	62.9	60.3	57.7	60.6	58.7	60.5
Technicians	11.3	7.1	7.6	7.1	6.9	6.6	6.5	6.9	6.5	7.4	7.4	7.9	7.6
Supporting staff	21.8	15.5	14.6	14.1	13.5	14.1	13.3	13.4	14.2	12.9	13.1	13.8	13.7
Others	19.7	20.0	18.9	15.8	17.4	15.0	14.9	16.7	18.9	22.0	18.8	19.6	18.2

5.2.9. RESEARCHERS IN THE GOVERNMENT SECTOR BY GENDER AND AGE GROUP

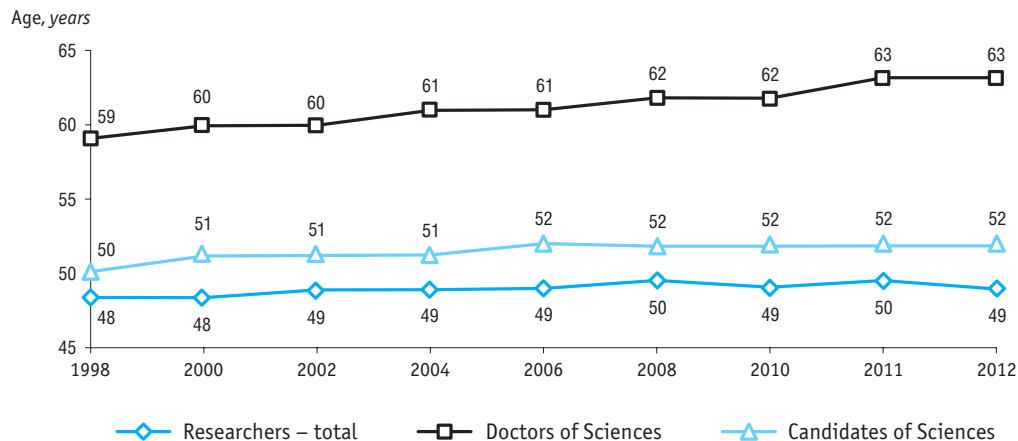
(head-count)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Total	132261	17326	43043	136521	18205	44943
Age, years:						
below 29	19971	5	2348	22081	13	2615
30–39	20242	289	8296	25643	393	10405
40–49	22644	1838	7969	19012	1524	7314
50–54	16357	2194	5445	14636	1970	4788
55–59	16849	2821	5492	15183	2717	5007
60–69	23031	5106	8553	23982	5513	8660
70 and over	13167	5073	4940	15984	6075	6154
Male	72653	13078	23696	75955	13427	24400
Age, years:						
below 29	11530	2	1354	12968	12	1580
30–39	9970	209	4091	13634	277	5200
40–49	10894	1307	3946	9112	1000	3399
50–54	8373	1583	2966	7368	1337	2537
55–59	9183	2073	3229	8163	1881	2783
60–69	13688	4001	4974	14153	4209	5167
70 and over	9015	3903	3136	10557	4711	3734
Female	59608	4248	19347	60566	4778	20543
Age, years:						
below 29	8441	3	994	9113	1	1035
30–39	10272	80	4205	12009	116	5205
40–49	11750	531	4023	9900	524	3915
50–54	7984	611	2479	7268	633	2251
55–59	7666	748	2263	7020	836	2224
60–69	9343	1105	3579	9829	1304	3493
70 and over	4152	1170	1804	5427	1364	2420

5.2.10. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE GOVERNMENT SECTOR BY AGE GROUP



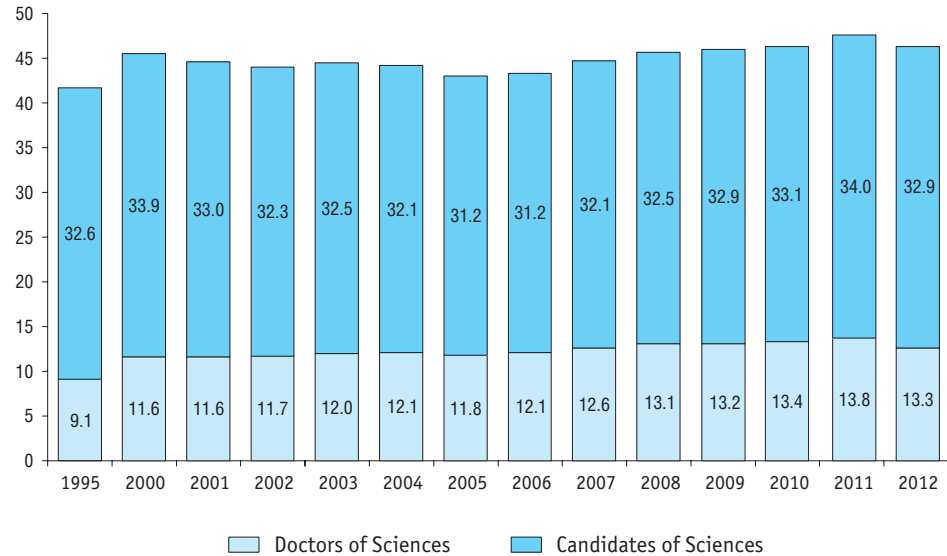
5.2.11. AVERAGE AGE OF RESEARCHERS IN THE GOVERNMENT SECTOR



5.2.12. RESEARCHERS WITH SCIENTIFIC DEGREES IN THE GOVERNMENT SECTOR (head-count)

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Researchers with scientific degrees	61062	58901	58774	58568	60066	60054	61707	60369	61309	61194	61605	63148
Doctors of Sciences	13358	14987	15885	16031	16511	16766	17415	17326	17554	17646	17789	18205
Candidates of Sciences	47704	43914	42889	42537	43555	43288	44292	43043	43755	43548	43816	44943

5.2.13. RESEARCHERS WITH SCIENTIFIC DEGREES AS A PERCENTAGE OF THE TOTAL NUMBER OF RESEARCHERS IN THE GOVERNMENT SECTOR

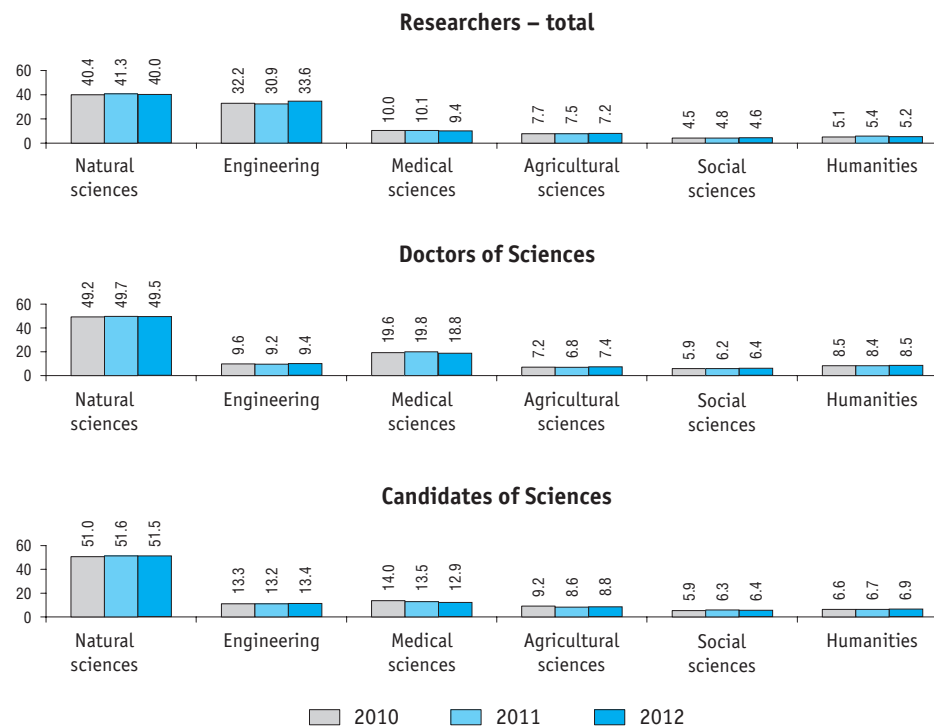


5.2.14. RESEARCHERS IN THE GOVERNMENT SECTOR BY FIELD OF SCIENCE AND TECHNOLOGY

(head-count)

	2008			2010			2011			2012		
	Researchers	Of whom		Researchers	Of whom		Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Total	132261	17326	43043	131734	17646	43548	128672	17789	43816	136521	18205	44943
Natural sciences	52719	8525	21841	53265	8683	22210	53140	8842	22627	54668	9017	23143
Engineering	44097	1740	6204	42472	1692	5802	39755	1632	5797	45825	1705	6040
Medical sciences	12918	3320	5921	13131	3454	6086	12992	3514	5930	12820	3423	5802
Agricultural sciences	10285	1225	3930	10147	1265	3988	9663	1202	3779	9800	1341	3948
Social sciences	5456	935	2251	5937	1044	2571	6224	1109	2754	6313	1172	2896
Humanities	6786	1581	2896	6782	1508	2891	6898	1490	2929	7095	1547	3114

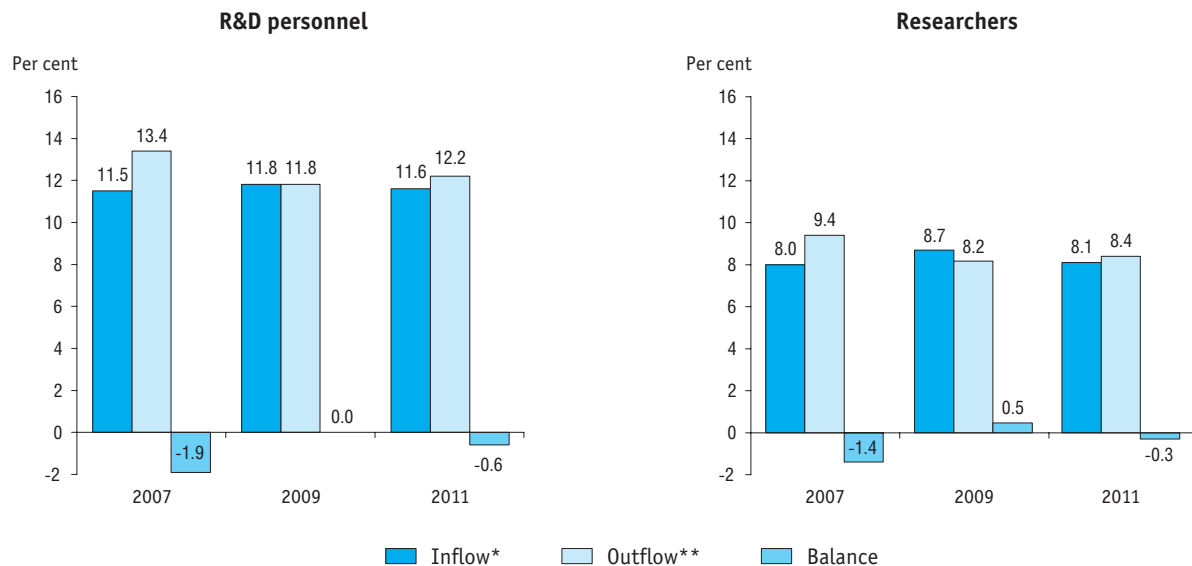
5.2.15. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE GOVERNMENT SECTOR BY FIELD OF SCIENCE AND TECHNOLOGY



5.2.16. FLOWS OF R&D PERSONNEL IN THE GOVERNMENT SECTOR BY OCCUPATION (head-count)

	Number at the beginning of the reference year	Inflow				Outflow				Number at the end of the reference year
		Total	Graduates from higher education institutions	From other research institutes	Others	Total	Voluntary turnover	Due to staff reduction	For other reasons	
Total										
2005	275249	32634	3990	5456	23188	35165	24924	851	9390	272718
2007	278286	31213	3474	5849	21890	37244	26183	1687	9374	272255
2009	260231	30799	3665	4587	22547	30670	18822	1696	10152	260360
2011	256637	29523	3152	4193	22178	31264	20567	1115	9582	254896
Researchers										
2005	139746	11715	3127	3121	5467	12087	8871	358	2858	139378
2007	140358	11082	2557	3113	5412	13237	9392	744	3101	138169
2009	132328	11519	2636	2434	6449	10898	6943	629	3326	132955
2011	129871	10428	2192	2337	5899	10944	7072	335	3537	128717
Technicians										
2005	25569	4128	336	630	3162	4227	2892	83	1252	25462
2007	27334	3896	296	408	3192	4714	3185	174	1355	26545
2009	24279	3872	335	412	3125	3581	1931	214	1436	24554
2011	24540	4424	363	220	3841	4484	2717	146	1621	26960
Supporting and other staff										
2005	109934	16791	527	1705	14555	18851	13161	410	5280	107878
2007	110594	16235	621	2328	13286	19293	13606	769	4918	107541
2009	103624	15408	694	1741	12973	16191	9948	853	5390	102851
2011	102226	14671	597	1636	12438	15836	10778	634	4424	99219

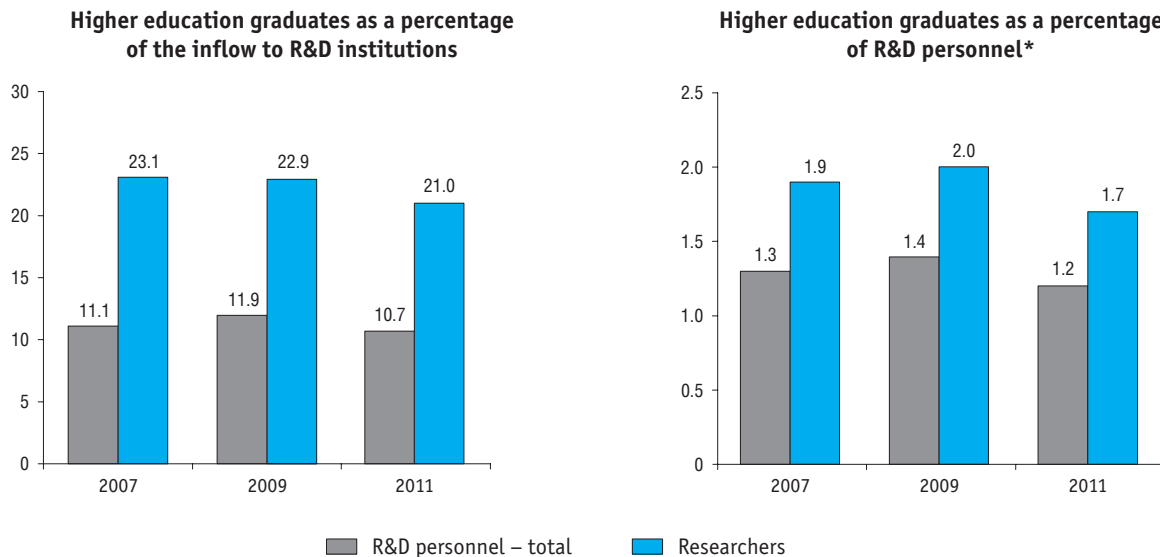
5.2.17. INFLOW AND OUTFLOW OF R&D PERSONNEL IN THE GOVERNMENT SECTOR



* The ratio of the R&D personnel admitted during the year to the number of employees at the end of the year.

** The ratio of the R&D personnel having resigned during the year to the number of employees at the beginning of the year.

5.2.18. INFLOW OF HIGHER EDUCATION GRADUATES TO R&D INSTITUTIONS IN THE GOVERNMENT SECTOR



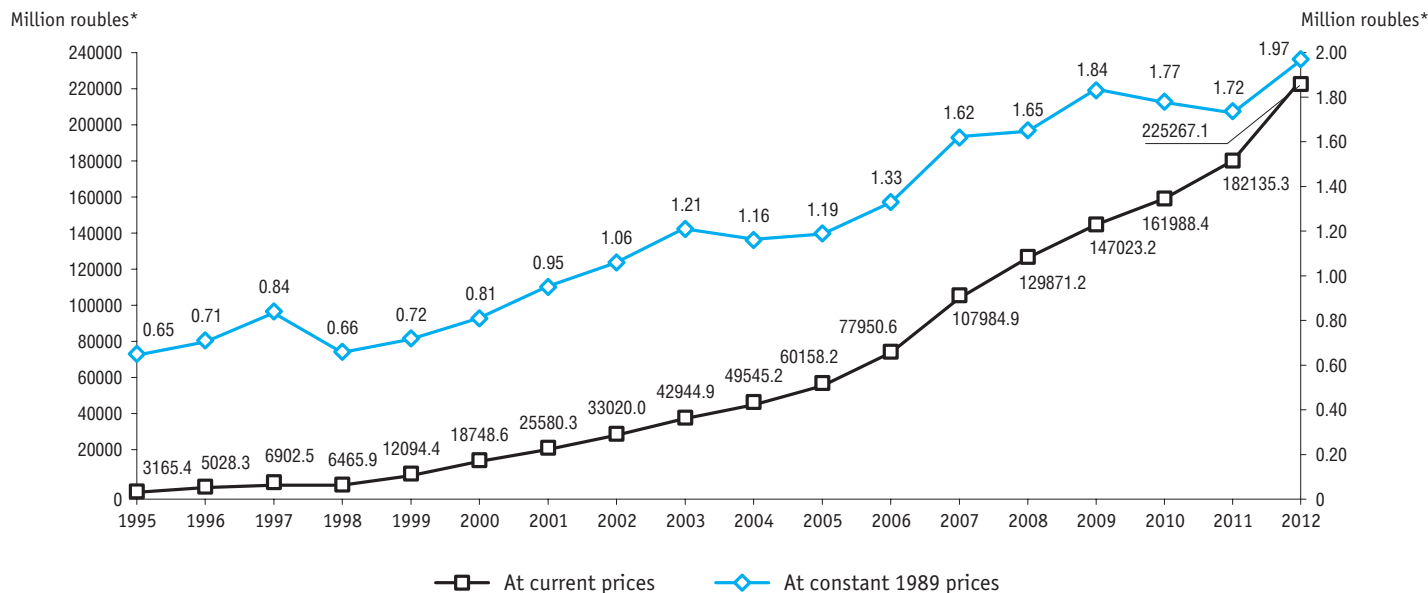
* The ratio of the higher education graduates admitted during the year to the number of employees at the end of the year.

5.2.19. GROSS DOMESTIC EXPENDITURE ON R&D IN THE GOVERNMENT SECTOR BY TYPE OF INSTITUTIONS

(thousand roubles)

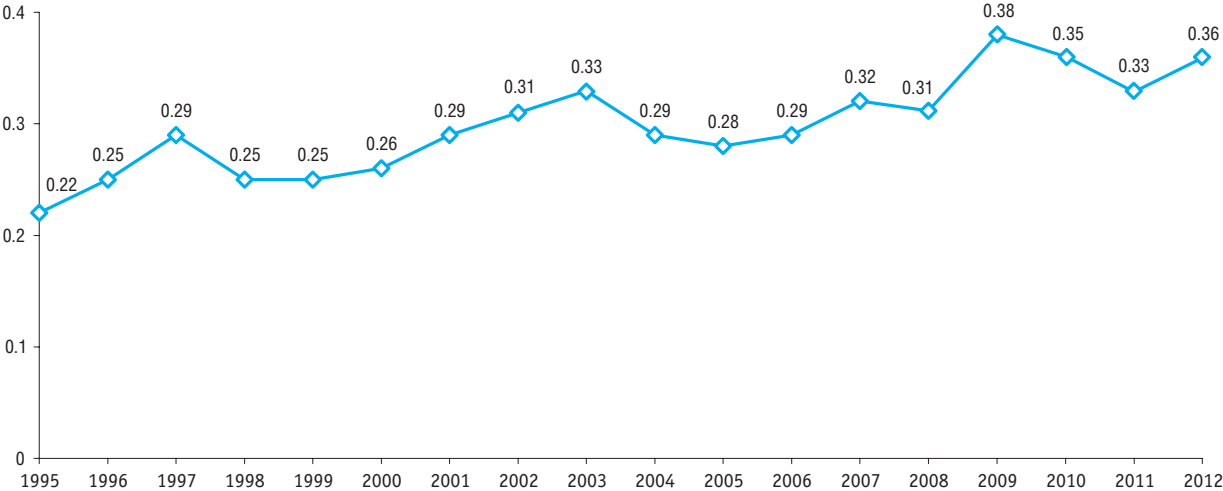
	2005	2008	2009	2010	2011	2012
Total	60158166.6	129871228.3	147023165.7	161988411.4	182135309.9	225267055.5
Research institutes	55762222.6	111905020.4	126002650.1	136870186.3	151261078.9	190774482.9
Design organisations	4007361.7	13446090.0	16426476.1	20163653.6	23348735.0	24722611.1
Construction project and exploration organisations	21993.6	381522.5	490398.7	524208.6	551628.3	561026.1
Experimental enterprises	20300.0	136641.7	159660.0	139733.5	528561.1	970655.1
Others	346288.7	4001953.7	3943980.8	4290629.4	6445306.6	8238280.4

5.2.20. GROSS DOMESTIC EXPENDITURE ON R&D IN THE GOVERNMENT SECTOR



* Before 1998 – billion roubles.

5.2.21. GROSS DOMESTIC EXPENDITURE ON R&D IN THE GOVERNMENT SECTOR
AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT



5.2.22. GROSS DOMESTIC EXPENDITURE ON R&D IN THE GOVERNMENT SECTOR BY SOURCE OF FUNDS

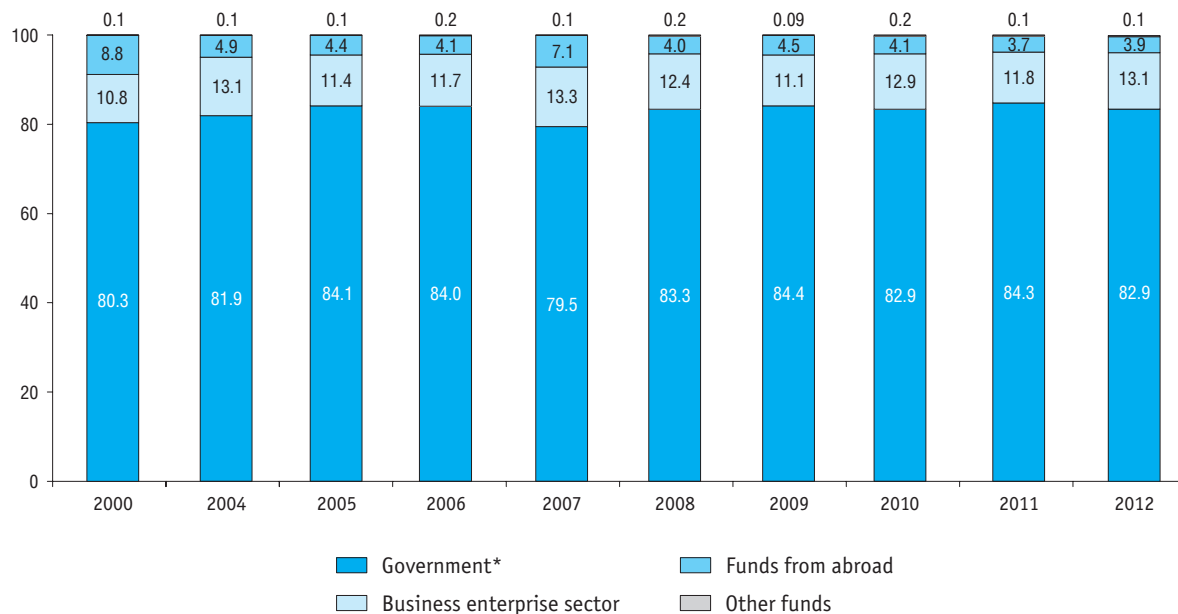
	Total	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
At current prices, thousand roubles, 1995 – million roubles						
1995	3165439.4	2779222.3	255799.4	2313.0	821.0	127283.7
1999	12094359.8	9317086.9	1392261.7	73806.5	3579.0	1307625.7
2000	18748588.2	15060439.1	2028296.2	11323.4	3898.5	1644631.0
2001	25580299.1	20398017.0	3166813.9	16458.8	8180.4	1990829.0
2002	33020017.4	26539969.2	4019173.2	16110.2	49374.0	2395390.8
2003	42944862.9	34808445.2	4925941.0	23854.9	22789.9	3163831.9
2004	49545237.7	40562960.9	6491792.8	47839.9	10698.3	2431945.8
2005	60158166.6	50589802.5	6845507.2	46912.8	21976.9	2653967.2
2006	77950634.9	65449102.1	9136754.4	111817.6	52071.9	3200888.9
2007	107984917.2	85896140.4	14355790.2	80481.6	12412.3	7640092.7
2008	129871228.3	108231726.8	16119227.3	183124.2	120667.0	5216483.0
2009	147023165.7	124027349.4	16292839.6	90578.1	38990.4	6573408.2
2010	161988411.4	134275595.6	20873979.0	205154.5	73117.4	6560564.9
2011	182135309.9	153529403.4	21528707.1	244802.6	61568.4	6770828.4
2012	225267055.5	186798862.0	29459319.3	197336.7	75635.7	8735901.8

* Including federal budget appropriations, own funds and funds of government sector institutions.

(continued)

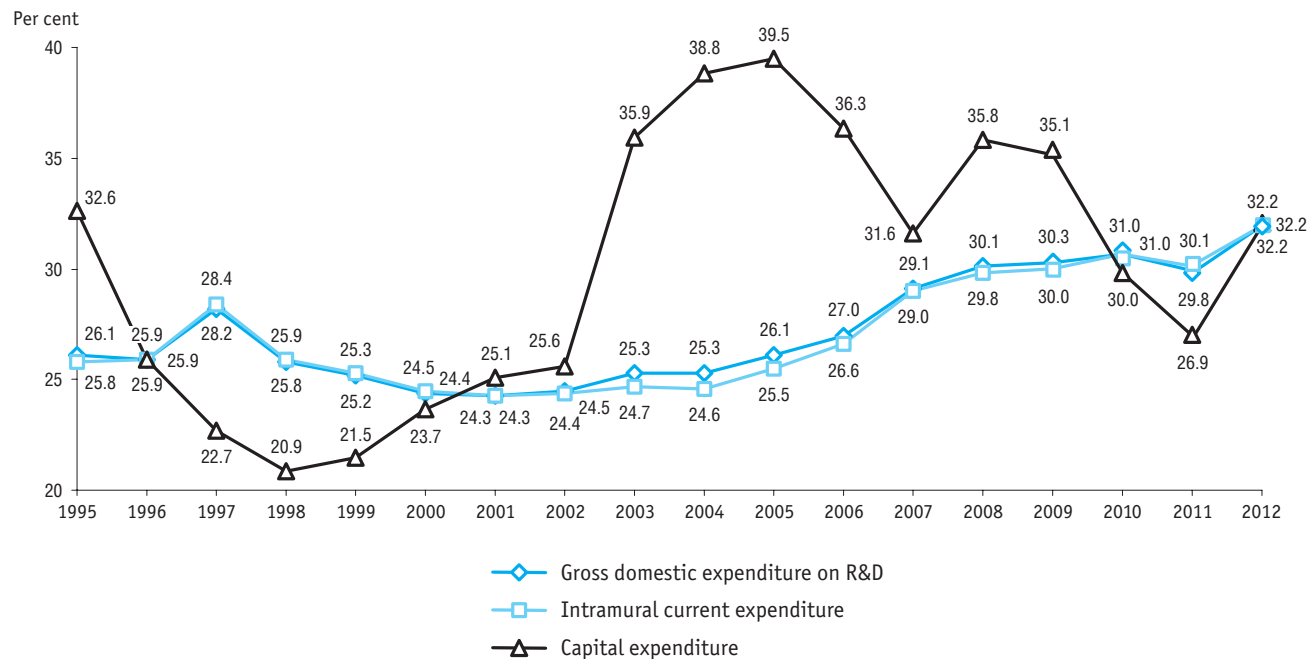
	Total	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
Per cent						
1995	100	87.8	8.1	0.07	0.03	4.0
1999	100	77.0	11.5	0.6	0.03	10.8
2000	100	80.3	10.8	0.06	0.02	8.8
2001	100	79.7	12.4	0.06	0.03	7.8
2002	100	80.4	12.2	0.05	0.1	7.3
2003	100	81.1	11.5	0.06	0.05	7.4
2004	100	81.9	13.1	0.1	0.02	4.9
2005	100	84.1	11.4	0.08	0.04	4.4
2006	100	84.0	11.7	0.1	0.07	4.1
2007	100	79.5	13.3	0.07	0.01	7.1
2008	100	83.3	12.4	0.1	0.09	4.0
2009	100	84.4	11.1	0.06	0.03	4.5
2010	100	82.9	12.9	0.1	0.05	4.1
2011	100	84.3	11.8	0.1	0.03	3.7
2012	100	82.9	13.1	0.1	0.03	3.9

5.2.23. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D IN THE GOVERNMENT SECTOR BY SOURCE OF FUNDS



* Including federal budget appropriations, own funds and funds of government sector institutions.

5.2.24. SHARE OF THE GOVERNMENT SECTOR IN GROSS DOMESTIC EXPENDITURE ON R&D BY TYPE OF COSTS



5.2.25. GROSS DOMESTIC EXPENDITURE ON R&D IN THE GOVERNMENT SECTOR BY TYPE OF COSTS

(thousand roubles)

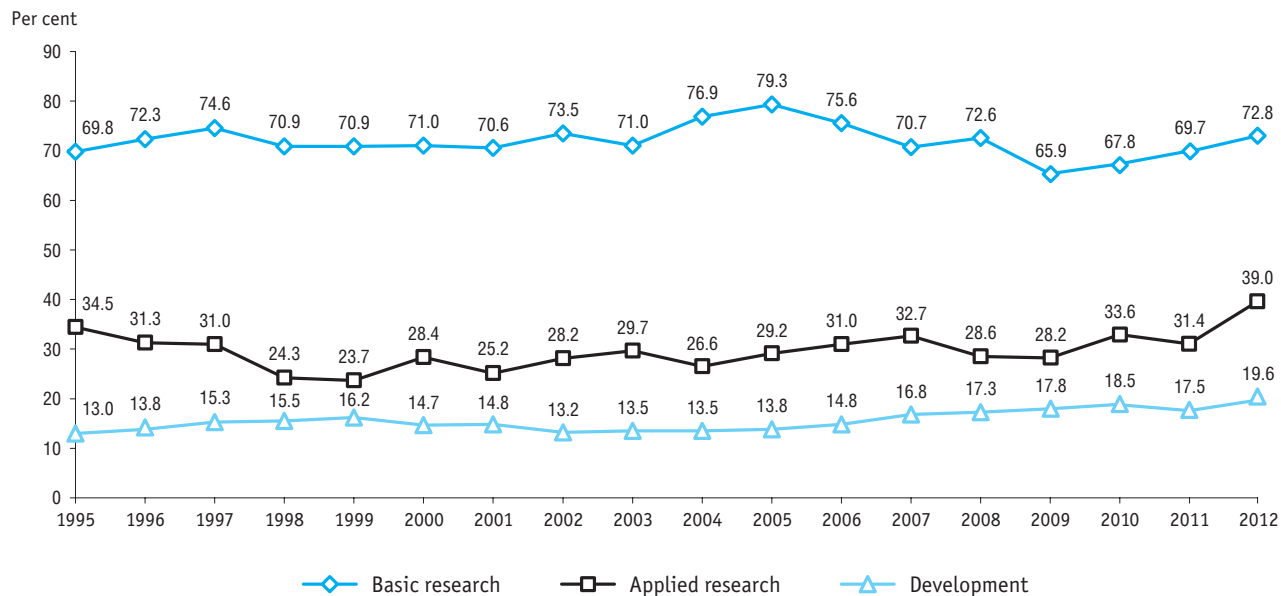
	2005	2007	2008	2009	2010	2011	2012
Gross domestic expenditure on R&D	60158166.6	107984917.2	129871228.3	147023165.7	161988411.4	182135309.9	225267055.5
Intramural current expenditure	56342327.7	102247576.2	122630304.7	138303922.9	151825126.6	170811017.0	210844599.2
Salaries	25406848.5	49141825.5	64641064.4	75166755.2	80849201.5	89553195.8	108260089.0
Of which for R&D personnel*	23066423.6	45216914.7	59514756.7	68956969.5	73752076.2	81321475.8	98882743.3
Social security payments	6257309.9	11095423.9	13683355.2	15270378.1	16436614.4	23348352.4	27086486.4
Equipment	3086873.3	4682814.6	5189920.0	5801943.7	5458681.5	5276489.5	8154615.9
Fixed assets	2072960.4	3152176.2	3559638.2	3834297.9	3241305.1	3403968.6	3680467.8
Other material costs	9781232.9	18344379.1	17531022.6	20128759.2	22464861.8	25352173.1	33170617.4
Other current costs	11810063.1	18983133.1	21584942.5	21936086.7	26615767.4	27280806.2	34172790.5
Capital expenditure	3815838.9	5737341.0	7240923.6	8719242.8	10163284.8	11324292.9	14422456.3
Land and buildings	399698.5	506072.5	670481.4	802555.6	3113137.6	2285830.0	2579811.6
Equipment	2485274.0	3948303.1	4803223.1	5164006.4	4647644.5	5963907.8	8948846.1
Other capital expenditure	930866.4	1282965.4	1767219.1	2752680.8	2402502.7	3074555.1	2893798.6

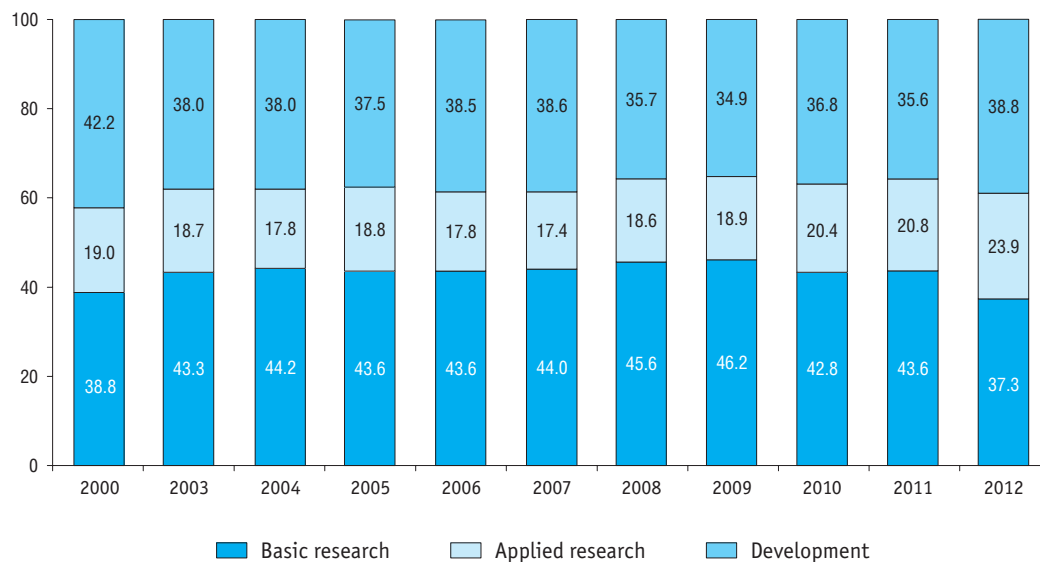
* Excluding those employed on a plural basis and on contracts.

**5.2.26. INTRAMURAL CURRENT EXPENDITURE ON R&D IN THE GOVERNMENT SECTOR BY TYPE OF ACTIVITY
AND FIELD OF SCIENCE AND TECHNOLOGY**
(thousand roubles)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2005							
Intramural current expenditure on R&D	56342327.7	20577533.0	25509704.3	3738833.2	2939051.4	1951167.1	1626038.7
Basic research	24586195.8	15976354.8	2622298.0	1662238.3	1678543.7	1333808.2	1312952.8
Applied research	10603039.3	2644812.7	4734050.4	1703960.2	840824.2	475142.3	204249.5
Development	21153092.6	1956365.5	18153355.9	372634.7	419683.5	142216.6	108836.4
2009							
Intramural current expenditure on R&D	138303922.9	53057400.3	57337613.7	10986547.1	7538339.2	4848230.9	4535791.7
Basic research	63843573.1	38973183.4	7810233.6	5263412.1	4736909.5	3144728.0	3915106.5
Applied research	26135931.3	10140896.7	7215817.1	5050748.8	1957833.8	1228496.0	542138.9
Development	48324418.5	3943320.2	42311563.0	672386.2	843595.9	475006.9	78546.3
2010							
Intramural current expenditure on R&D	151825126.6	56889173.8	65431955.8	12635358.1	6868458.0	4815854.6	5184326.3
Basic research	65041375.9	38927125.1	8471457.1	5340161.8	4177771.0	3645798.9	4479062.0
Applied research	30948555.6	13265692.5	7766540.0	6615628.6	1773878.6	936306.6	590509.3
Development	55835195.1	4696356.2	49193958.7	679567.7	916808.4	233749.1	114755.0
2011							
Intramural current expenditure on R&D	170811017.0	64225127.6	72553560.4	14858903.1	7944816.7	5088780.6	6139828.6
Basic research	74527944.1	45306685.6	9806502.8	5824214.7	4672089.0	3598320.7	5320131.3
Applied research	35457277.1	14580486.7	8910718.7	7987136.7	2286298.4	1138808.5	553828.1
Development	60825795.8	4337955.3	53836338.9	1047551.7	986429.3	351651.4	265869.2
2012							
Intramural current expenditure on R&D	210844599.2	74738364.2	99725492.3	15848845.5	8026764.3	5705727.6	6799405.3
Basic research	78707119.3	48982304.9	10692686.1	6227176.1	4157881.1	3443875.3	5203195.8
Applied research	50400053.9	16728318.1	19025107.0	8554415.1	2915626.9	1956966.9	1219619.9
Development	81737426.0	9027741.2	70007699.2	1067254.3	953256.3	304885.4	376589.6

5.2.27. SHARE OF THE GOVERNMENT SECTOR IN INTRAMURAL CURRENT EXPENDITURE ON R&D BY TYPE OF ACTIVITY



**5.2.28. PERCENTAGE DISTRIBUTION OF INTRAMURAL CURRENT EXPENDITURE ON R&D
IN THE GOVERNMENT SECTOR BY TYPE OF ACTIVITY**

5.2.29. AVERAGE MONTHLY SALARY OF R&D PERSONNEL IN THE GOVERNMENT SECTOR

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Average monthly salary, roubles, <i>1995 – thousand roubles</i>	330.5	2015.6	4969.6	5958.7	7220.9	9678.8	14208.3	19561.0	22979.7	24792.1	27869.4	32031.0
As a percentage of that:												
in the national economy (=100%)	70.0	90.7	90.4	88.4	84.4	91.0	104.5	113.1	123.3	118.3	119.3	119.4
in manufacturing (=100%)	72.1	85.2	88.7	87.0	85.7	94.9	110.3	121.9	138.6	130.0	128.0	130.8
in construction (=100%)	56.2	76.4	80.5	81.6	79.9	89.0	99.1	105.3	126.8	117.1	117.7	121.2

State Academies of Sciences

5.2.30. NUMBER OF R&D INSTITUTIONS IN STATE ACADEMIES OF SCIENCES

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	838	837	851	891	865	864	857	873	865
Russian Academy of Sciences	452	451	465	479	468	469	472	483	484
Russian Academy of Agricultural Sciences	297	297	292	312	304	302	294	295	291
Russian Academy of Medical Sciences	67	66	68	69	68	67	64	65	58
Russian Academy of Architecture and Civil Engineering	5	5	6	6	5	5	5	7	7
Russian Academy of Education	16	17	19	22	18	20	20	21	23
Russian Academy of Fine Arts	1	1	1	3	2	1	2	2	2

5.2.31. R&D PERSONNEL IN STATE ACADEMIES OF SCIENCES BY OCCUPATION

(head-count)

	2005	2006	2007	2008	2009	2010	2011	2012
Total	147871	144661	142609	137544	139582	137743	135838	132847
Researchers	83409	81389	80444	77315	78206	76868	74895	72290
Technicians	15422	14475	14119	12966	13320	13228	13666	13878
Supporting staff	25432	25148	24394	23683	23623	23025	23055	22155
Others	23608	23649	23652	23580	24433	24622	24222	24524
Russian Academy of Sciences	103294	99741	96969	93464	95290	95280	94945	95195
Researchers	60613	58423	56764	54576	55402	55183	53657	52886
Technicians	10072	9147	8866	8083	8350	8709	9340	9940
Supporting staff	17556	17131	16396	15733	15804	15454	15850	15538
Others	15053	15040	14943	15072	15734	15934	16098	16831
Russian Academy of Agricultural Sciences	29134	29407	29854	28963	29081	27984	26723	25718
Researchers	13350	13430	13914	13367	13200	12642	12273	11834
Technicians	3688	3702	3749	3421	3534	3329	3156	2988
Supporting staff	5707	5801	5683	5688	5731	5533	5290	5025
Others	6389	6474	6508	6487	6616	6480	6004	5871
Russian Academy of Medical Sciences	13292	13185	13272	12885	13063	12151	11940	9738
Researchers	7842	7859	8007	7798	7998	7393	7378	6008
Technicians	1575	1511	1402	1365	1368	1090	1089	903
Supporting staff	1923	1962	1985	1922	1851	1759	1642	1343
Others	1952	1853	1878	1800	1846	1909	1831	1484

(continued)

	2005	2006	2007	2008	2009	2010	2011	2012
Russian Academy of Architecture and Civil Engineering	630	742	728	721	573	606	558	581
Researchers	424	445	461	462	396	420	382	423
Technicians	74	89	66	79	46	63	58	28
Supporting staff	55	76	73	110	63	66	59	38
Others	77	132	128	70	68	57	59	92
Russian Academy of Education	1441	1505	1562	1335	1492	1392	1344	1290
Researchers	1116	1168	1176	1016	1136	1065	1044	977
Technicians	11	24	15	13	18	34	19	16
Supporting staff	180	166	212	159	173	130	131	130
Others	134	147	159	147	165	163	150	167
Russian Academy of Fine Arts	80	81	224	176	83	330	328	325
Researchers	64	64	122	96	74	165	161	162
Technicians	2	2	21	5	4	3	4	3
Supporting staff	11	12	45	71	1	83	83	81
Others	3	3	36	4	4	79	80	79

5.2.32. RESEARCHERS WITH SCIENTIFIC DEGREES IN STATE ACADEMIES OF SCIENCES

(head-count)

	2005	2006	2007	2008	2009	2010	2011	2012
Total	48178	47987	48047	47044	48026	47692	47873	46846
Doctors of Sciences	13735	13923	14246	14146	14405	14408	14536	14211
Candidates of Sciences	34443	34064	33801	32898	33621	33284	33337	32635
Russian Academy of Sciences	35378	34987	34613	33850	34654	34807	35109	35219
Doctors of Sciences	10185	10311	10426	10355	10549	10641	10709	10760
Candidates of Sciences	25193	24676	24187	23495	24105	24166	24400	24459
Russian Academy of Agricultural Sciences	6332	6475	6761	6674	6694	6524	6417	6372
Doctors of Sciences	1374	1405	1539	1571	1589	1567	1562	1602
Candidates of Sciences	4958	5070	5222	5103	5105	4957	4855	4770
Russian Academy of Medical Sciences	5611	5628	5715	5648	5735	5427	5412	4328
Doctors of Sciences	1939	1949	1984	1958	1969	1905	1970	1551
Candidates of Sciences	3672	3679	3731	3690	3766	3522	3442	2777
Russian Academy of Architecture and Civil Engineering	123	123	127	130	134	128	122	147
Doctors of Sciences	26	29	36	38	38	33	31	42
Candidates of Sciences	97	94	91	92	96	95	91	105
Russian Academy of Education	679	719	776	687	758	739	748	715
Doctors of Sciences	189	207	237	200	237	239	241	233
Candidates of Sciences	490	512	539	487	521	500	507	482
Russian Academy of Fine Arts	55	55	55	55	51	67	65	65
Doctors of Sciences	22	22	24	24	23	23	23	23
Candidates of Sciences	33	33	31	31	28	44	42	42

5.2.33. RESEARCHERS IN STATE ACADEMIES OF SCIENCES BY GENDER AND AGE GROUP

(head-count)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Total	77315	14146	32898	72290	14211	32635
Age, years:						
below 29	10610	9	2025	10126	3	2201
30–39	12006	228	6633	13233	294	8008
40–49	12483	1437	6121	9175	1086	5099
50–59	18694	4024	8191	14956	3566	6824
60–69	14390	4212	6418	14055	4388	6191
70 and over	9132	4236	3510	10745	4874	4312
Male	41981	10740	17426	39229	10632	17150
Age, years:						
below 29	5774	8	1159	5558	3	1342
30–39	5804	159	3306	6615	216	4047
40–49	5928	1024	2952	4303	723	2333
50–59	9959	2932	4464	7715	2497	3533
60–69	8436	3332	3491	8157	3387	3486
70 and over	6080	3285	2054	6881	3806	2409
Female	35334	3406	15472	33061	3579	15485
Age, years:						
below 29	4836	1	866	4568	–	859
30–39	6202	69	3327	6618	78	3961
40–49	6555	413	3169	4872	363	2766
50–59	8735	1092	3727	7241	1069	3291
60–69	5954	880	2927	5898	1001	2705
70 and over	3052	951	1456	3864	1068	1903

(continued)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Russian Academy of Sciences	54576	10355	23495	52886	10760	24459
<i>Age, years:</i>						
below 29	7379	1	1492	7396	2	1747
30–39	8116	136	4632	9557	180	6018
40–49	8436	891	4327	6318	724	3646
50–59	13167	2926	5878	10656	2576	5065
60–69	10707	3187	4708	10761	3446	4794
70 and over	6771	3214	2458	8198	3832	3189
Male	32618	8286	13419	31395	8445	13788
<i>Age, years:</i>						
below 29	4441	1	874	4475	2	1121
30–39	4457	106	2526	5250	149	3226
40–49	4492	687	2291	3339	515	1840
50–59	7842	2291	3478	6132	1915	2864
60–69	6738	2635	2773	6734	2775	2880
70 and over	4648	2566	1477	5465	3089	1857
Female	21958	2069	10076	21491	2315	10671
<i>Age, years:</i>						
below 29	2938	–	618	2921	–	626
30–39	3659	30	2106	4307	31	2792
40–49	3944	204	2036	2979	209	1806
50–59	5325	635	2400	4524	661	2201
60–69	3969	552	1935	4027	671	1914
70 and over	2123	648	981	2733	743	1332

(continued)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Russian Academy of Agricultural Sciences	13367	1571	5103	11834	1602	4770
<i>Age, years:</i>						
below 29	2052	8	332	1767	1	313
30–39	1879	19	809	2069	46	1054
40–49	2235	142	867	1500	102	682
50–59	3524	417	1376	2752	430	1073
60–69	2232	453	1014	2147	449	918
70 and over	1445	532	705	1599	574	730
Male	6024	1220	2599	5103	1198	2278
<i>Age, years:</i>						
below 29	905	7	189	762	1	172
30–39	739	11	378	816	30	499
40–49	814	90	367	495	65	258
50–59	1410	295	675	1051	296	475
60–69	1134	377	520	971	341	454
70 and over	1022	440	470	1008	465	420
Female	7343	351	2504	6731	404	2492
<i>Age, years:</i>						
below 29	1147	1	143	1005	–	141
30–39	1140	8	431	1253	16	555
40–49	1421	52	500	1005	37	424
50–59	2114	122	701	1701	134	598
60–69	1098	76	494	1176	108	464
70 and over	423	92	235	591	109	310

(continued)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Russian Academy of Medical Sciences	7798	1958	3690	6008	1551	2777
<i>Age, years:</i>						
below 29	982	–	179	830	–	120
30–39	1785	73	1102	1358	64	836
40–49	1521	378	803	1116	237	650
50–59	1613	607	768	1169	479	525
60–69	1192	504	580	837	399	359
70 and over	705	396	258	698	372	287
Male	2844	1099	1216	2207	849	910
<i>Age, years:</i>						
below 29	375	–	86	266	–	45
30–39	555	42	377	469	36	299
40–49	551	234	253	404	132	207
50–59	582	313	257	431	247	156
60–69	453	282	164	331	221	114
70 and over	328	228	79	306	213	89
Female	4954	859	2474	3801	702	1867
<i>Age, years:</i>						
below 29	607	–	93	564	–	75
30–39	1230	31	725	889	28	537
40–49	970	144	550	712	105	443
50–59	1031	294	511	738	232	369
60–69	739	222	416	506	178	245
70 and over	377	168	179	392	159	198

(continued)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Russian Academy of Architecture and Civil Engineering	462	38	92	423	42	105
<i>Age, years:</i>						
below 29	62	–	2	38	–	3
30–39	64	–	11	64	1	18
40–49	77	3	10	45	2	8
50–59	113	6	16	107	10	19
60–69	82	10	26	91	5	24
70 and over	64	19	27	78	24	33
Male	195	28	51	199	30	68
<i>Age, years:</i>						
below 29	26	–	2	22	–	1
30–39	25	–	6	31	1	13
40–49	29	1	8	23	1	6
50–59	33	3	9	36	5	13
60–69	52	10	13	39	4	15
70 and over	30	14	13	48	19	20
Female	267	10	41	224	12	37
<i>Age, years:</i>						
below 29	36	–	–	16	–	2
30–39	39	–	5	33	–	5
40–49	48	2	2	22	1	2
50–59	80	3	7	71	5	6
60–69	30	–	13	52	1	9
70 and over	34	5	14	30	5	13

(continued)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Russian Academy of Education	1016	200	487	977	233	482
<i>Age, years:</i>						
below 29	128	–	18	86	–	16
30–39	153	–	75	159	3	72
40–49	201	22	110	174	20	106
50–59	261	65	144	241	68	138
60–69	152	49	87	180	80	89
70 and over	121	64	53	137	62	61
Male	276	97	136	257	100	101
<i>Age, years:</i>						
below 29	24	–	8	32	–	3
30–39	27	–	19	39	–	10
40–49	37	11	31	33	9	21
50–59	89	29	43	54	33	25
60–69	53	23	21	60	41	23
70 and over	46	34	14	39	17	19
Female	740	103	351	720	133	381
<i>Age, years:</i>						
below 29	104	–	10	54	–	13
30–39	126	–	56	120	3	62
40–49	164	11	79	141	11	85
50–59	172	36	101	187	35	113
60–69	99	26	66	120	39	66
70 and over	75	30	39	98	45	42

(continued)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Russian Academy of Fine Arts	96	24	31	162	23	42
<i>Age, years:</i>						
below 29	7	—	2	9	—	2
30–39	9	—	4	26	—	10
40–49	13	1	4	22	1	7
50–59	16	3	9	31	3	4
60–69	25	9	3	39	9	7
70 and over	26	11	9	35	10	12
Male	24	10	5	68	10	5
<i>Age, years:</i>						
below 29	3	—	—	1	—	—
30–39	1	—	—	10	—	—
40–49	5	1	2	9	1	1
50–59	3	1	2	11	1	—
60–69	6	5	—	22	5	—
70 and over	6	3	1	15	3	4
Female	72	14	26	94	13	37
<i>Age, years:</i>						
below 29	4	—	2	8	—	2
30–39	8	—	4	16	—	10
40–49	8	—	2	13	—	6
50–59	13	2	7	20	2	4
60–69	19	4	3	17	4	7
70 and over	20	8	8	20	7	8

5.2.34. GROSS DOMESTIC EXPENDITURE ON R&D IN STATE ACADEMIES OF SCIENCES

(thousand roubles)

	2005	2006	2007	2008	2009	2010	2011	2012
At current prices								
Total	32401091.0	42465812.3	55613207.8	69073252.5	78818046.1	78636432.4	86974142.9	91204351.9
Russian Academy of Sciences	25799901.3	34156381.5	44276444.4	55912011.9	61370704.2	62471831.1	67408937.0	73456204.6
Russian Academy of Agricultural Sciences	3668815.1	4562308.5	6216412.7	7520092.1	9705184.3	8775351.6	9701044.9	9739635.0
Russian Academy of Medical Sciences	2547513.4	3218993.9	4166702.2	4710248.7	6688484.7	6105878.2	8403120.8	6506574.0
Russian Academy of Architecture and Civil Engineering	181189.4	254101.6	371206.3	399906.2	408177.1	385608.2	487273.3	394408.2
Russian Academy of Education	190812.2	258482.6	538678.7	416418.9	613427.0	578024.0	593962.6	636459.6
Russian Academy of Fine Arts	12859.6	15544.2	43763.5	114574.7	32068.8	319739.3	379804.3	471070.5
At constant 1989 prices								
Total	638.4	726.4	835.9	879.8	984.3	859.9	823.4	795.8
Russian Academy of Sciences	508.4	584.2	665.5	712.2	766.4	683.1	638.2	641.0
Russian Academy of Agricultural Sciences	72.3	78.0	93.4	95.8	121.2	96.0	91.8	85.0
Russian Academy of Medical Sciences	50.2	55.1	62.6	60.0	83.5	66.8	79.6	56.8
Russian Academy of Architecture and Civil Engineering	3.6	4.3	5.6	5.1	5.1	4.2	4.6	3.4
Russian Academy of Education	3.8	4.4	8.1	5.3	7.7	6.3	5.6	5.6
Russian Academy of Fine Arts	0.3	0.3	0.7	1.5	0.4	3.5	3.6	4.1

5.2.35. GROSS DOMESTIC EXPENDITURE ON R&D IN STATE ACADEMIES OF SCIENCES BY SOURCE OF FUNDS

(thousand roubles)

	Total	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
2005						
Total	32401091.0	27236822.1	3747062.6	41279.2	13757.0	1362170.1
Russian Academy of Sciences	25799901.3	21299039.5	3102597.8	41065.6	13296.3	1343902.1
Russian Academy of Agricultural Sciences	3668815.1	3284080.1	380561.3	107.1	15.0	4051.6
Russian Academy of Medical Sciences	2547513.4	2366534.6	166210.2	106.5	445.7	14216.4
Russian Academy of Architecture and Civil Engineering	181189.4	93690.6	87498.8	–	–	–
Russian Academy of Education	190812.2	181456.6	9355.6	–	–	–
Russian Academy of Fine Arts	12859.6	12020.7	838.9	–	–	–
2010						
Total	78636432.4	69475039.7	7559777.6	155682.3	43440.3	1402492.5
Russian Academy of Sciences	62471831.1	54737822.6	6213854.4	150989.6	43329.6	1325834.9
Russian Academy of Agricultural Sciences	8775351.6	8081393.0	683215.4	3497.2	85.0	7161.0
Russian Academy of Medical Sciences	6105878.2	5540950.2	498960.2	1195.5	25.7	64746.6
Russian Academy of Architecture and Civil Engineering	385608.2	229199.9	156408.3	–	–	–
Russian Academy of Education	578024.0	565934.7	7339.3	–	–	4750.0
Russian Academy of Fine Arts	319739.3	319739.3	–	–	–	–

(continued)

	Total	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
2011						
Total	86974142.9	78099590.3	6800068.5	175330.1	42203.6	1856950.4
Russian Academy of Sciences	67408937.0	60001835.6	5436777.0	166459.2	34265.3	1769599.9
Russian Academy of Agricultural Sciences	9701044.9	8994148.7	689201.2	8870.9	1738.3	7085.8
Russian Academy of Medical Sciences	8403120.8	7738851.1	581121.2	—	6200.0	76948.5
Russian Academy of Architecture and Civil Engineering	487273.3	397952.4	89320.9	—	—	—
Russian Academy of Education	593962.6	586998.2	3648.2	—	—	3316.2
Russian Academy of Fine Arts	379804.3	379804.3	—	—	—	—
2012						
Total	91204351.9	81151354.6	8251785.7	122857.7	53989.4	1624364.5
Russian Academy of Sciences	73456204.6	65185094.8	6581860.4	118695.3	41334.2	1529219.9
Russian Academy of Agricultural Sciences	9739635.0	8815209.9	899475.5	3146.6	12655.2	9147.8
Russian Academy of Medical Sciences	6506574.0	5776152.2	653272.7	1000.0	—	76149.1
Russian Academy of Architecture and Civil Engineering	394408.2	275867.6	117177.1	15.8	—	1347.7
Russian Academy of Education	636459.6	627959.6	—	—	—	8500.0
Russian Academy of Fine Arts	471070.5	471070.5	—	—	—	—

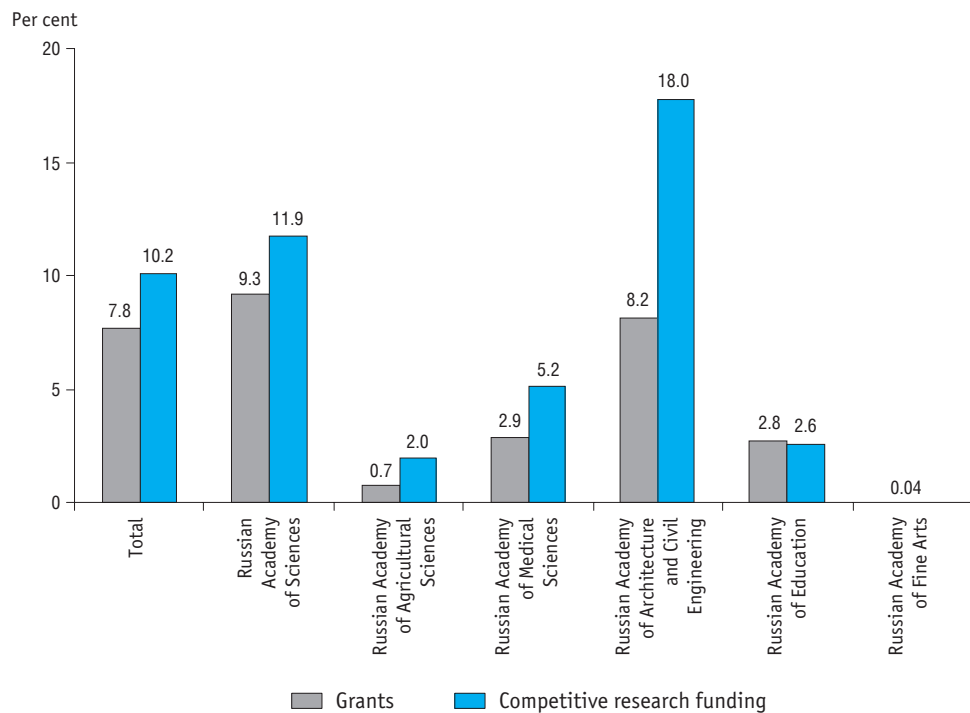
* Including federal budget appropriations, own funds and funds of government sector institutions.

