Statistical Office of the Republic of Serbia

BULLETIN

RESEARCH AND DEVELOPMENT IN THE REPUBLIC OF SERBIA, 2017

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Preface

The Statistical Office of the Republic of Serbia publishes the results of the regular annual statistical survey on research and development organizations entitled "Annual Report on Research and Development – Form IR". The results refer to 2017, the territory of the Republic of Serbia, Srbija – sever, Srbija – jug and to the regions: Beogradski region, Region Vojvodine, Region Šumadije and Zapadne Srbije, and Region Južne i Istočne Srbije.

R&D organizations and their activity are classified according to the type, size class and scientific field. Employees in the R&D activity are shown by occupation, scientific qualifications, type of employment and working hours, as well as by full-time equivalent (FTE). The data on research personnel, by age, have been published annually since 2007. In tables on research projects, finalised and non-finalised works are shown by type, ordering party and scientific field, while published works, inventions and patents are presented by publishing destination, i.e. sale, and by scientific field. The bulletin contains a tabulated presentation of funds for R&D work by origin, costs by source and use, as well as a presentation of investments in the R&D activity

Statistical data in this bulletin are available on the level of scientific fiels in which R&D organizations are classified, i.e. on the level of the scientific field of R&D works or inventions. All the data are available on the level of scientific field, both for R&D organizations and R&D projects.

The survey data have been published since 1965 in statistical bulletins of the Federal Statistical Office, and since 2002 by the Statistical Office of the Republic of Serbia.

Belgrade, 2018

the Director

Dr Miladin Kovačević

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METHODOLOGICAL EXPLANATIONS

Legal basis

The survey "Annual Report on Research and Development" is carried out on the basis of the Law on Official Statistics ("Official Journal of the RS", number 104/2009).

Methodological basis

Objective and scope of the statistical survey

The R&D activity, as an activity of particular importance for the Republic of Serbia, is an integral part of the international, scientific, education and cultural world. R&D is an activity of particular importance for the complete development of the Republic of Serbia based on knowledge, and combined with tertiary education is the principle factor and catalyst of economic and social growth.

R&D is a systematic creative work undertaken in view of discovering new stock of knowledge, in order to raise the general civilization level of the society and to use the knowledge in all social fields. The Annual Report on Research and Experimental Development (hereinafter: R&D) provides data on the scientific potential:

- number of organizations and units engaged in the R&D activity: by type, scientific field and section of economic activity;
- personnel: by sex, educational attainment, occupation, type of employment, working hours, full-time equivalent (FTE) and age;
- funds (receipts, expenditure and investments): by type of research, funding sources and use;
- results of R&D work: R&D works (finalised works, on-going works and published works): by type of research, ordering party and scientific party;
- inventions and patents: by scientific fields and R&D intensity.

Reporting units, statistical units

The population of the research and unit of observation of the statistical survey are all organisations engaged in the R&D activity, whether the latter is the principal activity or not.

Survey coverage

The reporting units of the survey are:

- R&D institutes and institutes of national interest for the Republic of Serbia; independent R&D organisations, business entities and institutions which principal or predominant activity is R&D.
- R&D units incorporated in enterprises or institutions.
- Tertiary educational institutions (faculties and arts academies), which activity, pursuant to the Law, is education and R&D-related, have been covered by this survey since 1978;

- Non-profit organisations – associations engaged in this activity. Excluded are R&D organisations created by the Ministry of the Interior and Ministry of Defence. The new Law on the R&D Activity anticipates the monitoring of these organisations.

Method, timetable and sources for data collection

The survey is conducted annually and the questionnaires are sent to reporting units the second week of March. Three questionnaires are used for that purpose, the first relating to business entities and centres of excellence (technology and business incubators, science and technology parks), the second to faculties and institutes, and the third to non-profit organisations – associations. The reporting units fill in the R&D questionnaire in April of the current year, and the data refer to the previous (reference) year, i.e. they are shown as of the end of the reference year. Data on the R&D activity are collected on full coverage: all faculties/academies, whatever the ownership, all R&D institutes, business entities and non-profit organisations/associations. All data on the number of R&D organisations and employees are shown as of 31 December of the reference year, while those on R&D works, receipts and expenditure refer to the whole year.

The main data sources are: human resources records on employees appointed to R&D, accounting records on realised receipts and calculated investments in R&D, as well as records of specialised services on the result of R&D activities – projects, works, patents pending, etc.

List and definitions of main concepts - indicators

Type of R&D organisation: R&D organisations are institutions and other legal entities, as well as units incorporated in business entities and institutions, which activity is completely or predominantly R&D-related. All the organisations are classified into:

- independent R&D institutes;
- Centres of excellence: the status of the centre can be acquired by an institute, i.e. tertiary education institution or their organisational part(s) if they have achieved in a five-year period ultimate and internationally recognised scientific and professional results in a specific scientific discipline based on what they have an extended international scientific, technical and technological co-operation.
- Tertiary education institution
- R&D units of business entities;
- Non-profit organisations/associations.

Sector of performance is determined according to the division of the economic activity in which R&D is performed. There are five sectors:

- Business sector covers business entities and organisations which primary activity is the market production of goods and services, and their sale at economically significant prices.
- This sector includes also private non-profit organisations, as well as incorporated R&D units.
- Government sector includes organisations, department offices and other bodies furnishing common services, other than tertiary education, which cannot be provided under market conditions and reflects the economical and social policy of the society. By definition, this sector covers: activities of the administration, defence and public order; health, education, culture, recreation and other social services; promotion of economic growth and living standard, and technological development. The legal, executive and institutional structure should be included in this sector, whether these are funded from regular or extraordinary budget.
- Non-profit sector covers non-market, private non-profit organisation serving households free of charge or at low cost. These organisations may be created by citizens' associations in order to provide goods and services to the members of the association or for general purposes. This sector includes professional associations, humanitarian organisations, trade associations, consumers' associations, etc.

- Tertiary education sector covers universities, faculties and academies, whatever their funding sources and legal status. This sector includes R&D institutes and clinics operating under the direct control of or administered by the tertiary education organisation.
- Sector "abroad" covers organisations and individuals located beyond the political boundaries of the country, as well as related land owned by these organisations. It also includes all international organisations, including their facilities on the national territory.

Personnel:

- **Researcher** is a person with at least tertiary educational attainment, i.e. having at least completed undergraduate academic studies and who is engaged in R&D work and holding the title pursuant to the Law. Depending on realised results in R&D, the researcher can acquire the research title: researcher-apprentice and researcher-associate, and the scientific title: senior scientific associate and scientific advisor.
- **Assistant-researchers** do not hold any research title; work directly with researchers in carrying out professional or technical works relative to R&D (laboratory technicians, engineers and technicians of technical sciences, designers, librarians, information assistant, computer experts, language editors, etc.).
- **Administrators** carry out exclusively or predominantly organisational, clerical, legal, administrative or financial work (treasurer, secretaries, jurists, etc.).
- Other personnel carry out supporting activities in R&D organisations (employed in workshops, on agricultural land, couriers, switchboard operators, maintenance workers, drivers, suppliers, etc.).
- Excluded are personnel engaged in protection and security, restaurants, hygiene maintenance, and related (guards, desk clerks, charwomen, etc.).

R&D projects and studies: shown are works completed from 1st January to 31st December, whatever their beginning. Works not being ordered by ordering parties are excluded.

- Basic research is a creative, systematic activity focused on acquiring new knowledge on the origin and causes of phenomena and facts, without any particular application or use in view. The results of a basic research are often formulated as general principles, theories or rules.

- Applied research is undertaken whether to establish a possibility to use the results of a research, having in mind its practical application, or to find new methods or ways that facilitate the achievement of a particular objective set in advance. This survey starts from existing knowledge and examines it thoroughly in view of solving specific issues.

- Experimental (development) research is a creative systematic activity based on the results of the basic and applied research, and practical knowledge directed towards introducing new materials, products, devices, processes and methods.

Inventions and patents: an invention is a new technological solution to a specific problem that involves inventiveness and applicability. A patent is the right that protects an invention. Patent and patent rights are acquired after recognition and registration of a granted right in the corresponding register.

Industry classification according to R&D intensity (based on OECD standards): high technology, medium-high technology, medium-low technology and low technology.

Level of data representativeness

All data are available for R&D organisations, scientific fields, type of research, type of employment and personnel's working hours, level of certain activity classes (2010 CA) and according to the territorial principle (up to *NSTJ 2* level).

Survey organisation

The Statistical Office of the Republic of Serbia, with the help of the Ministry of Education, Science and Technological Development, prepares and carries out the survey on R&D organisations.

The Office defines and produces uniform methodological basis and tools for the survey, compiles address records of reporting units, prints the questionnaires and other materials for the carrying out of the survey, sends the questionnaires to the reporting units, collects the questionnaires, controls the coverage, response accuracy and data completeness, transmit data electronically, makes calculation and logical controls, processes the data and publishes the results for the Republic of Serbia in the "Statistical Yearbook of Serbia", as well as in this bulletin.

Harmonisation with international recommendations, standards and practice

The methodology for this survey is harmonised with international standards to the greatest possible extent (as much as allowed by our laws), methodological recommendations from the Frascati Manual, with the exception of some financial indicators, which are difficult to present due to differences in financing the R&D work of our country in relation to most of EU member countries and other international organisations.

SURVEY TOOLS

Questionnaires and instructions for filling the questionnaires

- questionnaires: IR-1, IR-2 and IR-3;
- instructions for filling in the questionnaires;
- Questionnaires are available on the website of the Statistical Office of the Republic of Serbia www.stat.gov.rs.

List of nomenclatures and classifications used in the survey

- Classification of Activities – CA ("Official Journal of the RS", number 54/2010)
- Nomenclature of statistical territorial units NSTJ ("Official Journal of the RS", number 109/09 and 46/10)
- Fields of Science and Technology Classification, OECD 2006, Frascati Manual
- International Standard Classification of Education 2011 (the classifications and nomenclature are available on the website of the Statistical Office of the Republic of Serbia, www.stat.gov.rs)

Previous editions

Data on R&D organizations for previous years are available in the bulletins of the Federal Statistical Office, and since 2002 they have been published by the Statistical Office of the Republic of Serbia.

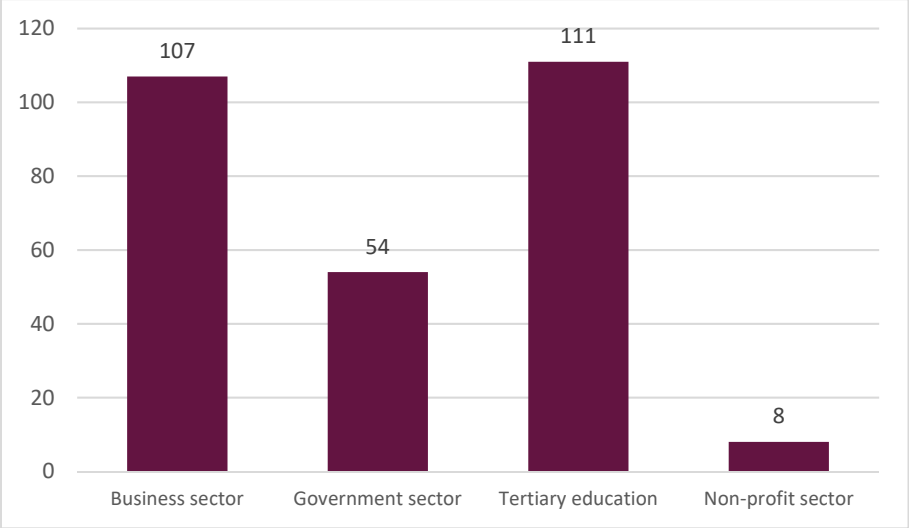
Symbols

-	= nil
…	= data not available
1)	= footnote
0	= data value under 0.5 of measurement unit

Research and development, 2017

1.1. R&D organizations by sectors and fields of science, 2017

	Total	Business sector	Government sector	Tertiary education	Non-profit sector
REPUBLIC OF SERBIA	**280**	**107**	**54**	**111**	**8**
Natural sciences	47	19	11	16	1
Engineering and technology	103	68	9	23	3
Medical and health sciences	19	9	3	7	-
Agricultural sciences	26	9	11	6	-
Social sciences	62	2	9	47	4
Humanities	23	-	11	12	-
SRBIJA – SEVER	214	74	52	80	8
Natural sciences	38	12	11	14	1
Engineering and technology	69	45	8	13	3
Medical and health sciences	16	8	3	5	-
Agricultural sciences	22	7	10	5	-
Social sciences	49	2	9	34	4
Humanities	20	-	11	9	-
Beogradski region	**167**	**56**	**47**	**58**	**6**
Natural sciences	30	7	11	12	-
Engineering and technology	51	35	5	8	3
Medical and health sciences	14	8	3	3	-
Agricultural sciences	16	4	8	4	-
Social sciences	38	2	9	24	3
Humanities	18	-	11	7	-
Region Vojvodine	**47**	**18**	**5**	**22**	**2**
Natural sciences	8	5	-	2	1
Engineering and technology	18	10	3	5	-
Medical and health sciences	2	-	-	2	-
Agricultural sciences	6	3	2	1	-
Social sciences	11	-	-	10	1
Humanities	2	-	-	2	-
SRBIJA – JUG	66	33	2	31	-
Natural sciences	9	7	-	2	-
Engineering and technology	34	23	1	10	-
Medical and health sciences	3	1	-	2	-
Agricultural sciences	4	2	1	1	-
Social sciences	13	-	-	13	-
Humanities	3	-	-	3	-
Region Šumadije i Zapadne Srbije	**34**	**18**	**1**	**15**	**-**
Natural sciences	5	4	-	1	-
Engineering and technology	17	13	-	4	-
Medical and health sciences	1	-	-	1	-
Agricultural sciences	3	1	1	1	-
Social sciences	7	-	-	7	-
Humanities	1	-	-	1	-
Region Južne i Istočne Srbije	**32**	**15**	**1**	**16**	**-**
Natural sciences	4	3	-	1	-
Engineering and technology	17	10	1	6	-
Medical and health sciences	2	1	-	1	-
Agricultural sciences	1	1	-	-	-
Social sciences	6	-	-	6	-
Humanities	2	-	-	2	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**



2.1. Full-time employees engaged in R&D activities, by sectors, fields of science and sex, 2017 (head count)

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**22782**	**11411**	**16182**	**8098**	**1533**	**778**	**3037**	**1539**	**559**	**214**	**1471**	**782**
Natural sciences	5185	2631	3977	2062	299	130	590	287	96	34	223	118
Engineering and technology	6729	2649	4352	1704	603	236	1138	434	226	63	410	212
Medical and health sciences	2804	1715	2419	1454	75	55	143	94	59	41	108	71
Agricultural sciences	2458	1235	1134	568	191	118	531	287	65	23	537	239
Social sciences	3765	2072	2848	1480	194	121	481	320	91	43	151	108
Humanities	1841	1109	1452	830	171	118	154	117	22	10	42	34
Business sector	**3340**	**1146**	**1610**	**532**	**659**	**238**	**639**	**193**	**233**	**81**	**199**	**102**
Natural sciences	1172	317	751	178	180	61	156	47	40	7	45	24
Engineering and technology	1824	632	762	289	416	138	397	106	135	39	114	60
Medical and health sciences	138	89	33	23	24	19	41	17	39	29	1	1
Agricultural sciences	153	68	29	14	27	12	42	20	17	6	38	16
Social sciences	53	40	35	28	12	8	3	3	2	-	1	1
Government sector	**5262**	**2873**	**3034**	**1819**	**247**	**134**	**1113**	**535**	**129**	**41**	**739**	**344**
Natural sciences	1984	1196	1539	974	57	27	254	130	40	17	94	48
Engineering and technology	1199	533	384	198	96	48	446	174	59	13	214	100
Medical and health sciences	191	148	165	123	5	5	17	17	-	-	4	3
Agricultural sciences	1190	590	360	205	76	47	329	159	26	9	399	170
Social sciences	307	167	249	123	11	6	40	33	2	1	5	4
Humanities	391	239	337	196	2	1	27	22	2	1	23	19
Tertiary education	**14156**	**7377**	**11536**	**5746**	**623**	**402**	**1273**	**804**	**193**	**91**	**531**	**334**
Natural sciences	2029	1118	1687	910	62	42	180	110	16	10	84	46
Engineering and technology	3693	1478	3204	1216	91	50	288	151	30	11	80	50
Medical and health sciences	2475	1478	2221	1308	46	31	85	60	20	12	103	67
Agricultural sciences	1115	577	745	349	88	59	160	108	22	8	100	53
Social sciences	3394	1856	2564	1329	167	103	433	280	85	41	145	103
Humanities	1450	870	1115	634	169	117	127	95	20	9	19	15
Non-profit sector	**24**	**15**	**2**	**1**	**4**	**4**	**12**	**7**	**4**	**1**	**2**	**2**
Engineering and technology	13	6	2	1	-	-	7	3	2	-	2	2
Social sciences	11	9	-	-	4	4	5	4	2	1	-	-
SRBIJA – SEVER	18982	9466	13184	6597	1339	675	2662	1308	498	191	1299	695
Natural sciences	4715	2365	3574	1831	283	122	553	267	87	29	218	116
Engineering and technology	5462	2148	3482	1392	488	183	996	360	196	58	300	155
Medical and health sciences	2107	1325	1798	1111	38	29	104	73	59	41	108	71
Agricultural sciences	2314	1161	1059	533	188	117	505	267	64	23	498	221
Social sciences	3067	1705	2244	1177	194	121	419	274	77	35	133	98
Humanities	1317	762	1027	553	148	103	85	67	15	5	42	34
Business sector	**3045**	**1031**	**1495**	**491**	**605**	**211**	**581**	**168**	**204**	**76**	**160**	**85**
Natural sciences	1129	294	727	165	176	58	146	43	36	5	44	23
Engineering and technology	1648	580	690	269	369	116	367	99	111	36	111	60
Medical and health sciences	135	88	31	23	23	18	41	17	39	29	1	1
Agricultural sciences	80	29	12	6	25	11	24	6	16	6	3	-
Social sciences	53	40	35	28	12	8	3	3	2	-	1	1
Government sector	**5057**	**2752**	**2968**	**1777**	**222**	**124**	**1086**	**513**	**129**	**41**	**652**	**297**
Natural sciences	1984	1196	1539	974	57	27	254	130	40	17	94	48
Engineering and technology	1018	426	336	168	72	38	422	153	59	13	129	54
Medical and health sciences	191	148	165	123	5	5	17	17	-	-	4	3
Agricultural sciences	1166	576	342	193	75	47	326	158	26	9	397	169
Social sciences	307	167	249	123	11	6	40	33	2	1	5	4
Humanities	391	239	337	196	2	1	27	22	2	1	23	19
Tertiary education	**10856**	**5668**	**8719**	**4328**	**508**	**336**	**983**	**620**	**161**	**73**	**485**	**311**
Natural sciences	1602	875	1308	692	50	37	153	94	11	7	80	45
Engineering and technology	2783	1136	2454	954	47	29	200	105	24	9	58	39
Medical and health sciences	1781	1089	1602	965	10	6	46	39	20	12	103	67
Agricultural sciences	1068	556	705	334	88	59	155	103	22	8	98	52
Social sciences	2696	1489	1960	1026	167	103	371	234	71	33	127	93
Humanities	926	523	690	357	146	102	58	45	13	4	19	15
Non-profit sector	**24**	**15**	**2**	**1**	**4**	**4**	**12**	**7**	**4**	**1**	**2**	**2**
Engineering and technology	13	6	2	1	-	-	7	3	2	-	2	2
Social sciences	11	9	-	-	4	4	5	4	2	1	-	-

2.1. Full-time employees engaged in R&D activities, by sectors, fields of science and sex, 2017 (head count) (continued)

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
Beogradski region	**13081**	**6640**	**8890**	**4627**	**1042**	**512**	**2022**	**964**	**370**	**134**	**757**	**403**
Natural sciences	3502	1898	2602	1470	256	119	458	232	69	22	117	55
Engineering and technology	3611	1361	1990	793	408	141	800	253	138	33	275	141
Medical and health sciences	1340	864	1132	721	38	29	104	73	44	31	22	10
Agricultural sciences	1372	711	720	373	150	98	282	156	44	15	176	69
Social sciences	2049	1104	1489	751	50	26	318	203	64	28	128	96
Humanities	1207	702	957	519	140	99	60	47	11	5	39	32
Business sector	**1913**	**724**	**718**	**312**	**521**	**185**	**415**	**116**	**138**	**51**	**121**	**60**
Natural sciences	462	166	169	66	149	55	97	36	25	2	22	7
Engineering and technology	1222	419	481	195	326	99	261	59	59	15	95	51
Medical and health sciences	135	88	31	23	23	18	41	17	39	29	1	1
Agricultural sciences	41	11	2	-	11	5	13	1	13	5	2	-
Social sciences	53	40	35	28	12	8	3	3	2	-	1	1
Government sector	**4242**	**2338**	**2711**	**1637**	**187**	**101**	**907**	**425**	**115**	**35**	**322**	**140**
Natural sciences	1984	1196	1539	974	57	27	254	130	40	17	94	48
Engineering and technology	819	306	208	94	52	25	382	126	57	12	120	49
Medical and health sciences	191	148	165	123	5	5	17	17	-	-	4	3
Agricultural sciences	550	282	213	127	60	37	187	97	14	4	76	17
Social sciences	307	167	249	123	11	6	40	33	2	1	5	4
Humanities	391	239	337	196	2	1	27	22	2	1	23	19
Tertiary education	**6904**	**3565**	**5459**	**2677**	**332**	**224**	**688**	**416**	**113**	**47**	**312**	**201**
Natural sciences	1056	536	894	430	50	37	107	66	4	3	1	-
Engineering and technology	1557	630	1299	503	30	17	150	65	20	6	58	39
Medical and health sciences	1014	628	936	575	10	6	46	39	5	2	17	6
Agricultural sciences	781	418	505	246	79	56	82	58	17	6	98	52
Social sciences	1680	890	1205	600	25	10	270	163	58	26	122	91
Humanities	816	463	620	323	138	98	33	25	9	4	16	13
Non-profit sector	**22**	**13**	**2**	**1**	**2**	**2**	**12**	**7**	**4**	**1**	**2**	**2**
Engineering and technology	13	6	2	1	-	-	7	3	2	-	2	2
Social sciences	9	7	-	-	2	2	5	4	2	1	-	-
Region Vojvodine	**5901**	**2826**	**4294**	**1970**	**297**	**163**	**640**	**344**	**128**	**57**	**542**	**292**
Natural sciences	1213	467	972	361	27	3	95	35	18	7	101	61
Engineering and technology	1851	787	1492	599	80	42	196	107	58	25	25	14
Medical and health sciences	767	461	666	390	-	-	-	-	15	10	86	61
Agricultural sciences	942	450	339	160	38	19	223	111	20	8	322	152
Social sciences	1018	601	755	426	144	95	101	71	13	7	5	2
Humanities	110	60	70	34	8	4	25	20	4	-	3	2
Business sector	**1132**	**307**	**777**	**179**	**84**	**26**	**166**	**52**	**66**	**25**	**39**	**25**
Natural sciences	667	128	558	99	27	3	49	7	11	3	22	16
Engineering and technology	426	161	209	74	43	17	106	40	52	21	16	9
Agricultural sciences	39	18	10	6	14	6	11	5	3	1	1	-
Government sector	**815**	**414**	**257**	**140**	**35**	**23**	**179**	**88**	**14**	**6**	**330**	**157**
Engineering and technology	199	120	128	74	20	13	40	27	2	1	9	5
Agricultural sciences	616	294	129	66	15	10	139	61	12	5	321	152
Tertiary education	**3952**	**2103**	**3260**	**1651**	**176**	**112**	**295**	**204**	**48**	**26**	**173**	**110**
Natural sciences	546	339	414	262	-	-	46	28	7	4	79	45
Engineering and technology	1226	506	1155	451	17	12	50	40	4	3	-	-
Medical and health sciences	767	461	666	390	-	-	-	-	15	10	86	61
Agricultural sciences	287	138	200	88	9	3	73	45	5	2	-	-
Social sciences	1016	599	755	426	142	93	101	71	13	7	5	2
Humanities	110	60	70	34	8	4	25	20	4	-	3	2
Non-profit sector	**2**	**2**	**-**	**-**	**2**	**2**	**-**	**-**	**-**	**-**	**-**	**-**
Social sciences	2	2	-	-	2	2	-	-	-	-	-	-
SRBIJA – JUG	3800	1945	2998	1501	194	103	375	231	61	23	172	87
Natural sciences	470	266	403	231	16	8	37	20	9	5	5	2
Engineering and technology	1267	501	870	312	115	53	142	74	30	5	110	57
Medical and health sciences	697	390	621	343	37	26	39	21	-	-	-	-
Agricultural sciences	144	74	75	35	3	1	26	20	1	-	39	18
Social sciences	698	367	604	303	-	-	62	46	14	8	18	10
Humanities	524	347	425	277	23	15	69	50	7	5	-	-
Business sector	**295**	**115**	**115**	**41**	**54**	**27**	**58**	**25**	**29**	**5**	**39**	**17**
Natural sciences	43	23	24	13	4	3	10	4	4	2	1	1
Engineering and technology	176	52	72	20	47	22	30	7	24	3	3	-
Medical and health sciences	3	1	2	-	1	1	-	-	-	-	-	-
Agricultural sciences	73	39	17	8	2	1	18	14	1	-	35	16

2.1. Full-time employees engaged in R&D activities, by sectors, fields of science and sex, 2017 (head count) (continued)

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
Government sector	**205**	**121**	**66**	**42**	**25**	**10**	**27**	**22**	**-**	**-**	**87**	**47**
Engineering and technology	181	107	48	30	24	10	24	21	-	-	85	46
Agricultural science	24	14	18	12	1	-	3	1	-	-	2	1
Tertiary education	**3300**	**1709**	**2817**	**1418**	**115**	**66**	**290**	**184**	**32**	**18**	**46**	**23**
Natural sciences	427	243	379	218	12	5	27	16	5	3	4	1
Engineering and technology	910	342	750	262	44	21	88	46	6	2	22	11
Medical and health sciences	694	389	619	343	36	25	39	21	-	-	-	-
Agricultural sciences	47	21	40	15	-	-	5	5	-	-	2	1
Social sciences	698	367	604	303	-	-	62	46	14	8	18	10
Humanities	524	347	425	277	23	15	69	50	7	5	-	-
Region Šumadije i Zapadne Srbije	**1677**	**894**	**1307**	**686**	**100**	**55**	**180**	**111**	**37**	**14**	**53**	**28**
Natural sciences	258	157	195	124	16	8	35	19	8	5	4	1
Engineering and technology	356	117	255	79	44	21	18	5	16	1	23	11
Medical and health sciences	351	199	289	162	23	16	39	21	-	-	-	-
Agricultural sciences	89	49	65	32	1	-	14	11	1	-	8	6
Social sciences	431	236	351	181	-	-	50	37	12	8	18	10
Humanities	192	136	152	108	16	10	24	18	-	-	-	-
Business sector	**141**	**62**	**39**	**18**	**43**	**24**	**32**	**13**	**20**	**3**	**7**	**4**
Natural sciences	24	15	9	7	4	3	8	3	3	2	-	-
Engineering and technology	99	33	23	6	39	21	18	5	16	1	3	-
Agricultural sciences	18	14	7	5	-	-	6	5	1	-	4	4
Government sector	**24**	**14**	**18**	**12**	**1**	**-**	**3**	**1**	**-**	**-**	**2**	**1**
Agricultural sciences	24	14	18	12	1	-	3	1	-	-	2	1
Tertiary education	**1512**	**818**	**1250**	**656**	**56**	**31**	**145**	**97**	**17**	**11**	**44**	**23**
Natural sciences	234	142	186	117	12	5	27	16	5	3	4	1
Engineering and technology	257	84	232	73	5	-	-	-	-	-	20	11
Medical and health sciences	351	199	289	162	23	16	39	21	-	-	-	-
Agricultural sciences	47	21	40	15	-	-	5	5	-	-	2	1
Social sciences	431	236	351	181	-	-	50	37	12	8	18	10
Humanities	192	136	152	108	16	10	24	18	-	-	-	-
Region Južne i Istočne Srbije	**2123**	**1051**	**1691**	**815**	**94**	**48**	**195**	**120**	**24**	**9**	**119**	**59**
Natural sciences	212	109	208	107	-	-	2	1	1	-	1	1
Engineering and technology	911	384	615	233	71	32	124	69	14	4	87	46
Medical and health sciences	346	191	332	181	14	10	-	-	-	-	-	-
Agricultural sciences	55	25	10	3	2	1	12	9	-	-	31	12
Social sciences	267	131	253	122	-	-	12	9	2	-	-	-
Humanities	332	211	273	169	7	5	45	32	7	5	-	-
Business sector	**154**	**53**	**76**	**23**	**11**	**3**	**26**	**12**	**9**	**2**	**32**	**13**
Natural sciences	19	8	15	6	-	-	2	1	1	-	1	1
Engineering and technology	77	19	49	14	8	1	12	2	8	2	-	-
Medical and health sciences	3	1	2	-	1	1	-	-	-	-	-	-
Agricultural sciences	55	25	10	3	2	1	12	9	-	-	31	12
Government sector	**181**	**107**	**48**	**30**	**24**	**10**	**24**	**21**	**-**	**-**	**85**	**46**
Engineering and technology	181	107	48	30	24	10	24	21	-	-	85	46
Tertiary education	**1788**	**891**	**1567**	**762**	**59**	**35**	**145**	**87**	**15**	**7**	**2**	**-**
Natural sciences	193	101	193	101	-	-	-	-	-	-	-	-
Engineering and technology	653	258	518	189	39	21	88	46	6	2	2	-
Medical and health sciences	343	190	330	181	13	9	-	-	-	-	-	-
Social sciences	267	131	253	122	-	-	12	9	2	-	-	-
Humanities	332	211	273	169	7	5	45	32	7	5	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

2.2. Full-time and part-time employees engaged in R&D activities by sectors, fields of sciences and sex, expressed in full-time equivalent, 2017

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**20788,1**	**10369,2**	**14557,4**	**7237,3**	**1380,2**	**711,3**	**2876,5**	**1452,7**	**534,7**	**204,4**	**1439,4**	**763,6**
Natural sciences	4997,8	2545,5	3856,1	2004,1	265,5	116,7	565,7	276,2	88,2	31,2	222,3	117,3
Engineering and technology	6073,7	2353,9	3870,8	1496,1	537,1	212,5	1065,5	390,3	215,6	59,2	384,7	195,8
Medical and health sciences	2065,3	1260,0	1715,4	1021,6	61,0	44,5	122,7	82,7	58,2	40,2	108,0	71,0
Agricultural sciences	2371,7	1196,3	1090,4	545,7	179,3	112,9	504,6	277,4	62,9	22,3	534,5	238,0
Social sciences	3481,1	1926,9	2599,8	1355,4	177,9	110,6	467,7	311,9	87,8	41,5	147,9	107,5
Humanities	1798,6	1086,7	1424,9	814,4	159,4	114,1	150,3	114,2	22,0	10,0	42,0	34,0
Business sector	**3110,6**	**1070,5**	**1548,9**	**514,2**	**562,0**	**205,9**	**589,0**	**175,5**	**216,6**	**75,6**	**194,1**	**99,3**
Natural sciences	1103,2	291,2	739,8	175,8	146,8	47,7	137,2	38,0	34,4	5,7	45,0	24,0
Engineering and technology	1698,1	597,1	719,5	278,5	365,6	125,5	376,3	98,9	127,1	36,4	109,6	57,8
Medical and health sciences	136,2	88,2	32,0	23,0	24,0	19,0	41,0	17,0	38,2	28,2	1,0	1,0
Agricultural sciences	123,5	56,4	23,8	9,6	15,3	6,9	31,5	18,6	14,9	5,3	38,0	16,0
Social sciences	49,6	37,6	33,8	27,3	10,3	6,8	3,0	3,0	2,0	-	0,5	0,5
Government sector	**5192,1**	**2832,0**	**2992,9**	**1794,4**	**239,6**	**128,9**	**1096,2**	**525,9**	**129,0**	**41,0**	**734,4**	**341,8**
Natural sciences	1969,9	1186,5	1525,9	965,2	56,7	27,0	254,0	130,0	40,0	17,0	93,3	47,3
Engineering and technology	1181,4	522,2	374,2	192,8	90,4	43,7	445,2	173,2	59,0	13,0	212,6	99,5
Medical and health sciences	177,3	139,0	152,9	115,6	4,2	4,2	16,2	16,2	-	-	4,0	3,0
Agricultural sciences	1172,3	581,5	360,0	205,0	76,0	47,0	313,8	151,5	26,0	9,0	396,5	169,0
Social sciences	303,1	165,5	245,8	121,5	10,3	6,0	40,0	33,0	2,0	1,0	5,0	4,0
Humanities	388,1	237,3	334,1	194,3	2,0	1,0	27,0	22,0	2,0	1,0	23,0	19,0
Tertiary education	**12462,5**	**6451,8**	**10013,6**	**4927,7**	**574,6**	**372,5**	**1179,8**	**744,3**	**185,6**	**86,8**	**508,9**	**320,5**
Natural sciences	1924,7	1067,8	1590,4	863,1	62,0	42,0	174,5	108,2	13,8	8,5	84,0	46,0
Engineering and technology	3181,2	1228,6	2775,1	1023,8	81,1	43,3	237,0	115,2	27,5	9,8	60,5	36,5
Medical and health sciences	1751,8	1032,8	1530,5	883,0	32,8	21,3	65,5	49,5	20,0	12,0	103,0	67,0
Agricultural sciences	1075,9	558,4	706,6	331,1	88,0	59,0	159,3	107,3	22,0	8,0	100,0	53,0
Social sciences	3118,4	1714,8	2320,2	1206,6	153,3	93,8	420,2	271,9	82,3	39,5	142,4	103,0
Humanities	1410,5	849,4	1090,8	620,1	157,4	113,1	123,3	92,2	20,0	9,0	19,0	15,0
Non-profit sector	**23,0**	**15,0**	**2,0**	**1,0**	**4,0**	**4,0**	**11,5**	**7,0**	**3,5**	**1,0**	**2,0**	**2,0**
Engineering and technology	13,0	6,0	2,0	1,0	-	-	7,0	3,0	2,0	-	2,0	2,0
Social sciences	10,0	9,0	-	-	4,0	4,0	4,5	4,0	1,5	1,0	-	-
SRBIJA – SEVER	17377,9	8616,4	11886,1	5894,3	1212,0	623,9	2529,6	1236,8	475,8	181,9	1274,5	679,6
Natural sciences	4534,8	2283,8	3460,1	1777,4	249,5	108,7	528,7	256,2	79,2	26,2	217,3	115,3
Engineering and technology	4931,8	1902,1	3099,1	1219,3	432,7	165,4	932,1	320,9	187,7	54,7	280,2	141,8
Medical and health sciences	1581,5	986,9	1276,3	776,7	35,8	26,8	103,2	72,2	58,2	40,2	108,0	71,0
Agricultural sciences	2227,7	1122,3	1015,4	510,7	176,3	111,9	478,6	257,4	61,9	22,3	495,5	220,0
Social sciences	2809,6	1571,8	2020,7	1064,3	177,9	110,6	405,7	265,9	73,8	33,5	131,5	97,5
Humanities	1292,6	749,6	1014,5	545,9	139,8	100,5	81,3	64,2	15,0	5,0	42,0	34,0
Business sector	**2829,2**	**957,8**	**1440,6**	**473,7**	**510,7**	**180,1**	**534,1**	**151,1**	**188,7**	**70,6**	**155,1**	**82,3**
Natural sciences	1060,2	268,2	715,8	162,8	142,8	44,7	127,2	34,0	30,4	3,7	44,0	23,0
Engineering and technology	1534,7	547,4	653,2	259,0	321,3	104,7	349,4	92,5	104,2	33,4	106,6	57,8
Medical and health sciences	134,2	87,2	31,0	23,0	23,0	18,0	41,0	17,0	38,2	28,2	1,0	1,0
Agricultural sciences	50,5	17,4	6,8	1,6	13,3	5,9	13,5	4,6	13,9	5,3	3,0	-
Social sciences	49,6	37,6	33,8	27,3	10,3	6,8	3,0	3,0	2,0	-	0,5	0,5
Government sector	**4987,1**	**2711,0**	**2926,9**	**1752,4**	**214,6**	**118,9**	**1069,2**	**503,9**	**129,0**	**41,0**	**647,4**	**294,8**
Natural sciences	1969,9	1186,5	1525,9	965,2	56,7	27,0	254,0	130,0	40,0	17,0	93,3	47,3
Engineering and technology	1000,4	415,2	326,2	162,8	66,4	33,7	421,2	152,2	59,0	13,0	127,6	53,5
Medical and health sciences	177,3	139,0	152,9	115,6	4,2	4,2	16,2	16,2	-	-	4,0	3,0
Agricultural sciences	1148,3	567,5	342,0	193,0	75,0	47,0	310,8	150,5	26,0	9,0	394,5	168,0
Social sciences	303,1	165,5	245,8	121,5	10,3	6,0	40,0	33,0	2,0	1,0	5,0	4,0
Humanities	388,1	237,3	334,1	194,3	2,0	1,0	27,0	22,0	2,0	1,0	23,0	19,0
Tertiary education	**9538,7**	**4932,7**	**7516,6**	**3667,2**	**482,7**	**320,9**	**914,8**	**574,8**	**154,6**	**69,3**	**470,0**	**300,5**
Natural sciences	1504,7	829,1	1218,4	649,4	50,0	37,0	147,5	92,2	8,8	5,5	80,0	45,0
Engineering and technology	2383,7	933,5	2117,7	796,5	45,0	27,0	154,5	73,2	22,5	8,3	44,0	28,5
Medical and health sciences	1270,0	760,7	1092,4	638,1	8,6	4,6	46,0	39,0	20,0	12,0	103,0	67,0
Agricultural sciences	1028,9	537,4	666,6	316,1	88,0	59,0	154,3	102,3	22,0	8,0	98,0	52,0
Social sciences	2446,9	1359,7	1741,1	915,5	153,3	93,8	358,2	225,9	68,3	31,5	126,0	93,0
Humanities	904,5	512,3	680,4	351,6	137,8	99,5	54,3	42,2	13,0	4,0	19,0	15,0
Non-profit sector	**23,0**	**15,0**	**2,0**	**1,0**	**4,0**	**4,0**	**11,5**	**7,0**	**3,5**	**1,0**	**2,0**	**2,0**
Engineering and technology	13,0	6,0	2,0	1,0	-	-	7,0	3,0	2,0	-	2,0	2,0
Social sciences	10,0	9,0	-	-	4,0	4,0	4,5	4,0	1,5	1,0	-	-

2.2. Full-time and part-time employees engaged in R&D activities by sectors, fields of sciences and sex, expressed in full-time equivalent, 2017 (continued)

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
Beogradski region	**12200,7**	**6181,0**	**8216,9**	**4257,2**	**949,6**	**479,4**	**1939,6**	**927,0**	**357,2**	**128,3**	**737,4**	**389,1**
Natural sciences	3357,8	1829,8	2516,4	1428,9	227,0	105,7	433,7	221,2	64,4	19,7	116,3	54,3
Engineering and technology	3265,2	1209,4	1757,7	688,6	359,0	128,4	760,8	233,7	131,1	30,4	256,6	128,3
Medical and health sciences	1132,1	709,4	927,9	570,2	35,8	26,8	103,2	72,2	43,2	30,2	22,0	10,0
Agricultural sciences	1323,9	692,1	683,0	355,6	148,4	97,2	272,5	155,3	44,0	15,0	176,0	69,0
Social sciences	1938,6	1050,2	1386,9	701,5	47,6	24,8	313,1	200,4	63,5	28,0	127,5	95,5
Humanities	1183,1	690,1	945,0	512,4	131,8	96,5	56,3	44,2	11,0	5,0	39,0	32,0
Business sector	**1737,3**	**664,3**	**676,3**	**300,1**	**442,0**	**159,1**	**374,2**	**101,0**	**128,7**	**46,8**	**116,1**	**57,3**
Natural sciences	408,5	141,7	165,4	64,8	120,3	41,7	78,2	27,0	22,6	1,2	22,0	7,0
Engineering and technology	1111,3	387,6	444,2	185,0	279,0	88,4	244,6	53,0	52,9	12,4	90,6	48,8
Medical and health sciences	134,2	87,2	31,0	23,0	23,0	18,0	41,0	17,0	38,2	28,2	1,0	1,0
Agricultural sciences	33,7	10,2	1,9	-	9,4	4,2	7,4	1,0	13,0	5,0	2,0	-
Social sciences	49,6	37,6	33,8	27,3	10,3	6,8	3,0	3,0	2,0	-	0,5	0,5
Government sector	**4204,2**	**2316,3**	**2679,7**	**1617,6**	**185,2**	**100,2**	**903,0**	**424,2**	**115,0**	**35,0**	**321,3**	**139,3**
Natural sciences	1969,9	1186,5	1525,9	965,2	56,7	27,0	254,0	130,0	40,0	17,0	93,3	47,3
Engineering and technology	819,0	306,0	208,0	94,0	52,0	25,0	382,0	126,0	57,0	12,0	120,0	49,0
Medical and health sciences	177,3	139,0	152,9	115,6	4,2	4,2	16,2	16,2	-	-	4,0	3,0
Agricultural sciences	546,8	282,0	213,0	127,0	60,0	37,0	183,8	97,0	14,0	4,0	76,0	17,0
Social sciences	303,1	165,5	245,8	121,5	10,3	6,0	40,0	33,0	2,0	1,0	5,0	4,0
Humanities	388,1	237,3	334,1	194,3	2,0	1,0	27,0	22,0	2,0	1,0	23,0	19,0
Tertiary education	**6238,2**	**3187,4**	**4858,9**	**2338,5**	**320,4**	**218,1**	**650,9**	**394,8**	**110,0**	**45,5**	**298,0**	**190,5**
Natural sciences	979,4	501,6	825,1	398,9	50,0	37,0	101,5	64,2	1,8	1,5	1,0	-
Engineering and technology	1321,9	509,8	1103,5	408,6	28,0	15,0	127,2	51,7	19,2	6,0	44,0	28,5
Medical and health sciences	820,6	483,2	744,0	431,6	8,6	4,6	46,0	39,0	5,0	2,0	17,0	6,0
Agricultural sciences	743,4	399,9	468,1	228,6	79,0	56,0	81,3	57,3	17,0	6,0	98,0	52,0
Social sciences	1577,9	840,1	1107,3	552,7	25,0	10,0	265,6	160,4	58,0	26,0	122,0	91,0
Humanities	795,0	452,8	610,9	318,1	129,8	95,5	29,3	22,2	9,0	4,0	16,0	13,0
Non-profit sector	**21,0**	**13,0**	**2,0**	**1,0**	**2,0**	**2,0**	**11,5**	**7,0**	**3,5**	**1,0**	**2,0**	**2,0**
Engineering and technology	13,0	6,0	2,0	1,0	-	-	7,0	3,0	2,0	-	2,0	2,0
Social sciences	8,0	7,0	-	-	2,0	2,0	4,5	4,0	1,5	1,0	-	-
Region Vojvodine	**5177,2**	**2435,4**	**3669,2**	**1637,1**	**262,4**	**144,5**	**590,0**	**309,8**	**118,6**	**53,6**	**537,1**	**290,5**
Natural sciences	1177,0	454,0	943,7	348,5	22,5	3,0	95,0	35,0	14,8	6,5	101,0	61,0
Engineering and technology	1666,6	692,7	1341,4	530,7	73,7	37,0	171,3	87,2	56,6	24,3	23,6	13,5
Medical and health sciences	449,4	277,5	348,4	206,5	-	-	-	-	15,0	10,0	86,0	61,0
Agricultural sciences	903,8	430,2	332,4	155,1	27,9	14,7	206,1	102,1	17,9	7,3	319,5	151,0
Social sciences	871,0	521,6	633,8	362,8	130,3	85,8	92,6	65,5	10,3	5,5	4,0	2,0
Humanities	109,5	59,5	69,5	33,5	8,0	4,0	25,0	20,0	4,0	-	3,0	2,0
Business sector	**1091,9**	**293,5**	**764,3**	**173,6**	**68,7**	**21,0**	**159,9**	**50,1**	**60,0**	**23,8**	**39,0**	**25,0**
Natural sciences	651,7	126,5	550,4	98,0	22,5	3,0	49,0	7,0	7,8	2,5	22,0	16,0
Engineering and technology	423,4	159,8	209,0	74,0	42,3	16,3	104,8	39,5	51,3	21,0	16,0	9,0
Agricultural sciences	16,8	7,2	4,9	1,6	3,9	1,7	6,1	3,6	0,9	0,3	1,0	-
Government sector	**782,9**	**394,7**	**247,2**	**134,8**	**29,4**	**18,7**	**166,2**	**79,7**	**14,0**	**6,0**	**326,1**	**155,5**
Engineering and technology	181,4	109,2	118,2	68,8	14,4	8,7	39,2	26,2	2,0	1,0	7,6	4,5
Agricultural sciences	601,5	285,5	129,0	66,0	15,0	10,0	127,0	53,5	12,0	5,0	318,5	151,0
Tertiary education	**3300,5**	**1745,3**	**2657,7**	**1328,7**	**162,3**	**102,8**	**263,9**	**180,0**	**44,6**	**23,8**	**172,0**	**110,0**
Natural sciences	525,3	327,5	393,3	250,5	-	-	46,0	28,0	7,0	4,0	79,0	45,0
Engineering and technology	1061,8	423,7	1014,2	387,9	17,0	12,0	27,3	21,5	3,3	2,3	-	-
Medical and health sciences	449,4	277,5	348,4	206,5	-	-	-	-	15,0	10,0	86,0	61,0
Agricultural sciences	285,5	137,5	198,5	87,5	9,0	3,0	73,0	45,0	5,0	2,0	-	-
Social sciences	869,0	519,6	633,8	362,8	128,3	83,8	92,6	65,5	10,3	5,5	4,0	2,0
Humanities	109,5	59,5	69,5	33,5	8,0	4,0	25,0	20,0	4,0	-	3,0	2,0
Social sciences												
Non-profit sector	**2,0**	**2,0**	**-**	**-**	**2,0**	**2,0**	**-**	**-**	**-**	**-**	**-**	**-**
Social sciences	2,0	2,0	-	-	2,0	2,0	-	-	-	-	-	-
SRBIJA – JUG	3410,2	1752,8	2671,3	1343,0	168,2	87,4	346,9	215,9	58,9	22,5	164,9	84,0
Natural sciences	463,0	261,7	396,0	226,7	16,0	8,0	37,0	20,0	9,0	5,0	5,0	2,0
Engineering and technology	1141,9	451,8	771,7	276,8	104,4	47,1	133,4	69,4	27,9	4,5	104,5	54,0
Medical and health sciences	483,8	273,1	439,1	244,9	25,2	17,7	19,5	10,5	-	-	-	-
Agricultural sciences	144,0	74,0	75,0	35,0	3,0	1,0	26,0	20,0	1,0	-	39,0	18,0
Social sciences	671,5	355,1	579,1	291,1	-	-	62,0	46,0	14,0	8,0	16,4	10,0
Humanities	506,0	337,1	410,4	268,5	19,6	13,6	69,0	50,0	7,0	5,0	-	-
Business sector	**281,4**	**112,7**	**108,3**	**40,5**	**51,3**	**25,8**	**54,9**	**24,4**	**27,9**	**5,0**	**39,0**	**17,0**
Natural sciences	43,0	23,0	24,0	13,0	4,0	3,0	10,0	4,0	4,0	2,0	1,0	1,0
Engineering and technology	163,4	49,7	66,3	19,5	44,3	20,8	26,9	6,4	22,9	3,0	3,0	-
Medical and health sciences	2,0	1,0	1,0	-	1,0	1,0	-	-	-	-	-	-
Agricultural sciences	73,0	39,0	17,0	8,0	2,0	1,0	18,0	14,0	1,0	-	35,0	16,0

2.2. Full-time and part-time employees engaged in R&D activities by sectors, fields of sciences and sex, expressed in full-time equivalent, 2017 (continued)