5.2.36. GRANTS AND COMPETITIVE RESEARCH FUNDING IN STATE ACADEMIES OF SCIENCES

(thousand roubles)

	Grants			Competitive research funding		
	2010	2011	2012	2010	2011	2012
Total	3320696.5	4313410.5	7114753.3	7098497.3	10578551.8	9341312.9
Russian Academy of Sciences	3107395.7	4025456.8	6799668.2	6540842.7	8939587.6	8718536.1
Russian Academy of Agricultural Sciences	37826.5	53864.0	72663.8	190877.1	184902.9	194786.4
Russian Academy of Medical Sciences	152943.3	223855.7	191880.8	338328.1	1398392.2	340025.1
Russian Academy of Architecture and Civil Engineering	9275.0	1860.7	32480.9	–	700.0	71120.4
Russian Academy of Education	13256.0	8203.7	17709.6	28449.4	54969.1	16844.9
Russian Academy of Fine Arts	–	169.6	350.0	–	–	–

5.2.37. SHARE OF GRANTS AND COMPETITIVE RESEARCH FUNDING IN GROSS DOMESTIC EXPENDITURE ON R&D BY STATE ACADEMIES OF SCIENCES: 2012



5.2.38. INTRAMURAL CURRENT EXPENDITURE ON R&D IN STATE ACADEMIES OF SCIENCES
BY TYPE OF ACTIVITY AND FIELD OF SCIENCE AND TECHNOLOGY
(thousand roubles)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2005							
Total	29777478.1	18396766.8	3775012.8	2020462.4	2951709.2	1372350.1	1261176.8
Basic research	22450265.3	15034789.2	1927581.8	1408254.7	1836684.2	1091798.9	1151156.5
Applied research	4684246.1	1900244.9	1203638.6	563651.8	722305.7	198138.7	96266.4
Development	2642966.7	1461732.7	643792.4	48555.9	392719.3	82412.5	13753.9
Russian Academy of Sciences	23557587.3	17820136.5	3264013.9	47892.7	44178.1	1153846.0	1227520.1
Basic research	18378054.4	14533327.6	1703406.3	35192.4	41527.0	946190.9	1118410.2
Applied research	3189013.1	1839125.4	1049372.4	12311.2	2327.3	190520.8	95356.0
Development	1990519.8	1447683.5	511235.2	389.1	323.8	17134.3	13753.9
Russian Academy of Agricultural Sciences	3436402.9	106420.4	419417.8	1730.0	2907531.1	1303.6	–
Basic research	2035377.8	71301.6	167578.4	1250.0	1795157.2	90.6	–
Applied research	871853.0	29707.4	120474.2	480.0	719978.4	1213.0	–
Development	529172.1	5411.4	131365.2	–	392395.5	–	–
Russian Academy of Medical Sciences	2408455.9	436190.0	–	1970839.7	–	1426.2	–
Basic research	1769378.6	396140.1	–	1371812.3	–	1426.2	–
Applied research	582272.7	31412.1	–	550860.6	–	–	–
Development	56804.6	8637.8	–	48166.8	–	–	–

(continued)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
Russian Academy of Architecture and Civil Engineering	177296.8	–	91418.1	–	–	77481.1	8397.6
Basic research	77034.6	–	56434.1	–	–	12202.9	8397.6
Applied research	33792.0	–	33792.0	–	–	–	–
Development	66470.2	–	1192.0	–	–	65278.2	–
Russian Academy of Education	184875.6	34019.9	163.0	–	–	138293.2	12399.5
Basic research	177560.3	34019.9	163.0	–	–	131888.3	11489.1
Applied research	7315.3	–	–	–	–	6404.9	910.4
Development	–	–	–	–	–	–	–
Russian Academy of Fine Arts	12859.6	–	–	–	–	–	12859.6
Basic research	12859.6	–	–	–	–	–	12859.6
Applied research	–	–	–	–	–	–	–
Development	–	–	–	–	–	–	–

(continued)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2010							
Total	75567075.3	46641824.7	9151937.5	5287947.4	6874515.6	3762206.3	3848643.8
Basic research	58463215.8	37672321.3	5723699.7	3697076.7	4463165.3	3297631.8	3609321.0
Applied research	11703343.1	5850061.3	2139160.2	1419197.8	1606420.9	454879.8	233623.1
Development	5400516.4	3119442.1	1289077.6	171672.9	804929.4	9694.7	5699.7
Russian Academy of Sciences	60061026.4	45208595.2	7859430.1	178674.8	112792.9	3109326.9	3592206.5
Basic research	48106251.7	36707923.6	5070955.9	144313.2	96417.7	2733202.6	3353438.7
Applied research	7844789.1	5397720.1	1828517.0	15577.7	3476.6	366429.6	233068.1
Development	4109985.6	3102951.5	959957.2	18783.9	12898.6	9694.7	5699.7
Russian Academy of Agricultural Sciences	8511755.9	696803.8	1018426.0	10471.7	6761722.7	22477.7	1854.0
Basic research	5331254.1	463607.9	475500.7	6440.0	4366747.6	17658.9	1299.0
Applied research	2110516.6	222416.8	275750.0	4031.7	1602944.3	4818.8	555.0
Development	1069985.2	10779.1	267175.3	–	792030.8	–	–
Russian Academy of Medical Sciences	5815021.4	713434.9	–	5098800.9	–	2785.6	–
Basic research	4026908.1	477799.0	–	3546323.5	–	2785.6	–
Applied research	1629512.8	229924.4	–	1399588.4	–	–	–
Development	158600.5	5711.5	–	152889.0	–	–	–

(continued)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
Russian Academy of Architecture and Civil Engineering	382164.7	–	274081.4	–	–	74461.0	33622.3
Basic research	222641.4	–	177243.1	–	–	11776.0	33622.3
Applied research	97578.2		34893.2	–	–	62685.0	–
Development	61945.1	–	61945.1	–	–	–	–
Russian Academy of Education	577367.6	22990.8	–	–	–	553155.1	1221.7
Basic research	556421.2	22990.8	–	–	–	532208.7	1221.7
Applied research	20946.4	–	–	–	–	20946.4	–
Development	–	–	–	–	–	–	–
Russian Academy of Fine Arts	219739.3	–	–	–	–	–	219739.3
Basic research	219739.3	–	–	–	–	–	219739.3
Applied research	–	–	–	–	–	–	–
Development	–	–	–	–	–	–	–

(continued)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2011							
Total	82860523.2	50967571.7	9332946.1	6323962.7	7777952.5	3965306.8	4492783.4
Basic research	65576698.2	43283641.9	5611478.3	4326349.9	4835816.4	3222397.2	4297014.5
Applied research	12373033.2	5549163.6	2236456.7	1774443.7	1981094.1	643801.7	188073.4
Development	4910791.8	2134766.2	1485011.1	223169.1	961042.0	99107.9	7695.5
Russian Academy of Sciences	64990681.6	49379000.5	7954681.0	146831.2	104911.5	3295033.5	4110223.9
Basic research	53846562.0	41943425.3	4956705.5	134705.3	88268.4	2808424.5	3915033.0
Applied research	7837900.1	5312755.0	1932300.0	11542.8	2377.3	391429.6	187495.4
Development	3306219.5	2122820.2	1065675.5	583.1	14265.8	95179.4	7695.5
Russian Academy of Agricultural Sciences	9312894.0	518854.5	1035247.7	13783.0	7672541.0	20230.8	52237.0
Basic research	5699735.0	404576.6	471547.7	9200.0	4747048.0	15703.7	51659.0
Applied research	2359729.8	102331.9	268993.0	4583.0	1978716.8	4527.1	578.0
Development	1253429.2	11946.0	294707.0	–	946776.2	–	–
Russian Academy of Medical Sciences	7212682.3	1045913.9	–	6163348.5	–	3419.9	–
Basic research	5097701.7	911837.2	–	4182444.6	–	3419.9	–
Applied research	1892394.6	134076.7	–	1758317.9	–	–	–
Development	222586.0	–	–	222586.0	–	–	–

(continued)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
Russian Academy of Architecture and Civil Engineering	482525.0	–	343017.4	–	500.0	100963.0	38044.6
Basic research	234781.7	–	183225.1	–	500.0	13012.0	38044.6
Applied research	123114.7	–	35163.7	–	–	87951.0	–
Development	124628.6	–	124628.6	–	–	–	–
Russian Academy of Education	591996.0	23802.8	–	–	–	545659.6	22533.6
Basic research	428173.5	23802.8	–	–	–	381837.1	22533.6
Applied research	159894.0	–	–	–	–	159894.0	–
Development	3928.5	–	–	–	–	3928.5	–
Russian Academy of Fine Arts	269744.3	–	–	–	–	–	269744.3
Basic research	269744.3	–	–	–	–	–	269744.3
Applied research	–	–	–	–	–	–	–
Development	–	–	–	–	–	–	–

(continued)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2012							
Total	88272202.8	54470831.4	11467173.5	5339027.3	7672943.7	4453351.6	4868875.3
Basic research	68709199.7	46253404.1	6840938.9	3844535.0	4174438.9	3367870.7	4228012.1
Applied research	12567999.7	4154032.0	2676070.4	1469221.0	2836252.3	895535.3	536888.7
Development	6995003.4	4063395.3	1950164.2	25271.3	662252.5	189945.6	103974.5
Russian Academy of Sciences	71202190.8	53311151.4	9509062.0	110862.0	98934.9	3655058.7	4517121.8
Basic research	57880378.0	45349408.5	5585952.0	85737.5	65546.0	2870402.0	3923332.0
Applied research	7518981.5	3968787.4	2278155.3	25088.6	30416.4	680243.1	536290.7
Development	5802831.3	3992955.5	1644954.7	35.9	2972.5	104413.6	57499.1
Russian Academy of Agricultural Sciences	9539554.7	653048.2	1206475.4	7700.0	7572505.2	97830.9	1995.0
Basic research	5203793.1	487134.9	522627.8	4300.0	4107389.3	80944.1	1397.0
Applied research	3365345.3	150503.1	388259.6	3400.0	2805835.9	16748.7	598.0
Development	970416.3	15410.2	295588.0	–	659280.0	138.1	–
Russian Academy of Medical Sciences	6285422.2	479257.8	582840.0	5220465.3	–	2859.1	–
Basic research	4729683.3	389486.7	582840.0	3754497.5	–	2859.1	–
Applied research	1475473.9	34741.5	–	1440732.4	–	–	–
Development	80265.0	55029.6	–	25235.4	–	–	–

(continued)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
Russian Academy of Architecture and Civil Engineering	392938.5	–	168796.1	–	1503.6	131256.4	91382.4
Basic research	234097.9	–	149519.1	–	1503.6	38168.2	44907.0
Applied research	30136.1	–	9655.5	–	–	20480.6	–
Development	128704.5	–	9621.5	–	–	72607.6	46475.4
Russian Academy of Education	634786.1	27374.0	–	–	–	566346.5	41065.6
Basic research	443936.9	27374.0	–	–	–	375497.3	41065.6
Applied research	178062.9	–	–	–	–	178062.9	–
Development	12786.3	–	–	–	–	12786.3	–
Russian Academy of Fine Arts	217310.5	–	–	–	–	–	217310.5
Basic research	217310.5	–	–	–	–	–	217310.5
Applied research	–	–	–	–	–	–	–
Development	–	–	–	–	–	–	–

5.3. Business Enterprise Sector

5.3.1. R&D INSTITUTIONS IN THE BUSINESS ENTERPRISE SECTOR BY TYPE

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	2345	2278	2110	1990	1851	1703	1682	1742	1540	1446	1405	1450	1362
Research institutes	1089	1062	972	956	888	855	805	765	699	659	634	598	567
Design organisations	615	564	535	487	451	410	398	391	334	306	290	287	262
Construction project and exploration organisations	204	94	79	71	60	55	51	45	37	31	31	32	27
Industrial enterprises	286	276	254	240	238	231	255	265	239	228	238	280	274
Experimental enterprises	31	32	30	30	25	16	15	19	20	21	16	14	19
Others	120	250	240	206	189	136	158	257	211	201	196	239	213

5.3.2. R&D PERSONNEL IN THE BUSINESS ENTERPRISE SECTOR BY TYPE OF INSTITUTIONS

(head-count)

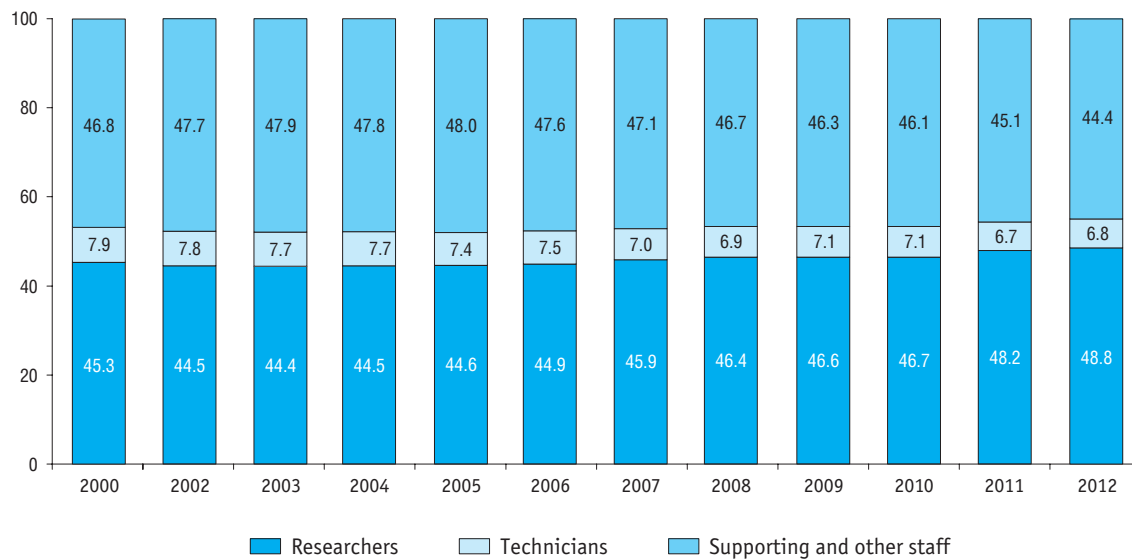
	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	726568	590646	568628	558668	537473	496706	486613	478401	451532	432415	423112	419752	394182
Research institutes	438599	349242	306767	302617	286133	255233	243004	234808	225430	214050	207166	196235	194274
Design organisations	174523	151705	175800	170095	170323	161295	153259	148294	138713	135811	129281	135133	110381
Construction project and exploration organisations	20844	8177	7235	6391	5707	5284	5839	7001	6004	5320	4905	5076	5402
Industrial enterprises	73410	52598	45076	46575	47892	43524	59856	56759	52042	49042	51807	52004	52071
Experimental enterprises	9998	3945	9457	9311	5570	865	5736	2653	849	938	925	852	946
Others	9194	24979	24293	23679	21848	30505	18919	28886	28494	27254	29028	30452	31108

5.3.3. R&D PERSONNEL IN THE BUSINESS ENTERPRISE SECTOR BY OCCUPATION

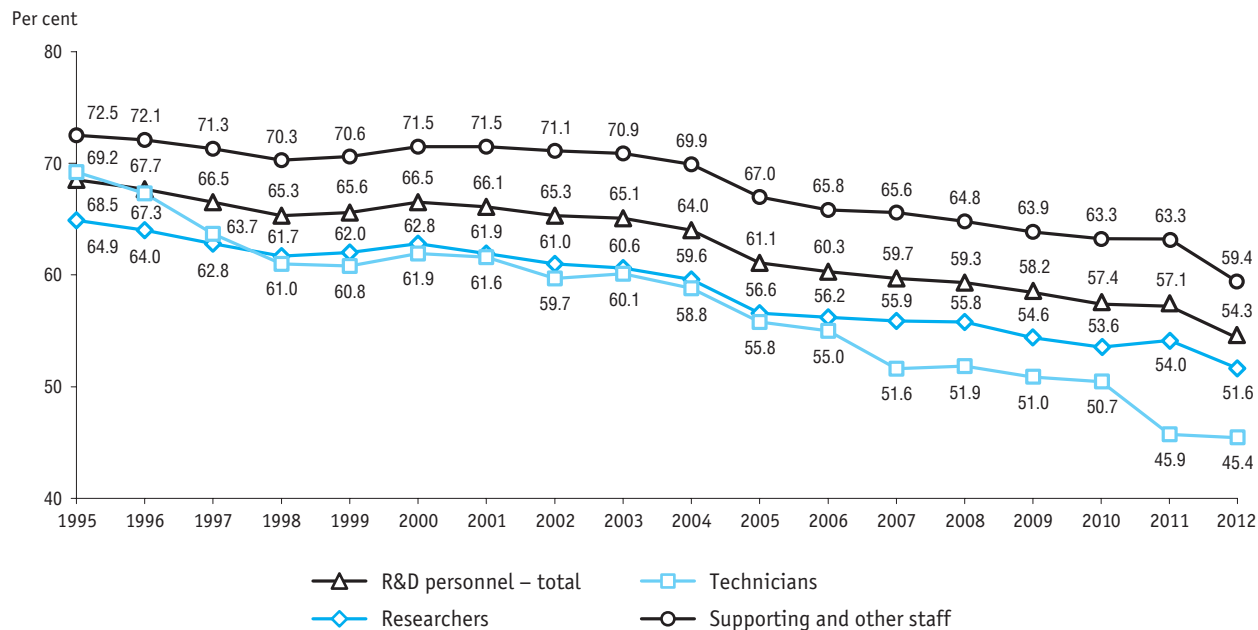
(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	726568	590646	568628	558668	537473	496706	486613	478401	451532	432415	423112	419752	394182
Researchers	336671	267640	252990	248232	239172	221445	218702	219632	209579	201668	197785	202185	192285
Technicians	70180	46535	44501	43137	41171	38837	36315	33340	31230	30613	30063	28235	26720
Supporting staff	201122	175261	169465	166620	159650	147980	144966	140507	129496	123814	120485	116829	106306
Others	118595	101210	101672	100679	97480	90444	86630	84922	81227	76320	74779	72503	68871

5.3.4. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL IN THE BUSINESS ENTERPRISE SECTOR BY OCCUPATION



5.3.5. SHARE OF THE BUSINESS ENTERPRISE SECTOR IN TOTAL R&D PERSONNEL BY OCCUPATION



5.3.6. R&D PERSONNEL IN THE BUSINESS ENTERPRISE SECTOR BY EDUCATIONAL ATTAINMENT

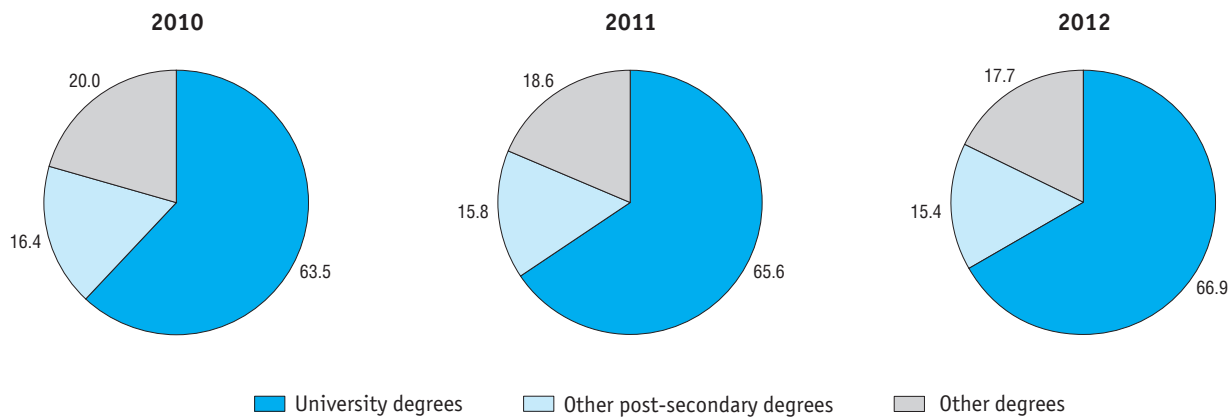
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	Total	University degrees	Other post-secondary degrees	Other degrees
R&D personnel				
2005	496706	288649	89265	118792
2008	451532	280083	78622	92827
2009	432415	270449	73054	88912
2010	423112	268821	69552	84739
2011	419752	275431	66267	78054
2012	394182	263555	60764	69863
Researchers				
2005	221445	221445	—	—
2008	209579	209579	—	—
2009	201668	201668	—	—
2010	197785	197785	—	—
2011	202185	202185	—	—
2012	192285	192285	—	—
Technicians				
2005	36837	6274	21435	9130
2008	31230	6421	17338	7471
2009	30613	7261	15924	7428
2010	30063	7842	15051	7170
2011	28235	7882	13972	6381
2012	26720	7547	13096	6077

(continued)

	Total	University degrees	Other post-secondary degrees	Other degrees
Supporting staff				
2005	147980	37101	42099	68780
2008	129496	39327	38116	52053
2009	123814	38134	35605	50075
2010	120485	38988	33362	48135
2011	116829	39771	32170	44888
2012	106306	37181	29116	40009
Others				
2005	90444	23829	25733	40882
2008	81227	24756	23168	33303
2009	76320	23386	21525	31409
2010	74779	24206	21139	29434
2011	72503	25593	20125	26785
2012	68871	26542	18552	23777

5.3.7. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL IN THE BUSINESS ENTERPRISE SECTOR BY EDUCATIONAL ATTAINMENT



5.3.8. EMPLOYEES WORKING PART-TIME AND ON CONTRACTS IN THE BUSINESS ENTERPRISE SECTOR BY OCCUPATION

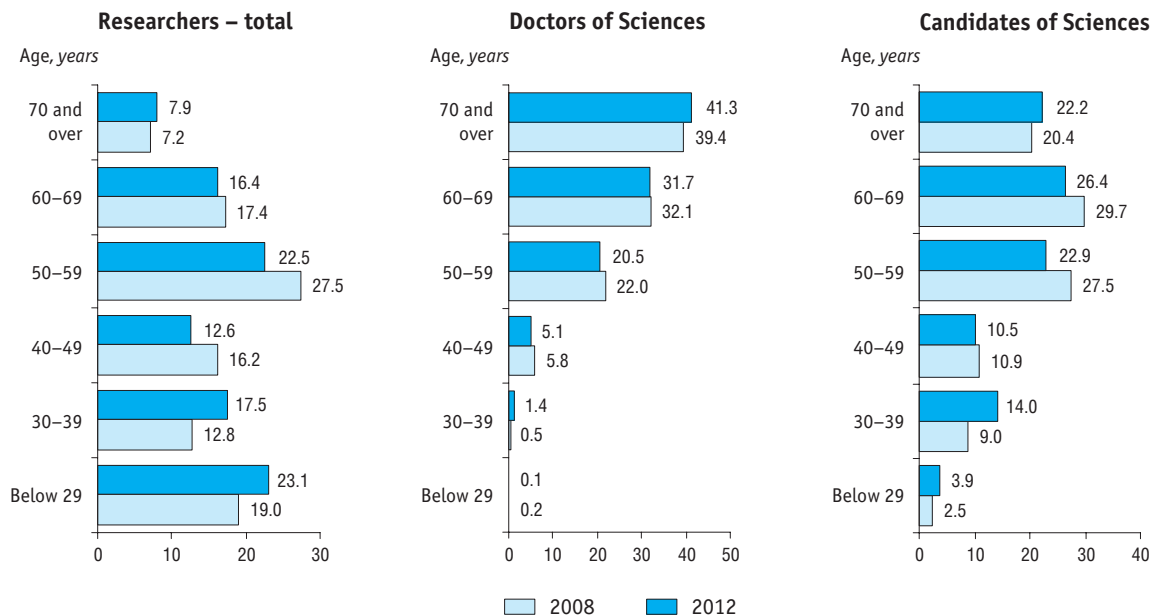
	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Head-count													
Total	93988	57105	54455	48370	43976	41158	42574	42861	37515	33467	32067	29886	29348
Researchers	45579	32604	31335	28532	26118	23921	26146	26113	23775	21163	20298	18558	18785
Technicians	8550	3579	3377	2972	2840	2882	2854	3004	2581	2429	2013	1923	1795
Supporting staff	21475	11387	11415	8749	8167	6700	6379	6440	5385	4554	4220	4169	3806
Others	18384	9535	8328	8117	6851	7655	7195	7304	5774	5321	5536	5236	4962
Per cent													
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Researchers	48.5	57.1	57.5	59.0	59.4	58.1	61.4	60.9	63.4	63.2	63.3	62.1	64.0
Technicians	9.1	6.3	6.2	6.1	6.5	7.0	6.7	7.0	6.9	7.3	6.3	6.4	6.1
Supporting staff	22.8	19.9	21.0	18.1	18.6	16.3	15.0	15.0	14.4	13.6	13.2	13.9	13.0
Others	19.6	16.7	15.3	16.8	15.6	18.6	16.9	17.0	15.4	15.9	17.3	17.5	16.9

5.3.9. RESEARCHERS IN THE BUSINESS ENTERPRISE SECTOR BY GENDER AND AGE GROUP

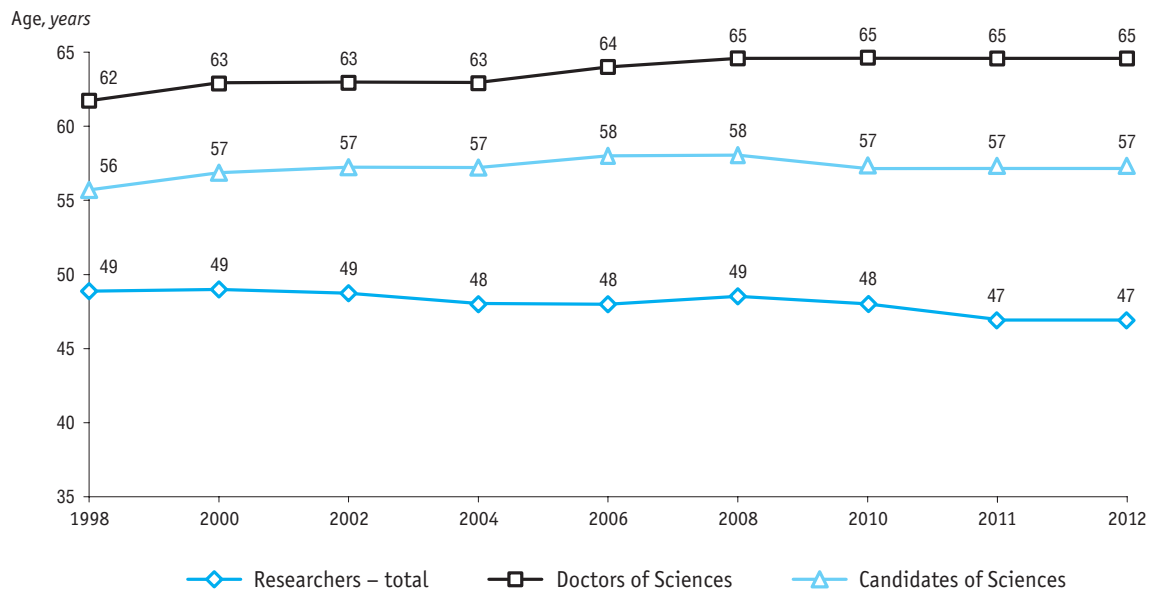
(head-count)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Total	209579	4284	20560	192285	3767	17991
Age, years:						
below 29	39743	8	522	44417	4	702
30–39	26840	21	1845	33697	51	2519
40–49	33992	250	2234	24270	191	1896
50–54	28373	369	2334	20606	306	1685
55–59	29208	572	3324	22582	465	2438
60–69	36400	1375	6113	31545	1195	4751
70 and over	15023	1689	4188	15168	1555	4000
Male	125997	3905	16502	118942	3422	14352
Age, years:						
below 29	25365	7	397	28758	4	527
30–39	16324	17	1303	21710	45	1832
40–49	17239	220	1676	13019	164	1360
50–54	15126	317	1817	10995	261	1340
55–59	16262	509	2667	12671	409	1962
60–69	23519	1276	5109	19756	1090	3963
70 and over	12162	1559	3533	12033	1449	3368
Female	83582	379	4058	73343	345	3639
Age, years:						
below 29	14378	1	125	15659	–	175
30–39	10516	4	542	11987	6	687
40–49	16753	30	558	11251	27	536
50–54	13247	52	517	9611	45	345
55–59	12946	63	657	9911	56	476
60–69	12881	99	1004	11789	105	788
70 and over	2861	130	655	3135	106	632

5.3.10. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE BUSINESS ENTERPRISE SECTOR BY AGE GROUP



5.3.11. AVERAGE AGE OF RESEARCHERS IN THE BUSINESS ENTERPRISE SECTOR

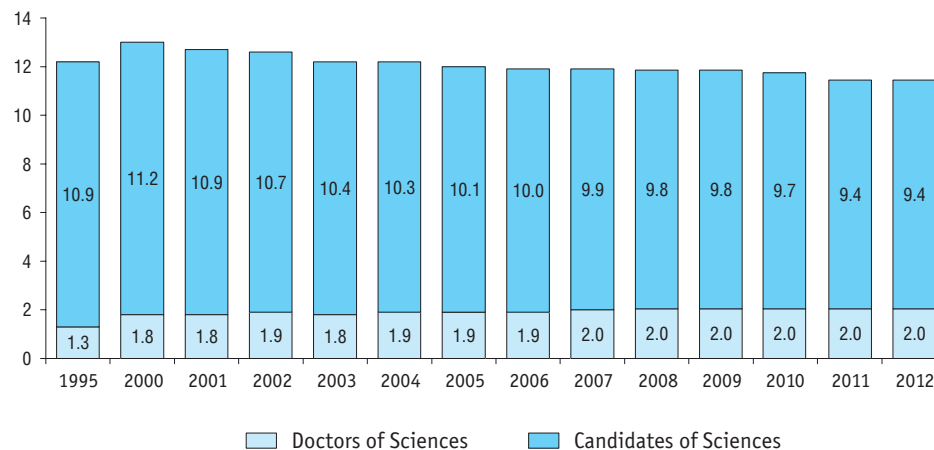


5.3.12. RESEARCHERS WITH SCIENTIFIC DEGREES IN THE BUSINESS ENTERPRISE SECTOR

(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Researchers with scientific degrees	41207	34775	31732	30507	29048	26661	25958	26257	24844	23861	23169	23045	21758
Doctors of Sciences	4348	4806	4691	4583	4511	4222	4108	4446	4284	4093	3987	4018	3767
Candidates of Sciences	36859	29969	27041	25924	24537	22439	21850	21811	20560	19768	19182	19027	17991

5.3.13. RESEARCHERS WITH SCIENTIFIC DEGREES AS A PERCENTAGE OF THE TOTAL NUMBER OF RESEARCHERS IN THE BUSINESS ENTERPRISE SECTOR

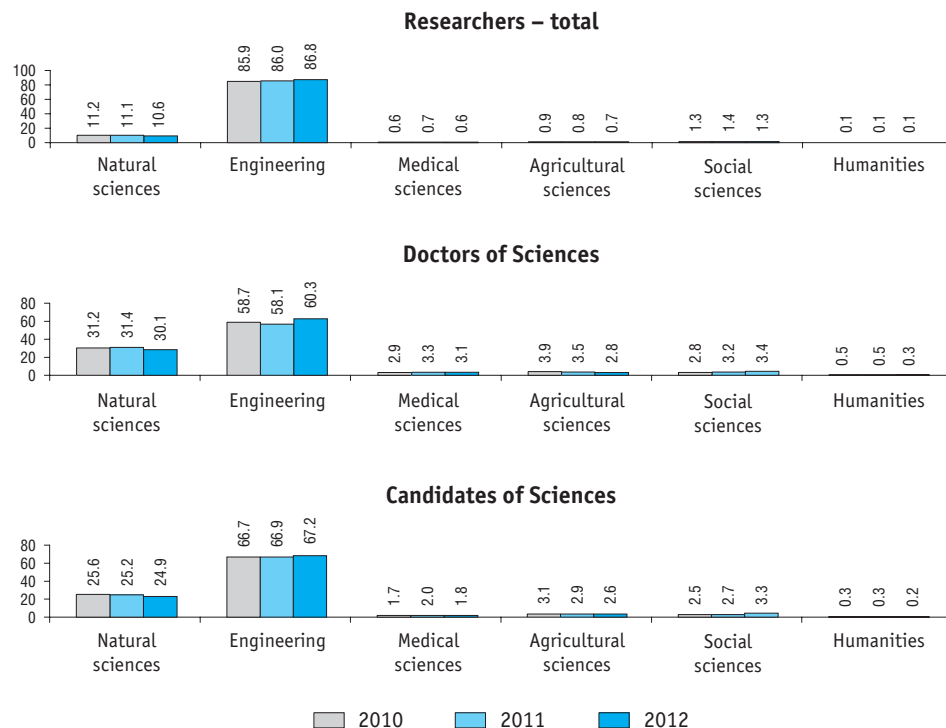


5.3.14. RESEARCHERS IN THE BUSINESS ENTERPRISE SECTOR BY FIELD OF SCIENCE AND TECHNOLOGY

(head-count)

	2008			2010			2011			2012		
	Researchers	Of whom		Researchers	Of whom		Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Total	209579	4284	20560	197785	3987	19182	202185	4018	19027	192285	3767	17991
Natural sciences	25014	1301	5106	22188	1244	4915	22434	1262	4786	20312	1135	4488
Engineering	177503	2478	13712	169887	2342	12793	173916	2334	12729	166841	2271	12084
Medical sciences	1353	139	413	1100	115	335	1354	131	376	1146	117	319
Agricultural sciences	2401	185	685	1692	155	596	1539	141	561	1334	106	469
Social sciences	3109	161	587	2639	112	484	2730	128	522	2465	128	602
Humanities	199	20	57	279	19	59	212	22	53	187	10	29

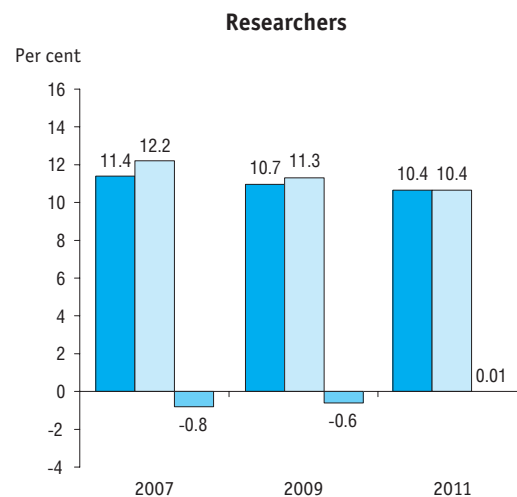
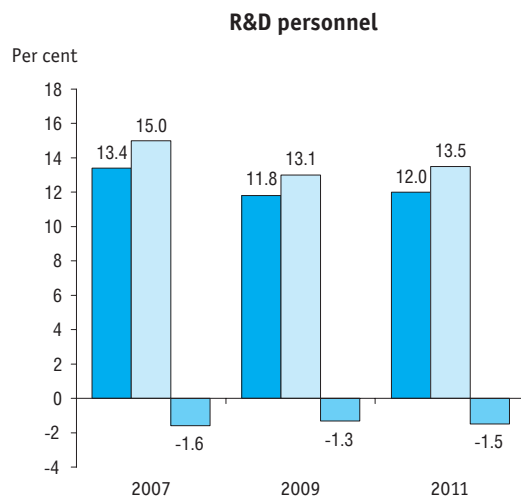
5.3.15. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE BUSINESS ENTERPRISE SECTOR BY FIELD OF SCIENCE AND TECHNOLOGY



5.3.16. FLOWS OF R&D PERSONNEL IN THE BUSINESS ENTERPRISE SECTOR BY OCCUPATION (head-count)

	Number at the beginning of the reference year	Inflow				Outflow				Number at the end of the reference year
		Total	Graduates from higher education institutions	From other research institutes	Others	Total	Voluntary turnover	Due to staff reduction	For other reasons	
Total										
2005	508840	68528	8027	8756	51745	80662	52534	5722	22406	496706
2007	487421	64128	8812	12072	43244	73148	49134	2861	21153	478401
2009	438982	50863	7550	7328	35985	57430	34540	3916	18974	432415
2011	427274	50218	7976	6092	36150	57740	36033	1794	19913	419752
Researchers										
2005	227397	22807	6529	5028	11250	28822	19496	2053	7273	221445
2007	221436	24998	6817	6798	11383	27067	18943	1338	6786	219632
2009	202994	21522	5776	4501	11245	22979	14360	1615	7004	201668
2011	202213	21121	5890	3770	11461	21109	14428	696	5985	202185
Technicians										
2005	38078	5739	301	729	4709	6965	4347	388	2230	36837
2007	34111	6873	577	1188	5108	7523	4741	205	2577	33340
2009	31615	4586	319	612	3655	5511	3243	365	1903	30613
2011	29057	4500	358	524	3618	5365	3378	124	1863	28235
Supporting and other staff										
2005	243365	39982	1197	2999	35786	44875	28691	3281	12903	238424
2007	231874	32257	1418	4086	26753	38558	25450	1318	11790	225429
2009	204373	24755	1455	2215	21085	28940	16937	1936	10067	200134
2011	196004	24597	1728	1798	21071	31266	18227	974	12065	189332

5.3.17. INFLOW AND OUTFLOW OF R&D PERSONNEL IN THE BUSINESS ENTERPRISE SECTOR



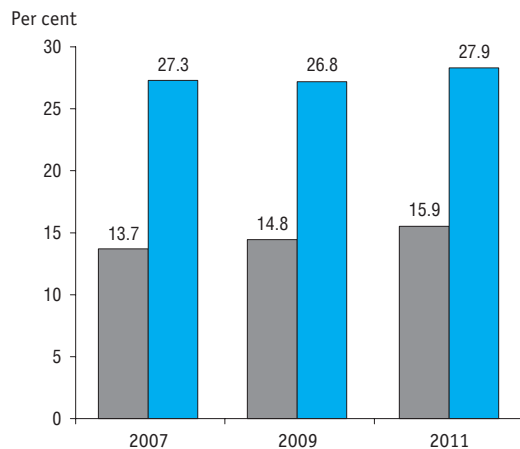
■ Inflow* ■ Outflow** ■ Balance

* The ratio of the R&D personnel admitted during the year to the number of employees at the end of the year.

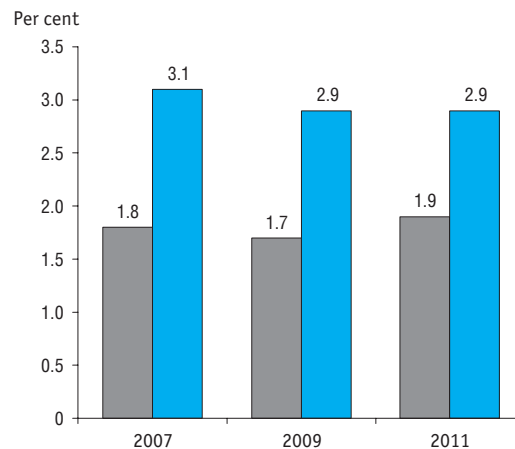
** The ratio of the R&D personnel having resigned during the year to the number of employees at the beginning of the year.

5.3.18. INFLOW OF HIGHER EDUCATION GRADUATES TO R&D INSTITUTIONS IN THE BUSINESS ENTERPRISE SECTOR

Higher education graduates as a percentage of the inflow to R&D institutions



Higher education graduates as a percentage of R&D personnel*



■ R&D personnel – total ■ Researchers

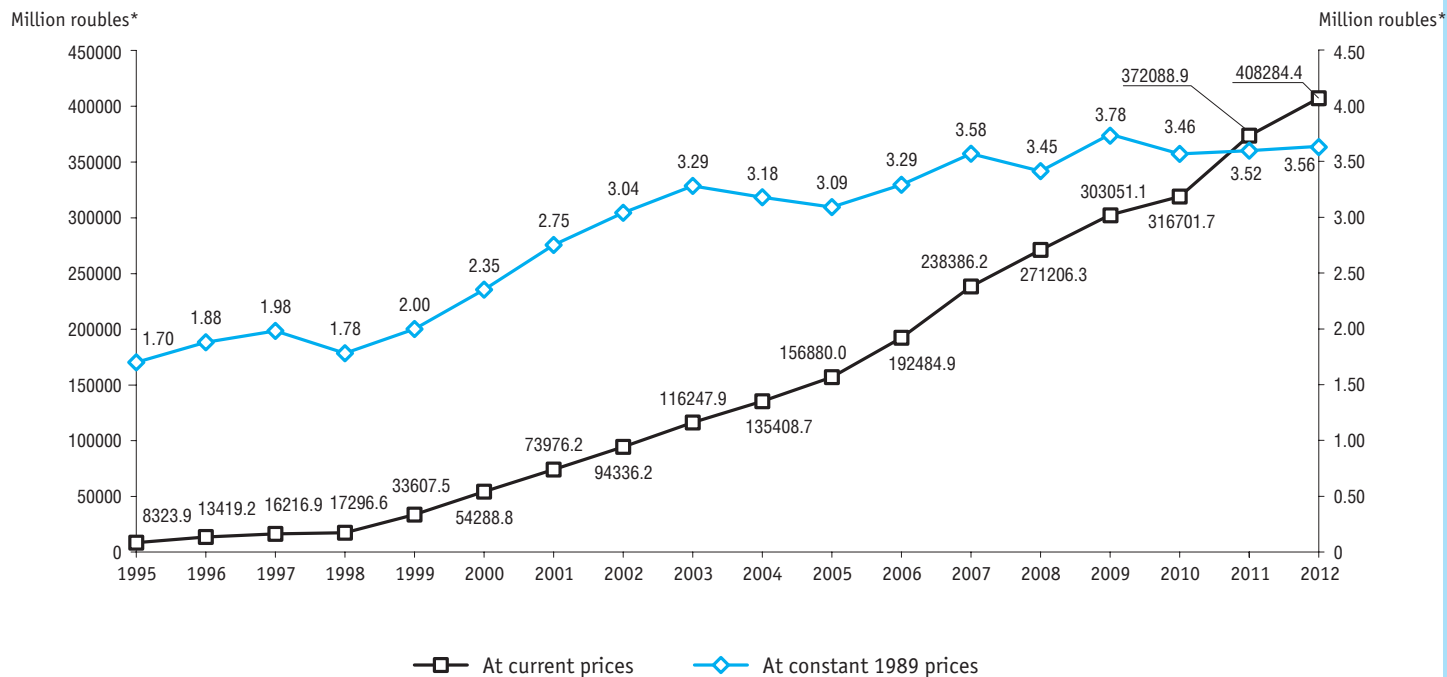
* The ratio of the higher education graduates admitted during the year to the number of employees at the end of the year.

5.3.19. GROSS DOMESTIC EXPENDITURE ON R&D IN THE BUSINESS ENTERPRISE SECTOR BY TYPE OF INSTITUTIONS

(thousand roubles, 1995 – million roubles)

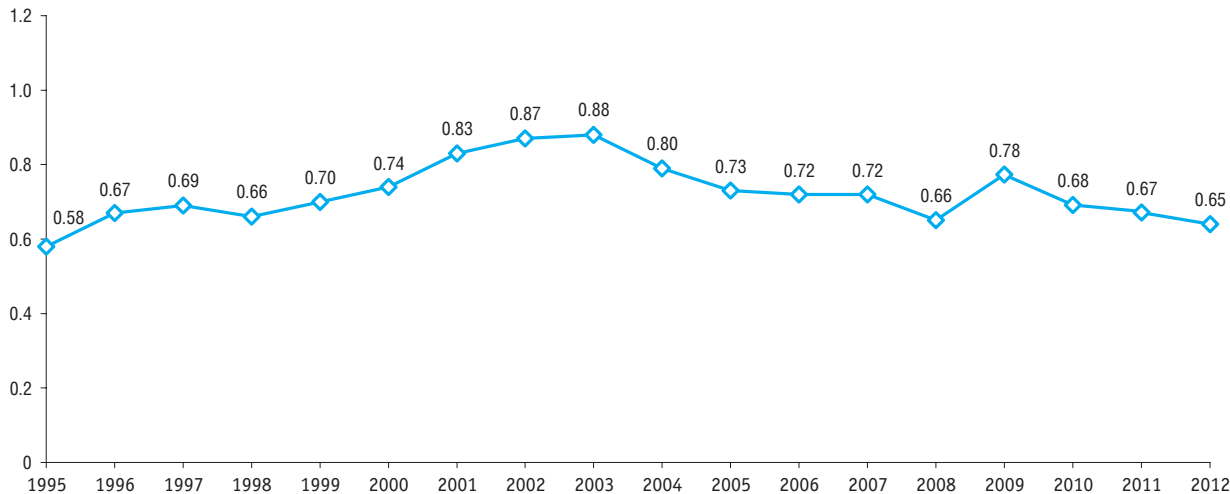
	1995	2000	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	8323907.6	54288781.4	135408690.9	156880029.0	192484851.0	238386207.4	271206280.5	303051131.5	316701679.9	372088873.4	408284378.5
Research institutes	4981890.4	31145022.1	67183746.7	79303185.8	87694068.9	104244210.6	126680440.5	135958941.4	149370680.2	169714137.6	200622676.3
Design organisations	2091275.3	13115444.7	46431191.8	51857668.0	68538930.7	82256666.5	91233658.1	109741372.9	99778643.7	117208342.7	104269890.1
Construction project and exploration organisations	210405.0	539721.1	1448869.6	1604470.7	2165860.5	3639681.6	4511306.2	4491565.7	3690958.0	4688711.6	5827594.8
Industrial enterprises	815663.2	4726082.4	11397153.2	12633435.9	22467177.6	25337067.8	23918615.0	26940377.2	32838780.9	41251710.9	49952762.8
Experimental enterprises	119136.5	294581.2	1814605.3	150835.5	2774519.1	851914.6	331824.8	392760.1	398159.1	372177.7	746678.7
Others	105537.2	4467929.9	7133124.3	11330433.1	8844294.2	22056666.3	24530435.9	25526114.2	30624458.0	38853792.9	46864775.8

5.3.20. GROSS DOMESTIC EXPENDITURE ON R&D IN THE BUSINESS ENTERPRISE SECTOR



* Before 1998 – billion roubles.

5.3.21. GROSS DOMESTIC EXPENDITURE ON R&D IN THE BUSINESS ENTERPRISE SECTOR
AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT



5.3.22. GROSS DOMESTIC EXPENDITURE ON R&D IN THE BUSINESS ENTERPRISE SECTOR BY SOURCE OF FUNDS

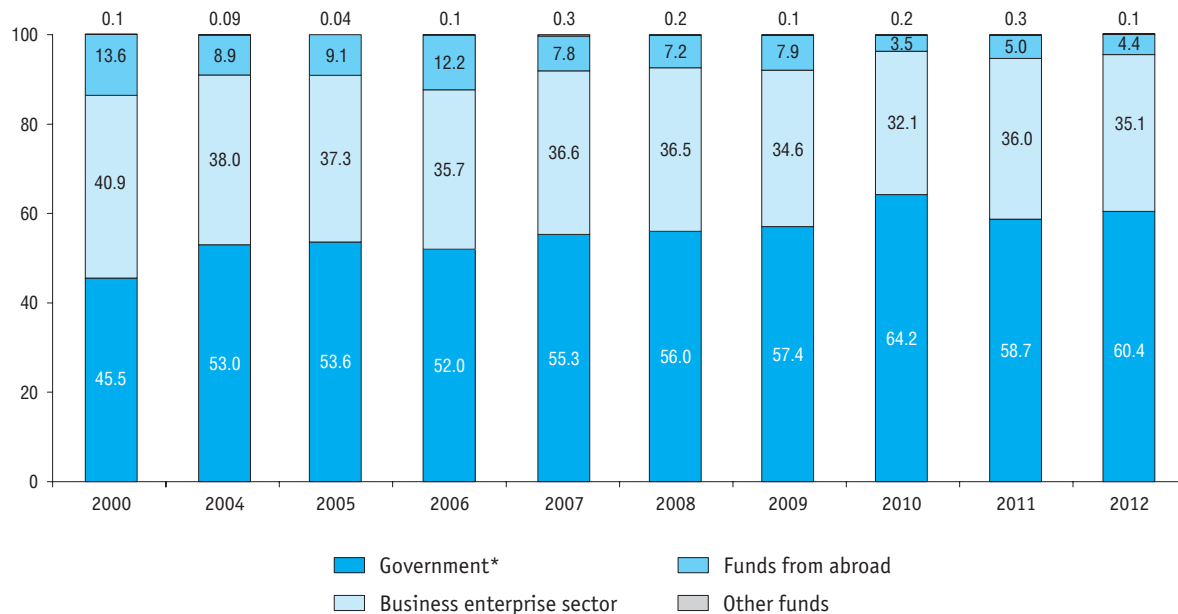
	Total	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
<i>At current prices, thousand roubles, 1995 – million roubles</i>						
1995	8323907.6	4256825.1	3639140.1	822.4	486.8	426633.2
1999	33607489.7	13697956.3	13224149.8	13190.2	11300.2	6660893.2
2000	54288781.4	24674880.5	22199361.6	23662.7	18968.0	7371908.6
2001	73976244.8	36274467.0	30729121.5	46348.3	149323.7	6776984.3
2002	94336248.9	47710158.8	38602812.7	28047.5	63017.2	7932212.7
2003	116247853.0	59896801.9	44401742.9	77901.7	204665.7	11666740.8
2004	135408690.9	71716243.4	51502628.6	46246.5	71105.3	12072467.1
2005	156880029.0	84032725.4	58460580.8	46809.5	14570.8	14325342.5
2006	192484851.0	100122872.7	68769254.4	34681.0	160678.6	23397364.3
2007	238386207.4	131768069.7	87352197.2	616853.5	163906.9	18485180.1
2008	271206280.5	151975682.0	99123835.8	43931.1	468252.7	19594578.9
2009	303051131.5	173872629.4	104955691.5	60958.8	238908.1	23922943.7
2010	316701679.9	203267110.6	101760706.5	75409.3	427247.1	11171206.4
2011	372088873.4	218291814.8	134043614.4	376915.9	806970.4	18569557.9
2012	408284378.5	246761318.2	143181603.7	240986.2	152505.3	17947965.1

(continued)

	Total	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
	Per cent					
1995	100	51.1	43.7	0.01	0.01	5.1
1999	100	40.8	39.3	0.04	0.03	19.8
2000	100	45.5	40.9	0.04	0.03	13.6
2001	100	49.0	41.5	0.06	0.2	9.2
2002	100	50.6	40.9	0.03	0.07	8.4
2003	100	51.5	38.2	0.07	0.2	10.0
2004	100	53.0	38.0	0.03	0.05	8.9
2005	100	53.6	37.3	0.03	0.01	9.1
2006	100	52.0	35.7	0.02	0.08	12.2
2007	100	55.3	36.6	0.3	0.07	7.8
2008	100	56.0	36.5	0.02	0.2	7.2
2009	100	57.4	34.6	0.02	0.08	7.9
2010	100	64.2	32.1	0.02	0.1	3.5
2011	100	58.7	36.0	0.1	0.2	5.0
2012	100	60.4	35.1	0.06	0.04	4.4

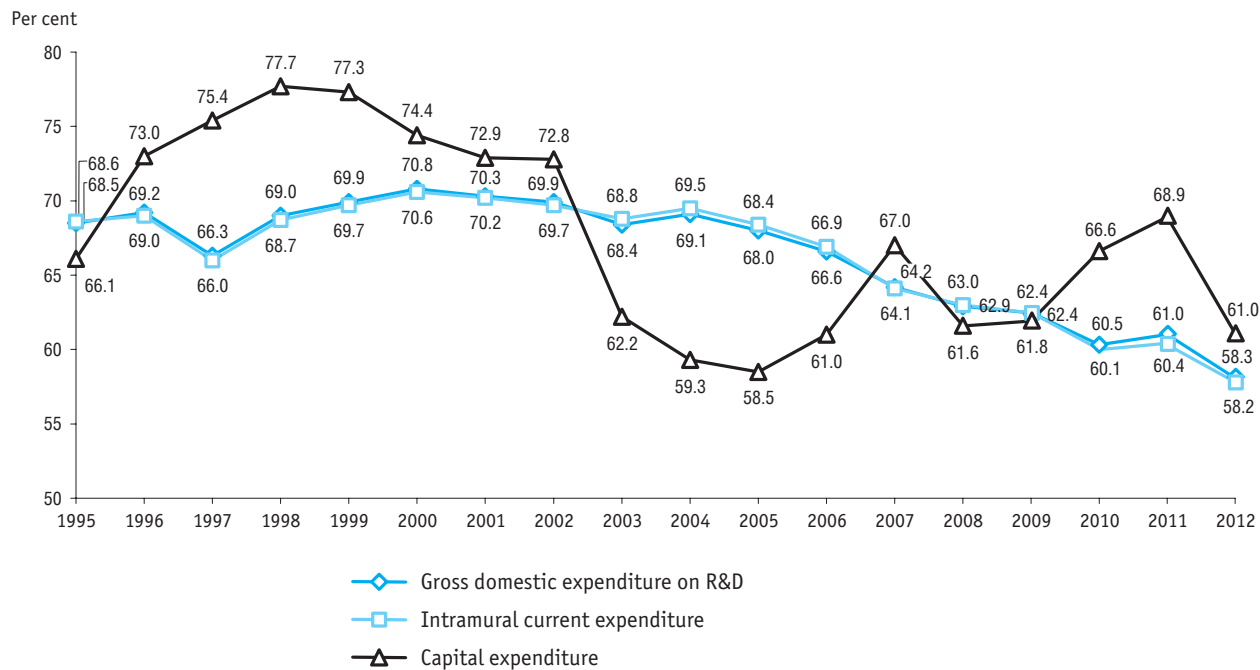
* Including federal budget appropriations and funds of government sector institutions.

5.3.23. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D IN THE BUSINESS ENTERPRISE SECTOR BY SOURCE OF FUNDS



* Including federal budget appropriations and funds of government sector institutions.

5.3.24. SHARE OF THE BUSINESS ENTERPRISE SECTOR IN GROSS DOMESTIC EXPENDITURE ON R&D BY TYPE OF COSTS



5.3.25. GROSS DOMESTIC EXPENDITURE ON R&D IN THE BUSINESS ENTERPRISE SECTOR BY TYPE OF COSTS

(thousand roubles)

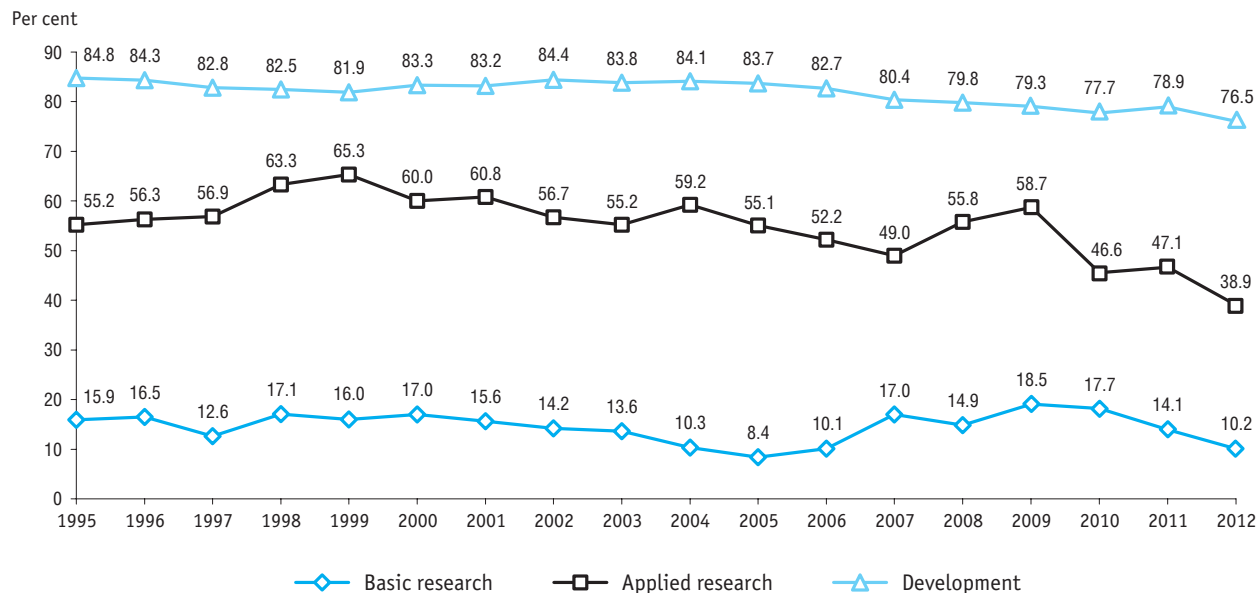
	2005	2007	2008	2009	2010	2011	2012
Gross domestic expenditure on R&D	156880029.0	238386207.4	271206280.5	303051131.5	316701679.9	372088873.4	408284378.5
Intramural current expenditure	151228693.6	226211577.7	258764246.7	287718749.5	294103827.7	343121369.6	380968190.9
Salaries	61762384.5	94546726.5	111090128.0	121823001.2	134771346.7	154670826.0	163680881.0
Of which for R&D personnel*	56579998.4	85564972.1	101472026.7	108594895.7	123576290.3	141005622.8	149328527.6
Social security payments	14652167.0	20370585.9	22451593.2	23934238.6	26089246.1	37534823.2	39738423.4
Equipment	5919453.8	8008224.5	7747615.5	7583666.7	9955224.5	11788168.9	13822393.6
Fixed assets	1630251.3	2088479.7	2159968.1	1799862.2	1879198.4	3304130.3	1866673.0
Other material costs	39963918.4	62599553.1	52972903.9	67227503.5	63367540.7	72417381.8	85310764.1
Other current costs	28930769.9	40686487.7	64502006.1	67150339.5	59920469.7	66710169.7	78415728.8
Capital expenditure	5651335.4	12174629.7	12442033.8	15332382.0	22597852.2	28967503.8	27316187.6
Land and buildings	1208092.5	3052930.6	4802602.2	3483317.9	4950198.0	6068422.7	9006103.9
Equipment	3228403.1	7538427.3	5483899.3	9546423.9	14167838.2	16379917.3	13818410.4
Other capital expenditure	1214839.8	1583271.8	2155532.3	2302640.2	3479816.0	6519163.8	4491673.3

* Excluding those employed on a plural basis and on contracts.

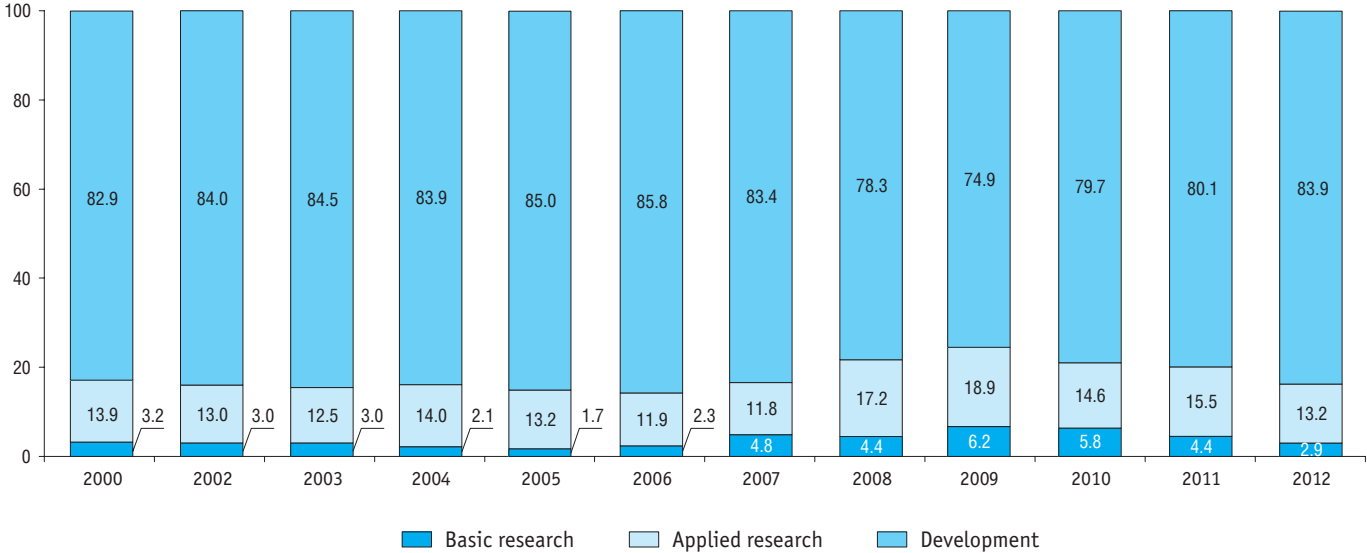
**5.3.26. INTRAMURAL CURRENT EXPENDITURE ON R&D IN THE BUSINESS ENTERPRISE SECTOR BY TYPE OF ACTIVITY
AND FIELD OF SCIENCE AND TECHNOLOGY**
(thousand roubles)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2005							
Intramural current expenditure on R&D	151228693.6	10041430.0	138455122.3	450558.6	1020195.6	1212995.6	48391.5
Basic research	2591506.7	1025517.8	1205156.9	53282.5	236864.8	47440.2	23244.5
Applied research	20026408.8	5053993.0	13842212.4	184566.8	446665.3	489579.6	9391.7
Development	128610778.1	3961919.2	123407753.0	212709.3	336665.5	675975.8	15755.3
2009							
Intramural current expenditure on R&D	287718749.5	21492695.7	261038294.2	1717172.2	1311911.1	2073906.1	84770.2
Basic research	17916877.3	4293227.7	12035394.7	701941.7	435204.8	388611.6	62496.8
Applied research	54351166.0	8391664.3	43885932.6	789544.3	277117.5	1005033.0	1874.3
Development	215450706.2	8807803.7	205116966.9	225686.2	599588.8	680261.5	20399.1
2010							
Intramural current expenditure on R&D	294103827.7	26739368.2	261926531.0	1507276.1	1288239.2	2550402.8	92010.4
Basic research	16935403.4	3875649.0	11521941.3	565100.5	441953.0	467877.0	62882.6
Applied research	42872394.0	10638493.8	29871209.5	595697.1	321868.8	1436993.9	8130.9
Development	234296030.3	12225225.4	220533380.2	346478.5	524417.4	645531.9	20996.9
2011							
Intramural current expenditure on R&D	343121369.6	27124981.9	308923155.3	1872537.9	1304510.0	3743135.2	153049.3
Basic research	15100475.9	3774239.8	9650966.9	615417.0	431079.6	551669.9	77102.7
Applied research	53220149.5	12693760.4	37294694.2	882555.2	311324.7	2011003.0	26812.0
Development	274800744.2	10656981.7	261977494.2	374565.7	562105.7	1180462.3	49134.6
2012							
Intramural current expenditure on R&D	380968190.9	27243077.6	347059349.6	1992378.4	1492477.6	2959975.4	220932.3
Basic research	11034975.2	2857779.7	6972175.3	601995.0	201513.8	371427.0	30084.4
Applied research	50351025.6	10971542.8	35740717.8	1045163.7	684025.7	1855202.6	54373.0
Development	319582190.1	13413755.1	304346456.5	345219.7	606938.1	733345.8	136474.9

5.3.27. SHARE OF THE BUSINESS ENTERPRISE SECTOR IN INTRAMURAL CURRENT EXPENDITURE ON R&D BY TYPE OF ACTIVITY



5.3.28. PERCENTAGE DISTRIBUTION OF INTRAMURAL CURRENT EXPENDITURE ON R&D
IN THE BUSINESS ENTERPRISE SECTOR BY TYPE OF ACTIVITY



5.3.29. AVERAGE MONTHLY SALARY OF R&D PERSONNEL IN THE BUSINESS ENTERPRISE SECTOR

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Average monthly salary, <i>roubles, 1995 – thousand roubles</i>	297.6	2519.9	6124.3	7525.0	9599.6	11744.8	15203.6	19345.3	21674.1	25359.7	29174.9	33165.2
As a percentage of that:												
in the national economy (=100%)	63.0	113.3	111.4	111.7	112.2	110.4	111.8	111.9	116.3	121.0	124.8	123.6
in manufacturing (=100%)	64.9	106.5	109.3	109.9	114.0	115.2	118.1	120.5	130.7	132.9	133.9	135.5
in construction (=100%)	50.6	95.5	99.2	103.0	106.2	108.1	106.1	104.2	119.6	119.8	123.2	125.5

5.4. Higher Education Sector

5.4.1. R&D INSTITUTIONS IN THE HIGHER EDUCATION SECTOR BY TYPE

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	511	526	531	526	533	539	540	616	603	603	617	696	660
Universities and other higher education institutions	395	390	390	393	402	406	417	500	503	506	517	581	560
Research institutes	88	107	113	108	106	109	106	95	80	78	71	67	54
Design and construction project organisations	18	19	17	17	17	17	14	12	11	11	11	12	12
Experimental enterprises	1	2	2	–	1	–	–	1	1	1	1	2	4
Others	9	8	9	8	7	7	3	8	8	7	17	34	30

5.4.2. R&D PERSONNEL IN THE HIGHER EDUCATION SECTOR BY TYPE OF INSTITUTIONS

(head-count)

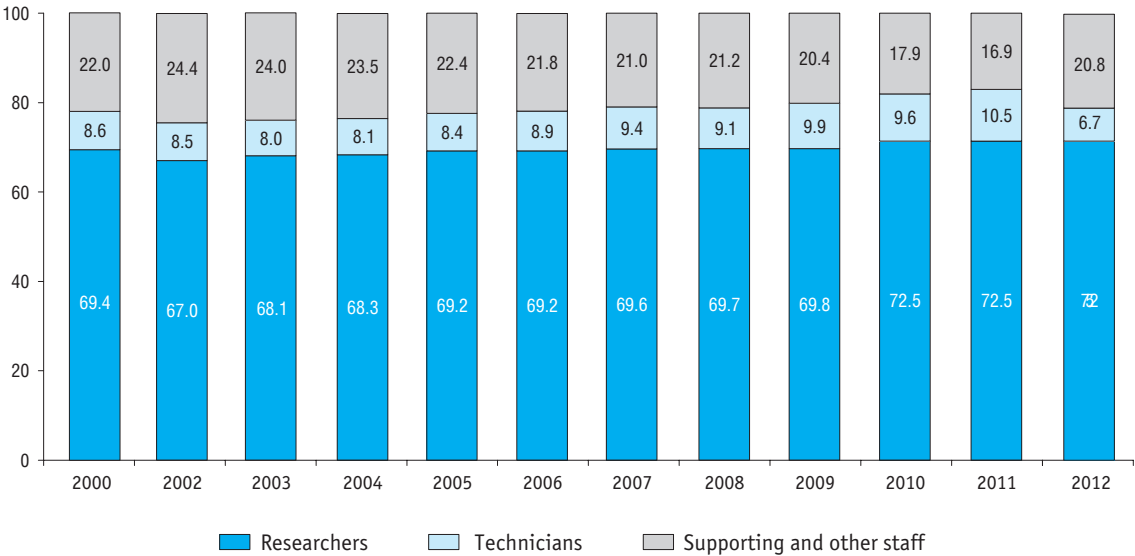
	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	52065	40787	44135	43120	43414	43500	44473	49059	47595	48498	53290	59454	59356
Universities and other higher education institutions	40015	31110	31053	31774	32105	33942	35179	40440	40003	41767	46776	53944	53586
Research institutes	9458	7254	10313	8550	8565	7021	7294	6609	5522	4995	4796	3904	3070
Design and construction project organisations	2170	2198	2325	2306	2189	1991	1878	1843	1783	1446	1392	1197	1830
Experimental enterprises	23	4	15	–	15	–	–	2	1	2	2	8	9
Others	399	221	429	490	540	546	122	165	286	288	324	401	861

5.4.3. R&D PERSONNEL IN THE HIGHER EDUCATION SECTOR BY OCCUPATION

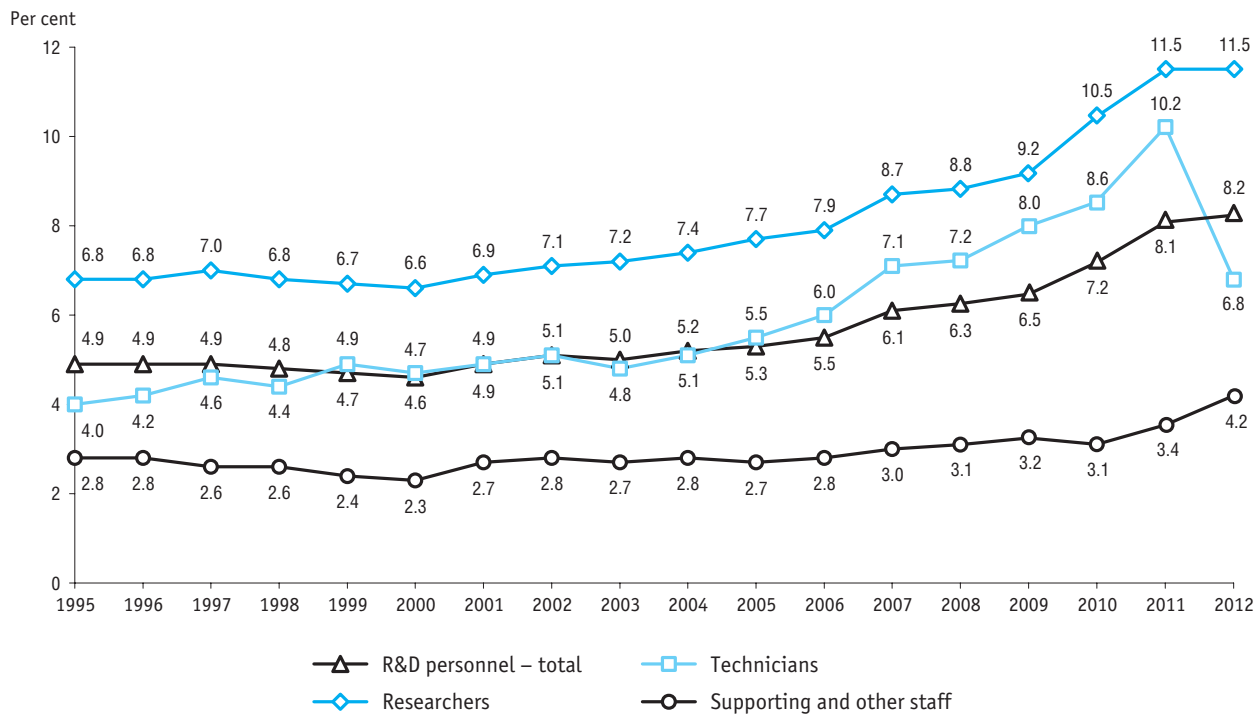
(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	52065	40787	44135	43120	43414	43500	44473	49059	47595	48498	53290	59454	59356
Researchers	35508	28325	29583	29346	29670	30111	30793	34162	33160	33847	38640	43121	43024
Technicians	4010	3509	3771	3434	3534	3658	3972	4606	4349	4778	5095	6256	3989
Supporting staff	7520	5463	6717	6695	6607	6098	5945	6282	6520	6198	6564	7345	9254
Others	5027	3490	4064	3645	3603	3633	3763	4009	3566	3675	2991	2732	3089

5.4.4. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL IN THE HIGHER EDUCATION SECTOR BY OCCUPATION



5.4.5. SHARE OF THE HIGHER EDUCATION SECTOR IN TOTAL R&D PERSONNEL BY OCCUPATION



5.4.6. R&D PERSONNEL IN THE HIGHER EDUCATION SECTOR BY EDUCATIONAL ATTAINMENT

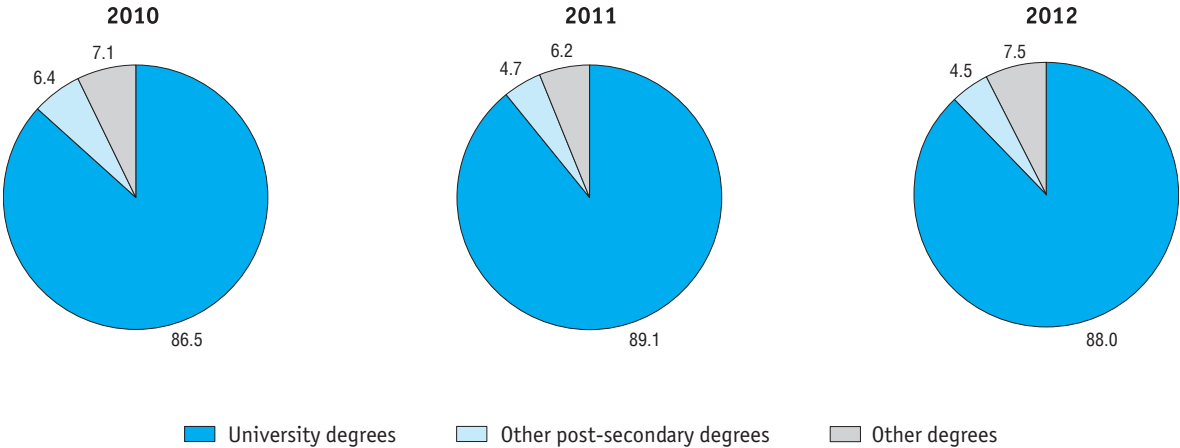
(head-count)

	Total	University degrees	Other post-secondary degrees	Other degrees
R&D personnel				
2005	43500	35159	4430	3911
2008	47595	39160	4523	3912
2009	48498	40456	4424	3618
2010	53290	46112	3394	3784
2011	59454	52965	2811	3678
2012	59356	52224	2670	4462
Researchers				
2005	30111	30111	–	–
2008	33160	33160	–	–
2009	33847	33847	–	–
2010	38640	38640	–	–
2011	43121	43121	–	–
2012	43024	43024	–	–
Technicians				
2005	3658	1079	2082	497
2008	4349	1471	2229	649
2009	4778	1861	2125	792
2010	5095	2460	1526	1109
2011	6256	3896	1270	1090
2012	3989	1749	984	1256

(continued)

	Total	University degrees	Other post-secondary degrees	Other degrees
Supporting staff				
2005	6098	2758	1465	1875
2008	6520	3316	1410	1794
2009	6198	3337	1357	1504
2010	6564	3695	1190	1679
2011	7345	4438	1126	1781
2012	9254	5940	1093	2221
Others				
2005	3633	1211	883	1539
2008	3566	1213	884	1469
2009	3675	1411	942	1322
2010	2991	1317	678	996
2011	2732	1510	415	807
2012	3089	1511	593	985

5.4.7. PERCENTAGE DISTRIBUTION OF R&D PERSONNEL IN THE HIGHER EDUCATION SECTOR BY EDUCATIONAL ATTAINMENT



5.4.8. EMPLOYEES WORKING PART-TIME AND ON CONTRACTS IN THE HIGHER EDUCATION SECTOR

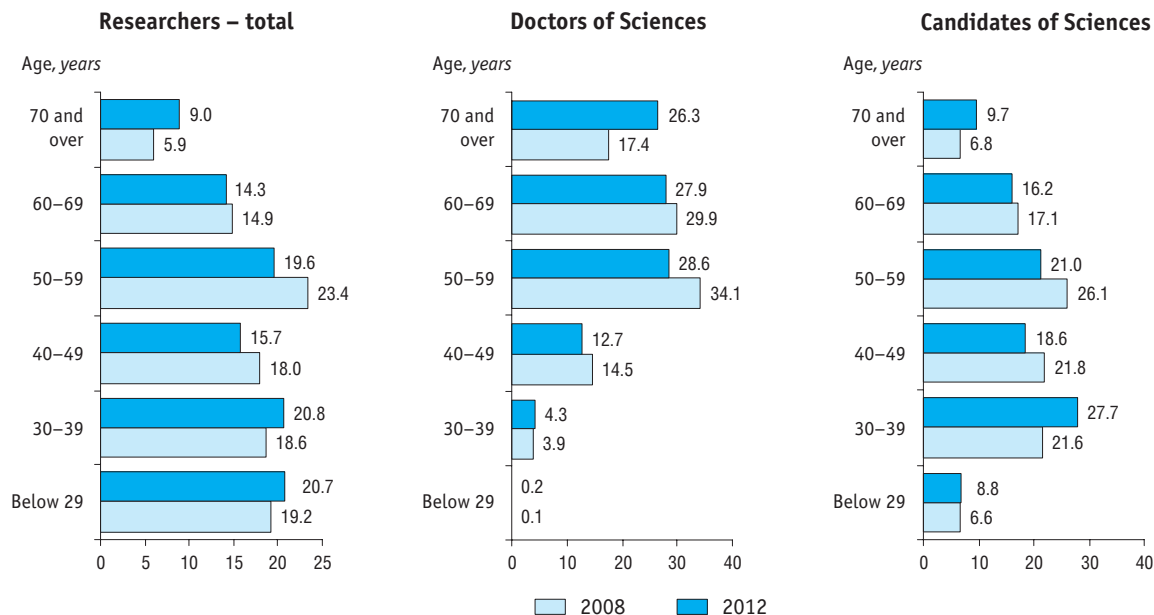
	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Head-count													
Total	95073	89611	87255	86735	83665	80995	87710	92451	95653	91995	94781	100274	100727
Researchers	71130	64753	62770	63369	61173	60173	64574	69799	71073	69815	71568	76609	75313
Technicians	7282	6778	8256	8034	8336	7051	7470	7619	9346	7555	8780	8334	10051
Supporting staff	10004	10814	10155	10160	9239	9148	10927	9967	10190	9461	9639	9763	9248
Others	6657	7266	6074	5172	4917	4623	4739	5066	5044	5164	4794	5568	6115
Per cent													
Total	100	100	100	100	100	100	100	100	100	100	100	100	100
Researchers	74.8	72.3	71.9	73.1	73.1	74.3	73.6	75.5	74.3	75.9	75.5	76.4	74.8
Technicians	7.7	7.6	9.5	9.3	10.0	8.7	8.5	8.2	9.8	8.2	9.3	8.3	10.0
Supporting staff	10.5	12.1	11.6	11.7	11.0	11.3	12.5	10.8	10.7	10.3	10.2	9.7	9.2
Others	7.0	8.1	7.0	6.0	5.9	5.7	5.4	5.5	5.3	5.6	5.1	5.6	6.1

5.4.9. RESEARCHERS IN THE HIGHER EDUCATION SECTOR BY GENDER AND AGE GROUP

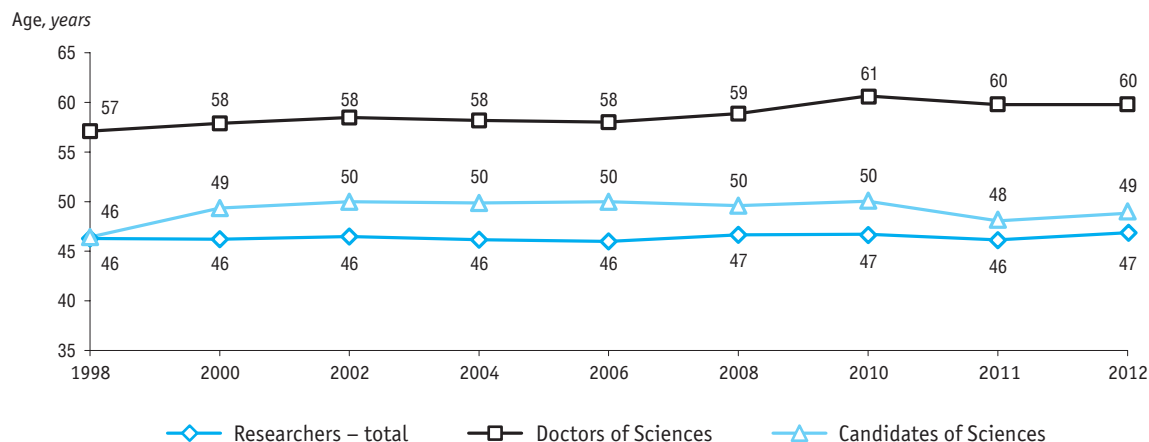
(head-count)

	2008			2012		
	Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Total	33160	3439	12040	43024	5729	18359
Age, years:						
below 29	6379	4	792	8894	9	1256
30–39	6164	133	2606	8955	246	5092
40–49	5964	499	2619	6744	725	3409
50–54	3999	547	1603	4273	735	1997
55–59	3760	627	1544	4139	906	1850
60–69	4937	1029	2055	6166	1601	2975
70 and over	1957	600	821	3853	1507	1780
Male	19506	2538	6770	23528	3922	9272
Age, years:						
below 29	4055	3	448	5238	5	649
30–39	3284	94	1353	4454	159	2410
40–49	3298	349	1412	3234	416	1533
50–54	2951	384	909	2245	480	996
55–59	2224	450	928	2244	569	971
60–69	3063	791	1205	3688	1167	1732
70 and over	1231	467	515	2425	1126	981
Female	13654	901	5270	19496	1807	9087
Age, years:						
below 29	2324	1	344	3656	4	607
30–39	2880	39	1253	4501	87	2682
40–49	2666	150	1207	3510	309	1876
50–54	1648	163	694	2028	255	1001
55–59	1536	177	616	1895	337	879
60–69	1874	238	850	2478	434	1243
70 and over	726	133	306	1428	381	799

5.4.10. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE HIGHER EDUCATION SECTOR BY AGE GROUP

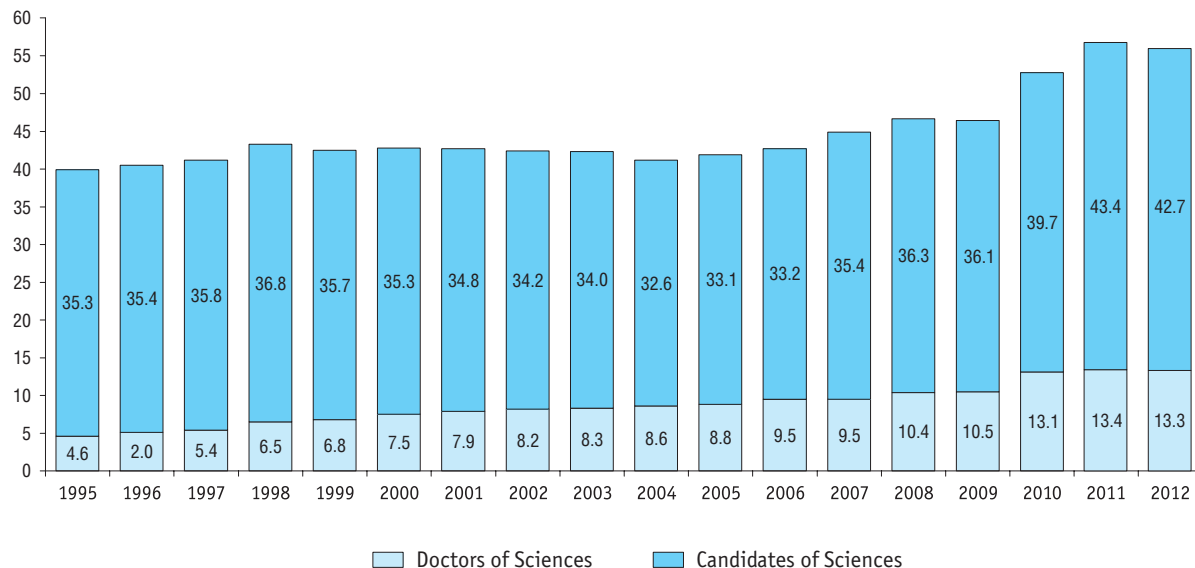


5.4.11. AVERAGE AGE OF RESEARCHERS IN THE HIGHER EDUCATION SECTOR

5.4.12. RESEARCHERS WITH SCIENTIFIC DEGREES IN THE HIGHER EDUCATION SECTOR
(head-count)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Researchers with scientific degrees	14162	12113	12530	12432	12212	12618	13153	15330	15479	15774	20423	24502	24088
Doctors of Sciences	1617	2120	2425	2447	2538	2654	2924	3252	3439	3568	5068	5774	5729
Candidates of Sciences	12545	9993	10105	9985	9674	9964	10229	12078	12040	12206	15355	18728	18359

5.4.13. RESEARCHERS WITH SCIENTIFIC DEGREES AS A PERCENTAGE OF THE TOTAL NUMBER OF RESEARCHERS IN THE HIGHER EDUCATION SECTOR

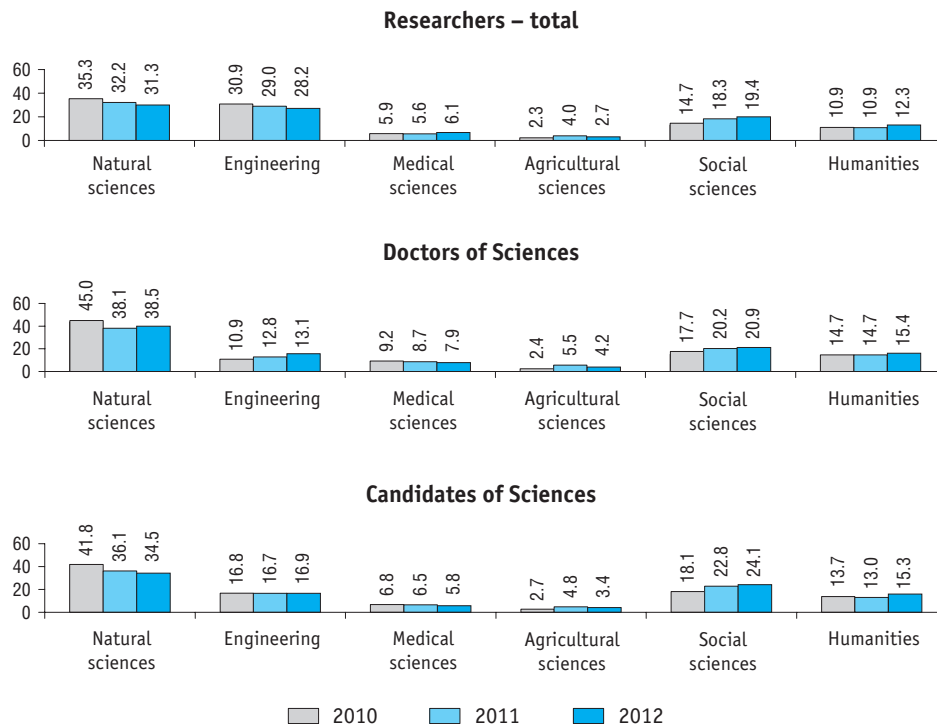


5.4.14. RESEARCHERS IN THE HIGHER EDUCATION SECTOR BY FIELD OF SCIENCE AND TECHNOLOGY

(head-count)

	2008			2010			2011			2012		
	Researchers	Of whom		Researchers	Of whom		Researchers	Of whom		Researchers	Of whom	
		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences		Doctors of Sciences	Candidates of Sciences
Total	33160	3439	12040	38640	5068	15355	43121	5774	18728	43024	5729	18359
Natural sciences	13111	1535	5244	13652	2283	6424	13897	2198	6770	13461	2205	6326
Engineering	10524	484	2352	11938	554	2574	12515	737	3121	12125	752	3099
Medical sciences	2403	441	1142	2263	466	1047	2419	504	1219	2609	453	1072
Agricultural sciences	933	116	416	894	122	420	1730	320	908	1153	241	621
Social sciences	4309	512	1818	5664	896	2783	7878	1168	4271	8366	1196	4423
Humanities	1880	351	1068	4229	747	2107	4682	847	2439	5310	882	2818

5.4.15. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE HIGHER EDUCATION SECTOR BY FIELD OF SCIENCE AND TECHNOLOGY

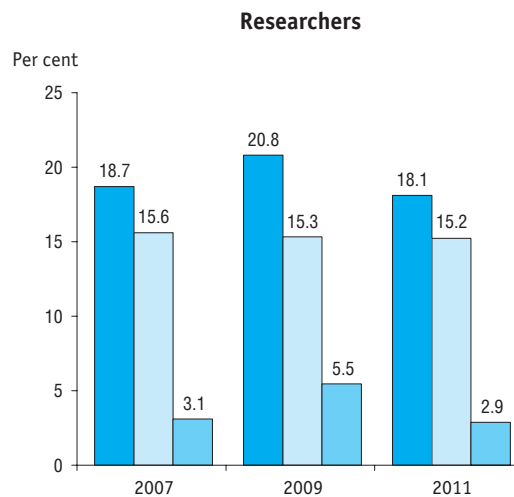
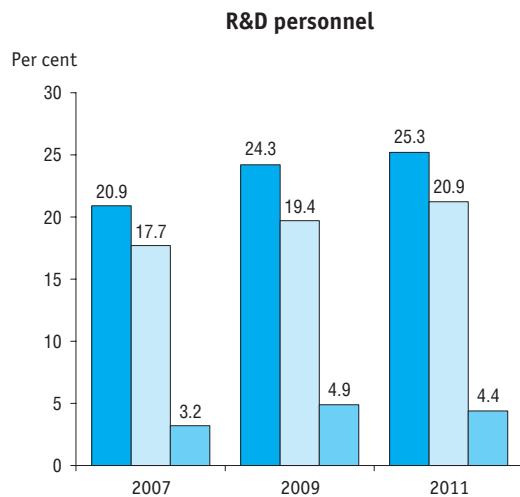


5.4.16. FLOWS OF R&D PERSONNEL IN THE HIGHER EDUCATION SECTOR BY OCCUPATION

(head-count)

	Number at the beginning of the reference year	Inflow				Outflow				Number at the end of the reference year
		Total	Graduates from higher education institutions	From other research institutes	Others	Total	Voluntary turnover	Due to staff reduction	For other reasons	
Total										
2005	41601	8770	1475	1388	5907	6871	4096	25	2750	43500
2007	47153	10264	1843	1844	6577	8358	5061	42	3255	49059
2009	45565	11766	2005	1583	8178	8833	4805	160	3868	48498
2011	56117	15068	2579	1578	10911	11731	6151	64	5516	59454
Reseachers										
2005	28951	5219	1229	1058	2932	4062	2470	16	1576	30111
2007	32895	6385	1560	1309	3516	5118	3098	22	1998	34162
2009	31619	7055	1465	1218	4372	4823	2614	80	2129	33847
2011	41648	7823	1707	1156	4960	6347	3639	42	2666	43121
Technicians										
2005	3451	1030	114	115	801	820	467	1	352	3658
2007	4326	1517	111	172	1234	1234	735	6	493	4606
2009	4352	1960	324	198	1438	1535	823	29	683	4778
2011	4713	3267	398	136	2733	1723	924	8	791	6256
Supporting and other staff										
2005	9199	2521	132	215	2174	1989	1159	8	822	9731
2007	9932	2362	172	363	1827	2006	1228	14	764	10291
2009	9594	2751	216	167	2368	2475	1368	51	1056	9873
2011	9756	3978	474	286	3218	3661	1588	14	2059	10077

5.4.17. INFLOW AND OUTFLOW OF R&D PERSONNEL IN THE HIGHER EDUCATION SECTOR



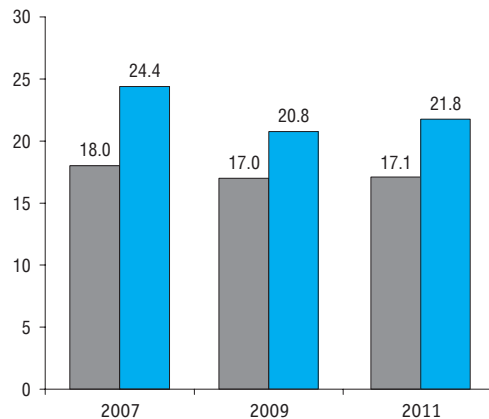
■ Inflow* ■ Outflow** ■ Balance

* The ratio of the R&D personnel admitted during the year to the number of employees at the end of the year.

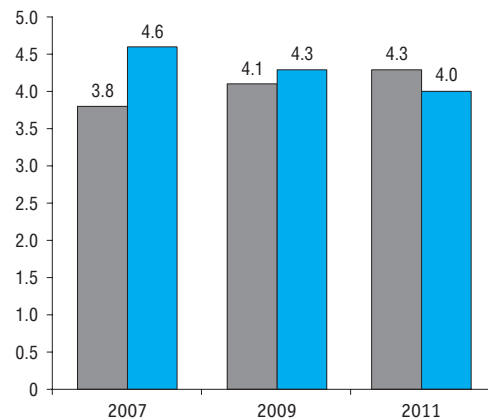
** The ratio of the R&D personnel having resigned during the year to the number of employees at the beginning of the year.

5.4.18. INFLOW OF HIGHER EDUCATION GRADUATES TO R&D INSTITUTIONS IN THE HIGHER EDUCATION SECTOR

Higher education graduates as a percentage of the inflow to R&D institutions



Higher education graduates as a percentage of R&D personnel*



■ R&D personnel – total ■ Researchers

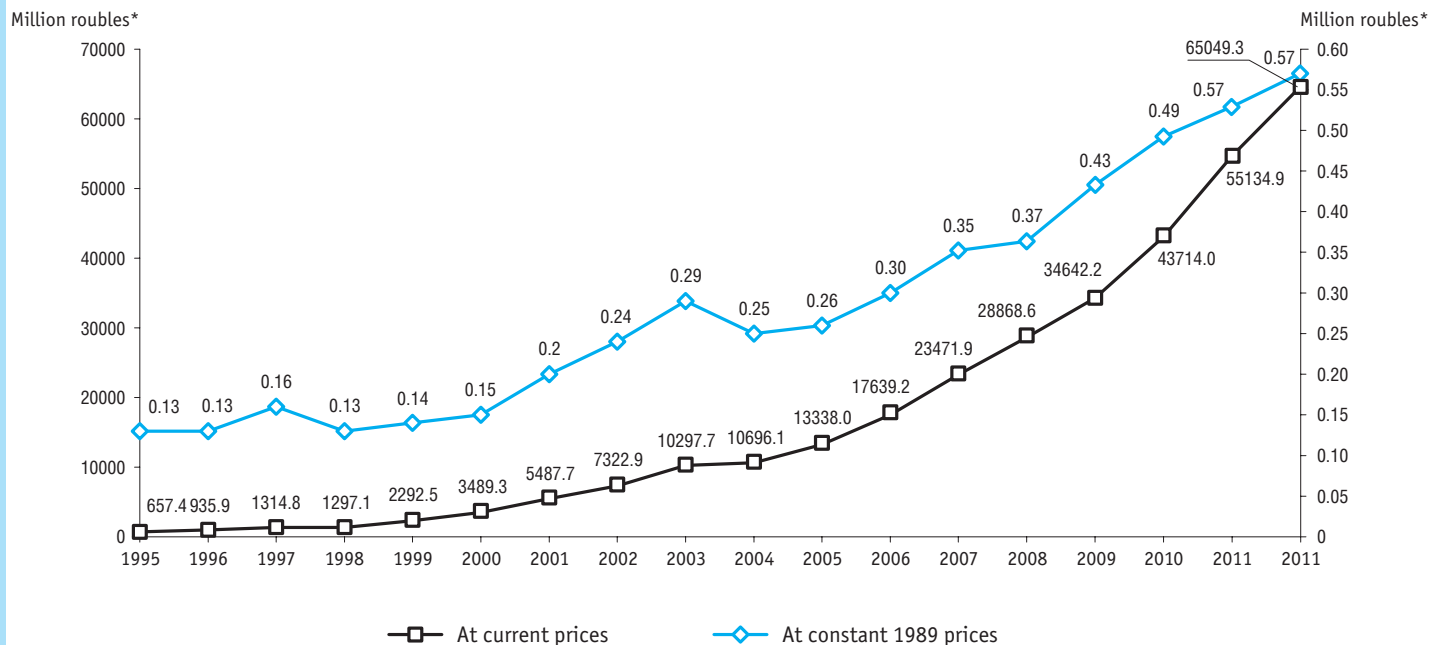
* The ratio of the higher education graduates admitted during the year to the number of employees at the end of the year.

5.4.19. GROSS DOMESTIC EXPENDITURE ON R&D IN THE HIGHER EDUCATION SECTOR BY TYPE OF INSTITUTIONS

(thousand roubles, 1995 – million roubles)

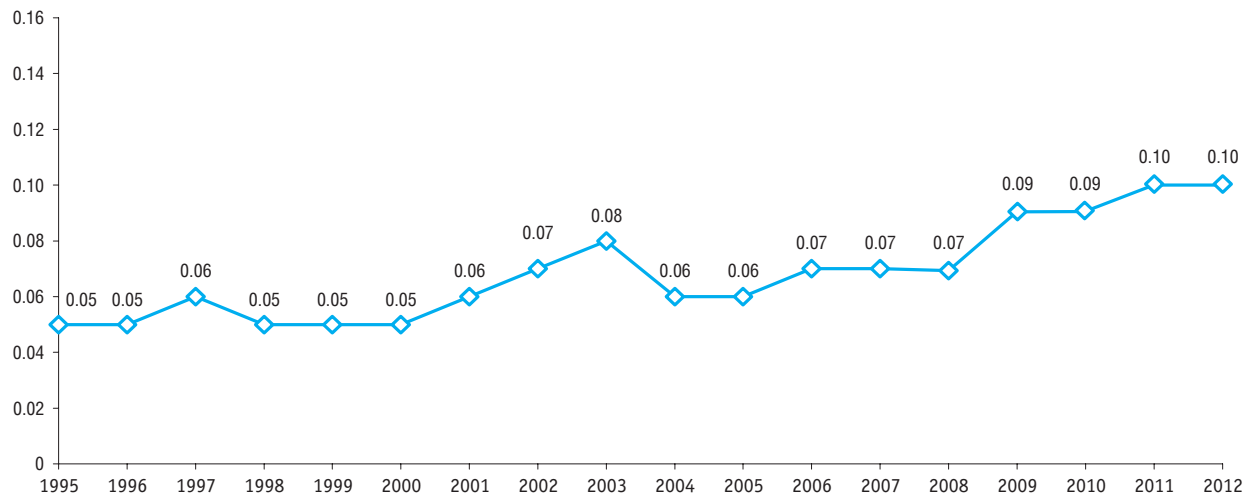
	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	657374.0	3489342.2	10297745.0	10696125.8	13337987.1	17639173.8	23471870.9	28868566.7	34642216.7	43714007.3	55134893.9	65049265.8
Universities and other higher education institutions	518911.5	2777397.1	8305924.1	8498024.0	10963094.5	14672493.3	20110291.8	25254713.6	30815022.6	38787366.4	51055347.1	59432957.4
Research institutes	102740.0	528449.7	1478121.0	1590604.7	1596818.1	2362999.9	2444732.5	2552781.1	2874500.2	3429235.6	2935458.1	3571846.1
Design and construction project organisations	32238.6	157818.5	446923.1	506534.8	519987.1	600446.4	875313.6	869259.6	758521.1	984428.5	809586.0	1344028.6
Experimental enterprises	104.6	78.5	–	1688.5	–	–	14145.0	24376.0	22657.0	26584.0	12042.6	14652.7
Others	3379.3	25598.4	66776.8	99273.8	258087.4	3234.2	27388.0	167436.4	171515.8	486392.8	322460.1	685781.0

5.4.20. GROSS DOMESTIC EXPENDITURE ON R&D IN THE HIGHER EDUCATION SECTOR



* Before 1998 – billion roubles.

5.4.21. GROSS DOMESTIC EXPENDITURE ON R&D IN THE HIGHER EDUCATION SECTOR AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT



5.4.22. GROSS DOMESTIC EXPENDITURE ON R&D IN THE HIGHER EDUCATION SECTOR BY SOURCE OF FUNDS

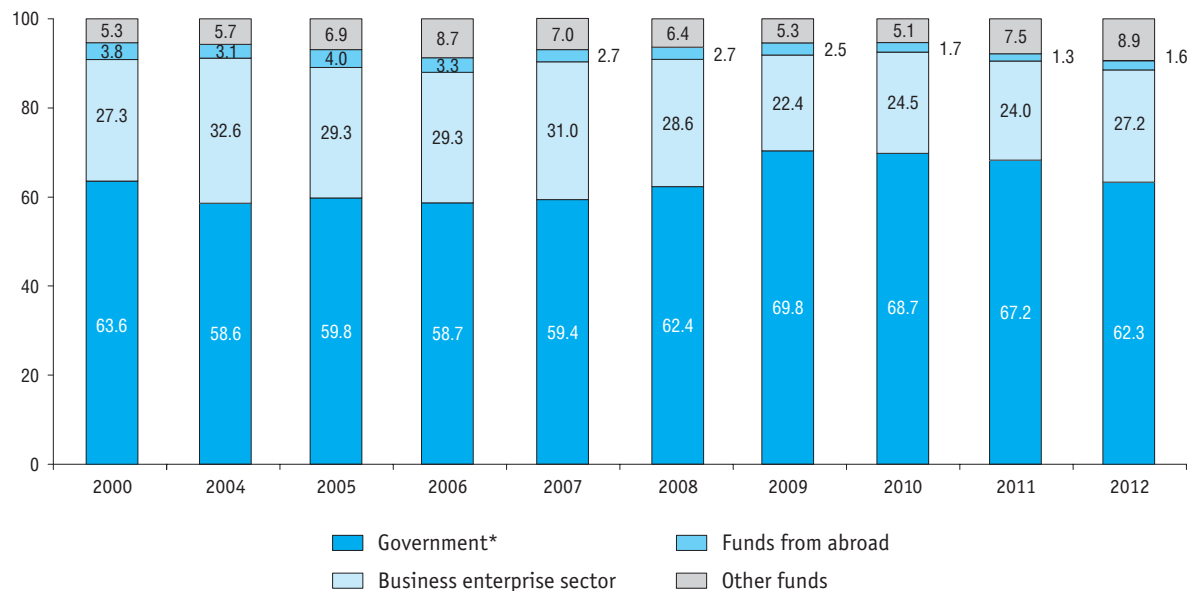
	Total	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
<i>At current prices, thousand roubles, 1995 – million roubles</i>						
1995	657374.0	440429.9	181015.3	27407.6	1279.1	7242.1
1999	2292507.7	1521173.4	545925.7	91660.8	3873.9	129873.9
2000	3489342.2	2220574.3	951898.2	178004.2	6651.5	132214.0
2001	5487653.7	3443940.3	1454005.4	297109.0	8069.0	284530.0
2002	7322943.2	4458540.7	1989239.9	382058.3	12154.0	480950.3
2003	10297745.0	6294220.6	2870119.3	704239.2	12759.1	416406.8
2004	10696125.8	6269141.4	3488281.5	597899.1	8162.1	332641.7
2005	13337987.1	7982229.6	3911201.8	889069.7	20503.0	534983.0
2006	17639173.8	10350996.7	5169607.6	1505274.5	26181.7	587113.3
2007	23471870.9	13931491.1	7267861.9	1573278.8	64898.0	634341.1
2008	28868566.7	18003735.9	8244450.2	1758509.8	84419.2	777451.6
2009	34642216.7	24181368.4	7769897.9	1741764.5	95595.8	853590.1
2010	43714007.3	30017817.7	10724045.9	2154774.3	55055.8	762313.6
2011	55134893.9	37047554.1	13224580.6	4030900.0	93584.3	738274.9
2012	65049265.8	40518331.2	17709405.2	5441235.5	371292.2	1009001.7

(continued)

	Total	Government*	Business enterprise sector	Higher education sector	Private non-profit sector	Funds from abroad
Per cent						
1995	100	67.0	27.5	4.2	0.2	1.1
1999	100	66.4	23.8	4.0	0.2	5.7
2000	100	63.6	27.3	5.1	0.2	3.8
2001	100	62.8	26.5	5.4	0.1	5.2
2002	100	60.9	27.2	5.2	0.2	6.6
2003	100	61.1	27.9	6.8	0.1	4.0
2004	100	58.6	32.6	5.6	0.08	3.1
2005	100	59.8	29.3	6.7	0.2	4.0
2006	100	58.7	29.3	8.5	0.1	3.3
2007	100	59.4	31.0	6.7	0.3	2.7
2008	100	62.4	28.6	6.1	0.3	2.7
2009	100	69.8	22.4	5.0	0.3	2.5
2010	100	68.7	24.5	4.9	0.1	1.7
2011	100	67.2	24.0	7.3	0.2	1.3
2012	100	62.3	27.2	8.4	0.6	1.6

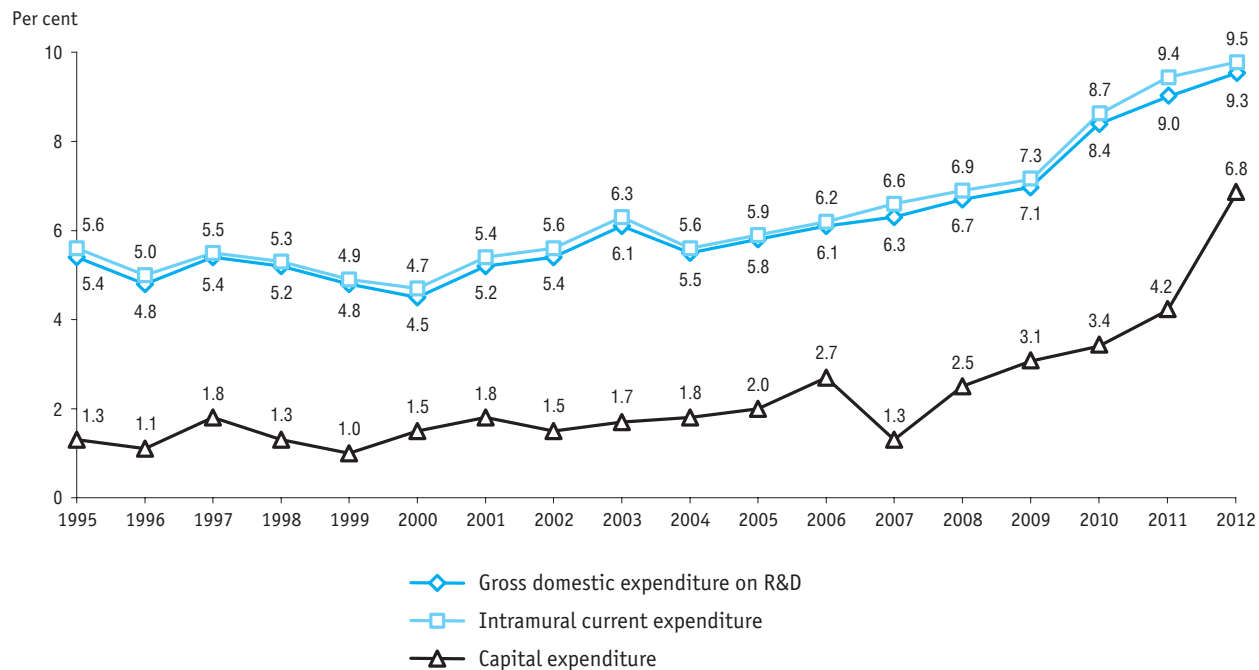
* Including federal budget appropriations, general university funds and funds of government sector institutions.