	Total		Researchers		Assistant-researchers		Technicians		Management		Other personnel	
	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
Government sector	**205,0**	**121,0**	**66,0**	**42,0**	**25,0**	**10,0**	**27,0**	**22,0**	**-**	**-**	**87,0**	**47,0**
Engineering and technology	181,0	107,0	48,0	30,0	24,0	10,0	24,0	21,0	-	-	85,0	46,0
Agricultural sciences	24,0	14,0	18,0	12,0	1,0	-	3,0	1,0	-	-	2,0	1,0
Tertiary education	**2923,8**	**1519,1**	**2497,0**	**1260,5**	**91,9**	**51,6**	**265,0**	**169,5**	**31,0**	**17,5**	**38,9**	**20,0**
Natural sciences	420,0	238,7	372,0	213,7	12,0	5,0	27,0	16,0	5,0	3,0	4,0	1,0
Engineering and technology	797,5	295,1	657,4	227,3	36,1	16,3	82,5	42,0	5,0	1,5	16,5	8,0
Medical and health sciences	481,8	272,1	438,1	244,9	24,2	16,7	19,5	10,5	-	-	-	-
Agricultural sciences	47,0	21,0	40,0	15,0	-	-	5,0	5,0	-	-	2,0	1,0
Social sciences	671,5	355,1	579,1	291,1	-	-	62,0	46,0	14,0	8,0	16,4	10,0
Humanities	506,0	337,1	410,4	268,5	19,6	13,6	69,0	50,0	7,0	5,0	-	-
Region Šumadije i Zapadne Srbije	**1354,8**	**732,1**	**1029,9**	**548,5**	**83,1**	**44,1**	**159,6**	**100,5**	**36,3**	**14,0**	**45,9**	**25,0**
Natural sciences	251,2	152,9	188,2	119,9	16,0	8,0	35,0	19,0	8,0	5,0	4,0	1,0
Engineering and technology	286,2	92,5	194,0	58,7	42,3	19,8	17,1	5,0	15,3	1,0	17,5	8,0
Medical and health sciences	139,8	82,8	109,1	64,6	11,2	7,7	19,5	10,5	-	-	-	-
Agricultural sciences	89,0	49,0	65,0	32,0	1,0	-	14,0	11,0	1,0	-	8,0	6,0
Social sciences	406,3	225,0	327,9	170,0	-	-	50,0	37,0	12,0	8,0	16,4	10,0
Humanities	182,3	129,9	145,7	103,3	12,6	8,6	24,0	18,0	-	-	-	-
Business sector	**135,7**	**60,8**	**37,0**	**18,0**	**41,3**	**22,8**	**31,1**	**13,0**	**19,3**	**3,0**	**7,0**	**4,0**
Natural sciences	24,0	15,0	9,0	7,0	4,0	3,0	8,0	3,0	3,0	2,0	-	-
Engineering and technology	93,7	31,8	21,0	6,0	37,3	19,8	17,1	5,0	15,3	1,0	3,0	-
Agricultural sciences	18,0	14,0	7,0	5,0	-	-	6,0	5,0	1,0	-	4,0	4,0
Government sector	**24,0**	**14,0**	**18,0**	**12,0**	**1,0**	**-**	**3,0**	**1,0**	**-**	**-**	**2,0**	**1,0**
Agricultural sciences	24,0	14,0	18,0	12,0	1,0	-	3,0	1,0	-	-	2,0	1,0
Tertiary education	**1195,1**	**657,3**	**974,9**	**518,5**	**40,8**	**21,3**	**125,5**	**86,5**	**17,0**	**11,0**	**36,9**	**20,0**
Natural sciences	227,2	137,9	179,2	112,9	12,0	5,0	27,0	16,0	5,0	3,0	4,0	1,0
Engineering and technology	192,5	60,7	173,0	52,7	5,0	-	-	-	-	-	14,5	8,0
Medical and health sciences	139,8	82,8	109,1	64,6	11,2	7,7	19,5	10,5	-	-	-	-
Agricultural sciences	47,0	21,0	40,0	15,0	-	-	5,0	5,0	-	-	2,0	1,0
Social sciences	406,3	225,0	327,9	170,0	-	-	50,0	37,0	12,0	8,0	16,4	10,0
Humanities	182,3	129,9	145,7	103,3	12,6	8,6	24,0	18,0	-	-	-	-
Region Južne i Istočne Srbije	**2055,4**	**1020,7**	**1641,4**	**794,5**	**85,1**	**43,3**	**187,3**	**115,4**	**22,6**	**8,5**	**119,0**	**59,0**
Natural sciences	211,8	108,8	207,8	106,8	-	-	2,0	1,0	1,0	-	1,0	1,0
Engineering and technology	855,7	359,3	577,7	218,1	62,1	27,3	116,3	64,4	12,6	3,5	87,0	46,0
Medical and health sciences	344,0	190,3	330,0	180,3	14,0	10,0	-	-	-	-	-	-
Agricultural sciences	55,0	25,0	10,0	3,0	2,0	1,0	12,0	9,0	-	-	31,0	12,0
Social sciences	265,2	130,1	251,2	121,1	-	-	12,0	9,0	2,0	-	-	-
Humanities	323,7	207,2	264,7	165,2	7,0	5,0	45,0	32,0	7,0	5,0	-	-
Business sector	**145,7**	**51,9**	**71,3**	**22,5**	**10,0**	**3,0**	**23,8**	**11,4**	**8,6**	**2,0**	**32,0**	**13,0**
Natural sciences	19,0	8,0	15,0	6,0	-	-	2,0	1,0	1,0	-	1,0	1,0
Engineering and technology	69,7	17,9	45,3	13,5	7,0	1,0	9,8	1,4	7,6	2,0	-	-
Medical and health sciences	2,0	1,0	1,0	-	1,0	1,0	-	-	-	-	-	-
Agricultural sciences	55,0	25,0	10,0	3,0	2,0	1,0	12,0	9,0	-	-	31,0	12,0
Government sector	**181,0**	**107,0**	**48,0**	**30,0**	**24,0**	**10,0**	**24,0**	**21,0**	**-**	**-**	**85,0**	**46,0**
Engineering and technology	181,0	107,0	48,0	30,0	24,0	10,0	24,0	21,0	-	-	85,0	46,0
Tertiary education	**1728,7**	**861,8**	**1522,1**	**742,0**	**51,1**	**30,3**	**139,5**	**83,0**	**14,0**	**6,5**	**2,0**	**-**
Natural sciences	192,8	100,8	192,8	100,8	-	-	-	-	-	-	-	-
Engineering and technology	605,0	234,4	484,4	174,6	31,1	16,3	82,5	42,0	5,0	1,5	2,0	-
Medical and health sciences	342,0	189,3	329,0	180,3	13,0	9,0	-	-	-	-	-	-
Social sciences	265,2	130,1	251,2	121,1	-	-	12,0	9,0	2,0	-	-	-
Humanities	323,7	207,2	264,7	165,2	7,0	5,0	45,0	32,0	7,0	5,0	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2017 (head count)

	Full-time and part-time reasearchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**16182**	**8098**	**10583**	**5266**	**2808**	**1413**	**122**	**39**	**2669**	**1380**
Natural sciences	3977	2062	2355	1306	680	317	1	-	941	439
Engineering and technology	4352	1704	2635	1011	931	396	81	24	705	273
Medical and health sciences	2419	1454	1522	913	447	267	37	14	413	260
Agricultural sciences	1134	568	886	419	101	44	-	-	147	105
Social sciences	2848	1480	2253	1086	414	265	1	-	180	129
Humanities	1452	830	932	531	235	124	2	1	283	174
Business sector	**1610**	**532**	**296**	**123**	**432**	**120**	**7**	**2**	**875**	**287**
Natural sciences	751	178	57	19	281	65	-	-	413	94
Computer and information sciences	571	104	5	-	235	39	-	-	331	65
Chemical sciences	54	33	16	7	30	21	-	-	8	5
Earth and related environmental sciences	12	4	5	2	1	-	-	-	6	2
Other Natural sciences	114	37	31	10	15	5	-	-	68	22
Engineering and technology	762	289	202	84	133	43	6	2	421	160
Civil engineering	2	1	-	-	-	-	-	-	2	1
Electrical engineering, electronic engineering and information engineering	229	73	50	17	74	26	-	-	105	30
Mechanical engineering	104	26	43	16	20	7	-	-	41	3
Chemical engineering	154	67	6	2	9	3	-	-	139	62
Materials engineering	52	27	26	13	5	3	6	2	15	9
Medical engineering	21	5	10	3	5	-	-	-	6	2
Environmental engineering	24	9	16	5	-	-	-	-	8	4
Environmental biotechnology	1	1	-	-	-	-	-	-	1	1
Other technologies and engineering	175	80	51	28	20	4	-	-	104	48
Medical and health sciences	33	23	1	-	2	-	1	-	29	23
Clinical medicine	2	-	-	-	2	-	-	-	-	-
Other medical sciences	31	23	1	-	-	-	1	-	29	23
Agricultural sciences	29	14	19	9	8	4	-	-	2	1
Agriculture, forestry and fishery	6	5	2	2	3	2	-	-	1	1
Agricultural biotechnology	23	9	17	7	5	2	-	-	1	-
Social sciences	35	28	17	11	8	8	-	-	10	9
Economics and business	15	10	9	4	6	6	-	-	-	-
Other social sciences	20	18	8	7	2	2	-	-	10	9
Government sector	**3034**	**1819**	**2161**	**1257**	**568**	**346**	**5**	**3**	**300**	**213**
Natural sciences	1539	974	1060	648	279	190	-	-	200	136
Mathematics	257	154	182	102	75	52	-	-	-	-
Physical sciences	669	367	433	220	106	58	-	-	130	89
Biological sciences	413	344	310	263	71	63	-	-	32	18
Other natural sciences	200	109	135	63	27	17	-	-	38	29
Engineering and technology	384	198	248	122	95	47	3	2	38	27
Civil engineering	26	19	19	14	6	4	-	-	1	1
Electrical engineering, electronic engineering and information engineering	75	19	54	10	9	1	-	-	12	8
Materials engineering	43	20	25	11	18	9	-	-	-	-
Environmental biotechnology	116	67	79	44	24	13	1	1	12	9
Industrial biotechnology	30	17	24	13	-	-	1	1	5	3
Other technologies and engineering	94	56	47	30	38	20	1	-	8	6
Medical and health sciences	165	123	122	88	20	15	2	1	21	19
Basic medicine	63	44	53	35	1	1	2	1	7	7
Other medical sciences	102	79	69	53	19	14	-	-	14	12
Agricultural sciences	360	205	281	160	56	24	-	-	23	21
Animal and dairy science	25	11	16	8	9	3	-	-	-	-
Veterinary sciences	58	28	38	21	20	7	-	-	-	-
Agricultural biotechnology	228	132	183	102	22	9	-	-	23	21
Other Agricultural sciences	49	34	44	29	5	5	-	-	-	-
Social sciences	249	123	204	98	44	24	-	-	1	1
Psychology	42	22	40	20	2	2	-	-	-	-
Economics and business	45	25	35	18	10	7	-	-	-	-
Sociology	24	10	21	8	3	2	-	-	-	-
Law	39	20	32	16	7	4	-	-	-	-
Political science	74	26	55	18	19	8	-	-	-	-
Other social science	25	20	21	18	3	1	-	-	1	1
Humanities	337	196	246	141	74	46	-	-	17	9
History and archeology	175	75	137	60	23	8	-	-	15	7
Languages and literature	96	71	55	40	39	29	-	-	2	2
Art (art, history of arts, performing arts, music)	14	12	12	10	2	2	-	-	-	-
Other Humanities	52	38	42	31	10	7	-	-	-	-
Tertiary education	**11536**	**5746**	**8126**	**3886**	**1806**	**946**	**110**	**34**	**1494**	**880**
Natural sciences	1687	910	1238	639	120	62	1	-	328	209
Mathematics	902	525	611	344	38	20	1	-	252	161
Computer and information sciences	241	102	190	81	46	19	-	-	5	2
Physical sciences	85	26	65	20	-	-	-	-	20	6
Chemical sciences	141	75	123	64	7	6	-	-	11	5
Earth and related environmental sciences	144	72	114	54	29	17	-	-	1	1
Biological sciences	174	110	135	76	-	-	-	-	39	34

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2017 (head count) (continued)

	Full-time and part-time reasearchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Engineering and technology	3204	1216	2185	805	701	305	72	20	246	86
Civil engineering	341	142	227	85	86	37	-	-	28	20
Electrical engineering, electronic engineering and information engineering	1579	531	988	320	473	184	1	-	117	27
Mechanical engineering	399	85	280	52	14	4	71	20	34	9
Chemical engineering	193	120	179	115	7	3	-	-	7	2
Environmental engineering	206	87	151	61	43	22	-	-	12	4
Other technologies and engineering	486	251	360	172	78	55	-	-	48	24
Medical and health sciences	2221	1308	1399	825	425	252	34	13	363	218
Basic medicine	1867	1065	1117	633	412	242	34	13	304	177
Other medical sciences	354	243	282	192	13	10	-	-	59	41
Agricultural sciences	745	349	586	250	37	16	-	-	122	83
Agriculture, forestry and fishery	368	166	276	111	29	11	-	-	63	44
Veterinary sciences	116	59	81	38	-	-	-	-	35	21
Agricultural biotechnology	17	6	16	5	1	1	-	-	-	-
Other Agricultural sciences	244	118	213	96	7	4	-	-	24	18
Social sciences	2564	1329	2032	977	362	233	1	-	169	119
Psychology	81	46	57	23	-	-	-	-	24	23
Economics and business	744	379	595	283	87	59	-	-	62	37
Educational sciences	652	361	495	258	127	80	-	-	30	23
Law	422	171	343	121	47	31	-	-	32	19
Political sciences	134	59	95	37	32	16	-	-	7	6
Media and communications	39	26	31	20	8	6	-	-	-	-
Other social sciences	492	287	416	235	61	41	1	-	14	11
Humanities	1115	634	686	390	161	78	2	1	266	165
Languages and literature	362	246	214	139	53	28	-	-	95	79
Phylosophy, ethics and religion	475	237	320	152	47	22	-	-	108	63
Art (arts, history of arts, performing arts, music)	206	114	93	69	59	26	2	1	52	18
Other Humanities	72	37	59	30	2	2	-	-	11	5
Non-profit sector	**2**	**1**	**-**	**-**	**2**	**1**	**-**	**-**	**-**	**-**
Engineering and technology	2	1	-	-	2	1	-	-	-	-
Other technologies and engineeering	2	1	-	-	2	1	-	-	-	-
SRBIJA – SEVER	13184	6597	8516	4272	2460	1237	104	33	2104	1055
Natural sciences	3574	1831	2083	1155	651	302	-	-	840	374
Engineering and technology	3482	1392	2052	803	798	341	80	24	552	224
Medical and health sciences	1798	1111	1049	649	442	265	23	9	284	188
Agricultural sciences	1059	533	821	389	96	42	-	-	142	102
Social sciences	2244	1177	1770	870	333	208	1	-	140	99
Humanities	1027	553	741	406	140	79	-	-	146	68
Business sector	**1495**	**491**	**262**	**111**	**405**	**111**	**6**	**2**	**822**	**267**
Natural sciences	727	165	55	19	281	65	-	-	391	81
Computer and information sciences	556	98	3	-	235	39	-	-	318	59
Chemical sciences	48	29	16	7	30	21	-	-	2	1
Earth and related environmental sciences	12	4	5	2	1	-	-	-	6	2
Other natural sciences	111	34	31	10	15	5	-	-	65	19
Engineering and technology	690	269	185	78	109	36	6	2	390	153
Civil engineering	2	1	-	-	-	-	-	-	2	1
Electrical engineering, electronic engineering and information engineering	197	60	43	14	55	19	-	-	99	27
Mechanical engineering	100	26	43	16	20	7	-	-	37	3
Chemical engineering	149	66	6	2	9	3	-	-	134	61
Materials engineering	50	26	26	13	5	3	6	2	13	8
Environmental engineering	24	9	16	5	-	-	-	-	8	4
Environmental biotechnology	1	1	-	-	-	-	-	-	1	1
Other technologies and engineering	167	80	51	28	20	4	-	-	96	48
Medical and health sciences	31	23	-	-	2	-	-	-	29	23
Clinical medicine	2	-	-	-	2	-	-	-	-	-
Other medical sciences	29	23	-	-	-	-	-	-	29	23
Agricultural sciences	12	6	5	3	5	2	-	-	2	1
Agriculture, forestry and fisheries	6	5	2	2	3	2	-	-	1	1
Agricultural biotechnology	6	1	3	1	2	-	-	-	1	-
Social sciences	35	28	17	11	8	8	-	-	10	9
Economics and business	15	10	9	4	6	6	-	-	-	-
Other social sciences	20	18	8	7	2	2	-	-	10	9
Government sector	**2968**	**1777**	**2123**	**1230**	**549**	**337**	**4**	**3**	**292**	**207**
Natural sciences	1539	974	1060	648	279	190	-	-	200	136
Mathematics	257	154	182	102	75	52	-	-	-	-
Physical sciences	669	367	433	220	106	58	-	-	130	89
Biological sciences	413	344	310	263	71	63	-	-	32	18
Other natural sciences	200	109	135	63	27	17	-	-	38	29
Engineering and technology	336	168	228	107	76	38	2	2	30	21
Civil engineering	26	19	19	14	6	4	-	-	1	1

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2017 (head count) (continued)

	Full-time and part-time reasearchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Electrical engineering, electronic engineering and information engineering	75	19	54	10	9	1	-	-	12	8
Materials engineering	43	20	25	11	18	9	-	-	-	-
Environmental biotechnology	116	67	79	44	24	13	1	1	12	9
Industrial biotechnology	30	17	24	13	-	-	1	1	5	3
Other technologies and engineering	46	26	27	15	19	11	-	-	-	-
Medical and health sciences	165	123	122	88	20	15	2	1	21	19
Basic medicine	63	44	53	35	1	1	2	1	7	7
Other medical science	102	79	69	53	19	14	-	-	14	12
Agricultural sciences	342	193	263	148	56	24	-	-	23	21
Animal and dairy science	25	11	16	8	9	3	-	-	-	-
Veterinary sciences	58	28	38	21	20	7	-	-	-	-
Agricultural biotechnology	228	132	183	102	22	9	-	-	23	21
Other agricultural sciences	31	22	26	17	5	5	-	-	-	-
Social sciences	249	123	204	98	44	24	-	-	1	1
Psychology	42	22	40	20	2	2	-	-	-	-
Economics and business	45	25	35	18	10	7	-	-	-	-
Sociology	24	10	21	8	3	2	-	-	-	-
Law	39	20	32	16	7	4	-	-	-	-
Political sciences	74	26	55	18	19	8	-	-	-	-
Other social sciences	25	20	21	18	3	1	-	-	1	1
Humanities	337	196	246	141	74	46	-	-	17	9
History and archeology	175	75	137	60	23	8	-	-	15	7
Languages and literature	96	71	55	40	39	29	-	-	2	2
Arts (arts, history of arts, performing arts, music)	14	12	12	10	2	2	-	-	-	-
Other Humanities	52	38	42	31	10	7	-	-	-	-
Tertiary education	**8719**	**4328**	**6131**	**2931**	**1504**	**788**	**94**	**28**	**990**	**581**
Natural sciences	1308	692	968	488	91	47	-	-	249	157
Mathematics	523	307	341	193	9	5	-	-	173	109
Computer and information sciences	241	102	190	81	46	19	-	-	5	2
Physical sciences	85	26	65	20	-	-	-	-	20	6
Chemical sciences	141	75	123	64	7	6	-	-	11	5
Earth and related environmental sciences	144	72	114	54	29	17	-	-	1	1
Biological sciences	174	110	135	76	-	-	-	-	39	34
Engineering and technology	2454	954	1639	618	611	266	72	20	132	50
Civil engineering	253	104	174	66	51	18	-	-	28	20
Electrical engineering, electronic engineering and information engineering	1285	436	762	242	454	178	1	-	68	16
Mechanical engineering	249	57	176	35	2	2	71	20	-	-
Chemical engineering	140	97	133	94	2	2	-	-	5	1
Environmental engineering	152	63	110	42	42	21	-	-	-	-
Other technologies and engineering	375	197	284	139	60	45	-	-	31	13
Medical and health sciences	1602	965	927	561	420	250	21	8	234	146
Basic medicine	1248	722	645	369	407	240	21	8	175	105
Other medical sciences	354	243	282	192	13	10	-	-	59	41
Agricultural sciences	705	334	553	238	35	16	-	-	117	80
Agriculture, forestry and fisheries	328	151	243	99	27	11	-	-	58	41
Veterinary sciences	116	59	81	38	-	-	-	-	35	21
Agricultural biotechnology	17	6	16	5	1	1	-	-	-	-
Other agricultural sciences	244	118	213	96	7	4	-	-	24	18
Social sciences	1960	1026	1549	761	281	176	1	-	129	89
Psychology	81	46	57	23	-	-	-	-	24	23
Economics and business	526	258	418	195	63	40	-	-	45	23
Educational sciences	421	254	317	186	78	46	-	-	26	22
Law	320	135	252	91	43	30	-	-	25	14
Political sciences	134	59	95	37	32	16	-	-	7	6
Media and communications	39	26	31	20	8	6	-	-	-	-
Other social sciences	439	248	379	209	57	38	1	-	2	1
Humanities	690	357	495	265	66	33	-	-	129	59
Languages and literature	210	138	172	113	3	3	-	-	35	22
Phylosophy, ethics and religion	303	119	203	74	47	22	-	-	53	23
Arts (arts, history of arts, performing arts, music)	105	63	61	48	14	6	-	-	30	9
Other Humanities	72	37	59	30	2	2	-	-	11	5
Non-profit sector	**2**	**1**	**-**	**-**	**2**	**1**	**-**	**-**	**-**	**-**
Engineering and technology	2	1	-	-	2	1	-	-	-	-
Other technologies and engineering	2	1	-	-	2	1	-	-	-	-
Beogradski region	**8890**	**4627**	**6346**	**3238**	**1193**	**683**	**82**	**24**	**1269**	**682**
Natural sciences	2602	1470	1784	974	404	257	-	-	414	239
Engineering and technology	1990	793	1278	513	253	111	79	23	380	146
Medical and earth sciences	1132	721	871	542	103	70	2	1	156	108
Agricultural sciences	720	373	567	286	62	22	-	-	91	65
Social sciences	1489	751	1163	546	232	144	1	-	93	61
Humanities	957	519	683	377	139	79	-	-	135	63

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2017 (head count) (continued)

	Full-time and part-time reasearchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Business sector	**718**	**312**	**244**	**106**	**125**	**63**	**6**	**2**	**343**	**141**
Natural sciences	169	66	52	19	46	26	-	-	71	21
Chemical sciences	46	28	16	7	30	21	-	-	-	-
Earth and related environmental sciences	12	4	5	2	1	-	-	-	6	2
Other natural sciences	111	34	31	10	15	5	-	-	65	19
Engineering and technology	481	195	174	76	68	29	6	2	233	88
Civil engineering	2	1	-	-	-	-	-	-	2	1
Electrical engineering, electronic engineering and information engineering	155	54	43	14	34	17	-	-	78	23
Mechanical engineering	98	26	43	16	20	7	-	-	35	3
Materials engineering	50	26	26	13	5	3	6	2	13	8
Environmental engineering	24	9	16	5	-	-	-	-	8	4
Environmental biotechnology	1	1	-	-	-	-	-	-	1	1
Other technologies and engineering	151	78	46	28	9	2	-	-	96	48
Medical and health sciences	31	23	-	-	2	-	-	-	29	23
Clinical medicine	2	-	-	-	2	-	-	-	-	-
Other medical sciences	29	23	-	-	-	-	-	-	29	23
Agricultural sciences	2	-	1	-	1	-	-	-	-	-
Agricultural biotechnology	2	-	1	-	1	-	-	-	-	-
Social science	35	28	17	11	8	8	-	-	10	9
Economics and business	15	10	9	4	6	6	-	-	-	-
Other social sciences	20	18	8	7	2	2	-	-	10	9
Government sector	**2711**	**1637**	**1926**	**1127**	**494**	**305**	**3**	**2**	**288**	**203**
Natural sciences	1539	974	1060	648	279	190	-	-	200	136
Mathematics	257	154	182	102	75	52	-	-	-	-
Physical sciences	669	367	433	220	106	58	-	-	130	89
Biological sciences	413	344	310	263	71	63	-	-	32	18
Other natural sciences	200	109	135	63	27	17	-	-	38	29
Engineering and technology	208	94	135	55	46	21	1	1	26	17
Civil engineering	26	19	19	14	6	4	-	-	1	1
Electrical engineering, electronic engineering and information engineering	75	19	54	10	9	1	-	-	12	8
Materials engineering	43	20	25	11	18	9	-	-	-	-
Environmental biotechnology	34	19	13	7	13	7	-	-	8	5
Industrial biotechnology	30	17	24	13	-	-	1	1	5	3
Medical and health sciences	165	123	122	88	20	15	2	1	21	19
Basic medicine	63	44	53	35	1	1	2	1	7	7
Other medical sciences	102	79	69	53	19	14	-	-	14	12
Agricultural sciences	213	127	159	97	31	9	-	-	23	21
Animal and dairy science	25	11	16	8	9	3	-	-	-	-
Veterinary science	24	10	15	10	9	-	-	-	-	-
Agricultural biotechnology	133	84	102	62	8	1	-	-	23	21
Other agricultural sciences	31	22	26	17	5	5	-	-	-	-
Social sciences	249	123	204	98	44	24	-	-	1	1
Psychology	42	22	40	20	2	2	-	-	-	-
Economics and business	45	25	35	18	10	7	-	-	-	-
Sociology	24	10	21	8	3	2	-	-	-	-
Law	39	20	32	16	7	4	-	-	-	-
Political sciences	74	26	55	18	19	8	-	-	-	-
Other social sciences	25	20	21	18	3	1	-	-	1	1
Humanities	337	196	246	141	74	46	-	-	17	9
History and archeology	175	75	137	60	23	8	-	-	15	7
Languages and literature	96	71	55	40	39	29	-	-	2	2
Arts (arts, history of arts, performing arts, music)	14	12	12	10	2	2	-	-	-	-
Other Humanities	52	38	42	31	10	7	-	-	-	-
Tertiary education	**5459**	**2677**	**4176**	**2005**	**572**	**314**	**73**	**20**	**638**	**338**
Natural sciences	894	430	672	307	79	41	-	-	143	82
Mathematics	148	66	79	31	2	1	-	-	67	34
Computer and information engineering	241	102	190	81	46	19	-	-	5	2
Physical sciences	85	26	65	20	-	-	-	-	20	6
Chemical sciences	141	75	123	64	7	6	-	-	11	5
Earth and environmental sciences	105	51	80	35	24	15	-	-	1	1
Biological sciences	174	110	135	76	-	-	-	-	39	34
Engineering and technology	1299	503	969	382	137	60	72	20	121	41
Civil engineering	215	88	142	56	51	18	-	-	22	14
Electrical engineering, electronic engineering and information engineering	394	137	290	106	35	15	1	-	68	16
Mechanical engineering	249	57	176	35	2	2	71	20	-	-
Chemical engineering	140	97	133	94	2	2	-	-	5	1
Environmental engineering	152	63	110	42	42	21	-	-	-	-
Other technologies and engineering	149	61	118	49	5	2	-	-	26	10
Medical and health sciences	936	575	749	454	81	55	-	-	106	66
Basic medicine	623	353	500	277	76	51	-	-	47	25
Other medical sciences	313	222	249	177	5	4	-	-	59	41