5.4.23. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D IN THE HIGHER EDUCATION SECTOR BY SOURCE OF FUNDS



* Including federal budget appropriations, general university funds and funds of government sector institutions.

5.4.24. SHARE OF THE HIGHER EDUCATION SECTOR IN GROSS DOMESTIC EXPENDITURE ON R&D BY TYPE OF COSTS



5.4.25. GROSS DOMESTIC EXPENDITURE ON R&D IN THE HIGHER EDUCATION SECTOR
BY TYPE OF COSTS
(thousand roubles)

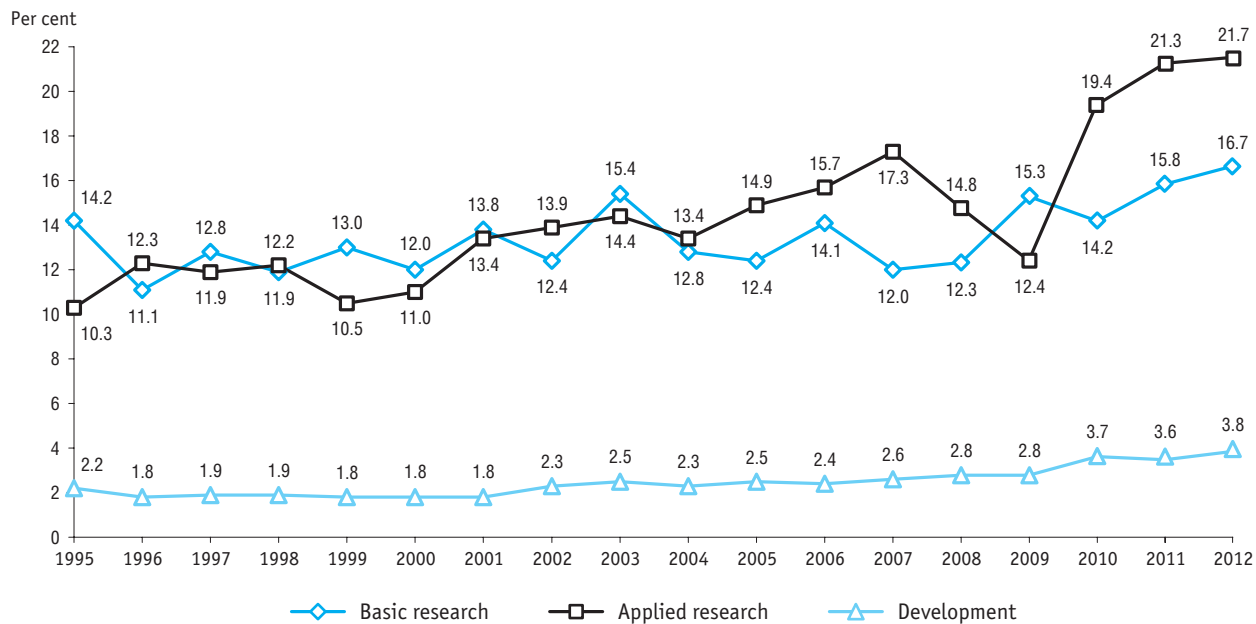
	2005	2007	2008	2009	2010	2011	2012
Gross domestic expenditure on R&D	13337987.1	23471870.9	28868566.7	34642216.7	43714007.3	55134893.9	65049265.8
Intramural current expenditure	13144292.5	23227988.8	28355126.5	33871885.4	42552245.4	53389079.3	61983505.1
Salaries	6952057.5	13249264.6	16969730.8	20240278.6	25267352.4	31150804.4	35209213.3
Of which for R&D personnel*	3552276.8	6942335.9	9350228.8	11592673.2	14033490.5	16496816.3	19509009.7
Social security payments	1654258.7	2975482.7	3734321.1	4387314.1	5260709.4	7630274.5	8427748.0
Equipment	917350.6	1296943.4	1642182.0	2733966.8	2639343.7	2969583.7	3336796.8
Fixed assets	640478.5	614052.6	940687.6	2321870.7	1713278.2	1510968.8	1845767.0
Other material costs	1501392.4	2330311.6	2284544.3	2358266.0	3344896.4	3695390.0	5072129.7
Other current costs	2119233.3	3375986.5	3724348.3	4152059.9	6039943.5	7943026.7	9937617.3
Capital expenditure	193694.6	243882.1	513440.2	770331.3	1161761.9	1745814.6	3065760.7
Land and buildings	39711.4	18409.5	1571.3	12677.4	14186.1	67000.0	106798.5
Equipment	104359.6	195759.4	480070.1	724609.8	1068873.2	1622614.3	2688993.0
Other capital expenditure	49623.6	29713.2	31798.8	33044.1	78702.6	56200.3	269969.2

* Excluding those employed on a plural basis and on contracts.

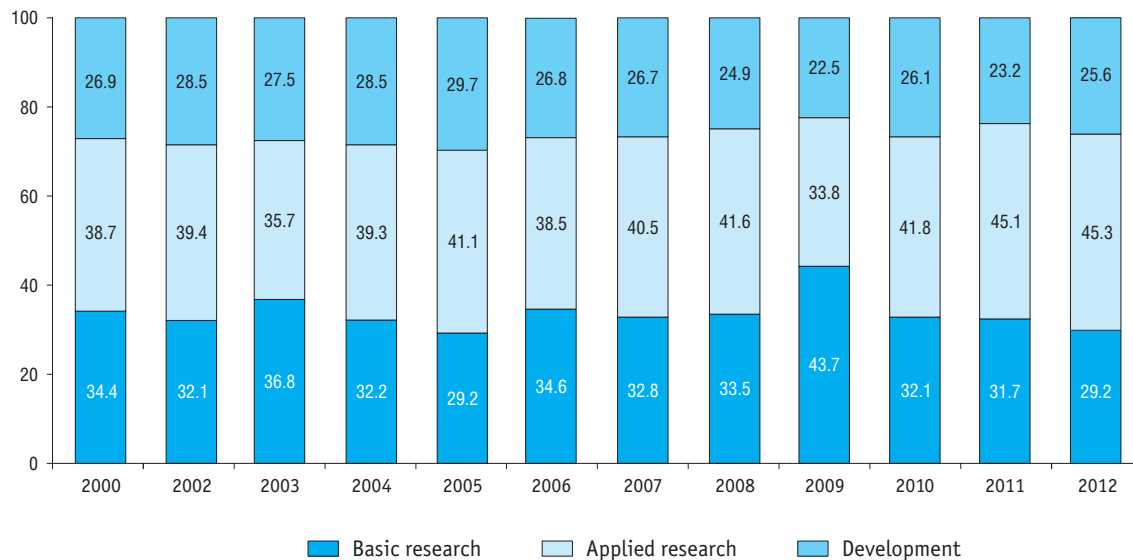
**5.4.26. INTRAMURAL CURRENT EXPENDITURE ON R&D IN THE HIGHER EDUCATION SECTOR BY TYPE OF ACTIVITY
AND FIELD OF SCIENCE AND TECHNOLOGY**
(thousand roubles)

	Total	Natural sciences	Engineering	Medical sciences	Agricultural sciences	Social sciences	Humanities
2005							
Intramural current expenditure on R&D	13144292.5	3896908.4	6853399.7	378448.2	200121.3	1419552.8	395862.1
Basic research	3841327.6	2342791.4	751584.6	147772.6	31818.6	342156.9	225203.5
Applied research	5405410.3	1112036.2	2918946.4	161855.9	121828.4	949311.8	141431.6
Development	3897554.6	442080.8	3182868.7	68819.7	46474.3	128084.1	29227.0
2009							
Intramural current expenditure on R&D	33871885.4	11758520.0	14414524.6	1077983.7	718062.5	4653782.2	1249012.4
Basic research	14799057.5	8818590.3	2761224.8	451826.3	205557.5	1721616.5	840242.1
Applied research	11450223.9	2142807.6	5490334.9	573316.0	394380.6	2533719.6	315665.2
Development	7622604.0	797122.1	6162964.9	52841.4	118124.4	398446.1	93105.1
2010							
Intramural current expenditure on R&D	42552245.4	12076614.1	20864675.6	1309942.7	730315.2	6137791.2	1432906.6
Basic research	13647906.8	7585787.8	2819934.7	472436.1	145701.5	1919937.8	704108.9
Applied research	17804762.0	3177035.8	9056919.5	680400.6	486773.7	3723764.3	679868.1
Development	11099576.6	1313790.5	8987821.4	157106.0	97840.0	494089.1	48929.6
2011							
Intramural current expenditure on R&D	53389079.3	15437217.8	24872185.8	1998847.3	1205802.3	7979786.2	1895239.9
Basic research	16943421.4	9245084.1	3405025.7	796436.8	179798.8	2145551.0	1171525.0
Applied research	24053848.5	4636085.0	11696505.8	982826.2	797822.7	5297493.2	643115.6
Development	12391809.4	1556048.7	9770654.3	219584.3	228180.8	536742.0	80599.3
2012							
Intramural current expenditure on R&D	61983505.1	16520903.2	29083907.5	2392704.1	1335727.7	9900554.9	2749707.7
Basic research	18085591.1	9987728.3	2764446.8	790365.8	228012.1	2719740.9	1595297.2
Applied research	28053049.3	4823141.2	14300631.4	1252506.2	903775.9	5893341.8	879652.8
Development	15844864.7	1710033.7	12018829.3	349832.1	203939.7	1287472.2	274757.7

5.4.27. SHARE OF THE HIGHER EDUCATION SECTOR IN INTRAMURAL CURRENT EXPENDITURE ON R&D BY TYPE OF ACTIVITY



5.4.28. PERCENTAGE DISTRIBUTION OF INTRAMURAL CURRENT EXPENDITURE ON R&D IN THE HIGHER EDUCATION SECTOR BY TYPE OF ACTIVITY



5.4.29. AVERAGE MONTHLY SALARY OF R&D PERSONNEL IN THE HIGHER EDUCATION SECTOR

	1995	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Average monthly salary, <i>roubles, 1995 – thousand roubles</i>	280.1	1400.3	4749.1	5088.8	7042.0	8348.7	12233.1	16812.7	21191.5	23716.4	24963.9	30715.1
As a percentage of that:												
in the national economy (=100%)	59.3	63.0	86.4	75.5	82.3	78.5	90.0	97.2	113.7	113.2	106.8	114.5
in manufacturing (=100%)	61.1	59.2	84.8	74.3	83.6	81.9	95.0	104.8	127.8	124.3	114.6	125.5
in construction (=100%)	47.7	53.0	76.9	69.7	77.9	76.8	85.3	90.5	116.9	112.0	105.4	116.2



6. R&D Output

6.1. PUBLICATIONS OF RUSSIAN AUTHORS IN SCIENTIFIC JOURNALS INDEXED IN SCOPUS BY DOCUMENT TYPE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Publications – total	31099	31473	32317	32526	33253	36076	38018	33717	34389	35276	36705	37736	41158	40428
Articles	29284	28597	28682	26805	27259	28346	28886	26274	27784	29318	30887	31040	33173	31490
Conference papers	1197	2069	2835	4620	4545	6281	7430	6065	5585	4806	4606	5381	5485	5564
Reviews	535	645	572	794	1123	1149	1426	1036	698	675	665	783	1150	1351
Other	83	162	228	307	326	300	276	342	322	477	547	532	1350	2023

6.2. PUBLICATIONS OF RUSSIAN AUTHORS IN SCIENTIFIC JOURNALS INDEXED IN WEB OF SCIENCE BY DOCUMENT TYPE*

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Publications – total	31918	32636	29809	31250	29846	30683	30511	29585	31190	33376	33584	32107	33359	32731
Articles	26956	26975	25179	25587	24928	24750	24373	23726	25067	26904	27566	26809	28313	27382
Conference papers	6198	7286	6356	7096	6711	6791	6444	5790	5899	5067	4498	3250	2760	2496
Reviews	599	632	591	613	673	711	680	750	764	865	878	770	721	790

* Some publications can be classified both as articles and conference papers.

6.3. PUBLICATIONS OF RUSSIAN AUTHORS IN SCIENTIFIC JOURNALS INDEXED IN SCOPUS*



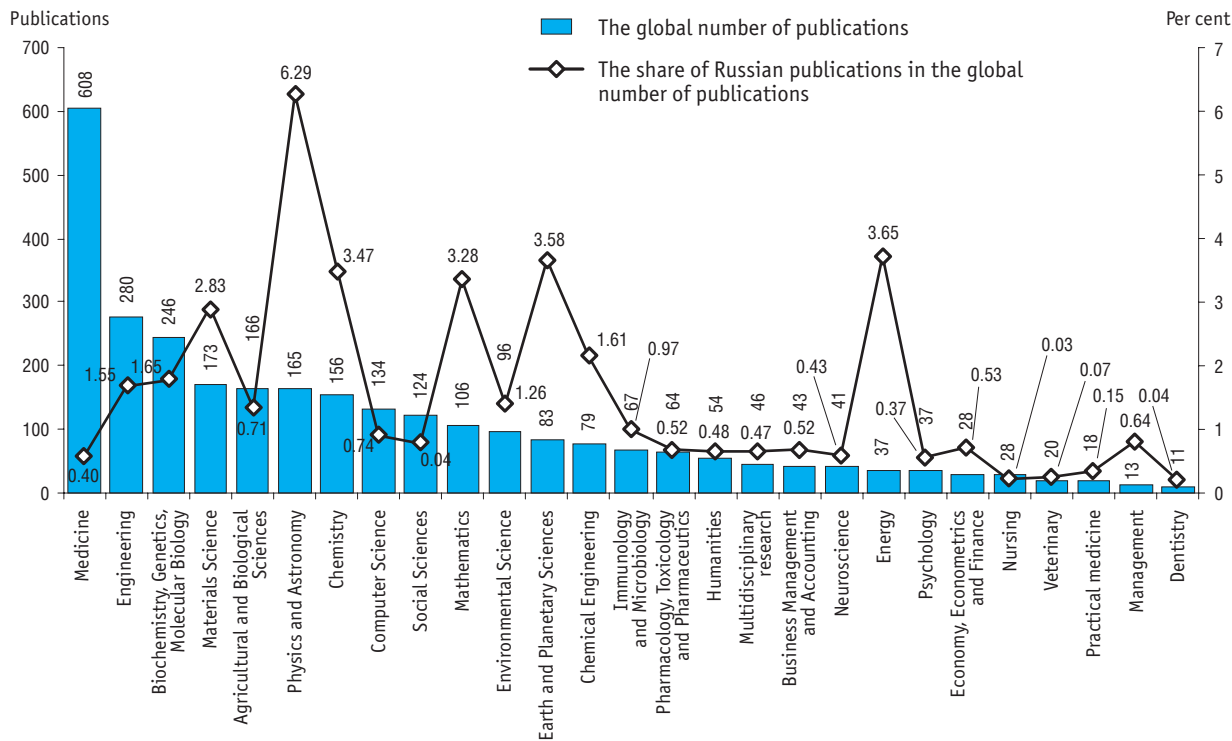
* The term 'publication' refers to 3 types of documents (articles, reviews, and reports).

6.4. PUBLICATIONS OF RUSSIAN AUTHORS IN SCIENTIFIC JOURNALS INDEXED IN WEB OF SCIENCE*



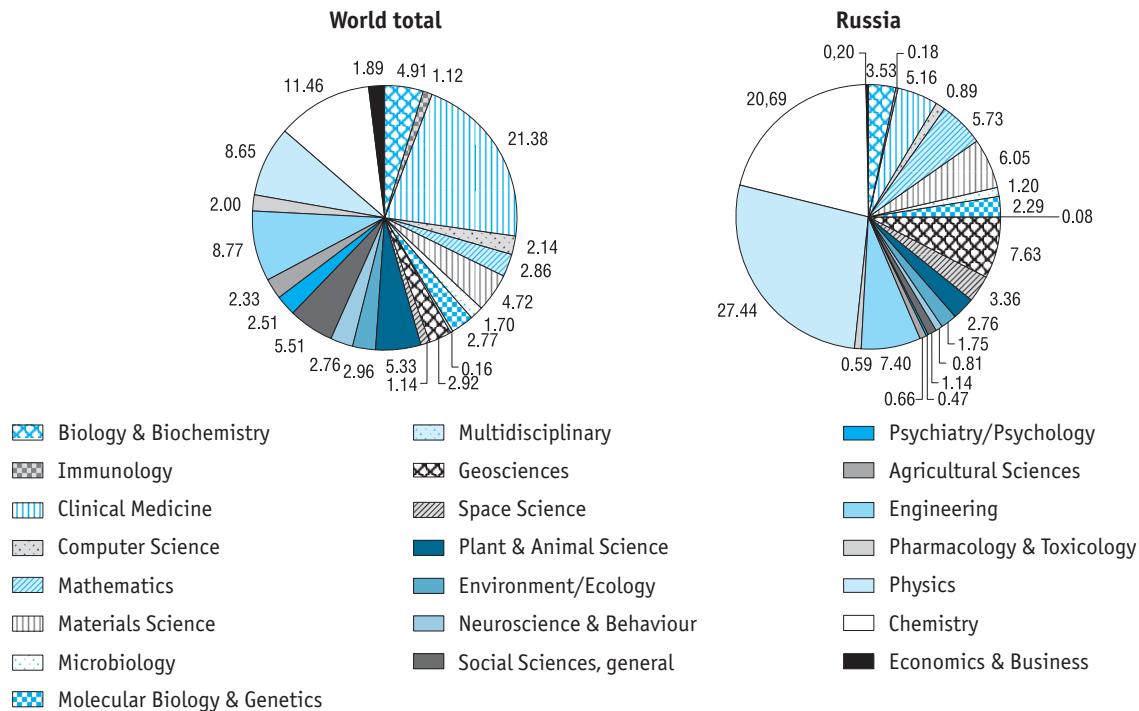
* The term 'publication' refers to 3 types of documents (articles, reviews, and reports).

6.5. SHARE OF PUBLICATIONS OF RUSSIAN AUTHORS IN THE GLOBAL NUMBER OF PUBLICATIONS INDEXED IN SCOPUS BY FIELD OF SCIENCE: 2012*



* According to 'SCImago Journal & Country Rank'.

6.6. PERCENTAGE DISTRIBUTION OF PUBLICATIONS OF RUSSIAN AUTHORS IN SCIENTIFIC JOURNALS INDEXED IN WEB OF SCIENCE BY FIELD OF SCIENCE: 2008–2012*



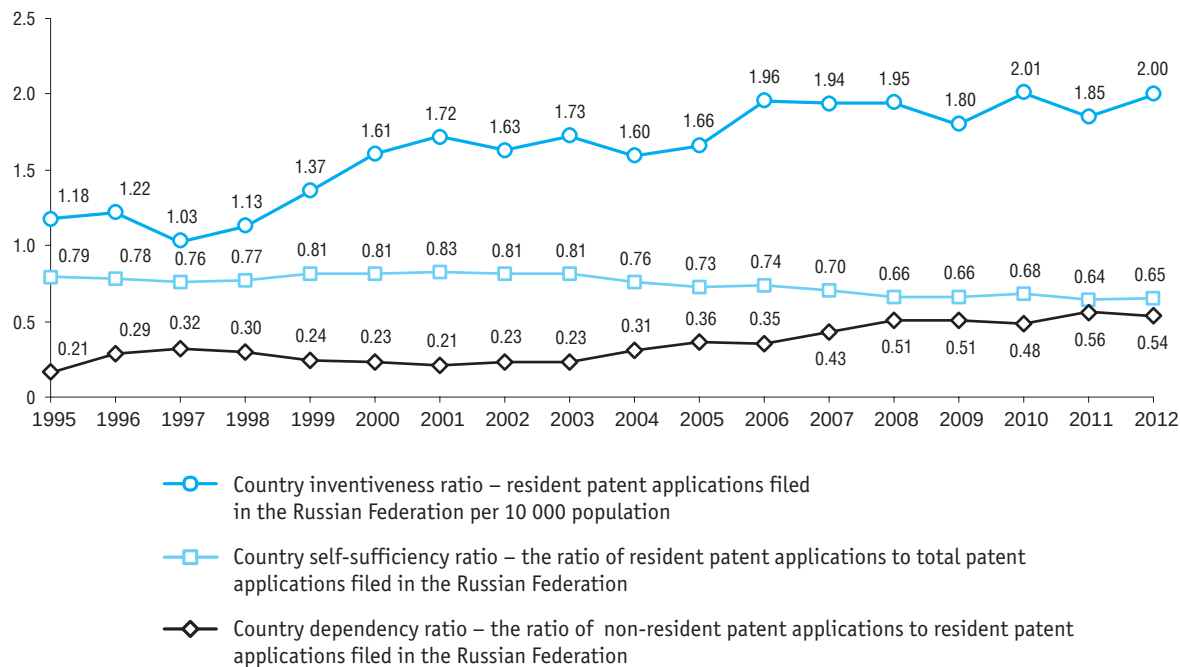
* Source: 'Essential Science Indicators' (ESI) by Thomson Reuters.

6.7. PATENT APPLICATIONS AND PATENTS GRANTED

	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012
Patent applications filed in the Russian Federation	22202	28688	32254	37691	39439	41849	38564	42500	41414	44211
By residents	17551	23377	23644	27884	27505	27712	25598	28722	26495	28701
By non-residents	4651	5311	8610	9807	11934	14137	12966	13778	14919	15510
Patents granted in the Russian Federation	31556*	17592	23390	23299	23028	28808	34824	30322	29999	32880
To residents	20861	14444	19447	19138	18431	22260	26294	21627	20339	22481
To non-residents	4772	3148	3943	4161	4597	6548	8530	8695	9660	10399
Patents valid with the indication of the Russian Federation	76186	144325	123089	123882	129910	147067	170264	181904	168558	181515

* With regard to patents granted in exchange for invention certificates.

6.8. INDICATORS OF PATENT ACTIVITY

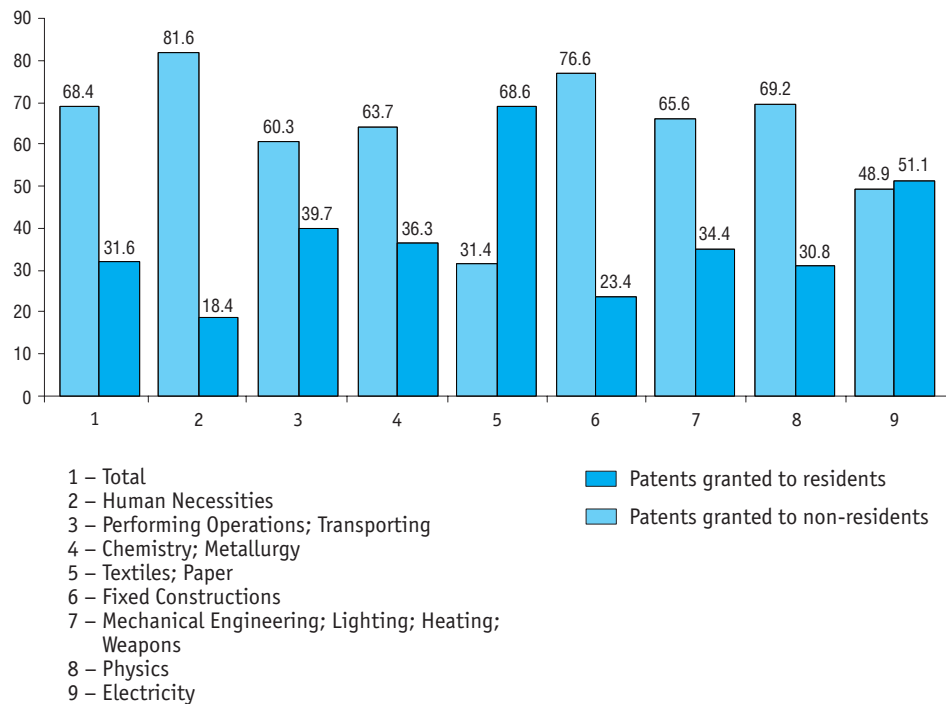


6.9. PATENTS GRANTED IN THE RUSSIAN FEDERATION BY SECTION OF THE INTERNATIONAL PATENT CLASSIFICATION*

	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012
Total	25633	17592	23390	23299	23028	28808	34824	30322	29999	32880
A. Human Necessities	4207	4347	6703	6738	6360	8025	11043	8468	8907	9506
B. Performing Operations; Transporting	6129	2905	3669	3897	3584	4298	5427	4711	4412	4969
C. Chemistry; Metallurgy	4529	3332	3645	3557	3702	5416	5508	5167	5512	5524
D. Textiles; Paper	437	197	216	183	221	259	310	320	301	274
E. Fixed Constructions	2042	1156	1659	1626	1536	1689	2086	1977	1603	1898
F. Mechanical Engineering; Lighting; Heating; Weapons	3033	2144	2634	2706	2679	2928	3537	3062	2761	3246
G. Physics	3083	2172	3068	2911	3048	3632	4160	3734	3881	4381
H. Electricity	2173	1339	1796	1681	1898	2561	2753	2883	2622	3082

* Patents granted to residents and non-residents.

6.10. PERCENTAGE DISTRIBUTION OF PATENTS GRANTED IN THE RUSSIAN FEDERATION BY ASSIGNEE AND SECTION OF THE INTERNATIONAL PATENT CLASSIFICATION: 2012



6.11. UTILITY MODEL PATENT APPLICATIONS AND PATENTS GRANTED

	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012
Patent applications filed in the Russian Federation	2039	4631	9473	9699	10075	10995	11153	12262	13241	14069
By residents	1997	4549	9082	9265	9588	10483	10728	11757	12584	13479
By non-residents	42	82	391	434	487	512	425	505	657	590
Patents granted in the Russian Federation	1207	4098	7242	9568	9757	9673	10919	10581	11079	11671
To residents	1195	4041	6958	9195	9311	9250	10500	10187	10571	11152
To non-residents	12	57	284	373	446	423	419	394	508	519
Patents valid with the indication of the Russian Federation	2971	15498	28364	33033	35082	41092	48170	54848	46876	50746

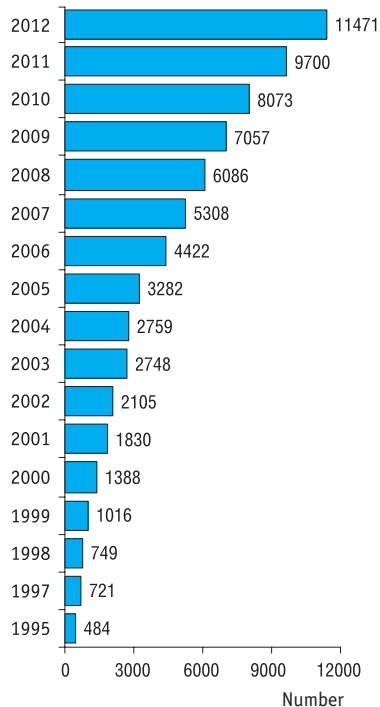
6.12. UTILITY MODEL PATENTS GRANTED IN THE RUSSIAN FEDERATION BY SECTION OF THE INTERNATIONAL PATENT CLASSIFICATION*

	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012
Total	1207	4098	7242	9568	9757	9673	10919	10581	11079	11671
A. Human Necessities	190	835	1344	1644	1642	1630	1803	1914	1833	1933
B. Performing Operations; Transporting	311	1004	1741	2301	2353	2357	2631	2411	2518	2678
C. Chemistry; Metallurgy	30	145	289	395	345	434	443	398	340	370
D. Textiles; Paper	37	73	73	63	61	55	59	57	68	55
E. Fixed Constructions	115	465	1022	1431	1501	1331	1517	1503	1459	1466
F. Mechanical Engineering; Lighting; Heating; Weapons	235	679	1111	1394	1431	1458	1612	1701	1815	1957
G. Physics	150	490	949	1424	1403	1450	1685	1580	1842	1912
H. Electricity	139	407	713	916	1021	958	1169	1017	1204	1300

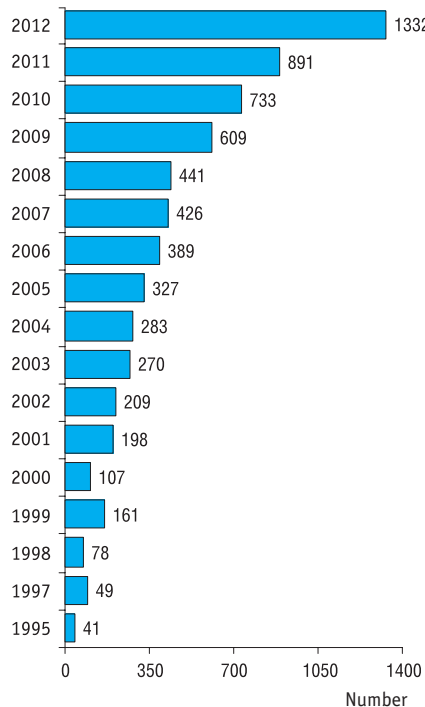
* Patents granted to residents and non-residents.

6.13. REGISTRATION OF INTELLECTUAL PROPERTY IN THE FIELD OF INFORMATION TECHNOLOGY

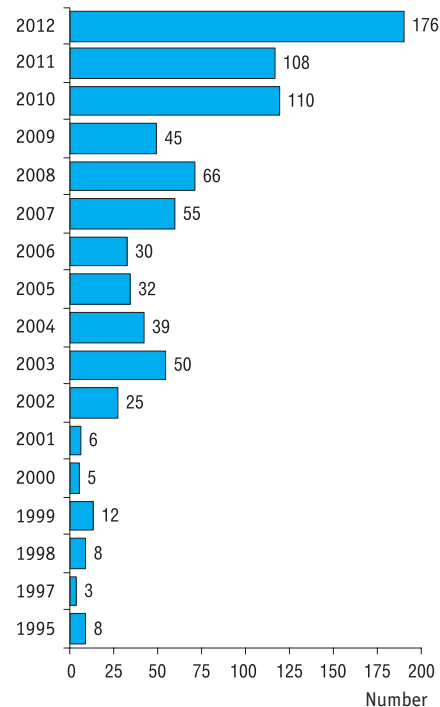
Computer programmes



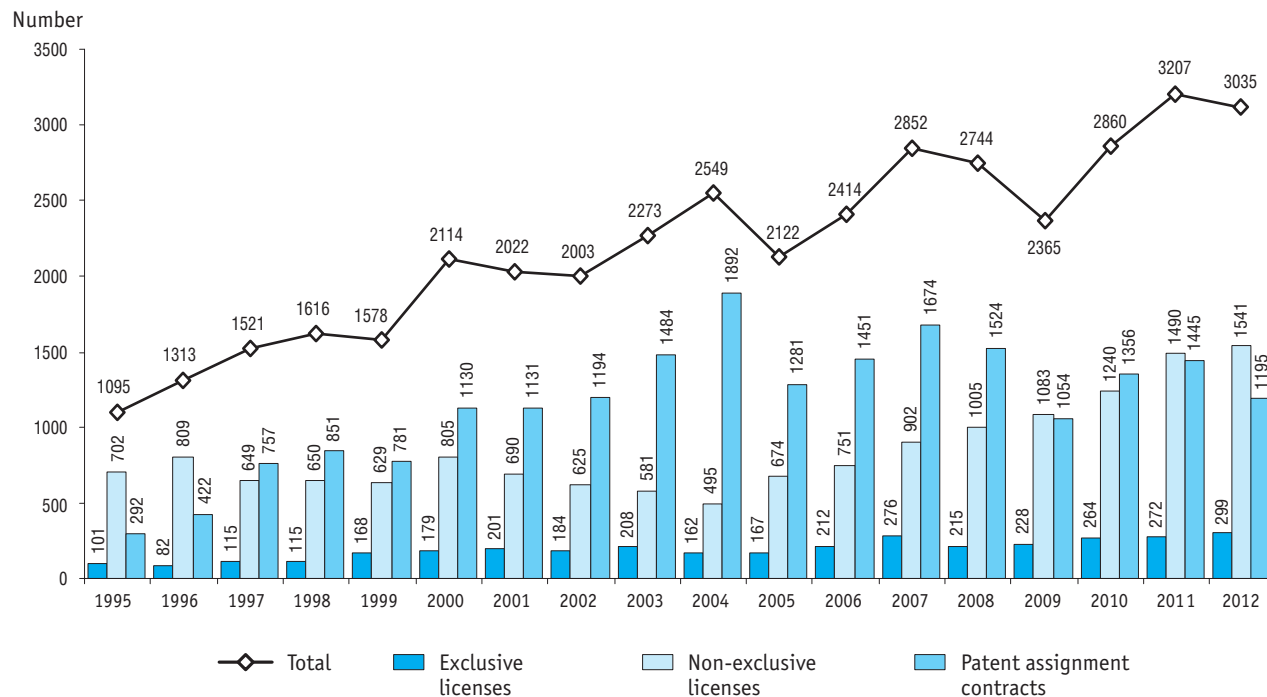
Databases



Topographies of integrated circuits



6.14. REGISTRATION OF INTERNAL LICENSE AGREEMENTS AND PATENT ASSIGNMENT CONTRACTS*

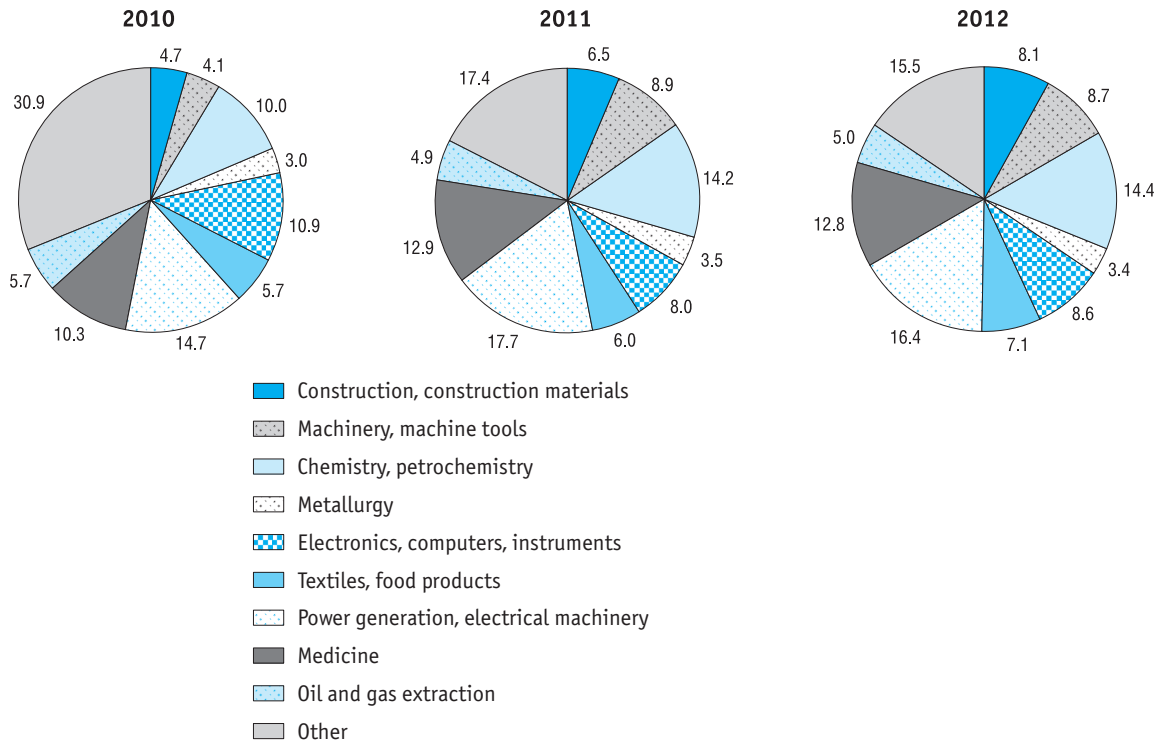


* Including patents on inventions, utility models, and industrial designs. Till 2008 – patent assignment contracts.

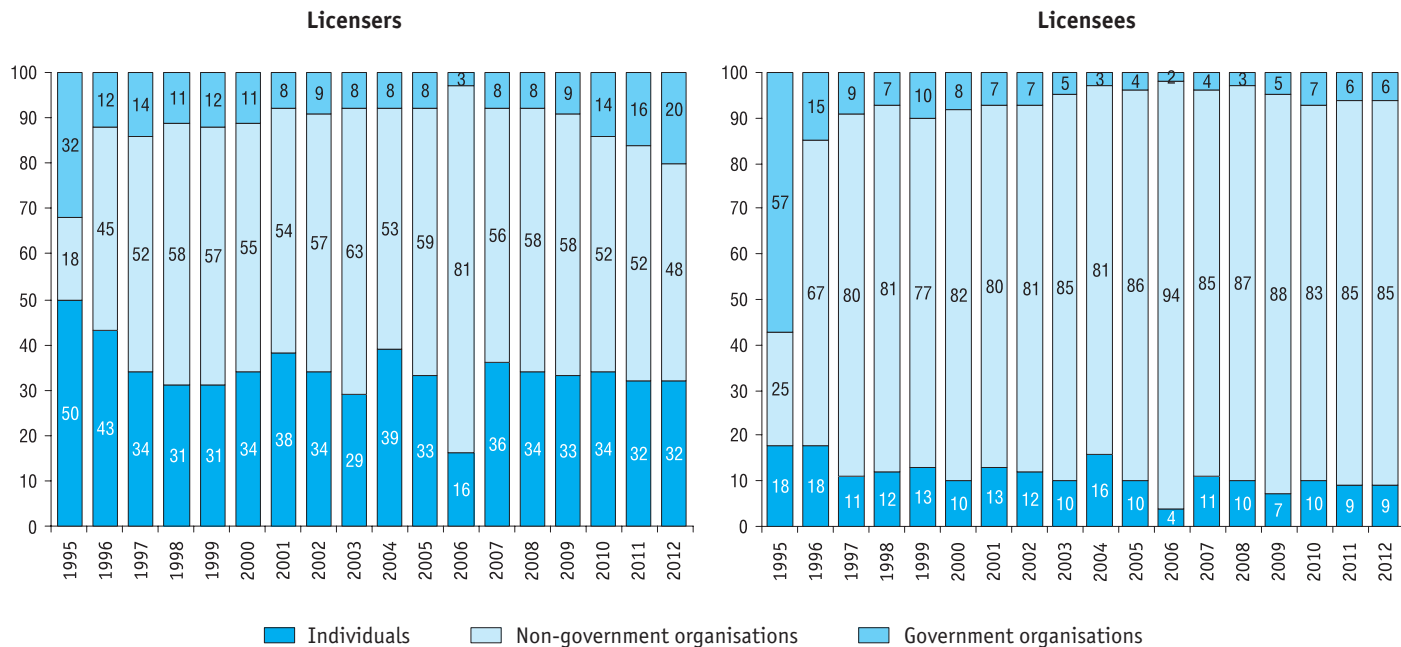
6.15. REGISTRATION OF INTERNAL LICENSE AGREEMENTS AND PATENT ASSIGNMENT CONTRACTS BY TECHNOLOGY FIELD

	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012
Total	1095	2114	2122	2414	2852	2744	2365	2860	3207	3035
I. Construction, construction materials	104	89	108	160	423	272	266	135	207	246
II. Machinery, machine tools	102	345	417	414	366	250	373	118	285	264
III. Chemistry, petrochemistry	150	203	268	500	120	94	94	286	454	438
IV. Metallurgy	55	85	69	181	245	133	186	86	113	103
V. Electronics, computers, instruments	87	78	165	157	137	73	101	311	257	260
VI. Textiles, food products	166	323	105	160	211	173	186	163	194	215
VII. Power generation, electrical machinery	55	150	223	220	390	247	364	421	567	499
VIII. Medicine	230	264	249	295	120	76	140	294	414	388
IX. Oil and gas extraction	49	224	136	100	434	338	449	162	158	152
X. Other	97	353	382	227	406	709	585	884	558	470

6.16. PERCENTAGE DISTRIBUTION OF INTERNAL LICENSE AGREEMENTS AND PATENT ASSIGNMENT CONTRACTS BY TECHNOLOGY FIELD



6.17. PERCENTAGE DISTRIBUTION OF INTERNAL LICENSE AGREEMENTS AND PATENT ASSIGNMENT CONTRACTS BY CATEGORY OF PARTNERS



6.18. TECHNOLOGY BALANCE OF PAYMENTS BY CATEGORY OF CONTRACTS

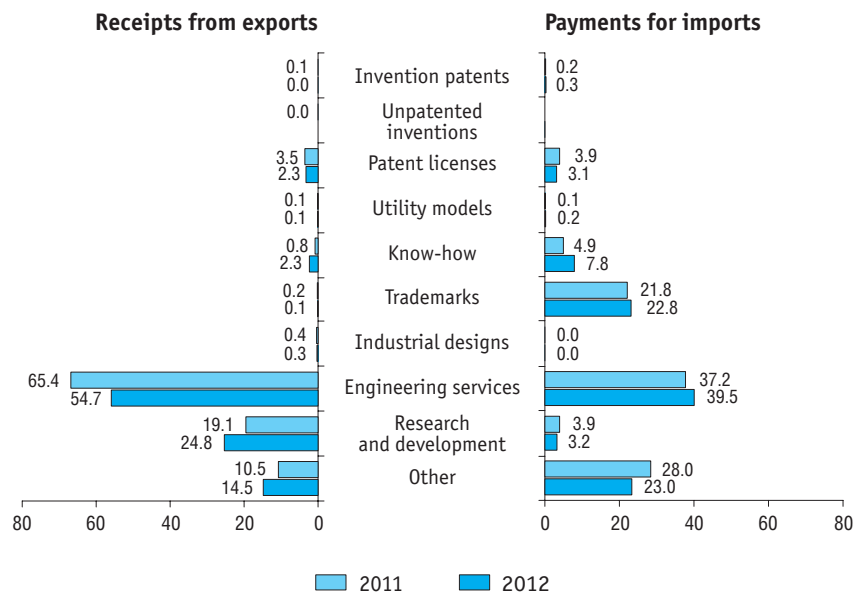
(thousand US dollars)

	Total	Invention patents	Unpatented inventions	Patent licenses	Utility models	Know-how	Trademarks	Industrial designs	Engineering services	Research and development	Other
Receipts from exports											
2000	203493.5	65.8	14.8	421.9	...	2333.5	11497.0	284.2	139307.1	23880.2	25689.0
2002	211478.4	214.5	—	210.0	...	1909.3	1446.9	84.9	143764.1	20812.0	43036.7
2003	237403.9	147.3	0.9	4000.6	...	1292.0	1185.5	2.0	166376.7	25974.2	38424.7
2004	383985.2	767.3	370.0	980.6	...	2933.9	1539.3	2.0	177335.0	63671.3	136385.8
2005	389396.4	926.3	467.0	1788.0	...	517.9	5583.5	1017.3	150858.8	83214.4	145023.2
2006	533385.9	100.8	4284.7	2576.1	...	398.0	6191.6	219.8	166911.1	89260.1	263443.7
2007	630391.6	347.2	—	5215.8	0.5	1985.1	7550.3	2457.0	267561.2	101170.3	244104.2
2008	833164.4	112.8	—	5183.8	3765.0	9709.5	17685.4	3752.3	491665.1	151463.4	149827.1
2009	618184.5	191.8	10.8	12825.7	936.2	10980.9	431.9	3554	410907.2	120877.9	57468.1
2010	627887.5	582.6	1987.0	11821.3	1718.9	13778.5	759.1	2531.0	368971.3	138356.8	87381.0
2011	584656.9	98.9	212.0	20334.7	688.0	4886.2	1251.7	2304.0	382161.5	111499.3	61220.6
2012	688469.9	21.0	—	21850.1	898.7	15653.4	999.4	2291.0	376428.2	170752.9	99575.2
Payments for imports											
2000	182908.0	255.5	792.0	2530.2	...	11122.0	31122.4	1044.2	110171.3	2268.3	23602.1
2002	572488.8	403.2	—	3873.6	...	16042.0	83127.7	508.0	180620.6	182662.7	105251.0
2003	666114.1	675.9	1095.3	18375.9	...	20265.2	141515.7	533.5	413643.7	17953.6	52055.3
2004	823030.1	1164.3	531.6	19910.5	...	28024.4	215034.5	644.7	497121.0	9612.8	50986.3
2005	954199.2	8730.3	2983.5	19315.4	...	9489.7	191045.0	1519.5	582813.8	16512.8	121789.2
2006	1128425.8	3201.3	—	21402.1	101.2	49705.7	160720.2	217.9	658016.9	38631.3	196429.2
2007	1426387.6	14408.5	—	68538.3	959.1	70461.1	222142.6	559.3	754249.4	32476.3	262593.0
2008	2087067.4	10716.8	16.5	63042.7	690.3	43270.8	408349.1	0.0	1156815.3	31030.0	373135.9
2009	1619031.6	1109.4	—	74956.9	253.3	61944.4	392697.1	1.0	879212.9	19857.7	188998.9
2010	1425983.3	4024.2	—	82853.9	3665.6	62117.0	419009.3	2.2	526913.5	49631.8	277765.8
2011	1862566.6	3531.0	—	71764.2	2264.3	92153.1	406684.6	26.2	692495.2	72676.4	520971.6
2012	2043187.9	6970.5	14.0	64208.4	5138.4	158428.1	465370.3	997.0	806467.1	66295.4	469298.7

(continued)

	Total	Invention patents	Unpatented inventions	Patent licenses	Utility models	Know-how	Trademarks	Industrial designs	Engineering services	Research and development	Other
Balance of payments											
2000	20585.5	-189.7	-777.2	-2108.3	...	-8788.5	-19625.4	-760.0	29135.8	21611.9	2086.9
2002	-361010.4	-188.7	—	-3663.6	...	-14132.7	-81680.8	-423.1	-36856.5	-161850.7	-62214.3
2003	-428710.2	-528.6	-1094.4	-14375.3	...	-18973.2	-140330.2	-531.5	-247267.0	8 020.6	-13630.6
2004	-439044.9	-397.0	-161.6	-18929.9	...	-25090.5	-213495.2	-642.7	-319786.0	54058.5	85399.5
2005	-564802.8	-7804.0	-2516.5	-17527.4	...	-8971.8	-185461.5	-502.2	-431955.0	66701.6	23234.0
2006	-595039.9	-3100.5	4284.7	-18826.0	-101.2	-49307.7	-154528.6	1.9	-491105.8	50628.8	67014.5
2007	-795996.0	-14061.3	—	-63322.5	-958.6	-68476.0	-214592.3	1897.7	-486688.2	68694.0	-18488.8
2008	-1253903.0	-10604.0	-16.5	-57858.9	3074.7	-33561.3	-390663.7	3752.3	-665150.2	120433.4	-223308.8
2009	-1000847.1	-917.6	10.8	-62131.2	682.9	-50963.5	-392265.2	3553.0	-468305.7	101020.2	-131530.8
2010	-798095.8	-3441.6	1987.0	-71032.6	-1946.7	-48338.5	-418250.2	2528.8	-157942.2	88725.0	-190384.8
2011	-1277909.7	-3432.1	212.0	-51429.5	-1576.3	-87266.9	-405432.9	2277.8	-310333.7	38822.9	-459751.0
2012	-1354718.0	-6949.5	-14.0	-42358.3	-4239.7	-142774.7	-464370.9	1294.0	-430038.9	104457.5	-369723.5

6.19. PERCENTAGE DISTRIBUTION OF TECHNOLOGY EXPORTS AND IMPORTS BY CATEGORY OF CONTRACTS



6.20. TECHNOLOGY BALANCE OF PAYMENTS BY COUNTRY

(thousand US dollars)

	Receipt from exports			Payments for imports			Balance of payments		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Total	627887.5	584656.9	688469.9	1425983.3	1862566.6	2043187.9	-798095.8	-1277909.7	-1354718.0
CIS countries	103958.0	92601.3	152718.3	38536.8	47160.7	100179.7	65421.2	45440.6	52538.6
Armenia	391.6	748.7	1129.0	2170.6	2642.7	1220.7	-1779.0	-1894.0	-91.7
Azerbaijan	6919.3	4550.8	5316.9	1278.8	46.2	568.5	5640.5	4504.6	4748.4
Belarus	24344.9	24268.7	70684.6	7473.8	7749.3	11570.7	16871.1	16519.4	59113.9
Kazakhstan	41080.9	31330.0	34723.8	5966.9	5156.9	5888.8	35114.0	26173.1	28835.0
Kyrgyzstan	2778.0	2931.5	2134.0	—	—	—	2778.0	2931.5	2134.0
Republic of Moldova	271.6	468.4	379.4	1.5	10.4	517.7	270.1	458.0	-138.3
Tajikistan	7484.8	3635.7	12329.6	—	3.9	367.0	7484.8	3631.8	11962.6
Turkmenistan	50.0	14.3	1.6	—	43.4	32.9	50.0	-29.1	-31.3
Ukraine	15048.2	19104.2	21184.1	21405.7	31430.4	79982.7	-6357.5	-12326.2	-58798.6
Uzbekistan	5588.7	5549.0	4835.3	239.5	77.5	30.7	5349.2	5471.5	4804.6
OECD countries	252625.9	222006.2	280743.7	1227931.3	1657411.6	1814405.8	-975305.4	-1435405.4	-1533662.1
Australia	3.5	54.3	10.6	290.0	782.7	1514.2	-286.5	-728.4	-1503.6
Austria	1118.1	795.5	925.2	92593.8	46866.7	46760.0	-91475.7	-46071.2	-45834.8
Belgium	719.8	804.0	2854.0	23555.4	78698.9	37670.9	-22835.6	-77894.9	-34816.9
Canada	1360.2	2086.6	1849.4	68531.3	131427.2	106066.8	-67171.1	-129340.6	-104217.4
Chile	417.0	—	—	215.5	9.2	—	201.5	-9.2	—
Czech Republic	292.5	1905.7	470.8	10089.7	18520.3	40261.5	-9797.2	-16614.6	-39790.7
Denmark	1053.7	801.2	1308.5	27228.7	29990.0	34475.3	-26175.0	-29188.8	-33166.8
Estonia	768.5	1723.5	347.6	533.5	33938.8	10758.5	235.0	-32215.3	-10410.9
Finland	3203.7	7782.7	15324.0	33797.1	30225.2	31352.7	-30593.4	-22442.5	-16028.7
France	10347.8	7345.4	11014.3	50984.8	150322.8	62183.8	-40637.0	-142977.4	-51169.5
Germany	45020.5	30810.9	30815.6	187132.1	229712.4	283846.3	-142111.6	-198901.5	-253030.7

(continued)

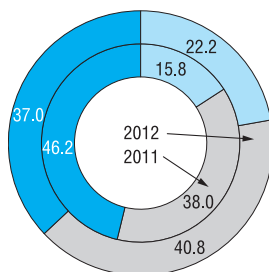
	Receipt from exports			Payments for imports			Balance of payments		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Greece	185.1	61.4	93.4	197.7	7748.7	7195.1	-12.6	-7687.3	-7101.7
Hungary	21.5	573.2	459.1	292.8	154.0	2593.9	-271.3	419.2	-2134.8
Iceland	4.9	—	—	—	—	—	4.9	—	—
Ireland	1670.7	753.2	1601.8	1438.3	4706.3	4802.1	232.4	-3953.1	-3200.3
Israel	2743.5	100.1	461.5	556.6	221.5	33.7	2186.9	-121.4	427.8
Italy	8133.4	7570.3	8349.8	49334.9	25062.6	122269.5	-41201.5	-17492.3	-113919.7
Japan	5952.4	5576.3	14308.5	18569.7	27133.4	54302.9	-12617.3	-21557.1	-39994.4
Luxembourg	0.8	69.3	0.8	6513.2	11739.3	6488.1	-6512.4	-11670.0	-6487.3
Mexico	—	15.8	34.3	—	—	—	—	15.8	34.3
Netherlands	23395.6	24141.8	46941.4	76208.1	118137.3	160170.9	-52812.5	-93995.5	-113229.5
New Zealand	—	—	—	0.5	20.5	0.5	-0.5	-20.5	-0.5
Norway	11842.8	12688.7	22575.4	4543.8	6687.0	3327.9	7299.0	6001.7	19247.5
Poland	520.5	235.3	341.9	32296.4	9953.1	24074.0	-31775.9	-9717.8	-23732.1
Portugal	5.6	—	233.0	—	4.3	—	5.6	-4.3	233.0
Republic of Korea	19476.0	24978.9	2508.9	10056.2	15766.6	33149.1	9419.8	9212.3	-30640.2
Slovakia	13835.5	294.1	122.0	1531.0	2699.6	225.7	12304.5	-2405.5	-103.7
Slovenia	1644.6	867.9	418.4	1443.0	2821.8	615.4	201.6	-1953.9	-197.0
Spain	39.5	64.3	188.0	18382.1	8289.6	47781.3	-18342.6	-8225.3	-47593.3
Sweden	768.5	364.4	7385.3	15598.5	57405.1	77655.3	-14830.0	-57040.7	-70270.0
Switzerland	6551.2	9947.0	7981.2	246627.1	126158.5	114195.5	-240075.9	-116211.5	-106214.3
Turkey	1582.6	427.4	608.2	6826.4	4179.2	3102.4	-5243.8	-3751.8	-2494.2
United Kingdom	30270.8	17303.4	48308.5	95187.1	110648.4	126391.4	-64916.3	-93345.0	-78082.9
USA	59675.1	61863.6	52902.3	147376.0	367380.6	371141.1	-87700.9	-305517.0	-318238.8

(continued)

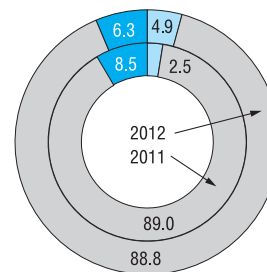
	Receipt from exports			Payments for imports			Balance of payments		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Other countries	271303.6	270049.4	255007.9	159515.2	157994.3	128602.4	111788.4	112055.1	126405.5
Brazil	2577	879.9	493.4	3.9	–	–	2573.1	879.9	493.4
Bulgaria	45326.4	28342.9	20273.4	28122.3	7347.2	1147.1	17204.1	20995.7	19126.3
China	22640.3	61736.2	58825.9	3009.8	970.9	3681.9	19630.5	60765.3	55144.0
Cyprus	8616.2	7094.2	10375.4	72323.1	65658.8	63485.2	-63706.9	-58564.6	-53109.8
Georgia	1200.2	875.9	490.0	179.0	24.0	27.4	1021.2	851.9	462.6
Hong Kong	4138.7	3997.4	4217.8	912.4	–	2766.0	3226.3	3997.4	1451.8
India	34820.3	43475.8	25326.8	588.5	229.3	4903.6	34231.8	43246.5	20423.2
Iran	67576.7	15232.8	40692.2	201	666.0	–	67375.7	14566.8	40692.2
Romania	245.9	514.6	467.6	69.8	136.3	3.4	176.1	378.3	464.2
Singapore	7660.6	10513.0	7963.4	959.2	–	1739.1	6701.4	10513.0	6224.3
South Africa	30602.5	35932.7	7187.4	12.8	20960.5	866.8	30589.7	14972.2	6320.6
Taiwan	4.1	–	15.2	2300.0	–	–	-2295.9	–	15.2
Other	45894.7	61454.0	78679.4	50833.4	62001.3	49981.9	-4938.7	-547.3	28697.5

6.21. PERCENTAGE DISTRIBUTION OF TECHNOLOGY EXPORTS AND IMPORTS BY COUNTRY GROUPS

Receipts from exports



Payments for imports



■ CIS countries
 ■ OECD countries
 ■ Other countries

6.22. TECHNOLOGY BALANCE OF PAYMENTS BY SECTOR OF PERFORMANCE

(thousand US dollars)

	Receipts from exports			Payments for imports			Balance of payments		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Total	627887.5	584656.9	688469.9	1425983.3	1862566.6	2043187.9	-798095.8	-1277909.7	-1354718.0
Sectors of performance:									
government	118457.6	154869.6	115616.7	29532.3	38154.5	5309.3	88925.3	116715.1	110307.4
business enterprise	508375.8	426003.6	570500.2	1396436.3	1824146.3	2037821.0	-888060.5	-1398142.7	-1467320.8
higher education	1054.1	1426.8	2313.0	12.5	264.2	52.8	1041.6	1162.6	2260.2
private non-profit	–	2356.9	40.0	2.2	1.6	4.8	-2.2	2355.3	35.2

6.23. TECHNOLOGY BALANCE OF PAYMENTS BY ECONOMIC ACTIVITY

(thousand US dollars)

	Receipts from exports			Payments for imports			Balance of payments		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Total	627887.5	584656.9	688469.9	1425983.3	1862566.6	2043187.9	-798095.8	-1277909.7	-1354718.0
Agriculture, hunting and forestry	–	–	898.7	1351.4	1718.2	7813.0	-1351.4	-1718.2	-6914.3
Fishing, aquaculture and service activities incidental to fishing	412.2	688.0	11921.6	–	–	–	412.2	688.0	11921.6
Mining and quarrying	25547.3	18213.1	2985.0	73304.8	104635.6	133163.6	-47757.5	-86422.5	-130178.6
Manufacturing	92064.0	52826.6	49034.2	1054931.6	1383378.1	1465294.1	-962867.6	-1330551.5	-1416259.9
Electricity, gas and water supply	994.6	1163.7	1001.8	2954.7	2890.2	1311.5	-1960.1	-1726.5	-309.7
Construction	148249.3	86965.7	138959.0	51983.0	103655.0	22281.4	96266.3	-16689.3	116677.6
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	5047.2	6397.3	6517.9	28536.1	1734.0	84385.0	-23488.9	4663.3	-77867.1
Transport and communications	19578.1	24394.9	41191.9	57552.4	120688.4	182970.6	-37974.3	-96293.5	-141778.7
Real estate, renting and business activities	332854.0	391502.1	433640.0	89930.8	67489.1	138388.9	242923.2	324013.0	295251.1
Research and development	178266.0	221063.2	178185.5	11329.9	10396.8	43427.2	166936.1	210666.4	134758.3
Other business activities	102306.7	119859.6	181532.5	77081.5	54572.1	90191.1	25225.2	65287.5	91341.4
Public administration and defence; compulsory social security	–	24.1	11.1	15.0	63.3	–	-15.0	-39.2	11.1
Education	3140.8	2481.4	2308.7	108.5	473.9	583.5	3032.3	2007.5	1725.2
Health and social services	–	–	–	–	132.8	198.6	–	-132.8	-198.6
Community, social and personal service activities	–	–	–	2174.0	1399.7	6797.7	-2174.0	-1399.7	-6797.7
Recreational, cultural and sporting activities	–	–	–	2174.0	1399.7	6797.7	-2174.0	-1399.7	-6797.7
Other	–	–	–	63141.0	74308.3	–	-63141.0	-74308.3	–

6.24. TECHNOLOGY BALANCE OF PAYMENTS BY OWNERSHIP OF ORGANISATIONS

(thousand US dollars)

	Receipts from exports			Payments for imports			Balance of payments		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
Total	627887.5	584656.9	688469.9	1425983.3	1862566.6	2043187.9	-798095.8	-1277909.7	-1354718.0
Russian ownership	482111.1	435396.1	528469.5	369267.9	539140.6	671170.6	112843.2	-103744.5	-142701.1
Public ownership	163850.4	193071.2	167755.2	50672.8	51863.4	22177.7	113177.6	141207.8	145577.5
Federal	160022.2	190110.1	166197.2	47741.2	47525.7	15452.3	112281.0	142584.4	150744.9
Provincial	3828.2	2961.1	1558.0	2931.6	4337.7	6725.4	896.6	-1376.6	-5167.4
Municipal ownership	—	—	—	—	—	—	—	—	—
Private ownership	301646.4	206561.3	310338.6	276779.6	402627.3	509019.0	24866.8	-196066.0	-198680.4
Joint ownership	16614.3	35763.6	47248.6	41815.5	84445.1	135596.6	-25201.2	-48681.5	-88348.0
Public corporations	—	—	3127.1	—	204.8	4377.3	—	-204.8	-1250.2
Foreign ownership	98643.3	97528.3	95120.0	662391.4	858441.5	902712.7	-563748.1	-760913.2	-807592.7
Joint ownership (with both Russian and foreign participation)	47133.1	51732.5	64880.4	394324.0	464984.5	469304.6	-347190.9	-413252.0	-404424.2

6.25. DEVELOPMENT OF ADVANCED MANUFACTURING TECHNOLOGIES BY TYPE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Advanced manufacturing technologies	711	688	637	727	821	676	637	735	780	854	897	864	1138	1323
Design and engineering	162	165	158	155	148	111	138	148	177	173	196	216	316	305
Fabrication, processing, and assembling	316	281	245	333	390	342	291	362	365	369	328	383	405	548
Automated material handling	16	20	11	7	10	11	9	13	8	14	21	18	24	23
Automated inspection and/or testing equipment	82	76	71	63	87	90	91	97	110	99	102	116	128	121
Communications and control	80	90	102	113	116	49	57	56	67	68	67	70	154	204
Manufacturing information systems	18	18	16	14	18	23	21	24	14	23	26	20	51	60
Integrated management and control	37	38	34	42	52	50	30	35	39	41	49	41	60	62

6.26. DEVELOPMENT OF ADVANCED MANUFACTURING TECHNOLOGIES BY DEGREE OF NOVELTY AND TYPE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Technologies new to the country	580	569	543	606	582	569	538	642	653	738	757	762	1028	1188
Design and engineering	126	136	142	129	125	102	125	138	140	150	169	191	272	269
Fabrication, processing, and assembling	256	231	210	271	251	271	239	308	314	316	283	336	371	491
Automated material handling	12	19	8	6	8	11	8	11	8	12	17	16	23	21
Automated inspection and/or testing equipment	65	66	62	55	48	71	72	79	91	87	92	98	117	101
Communications and control	75	74	87	99	99	46	52	52	52	65	61	67	147	194
Manufacturing information systems	18	14	11	13	7	20	20	24	13	20	22	17	41	55
Integrated management and control	28	29	23	33	44	48	22	30	35	37	40	37	57	57
Radically new technologies	67	72	44	70	56	52	60	52	75	54	140	102	110	135
Design and engineering	14	12	4	16	13	4	12	7	17	7	27	25	44	36
Fabrication, processing, and assembling	30	32	18	41	29	33	30	25	30	24	45	47	34	57
Automated material handling	3	1	1	–	1	–	–	1	–	1	4	2	1	2
Automated inspection and/or testing equipment	10	6	5	5	5	9	12	14	14	8	10	18	11	20
Communications and control	2	9	4	2	5	2	4	3	12	1	6	3	7	10
Manufacturing information systems	–	4	3	–	1	2	1	–	1	1	4	3	10	5
Integrated management and control	8	8	9	6	2	2	1	2	1	3	9	4	3	5

6.27. DEVELOPMENT OF ADVANCED MANUFACTURING TECHNOLOGIES BY DEGREE OF NOVELTY AND ECONOMIC ACTIVITY

	Total			Of which technologies					
	2010	2011	2012	new to the country			radically new		
				2010	2011	2012	2010	2011	2012
Advanced manufacturing technologies	864	1138	1323	762	1028	1188	102	110	135
Mining and quarrying	5	10	14	5	7	12	–	3	2
Manufacturing	231	338	336	215	320	320	16	18	16
Electricity, gas and water supply	6	23	32	5	22	32	1	1	–
Transport and communications	–	3	12	–	3	12	–	–	–
Real estate, renting and business activities	470	566	616	410	502	542	60	64	74
Research and development	443	531	562	385	471	493	58	60	69
Other business activities	14	20	31	13	20	30	1	–	1
Education	152	198	313	127	174	270	25	24	43
Higher education	152	198	313	127	174	270	25	24	43

6.28. DEVELOPMENT OF ADVANCED MANUFACTURING TECHNOLOGIES BY DEGREE OF NOVELTY AND OWNERSHIP OF ORGANISATIONS

	Total			Of which technologies					
	2010	2011	2012	new to the country			radically new		
				2010	2011	2012	2010	2011	2012
Total	864	1138	1323	762	1028	1188	102	110	135
Russian ownership	810	1060	1220	712	953	1089	98	107	131
Public ownership	529	670	789	459	596	685	70	74	104
Federal	514	656	775	445	583	671	69	73	104
Provincial	15	14	14	14	13	14	1	1	–
Municipal ownership	1	6	8	–	6	8	1	–	–
Ownership of voluntary associations	4	2	3	1	1	2	3	1	1
Private ownership	190	278	262	174	259	249	16	19	13
Joint ownership	86	95	145	78	82	132	8	13	13
Public corporations	–	9	12	–	9	12	–	–	–
Foreign ownership	9	35	44	9	34	43	–	1	1
Joint ownership (with both Russian and foreign participation)	45	43	59	41	41	56	4	2	3

6.29. USE OF ADVANCED MANUFACTURING TECHNOLOGIES BY TYPE

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Advanced manufacturing technologies	62390	70069	80012	93412	107015	119639	140983	168311	180324	184568	201850	203330	191650	191372
Design and engineering	10395	14385	18152	23135	29960	36826	43273	50653	54044	47116	54539	56130	41422	39664
Fabrication, processing, and assembling	34857	35408	37056	39113	40757	44066	42976	50290	48956	47235	52460	55438	53563	55579
Automated material handling	698	685	667	707	934	829	970	1270	1420	1469	1668	1853	1649	1570
Automated inspection and/ or testing equipment	2203	2409	2607	4335	4168	4071	4525	5941	6758	7531	8075	9106	9395	9519
Communications and control	11441	13713	18721	22975	27766	29923	44135	53971	62102	74468	77457	72798	77662	76479
Manufacturing information systems	1170	1823	1335	1563	1827	2085	3177	4092	4602	4175	4510	4848	4853	5171
Integrated management and control	1626	1646	1474	1584	1603	1839	1927	2094	2442	2380	2877	3157	3106	3390

6.30. USE OF ADVANCED MANUFACTURING TECHNOLOGIES BY TYPE AND DURATION

	Total		Of which technologies used during the period of					
			less than 1 year		1–5 years		6 years and over	
	2011	2012	2011	2012	2011	2012	2011	2012
Advanced manufacturing technologies	191650	191372	21606	17180	86890	85291	83154	88901
Design and engineering	41422	39664	5421	5329	19646	17537	16355	16798
Fabrication, processing, and assembling	53563	55579	6378	4827	20086	21763	27099	28989
Automated material handling	1649	1570	145	157	714	649	790	764
Automated inspection and/or testing equipment	9395	9519	1070	1033	4859	4875	3466	3611
Communications and control	77662	76479	7827	5024	37783	36498	32052	34957
Manufacturing information systems	4853	5171	474	489	2485	2562	1894	2120
Integrated management and control	3106	3390	291	321	1317	1407	1498	1662

6.31. USE OF ADVANCED MANUFACTURING TECHNOLOGIES BY ECONOMIC ACTIVITY AND DURATION

	Total		Of which technologies used during the period of					
			less than 1 year		1–5 years		6 years and over	
	2011	2012	2011	2012	2011	2012	2011	2012
Advanced manufacturing technologies	191650	191372	21606	17180	86890	85291	83154	88901
Mining and quarrying	8474	9527	543	617	5185	5658	2746	3252
Manufacturing	118021	119182	9883	10006	51451	49054	56687	60122
Electricity, gas and water supply	14649	14237	1700	1477	7791	7164	5158	5596
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	385	409	32	22	242	276	111	111
Transport and communications	3208	3007	269	281	883	1216	2056	1510
Real estate, renting and business activities	42405	40467	8715	4343	19257	19959	14433	16165
Research and development	29873	30454	7051	3355	12063	14809	10759	12290
Other business activities	9659	8061	1255	740	5504	4103	2900	3218
Education	4424	4443	454	422	2038	1929	1932	2092
Higher education	4424	4443	454	422	2038	1929	1932	2092
Community, social and personal service activities	84	100	10	12	43	35	31	53
Recreational, cultural and sporting activities	84	100	10	12	43	35	31	53

6.32. USE OF ADVANCED MANUFACTURING TECHNOLOGIES BY OWNERSHIP OF ORGANISATIONS AND DURATION

	Total		Of which technologies used during the period of					
			less than 1 year		1–5 years		6 years and over	
	2011	2012	2011	2012	2011	2012	2011	2012
Total	191650	191372	21606	17180	86890	85291	83154	88901
Russian ownership	168196	166376	19993	15327	75501	73492	72702	77557
Public ownership	41052	38762	7029	4677	16805	16961	17218	17124
Federal	36980	34615	6532	4186	14772	15018	15676	15411
Provincial	4072	4147	497	491	2033	1943	1542	1713
Municipal ownership	5010	5389	510	476	2952	2902	1548	2011
Ownership of voluntary associations	400	396	40	27	188	209	172	160
Private ownership	88789	83618	9299	6586	41435	37154	38055	39878
Ownership of consumer cooperatives	116	102	15	8	69	65	32	29
Joint ownership	31664	36000	3026	3369	13467	15312	15171	17319
Public corporations	1165	2109	74	184	585	889	506	1036
Foreign ownership	10406	11269	765	954	5571	5983	4070	4332
Joint Russian and foreign ownership	13048	13727	848	899	5818	5816	6382	7012

6.33. USE OF ADVANCED MANUFACTURING TECHNOLOGIES BY TYPE AND SOURCE OF ACQUISITION: 2012

	Total	Of which technologies		
		created in the reporting entity	acquired	
			in Russia	abroad
Advanced manufacturing technologies	191372	33267	110037	48068
Design and engineering	39664	9596	23739	6329
Fabrication, processing, and assembling	55579	13925	24971	16683
Automated material handling	1570	202	820	548
Automated inspection and/or testing equipment	9519	1356	5780	2383
Communications and control	76479	6577	49516	20386
Manufacturing information systems	5171	1025	3159	987
Integrated management and control	3390	586	2052	752

6.34. USE OF ADVANCED MANUFACTURING TECHNOLOGIES BY ECONOMIC ACTIVITY AND SOURCE OF ACQUISITION: 2012

	Total	Of which technologies		
		created in the reporting entity	acquired	
			in Russia	abroad
Advanced manufacturing technologies	191372	33267	110037	48068
Mining and quarrying	9527	466	6483	2578
Manufacturing	119182	19729	63506	35947
Electricity, gas and water supply	14237	1257	11056	1924
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	409	17	330	62
Transport and communications	3007	139	2101	767
Real estate, renting and business activities	40467	10437	23974	6056
Research and development	30454	9630	16130	4694
Other business activities	8061	550	6556	955
Education	4443	1206	2513	724
Higher education	4443	1206	2513	724
Community, social and personal service activities	100	16	74	10
Recreational, cultural and sporting activities	100	16	74	10

6.35. USE OF ADVANCED MANUFACTURING TECHNOLOGIES BY OWNERSHIP AND SOURCE OF ACQUISITION: 2012

	Total	Of which technologies		
		created in the reporting entity	acquired	
			in Russia	abroad
Total	191372	33267	110037	48068
Russian ownership	166376	31357	99083	35936
Public ownership	38762	13382	18428	6952
Federal	34615	12725	15769	6121
Provincial	4147	657	2659	831
Municipal ownership	5389	615	4216	558
Ownership of voluntary associations	396	15	257	124
Private ownership	83618	10988	50657	21973
Ownership of consumer cooperatives	102	8	56	38
Joint ownership	36000	5756	24433	5811
Public corporations	2109	593	1036	480
Foreign ownership	11269	610	4388	6271
Joint ownership (with both Russian and foreign participation)	13727	1300	6566	5861

6.36. USE OF ADVANCED MANUFACTURING TECHNOLOGIES ON THE BASIS OF INVENTION PATENTS BY TYPE*

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Advanced manufacturing technologies	2985	2804	2881	2457	2638	3292	3072	2168	1373	2463	1344	1012	6566	6032
Design and engineering	1204	1115	1116	623	637	702	1055	814	499	223	244	274	1574	1582
Fabrication, processing, and assembling	1438	1231	1327	1371	1597	1648	1411	914	442	506	415	337	2523	2236
Automated material handling	21	45	25	22	17	14	16	5	4	13	24	18	76	69
Automated inspection and/or testing equipment	190	171	234	216	158	236	262	142	115	725	114	116	661	739
Communications and control	81	182	117	164	190	620	258	213	238	885	426	209	1418	1138
Manufacturing information systems	5	9	16	16	11	27	44	53	51	52	47	31	193	172
Integrated management and control	46	51	46	45	28	45	26	27	24	25	42	27	121	96

* Data for 2011–2012 is not comparable with data from 1999–2010 due to changes in the methodology.



7. Innovative Activity of Enterprises

7.1. INNOVATIVE ACTIVITY OF ENTERPRISES BY TYPE OF INNOVATION AND ECONOMIC ACTIVITY

	Total, per cent		Enterprises engaged in innovation of selected types as a percentage of all enterprises					
			Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012	2011	2012
Mining and quarrying, manufacturing, electricity, gas and water supply								
Total	11.1	11.1	9.6	9.9	2.5	2.2	3.5	3.2
Mining and quarrying	8.4	8.2	6.8	7.0	0.7	0.6	3.9	3.1
Mining and quarrying of energy producing materials	11.3	10.0	9.0	8.3	1.1	0.4	5.8	4.1
Mining and quarrying, except energy producing materials	4.5	5.8	3.9	5.0	0.2	0.8	1.2	1.8
Manufacturing	13.3	13.4	11.6	12.0	3.4	3.0	4.1	3.9
High tech	30.1	31.3	28.0	30.1	6.7	6.0	9.3	9.2
Manufacture of pharmaceuticals	24.7	23.3	22.4	23.3	8.8	6.7	4.7	3.9
Manufacture of office machinery and computers	27.5	27.3	25.0	25.0	7.5	4.5	10.0	6.8
Manufacture of radio, television and communication equipment and apparatus	36.1	36.3	33.5	35.0	5.2	5.4	9.7	10.5
Manufacture of medical, precision and optical instruments, watches and clocks	27.2	30.0	25.5	28.4	6.4	6.4	8.6	8.8
Manufacture of aircrafts, including spacecrafts	35.6	36.8	33.6	36.1	8.9	4.9	16.4	15.3
Medium high tech	19.7	19.3	17.6	17.7	4.6	3.8	6.3	5.6
Manufacture of chemicals and chemical products	23.2	22.7	21.1	20.9	4.1	4.7	6.8	6.1
Manufacture of machinery and equipment, n.e.c.	17.7	16.7	15.3	14.8	4.3	3.2	5.8	4.7

(continued)

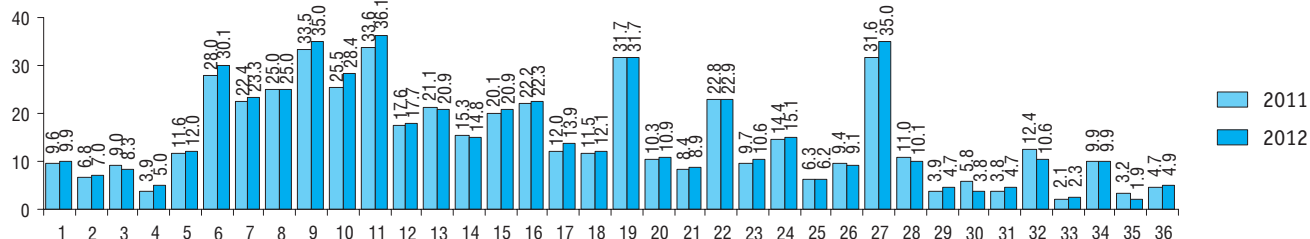
	Total, per cent		Enterprises engaged in innovation of selected types as a percentage of all enterprises					
			Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012	2011	2012
Manufacture of electrical machinery and apparatus	21.2	22.1	20.1	20.9	7.1	5.4	6.6	7.7
Manufacture of motor vehicles, trailers and semitrailers	24.4	23.7	22.2	22.3	3.3	2.7	7.9	5.4
Manufacture of other transport vehicles	13.9	15.0	12.0	13.9	3.0	2.2	5.6	4.5
Medium low tech	13.1	13.4	11.5	12.1	2.4	2.1	3.9	3.8
Manufacture of coke, refined petroleum products	31.7	31.7	31.7	31.7	5.8	3.8	11.5	9.6
Manufacture of rubber and plastic products	12.1	12.0	10.3	10.9	3.0	1.6	3.6	3.0
Manufacture of other non-metallic mineral products	9.7	10.3	8.4	8.9	1.9	1.9	2.8	2.4
Manufacture of basic metals	24.9	25.1	22.8	22.9	2.9	3.3	8.3	8.7
Manufacture of fabricated metal products	11.8	12.1	9.7	10.6	2.5	2.0	3.2	3.7
Construction and repair of vessels	14.4	15.1	14.4	15.1	1.2	2.5	3.6	5.0
Low tech	7.7	7.6	6.3	6.2	2.6	2.4	2.2	2.0
Manufacture of food products and beverages	11.7	11.8	9.4	9.1	4.7	4.4	3.1	2.9
Manufacture of tobacco products	36.8	35.0	31.6	35.0	15.8	–	5.3	5.0
Manufacture of textiles	11.6	12.4	11.0	10.1	1.6	4.0	2.3	4.0
Manufacture of wearing apparel, dressing and dyeing of fur	5.3	5.0	3.9	4.7	0.8	1.6	2.2	1.6
Manufacture of leather, leather products and footwear	8.0	6.8	5.8	3.8	2.2	2.3	3.6	3.0
Manufacture of wood and of products of wood and cork, except furniture	5.5	6.0	3.8	4.7	1.7	1.5	2.7	2.4

(continued)

	Total, per cent		Enterprises engaged in innovation of selected types as a percentage of all enterprises					
			Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012	2011	2012
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	13.3	11.1	12.4	10.6	4.0	3.1	4.4	3.1
Publishing and printing, reproduction of recorded media	2.7	2.7	2.1	2.3	0.6	0.6	0.7	0.6
Manufacture of furniture, manufacturing n.e.c.	12.2	11.1	9.9	9.9	3.3	2.4	2.8	2.6
Recycling	4.2	2.3	3.2	1.9	1.4	0.4	1.4	0.8
Electricity, gas and water supply	5.6	5.6	4.7	4.9	0.4	0.3	1.6	1.6
Communications, computer and related activities, research and development, other business activities								
Total	9.2	9.0	7.8	8.0	1.9	1.6	3.0	2.6
Communications	13.8	13.3	11.1	11.7	5.5	4.7	4.6	4.3
Computer and related activities	9.2	9.4	7.9	8.3	1.2	1.0	2.8	2.6
Research and development	29.8	30.1	28.8	29.1	4.6	4.2	8.5	7.2
Other business activities	4.9	4.0	3.6	3.0	0.9	0.6	1.9	1.3

7.2. ENTERPRISES ENGAGED IN TECHNOLOGICAL INNOVATION AS A PERCENTAGE OF ALL ENTERPRISES BY ECONOMIC ACTIVITY

Mining and quarrying, manufacturing, electricity, gas and water supply



1 – Total

2 – Mining and quarrying

3 – Mining and quarrying of energy producing materials

4 – Mining and quarrying, except energy producing materials

5 – Manufacturing

6 – High tech

7 – Manufacture of pharmaceuticals

8 – Manufacture of office machinery and computers

9 – Manufacture of radio, television and communication equipment and apparatus

10 – Manufacture of medical, precision and optical instruments, watches and clocks

11 – Manufacture of aircrafts, including spacecrafts

12 – Medium high tech

13 – Manufacture of chemicals and chemical products

14 – Manufacture of machinery and equipment, n.e.c.

15 – Manufacture of electrical machinery and apparatus

16 – Manufacture of motor vehicles, trailers and semi-trailers

17 – Manufacture of other transport vehicles

18 – Medium low tech

19 – Manufacture of coke, refined petroleum products

20 – Manufacture of rubber and plastic products

21 – Manufacture of other non-metallic mineral products

22 – Manufacture of basic metals

23 – Manufacture of fabricated metal products

24 – Construction and repair of vessels

25 – Low tech

26 – Manufacture of food products and beverages

27 – Manufacture of tobacco products

28 – Manufacture of textiles

29 – Manufacture of wearing apparel, dressing and dyeing of fur

30 – Manufacture of leather, leather products and footwear

31 – Manufacture of wood and of products of wood and cork, except furniture

32 – Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products

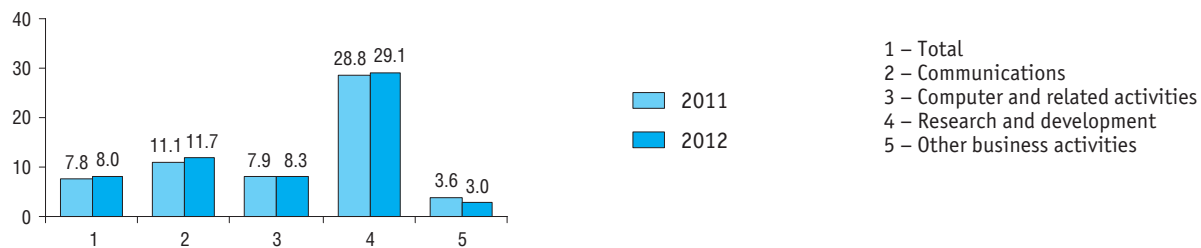
33 – Publishing and printing, reproduction of recorded media

34 – Manufacture of furniture; manufacturing n.e.c.

35 – Recycling

36 – Electricity, gas and water supply

(continued)

Communications, computer and related activities, research and development, other business activities

7.3. PERCENTAGE DISTRIBUTION OF ENTERPRISES ENGAGED IN TECHNOLOGICAL INNOVATION BY INNOVATIVE AND ECONOMIC ACTIVITY

	Enterprises engaged in									
	R&D	industrial design	acquisition of machinery and equipment	acquisition of technology	of which acquisition of patent rights and patent licenses	acquisition of software	other types of preproduction	personnel training	market research	other activities
2011										
Mining and quarrying, manufacturing, electricity, gas and water supply										
Total	36.1	25.2	62.8	10.7	7.1	29.1	14.3	17.6	8.0	10.3
Mining and quarrying	44.1	17.6	52.0	9.8	5.9	26.5	8.8	6.9	2.0	9.8
Mining and quarrying of energy producing materials	48.1	14.3	46.8	7.8	3.9	24.7	7.8	9.1	1.3	7.8
Mining and quarrying, except energy producing materials	32.0	28.0	68.0	16.0	12.0	32.0	12.0	–	4.0	16.0
Manufacturing	39.1	27.5	63.2	11.3	8.1	28.5	15.6	19.5	9.4	9.5
High tech	57.6	30.9	65.0	13.8	11.2	37.5	16.6	28.9	11.7	7.4
Manufacture of pharmaceuticals	76.3	18.4	47.4	26.3	23.7	23.7	13.2	15.8	18.4	5.3
Manufacture of office machinery and computers	60.0	40.0	60.0	10.0	10.0	50.0	20.0	20.0	10.0	10.0
Manufacture of radio, television and communication equipment and apparatus	62.5	33.7	68.3	3.8	2.9	33.7	20.2	27.9	9.6	7.7
Manufacture of medical, precision and optical instruments, watches and clocks	54.7	27.7	59.5	18.2	15.5	38.5	15.5	25.7	12.2	8.1

(continued)

	Enterprises engaged in									
	R&D	industrial design	acquisition of machinery and equipment	acquisition of technology	of which acquisition of patent rights and patent licenses	acquisition of software	other types of preproduction	personnel training	market research	other activities
Manufacture of aircrafts, including spacecrafts	40.8	42.9	89.8	12.2	6.1	51.0	14.3	53.1	10.2	6.1
Medium high tech	45.4	32.0	60.3	12.4	8.9	28.2	17.7	19.4	10.0	12.0
Manufacture of chemicals and chemical products	49.1	43.5	63.0	9.3	6.5	20.4	20.4	14.8	10.2	21.3
Manufacture of machinery and equipment, n.e.c.	40.0	24.8	53.0	12.2	7.8	29.1	15.7	19.6	11.3	7.0
Manufacture of electrical machinery and apparatus	56.9	32.3	71.5	16.9	13.8	31.5	19.2	24.6	10.8	9.2
Manufacture of motor vehicles, trailers and semi-trailers	37.8	35.4	59.8	8.5	7.3	26.8	19.5	17.1	8.5	18.3
Manufacture of other transport vehicles	43.8	34.4	59.4	15.6	9.4	37.5	12.5	18.8	–	12.5
Medium low tech	33.0	25.1	67.2	12.7	7.7	24.2	15.8	16.5	5.0	11.7
Manufacture of coke, refined petroleum products	54.5	51.5	54.5	30.3	18.2	30.3	21.2	12.1	–	24.2
Manufacture of rubber and plastic products	33.3	23.8	63.5	14.3	11.1	25.4	20.6	14.3	4.8	9.5
Manufacture of other non-metallic mineral products	18.8	23.1	75.2	7.7	2.6	13.7	16.2	17.1	6.8	10.3
Manufacture of basic metals	49.4	23.5	64.7	16.5	11.8	29.4	10.6	15.3	2.4	21.2
Manufacture of fabricated metal products	26.0	18.8	65.6	8.3	4.2	21.9	15.6	16.7	7.3	4.2
Construction and repair of vessels	41.7	33.3	70.8	12.5	8.3	54.2	12.5	29.2	4.2	4.2
Low tech	21.4	19.7	62.4	6.8	4.9	24.2	11.1	13.5	9.6	6.2
Manufacture of food products and beverages	25.6	22.0	63.8	6.8	4.9	16.8	11.0	11.7	10.7	7.4

(continued)

	Enterprises engaged in									
	R&D	industrial design	acquisition of machinery and equipment	acquisition of technology	of which acquisition of patent rights and patent licenses	acquisition of software	other types of preproduction	personnel training	market research	other activities
Manufacture of tobacco products	16.7	–	50.0	–	–	16.7	50.0	–	–	–
Manufacture of textiles	20.6	14.7	58.8	8.8	5.9	26.5	11.8	17.6	14.7	8.8
Manufacture of wearing apparel, dressing and dyeing of fur	28.6	28.6	64.3	–	–	35.7	7.1	14.3	28.6	–
Manufacture of leather, leather products and footwear	12.5	25.0	62.5	25.0	25.0	25.0	–	37.5	25.0	12.5
Manufacture of wood and of products of wood and cork, except furniture	10.0	25.0	75.0	10.0	10.0	35.0	15.0	15.0	5.0	5.0
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	14.3	14.3	71.4	–	–	25.0	17.9	21.4	7.1	3.6
Publishing and printing, reproduction of recorded media	9.4	10.9	43.8	4.7	1.6	56.3	7.8	12.5	1.6	3.1
Manufacture of furniture, manufacturing n.e.c.	21.4	21.4	66.7	11.9	9.5	21.4	9.5	14.3	7.1	4.8
Recycling	14.3	14.3	100	–	–	14.3	–	28.6	–	–
Electricity, gas and water supply	12.3	12.3	63.5	7.4	1.1	34.0	7.4	7.7	0.4	15.8
Communications, computer and related activities, research and development, other business activities										
Total	42.4	12.7	50.2	8.0	5.1	46.6	10.7	22.4	5.0	10.5
Communications	7.0	22.7	78.9	8.1	3.8	33.0	13.5	19.5	8.1	23.2
Computer and related activities	24.1	16.5	48.1	13.9	10.1	45.6	13.9	21.5	3.8	5.1
Research and development	80.7	12.8	44.4	6.9	4.1	33.9	13.4	22.9	6.1	8.9
Other business activities	12.4	6.6	43.9	8.3	6.1	71.0	5.0	23.5	2.2	7.5

(continued)

	Enterprises engaged in									
	R&D	industrial design	acquisition of machinery and equipment	acquisition of technology	of which acquisition of patent rights and patent licenses	acquisition of software	other types of preproduction	personnel training	market research	other activities
2012										
Mining and quarrying, manufacturing, electricity, gas and water supply										
Total	36.7	23.4	63.8	11.0	7.7	27.7	14.4	17.5	7.5	10.3
Mining and quarrying	37.6	14.7	51.4	9.2	6.4	23.9	5.5	9.2	–	13.8
Mining and quarrying of energy producing materials	43.4	11.8	46.1	10.5	6.6	21.1	5.3	9.2	–	11.8
Mining and quarrying, except energy producing materials	24.2	21.2	63.6	6.1	6.1	30.3	6.1	9.1	–	18.2
Manufacturing	39.4	25.6	65.0	11.5	8.6	27.1	15.9	18.3	9.0	9.2
High tech	57.5	28.0	67.8	11.1	8.7	33.8	19.8	25.6	10.8	5.5
Manufacture of pharmaceuticals	71.4	14.3	52.4	19.0	16.7	19.0	16.7	19.0	21.4	7.1
Manufacture of office machinery and computers	63.6	27.3	54.5	9.1	–	27.3	27.3	18.2	18.2	–
Manufacture of radio, television and communication equipment and apparatus	61.8	34.5	70.9	5.5	4.5	30.9	19.1	25.5	10.9	5.5
Manufacture of medical, precision and optical instruments, watches and clocks	56.1	24.4	65.9	12.2	11.0	35.4	19.5	21.3	8.5	6.1

(continued)

	Enterprises engaged in									
	R&D	industrial design	acquisition of machinery and equipment	acquisition of technology	of which acquisition of patent rights and patent licenses	acquisition of software	other types of preproduction	personnel training	market research	other activities
Manufacture of aircrafts, including spacecrafts	40.4	36.5	82.7	13.5	5.8	48.1	23.1	46.2	7.7	3.8
Medium high tech	43.9	29.7	62.9	14.6	11.2	28.6	18.3	19.8	10.2	11.5
Manufacture of chemicals and chemical products	45.8	42.1	65.4	15.9	10.3	18.7	23.4	17.8	12.1	23.4
Manufacture of machinery and equipment, n.e.c.	37.5	26.3	58.0	11.2	8.9	33.9	18.3	21.4	10.7	9.4
Manufacture of electrical machinery and apparatus	51.1	25.9	71.2	18.7	15.8	25.2	12.9	20.9	10.1	6.5
Manufacture of motor vehicles, trailers and semi-trailers	48.2	31.3	59.0	14.5	9.6	33.7	24.1	24.1	9.6	13.3
Manufacture of other transport vehicles	40.5	24.3	62.2	16.2	13.5	27.0	10.8	2.7	2.7	5.4
Medium low tech	34.2	24.1	68.1	11.2	7.8	27.5	16.3	17.7	4.6	11.2
Manufacture of coke, refined petroleum products	51.5	51.5	66.7	24.2	15.2	39.4	21.2	18.2	3.0	21.2
Manufacture of rubber and plastic products	33.8	23.5	57.4	16.2	14.7	17.6	17.6	17.6	5.9	10.3
Manufacture of other non-metallic mineral products	20.2	16.9	76.6	7.3	3.2	18.5	16.1	14.5	4.8	8.9
Manufacture of basic metals	54.8	22.6	66.7	11.9	9.5	34.5	8.3	21.4	3.6	23.8
Manufacture of fabricated metal products	27.2	23.3	65.0	6.8	4.9	27.2	22.3	16.5	4.9	1.0
Construction and repair of vessels	41.7	33.3	75.0	16.7	8.3	62.5	8.3	25.0	4.2	12.5
Low tech	21.9	19.3	61.8	7.1	5.3	17.5	8.5	9.4	9.6	6.3
Manufacture of food products and beverages	25.7	22.2	61.8	8.0	6.3	10.1	8.0	9.4	11.1	7.6

(continued)

	Enterprises engaged in									
	R&D	industrial design	acquisition of machinery and equipment	acquisition of technology	of which acquisition of patent rights and patent licenses	acquisition of software	other types of preproduction	personnel training	market research	other activities
Manufacture of tobacco products	14.3	14.3	71.4	—	—	—	14.3	—	—	—
Manufacture of textiles	23.3	16.7	60.0	3.3	3.3	20.0	10.0	20.0	23.3	3.3
Manufacture of wearing apparel, dressing and dyeing of fur	20.0	20.0	60.0	—	—	13.3	—	13.3	20.0	6.7
Manufacture of leather, leather products and footwear	40.0	40.0	80.0	—	—	20.0	20.0	—	20.0	20.0
Manufacture of wood and of products of wood and cork, except furniture	8.0	12.0	88.0	12.0	8.0	20.0	12.0	16.0	4.0	—
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	12.5	20.8	83.3	—	—	16.7	20.8	16.7	8.3	4.2
Publishing and printing, reproduction of recorded media	13.4	11.9	38.8	4.5	1.5	49.3	6.0	3.0	4.5	4.5
Manufacture of furniture, manufacturing n.e.c.	23.8	16.7	64.3	14.3	11.9	21.4	7.1	7.1	—	7.1
Recycling	—	—	100	—	—	—	—	—	—	—
Electricity, gas and water supply	18.2	11.8	60.6	8.4	1.7	33.7	7.7	15.2	—	16.2
Communications, computer and related activities, research and development, other business activities										
Total	49.0	9.9	47.3	8.8	5.7	42.4	10.4	22.9	6.4	10.4
Communications	10.7	11.2	65.5	5.3	1.9	34.0	12.6	24.3	11.7	27.2
Computer and related activities	36.7	12.2	45.9	16.3	11.2	43.9	7.1	23.5	3.1	6.1
Research and development	82.4	11.8	47.0	9.5	6.4	32.2	11.7	22.5	6.9	7.4
Other business activities	12.8	4.5	36.2	7.4	5.1	67.6	7.4	22.4	2.9	6.4

7.4. SALES OF INNOVATIVE GOODS AND SERVICES BY ECONOMIC ACTIVITY

	2011		2012	
	Million roubles	As a percentage of total sales	Million roubles	As a percentage of total sales
Mining and quarrying, manufacturing, electricity, gas and water supply				
Total	1847370.4	6.1	250960.4	7.8
Mining and quarrying	516779.7	6.7	522890.9	6.5
Mining and quarrying of energy producing materials	506198.0	7.5	506171.9	7.3
Mining and quarrying, except energy producing materials	10581.7	1.1	16719.0	1.5
Manufacturing	1309228.6	6.8	1973535.6	9.6
High tech	128342.9	12.1	175318.2	14.3
Manufacture of pharmaceuticals	22813.0	14.8	30861.1	15.8
Manufacture of office machinery and computers	1136.6	3.3	1020.6	2.2
Manufacture of radio, television and communication equipment and apparatus	20837.9	9.8	27998.0	10.5
Manufacture of medical, precision and optical instruments, watches and clocks	38587.0	13.7	43128.0	15.2
Manufacture of aircrafts, including spacecrafts	44968.4	12.1	72310.5	16.7
Medium high tech	559925.7	12.8	785190.0	16.1
Manufacture of chemicals and chemical products	133944.3	9.7	134239.8	9.3
Manufacture of machinery and equipment, n.e.c.	58384.1	5.9	62289.4	6.0
Manufacture of electrical machinery and apparatus	27099.9	6.2	30060.2	6.6
Manufacture of motor vehicles, trailers and semi-trailers	288502.9	23.7	484900.4	31.4
Manufacture of other transport vehicles	51994.5	15.4	73700.2	18.3
Medium low tech	392457.2	4.3	756622.1	8.0
Manufacture of coke, refined petroleum products	93082.1	2.3	431537.3	10.4
Manufacture of rubber and plastic products	31746.0	7.8	44603.6	10.4

(continued)

	2011		2012	
	Million roubles	As a percentage of total sales	Million roubles	As a percentage of total sales
Manufacture of other non-metallic mineral products	21659.1	2.6	27049.7	2.9
Manufacture of basic metals	225270.9	7.2	201410.1	6.6
Manufacture of fabricated metal products	7670.0	1.2	19871.4	2.8
Construction and repair of vessels	13029.2	7.5	32150.0	21.3
Low tech	166260.9	4.1	157075.5	3.7
Manufacture of food products and beverages	109552.6	4.1	106977.7	3.8
Manufacture of tobacco products	6640.5	3.8	6205.0	4.7
Manufacture of textiles	2062.8	2.5	2139.2	2.7
Manufacture of wearing apparel, dressing and dyeing of fur	933.3	2.0	834.7	1.7
Manufacture of leather, leather products and footwear	531.5	1.4	470.0	1.4
Manufacture of wood and of products of wood and cork, except furniture	2546.8	1.3	4676.6	1.8
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	12028.9	3.5	9551.4	2.7
Publishing and printing, reproduction of recorded media	19223.5	10.1	16619.3	8.6
Manufacture of furniture, manufacturing n.e.c.	7958.1	4.5	4639.4	2.4
Recycling	4783.0	3.9	4962.1	3.4
Manufacturing of other materials and substances, n.e.c.	62242.0	12.7	99329.9	13.4
Electricity, gas and water supply	21362.1	0.6	13177.9	0.4
Communications, computer and related activities, research and development, other business activities				
Total	259370.3	8.3	363300.8	9.6
Communications	49486.6	3.6	41444.1	2.5
Computer and related activities	24951.2	12.9	14648.1	6.2
Research and development	159410.0	23.4	283957.3	30.9
Other business activities	25522.6	2.9	23251.3	2.3

7.5. SALES OF GOODS AND SERVICES PRODUCED WITH THE USE OF MARKETING INNOVATION BY ECONOMIC ACTIVITY

	2011		2012	
	Million roubles	As a percentage of total sales	Million roubles	As a percentage of total sales
Mining and quarrying, manufacturing, electricity, gas and water supply				
Total	561396.9	1.9	652631.9	2.0
Mining and quarrying	450996.3	5.9	529681.9	6.6
Mining and quarrying of energy producing materials	449811.8	6.7	529668.2	7.7
Mining and quarrying, except energy producing materials	1184.5	0.1	13.7	0.001
Manufacturing	76395.9	0.4	96698.5	0.5
High tech	15310.2	1.4	16743.9	1.4
Manufacture of pharmaceuticals	24.9	0.02	—	—
Manufacture of office machinery and computers	30.0	0.1	—	—
Manufacture of radio, television and communication equipment and apparatus	737.7	0.3	48.8	0.02
Manufacture of medical, precision and optical instruments, watches and clocks	13092.7	4.6	13401.4	4.7
Manufacture of aircrafts, including spacecrafts	1425.0	0.4	3293.7	0.8
Medium high tech	38871.7	0.9	49220.6	1.0
Manufacture of chemicals and chemical products	29958.6	2.2	33642.8	2.3
Manufacture of machinery and equipment, n.e.c.	3457.0	0.3	13180.2	1.3
Manufacture of electrical machinery and apparatus	3278.3	0.8	2037.5	0.4
Manufacture of motor vehicles, trailers and semi-trailers	1783.3	0.1	237.5	0.02
Manufacture of other transport vehicles	394.5	0.1	122.6	0.03
Medium low tech	5612.1	0.1	8899.5	0.1
Manufacture of coke, refined petroleum products	—	—	—	—
Manufacture of rubber and plastic products	2110.5	0.5	1622.0	0.4

(continued)

	2011		2012	
	Million roubles	As a percentage of total sales	Million roubles	As a percentage of total sales
Manufacture of other non-metallic mineral products	511.4	0.1	2079.8	0.2
Manufacture of basic metals	1506.1	0.05	2047.8	0.1
Manufacture of fabricated metal products	1482.6	0.2	2275.1	0.3
Construction and repair of vessels	1.4	0.001	874.8	0.6
Low tech	16005.3	0.4	21751.4	0.5
Manufacture of food products and beverages	10597.4	0.4	13588.9	0.5
Manufacture of tobacco products	256.5	0.1	—	—
Manufacture of textiles	0.7	0.001	728.5	0.9
Manufacture of wearing apparel, dressing and dyeing of fur	1111.1	2.3	1369.7	2.8
Manufacture of leather, leather products and footwear	—	—	—	—
Manufacture of wood and of products of wood and cork, except furniture	1602.7	0.8	2377.7	0.9
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	1083.8	0.3	1772.0	0.5
Publishing and printing, reproduction of recorded media	697.1	0.4	1453.9	0.8
Manufacture of furniture, manufacturing n.e.c.	656.1	0.4	460.7	0.2
Recycling	—	—	—	—
Manufacturing of other materials and substances, n.e.c.	596.7	0.1	83.2	0.01
Electricity, gas and water supply	34004.6	1.0	26251.4	0.7
Communications, computer and related activities, research and development, other business activities				
Total	19522.4	0.6	28525.4	0.8
Communications	7507.0	0.5	8073.6	0.5
Computer and related activities	492.1	0.3	1619.0	0.7
Research and development	5392.6	0.8	12032.9	1.3
Other business activities	6130.8	0.7	6799.9	0.7

7.6. EXPENDITURE ON TECHNOLOGICAL, ORGANISATIONAL AND MARKETING INNOVATION BY ECONOMIC ACTIVITY

	Expenditure on technological, organisational and marketing innovation, <i>million roubles</i>		Of which					
			Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012	2011	2012
Mining and quarrying, manufacturing, electricity, gas and water supply								
Total	474587.1	590341.6	469442.2	583660.6	1661.0	2010.7	3483.9	4670.3
Mining and quarrying	70585.0	88092.8	70239.3	87775.3	17.2	12.2	328.5	305.3
Mining and quarrying of energy producing materials	66170.9	79627.2	65836.2	79532.4	17.2	0.2	317.5	94.6
Mining and quarrying, except energy producing materials	4414.1	8465.6	4403.1	8242.9	–	12.1	11.0	210.7
Manufacturing	374362.3	435997.1	370006.0	430459.6	1634.6	1989.8	2721.7	3547.7
High tech	39054.0	62469.7	38460.7	61917.1	142.7	124.0	450.5	428.7
Manufacture of pharmaceuticals	2381.2	5025.6	2331.6	5006.5	47.6	14.6	2.1	4.5
Manufacture of office machinery and computers	754.0	780.4	748.4	779.9	2.2	0.1	3.4	0.5
Manufacture of radio, television and communication equipment and apparatus	7736.5	12543.3	7697.1	12507.3	7.2	4.9	32.2	31.2
Manufacture of medical, precision and optical instruments, watches and clocks	12009.9	17752.0	11906.5	17670.4	28.5	30.6	74.9	51.0
Manufacture of aircrafts, including spacecrafts	16172.5	26368.3	15777.2	25953.1	57.3	73.8	338.0	341.4
Medium high tech	67152.6	86381.1	66501.1	85204.2	140.9	344.5	510.6	832.4
Manufacture of chemicals and chemical products	28583.8	36818.0	28407.1	36527.5	44.2	171.5	132.5	119.1
Manufacture of machinery and equipment, n.e.c.	11852.9	12574.4	11740.9	12280.5	18.7	74.7	93.3	219.3

(continued)

	Expenditure on technological, organisational and marketing innovation, <i>million roubles</i>		Of which					
			Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012	2011	2012
Manufacture of electrical machinery and apparatus	7016.5	8736.2	6941.6	8588.0	18.3	33.7	56.6	114.5
Manufacture of motor vehicles, trailers and semitrailers	15633.7	22817.5	15411.1	22475.2	57.2	58.0	165.3	284.3
Manufacture of other transport vehicles	4065.7	5434.9	4000.2	5333.1	2.5	6.6	63.0	95.2
Medium low tech	213912.7	220650.1	213314.3	219170.9	217.2	345.0	381.2	1134.1
Manufacture of coke, refined petroleum products	86139.0	103377.7	85891.6	103052.2	136.3	250.7	111.0	74.8
Manufacture of rubber and plastic products	7807.1	4863.3	7793.0	4847.0	8.1	11.2	6.0	5.1
Manufacture of other non-metallic mineral products	20635.7	13708.9	20582.3	13413.7	35.9	36.5	17.5	258.8
Manufacture of basic metals	89920.6	88388.3	89766.5	87608.1	32.6	30.7	121.5	749.5
Manufacture of fabricated metal products	3290.9	2336.7	3176.1	2287.7	3.6	15.8	111.2	33.2
Construction and repair of vessels	6119.4	7975.1	6104.8	7962.2	0.7	0.1	13.9	12.7
Low tech	28324.4	34599.4	26347.8	32910.1	1093.0	1095.8	883.6	593.5
Manufacture of food products and beverages	12884.8	17326.8	11830.8	16183.1	547.0	668.3	506.9	475.4
Manufacture of tobacco products	735.1	727.3	732.0	724.8	–	–	3.1	2.5
Manufacture of textiles	635.4	809.5	614.4	749.8	0.6	9.2	20.4	50.6
Manufacture of wearing apparel, dressing and dyeing of fur	131.8	110.0	117.0	106.2	2.0	1.7	12.9	2.0
Manufacture of leather, leather products and footwear	56.8	40.8	38.1	31.3	17.6	0.1	1.1	9.5
Manufacture of wood and of products of wood and cork, except furniture	2293.3	1391.8	1962.2	1204.5	1.8	172.8	329.3	14.5

(continued)

	Expenditure on technological, organisational and marketing innovation, <i>million roubles</i>		Of which					
			Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012	2011	2012
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	7602.7	12445.9	7457.3	12323.6	141.5	108.4	3.9	13.9
Publishing and printing, reproduction of recorded media	1058.5	464.0	1036.1	391.4	20.7	67.1	1.7	5.5
Manufacture of furniture; manufacturing n.e.c.	1213.3	814.2	847.7	728.7	361.7	67.7	3.9	17.8
Recycling	1712.6	469.0	1712.1	466.7	0.1	0.7	0.4	1.7
Manufacturing of other materials and substances, n.e.c.	25918.5	31896.8	25382.1	31257.2	40.7	80.5	495.7	559.0
Electricity, gas and water supply	29639.8	66251.7	29196.9	65425.7	9.2	8.7	433.6	817.4
Communications, computer and related activities, research and development, other business activities								
Total	273953.0	325024.6	264373.7	320900.3	8297.0	1610.3	1282.2	2514.1
Communications	138826.1	78577.1	130211.3	75842.6	8198.3	1375.1	416.5	1359.4
Computer and related activities	7593.3	7425.7	7542.7	7388.1	9.1	2.9	41.6	34.8
Research and development	117157.6	227942.8	116525.5	226779.5	74.4	197.5	557.6	965.8
Other business activities	10376.0	11078.9	10094.3	10890.1	15.3	34.8	266.4	154.0

7.7. PERCENTAGE DISTRIBUTION OF EXPENDITURE ON TECHNOLOGICAL, ORGANISATIONAL AND MARKETING INNOVATION BY ECONOMIC ACTIVITY