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2017 (head count) (continued)

	Full-time and part-time reasearchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Agricultural sciences	505	246	407	189	30	13	-	-	68	44
Agriculture, forestry and fisheries	128	63	97	50	22	8	-	-	9	5
Veterinary science	116	59	81	38	-	-	-	-	35	21
Agricultural biotechnology	17	6	16	5	1	1	-	-	-	-
Other agricultural sciences	244	118	213	96	7	4	-	-	24	18
Social sciences	1205	600	942	437	180	112	1	-	82	51
Economics and business	367	182	292	141	50	30	-	-	25	11
Educational sciences	315	189	241	141	48	26	-	-	26	22
Law	207	90	159	58	26	21	-	-	22	11
Political sciences	134	59	95	37	32	16	-	-	7	6
Media and communications	39	26	31	20	8	6	-	-	-	-
Other social sciences	143	54	124	40	16	13	1	-	2	1
Humanities	620	323	437	236	65	33	-	-	118	54
Languages and literature	210	138	172	113	3	3	-	-	35	22
Phylosophy, ethics and religion	303	119	203	74	47	22	-	-	53	23
Arts (arts, history of arts, performing arts, music)	79	46	36	31	13	6	-	-	30	9
Other humanities	28	20	26	18	2	2	-	-	-	-
Non-profit sector	**2**	**1**	**-**	**-**	**2**	**1**	**-**	**-**	**-**	**-**
Engineering and technology	2	1	-	-	2	1	-	-	-	-
Other technologies and engineering	2	1	-	-	2	1	-	-	-	-
Region Vojvodine	**4294**	**1970**	**2170**	**1034**	**1267**	**554**	**22**	**9**	**835**	**373**
Natural sciences	972	361	299	181	247	45	-	-	426	135
Engineering and technology	1492	599	774	290	545	230	1	1	172	78
Medical and health sciences	666	390	178	107	339	195	21	8	128	80
Agricultural sciences	339	160	254	103	34	20	-	-	51	37
Social sciences	755	426	607	324	101	64	-	-	47	38
Humanities	70	34	58	29	1	-	-	-	11	5
Business sector	**777**	**179**	**18**	**5**	**280**	**48**	**-**	**-**	**479**	**126**
Natural sciences	558	99	3	-	235	39	-	-	320	60
Computer and information sciences	556	98	3	-	235	39	-	-	318	59
Chemical sciences	2	1	-	-	-	-	-	-	2	1
Engineering and technology	209	74	11	2	41	7	-	-	157	65
Electrical engineering, electronic engineering and information engineering	42	6	-	-	21	2	-	-	21	4
Mechanical engineering	2	-	-	-	-	-	-	-	2	-
Chemical engineering	149	66	6	2	9	3	-	-	134	61
Other technologies and engineering	16	2	5	-	11	2	-	-	-	-
Agricultural sciences	10	6	4	3	4	2	-	-	2	1
Agriculture, forestry and fisheries	6	5	2	2	3	2	-	-	1	1
Agricultural biotechnology	4	1	2	1	1	-	-	-	1	-
Government sector	**257**	**140**	**197**	**103**	**55**	**32**	**1**	**1**	**4**	**4**
Engineering and technology	128	74	93	52	30	17	1	1	4	4
Environmental biotechnology	82	48	66	37	11	6	1	1	4	4
Other technologies and engineering	46	26	27	15	19	11	-	-	-	-
Agricultural sciences	129	66	104	51	25	15	-	-	-	-
Veterinary sciences	34	18	23	11	11	7	-	-	-	-
Agricultural biotechnology	95	48	81	40	14	8	-	-	-	-
Tertiary education	**3260**	**1651**	**1955**	**926**	**932**	**474**	**21**	**8**	**352**	**243**
Natural sciences	414	262	296	181	12	6	-	-	106	75
Mathematics	375	241	262	162	7	4	-	-	106	75
Earth and related environmental sciences	39	21	34	19	5	2	-	-	-	-
Engineering and technology	1155	451	670	236	474	206	-	-	11	9
Civil engineering	38	16	32	10	-	-	-	-	6	6
Electrical engineering, electronic engineering and information engineering	891	299	472	136	419	163	-	-	-	-
Other technologies and engineering	226	136	166	90	55	43	-	-	5	3
Medical and health sciences	666	390	178	107	339	195	21	8	128	80
Basic medicine	625	369	145	92	331	189	21	8	128	80
Other medical sciences	41	21	33	15	8	6	-	-	-	-
Agricultural sciences	200	88	146	49	5	3	-	-	49	36
Agriculture, forestry and fisheries	200	88	146	49	5	3	-	-	49	36
Social sciences	755	426	607	324	101	64	-	-	47	38
Psychology	81	46	57	23	-	-	-	-	24	23
Economics and business	159	76	126	54	13	10	-	-	20	12
Educational sciences	106	65	76	45	30	20	-	-	-	-
Law	113	45	93	33	17	9	-	-	3	3
Other social sciences	296	194	255	169	41	25	-	-	-	-
Humanities	70	34	58	29	1	-	-	-	11	5
Arts (arts, history of arts, performing arts, music)	26	17	25	17	1	-	-	-	-	-
Other Humanities	44	17	33	12	-	-	-	-	11	5

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2017 (head count) (continued)

	Full-time and part-time reasearchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
SRBIJA – JUG	2998	1501	2067	994	348	176	18	6	565	325
Natural sciences	403	231	272	151	29	15	1	-	101	65
Engineering and technology	870	312	583	208	133	55	1	-	153	49
Medical and health sciences	621	343	473	264	5	2	14	5	129	72
Agricultural sciences	75	35	65	30	5	2	-	-	5	3
Social sciences	604	303	483	216	81	57	-	-	40	30
Humanities	425	277	191	125	95	45	2	1	137	106
Business sector	**115**	**41**	**34**	**12**	**27**	**9**	**1**	**-**	**53**	**20**
Natural sciences	24	13	2	-	-	-	-	-	22	13
Computer and information sciences	15	6	2	-	-	-	-	-	13	6
Chemical sciences	6	4	-	-	-	-	-	-	6	4
Other natural sciences	3	3	-	-	-	-	-	-	3	3
Engineering and technology	72	20	17	6	24	7	-	-	31	7
Electrical engineering, electronic engineering and information engineering	32	13	7	3	19	7	-	-	6	3
Mechanical engineering	4	-	-	-	-	-	-	-	4	-
Chemical engineering	5	1	-	-	-	-	-	-	5	1
Materials engineering	2	1	-	-	-	-	-	-	2	1
Medical engineering	21	5	10	3	5	-	-	-	6	2
Other technologies and engineering	8	-	-	-	-	-	-	-	8	-
Medical and health sciences	2	-	1	-	-	-	1	-	-	-
Other medical sciences	2	-	1	-	-	-	1	-	-	-
Agricultural sciences	17	8	14	6	3	2	-	-	-	-
Agricultural biotechnology	17	8	14	6	3	2	-	-	-	-
Government sector	**66**	**42**	**38**	**27**	**19**	**9**	**1**	**-**	**8**	**6**
Engineering and technology	48	30	20	15	19	9	1	-	8	6
Other technologies and engineering	48	30	20	15	19	9	1	-	8	6
Agricultural sciences	18	12	18	12	-	-	-	-	-	-
Other agricultural sciences	18	12	18	12	-	-	-	-	-	-
Tertiary education	**2817**	**1418**	**1995**	**955**	**302**	**158**	**16**	**6**	**504**	**299**
Natural sciences	379	218	270	151	29	15	1	-	79	52
Mathematics	379	218	270	151	29	15	1	-	79	52
Engineering and technology	750	262	546	187	90	39	-	-	114	36
Civil engineering	88	38	53	19	35	19	-	-	-	-
Electrical engineering, electronic engineering and information engineering	294	95	226	78	19	6	-	-	49	11
Mechanical engineering	150	28	104	17	12	2	-	-	34	9
Chemical engineering	53	23	46	21	5	1	-	-	2	1
Environmental engineering	54	24	41	19	1	1	-	-	12	4
Other technologies and engineering	111	54	76	33	18	10	-	-	17	11
Medical and health sciences	619	343	472	264	5	2	13	5	129	72
Basic medicine	619	343	472	264	5	2	13	5	129	72
Agricultural sciences	40	15	33	12	2	-	-	-	5	3
Agriculture, forestry and fisheries	40	15	33	12	2	-	-	-	5	3
Social sciences	604	303	483	216	81	57	-	-	40	30
Economics and business	218	121	177	88	24	19	-	-	17	14
Educational sciences	231	107	178	72	49	34	-	-	4	1
Law	102	36	91	30	4	1	-	-	7	5
Other social sciences	53	39	37	26	4	3	-	-	12	10
Humanities	425	277	191	125	95	45	2	1	137	106
Languages and literature	152	108	42	26	50	25	-	-	60	57
Phylosophy, ethics and religion	172	118	117	78	-	-	-	-	55	40
Arts (arts, history of arts, performing arts, music)	101	51	32	21	45	20	2	1	22	9
Region Šumadije i Zapadne Srbije	**1307**	**686**	**839**	**399**	**141**	**77**	**13**	**5**	**314**	**205**
Natural sciences	195	124	119	74	7	3	-	-	69	47
Engineering and technology	255	79	175	52	15	5	-	-	65	22
Medical and health sciences	289	162	182	100	5	2	13	5	89	55
Agricultural sciences	65	32	56	27	4	2	-	-	5	3
Social sciences	351	181	265	120	60	40	-	-	26	21
Humanities	152	108	42	26	50	25	-	-	60	57
Business sector	**39**	**18**	**15**	**6**	**3**	**2**	**-**	**-**	**21**	**10**
Natural sciences	9	7	-	-	-	-	-	-	9	7
Chemical sciences	6	4	-	-	-	-	-	-	6	4
Other natural sciences	3	3	-	-	-	-	-	-	3	3
Engineering and technology	23	6	10	3	1	-	-	-	12	3
Mechanical engineering	4	-	-	-	-	-	-	-	4	-
Materials engineering	2	1	-	-	-	-	-	-	2	1
Medical engineering	17	5	10	3	1	-	-	-	6	2
Agricultural sciences	7	5	5	3	2	2	-	-	-	-
Agricultural biotechnology	7	5	5	3	2	2	-	-	-	-

3.1. Full-time and part-time researchers, by academic titles, sectors, field of science and sex, 2017 (head count) (continued)

	Full-time and part-time reasearchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Government sector	**18**	**12**	**18**	**12**	**-**	**-**	**-**	**-**	**-**	**-**
Agricultural sciences	18	12	18	12	-	-	-	-	-	-
Other Agricultural sciences	18	12	18	12	-	-	-	-	-	-
Tertiary education	**1250**	**656**	**806**	**381**	**138**	**75**	**13**	**5**	**293**	**195**
Natural sciences	186	117	119	74	7	3	-	-	60	40
Mathematics	186	117	119	74	7	3	-	-	60	40
Engineering and technology	232	73	165	49	14	5	-	-	53	19
Electrical engineering, electronic engineering and information engineering	158	51	116	37	6	3	-	-	36	11
Mechanical engineering	45	8	30	3	5	1	-	-	10	4
Other technologies and engineering	29	14	19	9	3	1	-	-	7	4
Medical and health sciences	289	162	182	100	5	2	13	5	89	55
Basic medicine	289	162	182	100	5	2	13	5	89	55
Agricultural sciences	40	15	33	12	2	-	-	-	5	3
Agriculture, forestry and fisheries	40	15	33	12	2	-	-	-	5	3
Social sciences	351	181	265	120	60	40	-	-	26	21
Economic and business	126	66	96	43	16	12	-	-	14	11
Educational sciences	142	68	106	44	36	24	-	-	-	-
Law	30	8	26	7	4	1	-	-	-	-
Other social sciences	53	39	37	26	4	3	-	-	12	10
Humanities	152	108	42	26	50	25	-	-	60	57
Languages and literature	152	108	42	26	50	25	-	-	60	57
Region Južne i Istočne Srbije	**1691**	**815**	**1228**	**595**	**207**	**99**	**5**	**1**	**251**	**120**
Natural sciences	208	107	153	77	22	12	1	-	32	18
Engineering and technology	615	233	408	156	118	50	1	-	88	27
Medical and health sciences	332	181	291	164	-	-	1	-	40	17
Agricultural sciences	10	3	9	3	1	-	-	-	-	-
Social sciences	253	122	218	96	21	17	-	-	14	9
Humanities	273	169	149	99	45	20	2	1	77	49
Business sector	**76**	**23**	**19**	**6**	**24**	**7**	**1**	**-**	**32**	**10**
Natural sciences	15	6	2	-	-	-	-	-	13	6
Computer and information sciences	15	6	2	-	-	-	-	-	13	6
Engineering and technologies	49	14	7	3	23	7	-	-	19	4
Electrical engineering, electronic engineering and information engineering	32	13	7	3	19	7	-	-	6	3
Chemical engineering	5	1	-	-	-	-	-	-	5	1
Medical engineering	4	-	-	-	4	-	-	-	-	-
Other technologies and engineering	8	-	-	-	-	-	-	-	8	-
Medical and health sciences	2	-	1	-	-	-	1	-	-	-
Other medical sciences	2	-	1	-	-	-	1	-	-	-
Agricultural sciences	10	3	9	3	1	-	-	-	-	-
Agricultural biotechnology	10	3	9	3	1	-	-	-	-	-
Government sector	**48**	**30**	**20**	**15**	**19**	**9**	**1**	**-**	**8**	**6**
Engineering and technology	48	30	20	15	19	9	1	-	8	6
Other technology and engineering	48	30	20	15	19	9	1	-	8	6
Tertiary education	**1567**	**762**	**1189**	**574**	**164**	**83**	**3**	**1**	**211**	**104**
Natural sciences	193	101	151	77	22	12	1	-	19	12
Mathematics	193	101	151	77	22	12	1	-	19	12
Engineering and technology	518	189	381	138	76	34	-	-	61	17
Civil engineering	88	38	53	19	35	19	-	-	-	-
Electrical engineering, electronic engineering and information engineering	136	44	110	41	13	3	-	-	13	-
Mechanical engineering	105	20	74	14	7	1	-	-	24	5
Chemical engineering	53	23	46	21	5	1	-	-	2	1
Environmental engineering	54	24	41	19	1	1	-	-	12	4
Other technologies and engineering	82	40	57	24	15	9	-	-	10	7
Medical and health sciences	330	181	290	164	-	-	-	-	40	17
Basic medicine	330	181	290	164	-	-	-	-	40	17
Social sciences	253	122	218	96	21	17	-	-	14	9
Economics and business	92	55	81	45	8	7	-	-	3	3
Educational sciences	89	39	72	28	13	10	-	-	4	1
Law	72	28	65	23	-	-	-	-	7	5
Humanities	273	169	149	99	45	20	2	1	77	49
Phylosophy, ethics and religion	172	118	117	78	-	-	-	-	55	40
Arts (arts, history of arts, performing arts, music)	101	51	32	21	45	20	2	1	22	9
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2017

	Full-time and part-time researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**14557,4**	**7237,3**	**9521,7**	**4695,7**	**2483,6**	**1251,2**	**95,4**	**30,0**	**2456,7**	**1260,4**
Natural sciences	3856,1	2004,1	2263,0	1259,1	661,2	308,8	1,0	-	930,9	436,2
Engineering and technology	3870,8	1496,1	2269,1	839,5	858,2	373,4	75,6	22,2	667,9	261,0
Medical and health sciences	1715,4	1021,6	1166,3	682,0	248,9	153,7	15,8	6,8	284,4	179,1
Agricultural sciences	1090,4	545,7	850,4	401,4	98,7	42,4	-	-	141,3	101,9
Social sciences	2599,8	1355,4	2057,5	994,9	384,0	250,3	1,0	-	157,3	110,2
Humanities	1424,9	814,4	915,4	518,8	232,6	122,6	2,0	1,0	274,9	172,0
Business sector	**1548,9**	**514,2**	**278,6**	**116,5**	**420,6**	**115,7**	**1,1**	**0,2**	**848,6**	**281,8**
Natural sciences	739,8	175,8	55,5	18,4	276,8	64,0	-	-	407,5	93,4
Computer and information sciences	563,4	103,0	5,0	-	231,1	38,0	-	-	327,3	65,0
Chemical sciences	54,0	33,0	16,0	7,0	30,0	21,0	-	-	8,0	5,0
Earth and related environmental sciences	8,4	2,8	3,5	1,4	0,7	-	-	-	4,2	1,4
Other natural sciences	114,0	37,0	31,0	10,0	15,0	5,0	-	-	68,0	22,0
Engineering and technology	719,5	278,5	189,8	80,7	128,1	41,3	0,6	0,2	401,0	156,3
Civil engineering	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Electrical engineering, electronic engineering and information engineering	219,3	71,5	42,7	15,5	73,5	26,0	-	-	103,1	30,0
Mechanical engineering	90,9	25,5	43,0	16,0	20,0	7,0	-	-	27,9	2,5
Chemical engineering	154,0	67,0	6,0	2,0	9,0	3,0	-	-	139,0	62,0
Materials engineering	37,8	19,0	22,4	11,2	2,5	1,3	0,6	0,2	12,3	6,3
Medical engineering	17,1	5,0	9,0	3,0	3,1	-	-	-	5,0	2,0
Environmental engineering	23,7	9,0	15,7	5,0	-	-	-	-	8,0	4,0
Environmental biotechnology	1,0	1,0	-	-	-	-	-	-	1,0	1,0
Other technologies and engineering	173,7	79,5	51,0	28,0	20,0	4,0	-	-	102,7	47,5
Medical and health sciences	32,0	23,0	0,5	-	2,0	-	0,5	-	29,0	23,0
Clinical medicine	2,0	-	-	-	2,0	-	-	-	-	-
Other medical sciences	30,0	23,0	0,5	-	-	-	0,5	-	29,0	23,0
Agricultural sciences	23,8	9,6	16,8	6,9	5,7	2,4	-	-	1,3	0,3
Agriculture, forestry and fisheries	1,4	1,1	0,4	0,4	0,7	0,4	-	-	0,3	0,3
Agricultural biotechnology	22,4	8,5	16,4	6,5	5,0	2,0	-	-	1,0	-
Social sciences	33,8	27,3	16,0	10,5	8,0	8,0	-	-	9,8	8,8
Economics and business	14,0	9,5	8,0	3,5	6,0	6,0	-	-	-	-
Other social sciences	19,8	17,8	8,0	7,0	2,0	2,0	-	-	9,8	8,8
Government sector	**2992,9**	**1794,4**	**2133,4**	**1239,8**	**559,1**	**341,1**	**5,0**	**3,0**	**295,4**	**210,5**
Natural sciences	1525,9	965,2	1049,0	639,9	279,0	190,0	-	-	197,9	135,3
Mathematics	253,1	151,2	178,1	99,2	75,0	52,0	-	-	-	-
Physical sciences	669,0	367,0	433,0	220,0	106,0	58,0	-	-	130,0	89,0
Biological sciences	407,8	339,7	305,5	259,4	71,0	63,0	-	-	31,3	17,3
Other natural sciences	196,0	107,3	132,4	61,3	27,0	17,0	-	-	36,6	29,0
Engineering and technology	374,2	192,8	243,5	120,4	89,7	43,4	3,0	2,0	38,0	27,0
Civil engineering	26,0	19,0	19,0	14,0	6,0	4,0	-	-	1,0	1,0
Electrical engineering, electronic engineering and information engineering	75,0	19,0	54,0	10,0	9,0	1,0	-	-	12,0	8,0
Materials engineering	43,0	20,0	25,0	11,0	18,0	9,0	-	-	-	-
Environmental biotechnology	115,4	67,0	78,4	44,0	24,0	13,0	1,0	1,0	12,0	9,0
Industrial biotechnology	30,0	17,0	24,0	13,0	-	-	1,0	1,0	5,0	3,0
Other technologies and engineering	84,8	50,8	43,1	28,4	32,7	16,4	1,0	-	8,0	6,0
Medical and health sciences	152,9	115,6	114,8	83,2	17,6	14,2	2,0	1,0	18,5	17,2
Basic medicine	63,0	44,0	53,0	35,0	1,0	1,0	2,0	1,0	7,0	7,0
Other medical sciences	89,9	71,6	61,8	48,2	16,6	13,2	-	-	11,5	10,2
Agricultural sciences	360,0	205,0	281,0	160,0	56,0	24,0	-	-	23,0	21,0
Animal and dairy science	25,0	11,0	16,0	8,0	9,0	3,0	-	-	-	-
Veterinary science	58,0	28,0	38,0	21,0	20,0	7,0	-	-	-	-
Agricultural biotechnology	228,0	132,0	183,0	102,0	22,0	9,0	-	-	23,0	21,0
Other agricultural sciences	49,0	34,0	44,0	29,0	5,0	5,0	-	-	-	-
Social sciences	245,8	121,5	200,8	96,5	44,0	24,0	-	-	1,0	1,0
Psychology	40,7	21,2	38,7	19,2	2,0	2,0	-	-	-	-
Economics and business	45,0	25,0	35,0	18,0	10,0	7,0	-	-	-	-
Sociology	24,0	10,0	21,0	8,0	3,0	2,0	-	-	-	-
Law	38,5	20,0	31,5	16,0	7,0	4,0	-	-	-	-
Political sciences	72,6	25,3	53,6	17,3	19,0	8,0	-	-	-	-
Other social sciences	25,0	20,0	21,0	18,0	3,0	1,0	-	-	1,0	1,0
Humanities	334,1	194,3	244,3	139,8	72,8	45,5	-	-	17,0	9,0
History and archeology	174,5	74,5	137,0	60,0	22,5	7,5	-	-	15,0	7,0
Languages and literature	93,8	70,0	53,5	39,0	38,3	29,0	-	-	2,0	2,0
Arts (arts, history of arts, performing arts, music)	14,0	12,0	12,0	10,0	2,0	2,0	-	-	-	-
Other humanities	51,8	37,8	41,8	30,8	10,0	7,0	-	-	-	-
Tertiary education	**10013,6**	**4927,7**	**7109,7**	**3339,4**	**1501,9**	**793,4**	**89,3**	**26,8**	**1312,7**	**768,1**
Natural sciences	1590,4	863,1	1158,5	600,8	105,4	54,8	1,0	-	325,5	207,5
Mathematics	886,3	516,2	599,7	337,9	35,0	18,0	1,0	-	250,6	160,3
Computer and information sciences	228,9	98,1	179,7	77,4	44,5	18,7	-	-	4,7	2,0
Physical sciences	85,0	26,0	65,0	20,0	-	-	-	-	20,0	6,0
Chemical sciences	141,0	75,0	123,0	64,0	7,0	6,0	-	-	11,0	5,0