	Expenditure on innovation					
	Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012
Mining and quarrying, manufacturing, electricity, gas and water supply						
Total	98.9	98.9	0.3	0.3	0.7	0.8
Mining and quarrying	99.5	99.6	0.02	0.01	0.5	0.3
Mining and quarrying of energy producing materials	99.5	99.9	0.03	0.0002	0.5	0.1
Mining and quarrying, except energy producing materials	99.8	97.4	–	0.1	0.2	2.5
Manufacturing	98.8	98.7	0.4	0.5	0.7	0.8
High tech	98.5	99.1	0.4	0.2	1.2	0.7
Manufacture of pharmaceuticals	97.9	99.6	2.0	0.3	0.1	0.1
Manufacture of office machinery and computers	99.3	99.9	0.3	0.02	0.4	0.1
Manufacture of radio, television and communication equipment and apparatus	99.5	99.7	0.1	0.04	0.4	0.2
Manufacture of medical, precision and optical instruments, watches and clocks	99.1	99.5	0.2	0.2	0.6	0.3
Manufacture of aircrafts, including spacecrafts	97.6	98.4	0.4	0.3	2.1	1.3
Medium high tech	99.0	98.6	0.2	0.4	0.8	1.0
Manufacture of chemicals and chemical products	99.4	99.2	0.2	0.5	0.5	0.3
Manufacture of machinery and equipment, n.e.c.	99.1	97.7	0.2	0.6	0.8	1.7

(continued)

	Expenditure on innovation					
	Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012
Manufacture of electrical machinery and apparatus	98.9	98.3	0.3	0.4	0.8	1.3
Manufacture of motor vehicles, trailers and semitrailers	98.6	98.5	0.4	0.3	1.1	1.2
Manufacture of other transport vehicles	98.4	98.1	0.1	0.1	1.5	1.8
Medium low tech	99.7	99.3	0.1	0.2	0.2	0.5
Manufacture of coke, refined petroleum products	99.7	99.7	0.2	0.2	0.1	0.1
Manufacture of rubber and plastic products	99.8	99.7	0.1	0.2	0.1	0.1
Manufacture of other non-metallic mineral products	99.7	97.8	0.2	0.3	0.1	1.9
Manufacture of basic metals	99.8	99.1	0.04	0.03	0.1	0.8
Manufacture of fabricated metal products	96.5	97.9	0.1	0.7	3.4	1.4
Construction and repair of vessels	99.8	99.8	0.01	0.001	0.2	0.2
Low tech	93.0	95.1	3.9	3.2	3.1	1.7
Manufacture of food products and beverages	91.8	93.4	4.2	3.9	3.9	2.7
Manufacture of tobacco products	99.6	99.7	–	–	0.4	0.3
Manufacture of textiles	96.7	92.6	0.1	1.1	3.2	6.3
Manufacture of wearing apparel, dressing and dyeing of fur	88.7	96.6	1.5	1.6	9.8	1.8
Manufacture of leather, leather products and footwear	67.1	76.6	31.0	0.2	2.0	23.2
Manufacture of wood products of wood and cork except fournitoure	85.6	86.5	0.1	12.4	14.4	1.0

(continued)

	Expenditure on innovation					
	Technological		Marketing		Organisational	
	2011	2012	2011	2012	2011	2012
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	98.1	99.0	1.9	0.9	0.1	0.1
Publishing and printing, reproduction of recorded media	97.9	84.3	2.0	14.5	0.2	1.2
Manufacture of furniture; manufacturing n.e.c.	69.9	89.5	29.8	8.3	0.3	2.2
Recycling	99.97	99.5	0.01	0.1	0.02	0.4
Electricity, gas and water supply	98.5	98.8	0.03	0.01	1.5	1.2
Communications, computer and related activities, research and development, other business activities						
Total	96.5	98.7	3.0	0.5	0.5	0.8
Communications	93.8	96.5	5.9	1.8	0.3	1.7
Computer and related activities	99.3	99.5	0.1	0.04	0.5	0.5
Research and development	99.5	99.5	0.1	0.1	0.5	0.4
Other business activities	97.3	98.3	0.1	0.3	2.6	1.4

7.8. PERCENTAGE DISTRIBUTION OF EXPENDITURE ON TECHNOLOGICAL INNOVATION BY INNOVATIVE AND ECONOMIC ACTIVITY

	R&D	Industrial design	Acquisition of machinery and equipment	Acquisition of technology	Of which acquisition of patent rights and patent licenses	Acquisition of software	Other types of preproduction	Personnel training	Market research	Other
2011										
Mining and quarrying, manufacturing, electricity, gas and water supply										
Total	14.9	5.5	60.9	0.7	0.2	0.9	8.5	0.4	0.3	8.0
Mining and quarrying	15.5	1.7	76.4	0.3	0.1	0.5	0.6	0.1	0.05	4.8
Mining and quarrying of energy producing materials	13.0	1.8	79.3	0.2	0.1	0.5	0.6	0.1	0.00002	4.6
Mining and quarrying, except energy producing materials	54.0	1.5	33.0	1.4	0.6	0.3	1.3	–	0.7	7.7
Manufacturing	14.5	6.3	59.3	0.5	0.3	0.8	10.3	0.3	0.3	7.6
High tech	39.0	12.1	41.2	0.2	0.1	1.4	3.5	0.5	0.2	1.9
Manufacture of pharmaceuticals	42.5	0.7	52.5	0.7	0.6	1.3	1.3	0.2	0.5	0.2
Manufacture of office machinery and computers	50.7	3.6	36.7	1.7	1.7	0.1	2.5	0.04	0.01	4.7
Manufacture of radio, television and communication equipment and apparatus	45.9	10.6	36.9	0.02	0.01	0.8	1.2	0.3	0.1	4.0
Manufacture of medical, precision and optical instruments, watches and clocks	61.4	7.3	24.0	0.2	0.2	0.9	3.4	0.3	0.3	2.2
Manufacture of aircrafts, including spacecrafts	17.7	18.4	54.8	0.1	0.03	2.1	5.2	0.8	0.2	0.7

(continued)

	R&D	Industrial design	Acquisition of machinery and equipment	Acquisition of technology	Of which acquisition of patent rights and patent licenses	Acquisition of software	Other types of preproduction	Personnel training	Market research	Other
Medium high tech	20.0	7.3	44.6	1.0	0.5	1.1	18.5	0.2	0.8	6.5
Manufacture of chemicals and chemical products	4.8	9.1	46.0	1.0	0.9	0.7	27.6	0.03	0.2	10.6
Manufacture of machinery and equipment, n.e.c.	37.5	3.5	43.2	0.7	0.3	2.0	5.8	0.4	0.2	6.6
Manufacture of electrical machinery and apparatus	35.0	7.6	39.6	3.0	0.9	1.6	5.0	0.8	6.5	0.9
Manufacture of motor vehicles, trailers and semitrailers	27.3	6.2	41.5	0.4	0.1	0.4	21.2	0.3	0.2	2.6
Manufacture of other transport vehicles	22.0	9.1	60.2	0.5	0.02	2.6	3.7	0.05	–	1.9
Medium low tech	5.8	4.4	70.4	0.5	0.2	0.6	8.9	0.3	0.01	9.1
Manufacture of coke, refined petroleum products	4.7	6.4	58.0	0.7	0.4	0.9	19.0	0.7	–	9.6
Manufacture of rubber and plastic products	3.0	0.6	77.2	0.4	0.3	1.2	9.9	0.02	0.001	7.7
Manufacture of other non-metallic mineral products	4.4	5.1	50.9	1.0	0.1	0.3	1.7	0.04	0.02	36.6
Manufacture of basic metals	1.9	2.7	90.2	0.1	0.1	0.2	1.4	0.05	0.0002	3.4
Manufacture of fabricated metal products	22.3	3.0	64.7	2.2	0.2	1.0	5.8	0.6	0.2	0.4
Construction and repair of vessels	79.3	2.5	15.0	0.04	0.004	1.4	0.9	0.6	0.01	0.3
Low tech	8.7	9.4	61.4	0.3	0.1	0.6	12.4	0.5	1.1	5.6
Manufacture of food products and beverages	14.3	7.2	60.4	0.4	0.04	0.6	8.8	1.1	2.1	5.1
Manufacture of tobacco products	0.1	–	74.9	–	–	0.04	25.0	–	–	–
Manufacture of textiles	8.4	15.8	42.0	0.1	0.1	0.3	9.0	0.2	0.4	23.6
Manufacture of wearing apparel, dressing and dyeing of fur	23.3	35.6	36.6	–	–	1.9	0.03	1.1	1.4	–

(continued)

	R&D	Industrial design	Acquisition of machinery and equipment	Acquisition of technology	Of which acquisition of patent rights and patent licenses	Acquisition of software	Other types of preproduction	Personnel training	Market research	Other
Manufacture of leather, leather products and footwear	11.4	4.1	73.6	1.1	0.3	6.2	–	1.3	2.0	0.4
Manufacture of wood and of products of wood and cork, except furniture	0.01	1.5	57.2	0.03	0.02	0.3	4.2	0.1	0.001	36.7
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	0.2	0.6	75.1	–	–	0.1	23.8	0.1	0.1	0.1
Publishing and printing, reproduction of recorded media	10.3	14.4	58.9	0.03	0.03	4.3	11.9	0.1	0.04	0.01
Manufacture of furniture, manufacturing n.e.c.	45.3	4.2	39.2	3.3	3.0	3.5	0.1	0.3	3.7	0.3
Recycling	0.7	70.8	28.5	–	–	0.01	–	0.01	–	–
Electricity, gas and water supply	17.5	3.3	43.4	4.1	0.02	2.8	4.0	1.9	1.7	21.4
Communications, computer and related activities, research and development, other business activities										
Total	39.0	2.3	16.2	1.8	0.2	1.5	37.3	0.1	0.1	1.8
Communications	2.9	1.6	18.8	2.0	0.1	1.5	71.3	0.02	0.1	1.9
Computer and related activities	40.8	4.5	32.5	0.6	0.3	1.6	18.8	0.1	0.2	0.9
Research and development	78.4	2.0	12.5	1.6	0.3	1.2	2.3	0.2	0.04	1.8
Other business activities	47.9	12.9	13.2	1.6	0.2	6.3	17.1	0.5	0.3	0.2

(continued)

	R&D	Industrial design	Acquisition of machinery and equipment	Acquisition of technology	Of which acquisition of patent rights and patent licenses	Acquisition of software	Other types of preproduction	Personnel training	Market research	Other
2012										
Mining and quarrying, manufacturing, electricity, gas and water supply										
Total	20.4	5.4	55.2	1.9	0.3	1.3	7.8	0.6	0.2	7.2
Mining and quarrying	41.4	2.7	43.2	0.4	0.3	0.2	1.3	0.1	–	10.6
Mining and quarrying of energy producing materials	42.0	2.9	42.6	0.4	0.3	0.2	1.4	0.2	–	10.4
Mining and quarrying, except energy producing materials	35.9	1.5	49.5	0.05	0.05	0.4	0.2	0.004	–	12.5
Manufacturing	17.7	6.3	55.8	2.4	0.3	1.5	8.9	0.6	0.2	6.5
High tech	43.8	8.3	39.6	0.4	0.3	1.2	4.7	0.2	0.5	1.3
Manufacture of pharmaceuticals	21.4	1.5	67.2	1.3	1.3	0.3	0.9	0.1	0.8	6.4
Manufacture of office machinery and computers	33.6	3.9	59.4	0.2	–	0.1	2.7	0.04	0.1	–
Manufacture of radio, television and communication equipment and apparatus	58.9	7.7	29.1	0.1	0.03	1.0	2.7	0.2	0.1	0.2
Manufacture of medical, precision and optical instruments, watches and clocks	61.4	6.7	22.5	0.8	0.6	0.9	4.6	0.2	1.3	1.5
Manufacture of aircrafts, including spacecrafts	29.3	11.0	50.5	0.1	0.03	1.7	6.5	0.2	0.1	0.7

(continued)

	R&D	Industrial design	Acquisition of machinery and equipment	Acquisition of technology	Of which acquisition of patent rights and patent licenses	Acquisition of software	Other types of preproduction	Personnel training	Market research	Other
Medium high tech	18.1	9.9	46.0	1.0	0.6	1.1	18.3	0.4	0.3	4.9
Manufacture of chemicals and chemical products	6.9	11.8	45.1	1.7	1.3	0.3	27.2	0.2	0.4	6.4
Manufacture of machinery and equipment, n.e.c.	27.7	10.1	46.0	0.4	0.1	2.2	5.8	0.4	0.2	7.3
Manufacture of electrical machinery and apparatus	32.0	5.6	49.7	1.2	0.6	1.8	5.3	0.3	0.8	3.4
Manufacture of motor vehicles, trailers and semi-trailers	26.6	9.5	40.0	0.3	0.02	0.9	18.8	0.9	0.2	2.8
Manufacture of other transport vehicles	14.7	4.6	71.1	0.04	0.04	3.8	5.5	0.1	0.005	0.1
Medium low tech	6.6	4.6	66.3	3.9	0.3	0.9	6.8	1.0	0.01	9.9
Manufacture of coke, refined petroleum products	3.4	7.2	60.7	8.1	0.4	0.8	9.3	0.1	0.005	10.6
Manufacture of rubber and plastic products	9.1	5.4	58.7	0.7	0.6	0.8	13.7	0.1	0.1	11.4
Manufacture of other non-metallic mineral products	18.6	3.3	70.6	1.3	0.2	0.5	3.4	0.04	0.1	2.3
Manufacture of basic metals	2.3	1.9	76.9	0.1	0.04	0.9	4.6	2.3	0.002	10.9
Manufacture of fabricated metal products	23.9	6.4	56.3	1.0	0.5	1.9	9.8	0.4	0.2	0.04
Construction and repair of vessels	70.2	2.1	22.4	0.1	0.002	1.7	0.6	0.1	0.001	2.7
Low tech	13.1	6.5	56.5	0.3	0.1	7.2	12.6	0.3	1.2	2.4
Manufacture of food products and beverages	23.5	11.8	54.1	0.2	0.1	0.2	2.8	0.6	2.1	4.7
Manufacture of tobacco products	0.1	12.3	84.7	–	–	–	2.9	–	–	–
Manufacture of textiles	4.2	2.4	59.6	0.01	0.01	0.2	32.9	0.2	0.4	0.1
Manufacture of wearing apparel, dressing and dyeing of fur	32.0	21.4	40.5	–	–	1.5	–	2.7	1.0	0.8

(continued)

	R&D	Industrial design	Acquisition of machinery and equipment	Acquisition of technology	Of which acquisition of patent rights and patent licenses	Acquisition of software	Other types of preproduction	Personnel training	Market research	Other
Manufacture of leather, leather products and footwear	4.2	2.2	92.1	–	–	0.4	0.7	–	0.3	0.1
Manufacture of wood and of products of wood and cork, except furniture	0.4	1.5	91.6	3.9	0.4	0.2	2.2	0.1	0.02	–
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	0.01	0.2	53.5	–	–	18.7	27.5	0.03	0.01	0.1
Publishing and printing, reproduction of recorded media	3.7	8.4	65.8	1.8	0.1	4.7	1.8	0.2	13.5	0.2
Manufacture of furniture, manufacturing n.e.c.	56.2	0.8	40.8	0.6	0.04	0.4	0.04	0.02	–	1.1
Recycling	–	–	100	–	–	–	–	–	–	–
Electricity, gas and water supply	9.3	3.2	67.4	0.5	0.01	1.6	9.1	1.3	–	7.6
Communications, computer and related activities, research and development, other business activities										
Total	64.1	1.5	18.2	1.2	0.1	2.0	2.1	0.3	0.6	10.0
Communications	21.1	2.2	26.6	2.9	0.003	4.2	3.0	0.1	1.0	39.1
Computer and related activities	47.6	5.4	34.6	1.1	0.9	6.1	1.9	0.2	0.2	2.9
Research and development	79.8	1.0	15.1	0.6	0.01	0.7	1.2	0.3	0.4	0.7
Other business activities	48.7	5.0	13.9	1.0	0.9	11.1	13.9	0.8	0.3	5.5

7.9. PERCENTAGE DISTRIBUTION OF EXPENDITURE ON TECHNOLOGICAL INNOVATION BY SOURCE OF FUNDS AND ECONOMIC ACTIVITY

	Own funds of enterprises	Federal budget	Provincial and municipal budgets	Nonbudgetary funds	Funds from abroad	Of which from EU Member States, Iceland, Liechtenstein, Norway, and Switzerland	Venture funds	Other
2011								
Mining and quarrying, manufacturing, electricity, gas and water supply								
Total	69.6	4.7	0.2	0.1	1.1	0.7	-	24.3
Mining and quarrying	82.3	0.04	-	-	-	-	-	17.7
Mining and quarrying of energy producing materials	85.1	0.04	-	-	-	-	-	14.9
Mining and quarrying, except energy producing materials	41.2	-	-	-	-	-	-	58.8
Manufacturing	67.1	5.9	0.2	0.1	1.3	0.9	-	25.4
High tech	67.2	18.9	0.1	0.8	2.3	-	-	10.7
Manufacture of pharmaceuticals	72.2	22.0	-	-	-	-	-	5.8
Manufacture of office machinery and computers	55.3	44.7	-	-	-	-	-	0.01
Manufacture of radio, television and communication equipment and apparatus	59.9	26.9	0.4	-	0.1	-	-	12.7
Manufacture of medical, precision and optical instruments, watches and clocks	63.9	21.9	0.1	-	6.6	-	-	7.5
Manufacture of aircrafts, including spacecrafts	72.9	11.1	-	2.1	0.5	-	-	13.3

(continued)

	Own funds of enterprises	Federal budget	Provincial and municipal budgets	Nonbudgetary funds	Funds from abroad	Of which from EU Member States, Iceland, Liechtenstein, Norway, and Switzerland	Venture funds	Other
Medium high tech	83.4	2.6	0.4	0.01	0.03	0.03	–	13.6
Manufacture of chemicals and chemical product	86.1	0.7	–	–	0.1	0.1	–	13.1
Manufacture of machinery and equipment, n.e.c.	78.5	7.9	0.2	0.04	–	–	–	13.4
Manufacture of electrical machinery and apparatus	86.0	6.7	1.0	–	–	–	–	6.3
Manufacture of motor vehicles, trailers and semi-trailers	84.7	0.1	–	–	–	–	–	15.2
Manufacture of other transport vehicles	69.0	2.6	4.1	0.01	–	–	–	24.3
Medium low tech	64.3	0.7	0.1	–	0.2	0.1	–	34.7
Manufacture of coke, refined petroleum products	63.9	–	–	–	0.2	–	–	35.9
Manufacture of rubber and plastic products	56.4	0.3	3.0	–	–	–	–	40.3
Manufacture of other non-metallic mineral products	66.4	–	0.1	–	–	–	–	33.5
Manufacture of basic metals	67.7	0.1	–	–	0.3	0.3	–	31.9
Manufacture of fabricated metal products	66.1	4.5	0.4	–	–	–	–	28.9
Construction and repair of vessels	22.0	21.5	0.01	–	–	–	–	56.5
Low tech	71.3	0.1	0.04	0.01	12.7	–	–	15.9
Manufacture of food products and beverages	83.4	0.04	0.05	–	2.3	0.4	–	14.3
Manufacture of tobacco products	76.5	–	–	–	–	–	–	23.5
Manufacture of textiles	62.5	0.02	–	–	–	–	–	37.5
Manufacture of wearing apparel, dressing and dyeing of fur	91.4	7.2	–	–	–	–	–	1.5

(continued)

	Own funds of enterprises	Federal budget	Provincial and municipal budgets	Nonbudgetary funds	Funds from abroad	Of which from EU Member States, Iceland, Liechtenstein, Norway, and Switzerland	Venture funds	Other
Manufacture of leather, leather products and footwear	100	–	–	–	–	–	–	–
Manufacture of wood and of products of wood and cork, except furniture	27.6	–	0.1	0.1	6.7	–	–	65.5
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	53.3	0.01	0.03	–	39.5	39.5	–	7.2
Publishing and printing, reproduction of recorded media	89.0	0.1	0.04	–	–	–	–	10.9
Manufacture of furniture, manufacturing n.e.c.	96.0	1.0	–	–	–	–	–	3.0
Recycling	92.4	–	–	–	–	–	–	7.6
Electricity, gas and water supply	70.1	1.3	1.2	0.001	1.4	–	–	26.1
Communications, computer and related activities, research and development, other business activities								
Total	64.2	22.7	0.2	0.3	0.5	0.05	0.0004	12.2
Communications	98.5	0.5	0.1	0.002	–	–	–	0.9
Computer and related activities	96.4	0.8	0.6	0.1	1.1	0.9	–	1.0
Research and development	25.3	50.4	0.3	0.6	0.8	0.05	0.001	22.6
Other business activities	45.9	4.7	0.5	0.02	1.6	–	–	47.2

(continued)

	Own funds of enterprises	Federal budget	Provincial and municipal budgets	Nonbudgetary funds	Funds from abroad	Of which from EU Member States, Iceland, Liechtenstein, Norway, and Switzerland	Venture funds	Other
2012								
Mining and quarrying, manufacturing, electricity, gas and water supply								
Total	73.3	7.3	0.2	0.6	2.7	1.2	0.1	15.9
Mining and quarrying	74.6	0.1	—	—	—	—	—	25.2
Mining and quarrying of energy producing materials	72.2	0.1	—	—	—	—	—	27.8
Mining and quarrying, except energy producing materials	98.5	0.8	—	—	—	—	—	0.7
Manufacturing	73.3	8.2	0.1	0.8	3.6	1.6	0.1	13.9
High tech	50.5	28.5	0.3	0.1	2.4	—	—	18.2
Manufacture of pharmaceuticals	65.1	10.8	—	0.6	—	—	—	23.5
Manufacture of office machinery and computers	23.1	76.8	—	—	—	—	—	0.1
Manufacture of radio, television and communication equipment and apparatus	43.8	51.0	0.2	0.04	—	—	—	5.0
Manufacture of medical, precision and optical instruments, watches and clocks	47.2	33.9	1.1	—	7.7	—	—	10.2
Manufacture of aircrafts, including spacecrafts	54.0	16.0	—	—	0.4	—	—	29.6

(continued)

	Own funds of enterprises	Federal budget	Provincial and municipal budgets	Nonbudgetary funds	Funds from abroad	Of which from EU Member States, Iceland, Liechtenstein, Norway, and Switzerland	Venture funds	Other
Medium high tech	77.8	4.2	0.1	0.1	6.8	0.03	–	11.0
Manufacture of chemicals and chemical products	69.7	2.5	–	–	15.8	–	–	12.0
Manufacture of machinery and equipment, n.e.c.	72.7	14.6	0.1	–	0.2	0.2	–	12.5
Manufacture of electrical machinery and apparatus	86.7	7.2	1.0	0.6	–	–	–	4.5
Manufacture of motor vehicles, trailers and semi-trailers	92.7	0.8	0.02	–	–	–	–	6.5
Manufacture of other transport vehicles	67.5	1.8	–	–	–	–	–	30.7
Medium low tech	80.7	1.6	0.1	1.5	1.7	1.6	0.2	14.2
Manufacture of coke, refined petroleum products	82.2	0.004	–	–	–	–	–	17.8
Manufacture of rubber and plastic products	75.6	1.8	0.3	0.3	1.0	–	3.0	17.9
Manufacture of other non-metallic mineral products	55.2	1.0	0.2	–	27.0	26.9	–	16.6
Manufacture of basic metals	89.2	0.1	–	–	–	–	0.3	10.4
Manufacture of fabricated metal products	67.2	10.7	0.3	–	1.0	0.01	–	20.8
Construction and repair of vessels	16.6	37.7	1.2	42.3	–	–	–	2.2
Low tech	76.4	0.1	0.3	0.0003	11.3	10.4	–	11.9
Manufacture of food products and beverages	86.2	0.1	0.04	–	2.4	0.7	–	11.2
Manufacture of tobacco products	100	–	–	–	–	–	–	–
Manufacture of textiles	40.0	0.01	–	–	–	–	–	60.0
Manufacture of wearing apparel, dressing and dyeing of fur	87.9	12.1	–	–	–	–	–	–

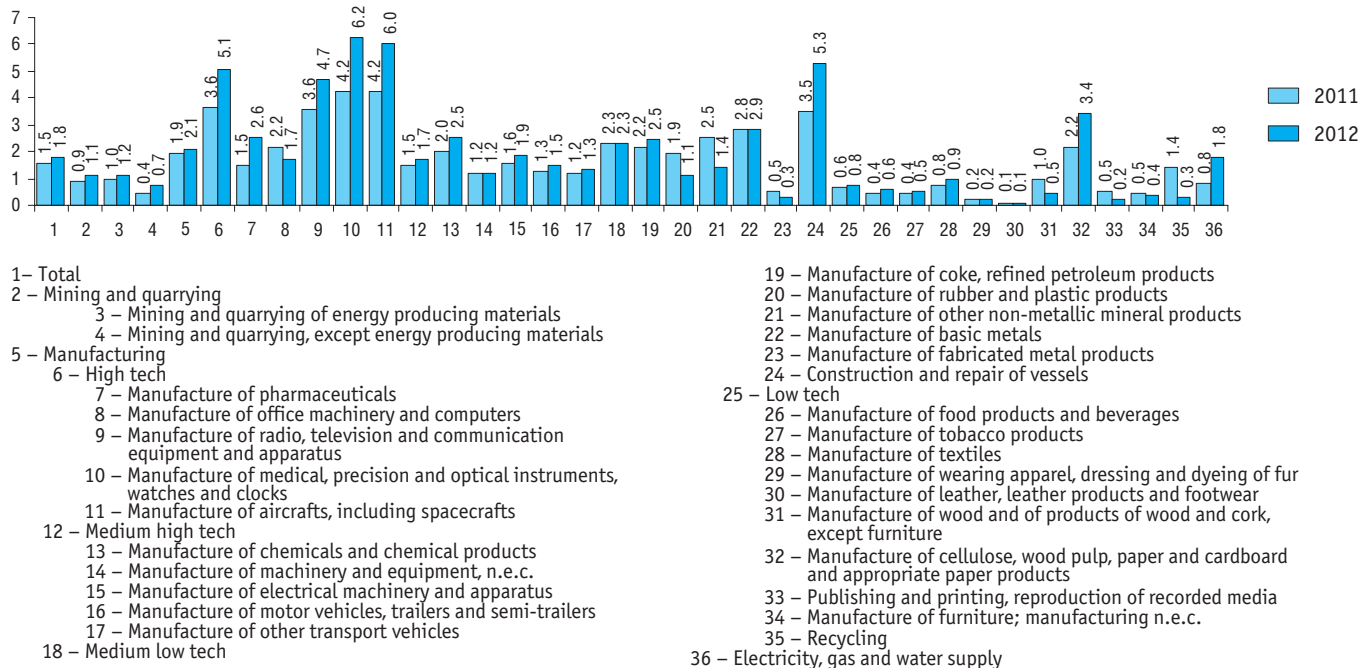
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	Own funds of enterprises	Federal budget	Provincial and municipal budgets	Nonbudgetary funds	Funds from abroad	Of which from EU Member States, Iceland, Liechtenstein, Norway, and Switzerland	Venture funds	Other
Manufacture of leather, leather products and footwear	100	—	—	—	—	—	—	—
Manufacture of wood and of products of wood and cork, except furniture	36.5	—	—	—	—	—	—	63.5
Manufacture of cellulose, wood pulp, paper and cardboard and appropriate paper products	67.9	—	—	—	27.0	27.0	—	5.0
Publishing and printing, reproduction of recorded media	61.7	0.001	22.0	—	—	—	—	16.3
Manufacture of furniture, manufacturing n.e.c.	93.2	0.7	—	0.01	—	—	—	6.1
Recycling	63.4	—	—	—	—	—	—	36.6
Electricity, gas and water supply	72.0	10.8	0.7	—	—	—	—	16.5
Communications, computer and related activities, research and development, other business activities								
Total	35.7	46.6	0.9	0.2	1.3	0.1	0.0003	15.4
Communications	78.7	2.7	0.003	—	—	—	—	18.6
Computer and related activities	80.9	11.7	3.9	1.3	1.3	1.2	0.004	0.9
Research and development	19.9	64.4	1.1	0.2	1.7	0.1	0.0003	12.6
Other business activities	33.1	3.2	2.4	0.002	0.3	0.03	—	61.0

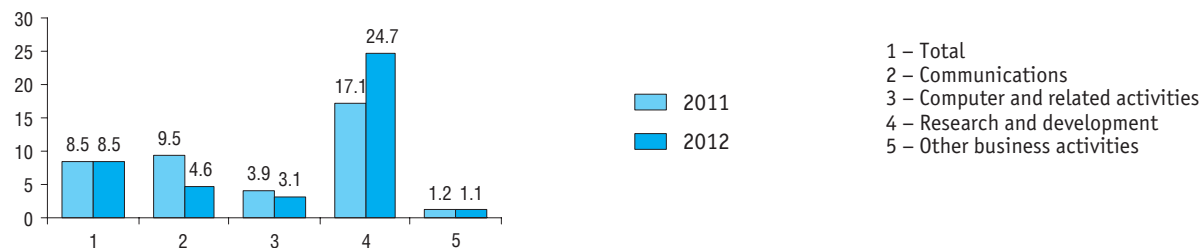
7.10. INTENSITY OF EXPENDITURE ON TECHNOLOGICAL INNOVATION BY ECONOMIC ACTIVITY

(expenditure on technological innovation as a percentage of total sales)

Mining and quarrying, manufacturing, electricity, gas and water supply



(continued)

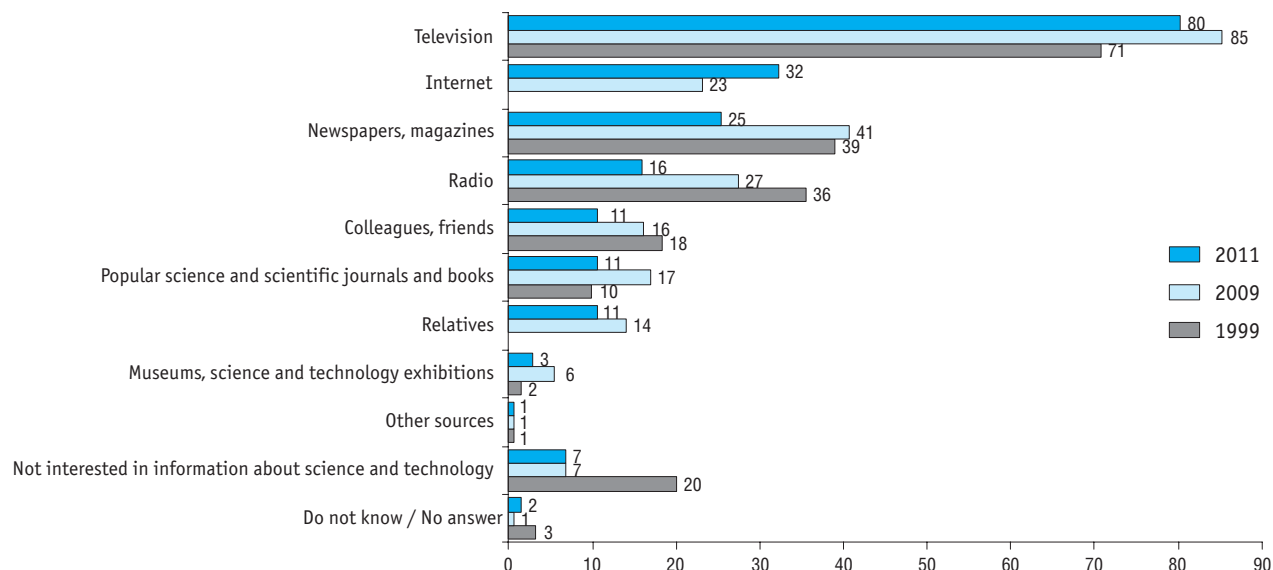
Communications, computer and related activities, research and development, other business activities



8. Public Attitudes towards Science and Technology

8.1. SOURCES OF INFORMATION ABOUT SCIENCE AND TECHNOLOGY*

(respondents who indicated certain sources of information as a percentage of all respondents **)

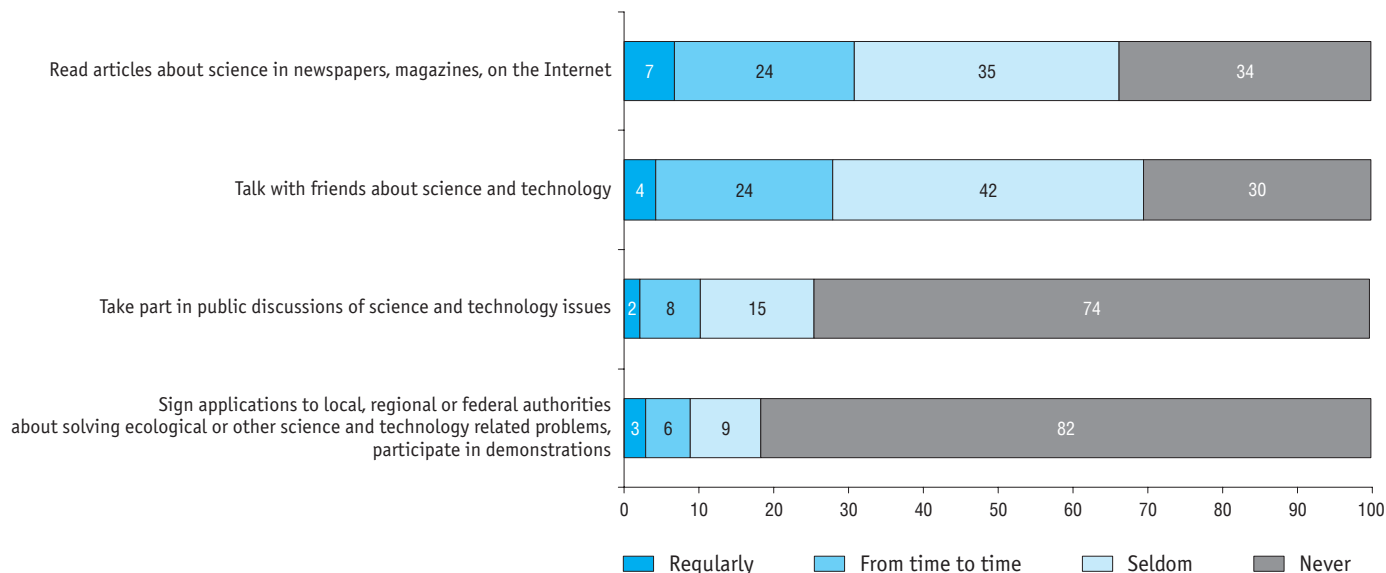


* In this section the data for Russia is based on the results of the representative surveys of the adult population, organised by HSE Institute for Statistical Studies and Economics of Knowledge. The data sources for the European countries are: *Special Eurobarometer 340. Science and Technology*. Luxembourg: Directorate-General for Communication, 2010; *Special Eurobarometer 224. Europeans, Science and Technology*. Luxembourg: Office for Official Publications of the European Communities, 2005; for the United States and other countries the following data sources were used: *National Science Board. Science and Engineering Indicators – 2008*. Washington, D.C.: US Government Printing Office, 2008; *National Science Board. Science and Engineering Indicators – 2010*. Arlington, VA: National Science Foundation, 2010; *Science and Engineering Indicators – 2012*. Arlington, VA: National Science Foundation, 2012.

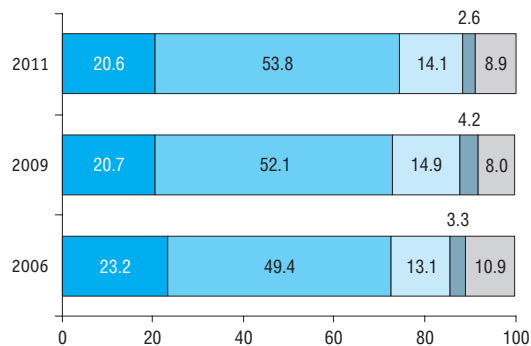
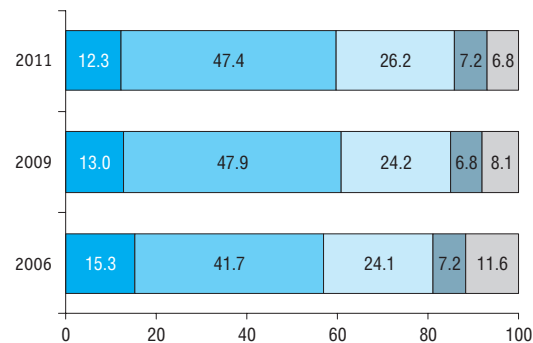
** The total exceeds 100%, as the respondents could give multiple answers.

8.2. INVOLVEMENT OF THE POPULATION IN SCIENCE AND TECHNOLOGY ISSUES: 2011

(respondents who are engaged in certain activities as a percentage of all respondents)

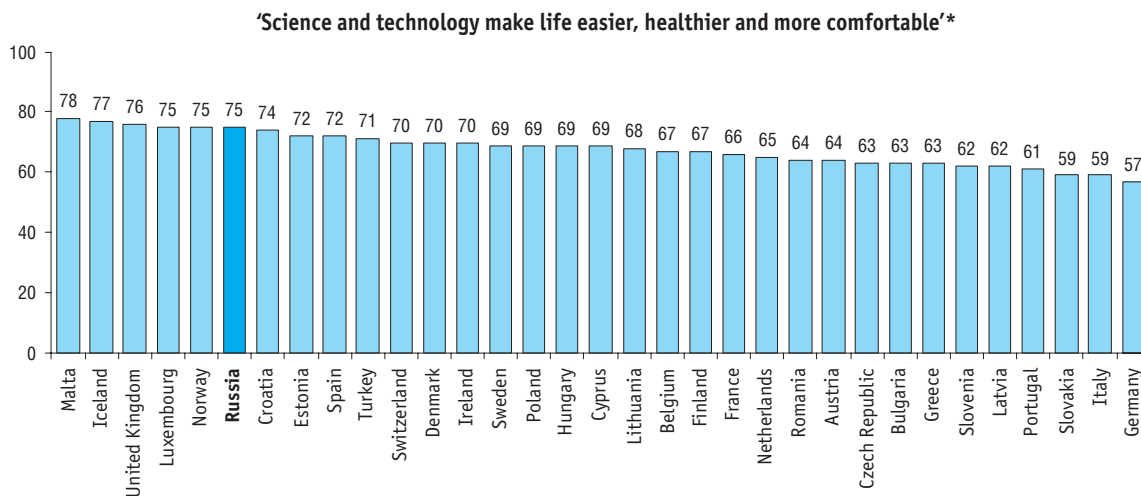


8.3. PUBLIC ASSESSMENT OF THE INFLUENCE OF SCIENCE AND TECHNOLOGY ON LIFE

*(as a percentage of all respondents)***Russia: Do you agree with the following statements?****'Science and technology make life easier, healthier and more comfortable'****'Science and technology change life and make it more restless'**

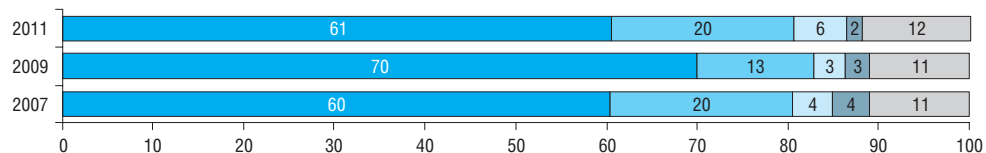
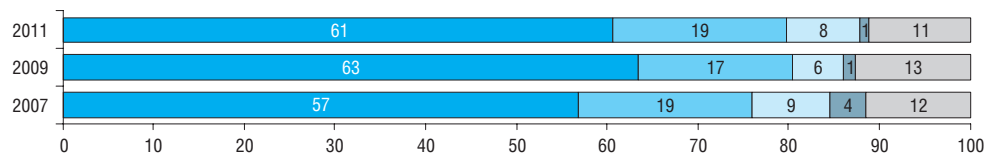
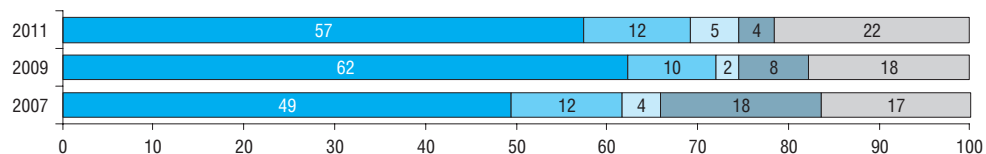
- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree
- No opinion

(continued)



* The data on Russia is for 2011. The data on other countries is for 2010. The answers 'strongly agree' and 'somewhat agree' were taken into account.

8.4. PUBLIC ASSESSMENTS OF THE EFFECTS OF S&T DEVELOPMENT

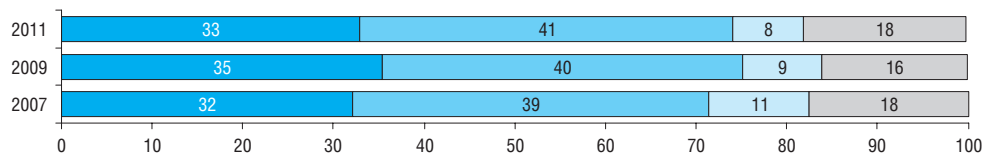
*(as a percentage of all respondents)***'How will the following technologies influence our life in the next 20 years?'****Energy saving technologies****Internet****Nanotechnology**

■ Improve
 ■ Will not influence
 ■ Impair
 ■ Haven't heard of that
 ■ Don't know / No opinion

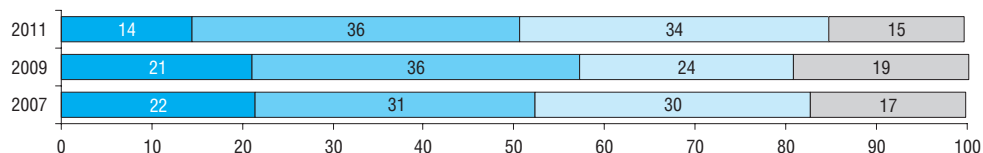
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'What kind of influence will the following technologies have on people's health?'

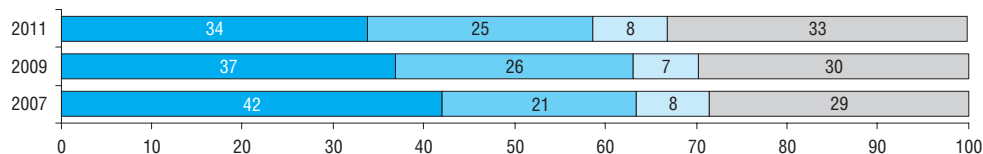
Energy saving technologies



Internet

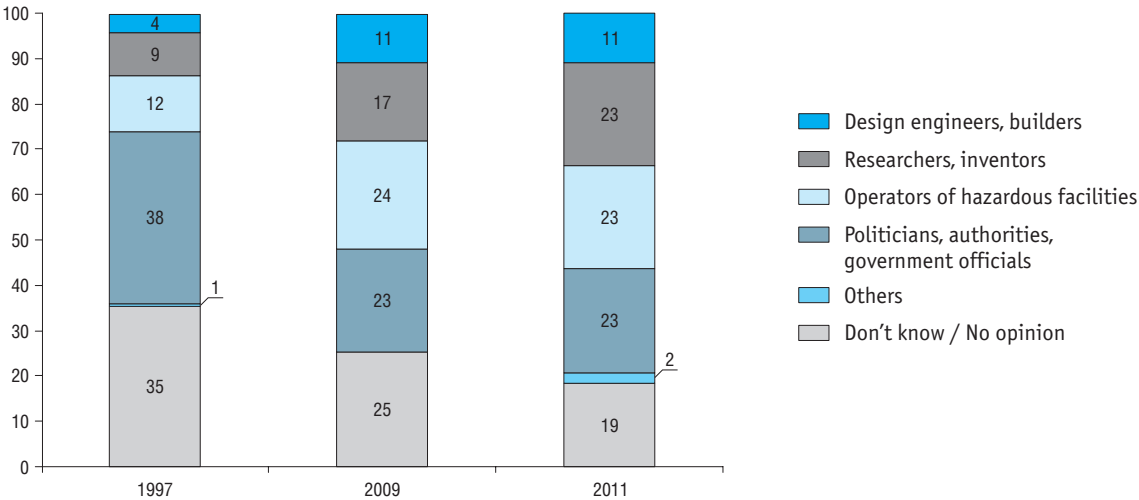


Nanotechnology



Positive No influence Negative Don't know / No opinion

8.5. PUBLIC OPINION ABOUT THOSE RESPONSIBLE FOR THE NEGATIVE EFFECTS OF S&T DEVELOPMENT
(as a percentage of all respondents)

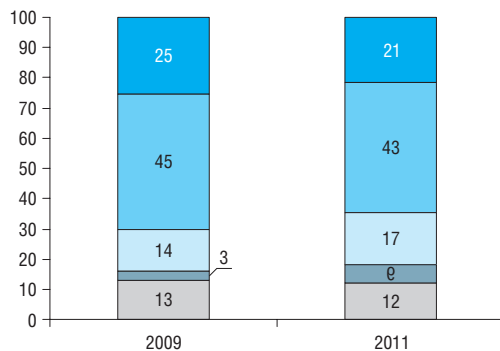


8.6. PUBLIC OPINION ABOUT POSSIBLE PROHIBITION OF RESEARCH

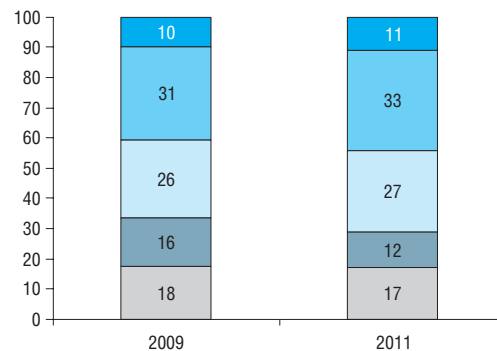
(as a percentage of all respondents)

Do you agree with the following statements?

'If some research is likely to not only benefit the humanity but to harm it, such research should be banned'

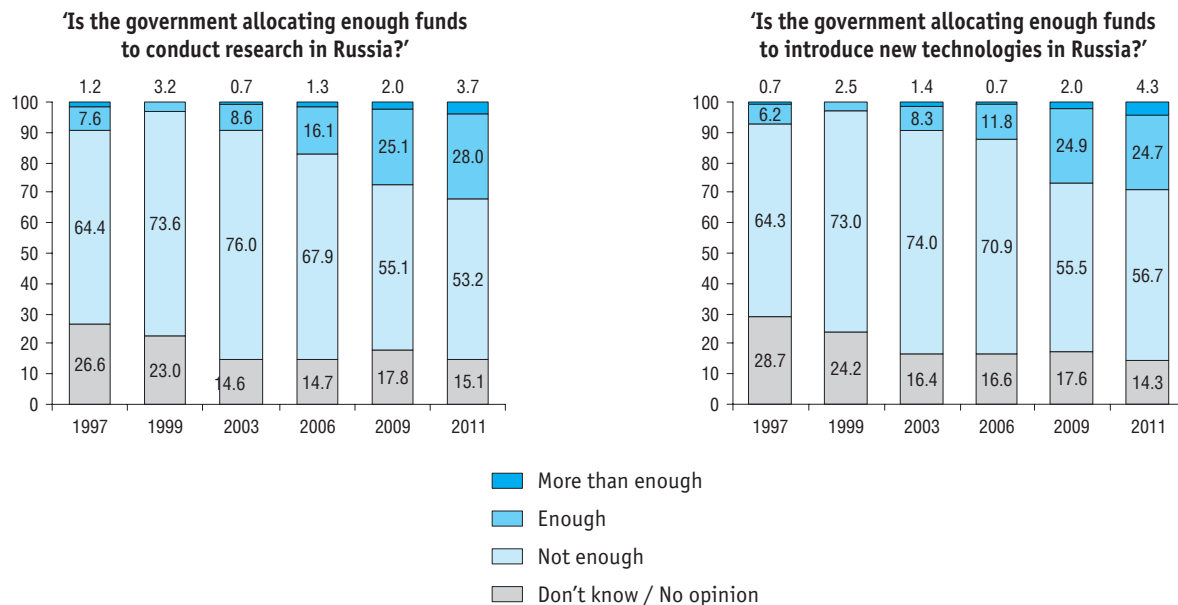


'Research should be conducted on any topic, prohibitions are inadmissible in this regard'



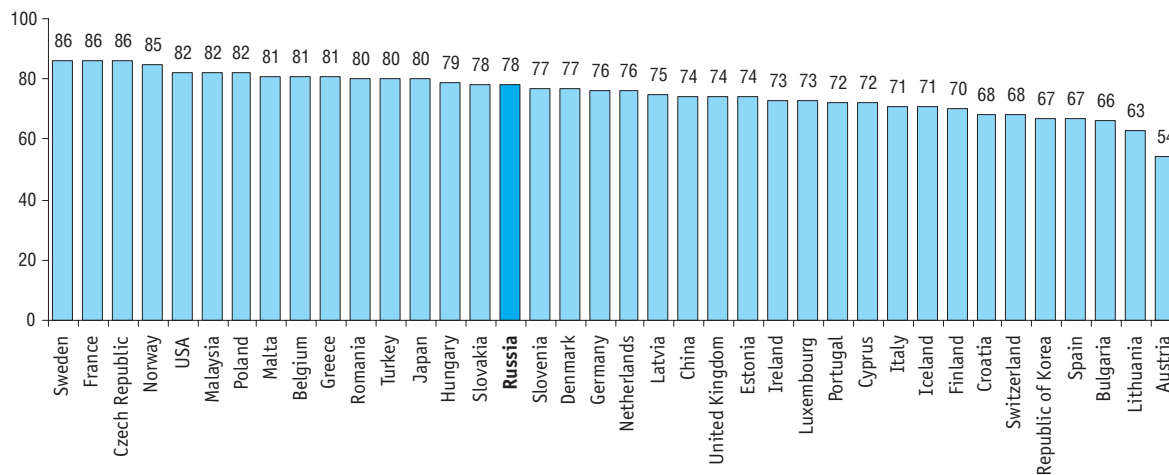
- Strongly agree
- Somewhat agree
- Somewhat disagree
- Disagree
- Don't know / No opinion

8.7. PUBLIC OPINION ABOUT FINANCING RESEARCH AND INTRODUCING NEW TECHNOLOGIES

(as a percentage of all respondents)

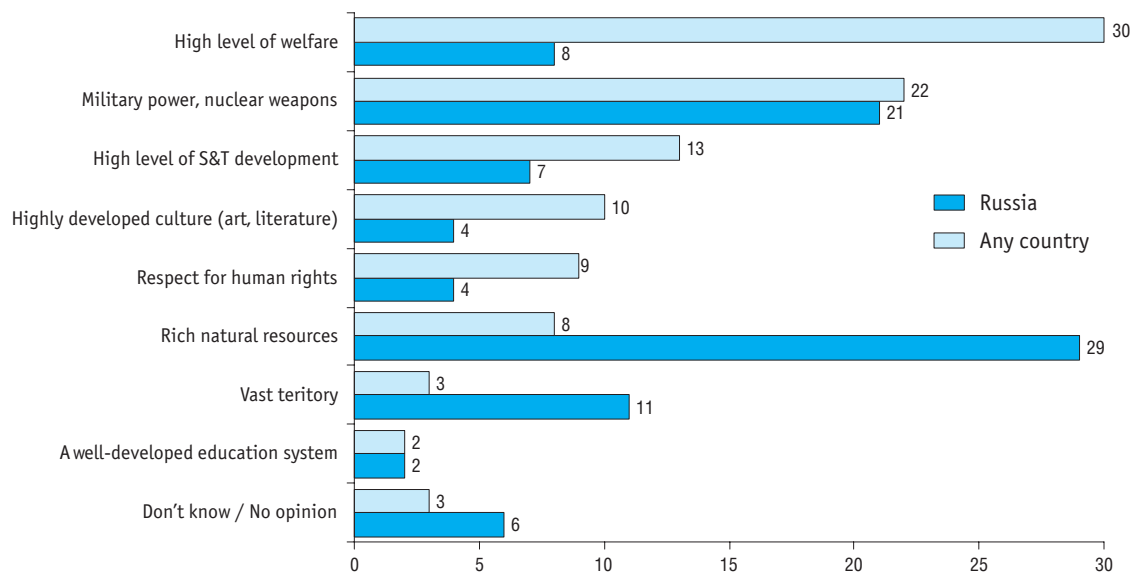
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**'Research should have financial support from the state' even if it does not bring immediate benefits,
but increases the knowledge of mankind***



* The data for Russia is for 2011, for other countries it is for the nearest years, for which data is available.

8.8. SYMBOLS OF NATIONAL PRESTIGE IN RUSSIA: 2011

(as a percentage of all respondents)***'What must any country possess in the first place to gain respect of other states?****What earns Russia respect among other countries in the first place?'**

* The total exceeds 100%, as the respondents could give multiple answers.



9. International Comparisons

9.1. GROSS DOMESTIC EXPENDITURE ON R&D
(million current PPP \$)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Russia	8122.3	10726.9	14563.6	16317.2	16487.8	18115.0	22848.5	26562.7	30060.9	34165.6	33421.3	35041.7	37789.9
CIS countries													
Armenia	...	11.6	20.4	22.5	22.6	32.4	35.3	36.3	42.1	47.5	40.0	48.0	...
Azerbaijan	...	59.7	67.7	82.9	86.2	83.0	89.9	114.6	126.4	211.1	195.3	202.4	...
Belarus	...	372.4	366.1	394.0	463.4	566.5	626.3	1019.6	885.5	779.0	911.6	1074.1	...
Kazakhstan	...	129.2	235.8	260.5	288.7	373.7	365.6	352.4	385.8	418.7	302.8	341.0	...
Kyrgyzstan	...	10.2	14.2	17.4	17.2	17.7	21.8	24.7	22.3	19.5	19.0	20.7	...
Republic of Moldova	...	...	...	22.4	26.7	33.9	37.3	53.1	57.4	53.7	48.5	48.7	...
Tajikistan	...	...	4.7	5.1	5.7	9.3	9.0	7.2	9.1	11.8	13.2	19.7	...
Turkmenistan	...	...	...	...	...	...	...	...	...	...	...	...	...
Ukraine	...	1551.5	1921.8	2391.1	2680.7	3074.4	2764.8	2759.5	2862.6	2500.2	2545.6	2400.0	...
Uzbekistan	...	...	...	...	...	...	...	...	...	...	...	...	...
OECD countries													
Australia	...	7917.8	9885.3	...	11713.4	...	15468.7	...	19133.0	...	20578.1	...	...
Austria	2884.9	4475.0	5229.8	5699.8	6003.4	6802.5	7368.9	7916.8	8854.1	8811.1	9449.3	9761.9	10155.7
Belgium	3792.9	5571.4	6010.9	5893.3	6027.2	6171.1	6704.1	7167.9	7799.3	8000.0	8265.0	8719.4	...
Canada	11307.0	16689.7	19145.3	20134.1	21675.8	23090.0	24075.7	24794.8	24911.9	24731.1	24663.6	24289.3	...
Chile	...	...	...	...	...	...	...	867.9	1037.3	1126.7	1331.4	...	...
Czech Republic	1259.7	1863.7	2063.9	2297.7	2454.9	2947.6	3550.8	3892.7	3793.9	3960.1	4144.6	5086.5	...
Denmark	2183.0	...	4147.2	4225.8	4335.1	4418.9	4849.5	5311.2	6235.8	6679.7	6910.4	7052.4	...
Estonia	...	81.4	116.6	139.1	170.2	207.2	289.9	312.9	379.1	374.3	437.6	710.4	...
Finland	2167.8	4445.3	4814.7	4953.0	5386.6	5601.2	6057.7	6636.5	7487.9	7472.9	7534.5	7634.8	...
France	27409.7	32961.9	38152.9	36861.8	37971.5	39235.7	41940.7	44011.9	46547.8	49479.8	49934.3	51891.0	...
Germany	40129.2	52349.5	56657.0	59443.7	61307.1	64298.8	70108.1	74016.5	81970.7	82360.7	86279.8	93055.5	...
Greece	676.0	...	...	1419.7	1468.6	1615.5	1746.6	1866.8	...	...	...	...	...

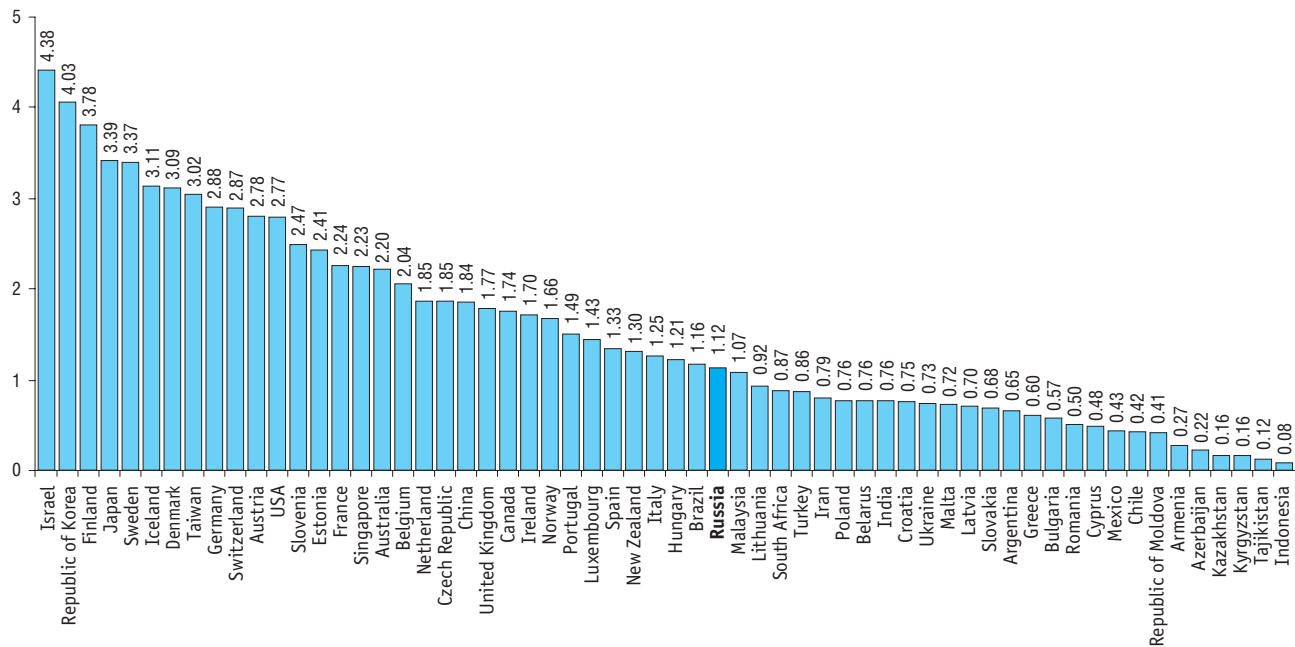
(continued)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Hungary	666.6	976.9	1492.6	1458.5	1437.2	1615.7	1849.8	1870.7	2058.2	2369.5	2404.6	2581.9	...
Iceland	95.0	216.5	263.8	251.0	...	287.1	325.8	310.6	333.6	370.2	...	...	...
Ireland	813.2	1222.5	1430.2	1614.0	1829.4	2009.4	2249.9	2537.4	2738.4	3049.6	3130.4	3223.0	...
Israel	2664.1	6310.3	7051.7	6377.3	6882.4	7145.9	7603.0	8924.4	8927.6	8717.9	8962.8	9822.7	...
Italy	11665.5	15248.8	17268.9	17297.4	17476.1	17999.0	20172.4	22315.3	24076.1	24511.5	24540.5	24812.1	...
Japan	82468.2	98666.6	108166.2	112165.2	117640.1	128694.6	138338.5	147702.5	148719.2	135951.8	139626.2	146537.3	...
Luxembourg	...	387.2	...	452.1	485.2	495.3	615.5	639.9	682.8	680.1	637.0	656.2	...
Mexico	1939.0	3359.7	4171.3	4391.9	4748.2	5346.2	5465.6	5699.7	6626.6	7029.8	7931.5	8209.4	...
Netherlands	6544.1	9063.7	9698.0	9869.2	10416.0	10904.4	11707.3	12061.0	12467.8	12301.2	12810.1	...	...
New Zealand	608.8	...	...	1108.7	...	1189.3	...	1434.7	...	1683.0	...	1772.1	...
Norway	1730.7	...	2792.2	2986.7	3063.3	3315.9	3707.1	4189.7	4630.5	4650.8	4720.7	5006.7	...
Poland	1808.1	2605.0	2472.2	2475.9	2769.7	2982.4	3191.8	3620.4	4150.9	4837.6	5625.3	6227.9	...
Portugal	707.1	1324.3	1453.2	1444.2	1550.5	1755.2	2395.1	2989.6	3981.9	4340.9	4321.1	4037.6	...
Republic of Korea	13304.9	18558.5	22506.8	24007.4	27871.1	30618.3	35293.2	40722.5	43906.4	46729.3	52843.7	59890.0	...
Slovakia	410.9	384.3	398.3	419.7	403.8	440.1	481.6	517.9	594.1	589.5	796.1	882.3	...
Slovenia	392.4	482.2	577.6	519.8	619.8	674.9	795.0	795.3	972.6	1013.7	1143.8	1387.8	...
Spain	4990.1	7790.6	9808.5	10909.9	11783.0	13330.8	16042.7	18314.9	20414.9	20440.2	20232.5	19763.1	...
Sweden	6283.4	...	...	10366.4	10448.0	10509.9	11928.7	11951.6	13496.1	12461.8	12485.6	13216.2	...
Switzerland	...	5765.9	...	...	7468.7	...	...	...	10525.2	...	...	...	...
Turkey	1202.1	2823.4	3008.9	2841.1	3567.7	4617.5	5186.6	7048.1	7744.5	8817.7	9713.4	10826.9	...
United Kingdom	21853.7	27859.0	30635.7	31049.9	32012.0	34080.7	36982.0	38731.5	39396.9	39213.2	39505.8	39627.1	...
USA	184077.0	268121.0	277066.0	289736.0	300293.0	325936.0	353328.0	380088.0	406258.0	405072.0	408657.0	415193.0	...

(continued)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU countries which are not OECD members													
Bulgaria	...	258.5	284.5	310.4	336.2	347.4	389.9	429.0	498.8	545.8	625.8	632.6	...
Croatia	...	510.7	536.3	575.0	670.0	590.4	558.3	665.0	802.4	721.3	618.1	642.9	...
Cyprus	...	32.8	45.9	54.8	63.1	74.8	86.3	98.5	107.1	123.4	126.1	126.0	...
Latvia	...	84.3	96.7	93.4	113.4	167.6	239.8	232.2	252.0	164.4	215.8	273.8	...
Lithuania	...	177.9	242.7	278.6	335.9	364.6	432.3	498.9	524.4	477.1	477.2	598.2	...
Malta	...	...	19.9	19.8	42.3	48.0	55.6	55.6	58.3	57.7	75.6	84.7	...
Romania	976.5	468.3	579.7	643.9	732.2	831.9	1092.4	1442.3	1866.6	1485.9	1466.0	1648.5	...
Other countries													
Argentina	...	1483.0	1168.8	1366.8	1632.3	1933.0	2323.8	2669.3	3002.0	3467.2	3980.2	4640.6	...
Brazil	...	12462.2	13026.9	13087.6	13357.2	15372.5	17119.2	20304.7	22208.7	23470.3	25292.1	...	...
China	10512.2	27215.6	39606.3	47126.7	57782.3	71054.9	86619.5	102323.3	120743.4	154024.6	178167.9	208171.8	...
India	...	12026.5	13042.1	14234.5	16587.5	19617.9	21782.8	24305.9	...	...	...	...	...
Indonesia	...	336.1	...	...	...	...	...	...	...	804.3	...	...	...
Iran	...	...	2758.5	3716.6	3496.9	4726.8	4699.8	...	6432.2	...	...	...	...
Malaysia	...	1034.8	1585.1	...	1728.1	...	2087.9	...	3157.5	4035.9	4615.9	4953.4	...
Singapore	1027.5	2470.9	2997.1	3124.5	3669.3	4246.7	4699.5	5757.6	6693.0	5574.6	6053.2	7060.2	...
South Africa	...	...	...	2726.5	3153.9	3654.2	4134.3	4437.5	4732.6	4416.2	...	...	...
Taiwan	5531.4	8768.4	10480.9	11690.0	13109.1	14527.0	16568.0	18494.6	20657.5	21616.3	24036.0	26493.1	...

9.2. GROSS DOMESTIC EXPENDITURE ON R&D AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT: 2012*



* Or the nearest years for which data is available.

9.3. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY SECTOR OF PERFORMANCE: 2012*

	Gross domestic expenditure on R&D	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
Russia	100	32.2	58.3	9.3	0.2
CIS countries					
Armenia	100	89.1	...	10.9	...
Azerbaijan	100	72.4	17.8	9.8	...
Belarus	100	20.5	69.9	9.6	–
Kazakhstan	100	25.0	51.6	16.4	7.0
Kyrgyzstan	100	62.0	23.3	14.6	–
Republic of Moldova	100	70.0	19.0	11.0	...
Tajikistan	100	67.0	...	33.0	...
Turkmenistan	...	...	...	...	...
Ukraine	100	37.9	55.7	6.3	–
Uzbekistan	...	...	...	...	...
OECD countries					
Australia	100	12.4	58.0	26.6	3.0
Austria	100	5.3	68.1	26.1	0.5
Belgium	100	9.0	67.1	22.9	1.0
Canada	100	10.1	51.3	38.1	0.5
Chile	100	8.4	38.7	30.6	22.3
Czech Republic	100	17.5	60.3	21.6	0.5
Denmark	100	2.2	67.6	29.8	0.4
Estonia	100	8.1	63.2	27.8	0.9
Finland	100	8.8	70.5	20.0	0.7
France	100	14.1	63.4	21.2	1.2
Germany	100	14.7	67.3	18.0	...
Greece	100	20.9	28.6	49.2	1.3

(continued)

	Gross domestic expenditure on R&D	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
Hungary	100	15.8	62.4	20.2	...
Iceland	100	20.0	52.9	24.9	2.2
Ireland	100	4.9	69.0	26.1	...
Israel	100	3.7	80.2	12.6	3.4
Italy	100	13.7	54.2	28.6	3.5
Japan	100	8.4	77.0	13.2	1.5
Luxembourg	100	19.2	68.5	12.4	...
Mexico	100	30.5	39.0	28.9	1.6
Netherlands	100	11.7	47.9	40.4	...
New Zealand	100	22.7	45.4	31.8	...
Norway	100	16.4	52.1	31.5	...
Poland	100	34.5	30.1	35.1	0.2
Portugal	100	7.5	45.9	38.3	8.3
Republic of Korea	100	11.7	76.5	10.1	1.6
Slovakia	100	27.7	37.2	34.9	0.2
Slovenia	100	14.3	73.9	11.8	0.1
Spain	100	19.5	52.1	28.2	0.2
Sweden	100	4.3	69.3	26.0	0.3
Switzerland	100	0.7	73.5	24.2	1.6
Turkey	100	11.3	43.2	45.5	...
United Kingdom	100	9.3	61.5	26.9	2.4
USA	100	12.1	68.3	15.2	4.3

(continued)

	Gross domestic expenditure on R&D	Government sector	Business enterprise sector	Higher education sector	Private non-profit sector
EU countries which are not OECD members					
Bulgaria	100	35.8	53.2	10.2	0.7
Croatia	100	27.4	44.7	27.8	0.2
Cyprus	100	17.1	15.9	52.8	14.3
Latvia	100	23.3	27.8	48.9	...
Lithuania	100	19.6	26.1	54.3	...
Malta	100	3.2	66.7	30.1	–
Romania	100	40.7	36.0	22.9	0.4
Other countries					
Argentina	100	42.3	24.6	31.4	1.7
Brazil	100	21.3	40.2	38.4	0.1
China	100	16.3	75.7	7.9	...
India	100	61.7	33.9	4.4	–
Indonesia	100	...	...	37.9	...
Iran	100	56.1	10.6	33.3	...
Malaysia	100	14.4	56.7	28.9	–
Singapore	100	10.2	62.1	27.7	...
South Africa	100	21.6	53.2	24.3	0.9
Taiwan	100	15.1	72.7	11.9	0.3

*Or the nearest years for which data is available.

9.4. PERCENTAGE DISTRIBUTION OF GROSS DOMESTIC EXPENDITURE ON R&D BY SOURCE OF FUNDS: 2012*

	Gross domestic expenditure on R&D	Government	Business enterprise sector	Other funds from national sources	Funds from abroad
Russia	100	67.8**	27.2	1.0	4.0
CIS countries					
Azerbaijan	100	89.7	9.5	0.8	–
Armenia	100	59.4	...	...	3.4
Belarus	100	45.5	45.8	–	8.7
Kazakhstan	100	24.9	51.6	23.2	0.3
Kyrgyzstan	100	57.7	38.6	1.4	0.9
Republic of Moldova	100	...	...	...	9.4
Tajikistan	100	82.1	1.6	0.1	...
Turkmenistan	...	...	...	...	...
Uzbekistan	...	...	...	...	...
Ukraine	100	46.0	27.2	0.2	25.8
OECD countries					
Australia	100	34.6	61.9	1.9	1.6
Austria	100	39.3	44.6	0.5	15.5
Belgium	100	25.3	58.6	4.0	12.1
Canada	100	36.1	45.5	11.8	6.6
Chile	100	37.3	35.4	11.6	15.7
Czech Republic	100	37.0	46.9	0.8	15.2
Denmark	100	27.6	60.2	3.5	8.7
Estonia	100	32.8	55.0	0.4	11.9
Finland	100	25.0	67.0	1.4	6.5
France	100	37.0	53.5	1.8	7.6
Germany	100	30.3	65.6	0.2	3.9
Greece	100	46.8	31.1	3.1	19.0

(continued)

	Gross domestic expenditure on R&D	Government	Business enterprise sector	Other funds from national sources	Funds from abroad
Hungary	100	38.1	47.5	1.0	13.5
Iceland	100	38.9	50.2	0.5	10.3
Ireland	100	30.3	48.3	1.3	20.1
Israel	100	14.8	39.0	3.3	42.8
Italy	100	41.6	44.7	4.0	9.8
Japan	100	16.4	76.5	6.6	0.5
Luxembourg	100	33.9	46.1	0.2	19.9
Mexico	100	59.6	36.8	2.9	0.7
Netherlands	100	40.9	45.1	3.1	10.8
New Zealand	100	41.2	40.1	12.4	6.3
Norway	100	46.7	44.1	1.5	7.8
Poland	100	55.8	28.1	2.7	13.4
Portugal	100	44.9	44.1	7.8	3.2
Republic of Korea	100	24.9	73.7	1.2	0.2
Slovakia	100	49.8	33.9	2.2	14.2
Slovenia	100	31.5	61.2	0.2	7.0
Spain	100	46.6	43.0	4.6	5.7
Sweden	100	27.5	58.2	3.5	10.9
Switzerland	100	22.8	68.2	3.0	6.0
Turkey	100	29.2	45.8	24.2	0.7
United Kingdom	100	32.2	44.6	6.2	17.0
USA	100	33.4	60.0	6.6	–

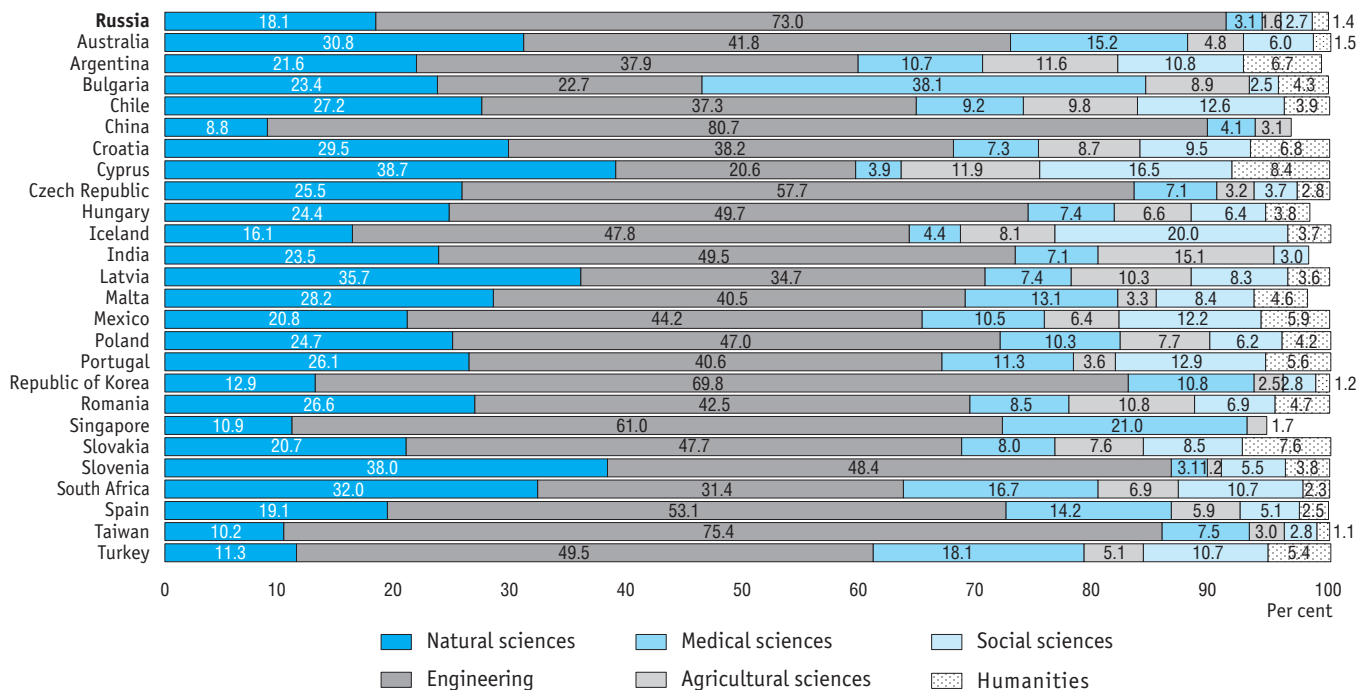
* Or the nearest years for which data is available.

** Including federal budget appropriations, general university funds and funds of government sector institutions (e.g. own funds of institutions).

(continued)

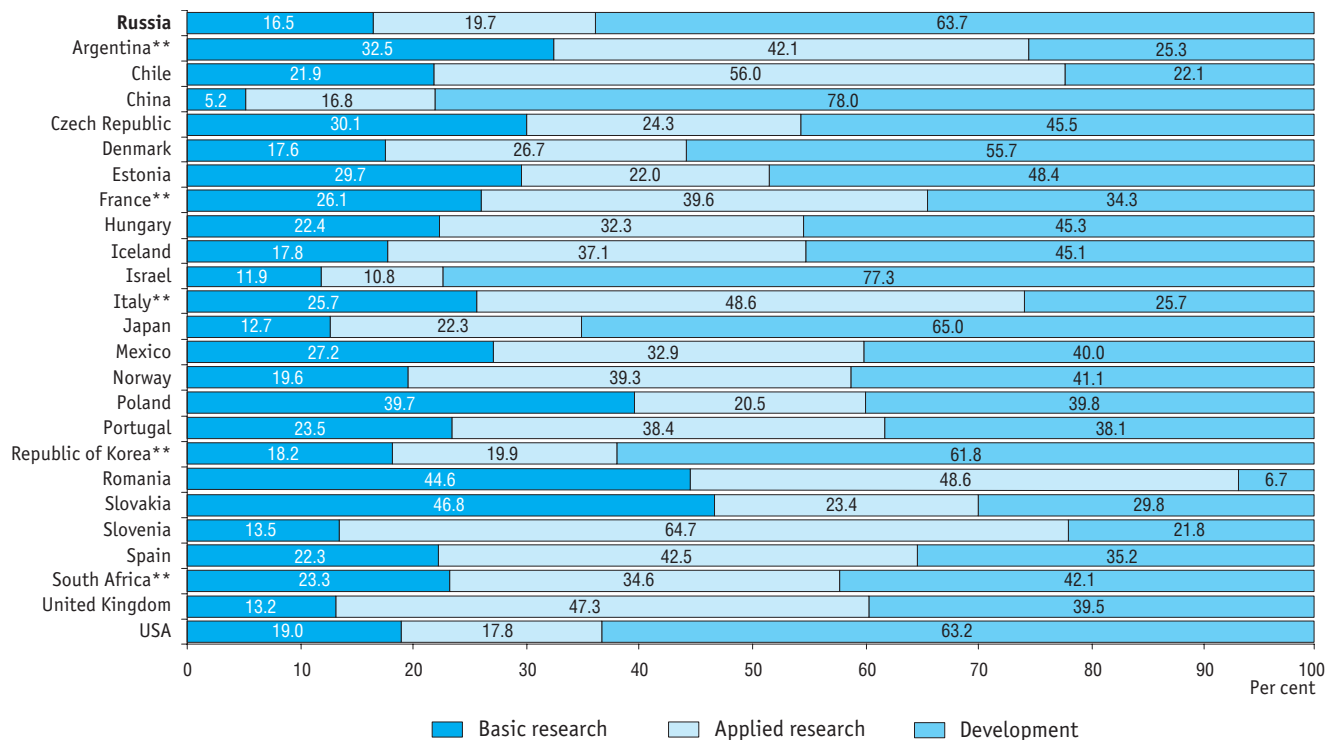
	Gross domestic expenditure on R&D	Government	Business enterprise sector	Other funds from national sources	Funds from abroad
EU countries which are not OECD members					
Bulgaria	100	38.8	16.9	0.4	43.9
Croatia	100	48.2	38.2	2.0	11.6
Cyprus	100	68.3	12.7	3.9	15.0
Latvia	100	22.5	24.8	1.6	51.0
Lithuania	100	42.3	28.1	1.1	28.5
Malta	100	30.7	52.6	0.5	16.2
Romania	100	49.1	37.4	1.4	12.1
Other countries					
Argentina	100	71.6	23.9	4.0	0.5
Brazil	100	52.7	45.4	1.9	–
China	100	21.7	73.9	...	1.3
India	100	66.1	33.9	–	–
Indonesia	100	84.5	14.7	0.2	...
Iran	100	61.6	30.9	7.4	...
Malaysia	100	41.4	55.0	3.1	0.3
Singapore	100	38.1	55.3	1.6	5.0
South Africa	100	44.4	42.5	0.9	12.1
Taiwan	100	26.2	72.5	1.2	0.04

9.5. GROSS DOMESTIC EXPENDITURE ON R&D BY FIELD OF SCIENCE AND TECHNOLOGY: 2012*



* Or the nearest years for which data is available.

9.6. INTRAMURAL CURRENT EXPENDITURE ON R&D BY TYPE OF ACTIVITY: 2012*



* Or the nearest years for which data is available.

** As a percentage of gross domestic expenditure on R&D.

9.7. GOVERNMENT BUDGET APPROPRIATIONS ON R&D

(million current PPP \$)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Russia	5977.1	4784.6	7169.6	9087.9	9047.1	13254.0	15344.5	18515.6	20829.0	27442.1	26343.2	28146.0	29754.4
CIS countries													
Australia	2312.2	2842.6	3269.9	3672.5	3302.9	3713.4	3956.7	3810.2	3846.6	4542.2	4606.1	4753.5	4759.6
Austria	1228.4	1430.0	1637.5	1641.6	1758.7	1827.3	1979.7	2040.5	2330.5	2532.6	2686.6	2753.0	2915.2
Belgium	1163.1	1597.4	1856.0	1916.0	1911.0	1987.2	2201.0	2283.2	2684.0	2652.7	2749.2	2760.0	2769.7
Canada	3812.8	4574.3	5566.4	5901.4	6177.2	6777.1	6885.2	7550.2	7933.5	8438.3	8500.3	...	...
Chile	...	...	...	...	...	...	...	...	...	...	...	720.0	...
Czech Republic	...	837.0	852.9	956.5	990.1	1148.4	1302.7	1468.3	1436.7	1646.0	1586.8	1854.7	1931.0
Denmark	791.1	1170.9	1206.6	1205.2	1244.6	1285.4	1417.8	1629.2	1852.5	2079.6	2177.0	2331.8	2341.9
Estonia	...	44.9	62.9	67.6	73.6	90.1	129.2	139.7	189.6	182.7	193.2	232.6	257.6
Finland	928.4	1302.6	1384.2	1437.7	1574.0	1651.7	1781.5	1849.3	1976.6	2123.5	2236.1	2207.9	2187.1
France	13244.3	14740.2	17125.4	16852.2	16921.4	18084.5	16156.5	15798.7	19214.2	20229.9	18829.3	19422.2	...
Germany	16044.5	16808.7	17769.8	18638.6	18897.5	19865.0	21001.2	22513.8	24261.3	26682.0	28389.5	29234.2	30174.2
Greece	400.0	619.7	616.5	662.6	797.4	889.5	979.0	918.5	1341.4	1070.3	835.3	802.6	834.9
Hungary	...	...	...	...	...	708.7	674.9	747.7	881.2	947.1	745.9	634.8	884.0
Iceland	44.8	76.2	90.3	96.5	87.3	91.0	94.2	98.9	115.5	130.7	119.2	109.1	114.3
Ireland	209.3	314.1	502.0	521.0	631.7	731.4	795.9	954.1	996.1	1013.0	982.6	958.7	952.5
Israel	883.6	1292.9	1278.1	1256.8	1197.4	1115.0	1090.7	1107.9	1173.8	1187.2	1207.9	1284.6	...
Italy	6720.6	9370.2	...	...	...	11050.6	10905.0	12165.3	12602.6	12477.6	11939.6	11166.5	10712.5
Japan	14306.6	21173.8	24652.7	25727.8	26895.7	27617.8	28625.9	29207.8	30559.9	30631.7	31925.6	33529.2	34871.2
Luxembourg	...	30.1	47.3	60.4	71.6	83.7	121.4	148.9	194.8	221.6	245.8	264.6	282.6
Mexico	1261.7	2117.1	2223.6	2706.0	2368.8	2599.5	2677.7	2864.8	3597.0	3737.5	4737.7	4824.5	...
Netherlands	2826.5	3792.4	4232.0	4237.3	4435.0	4529.7	4991.1	5195.0	5438.9	5733.8	5712.6	5901.9	5863.3
New Zealand	308.5	...	...	479.4	...	...	572.4	628.5	684.9	732.5	750.0	721.0	779.7
Norway	821.9	1057.2	1272.7	1347.9	1462.7	1554.6	1803.8	1979.9	2113.8	2290.7	2405.0	2482.8	2498.7

(continued)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Poland	1139.3	1539.6	...	...	1553.6	1547.5	1809.9	2011.4	2079.3	2427.5	...	...	...
Portugal	559.4	1019.6	1272.1	1199.7	1278.4	1581.1	1683.7	1927.8	2420.9	2752.2	2779.5	2769.2	2507.3
Republic of Korea	...	5024.7	6701.1	7021.2	7662.7	8539.3	9329.1	10589.5	11895.0	13096.6	14408.6	15660.3	...
Slovakia	171.4	212.9	219.8	217.3	236.6	244.1	267.4	238.4	348.2	445.5	483.5	609.5	336.2
Slovenia	...	174.0	207.9	222.9	262.1	272.7	284.8	286.3	298.9	378.0	334.1	311.5	313.8
Spain	3006.6	5174.7	7323.4	7627.3	5931.3	6479.5	9148.0	10963.7	11684.6	12195.2	11522.4	10104.7	...
Sweden	2084.2	1731.1	2278.6	2490.7	2531.3	2535.0	2723.6	2780.1	2917.3	3152.9	3254.3	3242.8	...
Switzerland	...	1458.4	1671.3	...	1927.0	...	2113.8	...	2686.2	...	3080.0	...	...
Turkey	...	...	...	...	...	...	...	...	...	...	...	...	...
United Kingdom	8786.0	10359.1	12872.8	13128.6	13165.0	13228.0	14062.8	14240.3	14400.7	14745.3	14049.5	13280.0	...
USA	68791.0	83612.5	103056.7	114866.1	126270.5	131259.0	136019.0	141890.3	144391.0	164292.0	148962.0	144379.0	140568.0
Other countries													
Argentina	...	836.4	670.5	766.8	844.3	1036.1	1226.6	1529.4	1754.6	2172.4	2342.1	2570.6	...
China	...	...	...	...	...	...	...	...	...	...	...	...	...
Romania	555.7	178.0	217.1	266.0	322.2	441.7	795.9	1021.2	1283.5	963.5	903.9	884.7	742.8
Singapore	...	...	...	...	...	...	...	...	...	...	...	...	...
South Africa	...	...	...	...	...	...	...	...	...	...	...	...	...
Taiwan	...	2833.1	3691.7	4096.4	4504.3	4639.9	5637.8	5641.9	6015.8	6374.2	6771.2	7132.3	7058.7

9.8. R&D PERSONNEL: 2012*
(person-year; in full time equivalent)

	R&D personnel	Researchers
Russia	828260	444074
CIS countries		
Armenia	5718	4458
Azerbaijan	18687	11891
Belarus	31194	19668
Kazakhstan	15699	10493
Kyrgyzstan	3333	2224
Republic of Moldova	4390	2767
Tajikistan	2537	1565
Turkmenistan	...	...
Ukraine	110918	57387
Uzbekistan	20312	15029
OECD countries		
Australia	137489	92649
Austria	60378	37084
Belgium	59991	40498
Canada	221360	149060
Chile	11491	5440
Czech Republic	55697	30682
Denmark	57170	37480
Estonia	5724	4511
Finland	54526	40003
France	392875	239613
Germany	562763	327953
Greece	35531	21013

(continued)

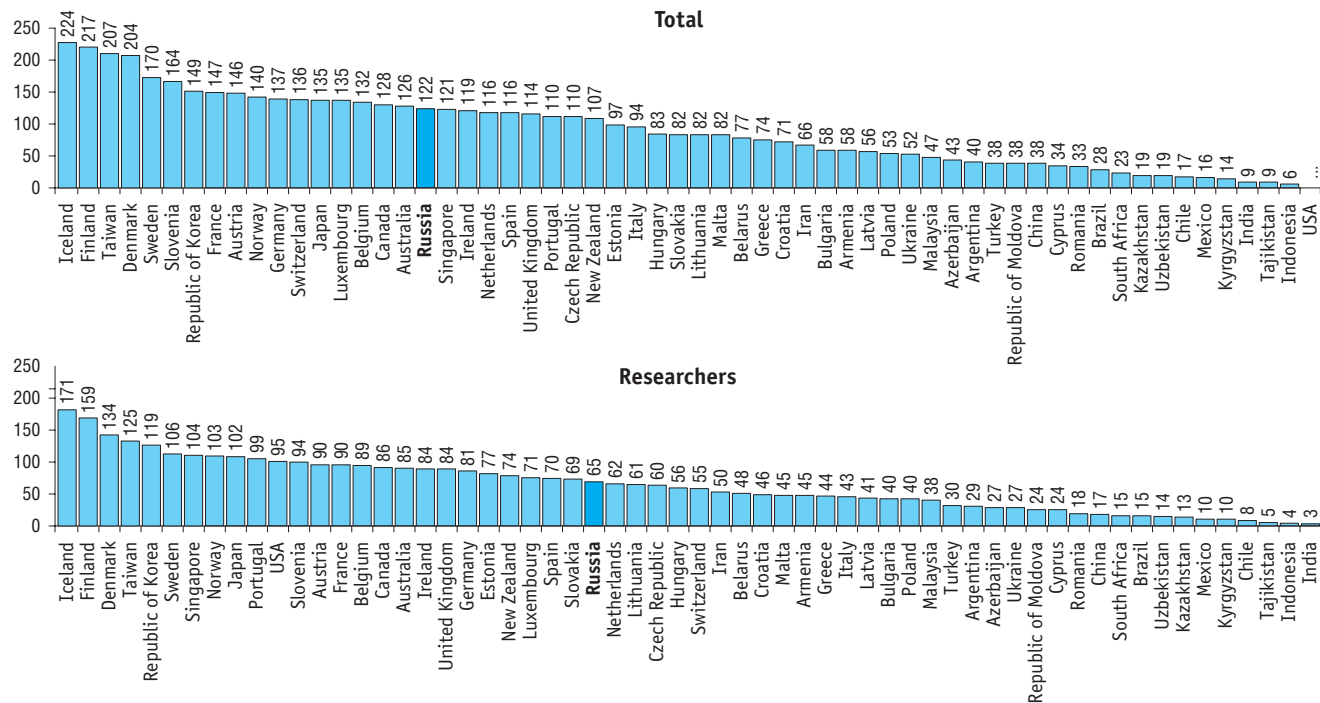
	R&D personnel	Researchers
Hungary	33960	23019
Iceland	3753	2861
Ireland	21560	15172
Israel	...	...
Italy	231914	106848
Japan	869825	656651
Luxembourg	4988	2636
Mexico	70293	46125
Netherlands	100544	53703
New Zealand	23800	16300
Norway	36950	27228
Poland	85219	64133
Portugal	52944	47301
Republic of Korea	361374	288901
Slovakia	18112	15326
Slovenia	15269	8774
Spain	215079	130235
Sweden	78480	49053
Switzerland	62066	25142
Turkey	92801	72109
United Kingdom	358583	262303
USA	...	1412639

(continued)

	R&D personnel	Researchers
EU countries which are not OECD members		
Bulgaria	16986	11902
Croatia	10622	6847
Cyprus	1285	905
Latvia	5432	3947
Lithuania	11173	8390
Malta	1382	755
Romania	29749	16080
Other countries		
Argentina	69693	50340
Brazil	266709	138653
China	2882903	1318086
India	391149	154827
Indonesia	55118	41143
Iran	141871	107810
Malaysia	57405	47242
Singapore	38996	33719
South Africa	30891	19793
Taiwan	221371	134048

* Or the nearest years for which data is available. For several CIS countries (Azerbaijan, Armenia, Belarus, Kyrgyzstan, Tajikistan), Iran and Indonesia the calculation is based on head-count data. The data for Germany, Mexico and Indonesia refers to different years.

9.9. R&D PERSONNEL PER 10 000 EMPLOYMENT: 2012* (head-count)



* Or the nearest years for which data is available. For several CIS countries (Azerbaijan, Armenia, Belarus, Kyrgyzstan and Tajikistan), Iran and Indonesia the calculation is based on head-count data, for other countries it is based on the full-time equivalent.

9.10. PERCENTAGE DISTRIBUTION OF RESEARCHERS BY SECTOR OF PERFORMANCE: 2012*

	Government sector	Business enterprise sector	Higher education sector
Russia	33.7	46.1	19.8
CIS countries			
Azerbaijan	71.2	11.6	17.2
Armenia	77.4	—	22.6
Belarus	30.3	59.1	10.6
Kazakhstan	27.4	26.6	38.4
Kyrgyzstan	52.7	13.4	33.9
Republic of Moldova	71.8	7.7	20.5
Tajikistan	82.5	—	17.5
Turkmenistan	...	...	...
Uzbekistan	32.8	12.8	54.0
Ukraine	52.4	37.6	10.0
OECD countries			
Australia	8.9	29.9	57.8
Austria	4.5	62.3	32.5
Belgium	7.3	46.0	46.0
Canada	6.4	59.9	33.4
Chile	5.4	23.9	60.2
Czech Republic	20.3	45.5	33.5
Denmark	3.1	61.6	34.8
Estonia	11.9	33.3	53.2
Finland	11.6	57.4	29.9
France	11.2	58.4	29.3
Germany	15.8	56.7	27.6
Greece	10.5	29.9	58.9

(continued)

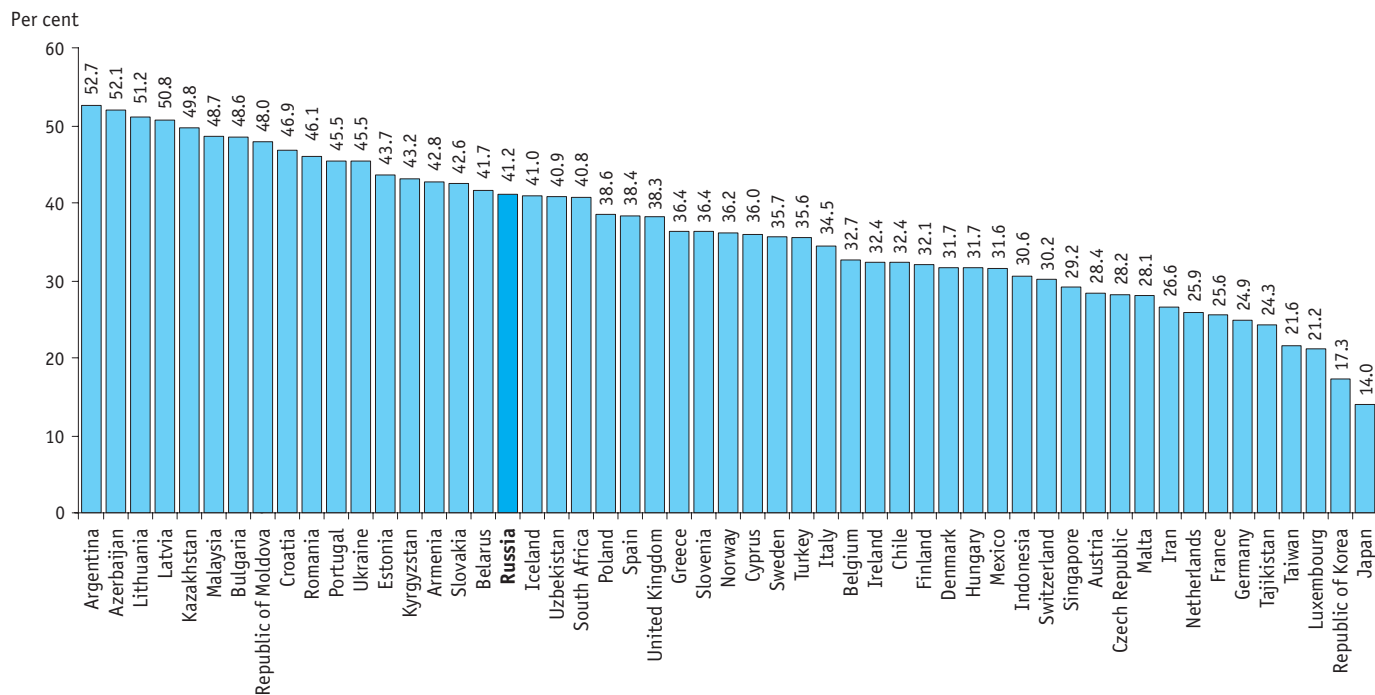
	Government sector	Business enterprise sector	Higher education sector
Hungary	22.9	51.1	26.0
Iceland	19.1	39.4	39.3
Ireland	3.6	59.3	37.1
Israel	...	...	...
Italy	16.4	38.6	41.0
Japan	4.9	74.8	19.2
Luxembourg	25.0	55.4	19.7
Mexico	19.8	41.1	36.2
Netherlands	13.0	49.5	37.5
New Zealand	11.7	31.3	57.1
Norway	16.9	47.3	35.8
Poland	21.6	16.5	61.9
Portugal	4.7	22.4	61.4
Republic of Korea	7.3	77.4	14.1
Slovakia	18.9	13.4	67.5
Slovenia	20.7	51.4	27.7
Spain	17.6	34.5	47.7
Sweden	4.3	60.4	34.9
Switzerland	1.9	41.1	57.0
Turkey	8.4	42.2	49.4
United Kingdom	3.4	32.8	62.3
USA	...	80.0	...

(continued)

	Government sector	Business enterprise sector	Higher education sector
EU countries which are not OECD members			
Bulgaria	48.5	13.0	37.8
Croatia	29.9	18.0	52.0
Cyprus	10.5	20.4	59.7
Latvia	17.4	14.0	68.6
Lithuania	16.4	16.3	67.3
Malta	5.4	65.2	29.4
Romania	36.4	21.9	40.8
Other countries			
Argentina	44.8	8.8	45.2
Brazil	5.5	25.9	67.8
China	19.0	62.1	18.9
India	48.7	37.0	14.3
Indonesia	...	...	35.1
Iran	33.6	15.0	51.5
Malaysia	5.4	12.4	82.2
Singapore	5.4	51.7	42.9
South Africa	14.8	30.6	53.6
Taiwan	11.0	64.7	23.9

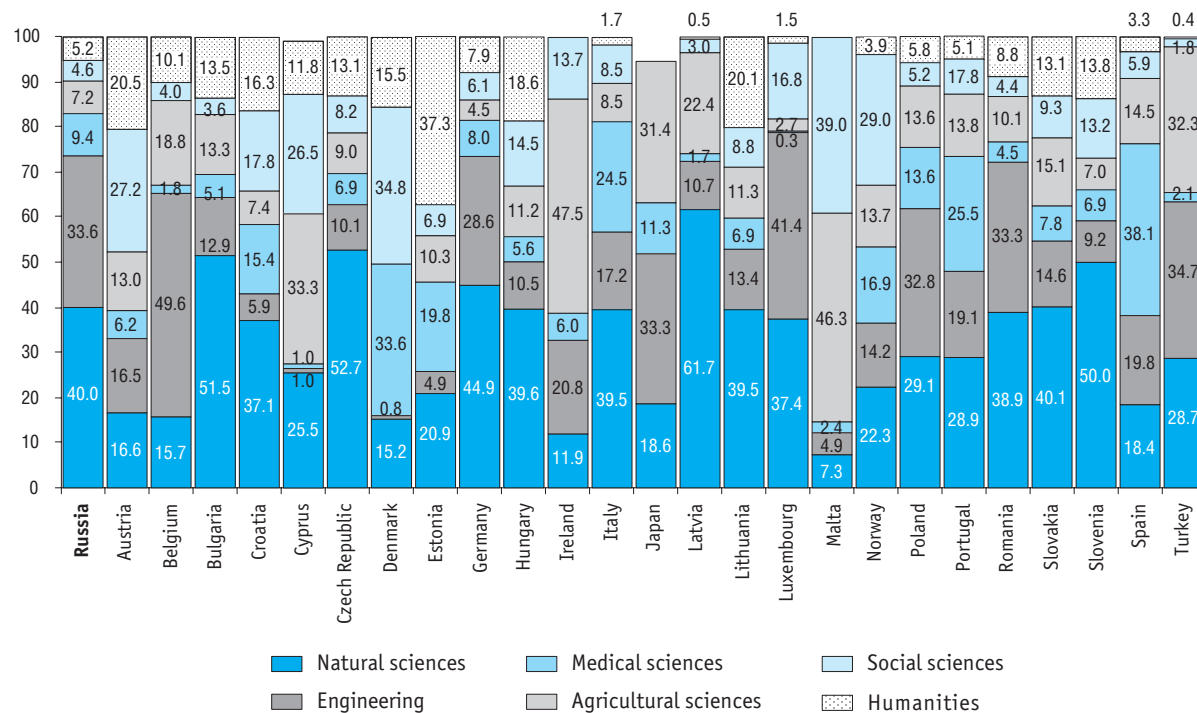
*Or the nearest years for which data is available. For several CIS countries (Azerbaijan, Armenia, Belarus, Kyrgyzstan and Tajikistan), Iran and Indonesia the calculation is based on head-count data, for other countries it is based on the full-time equivalent.

9.11. FEMALE PROPORTION IN THE NUMBER OF RESEARCHERS: 2012*



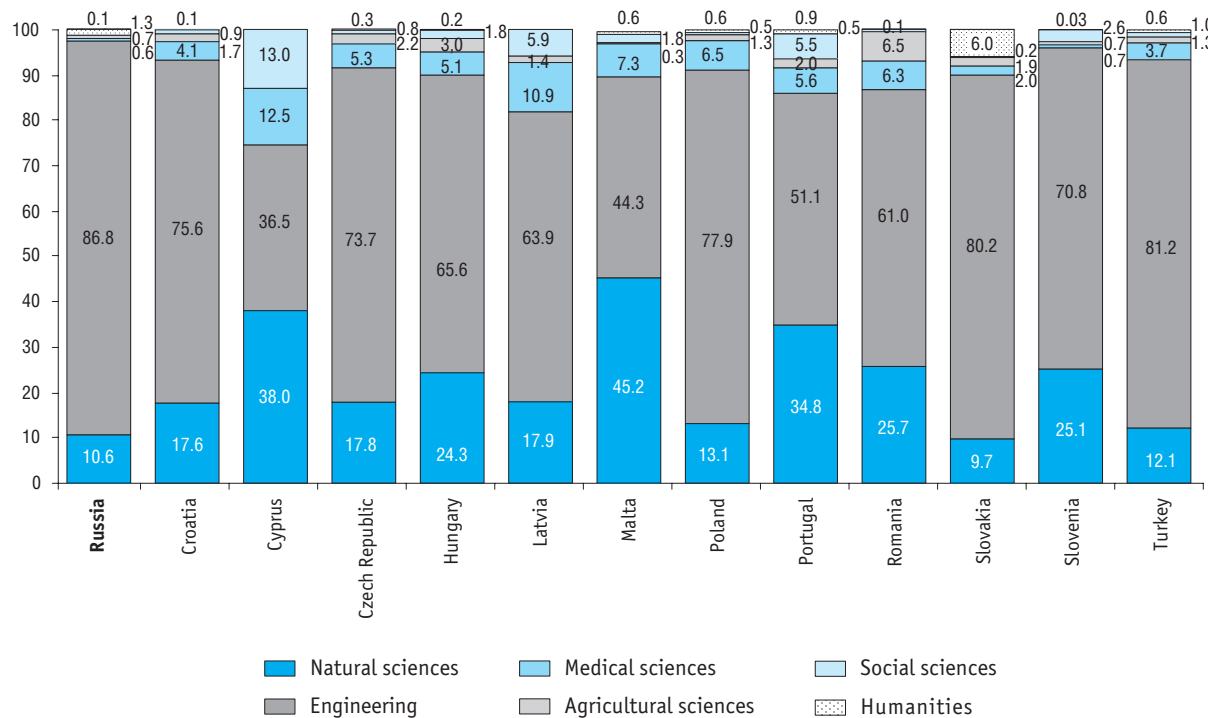
* Or the nearest years for which data is available. The calculation is based on head-count data.

9.12. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE GOVERNMENT SECTOR BY FIELD OF SCIENCE AND TECHNOLOGY: 2012*



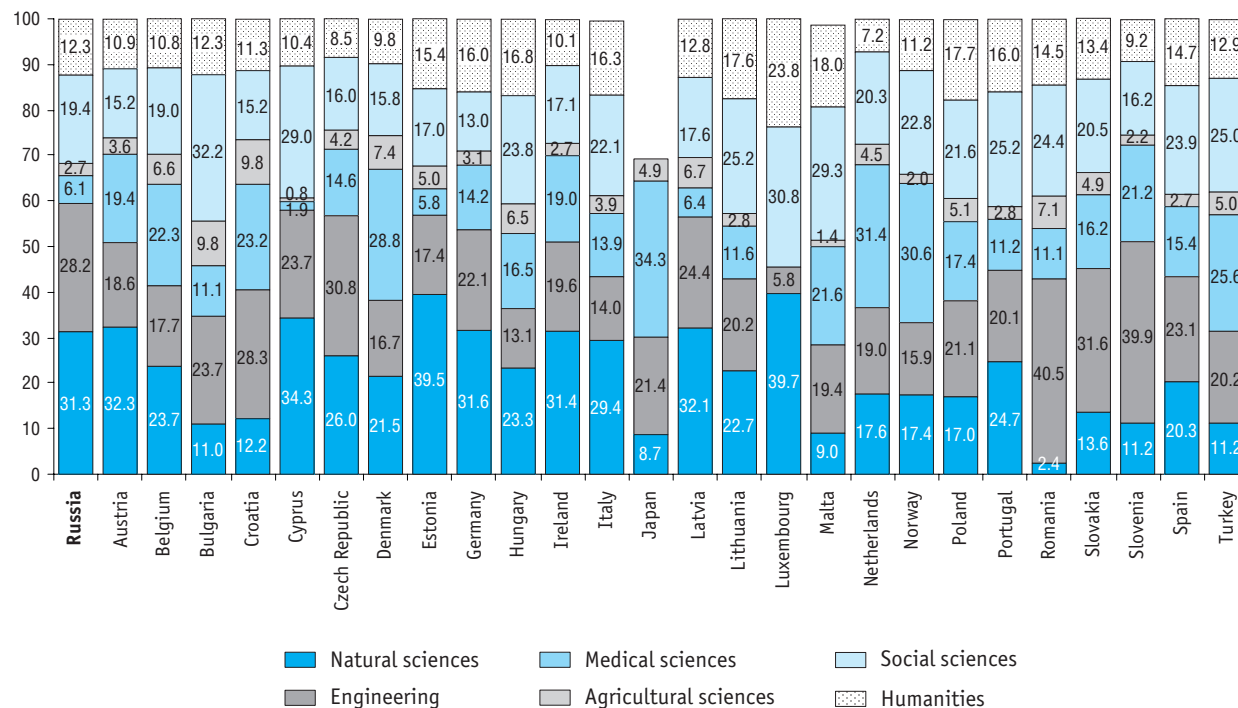
* Or the nearest years for which data is available. For Russia the calculation is based on head-count data, for other countries it is based on the full-time equivalent.

9.13. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE BUSINESS ENTERPRISE SECTOR BY FIELD OF SCIENCE AND TECHNOLOGY: 2012*



* Or the nearest years for which data is available. For Russia the calculation is based on head-count data, for other countries it is based on the full-time equivalent.

9.14. PERCENTAGE DISTRIBUTION OF RESEARCHERS IN THE HIGHER EDUCATION SECTOR
BY FIELD OF SCIENCE AND TECHNOLOGY: 2012*



* Or the nearest years for which data is available. For Russia the calculation is based on head-count data, for other countries it is based on the full-time equivalent.

9.15. PUBLICATIONS AND CITATIONS IN SCIENTIFIC JOURNALS INDEXED IN WEB OF SCIENCE: 2008-2012*

	Number of publications	Number of citations	Number of citations per publication
Russia	135363	345953	2.56
CIS countries			
Armenia	2953	13617	4.61
Azerbaijan	2092	5438	2.6
Belarus	5177	15041	2.91
Kazakhstan	1368	2631	1.92
Kyrgyzstan	308	736	2.39
Republic of Moldova	1151	4260	3.7
Tajikistan**	294	616	2.10
Turkmenistan**	61	125	2.05
Ukraine	23934	55531	2.32
Uzbekistan	1628	3994	2.45
OECD countries			
Australia	198664	1235178	6.22
Austria	57429	395291	6.88
Belgium	83990	617404	7.35
Canada	269099	1806241	6.71
Chile	24243	110338	4.55
Czech Republic	44569	214136	4.8
Denmark	59454	480692	8.09
England	389378	2937938	7.55
Estonia	6296	36278	5.76
Finland	49387	340636	6.9

* The data refers to the number of publications and citations received in 2008-2012 by publications issued within the same period. Data is presented according to 'Essential Science Indicators'.

** The data on Tajikistan and Turkmenistan is excluded due to the insignificant number of publications. The calculation is based on 'Web of Science' data. Data on the United Kingdom is presented for four constituent countries separately: England, Scotland, Wales and Northern Ireland.