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2017 (continued)

	Full-time and part-time researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Earth and related environmental sciences	80,0	40,2	60,9	27,9	18,9	12,1	-	-	0,2	0,2
Biological sciences	169,2	107,6	130,2	73,6	-	-	-	-	39,0	34,0
Engineering and technology	2775,1	1023,8	1835,8	638,4	638,4	287,7	72,0	20,0	228,9	77,7
Civil engineering	341,0	142,0	227,0	85,0	86,0	37,0	-	-	28,0	20,0
Electrical engineering, electronic engineering and information engineering	1323,0	446,9	791,5	251,5	414,0	168,9	1,0	-	116,5	26,5
Mechanical engineering	398,3	84,3	279,3	51,3	14,0	4,0	71,0	20,0	34,0	9,0
Chemical engineering	141,1	85,1	131,2	82,2	6,0	2,0	-	-	3,9	0,9
Environmental engineering	179,0	75,0	130,5	51,5	42,5	21,5	-	-	6,0	2,0
Other technologies and engineering	392,7	190,5	276,3	116,9	75,9	54,3	-	-	40,5	19,3
Medical and health sciences	1530,5	883,0	1051,0	598,8	229,3	139,5	13,3	5,8	236,9	138,9
Basic medicine	1261,9	717,0	842,0	474,8	216,3	129,5	13,3	5,8	190,3	106,9
Other medical sciences	268,6	166,0	209,0	124,0	13,0	10,0	-	-	46,6	32,0
Agricultural sciences	706,6	331,1	552,6	234,5	37,0	16,0	-	-	117,0	80,6
Agriculture, forestry and fisheries	366,5	165,5	274,5	110,5	29,0	11,0	-	-	63,0	44,0
Veterinary sciences	79,9	41,6	49,9	23,0	-	-	-	-	30,0	18,6
Agricultural biotechnology	17,0	6,0	16,0	5,0	1,0	1,0	-	-	-	-
Other agricultural sciences	243,2	118,0	212,2	96,0	7,0	4,0	-	-	24,0	18,0
Social sciences	2320,2	1206,6	1840,7	887,9	332,0	218,3	1,0	-	146,5	100,4
Psychology	40,5	23,0	28,5	12,5	-	-	-	-	12,0	10,5
Economics and business	664,3	339,5	533,5	253,3	76,5	53,3	-	-	54,3	32,9
Educational sciences	590,0	328,0	446,1	231,8	114,2	73,5	-	-	29,7	22,7
Law	383,4	155,2	311,1	108,4	41,0	28,5	-	-	31,3	18,3
Political sciences	124,2	55,2	86,7	33,2	31,3	16,0	-	-	6,2	6,0
Media and communications	32,4	21,2	24,4	15,2	8,0	6,0	-	-	-	-
Other social sciences	485,4	284,5	410,4	233,5	61,0	41,0	1,0	-	13,0	10,0
Humanities	1090,8	620,1	671,1	379,0	159,8	77,1	2,0	1,0	257,9	163,0
Languages and literature	354,8	241,3	211,2	136,3	53,0	28,0	-	-	90,6	77,0
Phylosophy, ethics and religion	475,0	237,0	320,0	152,0	47,0	22,0	-	-	108,0	63,0
Arts (arts, history of arts, performing arts, music)	189,0	104,8	80,9	60,7	57,8	25,1	2,0	1,0	48,3	18,0
Other humanities										
Non-profit sector	**2,0**	**1,0**	**-**	**-**	**2,0**	**1,0**	**-**	**-**	**-**	**-**
Engineering and technology	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Other technologies and engineering	2,0	1,0	-	-	2,0	1,0	-	-	-	-
SRBIJA – SEVER	11886,1	5894,3	7686,6	3810,7	2147,1	1079,9	87,4	27,5	1965,0	976,2
Natural sciences	3460,1	1777,4	1993,6	1109,7	635,2	295,8	-	-	831,3	371,9
Engineering and technology	3099,1	1219,3	1765,2	659,1	730,2	319,6	74,6	22,2	529,1	218,4
Medical and health sciences	1276,3	776,7	813,7	482,9	247,6	153,2	11,8	5,3	203,2	135,3
Agricultural sciences	1015,4	510,7	785,4	371,4	93,7	40,4	-	-	136,3	98,9
Social sciences	2020,7	1064,3	1595,7	787,3	303,0	193,3	1,0	-	121,0	83,7
Humanities	1014,5	545,9	733,0	400,3	137,4	77,6	-	-	144,1	68,0
Business sector	**1440,6**	**473,7**	**247,4**	**105,0**	**396,0**	**106,7**	**0,6**	**0,2**	**796,6**	**261,8**
Natural sciences	715,8	162,8	53,5	18,4	276,8	64,0	-	-	385,5	80,4
Computer and information sciences	548,4	97,0	3,0	-	231,1	38,0	-	-	314,3	59,0
Chemical sciences	48,0	29,0	16,0	7,0	30,0	21,0	-	-	2,0	1,0
Earth and related environmental sciences	8,4	2,8	3,5	1,4	0,7	-	-	-	4,2	1,4
Other natural sciences	111,0	34,0	31,0	10,0	15,0	5,0	-	-	65,0	19,0
Engineering and technology	653,2	259,0	175,1	75,2	106,5	34,3	0,6	0,2	371,0	149,3
Civil engineering	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Electrical engineering, electronic engineering and information engineering	189,1	59,0	37,0	13,0	55,0	19,0	-	-	97,1	27,0
Mechanical engineering	86,9	25,5	43,0	16,0	20,0	7,0	-	-	23,9	2,5
Chemical engineering	149,0	66,0	6,0	2,0	9,0	3,0	-	-	134,0	61,0
Materials engineering	35,8	18,0	22,4	11,2	2,5	1,3	0,6	0,2	10,3	5,3
Environmental engineering	23,7	9,0	15,7	5,0	-	-	-	-	8,0	4,0
Environmental biotechnology	1,0	1,0	-	-	-	-	-	-	1,0	1,0
Other technologies and engineering	165,7	79,5	51,0	28,0	20,0	4,0	-	-	94,7	47,5
Medical and health sciences	31,0	23,0	-	-	2,0	-	-	-	29,0	23,0
Clinical medicine	2,0	-	-	-	2,0	-	-	-	-	-
Other medical sciences	29,0	23,0	-	-	-	-	-	-	29,0	23,0
Agricultural sciences	6,8	1,6	2,8	0,9	2,7	0,4	-	-	1,3	0,3
Agriculture, forestry and fisheries	1,4	1,1	0,4	0,4	0,7	0,4	-	-	0,3	0,3
Agricultural biotechnology	5,4	0,5	2,4	0,5	2,0	-	-	-	1,0	-
Social sciences	33,8	27,3	16,0	10,5	8,0	8,0	-	-	9,8	8,8
Economics and business	14,0	9,5	8,0	3,5	6,0	6,0	-	-	-	-
Other social sciences	19,8	17,8	8,0	7,0	2,0	2,0	-	-	9,8	8,8
Government sciences	**2926,9**	**1752,4**	**2095,4**	**1212,8**	**540,1**	**332,1**	**4,0**	**3,0**	**287,4**	**204,5**
Natural sciences	1525,9	965,2	1049,0	639,9	279,0	190,0	-	-	197,9	135,3
Mathematics	253,1	151,2	178,1	99,2	75,0	52,0	-	-	-	-
Physical sciences	669,0	367,0	433,0	220,0	106,0	58,0	-	-	130,0	89,0
Biological sciences	407,8	339,7	305,5	259,4	71,0	63,0	-	-	31,3	17,3
Other natural sciences	196,0	107,3	132,4	61,3	27,0	17,0	-	-	36,6	29,0
Engineering and technology	326,2	162,8	223,5	105,4	70,7	34,4	2,0	2,0	30,0	21,0

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2017 (continued)

	Full-time and part-time researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Civil engineering	26,0	19,0	19,0	14,0	6,0	4,0	-	-	1,0	1,0
Electrical engineering, electronic engineering and information engineering	75,0	19,0	54,0	10,0	9,0	1,0	-	-	12,0	8,0
Materials engineering	43,0	20,0	25,0	11,0	18,0	9,0	-	-	-	-
Environmental biotechnology	115,4	67,0	78,4	44,0	24,0	13,0	1,0	1,0	12,0	9,0
Industrial biotechnology	30,0	17,0	24,0	13,0	-	-	1,0	1,0	5,0	3,0
Other technologies and engineering	36,8	20,8	23,1	13,4	13,7	7,4	-	-	-	-
Medical and health sciences	152,9	115,6	114,8	83,2	17,6	14,2	2,0	1,0	18,5	17,2
Basic medicine	63,0	44,0	53,0	35,0	1,0	1,0	2,0	1,0	7,0	7,0
Other medical sciences	89,9	71,6	61,8	48,2	16,6	13,2	-	-	11,5	10,2
Agricultural sciences	342,0	193,0	263,0	148,0	56,0	24,0	-	-	23,0	21,0
Animal and dairy science	25,0	11,0	16,0	8,0	9,0	3,0	-	-	-	-
Veterinary science	58,0	28,0	38,0	21,0	20,0	7,0	-	-	-	-
Agricultural biotechnology	228,0	132,0	183,0	102,0	22,0	9,0	-	-	23,0	21,0
Other agricultural sciences	31,0	22,0	26,0	17,0	5,0	5,0	-	-	-	-
Social sciences	245,8	121,5	200,8	96,5	44,0	24,0	-	-	1,0	1,0
Psychology	40,7	21,2	38,7	19,2	2,0	2,0	-	-	-	-
Economics and business	45,0	25,0	35,0	18,0	10,0	7,0	-	-	-	-
Sociology	24,0	10,0	21,0	8,0	3,0	2,0	-	-	-	-
Law	38,5	20,0	31,5	16,0	7,0	4,0	-	-	-	-
Political sciences	72,6	25,3	53,6	17,3	19,0	8,0	-	-	-	-
Other social sciences	25,0	20,0	21,0	18,0	3,0	1,0	-	-	1,0	1,0
Humanities	334,1	194,3	244,3	139,8	72,8	45,5	-	-	17,0	9,0
History and archeology	174,5	74,5	137,0	60,0	22,5	7,5	-	-	15,0	7,0
Languages and literature	93,8	70,0	53,5	39,0	38,3	29,0	-	-	2,0	2,0
Art (arts, history of arts, performing arts, music)	14,0	12,0	12,0	10,0	2,0	2,0	-	-	-	-
Other humanities	51,8	37,8	41,8	30,8	10,0	7,0	-	-	-	-
Tertiary education	**7516,6**	**3667,2**	**5343,8**	**2492,9**	**1209,0**	**640,1**	**82,8**	**24,3**	**881,0**	**509,9**
Natural sciences	1218,4	649,4	891,1	451,4	79,4	41,8	-	-	247,9	156,2
Mathematics	514,3	302,5	332,3	188,5	9,0	5,0	-	-	173,0	109,0
Computer and information sciences	228,9	98,1	179,7	77,4	44,5	18,7	-	-	4,7	2,0
Physical sciences	85,0	26,0	65,0	20,0	-	-	-	-	20,0	6,0
Chemical sciences	141,0	75,0	123,0	64,0	7,0	6,0	-	-	11,0	5,0
Earth and related environmental sciences	80,0	40,2	60,9	27,9	18,9	12,1	-	-	0,2	0,2
Biological sciences	169,2	107,6	130,2	73,6	-	-	-	-	39,0	34,0
Engineering and technology	2117,7	796,5	1366,6	478,5	551,0	249,9	72,0	20,0	128,1	48,1
Civil engineering	253,0	104,0	174,0	66,0	51,0	18,0	-	-	28,0	20,0
Electrical engineering, electronic engineering and information engineering	1069,4	362,9	605,4	184,0	395,0	162,9	1,0	-	68,0	16,0
Mechanical engineering	249,0	57,0	176,0	35,0	2,0	2,0	71,0	20,0	-	-
Chemical engineering	90,5	63,5	87,0	62,0	1,0	1,0	-	-	2,5	0,5
Environmental engineering	152,0	63,0	110,0	42,0	42,0	21,0	-	-	-	-
Other technologies and engineering	303,8	146,1	214,2	89,5	60,0	45,0	-	-	29,6	11,6
Medical and health sciences	1092,4	638,1	698,9	399,7	228,0	139,0	9,8	4,3	155,7	95,1
Basic medicine	823,8	472,1	489,9	275,7	215,0	129,0	9,8	4,3	109,1	63,1
Other medical sciences	268,6	166,0	209,0	124,0	13,0	10,0	-	-	46,6	32,0
Agricultural sciences	666,6	316,1	519,6	222,5	35,0	16,0	-	-	112,0	77,6
Agriculture, forestry and fisheries	326,5	150,5	241,5	98,5	27,0	11,0	-	-	58,0	41,0
Veterinary science	79,9	41,6	49,9	23,0	-	-	-	-	30,0	18,6
Agricultural biotechnology	17,0	6,0	16,0	5,0	1,0	1,0	-	-	-	-
Other agricultural sciences	243,2	118,0	212,2	96,0	7,0	4,0	-	-	24,0	18,0
Social sciences	1741,1	915,5	1378,9	680,3	251,0	161,3	1,0	-	110,2	73,9
Psychology	40,5	23,0	28,5	12,5	-	-	-	-	12,0	10,5
Economics and business	451,7	222,0	359,2	166,3	52,5	34,3	-	-	40,0	21,4
Educational sciences	375,5	227,5	284,6	166,3	65,2	39,5	-	-	25,7	21,7
Law	283,4	120,1	222,1	79,3	37,0	27,5	-	-	24,3	13,3
Political sciences	124,2	55,2	86,7	33,2	31,3	16,0	-	-	6,2	6,0
Media and communications	32,4	21,2	24,4	15,2	8,0	6,0	-	-	-	-
Other social sciences	433,4	246,5	373,4	207,5	57,0	38,0	1,0	-	2,0	1,0
Humanities	680,4	351,6	488,7	260,5	64,6	32,1	-	-	127,1	59,0
Languages and literature	209,1	138,0	171,1	113,0	3,0	3,0	-	-	35,0	22,0
Phylosophy, ethics and religion	303,0	119,0	203,0	74,0	47,0	22,0	-	-	53,0	23,0
Art (arts, history of arts, performing arts, music)	96,3	57,6	55,6	43,5	12,6	5,1	-	-	28,1	9,0
Other humanities	72,0	37,0	59,0	30,0	2,0	2,0	-	-	11,0	5,0
Non-profit sector	**2,0**	**1,0**	**-**	**-**	**2,0**	**1,0**	**-**	**-**	**-**	**-**
Engineering and technology	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Other technologies and engineering	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Beogradski region	**8216,9**	**4257,2**	**5797,5**	**2923,7**	**1128,2**	**650,9**	**76,6**	**22,2**	**1214,6**	**660,4**
Natural sciences	2516,4	1428,9	1712,3	939,2	395,1	252,8	-	-	409,0	236,9
Engineering and technology	1757,7	688,6	1095,7	424,8	229,9	100,8	73,6	21,2	358,5	141,8
Medical and health sciences	927,9	570,2	697,5	411,6	87,3	60,4	2,0	1,0	141,1	97,2
Agricultural sciences	683,0	355,6	535,0	271,0	62,0	22,0	-	-	86,0	62,6
Social sciences	1386,9	701,5	1081,5	505,3	217,5	137,3	1,0	-	86,9	58,9
Humanities	945,0	512,4	675,5	371,8	136,4	77,6	-	-	133,1	63,0

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2017 (continued)

	Full-time and part-time researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Business sector	**676,3**	**300,1**	**231,5**	**102,1**	**122,2**	**61,3**	**0,6**	**0,2**	**322,0**	**136,5**
Natural sciences	165,4	64,8	50,5	18,4	45,7	26,0	-	-	69,2	20,4
Chemical sciences	46,0	28,0	16,0	7,0	30,0	21,0	-	-	-	-
Earth and related environmental sciences	8,4	2,8	3,5	1,4	0,7	-	-	-	4,2	1,4
Other natural sciences	111,0	34,0	31,0	10,0	15,0	5,0	-	-	65,0	19,0
Engineering and technology	444,2	185,0	164,1	73,2	65,5	27,3	0,6	0,2	214,0	84,3
Civil engineering	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Electrical engineering, electronic engineering and information engineering	147,1	53,0	37,0	13,0	34,0	17,0	-	-	76,1	23,0
Mechanical engineering	84,9	25,5	43,0	16,0	20,0	7,0	-	-	21,9	2,5
Materials engineering	35,8	18,0	22,4	11,2	2,5	1,3	0,6	0,2	10,3	5,3
Environmental engineering	23,7	9,0	15,7	5,0	-	-	-	-	8,0	4,0
Environmental biotechnology	1,0	1,0	-	-	-	-	-	-	1,0	1,0
Other technologies and engineering	149,7	77,5	46,0	28,0	9,0	2,0	-	-	94,7	47,5
Medical and health sciences	31,0	23,0	-	-	2,0	-	-	-	29,0	23,0
Clinical medicine	2,0	-	-	-	2,0	-	-	-	-	-
Other medical sciences	29,0	23,0	-	-	-	-	-	-	29,0	23,0
Agricultural sciences	1,9	-	0,9	-	1,0	-	-	-	-	-
Agricultural biotechnology	1,9	-	0,9	-	1,0	-	-	-	-	-
Social sciences	33,8	27,3	16,0	10,5	8,0	8,0	-	-	9,8	8,8
Economics and business	14,0	9,5	8,0	3,5	6,0	6,0	-	-	-	-
Other social sciences	19,8	17,8	8,0	7,0	2,0	2,0	-	-	9,8	8,8
Government sector	**2679,7**	**1617,6**	**1902,9**	**1111,4**	**490,4**	**303,7**	**3,0**	**2,0**	**283,4**	**200,5**
Natural sciences	1525,9	965,2	1049,0	639,9	279,0	190,0	-	-	197,9	135,3
Mathematics	253,1	151,2	178,1	99,2	75,0	52,0	-	-	-	-
Physical sciences	669,0	367,0	433,0	220,0	106,0	58,0	-	-	130,0	89,0
Biological sciences	407,8	339,7	305,5	259,4	71,0	63,0	-	-	31,3	17,3
Other natural sciences	196,0	107,3	132,4	61,3	27,0	17,0	-	-	36,6	29,0
Engineering and technology	208,0	94,0	135,0	55,0	46,0	21,0	1,0	1,0	26,0	17,0
Civil engineering	26,0	19,0	19,0	14,0	6,0	4,0	-	-	1,0	1,0
Electrical engineering, electronic engineering and information engineering	75,0	19,0	54,0	10,0	9,0	1,0	-	-	12,0	8,0
Materials engineering	43,0	20,0	25,0	11,0	18,0	9,0	-	-	-	-
Environmental biotechnology	34,0	19,0	13,0	7,0	13,0	7,0	-	-	8,0	5,0
Industrial biotechnology	30,0	17,0	24,0	13,0	-	-	1,0	1,0	5,0	3,0
Medical and health sciences	152,9	115,6	114,8	83,2	17,6	14,2	2,0	1,0	18,5	17,2
Basic medicine	63,0	44,0	53,0	35,0	1,0	1,0	2,0	1,0	7,0	7,0
Other medical sciences	89,9	71,6	61,8	48,2	16,6	13,2	-	-	11,5	10,2
Agricultural sciences	213,0	127,0	159,0	97,0	31,0	9,0	-	-	23,0	21,0
Animal and dairy science	25,0	11,0	16,0	8,0	9,0	3,0	-	-	-	-
Veterinary science	24,0	10,0	15,0	10,0	9,0	-	-	-	-	-
Agricultural biotechnology	133,0	84,0	102,0	62,0	8,0	1,0	-	-	23,0	21,0
Other agricultural sciences	31,0	22,0	26,0	17,0	5,0	5,0	-	-	-	-
Social sciences	245,8	121,5	200,8	96,5	44,0	24,0	-	-	1,0	1,0
Psychology	40,7	21,2	38,7	19,2	2,0	2,0	-	-	-	-
Economics and business	45,0	25,0	35,0	18,0	10,0	7,0	-	-	-	-
Sociocology	24,0	10,0	21,0	8,0	3,0	2,0	-	-	-	-
Law	38,5	20,0	31,5	16,0	7,0	4,0	-	-	-	-
Political sciences	72,6	25,3	53,6	17,3	19,0	8,0	-	-	-	-
Other social sciences	25,0	20,0	21,0	18,0	3,0	1,0	-	-	1,0	1,0
Humanities	334,1	194,3	244,3	139,8	72,8	45,5	-	-	17,0	9,0
History and archeology	174,5	74,5	137,0	60,0	22,5	7,5	-	-	15,0	7,0
Languages and literature	93,8	70,0	53,5	39,0	38,3	29,0	-	-	2,0	2,0
Art (arts, history of arts, performing arts, music)	14,0	12,0	12,0	10,0	2,0	2,0	-	-	-	-
Other humanities	51,8	37,8	41,8	30,8	10,0	7,0	-	-	-	-
Tertiary education	**4858,9**	**2338,5**	**3663,1**	**1710,2**	**513,6**	**284,9**	**73,0**	**20,0**	**609,2**	**323,4**
Natural sciences	825,1	398,9	612,8	280,9	70,4	36,8	-	-	141,9	81,2
Mathematics	147,0	65,0	78,0	30,0	2,0	1,0	-	-	67,0	34,0
Computer and information sciences	228,9	98,1	179,7	77,4	44,5	18,7	-	-	4,7	2,0
Physical sciences	85,0	26,0	65,0	20,0	-	-	-	-	20,0	6,0
Chemical sciences	141,0	75,0	123,0	64,0	7,0	6,0	-	-	11,0	5,0
Earth and related environmental sciences	54,0	27,2	36,9	15,9	16,9	11,1	-	-	0,2	0,2
Biological sciences	169,2	107,6	130,2	73,6	-	-	-	-	39,0	34,0
Engineering and technology	1103,5	408,6	796,6	296,6	116,4	51,5	72,0	20,0	118,5	40,5
Civil engineering	215,0	88,0	142,0	56,0	51,0	18,0	-	-	22,0	14,0
Electrical engineering, electronic engineering and information engineering	248,3	76,4	163,9	52,9	15,4	7,5	1,0	-	68,0	16,0
Mechanical engineering	249,0	57,0	176,0	35,0	2,0	2,0	71,0	20,0	-	-
Chemical engineering	90,5	63,5	87,0	62,0	1,0	1,0	-	-	2,5	0,5
Environmental engineering	152,0	63,0	110,0	42,0	42,0	21,0	-	-	-	-
Other technologies and engineering	148,7	60,7	117,7	48,7	5,0	2,0	-	-	26,0	10,0
Medical and health sciences	744,0	431,6	582,7	328,4	67,7	46,2	-	-	93,6	57,0
Basic medicine	516,4	286,6	406,7	219,4	62,7	42,2	-	-	47,0	25,0
Other medical sciences	227,6	145,0	176,0	109,0	5,0	4,0	-	-	46,6	32,0

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2017 (continued)

	Full-time and part-time researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Agricultural sciences	468,1	228,6	375,1	174,0	30,0	13,0	-	-	63,0	41,6
Agriculture, forestry and fisheries	128,0	63,0	97,0	50,0	22,0	8,0	-	-	9,0	5,0
Veterinary science	79,9	41,6	49,9	23,0	-	-	-	-	30,0	18,6
Agricultural biotechnology	17,0	6,0	16,0	5,0	1,0	1,0	-	-	-	-
Other agricultural sciences	243,2	118,0	212,2	96,0	7,0	4,0	-	-	24,0	18,0
Social sciences	1107,3	552,7	864,7	398,3	165,5	105,3	1,0	-	76,1	49,1
Economics and business	298,8	148,4	238,1	113,7	40,5	25,3	-	-	20,2	9,4
Educational sciences	308,5	185,4	237,6	138,7	45,2	25,0	-	-	25,7	21,7
Law	204,5	88,5	158,0	57,5	24,5	20,0	-	-	22,0	11,0
Political sciences	124,2	55,2	86,7	33,2	31,3	16,0	-	-	6,2	6,0
Media and communications	32,4	21,2	24,4	15,2	8,0	6,0	-	-	-	-
Other social sciences	138,9	54,0	119,9	40,0	16,0	13,0	1,0	-	2,0	1,0
Humanities	610,9	318,1	431,2	232,0	63,6	32,1	-	-	116,1	54,0
Languages and literature	209,1	138,0	171,1	113,0	3,0	3,0	-	-	35,0	22,0
Phylosophy, ethics and religion	303,0	119,0	203,0	74,0	47,0	22,0	-	-	53,0	23,0
Art (arts, history of arts, performing arts, music)	70,8	41,1	31,1	27,0	11,6	5,1	-	-	28,1	9,0
Other humanities	28,0	20,0	26,0	18,0	2,0	2,0	-	-	-	-
Non-profit sector	**2,0**	**1,0**	**-**	**-**	**2,0**	**1,0**	**-**	**-**	**-**	**-**
Engineering and technology	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Other technologies and engineering	2,0	1,0	-	-	2,0	1,0	-	-	-	-
Region Vojvodine	**3669,2**	**1637,1**	**1889,1**	**887,0**	**1018,9**	**429,0**	**10,8**	**5,3**	**750,4**	**315,8**
Natural sciences	943,7	348,5	281,3	170,5	240,1	43,0	-	-	422,3	135,0
Engineering and technology	1341,4	530,7	669,5	234,3	500,3	218,8	1,0	1,0	170,6	76,6
Medical and health sciences	348,4	206,5	116,2	71,3	160,3	92,8	9,8	4,3	62,1	38,1
Agricultural sciences	332,4	155,1	250,4	100,4	31,7	18,4	-	-	50,3	36,3
Social sciences	633,8	362,8	514,2	282,0	85,5	56,0	-	-	34,1	24,8
Humanities	69,5	33,5	57,5	28,5	1,0	-	-	-	11,0	5,0
Business sector	**764,3**	**173,6**	**15,9**	**2,9**	**273,8**	**45,4**	**-**	**-**	**474,6**	**125,3**
Natural sciences	550,4	98,0	3,0	-	231,1	38,0	-	-	316,3	60,0
Computer and information sciences	548,4	97,0	3,0	-	231,1	38,0	-	-	314,3	59,0
Chemical sciences	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Engineering and technology	209,0	74,0	11,0	2,0	41,0	7,0	-	-	157,0	65,0
Electrical engineering, electronic engineering and information engineering	42,0	6,0	-	-	21,0	2,0	-	-	21,0	4,0
Mechanical engineering	2,0	-	-	-	-	-	-	-	2,0	-
Chemical engineering	149,0	66,0	6,0	2,0	9,0	3,0	-	-	134,0	61,0
Other technologies and engineering	16,0	2,0	5,0	-	11,0	2,0	-	-	-	-
Agricultural sciences	4,9	1,6	1,9	0,9	1,7	0,4	-	-	1,3	0,3
Agricultural, forestry and fisheries	1,4	1,1	0,4	0,4	0,7	0,4	-	-	0,3	0,3
Agricultural biotechnology	3,5	0,5	1,5	0,5	1,0	-	-	-	1,0	-
Government sector	**247,2**	**134,8**	**192,5**	**101,4**	**49,7**	**28,4**	**1,0**	**1,0**	**4,0**	**4,0**
Engineering and technology	118,2	68,8	88,5	50,4	24,7	13,4	1,0	1,0	4,0	4,0
Environmental biotechnology	81,4	48,0	65,4	37,0	11,0	6,0	1,0	1,0	4,0	4,0
Other technologies and engineering	36,8	20,8	23,1	13,4	13,7	7,4	-	-	-	-
Agricultural sciences	129,0	66,0	104,0	51,0	25,0	15,0	-	-	-	-
Veterinary sciences	34,0	18,0	23,0	11,0	11,0	7,0	-	-	-	-
Agricultural biotechnology	95,0	48,0	81,0	40,0	14,0	8,0	-	-	-	-
Tertiary education	**2657,7**	**1328,7**	**1680,7**	**782,7**	**695,4**	**355,2**	**9,8**	**4,3**	**271,8**	**186,5**
Natural sciences	393,3	250,5	278,3	170,5	9,0	5,0	-	-	106,0	75,0
Mathematics	367,3	237,5	254,3	158,5	7,0	4,0	-	-	106,0	75,0
Earth and related environmental sciences	26,0	13,0	24,0	12,0	2,0	1,0	-	-	-	-
Engineering and technology	1014,2	387,9	570,0	181,9	434,6	198,4	-	-	9,6	7,6
Civil engineering	38,0	16,0	32,0	10,0	-	-	-	-	6,0	6,0
Electrical engineering, electronic engineering and information engineering	821,1	286,5	441,5	131,1	379,6	155,4	-	-	-	-
Other technologies and engineering	155,1	85,4	96,5	40,8	55,0	43,0	-	-	3,6	1,6
Medical and health sciences	348,4	206,5	116,2	71,3	160,3	92,8	9,8	4,3	62,1	38,1
Basic medicine	307,4	185,5	83,2	56,3	152,3	86,8	9,8	4,3	62,1	38,1
Other medical sciences	41,0	21,0	33,0	15,0	8,0	6,0	-	-	-	-
Agricultural sciences	198,5	87,5	144,5	48,5	5,0	3,0	-	-	49,0	36,0
Agriculture, forestry and fisheries	198,5	87,5	144,5	48,5	5,0	3,0	-	-	49,0	36,0
Social sciences	633,8	362,8	514,2	282,0	85,5	56,0	-	-	34,1	24,8
Psychology	40,5	23,0	28,5	12,5	-	-	-	-	12,0	10,5
Economics and business	152,9	73,6	121,1	52,6	12,0	9,0	-	-	19,8	12,0
Educational sciences	67,0	42,1	47,0	27,6	20,0	14,5	-	-	-	-
Law	78,9	31,6	64,1	21,8	12,5	7,5	-	-	2,3	2,3
Other social sciences	294,5	192,5	253,5	167,5	41,0	25,0	-	-	-	-
Humanities	69,5	33,5	57,5	28,5	1,0	-	-	-	11,0	5,0
Arts (arts, history of arts, performing arts, music)	25,5	16,5	24,5	16,5	1,0	-	-	-	-	-
Other humanities	44,0	17,0	33,0	12,0	-	-	-	-	11,0	5,0

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2017 (continued)

	Full-time and part-time researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
SRBIJA – JUG	2671,3	1343,0	1835,1	885,0	336,5	171,3	8,0	2,5	491,7	284,2
Natural sciences	396,0	226,7	269,4	149,4	26,0	13,0	1,0	-	99,6	64,3
Engineering and technology	771,7	276,8	503,9	180,4	128,0	53,8	1,0	-	138,8	42,6
Medical and health sciences	439,1	244,9	352,6	199,1	1,3	0,5	4,0	1,5	81,2	43,8
Agricultural sciences	75,0	35,0	65,0	30,0	5,0	2,0	-	-	5,0	3,0
Social sciences	579,1	291,1	461,8	207,6	81,0	57,0	-	-	36,3	26,5
Humanities	410,4	268,5	182,4	118,5	95,2	45,0	2,0	1,0	130,8	104,0
Business sector	**108,3**	**40,5**	**31,2**	**11,5**	**24,6**	**9,0**	**0,5**	**-**	**52,0**	**20,0**
Natural sciences	24,0	13,0	2,0	-	-	-	-	-	22,0	13,0
Computer and information sciences	15,0	6,0	2,0	-	-	-	-	-	13,0	6,0
Chemical sciences	6,0	4,0	-	-	-	-	-	-	6,0	4,0
Other natural sciences	3,0	3,0	-	-	-	-	-	-	3,0	3,0
Engineering and technology	66,3	19,5	14,7	5,5	21,6	7,0	-	-	30,0	7,0
Electrical engineering, electronic engineering and information engineering	30,2	12,5	5,7	2,5	18,5	7,0	-	-	6,0	3,0
Materials engineering	4,0	-	-	-	-	-	-	-	4,0	-
Chemical engineering	5,0	1,0	-	-	-	-	-	-	5,0	1,0
Materials engineering	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Medical engineering	17,1	5,0	9,0	3,0	3,1	-	-	-	5,0	2,0
Other technologies and engineering	8,0	-	-	-	-	-	-	-	8,0	-
Medical and health sciences	1,0	-	0,5	-	-	-	0,5	-	-	-
Other medical sciences	1,0	-	0,5	-	-	-	0,5	-	-	-
Agricultural sciences	17,0	8,0	14,0	6,0	3,0	2,0	-	-	-	-
Agricultural biotechnology	17,0	8,0	14,0	6,0	3,0	2,0	-	-	-	-
Government sector	**66,0**	**42,0**	**38,0**	**27,0**	**19,0**	**9,0**	**1,0**	**-**	**8,0**	**6,0**
Engineering and technology	48,0	30,0	20,0	15,0	19,0	9,0	1,0	-	8,0	6,0
Other technologies and engineering	48,0	30,0	20,0	15,0	19,0	9,0	1,0	-	8,0	6,0
Agricultural sciences	18,0	12,0	18,0	12,0	-	-	-	-	-	-
Other agricultural sciences	18,0	12,0	18,0	12,0	-	-	-	-	-	-
Tertiary education	**2497,0**	**1260,5**	**1765,9**	**846,5**	**292,9**	**153,3**	**6,5**	**2,5**	**431,7**	**258,2**
Natural sciences	372,0	213,7	267,4	149,4	26,0	13,0	1,0	-	77,6	51,3
Mathematics	372,0	213,7	267,4	149,4	26,0	13,0	1,0	-	77,6	51,3
Engineering and technology	657,4	227,3	469,2	159,9	87,4	37,8	-	-	100,8	29,6
Civil engineering	88,0	38,0	53,0	19,0	35,0	19,0	-	-	-	-
Electrical engineering, electronic engineering and information engineering	253,6	84,0	186,1	67,5	19,0	6,0	-	-	48,5	10,5
Mechanical engineering	149,3	27,3	103,3	16,3	12,0	2,0	-	-	34,0	9,0
Chemical engineering	50,6	21,6	44,2	20,2	5,0	1,0	-	-	1,4	0,4
Environmental engineering	27,0	12,0	20,5	9,5	0,5	0,5	-	-	6,0	2,0
Other technologies and engineering	88,9	44,4	62,1	27,4	15,9	9,3	-	-	10,9	7,7
Medicial and health engineering	438,1	244,9	352,1	199,1	1,3	0,5	3,5	1,5	81,2	43,8
Basic medicine	438,1	244,9	352,1	199,1	1,3	0,5	3,5	1,5	81,2	43,8
Agricultural sciences	40,0	15,0	33,0	12,0	2,0	-	-	-	5,0	3,0
Agriculture, forestry and fisheries	40,0	15,0	33,0	12,0	2,0	-	-	-	5,0	3,0
Social sciences	579,1	291,1	461,8	207,6	81,0	57,0	-	-	36,3	26,5
Economics and business	212,6	117,5	174,3	87,0	24,0	19,0	-	-	14,3	11,5
Educational sciences	214,5	100,5	161,5	65,5	49,0	34,0	-	-	4,0	1,0
Law	100,0	35,1	89,0	29,1	4,0	1,0	-	-	7,0	5,0
Other social sciences	52,0	38,0	37,0	26,0	4,0	3,0	-	-	11,0	9,0
Humanities	410,4	268,5	182,4	118,5	95,2	45,0	2,0	1,0	130,8	104,0
Languages and literature	145,7	103,3	40,1	23,3	50,0	25,0	-	-	55,6	55,0
Phylosophy, ethics and religion	172,0	118,0	117,0	78,0	-	-	-	-	55,0	40,0
Art (arts, history of arts, performing arts, music)	92,7	47,2	25,3	17,2	45,2	20,0	2,0	1,0	20,2	9,0
Region Šumadije i Zapadne Srbije	**1029,9**	**548,5**	**645,1**	**307,4**	**132,2**	**72,8**	**3,5**	**1,5**	**249,1**	**166,8**
Natural sciences	188,2	119,9	116,6	72,6	4,0	1,0	-	-	67,6	46,3
Engineering and technology	194,0	58,7	123,7	36,2	12,9	4,3	-	-	57,4	18,2
Medical and health sciences	109,1	64,6	63,1	35,8	1,3	0,5	3,5	1,5	41,2	26,8
Agricultural sciences	65,0	32,0	56,0	27,0	4,0	2,0	-	-	5,0	3,0
Social sciences	327,9	170,0	245,6	112,5	60,0	40,0	-	-	22,3	17,5
Humanities	145,7	103,3	40,1	23,3	50,0	25,0	-	-	55,6	55,0
Business sector	**37,0**	**18,0**	**14,0**	**6,0**	**3,0**	**2,0**	**-**	**-**	**20,0**	**10,0**
Natural sciences	9,0	7,0	-	-	-	-	-	-	9,0	7,0
Chemical sciences	6,0	4,0	-	-	-	-	-	-	6,0	4,0
Other natural sciences	3,0	3,0	-	-	-	-	-	-	3,0	3,0
Engineering and technology	21,0	6,0	9,0	3,0	1,0	-	-	-	11,0	3,0
Mechanical engineering	4,0	-	-	-	-	-	-	-	4,0	-
Materials engineering	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Medical engineering	15,0	5,0	9,0	3,0	1,0	-	-	-	5,0	2,0
Agricultural sciences	7,0	5,0	5,0	3,0	2,0	2,0	-	-	-	-
Agricultural biotechnology	7,0	5,0	5,0	3,0	2,0	2,0	-	-	-	-
Government sector	**18,0**	**12,0**	**18,0**	**12,0**	**-**	**-**	**-**	**-**	**-**	**-**
Agricultural sciences	18,0	12,0	18,0	12,0	-	-	-	-	-	-
Other agricultural sciences	18,0	12,0	18,0	12,0	-	-	-	-	-	-

3.2. Full-time and part-time researchers, by academic titles, sectors, fields of science and sex, expressed in full-time equivalent, 2017 (continued)

	Full-time and part-time researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Tertiary education	**974,9**	**518,5**	**613,1**	**289,4**	**129,2**	**70,8**	**3,5**	**1,5**	**229,1**	**156,8**
Natural sciences	179,2	112,9	116,6	72,6	4,0	1,0	-	-	58,6	39,3
Mathematics	179,2	112,9	116,6	72,6	4,0	1,0	-	-	58,6	39,3
Engineering and technology	173,0	52,7	114,7	33,2	11,9	4,3	-	-	46,4	15,2
Electrical engineering, electronic engineering and information engineering	120,3	41,0	78,8	27,5	6,0	3,0	-	-	35,5	10,5
Mechanical engineering	44,3	7,3	29,3	2,3	5,0	1,0	-	-	10,0	4,0
Other technologies and engineering	8,4	4,4	6,6	3,4	0,9	0,3	-	-	0,9	0,7
Medical and health sciences	109,1	64,6	63,1	35,8	1,3	0,5	3,5	1,5	41,2	26,8
Basic medicine	109,1	64,6	63,1	35,8	1,3	0,5	3,5	1,5	41,2	26,8
Agricultural sciences	40,0	15,0	33,0	12,0	2,0	-	-	-	5,0	3,0
Agriculture, forestry and fisheries	40,0	15,0	33,0	12,0	2,0	-	-	-	5,0	3,0
Social sciences	327,9	170,0	245,6	112,5	60,0	40,0	-	-	22,3	17,5
Economics and business	120,6	62,5	93,3	42,0	16,0	12,0	-	-	11,3	8,5
Educational sciences	125,5	61,5	89,5	37,5	36,0	24,0	-	-	-	-
Law	29,8	8,0	25,8	7,0	4,0	1,0	-	-	-	-
Other social sciences	52,0	38,0	37,0	26,0	4,0	3,0	-	-	11,0	9,0
Humanities	145,7	103,3	40,1	23,3	50,0	25,0	-	-	55,6	55,0
Languages and literature	145,7	103,3	40,1	23,3	50,0	25,0	-	-	55,6	55,0
Region Juzne i Istočne Srbije	**1641,4**	**794,5**	**1190,0**	**577,6**	**204,3**	**98,5**	**4,5**	**1,0**	**242,6**	**117,4**
Natural sciences	207,8	106,8	152,8	76,8	22,0	12,0	1,0	-	32,0	18,0
Engineering and technology	577,7	218,1	380,2	144,2	115,1	49,5	1,0	-	81,4	24,4
Medical and health sciences	330,0	180,3	289,5	163,3	-	-	0,5	-	40,0	17,0
Agricultural sciences	10,0	3,0	9,0	3,0	1,0	-	-	-	-	-
Social sciences	251,2	121,1	216,2	95,1	21,0	17,0	-	-	14,0	9,0
Humanities	264,7	165,2	142,3	95,2	45,2	20,0	2,0	1,0	75,2	49,0
Business sector	**71,3**	**22,5**	**17,2**	**5,5**	**21,6**	**7,0**	**0,5**	**-**	**32,0**	**10,0**
Natural sciences	15,0	6,0	2,0	-	-	-	-	-	13,0	6,0
Computer and information sciences	15,0	6,0	2,0	-	-	-	-	-	13,0	6,0
Engineering and technology	45,3	13,5	5,7	2,5	20,6	7,0	-	-	19,0	4,0
Electrical engineering, electronic engineering and information engineering	30,2	12,5	5,7	2,5	18,5	7,0	-	-	6,0	3,0
Chemical engineering	5,0	1,0	-	-	-	-	-	-	5,0	1,0
Medical engineering	2,1	-	-	-	2,1	-	-	-	-	-
Other technologies and engineering	8,0	-	-	-	-	-	-	-	8,0	-
Medical and health sciences	1,0	-	0,5	-	-	-	0,5	-	-	-
Other medical sciences	1,0	-	0,5	-	-	-	0,5	-	-	-
Agricultural sciences	10,0	3,0	9,0	3,0	1,0	-	-	-	-	-
Agricultural biotechnology	10,0	3,0	9,0	3,0	1,0	-	-	-	-	-
Government sector	**48,0**	**30,0**	**20,0**	**15,0**	**19,0**	**9,0**	**1,0**	**-**	**8,0**	**6,0**
Engineering and technology	48,0	30,0	20,0	15,0	19,0	9,0	1,0	-	8,0	6,0
Other technologies and engineering	48,0	30,0	20,0	15,0	19,0	9,0	1,0	-	8,0	6,0
Tertiary education	**1522,1**	**742,0**	**1152,8**	**557,1**	**163,7**	**82,5**	**3,0**	**1,0**	**202,6**	**101,4**
Natural sciences	192,8	100,8	150,8	76,8	22,0	12,0	1,0	-	19,0	12,0
Mathematics	192,8	100,8	150,8	76,8	22,0	12,0	1,0	-	19,0	12,0
Engineering and technology	484,4	174,6	354,5	126,7	75,5	33,5	-	-	54,4	14,4
Civil engineering	88,0	38,0	53,0	19,0	35,0	19,0	-	-	-	-
Electrical engineering, electronic engineering and information engineering	133,3	43,0	107,3	40,0	13,0	3,0	-	-	13,0	-
Mechanical engineering	105,0	20,0	74,0	14,0	7,0	1,0	-	-	24,0	5,0
Chemical engineering	50,6	21,6	44,2	20,2	5,0	1,0	-	-	1,4	0,4
Environmental engineering	27,0	12,0	20,5	9,5	0,5	0,5	-	-	6,0	2,0
Other technologies and engineering	80,5	40,0	55,5	24,0	15,0	9,0	-	-	10,0	7,0
Medical and health sciences	329,0	180,3	289,0	163,3	-	-	-	-	40,0	17,0
Basic medicine	329,0	180,3	289,0	163,3	-	-	-	-	40,0	17,0
Social sciences	251,2	121,1	216,2	95,1	21,0	17,0	-	-	14,0	9,0
Economics and business	92,0	55,0	81,0	45,0	8,0	7,0	-	-	3,0	3,0
Educational sciences	89,0	39,0	72,0	28,0	13,0	10,0	-	-	4,0	1,0
Law	70,2	27,1	63,2	22,1	-	-	-	-	7,0	5,0
Humanities	264,7	165,2	142,3	95,2	45,2	20,0	2,0	1,0	75,2	49,0
Phylosophy, ethics and religion	172,0	118,0	117,0	78,0	-	-	-	-	55,0	40,0
Art (arts, history of arts, performing arts, music)	92,7	47,2	25,3	17,2	45,2	20,0	2,0	1,0	20,2	9,0
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2017

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
REPUBLIKA SRBIJA	**13457**	**6679**	**2725**	**1419**	**1304**	**676**	**229**	**102**
Under 25	147	81	24	12	14	8	5	5
25–29	1304	641	187	89	146	83	24	10
30–34	2603	1297	292	159	191	98	32	15
35–39	2193	1228	383	204	194	102	26	15
40–44	1859	995	386	217	207	122	33	11
45–49	1574	811	405	216	180	95	33	17
50–54	1328	653	380	215	159	90	27	12
55–59	1168	505	344	175	111	43	20	8
60–64	938	352	249	111	81	34	18	5
65–69	329	113	68	18	17	1	7	2
70 and over	14	3	7	3	4	-	4	2
Business sector - total	**1488**	**502**	**122**	**30**	**521**	**194**	**138**	**44**
Under 25	13	4	-	-	7	2	-	-
25–29	206	76	27	3	68	31	10	2
30–34	671	143	19	6	75	31	14	4
35–39	223	117	17	6	77	31	11	4
40–44	114	62	9	3	72	27	21	6
45–49	71	39	8	3	72	31	23	10
50–54	74	34	17	5	53	21	19	6
55–59	43	15	9	1	56	13	18	6
60–64	54	9	9	2	25	7	16	4
65–69	13	2	4	-	12	-	3	1
70 and over	6	1	3	1	4	-	3	1
Government sector - total	**2955**	**1776**	**79**	**43**	**237**	**128**	**10**	**6**
Under 25	10	7	2	1	1	1	1	1
25–29	187	117	7	5	14	7	-	-
30–34	540	370	7	4	18	6	3	3
35–39	625	392	9	6	28	20	3	1
40–44	535	311	6	3	37	24	-	-
45–49	383	233	9	4	41	22	-	-
50–54	258	144	12	8	36	24	-	-
55–59	205	106	14	5	32	14	1	1
60–64	157	73	10	6	27	10	-	-
65–69	51	21	2	-	3	-	2	-
70 and over	4	2	1	1	-	-	-	-
Tertiary education - total	**9012**	**4400**	**2524**	**1346**	**542**	**350**	**81**	**52**
Under 25	124	70	22	11	5	4	4	4
25–29	911	448	153	81	64	45	14	8
30–34	1392	784	266	149	98	61	15	8
35–39	1344	719	357	192	89	51	12	10
40–44	1209	621	371	211	98	71	12	5
45–49	1120	539	388	209	65	40	10	7
50–54	996	475	351	202	70	45	8	6
55–59	920	384	321	169	23	16	1	1
60–64	727	270	230	103	29	17	2	1
65–69	265	90	62	18	1	-	2	1
70 and over	4	-	3	1	-	-	1	1
Non-profit sector - total	**2**	**1**	**-**	**-**	**4**	**4**	**-**	**-**
Under 25	-	-	-	-	1	1	-	-
35–39	1	-	-	-	-	-	-	-
40–44	1	1	-	-	-	-	-	-
45–49	-	-	-	-	2	2	-	-
65–69	-	-	-	-	1	1	-	-
SRBIJA – SEVER	11019	5445	2165	1152	1159	604	180	71
Under 25	135	71	12	4	12	7	2	2
25–29	1154	568	142	66	125	71	21	8
30–34	2249	1102	208	112	172	88	23	11
35–39	1849	1038	306	167	177	96	19	8
40–44	1504	795	321	183	186	111	26	9
45–49	1251	645	333	180	161	85	26	12
50–54	1006	488	303	179	138	75	19	6
55–59	880	376	273	146	102	40	19	8
60–64	715	272	204	96	67	30	16	4
65–69	263	87	58	17	15	1	5	1
70 and over	13	3	5	2	4	-	4	2

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2017 (continued)