(continued)

	Number of publications	Number of citations	Number of citations per publication
France	314830	2031856	6.45
Germany	440532	3068391	6.97
Greece	51249	268236	5.23
Hungary	27890	147326	5.28
Iceland	3757	35523	9.46
Ireland	31838	210970	6.63
Israel	58327	370961	6.36
Italy	255440	1621174	6.35
Japan	375342	1908423	5.08
Luxembourg	2626	13231	5.04
Mexico	47805	184555	3.86
Netherlands	152880	1226210	8.02
New Zealand	35738	202819	5.68
Northern Ireland	10176	65050	6.39
Norway	47295	296265	6.26
Poland	97710	338974	3.47
Portugal	46623	242313	5.2
Republic of Korea	198758	809144	4.07
Scotland	61124	506750	8.29
Slovakia	14460	53663	3.71
Slovenia	16435	68530	4.17
Spain	223927	1274445	5.69
Sweden	98990	729384	7.37
Switzerland	111203	971419	8.74
Turkey	106691	300656	2.82
USA	1664136	12356824	7.43
Wales	21099	141371	6.7

(continued)

	Number of publications	Number of citations	Number of citations per publication
EU countries which are not OECD members			
Bulgaria	10997	42609	3.87
Croatia	15952	53928	3.38
Cyprus	3345	14995	4.48
Latvia	2346	7876	3.36
Lithuania	9708	29621	3.05
Malta	682	2557	3.75
Romania	30895	78721	2.55
Other countries			
Argentina	36166	163143	4.51
Brazil	160443	517232	3.22
China	699044	2802343	4.01
Egypt	27107	80398	2.97
Georgia	2101	9713	4.62
India	207086	697827	3.37
Indonesia	5072	22910	4.52
Iran	84130	234104	2.78
Malaysia	27774	74512	2.68
Pakistan	21245	60783	2.86
Saudi Arabia	19746	53111	2.69
Serbia	19096	50557	2.65
Singapore	44468	283123	6.37
South Africa	37488	180179	4.81
Taiwan	121352	481307	3.97
Thailand	25928	108215	4.17

9.16. PUBLICATIONS AND CITATIONS IN SCIENTIFIC JOURNALS INDEXED IN SCOPUS: 1996-2012*

	Number of publications	Number of citations	Number of citations per publication
Russia	579814	3132050	5.52
CIS countries			
Armenia	9194	73659	8.78
Azerbaijan	7373	18607	3.00
Belarus	24466	122850	5.08
Kazakhstan	5563	21197	4.48
Kyrgyzstan	961	5008	6.04
Republic of Moldova	4513	27987	6.50
Tajikistan	870	2429	3.14
Turkmenistan	213	1259	7.29
Ukraine	108782	452610	4.29
Uzbekistan	7414	29026	3.99
OECD countries			
Australia	643028	9338061	16.73
Austria	204243	3047983	16.67
Belgium	285735	4696153	18.16
Canada	946493	15696168	18.50
Chile	66972	685110	13.24
Czech Republic	160193	1265709	9.28
Denmark	198923	3876514	21.56
Estonia	18774	204306	13.58
Finland	184924	3091345	18.55
France	1229376	17870597	15.60

* According to 'SCImago Journal & Country Rank'.

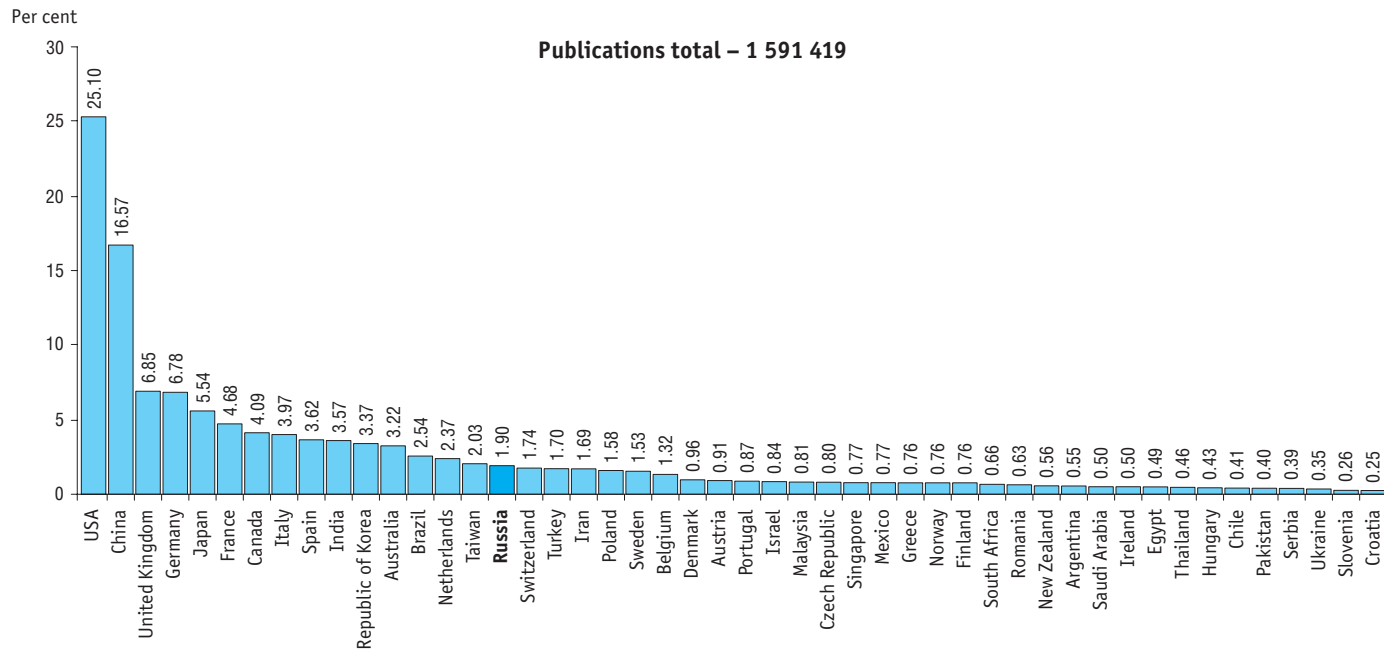
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	Number of publications	Number of citations	Number of citations per publication
Germany	1704566	25848738	16.16
Greece	171529	1827577	12.28
Hungary	109150	1189497	11.76
Iceland	10359	199408	23.70
Ireland	98785	1329296	16.47
Israel	215590	3663004	17.78
Italy	909701	12719572	15.26
Japan	1734289	20347377	12.11
Luxembourg	6459	52218	12.97
Mexico	162116	1346721	10.00
Netherlands	519258	10050413	21.25
New Zealand	122601	1705695	15.73
Norway	154481	2299463	17.23
Poland	339712	2441439	8.25
Portugal	134447	1342075	13.06
Republic of Korea	566953	4640390	10.55
Slovakia	55454	389078	7.78
Slovenia	49471	403209	9.53
Spain	715452	8688942	13.89
Sweden	361569	6810427	20.11
Switzerland	377016	7714443	22.69
Turkey	291814	1935431	8.24
United Kingdom	1763766	31393290	18.29
USA	6672307	129540193	20.45

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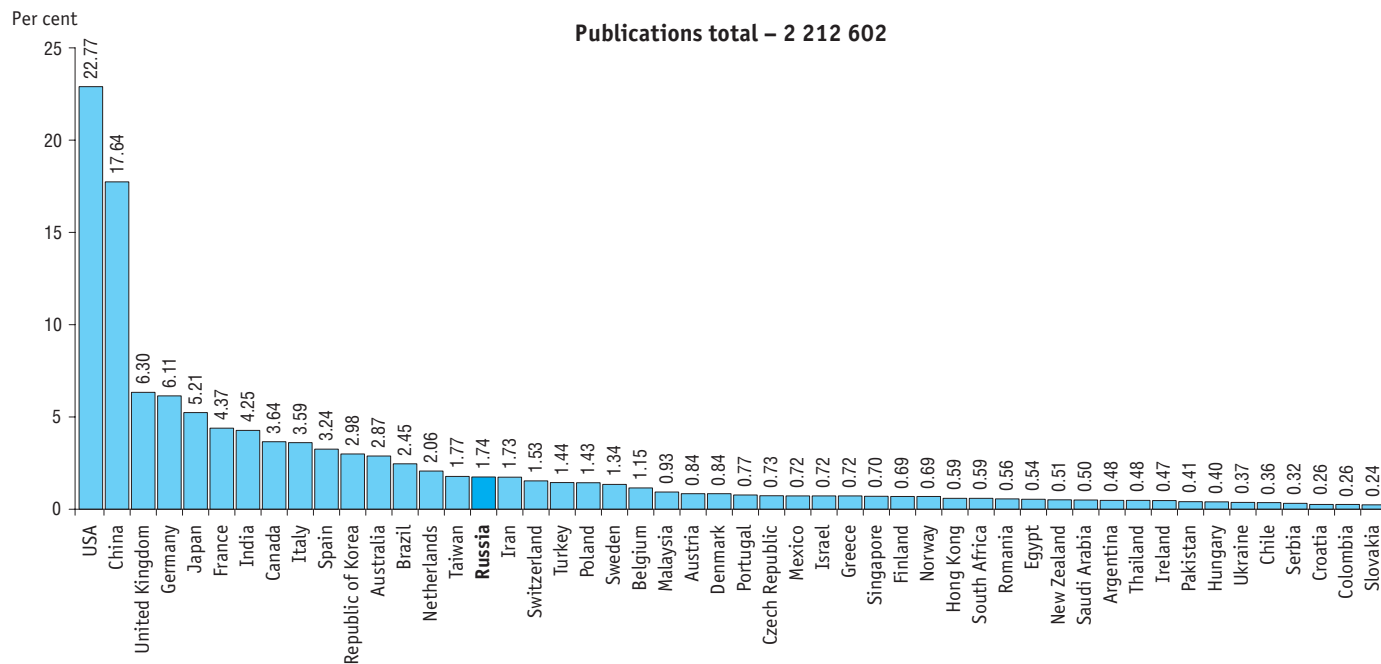
	Number of publications	Number of citations	Number of citations per publication
EU countries which are not OECD members			
Bulgaria	44609	319449	7.80
Cyprus	9938	79318	12.46
Latvia	9918	67924	8.61
Lithuania	24434	151748	8.61
Malta	2384	21115	12.50
Romania	91247	396795	6.34
Croatia	55909	305003	6.45
Other countries			
Argentina	114659	1167884	11.44
Brazil	446892	3362480	10.09
China	2655272	11253119	6.17
Egypt	87658	518096	7.56
Georgia	7309	50895	7.74
India	716232	4528302	7.99
Indonesia	19740	146670	10.94
Iran	197571	832211	8.49
Malaysia	97018	356918	7.85
Pakistan	55915	243958	6.22
Saudi Arabia	56534	293556	7.11
Serbia	28312	81010	8.75
Singapore	144653	1616952	12.95
South Africa	118747	1170454	11.36
Taiwan	389411	3259864	10.41
Thailand	79537	621817	10.96

9.17. COUNTRY SHARES IN THE TOTAL NUMBER OF PUBLICATIONS IN SCIENTIFIC JOURNALS INDEXED IN WEB OF SCIENCE: 2012*



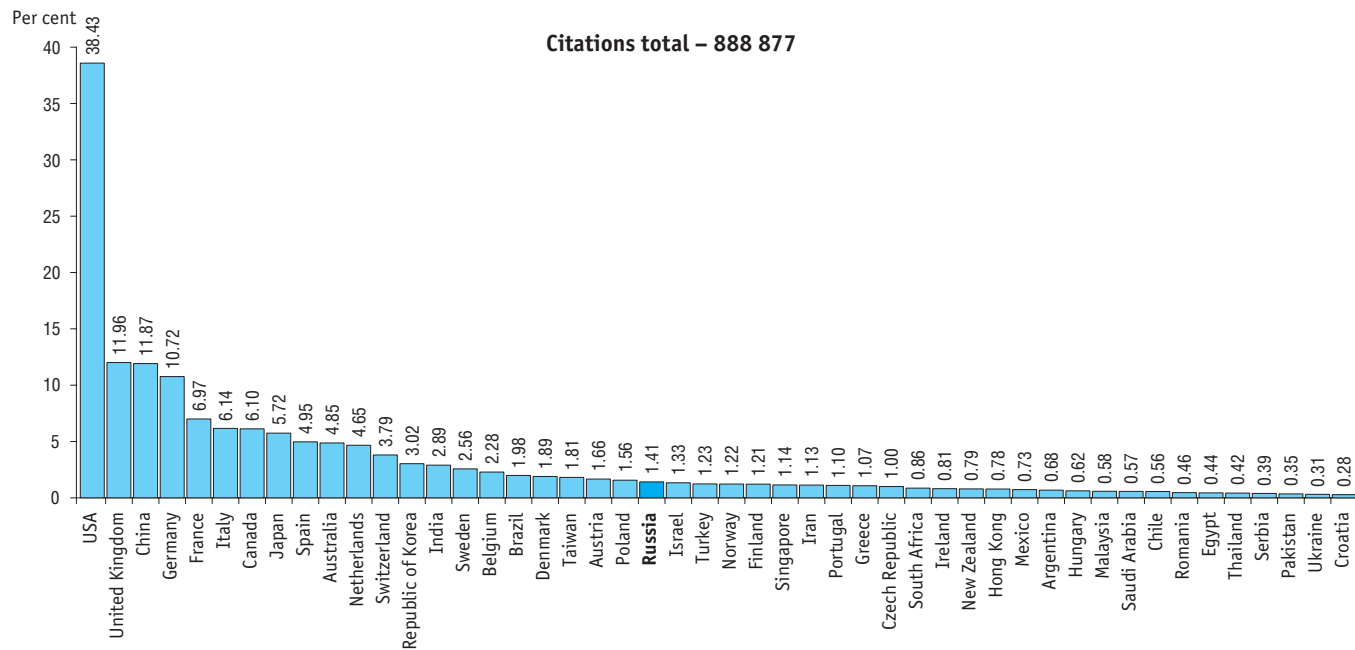
* The term 'publication' refers to three types of documents: articles, reviews, reports.

9.18. COUNTRY SHARES IN THE TOTAL NUMBER OF PUBLICATIONS IN SCIENTIFIC JOURNALS INDEXED IN SCOPUS: 2012*



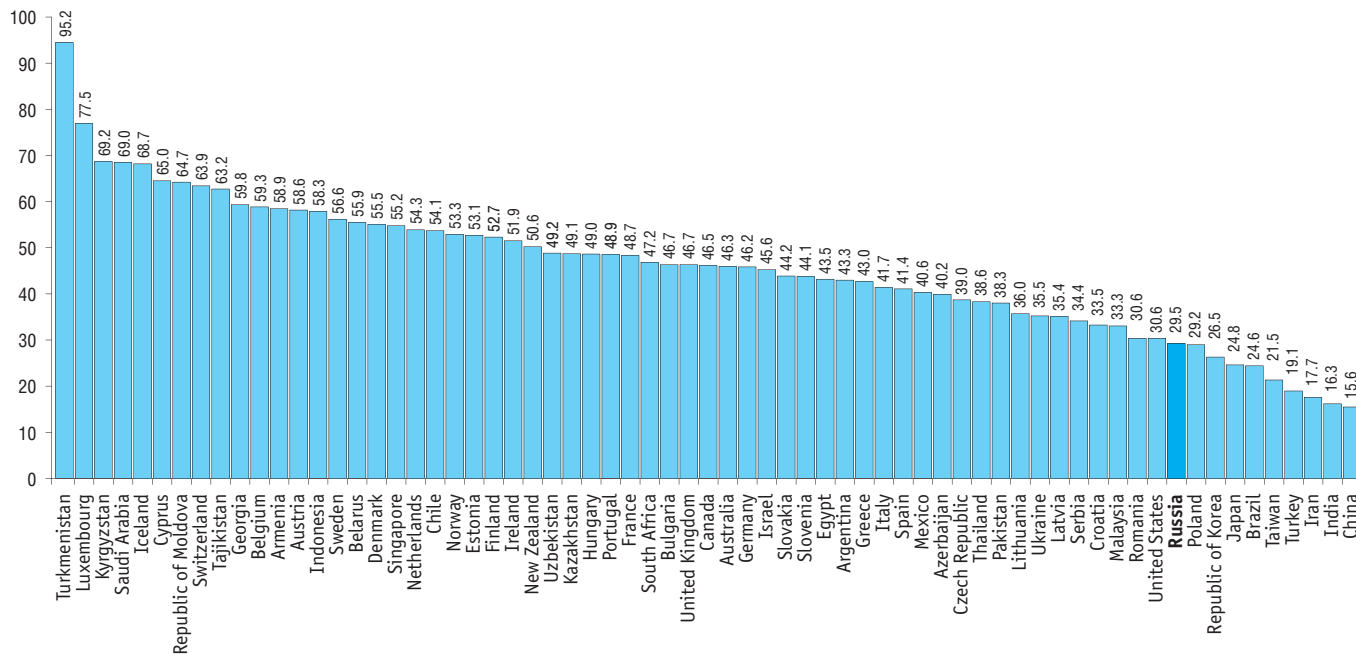
* The term 'publication' refers to three types of documents: articles, reviews, reports.

9.19. COUNTRY SHARES IN THE TOTAL NUMBER OF CITATIONS IN SCIENTIFIC JOURNALS INDEXED IN SCOPUS: 2012*



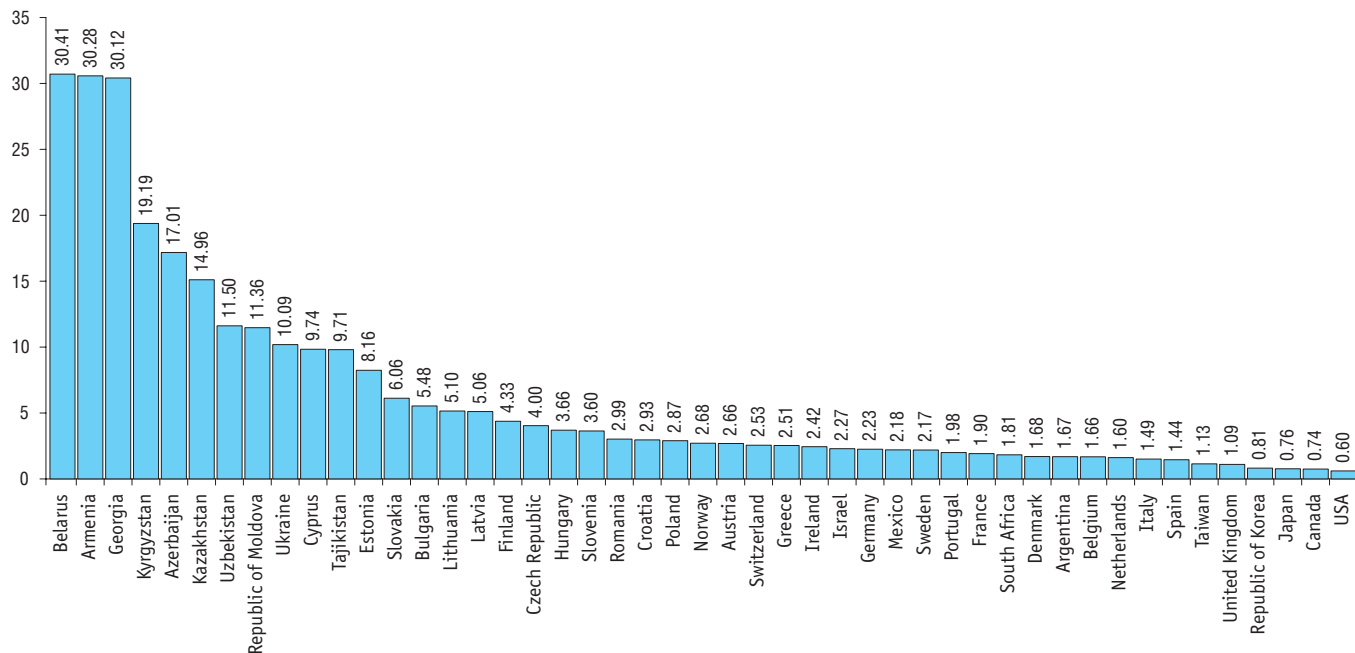
* The number of citations received in 2012 by publications issued within the same period.

9.20. PUBLICATIONS IN CO-AUTHORSHIP WITH FOREIGN RESEARCHERS AS A PERCENTAGE OF TOTAL COUNTRY PUBLICATIONS IN SCIENTIFIC JOURNALS INDEXED IN SCOPUS: 2012*



* According to 'SCImago Journal & Country Rank'.

9.21. PUBLICATIONS IN CO-AUTHORSHIP WITH RUSSIAN RESEARCHERS AS A PERCENTAGE OF TOTAL COUNTRY PUBLICATIONS IN SCIENTIFIC JOURNALS INDEXED IN SCOPUS: 2012*



* The term 'publication' refers to three types of documents: articles, reviews, reports.

9.22. PATENT APPLICATIONS FILED BY RESIDENTS AND NON-RESIDENTS AT NATIONAL PATENT AGENCIES

	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Russia	22202	28688	29989	29225	30651	30192	32254	37691	39439	41849	38564	42500	41414	44211
CIS countries														
Armenia	285	127	155	207	157	6	208	193	140	230	127	142	140	141
Azerbaijan	251	...	213	241	264	277	287	259	295	233	281	271	205	144
Belarus	1039	1198	1144	1274	1380	1265	1462	1525	1662	1730	1926	1933	1871	1871
Kazakhstan	1373	1515	1706	...	1798	...	1626	1557	...	173	1827	1964	1732	...
Kyrgyzstan	148	84	98	128	180	...	...	...	158	138	...	140	...	111
Republic of Moldova	309	250	454	269	296	306	388	312	347	295	139	150	108	115
Tajikistan	65	52	84	39	31	34	36	26	...	...	12	10	5	6
Turkmenistan	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Ukraine	5960	7224	8818	2754	3073	5779	5592	5890	6163	5697	4814	5312	5253	4955
Uzbekistan	1058	968	1246	918	1102	478	444	509	522	448	412	632	556	510
OECD countries														
Australia	14061	22001	22735	22545	21594	22833	23857	26003	26840	26346	23681	24887	25526	26358
Austria	2186	2301	2099	2261	2333	2514	2505	2649	2672	2627	2555	2673	2430	2552
Belgium	1087	820	835	748	707	636	622	651	617	708	817	760	763	882
Canada	26592	39622	39716	39741	37228	38201	39888	42038	40131	42089	37477	35449	35111	35242
Chile	1706	3120	2750	2538	2405	2867	3007	3215	3806	3952	1717	1076	2792	3019
Czech Republic	3519	4939	4752	5557	3579	1252	830	836	908	854	881	982	880	1071
Denmark	1484	1870	1945	1984	1925	2015	1823	1691	1857	1829	1649	1768	1771	1635
Estonia	79	804	717	719	602	124	38	45	63	72	96	97	77	25
Finland	3791	2903	2660	2369	2187	2 220	2059	2018	2015	1946	1933	1833	1774	1827
France	15896	17353	17104	16908	16850	17290	17275	17249	17109	16419	15693	16580	16754	16632
Germany	46158	62142	60475	58187	58481	59234	60222	60585	60992	62417	59583	59245	59444	61340
Greece	312	340	434	412	420	407	482	562	595	658	720	744	...	656
Hungary	2889	4937	5448	5906	4810	2657	1202	924	791	772	787	696	698	758

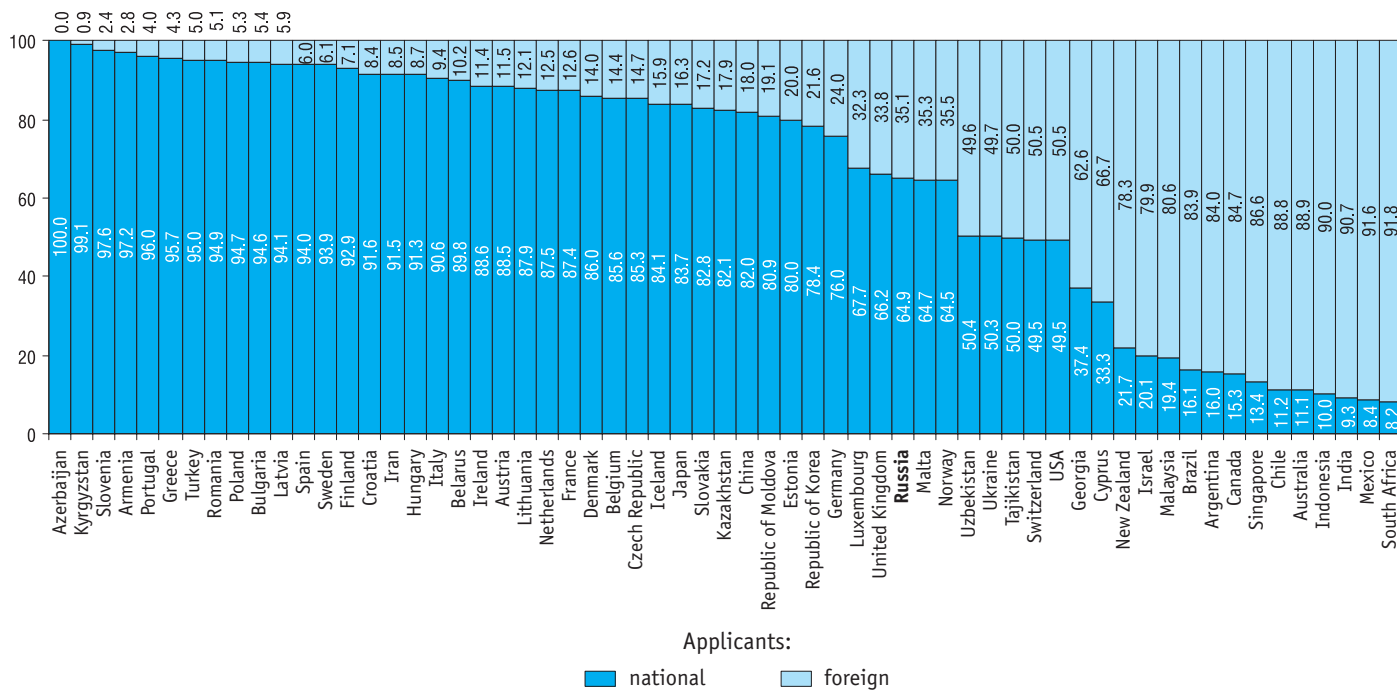
(continued)

	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Iceland	68	876	762	450	805	529	592	371	114	81	86	76	71	44
Ireland	990	1080	1169	982	939	845	864	935	925	1007	961	792	561	555
Israel	4425	6802	6769	6308	5898	6414	6826	7496	8009	7742	6774	7306	6886	6792
Italy	8574	9273	9487	9500	9401	9247	9331	10903	10125	9449	9717	9723	9721	9310
Japan	368831	419543	440248	421805	413093	423081	427078	408674	396291	391002	348596	344598	342610	342796
Luxembourg	104	176	121	83	24	41	88	52	40	71	84	100	128	161
Mexico	5234	13061	13565	13062	12207	13198	14435	15505	16599	16581	14281	14576	14055	15314
Netherlands	2692	2994	2653	2603	2861	2743	2850	2716	2446	2732	2854	2767	2895	2713
New Zealand	4719	7048	7275	6948	6873	6531	7005	7365	7844	5724	6358	6636	6209	7099
Norway	5408	6700	6431	6287	5861	5490	5986	6076	6656	5430	3604	1813	1776	1564
Poland	3860	7303	6530	6605	6241	7740	6583	2812	2753	2778	3140	3430	4123	4657
Portugal	201	146	163	179	165	187	205	220	281	405	617	545	646	647
Republic of Korea	78499	102010	104612	106136	118651	140115	160921	166189	172469	170632	163523	170101	178924	188915
Slovakia	1669	2040	1942	1858	1647	453	250	283	345	242	239	282	257	203
Slovenia	430	431	408	401	370	384	373	299	346	307	385	453	...	...
Spain	2600	3194	2995	3134	3180	3184	3353	3427	3532	3884	3803	3779	3626	3475
Sweden	4865	5068	4500	3955	3728	3230	2960	2859	2925	2855	2649	2549	2341	2436
Switzerland	3720	2551	2453	2293	2227	2176	2098	2102	2034	2033	2078	2155	2043	2988
Turkey	1690	3433	3212	1838	837	917	1146	1232	2021	2397	2732	3357	4113	4666
United Kingdom	27521	32747	32081	31531	31624	29954	27988	25745	24999	23379	22465	21929	22259	23235
USA	228142	295895	326471	334445	342441	356943	390733	425966	456154	456321	456106	490226	503582	542815

(continued)

	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU countries which are not OECD members														
Bulgaria	731	940	1068	1024	958	396	313	291	239	271	266	260	283	259
Croatia	600	875	961	1031	1086	1224	1012	436	437	401	318	278	251	...
Cyprus	...	70	48	69	97	94	64	34	19	21	12	8	8	12
Latvia	300	179	180	214	115	151	169	151	147	215	243	185	183	205
Lithuania	133	127	123	131	113	114	115	99	82	105	107	114	108	124
Malta	24	116	133	202	...	471	...	805	39	48	29	19	15	17
Romania	2232	1290	1405	1841	1174	1137	984	876	886	1031	1091	1418	1463	1077
Other countries														
Argentina	4264	6636	5779	4861	4557	4602	5269	5617	5743	5582	4916	4717	...	4813
Brazil	7448	17376	17204	16022	17704	19272	20005	24074	21825	22917	21944	22686	28306	30116
China	18699	51906	63450	80232	105317	130384	173327	210501	245161	289838	314604	391177	526412	652777
Georgia	707	456	503	446	403	458	461	535	162	247	468	359	398	372
India	6566	8538	10592	11465	12613	17466	24382	28928	35218	36812	34287	39762	42291	43955
Indonesia	2874	3890	3926	3843	3300	3668	4304	4612	...	...	4540	5638	5838	...
Iran	407	616	993	1195	1642	2782	4494	6527	...	...	...	...	...	...
Malaysia	4052	6227	5934	4937	5062	5442	6286	4800	2372	5303	5737	6383	6452	6940
Singapore	2557	8236	8656	8199	7874	8585	8605	9163	9951	9692	8736	9773	9794	9685
South Africa	6365	3295	6393	6600	6225	6789	7004	7605	8317	7941	6735	6383	7245	7444

9.23. PERCENTAGE DISTRIBUTION OF PATENT APPLICATIONS BY APPLICANT AND COUNTRY: 2012*



* Or the nearest years for which data is available.

9.24. PATENT APPLICATIONS FILED BY RESIDENTS AT NATIONAL AND FOREIGN PATENT AGENCIES*

	Number of applications				Number of applications per 1 000 000 population				Number of applications per 1 000 000 economically active population			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
Russia	28857	32835	31463	34803	202.2	229.8	220.2	243.4	381.2	435.0	415.2	459.9
CIS countries												
Armenia	160	192	200	188	53.9	64.0	66.7	62.7	114.3	128.0	133.3	125.3
Azerbaijan	333	456	418	640	37.2	50.4	45.6	68.8	75.8	101.3	90.5	136.2
Belarus	3229	2893	2368	2812	339.9	304.5	249.3	296.0	723.7	645.0	525.8	624.9
Kazakhstan	1788	1921	1821	...	111.1	117.9	109.7	...	208.1	219.8	205.3	...
Kyrgyzstan	28	181	73	132	5.2	32.9	13.3	23.6	11.3	71.5	28.4	50.8
Republic of Moldova	161	231	193	149	44.7	64.2	53.6	41.4	127.6	189.8	156.5	124.2
Tajikistan	29	25	22	21	3.9	3.3	2.8	2.6	9.3	7.8	6.7	6.0
Turkmenistan	9	1	2	2	1.8	0.2	0.4	0.4	4.3	0.5	0.9	0.9
Ukraine	2868	3038	3318	3083	62.2	66.2	72.6	67.6	123.2	130.4	142.3	133.5
Uzbekistan	239	374	304	271	8.6	13.1	10.4	9.1	20.4	30.7	24.0	20.8
OECD countries												
Australia	10692	11556	11530	11234	483.2	515.3	506.6	494.9	913.8	971.1	952.9	920.8
Austria	9973	11062	11599	12088	1192.5	1318.8	1377.4	1439.0	2319.3	2572.6	2697.4	2811.2
Belgium	10159	11804	11718	11719	941.5	1084.6	1067.4	1055.8	2116.5	2360.8	2391.4	2391.6
Canada	22106	24209	24967	26304	655.4	709.4	724.0	753.7	1201.4	1301.6	1328.0	1391.7
Chile	505	543	678	761	29.7	31.6	39.2	43.7	67.8	69.9	84.1	92.8
Czech Republic	1637	1906	1812	1875	156.0	181.2	172.6	178.6	309.6	361.7	344.6	353.8
Denmark	9835	11233	11812	10666	1781.1	2025.4	2121.0	1904.6	3391.4	3873.4	4073.1	3677.9
Estonia	270	304	275	293	201.4	226.8	205.2	225.4	389.6	441.2	394.0	418.6
Finland	11427	13046	11698	12658	2140.3	2432.4	2171.4	2344.1	4235.4	4849.8	4327.8	4688.1

* By the priority year at the national level.

(continued)

	Number of applications				Number of applications per 1 000 000 population				Number of applications per 1 000 000 economically active population			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
France	60935	65623	67107	67188	945.3	1013.0	1030.6	1022.6	2159.5	2316.1	2364.1	2349.2
Germany	162522	173532	175550	178896	1985.0	2122.5	2146.6	2184.3	3897.4	4161.4	4160.0	4219.2
Greece	1193	1172	480	1096	105.7	103.6	42.4	98.7	238.6	234.4	96.0	219.2
Hungary	1853	1634	1712	1654	184.9	163.4	171.7	167.1	441.2	380.0	398.1	375.9
Iceland	425	346	325	314	1331.3	1088.0	1018.8	1046.7	2348.1	1911.6	1805.6	1570.0
Ireland	4372	4102	4185	4214	963.2	899.6	914.3	916.1	1900.9	1864.5	1902.3	1915.5
Israel	9778	10928	10991	12208	1306.6	1433.8	1415.7	1545.3	3154.2	3415.0	3434.7	3391.1
Italy	26570	27910	28300	27547	441.4	461.4	466.0	454.6	1062.8	1116.4	1127.5	1076.1
Japan	464226	468320	474984	486070	3625.8	3657.5	3715.7	3812.3	6980.8	7061.5	7206.2	7409.6
Luxembourg	1486	1890	2347	2399	2982.7	3724.1	4518.7	4798.0	4016.2	4973.7	6017.9	7996.7
Mexico	1340	1631	1918	2142	12.5	15.1	17.6	19.5	28.3	34.1	39.2	41.8
Netherlands	34680	33388	33496	29906	2098.5	2009.9	2006.6	1780.1	3896.6	3794.1	3806.4	3360.2
New Zealand	2996	3223	3059	2856	691.6	735.7	692.9	649.1	1302.6	1401.3	1274.6	1190.0
Norway	5046	5595	5547	5703	1045.4	1144.4	1119.9	1140.6	1940.8	2151.9	2109.9	2112.2
Poland	3551	4061	4900	6023	93.1	105.4	127.2	156.4	205.5	237.2	284.5	348.2
Portugal	1140	1059	1019	1097	107.2	99.6	95.7	104.5	203.6	189.1	185.3	199.5
Republic of Korea	170392	178644	187739	203410	3464.5	3615.5	3771.4	4068.2	6983.3	7203.4	7479.6	7976.9
Slovakia	323	371	440	365	59.6	68.3	80.9	67.6	119.6	137.4	163.0	135.2
Slovenia	920	1043	663	495	450.6	509.1	323.0	235.7	882.9	1001.0	650.6	495.0
Spain	9298	10733	10825	11380	202.4	233.0	234.7	246.3	404.3	464.6	468.6	492.6
Sweden	20652	22443	21987	21161	2220.9	2393.0	2326.8	2227.5	4208.7	4536.7	4383.4	4149.2
Switzerland	35843	39393	38710	39858	4594.7	5059.4	4919.1	4982.3	7526.9	8200.0	7904.8	8664.8
Turkey	3319	4211	5283	5986	46.1	57.7	71.4	79.6	131.5	161.1	194.0	221.7
United Kingdom	48767	50865	50749	50447	789.2	817.0	808.9	791.9	1563.0	1619.9	1606.0	1581.4
USA	398485	432911	440433	460276	1297.0	1397.5	1411.5	1466.3	2561.6	2787.2	2840.6	2969.5

(continued)

	Number of applications				Number of applications per 1 000 000 population				Number of applications per 1 000 000 economically active population			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
EU countries which are not OECD members												
Bulgaria	397	391	395	372	52.2	52.1	53.4	51.0	110.1	110.9	114.5	109.4
Croatia	423	404	366	...	96.1	91.8	85.1	...	213.1	205.6	191.9	...
Cyprus	296	266	352	435	269.1	241.8	320.0	395.5	518.4	454.7	591.6	725.0
Latvia	503	454	325	364	218.7	206.4	154.8	182.0	424.1	394.4	304.0	330.9
Lithuania	139	174	142	198	42.1	52.7	47.3	66.0	85.1	107.3	94.2	132.0
Malta	262	155	276	256	632.9	372.6	661.9	612.4	1488.6	861.1	1533.3	1280.0
Romania	1150	1501	1599	1243	53.4	69.9	74.6	58.4	115.9	150.6	162.0	121.9
Other countries												
Argentina	312	298	339	1048	7.8	7.4	8.3	25.5	17.0	16.2	18.2	55.4
Brazil	5070	4212	6363	6603	26.2	21.6	32.3	33.2	50.7	41.4	61.7	63.0
China	241547	308318	436144	560681	181.0	229.9	323.7	413.2	298.8	379.5	534.1	711.9
Georgia	261	185	158	153	59.3	41.1	35.1	34.0	112.1	78.5	66.4	63.8
India	11939	14862	15860	18020	10.0	12.3	13.0	14.6	25.5	31.8	33.3	37.2
Indonesia	472	580	608	...	2.0	2.4	2.5	...	4.2	5.1	5.2	...
Iran	60	89	113	68	0.8	1.2	1.5	0.9	2.4	3.5	4.4	2.6
Malaysia	1812	1937	1947	1939	65.2	68.4	67.6	66.4	149.6	156.6	153.9	152.7
Singapore	3325	4229	4568	4826	672.3	831.4	880.5	910.6	1097.4	1348.5	1411.2	1608.7
South Africa	1963	1996	1761	1608	39.7	39.9	34.8	31.4	111.9	114.8	99.7	86.0

9.25. TRIADIC PATENT FAMILIES*

	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Russia	63	73	56	56	51	42	50	44	45	42	41	46	48
OECD countries													
Australia	236	379	281	290	284	303	283	251	245	235	224	219	212
Austria	223	276	258	234	244	271	298	298	286	273	293	303	306
Belgium	375	329	317	295	281	355	324	321	329	319	293	305	311
Canada	390	525	501	506	492	556	529	521	521	482	482	510	485
Chile	2	2	5	5	3	5	6	7	6	5	9	9	9
Czech Republic	3	9	12	15	16	16	16	17	19	20	18	19	19
Denmark	189	226	186	186	197	235	276	247	257	258	226	226	230
Estonia	0	1	2	0	3	0	1	5	3	3	3	3	3
Finland	319	352	311	204	231	261	264	267	270	264	271	273	280
France	1976	2151	1976	1998	2042	2158	2150	2028	2034	2041	2026	2017	2053
Germany	4914	5823	5178	5043	4996	5163	5297	5107	5105	4962	4985	4931	4982
Greece	2	6	8	8	10	8	12	12	11	9	9	7	7
Hungary	25	29	30	28	31	34	32	32	36	36	35	35	34
Iceland	6	11	3	10	4	5	4	4	5	4	4	4	3
Ireland	31	31	49	41	55	58	70	62	74	73	69	66	67
Israel	161	326	288	237	261	310	365	319	299	298	285	279	283
Italy	621	640	654	607	606	640	642	619	615	610	598	597	595
Japan	9592	14913	13321	13545	14314	14851	13864	13418	13451	12190	12164	13269	13705
Luxembourg	14	20	26	10	17	19	15	18	13	15	12	13	12
Mexico	12	9	12	10	12	12	13	15	13	12	9	9	10
Netherlands	769	1026	924	984	950	956	913	900	848	838	841	779	811

(continued)

	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
New Zealand	21	48	33	56	58	64	50	52	49	47	43	44	41
Norway	87	106	78	79	81	88	95	91	90	85	101	98	101
Poland	5	9	12	12	10	9	8	8	11	13	15	16	17
Portugal	3	2	5	6	8	5	9	9	17	12	9	9	10
Republic of Korea	331	732	891	1182	1481	1747	1651	1547	1654	1438	1564	1660	1709
Slovakia	2	2	2	3	2	1	2	3	2	3	2	3	4
Slovenia	7	9	6	11	9	8	10	7	7	8	7	7	7
Spain	83	146	153	147	110	152	155	146	151	156	161	165	162
Sweden	760	621	565	531	516	533	636	697	728	712	676	686	701
Switzerland	771	814	746	674	702	727	721	735	699	690	699	707	708
Turkey	2	4	10	8	9	13	12	11	12	12	16	20	21
United Kingdom	1586	1633	1469	1507	1519	1512	1520	1501	1434	1398	1390	1374	1371
USA	12365	13855	13080	13878	14175	14538	14686	13956	13360	12986	12295	12416	12649
EU countries which are not OECD members													
Bulgaria	3	1	2	2	5	2	3	2	1	...	...	...	...
Croatia	6	6	6	18	8	7	4	6	1	0	2	...	...
Cyprus	...	0	5	2	1	1	2	1	2	1	...	...	...
Latvia	2	3	1	2	3	1	5	3	1	1	...	...	...
Lithuania	...	1	0	3	14	8	1	...	...	...	...	...	...
Malta	...	3	3	1	...	...	2	...	...	...	...	...	...
Romania	2	0	0	1	1	1	6	1	4	3	2	2	2

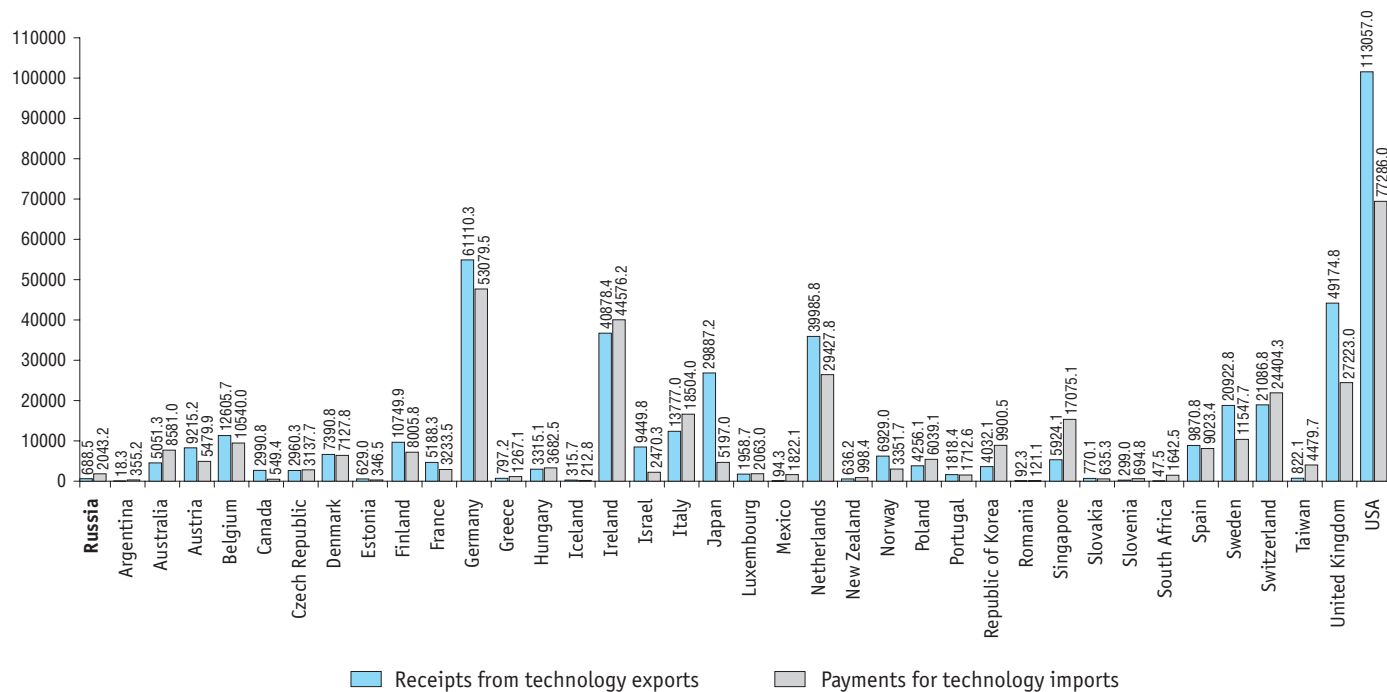
(continued)

	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Other countries													
Argentina	6	7	6	4	5	5	7	7	7	6	6	5	5
Brazil	20	29	47	32	26	31	24	28	11	9	0	0	...
China	21	71	100	157	202	219	299	311	393	429	630	768	958
India	8	48	80	131	105	102	91	89	57	60	29	12	...
Singapore	21	70	87	91	66	95	87	93	80	83	82	78	76
South Africa	25	36	16	15	33	20	25	25	23	26	22	22	21

* Patent applications filed simultaneously at the European Patent Office, the US Patent and Trademark Office, and the Japan Patent Office.

9.26. RECEIPTS FROM TECHNOLOGY EXPORTS AND PAYMENTS FOR TECHNOLOGY IMPORTS: 2012*

(million US dollars)



* Or the nearest years for which data is available.

TECHNICAL NOTES

Advanced manufacturing technologies – technologies and technological processes involving machines, devices, equipment and instruments based on microelectronics or computer-controlled, and used in designing, manufacturing or processing of a product.

Applied research is the original investigation that acquires new knowledge in order to solve particular problem. Applied research is undertaken to determine possible uses for the findings of basic research and aids in discovering new methods or ways of achieving specific and predetermined objectives.

Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view. It results in hypotheses, theories, methods, etc. Basic research can additionally provide recommendations for applied research to expose the opportunities for the practical application of the obtained results, as well as result in scientific publications, etc.

Bibliometric indicators are calculated on the basis of the Scopus and Web of Science databases. Publications considered include scientific articles, conference papers and reviews. A publication is associated with a country if it is listed in the affiliated address of the author or one of the co-authors.

Competitive research funding (programme financing) – funds received by the organization, which took the first place according to the decision of the competition commission made on the basis of summarizing the results of the competition of scientific, technical programs, innovation and other projects related to the implementation of scientific research and development, on the basis of the best conditions for the implementation

of the competitive project presented by the organisation in comparison with other participants.

Development is a systematic work drawing on existing knowledge gained from research and/or practical experience, and is directed toward producing new materials, products processes or devices, and also services, systems or methods; or to improving substantially those already produced.

Doctoral courses are one of the training forms for highly qualified R&D and teaching personnel that may lead to a Doctor of Sciences degree. Persons having a Candidate of Sciences degree can be admitted to doctoral courses. The duration of training in doctoral courses should not exceed three years.

Enterprises engaged in technological innovation are those involved in development and introduction of technologically new or improved products or services, technologically new or improved processes or techniques of service production (transfer), and other types of innovative activities.

Expenditure on innovation is the actual expenditure related to implementation of various types of innovative activity performed within an enterprise (a sector, region, country). Innovation expenditure comprises current and capital expenditure. Innovation statistics covers the expenditure of technological, organisational and marketing innovations.

Federal budget appropriations on civil S&T – federal budget funds allocated for civil basic and applied research. In accordance with the new budget classification adopted in Russia since January 1, 2005, appropriations earlier included in the subsections 0601 'Basic Research' and 0602 'Development of Perspective Technologies and Priority Objectives of S&T Progress' of section 06 'Basic Research and Promotion of Science and Tech-

nology Progress' of the federal budget are attributed to basic and applied research, respectively.

Fixed (capital) assets of research and development (R&D) comprise:

- buildings and installations;
- machinery and equipment, including experimental devices, research instruments, automation means, and computers, etc.;
- transportation means;
- instruments, appliances, and other fixed assets on the balance of R&D institutions and their experimental bases, used in their main activities.

Grants are cash and other assets that are provided free of charge and irrevocably by persons and legal entities, including foreign citizens and foreign legal entities and international organisations which have the right to provide grants to the Russian Federation in accordance with the procedures laid down by the Government of the Russian Federation, to realise specific S&T programmes and projects, innovation projects, to conduct specific research under the conditions attached by grant-makers (Federal law of August 26, 1996, № 127-Federal Act 'On science and state scientific and technical policy' (with changes and amendments)).

Gross domestic expenditure on R&D — expressed in a monetary form is the actual expenditure on research and development performed by organisations during the reference year irrespective of financing sources. Its estimation is based on statistical accounting of expenditure on R&D performed by organisations during the reference year regardless of the source of funds.

Gross domestic expenditure on R&D comprises:

- **current expenditure** – salaries, social security payments, expenditure on acquisition of equipment due to prime cost of projects, oth-

er material costs (acquired raw or fabricated materials, completing devices, half-finished products, fuel, energy, production works and services, etc.), and other current costs;

- **capital expenditure** includes those on land, construction or acquisition of buildings, acquisition of equipment included in fixed assets, etc.

Gross domestic expenditure on R&D is estimated at current and constant prices calculated using the GDP deflator.

Innovative activity of an enterprise characterises the degree of involvement an enterprise has in innovation in general, or in specific innovative activities, within a certain period. The level of innovative activity is generally defined as the ratio of enterprises engaged in technological, organisational and marketing innovations to the total enterprises surveyed in a country, sector, region, etc. within a specific period of time.

Innovative activities are all types of economic activities related to the transformation of ideas (usually the result of research and development or other scientific achievements) into technologically new or significantly improved goods and services, introduced to the market, as well as new or significantly improved technological processes used in service production (transfer) or implemented in manufacturing modes. Innovative activities incorporate scientific, technological, organisational, financial and commercial actions that lead to innovation.

Innovative goods and services are products (goods and services) that have undergone technological modification in the last three years. By degree of novelty innovative goods and services include newly introduced (or technologically modified) and improved products.

Intangible assets are the long-term resources of an entity, but have no physical existence; they derive their value from intellectual or legal rights,

and from the value they add to the other assets. These are licenses, patents, technological innovations, software, designs, other intellectual property, lease and other rights, privileges, trademarks, called invisible assets. Intangible assets are divided into those produced and non-produced. According to the Russian Classifier of Fixed Assets, produced intangible assets refer to information open to the public which is the result of intellectual activity and is recorded on a relatively low-value data storage medium, including mineral exploration (information obtained as a result of exploration); computer software; entertainment, literary and artistic originals; high-tech industrial technology; other intangible fixed assets (integrated circuits, trade secrets, “know-how”, trademarks, patents), viewed as the result of creating information.

License is a legal agreement between an owner (licenser) and a grantee (licensee) on the transmission for a contingent consideration of exclusive rights to the utilization of industrial property or know-how, occurring under certain conditions and for a certain period of time. A patent license agreement provides the right to use patents, and defines the volume of transferred rights, the validity period, the territory coverage, and also the type of payment.

Marketing innovation includes newly implemented or significantly improved marketing methods, that incorporate major changes in product package and design, innovative sales, as well as the presentation and promotion of products, and new pricing strategies. Marketing innovations are aimed at better addressing customer needs and the expansion of consumer goods and services, and developing new markets with the objective of increasing a range of sales.

Organisational innovation is the implementation of a new organisational method in a firm’s business practices, workplace organisation or external relations. Organisational innovations are aimed at increasing ef-

fectiveness of an enterprise performance by reducing administrative and transaction costs, improving workplace organisation (working time) and thereby increasing labour productivity, gaining access to market assets, and reducing supply costs.

Patent for invention is a document granted by the government to an inventor that entitles priority, authorship and exclusive right to use the invention for an agreed period of operation.

Postgraduate courses are the main form of training the teaching and R&D personnel in the system of postgraduate professional education that may lead to a Candidate of Sciences degree. In accordance with the current Nomenclature of Scientific Occupations accepted in the Russian Federation, postgraduate training is implemented by a field of science and technology and scientific discipline. Persons having higher (university or equivalent) education are admitted to postgraduate courses. Postgraduate training includes full-time or part-time forms. The duration of study in the former case should not exceed three years, in the latter, four years.

R&D personnel is a population of persons whose creative activities are aimed at the advancement of scientific knowledge or search for new areas of its application, as well as direct services related to performance of R&D. R&D personnel is subdivided into the following categories:

- **researchers** are professionals engaged in R&D and immediately performing the creation of new knowledge, products, processes, methods, and systems, as well as in the management of these activities. Researchers usually have higher education (university or equivalent) degrees;
- **technicians** take part in R&D, performing technical functions, as a rule, under the supervision of researchers. Technicians generally have secondary professional education and (or) the necessary professional experience and knowledge;

- **supporting staff** includes staff members performing supporting functions connected with R&D: employees of planning and finance units, patent services, S&T information units, S&T libraries; workers engaged in assembling, adjusting, maintaining and repairing scientific equipment and instruments; workers of pilot (experimental) production units; laboratory assistants without higher or secondary professional education;
- **other auxiliary personnel** includes staff members performing general functions connected with the activities of an organization as a whole (employees of accounting departments, personnel departments, units for material and technical supplies, secretarial and clerical staff, etc.).

Research and development (R&D) – the term comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications.

Sectors of R&D performance:

- government sector includes institutions subordinated to government ministries and agencies, responsible for state administration and satisfaction of public needs in general, as well as non-profit institutions completely or mainly financed and controlled by the government;
- business enterprise sector includes all organisations and enterprises whose main activity is connected with the production of goods or services for sale, including those owned by the state, as well as private non-profit institutions serving the abovementioned organisations;
- higher education sector includes universities and other higher education institutions irrespective of financing sources and legal sta-

tus, as well as research institutes, experimental stations, and clinics directly controlled by higher education institutions, or associated with them;

- private non-profit sector consists of private institutions that are not aiming to gain profit (professional societies, voluntary associations, etc.) and private individual organisations.

Sources of R&D funding – primary sources of financing R&D. They are determined based on the fact of the direct transfer of funds from the institution-customer to the institution-performer. As a whole, R&D funds of the reporting institution are divided into those which can be attributed as their own and those that are received from other external institutions.

The sources of R&D funding include:

- government (including the federal budget, regional and local (municipal) budgets);
- general university funds;
- non-budget funds (Russian Foundation for Technological Development, regional development funds, sectoral and intersectoral funds for research and experimental development, regional ecological funds, etc.);
- funds from abroad;
- government sector institutions' funds;
- business enterprise sector funds;
- higher education sector funds;
- private non-profit sector funds;
- own funds of institutions.

Technological innovations are the final result of innovative activities, embodied in a technologically new or improved good or service introduced on a market, a technologically new or improved process or technique of service

production (transfer) used in practice. An accomplished innovation is one that is introduced to the market or implemented into the production process.

Technology balance of payments registers the volume of commercial transactions related to international technology and other intangible assets transfers (exports and imports).

Trade in technology with foreign countries comprises of all contracts on exports and imports of technologies and engineering services, including contracts between joint ventures and foreign enterprises registered in Russia, as well as their branches (offices) registered in Russia and their foreign mother companies.

SCIENCE AND TECHNOLOGY INDICATORS IN THE RUSSIAN FEDERATION

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