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
Business sector - total	**1396**	**464**	**99**	**27**	**472**	**169**	**133**	**42**
Under 25	12	4	-	-	7	2	-	-
25–29	193	71	23	3	64	27	10	2
30–34	650	132	14	4	66	28	11	2
35–39	212	113	11	5	69	28	11	4
40–44	102	58	8	3	63	23	20	6
45–49	58	34	8	3	66	26	23	10
50–54	65	30	15	5	46	15	19	6
55–59	38	13	6	1	53	13	17	6
60–64	49	7	8	2	23	7	16	4
65–69	12	1	4	-	11	-	3	1
70 and over	5	1	2	1	4	-	3	1
Government sector - total	**2889**	**1734**	**79**	**43**	**212**	**118**	**10**	**6**
Under 25	10	7	2	1	1	1	1	1
25–29	178	115	7	5	14	7	-	-
30–34	533	365	7	4	18	6	3	3
35–39	620	388	9	6	28	20	3	1
40–44	525	304	6	3	34	22	-	-
45–49	365	218	9	4	32	19	-	-
50–54	250	139	12	8	31	22	-	-
55–59	199	103	14	5	29	12	1	1
60–64	154	72	10	6	23	9	-	-
65–69	51	21	2	-	2	-	2	-
70 and over	4	2	1	1	-	-	-	-
Tertiary education - total	**6732**	**3246**	**1987**	**1082**	**471**	**313**	**37**	**23**
Under 25	113	60	10	3	3	3	1	1
25–29	783	382	112	58	47	37	11	6
30–34	1066	605	187	104	88	54	9	6
35–39	1016	537	286	156	80	48	5	3
40–44	876	432	307	177	89	66	6	3
45–49	828	393	316	173	61	38	3	2
50–54	691	319	276	166	61	38	-	-
55–59	643	260	253	140	20	15	1	1
60–64	512	193	186	88	21	14	-	-
65–69	200	65	52	17	1	-	-	-
70 and over	4	-	2	-	-	-	1	1
Non-profit sector - total	**2**	**1**	**-**	**-**	**4**	**4**	**-**	**-**
Under 25	-	-	-	-	1	1	-	-
35–39	1	-	-	-	-	-	-	-
40–44	1	1	-	-	-	-	-	-
45–49	-	-	-	-	2	2	-	-
65–69	-	-	-	-	1	1	-	-
Beogradski region	**7797**	**4042**	**1093**	**585**	**912**	**467**	**130**	**45**
Under 25	67	42	1	-	7	4	1	1
25–29	783	412	73	44	84	44	12	3
30–34	1333	804	87	46	129	64	10	2
35–39	1277	726	133	71	134	67	11	4
40–44	1135	594	148	84	154	92	22	8
45–49	971	507	172	89	131	72	23	11
50–54	784	386	173	102	109	61	13	5
55–59	700	293	164	93	89	38	15	5
60–64	542	215	106	49	58	25	14	3
65–69	193	60	31	5	13	-	5	1
70 and over	12	3	5	2	4	-	4	2
Business sector - total	**646**	**293**	**72**	**19**	**410**	**150**	**111**	**35**
Under 25	8	3	-	-	4	1	-	-
25–29	104	52	10	3	50	22	9	2
30–34	214	102	9	3	57	22	8	1
35–39	110	53	9	3	65	26	9	3
40–44	54	26	7	3	56	21	17	5
45–49	33	20	4	-	59	26	21	10
50–54	47	20	13	3	38	12	13	5
55–59	30	10	6	1	46	13	14	4
60–64	32	5	8	2	20	7	14	3
65–69	9	1	4	-	11	-	3	1
70 and over	5	1	2	1	4	-	3	1

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2017 (continued)

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
Government sector - total	**2651**	**1604**	**60**	**33**	**184**	**100**	**3**	**1**
Under 25	10	7	-	-	1	1	-	-
25–29	164	107	2	1	10	4	-	-
30–34	494	343	5	3	14	4	-	-
35–39	561	356	6	5	23	15	-	-
40–44	486	280	6	3	32	20	-	-
45–49	333	196	5	2	27	17	-	-
50–54	224	129	11	8	30	22	-	-
55–59	184	95	14	5	27	11	1	1
60–64	145	69	8	5	19	6	-	-
65–69	46	20	2	-	1	-	2	-
70 and over	4	2	1	1	-	-	-	-
Tertiary education - total	**4498**	**2144**	**961**	**533**	**316**	**215**	**16**	**9**
Under 25	49	32	1	-	2	2	1	1
25–29	515	253	61	40	24	18	3	1
30–34	625	359	73	40	58	38	2	1
35–39	605	317	118	63	46	26	2	1
40–44	594	287	135	78	66	51	5	3
45–49	605	291	163	87	43	27	2	1
50–54	513	237	149	91	41	27	-	-
55–59	486	188	144	87	16	14	-	-
60–64	365	141	90	42	19	12	-	-
65–69	138	39	25	5	1	-	-	-
70 and over	3	-	2	-	-	-	1	1
Non-profit sector - total	**2**	**1**	**-**	**-**	**2**	**2**	**-**	**-**
35–39	1	-	-	-	-	-	-	-
40–44	1	1	-	-	-	-	-	-
45–49	-	-	-	-	2	2	-	-
Region Vojvodine	**3222**	**1403**	**1072**	**567**	**247**	**137**	**50**	**26**
Under 25	68	29	11	4	5	3	1	1
25–29	371	156	69	22	41	27	9	5
30–34	916	298	121	66	43	24	13	9
35–39	572	312	173	96	43	29	8	4
40–44	369	201	173	99	32	19	4	1
45–49	280	138	161	91	30	13	3	1
50–54	222	102	130	77	29	14	6	1
55–59	180	83	109	53	13	2	4	3
60–64	173	57	98	47	9	5	2	1
65–69	70	27	27	12	2	1	-	-
70 and over	1	-	-	-	-	-	-	-
Business sector - total	**750**	**171**	**27**	**8**	**62**	**19**	**22**	**7**
Under 25	4	1	-	-	3	1	-	-
25–29	89	19	13	-	14	5	1	-
30–34	436	30	5	1	9	6	3	1
35–39	102	60	2	2	4	2	2	1
40–44	48	32	1	-	7	2	3	1
45–49	25	14	4	3	7	-	2	-
50–54	18	10	2	2	8	3	6	1
55–59	8	3	-	-	7	-	3	2
60–64	17	2	-	-	3	-	2	1
65–69	3	-	-	-	-	-	-	-
Government sector - total	**238**	**130**	**19**	**10**	**28**	**18**	**7**	**5**
Under 25	-	-	2	1	-	-	1	1
25–29	14	8	5	4	4	3	-	-
30–34	39	22	2	1	4	2	3	3
35–39	59	32	3	1	5	5	3	1
40–44	39	24	-	-	2	2	-	-
45–49	32	22	4	2	5	2	-	-
50–54	26	10	1	-	1	-	-	-
55–59	15	8	-	-	2	1	-	-
60–64	9	3	2	1	4	3	-	-
65–69	5	1	-	-	1	-	-	-
Tertiary education - total	**2234**	**1102**	**1026**	**549**	**155**	**98**	**21**	**14**
Under 25	64	28	9	3	1	1	-	-
25–29	268	129	51	18	23	19	8	5
30–34	441	246	114	64	30	16	7	5
35–39	411	220	168	93	34	22	3	2
40–44	282	145	172	99	23	15	1	-
45–49	223	102	153	86	18	11	1	1
50–54	178	82	127	75	20	11	-	-
55–59	157	72	109	53	4	1	1	1
60–64	147	52	96	46	2	2	-	-
65–69	62	26	27	12	-	-	-	-
70 and over	1	-	-	-	-	-	-	-

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2017 (continued)

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
Non-profit sector - total	**-**	**-**	**-**	**-**	**2**	**2**	**-**	**-**
Under 25	-	-	-	-	1	1	-	-
65–69	-	-	-	-	1	1	-	-
SRBIJA – JUG	2438	1234	560	267	145	72	49	31
Under 25	12	10	12	8	2	1	3	3
25–29	150	73	45	23	21	12	3	2
30–34	354	195	84	47	19	10	9	4
35–39	344	190	77	37	17	6	7	7
40–44	355	200	65	34	21	11	7	2
45–49	323	166	72	36	19	10	7	5
50–54	322	165	77	36	21	15	8	6
55–59	288	129	71	29	9	3	1	-
60–64	223	80	45	15	14	4	2	1
65–69	66	26	10	1	2	-	2	1
70 and over	1	-	2	1	-	-	-	-
Business sector - total	**92**	**38**	**23**	**3**	**49**	**25**	**5**	**2**
Under 25	1	-	-	-	-	-	-	-
25–29	13	5	4	-	4	4	-	-
30–34	21	11	5	2	9	3	3	2
35–39	11	4	6	1	8	3	-	-
40–44	12	4	1	-	9	4	1	-
45–49	13	5	-	-	6	5	-	-
50–54	9	4	2	-	7	6	-	-
55–59	5	2	3	-	3	-	1	-
60–64	5	2	1	-	2	-	-	-
65–69	1	1	-	-	1	-	-	-
70 and over	1	-	1	-	-	-	-	-
Government sector - total	**66**	**42**	**-**	**-**	**25**	**10**	**-**	**-**
25–29	9	2	-	-	-	-	-	-
30–34	7	5	-	-	-	-	-	-
35–39	5	4	-	-	-	-	-	-
40–44	10	7	-	-	3	2	-	-
45–49	18	15	-	-	9	3	-	-
50–54	8	5	-	-	5	2	-	-
55–59	6	3	-	-	3	2	-	-
60–64	3	1	-	-	4	1	-	-
65–69	-	-	-	-	1	-	-	-
Tertiary education - total	**2280**	**1154**	**537**	**264**	**71**	**37**	**44**	**29**
Under 25	11	10	12	8	2	1	3	3
25–29	128	66	41	23	17	8	3	2
30–34	326	179	79	45	10	7	6	2
35–39	328	182	71	36	9	3	7	7
40–44	333	189	64	34	9	5	6	2
45–49	292	146	72	36	4	2	7	5
50–54	305	156	75	36	9	7	8	6
55–59	277	124	68	29	3	1	-	-
60–64	215	77	44	15	8	3	2	1
65–69	65	25	10	1	-	-	2	1
70 and over	-	-	1	1	-	-	-	-
Region Šumadije i Zapadne Srbije	**851**	**458**	**456**	**228**	**68**	**33**	**32**	**22**
Under 25	6	6	12	8	2	1	3	3
25–29	68	36	40	22	12	9	3	2
30–34	157	90	69	41	8	3	7	4
35–39	134	70	65	33	12	4	5	5
40–44	108	65	53	28	9	3	5	1
45–49	83	45	61	30	6	5	3	3
50–54	111	64	63	34	9	7	6	4
55–59	102	47	52	19	3	-	-	-
60–64	68	29	36	12	6	1	-	-
65–69	14	6	4	-	1	-	-	-
70 and over	-	-	1	1	-	-	-	-
Business sector - total	**35**	**18**	**4**	**-**	**40**	**22**	**3**	**2**
Under 25	1	-	-	-	-	-	-	-
25–29	6	1	-	-	4	4	-	-
30–34	7	4	1	-	7	3	2	2
35–39	3	1	2	-	8	3	-	-
40–44	6	3	1	-	4	2	1	-
45–49	3	3	-	-	5	5	-	-
50–54	4	3	-	-	6	5	-	-
55–59	2	1	-	-	3	-	-	-
60–64	3	2	-	-	2	-	-	-
65–69	-	-	-	-	1	-	-	-

4.1. Full-time and part-time researchers and assistant researchers, by age and sex, 2017 (continued)

	Researchers				Assistant researchers			
	Full-time		Part-time		Full-time		Part-time	
	All	Women	All	Women	All	Women	All	Women
Government sector - total	**18**	**12**	**-**	**-**	**1**	**-**	**-**	**-**
30–34	2	1	-	-	-	-	-	-
35–39	2	2	-	-	-	-	-	-
40–44	4	2	-	-	-	-	-	-
45–49	6	5	-	-	-	-	-	-
50–54	2	1	-	-	-	-	-	-
60–64	2	1	-	-	1	-	-	-
Tertiary education - total	**798**	**428**	**452**	**228**	**27**	**11**	**29**	**20**
Under 25	5	6	12	8	2	1	3	3
25–29	62	35	40	22	8	5	3	2
30–34	148	85	68	41	1	-	5	2
35–39	129	67	63	33	4	1	5	5
40–44	98	60	52	28	5	1	4	1
45–49	74	37	61	30	1	-	3	3
50–54	105	60	63	34	3	2	6	4
55–59	100	46	52	19	-	-	-	-
60–64	63	26	36	12	3	1	-	-
65–69	14	6	4	-	-	-	-	-
70 and over	-	-	1	1	-	-	-	-
Region Južne i Istočne Srbije	**1587**	**776**	**104**	**39**	**77**	**39**	**17**	**9**
Under 25	6	4	-	-	-	-	-	-
25–29	82	37	5	1	9	3	-	-
30–34	197	105	15	6	11	7	2	-
35–39	210	120	12	4	5	2	2	2
40–44	247	135	12	6	12	8	2	1
45–49	240	121	11	6	13	5	4	2
50–54	211	101	14	2	12	8	2	2
55–59	186	82	19	10	6	3	1	-
60–64	155	51	9	3	8	3	2	1
65–69	52	20	6	1	1	-	2	1
70 and over	1	-	1	-	-	-	-	-
Business sector - total	**57**	**20**	**19**	**3**	**9**	**3**	**2**	**-**
25–29	7	4	4	-	-	-	-	-
30–34	14	7	4	2	2	-	1	-
35–39	8	3	4	1	-	-	-	-
40–44	6	1	-	-	5	2	-	-
45–49	10	2	-	-	1	-	-	-
50–54	5	1	2	-	1	1	-	-
55–59	3	1	3	-	-	-	1	-
60–64	2	-	1	-	-	-	-	-
65–69	1	1	-	-	-	-	-	-
70 and over	1	-	1	-	-	-	-	-
Government sector - total	**48**	**30**	**-**	**-**	**24**	**10**	**-**	**-**
25–29	9	2	-	-	-	-	-	-
30–34	5	4	-	-	-	-	-	-
35–39	3	2	-	-	-	-	-	-
40–44	6	5	-	-	3	2	-	-
45–49	12	10	-	-	9	3	-	-
50–54	6	4	-	-	5	2	-	-
55–59	6	3	-	-	3	2	-	-
60–64	1	-	-	-	3	1	-	-
65–69	-	-	-	-	1	-	-	-
Tertiary education - total	**1482**	**726**	**85**	**36**	**44**	**26**	**15**	**9**
Under 25	6	4	-	-	-	-	-	-
25–29	66	31	1	1	9	3	-	-
30–34	178	94	11	4	9	7	1	-
35–39	199	115	8	3	5	2	2	2
40–44	235	129	12	6	4	4	2	1
45–49	218	109	11	6	3	2	4	2
50–54	200	96	12	2	6	5	2	2
55–59	177	78	16	10	3	1	-	-
60–64	152	51	8	3	5	2	2	1
65–69	51	19	6	1	-	-	2	1
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

5.1. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science and sex, 2017
(head count)

	Full-time and part-time assistant researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**1533**	**778**	**171**	**92**	**232**	**121**	**20**	**7**	**1109**	**557**
Natural sciences	299	130	28	5	48	18	4	1	219	106
Engineering and technology	603	236	58	31	95	41	6	1	444	163
Medical and health sciences	75	55	5	3	11	8	1	1	57	42
Agricultural sciences	191	118	59	39	23	11	5	3	104	65
Social sciences	194	121	10	5	18	12	3	1	163	103
Humanities	171	118	11	9	37	31	1	-	122	78
Business sector	**659**	**238**	**65**	**24**	**62**	**15**	**5**	**-**	**526**	**198**
Natural sciences	180	61	18	2	22	6	-	-	140	53
Engineering and technology	416	138	36	17	24	-	5	-	351	121
Medical and health sciences	24	19	-	-	4	3	-	-	19	15
Agricultural sciences	27	12	7	3	10	4	-	-	10	5
Social sciences	12	8	4	2	2	2	-	-	6	4
Government sector	**247**	**134**	**62**	**38**	**61**	**34**	**9**	**4**	**115**	**58**
Natural sciences	57	27	4	1	14	6	4	1	35	19
Engineering and technology	96	48	10	5	28	16	1	1	57	26
Medical and health sciences	5	5	1	1	2	2	1	1	1	1
Agricultural sciences	76	47	45	30	10	5	3	1	18	11
Social sciences	11	6	2	1	7	5	-	-	2	-
Humanities	2	1	-	-	-	-	-	-	2	1
Tertiary education	**623**	**402**	**44**	**30**	**108**	**71**	**6**	**3**	**465**	**298**
Natural sciences	62	42	6	2	12	6	-	-	44	34
Engineering and technology	91	50	12	9	43	25	-	-	36	16
Medical and health sciences	46	31	4	2	5	3	-	-	37	26
Agricultural sciences	88	59	7	6	3	2	2	2	76	49
Social sciences	167	103	4	2	8	4	3	1	152	96
Humanities	169	117	11	9	37	31	1	-	120	77
Non-profit sector	**4**	**4**	**-**	**-**	**1**	**1**	**-**	**-**	**3**	**3**
Social sciences	4	4	-	-	1	1	-	-	3	3
SRBIJA – SEVER	1339	675	155	83	199	104	19	7	965	480
Natural sciences	283	122	26	4	46	17	4	1	207	100
Engineering and technology	488	183	47	24	77	35	6	1	358	123
Medical and health sciences	38	29	3	3	9	6	1	1	24	18
Agricultural sciences	188	117	58	38	21	11	5	3	104	65
Social sciences	194	121	10	5	18	12	3	1	163	103
Humanities	148	103	11	9	28	23	-	-	109	71
Business sector	**605**	**211**	**62**	**22**	**54**	**15**	**5**	**-**	**483**	**173**
Natural sciences	176	58	18	2	21	6	-	-	137	50
Engineering and technology	369	116	34	16	18	-	5	-	312	100
Medical and health sciences	23	18	-	-	4	3	-	-	18	14
Agricultural sciences	25	11	6	2	9	4	-	-	10	5
Social sciences	12	8	4	2	2	2	-	-	6	4
Government sector	**222**	**124**	**61**	**38**	**55**	**31**	**9**	**4**	**97**	**51**
Natural sciences	57	27	4	1	14	6	4	1	35	19
Engineering and technology	72	38	9	5	23	13	1	1	39	19
Medical and health sciences	5	5	1	1	2	2	1	1	1	1
Agricultural sciences	75	47	45	30	9	5	3	1	18	11
Social sciences	11	6	2	1	7	5	-	-	2	-
Humanities	2	1	-	-	-	-	-	-	2	1
Tertiary education	**508**	**336**	**32**	**23**	**89**	**57**	**5**	**3**	**382**	**253**
Natural sciences	50	37	4	1	11	5	-	-	35	31
Engineering and technology	47	29	4	3	36	22	-	-	7	4
Medical and health sciences	10	6	2	2	3	1	-	-	5	3
Agricultural sciences	88	59	7	6	3	2	2	2	76	49
Social sciences	167	103	4	2	8	4	3	1	152	96
Humanities	146	102	11	9	28	23	-	-	107	70
Non-profit sector	**4**	**4**	**-**	**-**	**1**	**1**	**-**	**-**	**3**	**3**
Social sciences	4	4	-	-	1	1	-	-	3	3
Beogradski region	**1042**	**512**	**127**	**75**	**159**	**81**	**17**	**7**	**738**	**348**
Natural sciences	256	119	9	2	36	16	4	1	207	100
Engineering and technology	408	141	41	21	58	20	6	1	303	99
Medical and health sciences	38	29	3	3	9	6	1	1	24	18
Agricultural sciences	150	98	53	35	15	8	3	3	79	52
Social sciences	50	26	10	5	13	8	3	1	24	12
Humanities	140	99	11	9	28	23	-	-	101	67

5.1. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science and sex, 2017
(head count) (continued)

	Full-time and part-time assistant researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Business sector	**521**	**185**	**42**	**18**	**40**	**13**	**5**	**-**	**433**	**153**
Natural sciences	149	55	1	-	11	5	-	-	137	50
Engineering and technology	326	99	34	16	18	-	5	-	269	83
Medical and health sciences	23	18	-	-	4	3	-	-	18	14
Agricultural sciences	11	5	3	-	5	3	-	-	3	2
Social sciences	12	8	4	2	2	2	-	-	6	4
Government sector	**187**	**101**	**53**	**34**	**46**	**24**	**7**	**4**	**81**	**39**
Natural sciences	57	27	4	1	14	6	4	1	35	19
Engineering and technology	52	25	3	2	16	8	1	1	32	14
Medical and health sciences	5	5	1	1	2	2	1	1	1	1
Agricultural sciences	60	37	43	29	7	3	1	1	9	4
Social sciences	11	6	2	1	7	5	-	-	2	-
Humanities	2	1	-	-	-	-	-	-	2	1
Tertiary education	**332**	**224**	**32**	**23**	**73**	**44**	**5**	**3**	**222**	**154**
Natural sciences	50	37	4	1	11	5	-	-	35	31
Engineering and technology	30	17	4	3	24	12	-	-	2	2
Medical and health sciences	10	6	2	2	3	1	-	-	5	3
Agricultural sciences	79	56	7	6	3	2	2	2	67	46
Social sciences	25	10	4	2	4	1	3	1	14	6
Humanities	138	98	11	9	28	23	-	-	99	66
Non-profit sector	**2**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**2**
Social sciences	2	2	-	-	-	-	-	-	2	2
Region Vojvodine	**297**	**163**	**28**	**8**	**40**	**23**	**2**	**-**	**227**	**132**
Natural sciences	27	3	17	2	10	1	-	-	-	-
Engineering and technology	80	42	6	3	19	15	-	-	55	24
Agricultural sciences	38	19	5	3	6	3	2	-	25	13
Social sciences	144	95	-	-	5	4	-	-	139	91
Humanities	8	4	-	-	-	-	-	-	8	4
Business sector	**84**	**26**	**20**	**4**	**14**	**2**	**-**	**-**	**50**	**20**
Natural sciences	27	3	17	2	10	1	-	-	-	-
Engineering and technology	43	17	-	-	-	-	-	-	43	17
Agricultural sciences	14	6	3	2	4	1	-	-	7	3
Government sector	**35**	**23**	**8**	**4**	**9**	**7**	**2**	**-**	**16**	**12**
Engineering and technology	20	13	6	3	7	5	-	-	7	5
Agricultural sciences	15	10	2	1	2	2	2	-	9	7
Tertiary education	**176**	**112**	**-**	**-**	**16**	**13**	**-**	**-**	**160**	**99**
Engineering and technology	17	12	-	-	12	10	-	-	5	2
Agricultural sciences	9	3	-	-	-	-	-	-	9	3
Social sciences	142	93	-	-	4	3	-	-	138	90
Humanities	8	4	-	-	-	-	-	-	8	4
Non-profit sector	**2**	**2**	**-**	**-**	**1**	**1**	**-**	**-**	**1**	**1**
Social sciences	2	2	-	-	1	1	-	-	1	1
SRBIJA – JUG	194	103	16	9	33	17	1	-	144	77
Natural sciences	16	8	2	1	2	1	-	-	12	6
Engineering and technology	115	53	11	7	18	6	-	-	86	40
Medical and health sciences	37	26	2	-	2	2	-	-	33	24
Agricultural sciences	3	1	1	1	2	-	-	-	-	-
Social sciences	23	15	-	-	9	8	1	-	13	7
Business sector	**54**	**27**	**3**	**2**	**8**	**-**	**-**	**-**	**43**	**25**
Natural sciences	4	3	-	-	1	-	-	-	3	3
Engineering and technology	47	22	2	1	6	-	-	-	39	21
Medical and health sciences	1	1	-	-	-	-	-	-	1	1
Agricultural sciences	2	1	1	1	1	-	-	-	-	-
Government sector	**25**	**10**	**1**	**-**	**6**	**3**	**-**	**-**	**18**	**7**
Engineering and technology	24	10	1	-	5	3	-	-	18	7
Agricultural sciences	1	-	-	-	1	-	-	-	-	-
Tertiary education	**115**	**66**	**12**	**7**	**19**	**14**	**1**	**-**	**83**	**45**
Natural sciences	12	5	2	1	1	1	-	-	9	3
Engineering and technology	44	21	8	6	7	3	-	-	29	12
Medical and health sciences	36	25	2	-	2	2	-	-	32	23
Humanities	23	15	-	-	9	8	1	-	13	7

5.1. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science and sex, 2017
(head count) (continued)

	Full-time and part-time assistant researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Region Šumadije i Zapadne Srbije	**100**	**55**	**4**	**1**	**14**	**8**	**-**	**-**	**82**	**46**
Natural sciences	16	8	2	1	2	1	-	-	12	6
Engineering and technology	44	21	-	-	3	-	-	-	41	21
Medical and health sciences	23	16	2	-	2	2	-	-	19	14
Agricultural sciences	1	-	-	-	1	-	-	-	-	-
Humanities	16	10	-	-	6	5	-	-	10	5
Business sector	**43**	**24**	**-**	**-**	**3**	**-**	**-**	**-**	**40**	**24**
Natural sciences	4	3	-	-	1	-	-	-	3	3
Engineering and technology	39	21	-	-	2	-	-	-	37	21
Government sector	**1**	**-**	**-**	**-**	**1**	**-**	**-**	**-**	**-**	**-**
Agricultural sciences	1	-	-	-	1	-	-	-	-	-
Tertiary education	**56**	**31**	**4**	**1**	**10**	**8**	**-**	**-**	**42**	**22**
Natural sciences	12	5	2	1	1	1	-	-	9	3
Engineering and technology	5	-	-	-	1	-	-	-	4	-
Medical and health sciences	23	16	2	-	2	2	-	-	19	14
Humanities	16	10	-	-	6	5	-	-	10	5
Region Južne i Istočne Srbije	**94**	**48**	**12**	**8**	**19**	**9**	**1**	**-**	**62**	**31**
Engineering and technology	71	32	11	7	15	6	-	-	45	19
Medical and health sciences	14	10	-	-	-	-	-	-	14	10
Agricultural sciences	2	1	1	1	1	-	-	-	-	-
Humanities	7	5	-	-	3	3	1	-	3	2
Business sector	**11**	**3**	**3**	**2**	**5**	**-**	**-**	**-**	**3**	**1**
Engineering and technology	8	1	2	1	4	-	-	-	2	-
Medical and health sciences	1	1	-	-	-	-	-	-	1	1
Agricultural sciences	2	1	1	1	1	-	-	-	-	-
Government sector	**24**	**10**	**1**	**-**	**5**	**3**	**-**	**-**	**18**	**7**
Engineering and technology	24	10	1	-	5	3	-	-	18	7
Tertiary education	**59**	**35**	**8**	**6**	**9**	**6**	**1**	**-**	**41**	**23**
Engineering and technology	39	21	8	6	6	3	-	-	25	12
Medical and health sciences	13	9	-	-	-	-	-	-	13	9
Humanities	7	5	-	-	3	3	1	-	3	2
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

5.2. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science, expressed in full-time equivalent, 2017

	Full-time and part-time assistant researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**1380,2**	**711,3**	**155,2**	**85,1**	**215,7**	**111,5**	**19,1**	**7,0**	**989,2**	**506,7**
Natural sciences	265,5	116,7	23,8	5,0	43,2	15,9	4,0	1,0	194,5	94,8
Engineering and technology	537,1	212,5	50,8	26,8	89,3	37,8	5,1	1,0	391,9	146,9
Medical and health sciences	61,0	44,5	3,2	2,2	9,7	6,7	1,0	1,0	46,1	33,6
Agricultural sciences	179,3	112,9	56,9	37,6	20,2	10,3	5,0	3,0	97,2	62,0
Social sciences	177,9	110,6	9,5	4,5	16,3	9,8	3,0	1,0	149,1	95,3
Humanities	159,4	114,1	11,0	9,0	37,0	31,0	1,0	-	110,4	74,1
Business sector	**562,0**	**205,9**	**56,5**	**22,1**	**52,0**	**11,5**	**4,1**	**-**	**448,4**	**171,3**
Natural sciences	146,8	47,7	13,8	2,0	17,5	3,9	-	-	115,5	41,8
Engineering and technology	365,6	125,5	34,3	17,0	22,0	-	4,1	-	305,2	108,5
Medical and health sciences	24,0	19,0	-	-	4,0	3,0	-	-	19,0	15,0
Agricultural sciences	15,3	6,9	4,9	1,6	7,2	3,3	-	-	3,2	2,0
Social sciences	10,3	6,8	3,5	1,5	1,3	1,3	-	-	5,5	4,0
Government sector	**239,6**	**128,9**	**58,2**	**35,5**	**59,0**	**32,3**	**9,0**	**4,0**	**113,4**	**57,1**
Natural sciences	56,7	27,0	4,0	1,0	13,7	6,0	4,0	1,0	35,0	19,0
Engineering and technology	90,4	43,7	7,0	3,3	26,3	14,3	1,0	1,0	56,1	25,1
Medical and health sciences	4,2	4,2	0,2	0,2	2,0	2,0	1,0	1,0	1,0	1,0
Agricultural sciences	76,0	47,0	45,0	30,0	10,0	5,0	3,0	1,0	18,0	11,0
Social sciences	10,3	6,0	2,0	1,0	7,0	5,0	-	-	1,3	-
Humanities	2,0	1,0	-	-	-	-	-	-	2,0	1,0

5.2. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science, expressed in full-time equivalent, 2017 (continued)

	Full-time and part-time assistant researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Tertiary education	**574,6**	**372,5**	**40,5**	**27,5**	**103,7**	**66,7**	**6,0**	**3,0**	**424,4**	**275,3**
Natural sciences	62,0	42,0	6,0	2,0	12,0	6,0	-	-	44,0	34,0
Engineering and technology	81,1	43,3	9,5	6,5	41,0	23,5	-	-	30,6	13,3
Medical and health sciences	32,8	21,3	3,0	2,0	3,7	1,7	-	-	26,1	17,6
Agricultural sciences	88,0	59,0	7,0	6,0	3,0	2,0	2,0	2,0	76,0	49,0
Social sciences	153,3	93,8	4,0	2,0	7,0	2,5	3,0	1,0	139,3	88,3
Humanities	157,4	113,1	11,0	9,0	37,0	31,0	1,0	-	108,4	73,1
Non-profit sector	**4,0**	**4,0**	**-**	**-**	**1,0**	**1,0**	**-**	**-**	**3,0**	**3,0**
Social sciences	4,0	4,0	-	-	1,0	1,0	-	-	3,0	3,0
SRBIJA – SEVER	1212,0	623,9	141,7	77,6	187,0	97,3	18,1	7,0	864,2	441,0
Natural sciences	249,5	108,7	21,8	4,0	41,2	14,9	4,0	1,0	182,5	88,8
Engineering and technology	432,7	165,4	41,3	21,3	74,3	33,3	5,1	1,0	312,0	109,8
Medical and health sciences	35,8	26,8	2,2	2,2	9,0	6,0	1,0	1,0	22,6	16,6
Agricultural sciences	176,3	111,9	55,9	36,6	18,2	10,3	5,0	3,0	97,2	62,0
Social sciences	177,9	110,6	9,5	4,5	16,3	9,8	3,0	1,0	149,1	95,3
Humanities	139,8	100,5	11,0	9,0	28,0	23,0	-	-	100,8	68,5
Business sector	**510,7**	**180,1**	**53,5**	**20,1**	**45,0**	**11,5**	**4,1**	**-**	**407,1**	**147,5**
Natural sciences	142,8	44,7	13,8	2,0	16,5	3,9	-	-	112,5	38,8
Engineering and technology	321,3	104,7	32,3	16,0	17,0	-	4,1	-	267,9	88,7
Medical and health sciences	23,0	18,0	-	-	4,0	3,0	-	-	18,0	14,0
Agricultural sciences	13,3	5,9	3,9	0,6	6,2	3,3	-	-	3,2	2,0
Social sciences	10,3	6,8	3,5	1,5	1,3	1,3	-	-	5,5	4,0
Government sector	**214,6**	**118,9**	**57,2**	**35,5**	**53,0**	**29,3**	**9,0**	**4,0**	**95,4**	**50,1**
Natural sciences	56,7	27,0	4,0	1,0	13,7	6,0	4,0	1,0	35,0	19,0
Engineering and technology	66,4	33,7	6,0	3,3	21,3	11,3	1,0	1,0	38,1	18,1
Medical and health sciences	4,2	4,2	0,2	0,2	2,0	2,0	1,0	1,0	1,0	1,0
Agricultural sciences	75,0	47,0	45,0	30,0	9,0	5,0	3,0	1,0	18,0	11,0
Social sciences	10,3	6,0	2,0	1,0	7,0	5,0	-	-	1,3	-
Humanities	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Tertiary education	**482,7**	**320,9**	**31,0**	**22,0**	**88,0**	**55,5**	**5,0**	**3,0**	**358,7**	**240,4**
Natural sciences	50,0	37,0	4,0	1,0	11,0	5,0	-	-	35,0	31,0
Engineering and technology	45,0	27,0	3,0	2,0	36,0	22,0	-	-	6,0	3,0
Medical and health sciences	8,6	4,6	2,0	2,0	3,0	1,0	-	-	3,6	1,6
Agricultural sciences	88,0	59,0	7,0	6,0	3,0	2,0	2,0	2,0	76,0	49,0
Social sciences	153,3	93,8	4,0	2,0	7,0	2,5	3,0	1,0	139,3	88,3
Humanities	137,8	99,5	11,0	9,0	28,0	23,0	-	-	98,8	67,5
Non-profit sector	**4,0**	**4,0**	**-**	**-**	**1,0**	**1,0**	**-**	**-**	**3,0**	**3,0**
Social sciences	4,0	4,0	-	-	1,0	1,0	-	-	3,0	3,0
Beogradski region	**949,6**	**479,4**	**123,0**	**72,7**	**152,8**	**78,2**	**16,1**	**7,0**	**656,7**	**320,5**
Natural sciences	227,0	105,7	9,0	2,0	31,5	13,9	4,0	1,0	182,5	88,8
Engineering and technology	359,0	128,4	38,3	20,0	57,0	20,0	5,1	1,0	258,6	87,4
Medical and health sciences	35,8	26,8	2,2	2,2	9,0	6,0	1,0	1,0	22,6	16,6
Agricultural sciences	148,4	97,2	53,0	35,0	15,0	8,0	3,0	3,0	77,4	51,2
Social sciences	47,6	24,8	9,5	4,5	12,3	7,3	3,0	1,0	22,8	12,0
Humanities	131,8	96,5	11,0	9,0	28,0	23,0	-	-	92,8	64,5
Business sector	**442,0**	**159,1**	**39,8**	**17,5**	**34,1**	**10,2**	**4,1**	**-**	**363,0**	**130,4**
Natural sciences	120,3	41,7	1,0	-	6,8	2,9	-	-	112,5	38,8
Engineering and technology	279,0	88,4	32,3	16,0	17,0	-	4,1	-	225,6	72,4
Medical and health sciences	23,0	18,0	-	-	4,0	3,0	-	-	18,0	14,0
Agricultural sciences	9,4	4,2	3,0	-	5,0	3,0	-	-	1,4	1,2
Social sciences	10,3	6,8	3,5	1,5	1,3	1,3	-	-	5,5	4,0
Government sector	**185,2**	**100,2**	**52,2**	**33,2**	**45,7**	**24,0**	**7,0**	**4,0**	**80,3**	**39,0**
Natural sciences	56,7	27,0	4,0	1,0	13,7	6,0	4,0	1,0	35,0	19,0
Engineering and technology	52,0	25,0	3,0	2,0	16,0	8,0	1,0	1,0	32,0	14,0
Medical and health sciences	4,2	4,2	0,2	0,2	2,0	2,0	1,0	1,0	1,0	1,0
Agricultural sciences	60,0	37,0	43,0	29,0	7,0	3,0	1,0	1,0	9,0	4,0
Social sciences	10,3	6,0	2,0	1,0	7,0	5,0	-	-	1,3	-
Humanities	2,0	1,0	-	-	-	-	-	-	2,0	1,0
Tertiary education	**320,4**	**218,1**	**31,0**	**22,0**	**73,0**	**44,0**	**5,0**	**3,0**	**211,4**	**149,1**
Natural sciences	50,0	37,0	4,0	1,0	11,0	5,0	-	-	35,0	31,0
Engineering and technology	28,0	15,0	3,0	2,0	24,0	12,0	-	-	1,0	1,0
Medical and health sciences	8,6	4,6	2,0	2,0	3,0	1,0	-	-	3,6	1,6
Agricultural sciences	79,0	56,0	7,0	6,0	3,0	2,0	2,0	2,0	67,0	46,0
Social sciences	25,0	10,0	4,0	2,0	4,0	1,0	3,0	1,0	14,0	6,0
Humanities	129,8	95,5	11,0	9,0	28,0	23,0	-	-	90,8	63,5
Non-profit sector	**2,0**	**2,0**	**-**	**-**	**-**	**-**	**-**	**-**	**2,0**	**2,0**
Social sciences	2,0	2,0	-	-	-	-	-	-	2,0	2,0

5.2. Full-time and part-time assistant researchers, by academic titles, sectors, fields of science, expressed in full-time equivalent, 2017 (continued)

	Full-time and part-time assistant researchers									
	Total		Doctors of science		Masters of science		Specialists		University degree	
	All	Women	All	Women	All	Women	All	Women	All	Women
Region Vojvodine	**262,4**	**144,5**	**18,7**	**4,9**	**34,2**	**19,1**	**2,0**	**-**	**207,5**	**120,5**
Natural sciences	22,5	3,0	12,8	2,0	9,7	1,0	-	-	-	-
Engineering and technology	73,7	37,0	3,0	1,3	17,3	13,3	-	-	53,4	22,4
Agricultural sciences	27,9	14,7	2,9	1,6	3,2	2,3	2,0	-	19,8	10,8
Social sciences	130,3	85,8	-	-	4,0	2,5	-	-	126,3	83,3
Humanities	8,0	4,0	-	-	-	-	-	-	8,0	4,0
Business sector	**68,7**	**21,0**	**13,7**	**2,6**	**10,9**	**1,3**	**-**	**-**	**44,1**	**17,1**
Natural sciences	22,5	3,0	12,8	2,0	9,7	1,0	-	-	-	-
Engineering and technology	42,3	16,3	-	-	-	-	-	-	42,3	16,3
Agricultural sciences	3,9	1,7	0,9	0,6	1,2	0,3	-	-	1,8	0,8
Government sector	**29,4**	**18,7**	**5,0**	**2,3**	**7,3**	**5,3**	**2,0**	**-**	**15,1**	**11,1**
Engineering and technology	14,4	8,7	3,0	1,3	5,3	3,3	-	-	6,1	4,1
Agricultural sciences	15,0	10,0	2,0	1,0	2,0	2,0	2,0	-	9,0	7,0
Tertiary education	**162,3**	**102,8**	**-**	**-**	**15,0**	**11,5**	**-**	**-**	**147,3**	**91,3**
Engineering and technology	17,0	12,0	-	-	12,0	10,0	-	-	5,0	2,0
Agricultural sciences	9,0	3,0	-	-	-	-	-	-	9,0	3,0
Social sciences	128,3	83,8	-	-	3,0	1,5	-	-	125,3	82,3
Humanities	8,0	4,0	-	-	-	-	-	-	8,0	4,0
Non-profit sector	**2,0**	**2,0**	**-**	**-**	**1,0**	**1,0**	**-**	**-**	**1,0**	**1,0**
Social sciences	2,0	2,0	-	-	1,0	1,0	-	-	1,0	1,0
SRBIJA – JUG	168,2	87,4	13,5	7,5	28,7	14,2	1,0	-	125,0	65,7
Natural sciences	16,0	8,0	2,0	1,0	2,0	1,0	-	-	12,0	6,0
Engineering and technology	104,4	47,1	9,5	5,5	15,0	4,5	-	-	79,9	37,1
Medical and health sciences	25,2	17,7	1,0	-	0,7	0,7	-	-	23,5	17,0
Agricultural sciences	3,0	1,0	1,0	1,0	2,0	-	-	-	-	-
Humanities	19,6	13,6	-	-	9,0	8,0	1,0	-	9,6	5,6
Business sector	**51,3**	**25,8**	**3,0**	**2,0**	**7,0**	**-**	**-**	**-**	**41,3**	**23,8**
Natural sciences	4,0	3,0	-	-	1,0	-	-	-	3,0	3,0
Engineering and technology	44,3	20,8	2,0	1,0	5,0	-	-	-	37,3	19,8
Medical and health sciences	1,0	1,0	-	-	-	-	-	-	1,0	1,0
Agricultural sciences	2,0	1,0	1,0	1,0	1,0	-	-	-	-	-
Government sector	**25,0**	**10,0**	**1,0**	**-**	**6,0**	**3,0**	**-**	**-**	**18,0**	**7,0**
Engineering and technology	24,0	10,0	1,0	-	5,0	3,0	-	-	18,0	7,0
Agricultural sciences	1,0	-	-	-	1,0	-	-	-	-	-
Tertiary education	**91,9**	**51,6**	**9,5**	**5,5**	**15,7**	**11,2**	**1,0**	**-**	**65,7**	**34,9**
Natural sciences	12,0	5,0	2,0	1,0	1,0	1,0	-	-	9,0	3,0
Engineering and technology	36,1	16,3	6,5	4,5	5,0	1,5	-	-	24,6	10,3
Medical and health sciences	24,2	16,7	1,0	-	0,7	0,7	-	-	22,5	16,0
Humanities	19,6	13,6	-	-	9,0	8,0	1,0	-	9,6	5,6
Region Šumadije i Zapadne Srbije	**83,1**	**44,1**	**3,0**	**1,0**	**12,7**	**6,7**	**-**	**-**	**67,4**	**36,4**
Natural sciences	16,0	8,0	2,0	1,0	2,0	1,0	-	-	12,0	6,0
Engineering and technology	42,3	19,8	-	-	3,0	-	-	-	39,3	19,8
Medical and health sciences	11,2	7,7	1,0	-	0,7	0,7	-	-	9,5	7,0
Agricultural sciences	1,0	-	-	-	1,0	-	-	-	-	-
Humanities	12,6	8,6	-	-	6,0	5,0	-	-	6,6	3,6
Business sector	**41,3**	**22,8**	**-**	**-**	**3,0**	**-**	**-**	**-**	**38,3**	**22,8**
Natural sciences	4,0	3,0	-	-	1,0	-	-	-	3,0	3,0
Engineering and technology	37,3	19,8	-	-	2,0	-	-	-	35,3	19,8
Government sector	**1,0**	**-**	**-**	**-**	**1,0**	**-**	**-**	**-**	**-**	**-**
Agricultural sciences	1,0	-	-	-	1,0	-	-	-	-	-
Tertiary education	**40,8**	**21,3**	**3,0**	**1,0**	**8,7**	**6,7**	**-**	**-**	**29,1**	**13,6**
Natural sciences	12,0	5,0	2,0	1,0	1,0	1,0	-	-	9,0	3,0
Engineering and technology	5,0	-	-	-	1,0	-	-	-	4,0	-
Medical and health sciences	11,2	7,7	1,0	-	0,7	0,7	-	-	9,5	7,0
Humanities	12,6	8,6	-	-	6,0	5,0	-	-	6,6	3,6
Region Južne i Istočne Srbije	**85,1**	**43,3**	**10,5**	**6,5**	**16,0**	**7,5**	**1,0**	**-**	**57,6**	**29,3**
Engineering and technology	62,1	27,3	9,5	5,5	12,0	4,5	-	-	40,6	17,3
Medical and health sciences	14,0	10,0	-	-	-	-	-	-	14,0	10,0
Agricultural sciences	2,0	1,0	1,0	1,0	1,0	-	-	-	-	-
Humanities	7,0	5,0	-	-	3,0	3,0	1,0	-	3,0	2,0
Business sector	**10,0**	**3,0**	**3,0**	**2,0**	**4,0**	**-**	**-**	**-**	**3,0**	**1,0**
Engineering and technology	7,0	1,0	2,0	1,0	3,0	-	-	-	2,0	-
Medical and health sciences	1,0	1,0	-	-	-	-	-	-	1,0	1,0
Agricultural sciences	2,0	1,0	1,0	1,0	1,0	-	-	-	-	-
Government sector	**24,0**	**10,0**	**1,0**	**-**	**5,0**	**3,0**	**-**	**-**	**18,0**	**7,0**
Engineering and technology	24,0	10,0	1,0	-	5,0	3,0	-	-	18,0	7,0
Tertiary education	**51,1**	**30,3**	**6,5**	**4,5**	**7,0**	**4,5**	**1,0**	**-**	**36,6**	**21,3**
Engineering and technology	31,1	16,3	6,5	4,5	4,0	1,5	-	-	20,6	10,3
Medical and health sciences	13,0	9,0	-	-	-	-	-	-	13,0	9,0
Humanities	7,0	5,0	-	-	3,0	3,0	1,0	-	3,0	2,0
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

6.1. Engaged on the basis of work on contract and author contract (head count), 2017

	Engaged on the basis of work on contract and author contract							
	Total		Researchers		Assistant researchers		Other	
	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**2556**	**1336**	**2100**	**1147**	**209**	**79**	**247**	**110**
Natural sciences	577	268	373	162	68	36	136	70
Engineering and technology	380	114	195	68	106	24	79	22
Medical and health sciences	1106	723	1105	723	-	-	1	-
Agricultural sciences	29	13	28	12	1	1	-	-
Social sciences	267	117	253	109	4	2	10	6
Humanities	197	101	146	73	30	16	21	12
Business sector	**1361**	**784**	**1203**	**742**	**66**	**13**	**92**	**29**
Natural sciences	74	25	41	9	10	4	23	12
Engineering and technology	204	54	81	28	56	9	67	17
Medical and health sciences	1077	703	1076	703	-	-	1	-
Agricultural sciences	4	2	4	2	-	-	-	-
Social sciences	2	-	1	-	-	-	1	-
Government sector	**469**	**229**	**250**	**130**	**117**	**51**	**102**	**48**
Natural sciences	293	142	164	80	46	24	83	38
Engineering and technology	58	19	6	4	48	13	4	2
Medical and health sciences	11	6	11	6	-	-	-	-
Agricultural sciences	6	3	5	2	1	1	-	-
Social sciences	24	18	21	17	3	1	-	-
Humanities	77	41	43	21	19	12	15	8
Tertiary education	**719**	**318**	**645**	**274**	**21**	**11**	**53**	**33**
Natural sciences	205	97	168	73	7	4	30	20
Engineering and technology	118	41	108	36	2	2	8	3
Medical and health sciences	18	14	18	14	-	-	-	-
Agricultural sciences	19	8	19	8	-	-	-	-
Social sciences	239	98	229	91	1	1	9	6
Humanities	120	60	103	52	11	4	6	4
Non-profit sector	**7**	**5**	**2**	**1**	**5**	**4**	**-**	**-**
Natural sciences	5	4	-	-	5	4	-	-
Social sciences	2	1	2	1	-	-	-	-
SRBIJA – SEVER	2363	1251	1932	1071	195	74	236	106
Natural sciences	552	255	355	153	61	32	136	70
Engineering and technology	295	85	127	43	99	23	69	19
Medical and health sciences	1104	723	1103	723	-	-	1	-
Agricultural sciences	28	12	27	11	1	1	-	-
Social sciences	254	106	241	99	4	2	9	5
Humanities	130	70	79	42	30	16	21	12
Business sector	**1328**	**777**	**1178**	**735**	**60**	**13**	**90**	**29**
Natural sciences	70	25	37	9	10	4	23	12
Engineering and technology	178	48	63	22	50	9	65	17
Medical and health sciences	1075	703	1074	703	-	-	1	-
Agricultural sciences	3	1	3	1	-	-	-	-
Social sciences	2	-	1	-	-	-	1	-
Government sector	**468**	**229**	**249**	**130**	**117**	**51**	**102**	**48**
Natural sciences	293	142	164	80	46	24	83	38
Engineering and technology	57	19	5	4	48	13	4	2
Medical and health sciences	11	6	11	6	-	-	-	-
Agricultural sciences	6	3	5	2	1	1	-	-
Social sciences	24	18	21	17	3	1	-	-
Humanities	77	41	43	21	19	12	15	8
Tertiary education	**560**	**240**	**503**	**205**	**13**	**6**	**44**	**29**
Natural sciences	184	84	154	64	-	-	30	20
Engineering and technology	60	18	59	17	1	1	-	-
Medical and health sciences	18	14	18	14	-	-	-	-
Agricultural sciences	19	8	19	8	-	-	-	-
Social sciences	226	87	217	81	1	1	8	5
Humanities	53	29	36	21	11	4	6	4
Non-profit sector	**7**	**5**	**2**	**1**	**5**	**4**	**-**	**-**
Engineering and technology	5	4	-	-	5	4	-	-
Agricultural sciences	2	1	2	1	-	-	-	-
Beogradski region	**2177**	**1181**	**1820**	**1026**	**134**	**54**	**223**	**101**
Natural sciences	483	232	306	139	49	26	128	67
Engineering and technology	237	66	123	40	50	9	64	17
Medical and health sciences	1097	716	1096	716	-	-	1	-
Agricultural sciences	6	3	5	2	1	1	-	-
Social sciences	224	94	211	87	4	2	9	5
Humanities	130	70	79	42	30	16	21	12

6.1. Engaged on the basis of work on contract and author contract (head count), 2017 (continued)

	Engaged on the basis of work on contract and author contract							
	Total		Researchers		Assistant researchers		Other	
	All	Women	All	Women	All	Women	All	Women
Business sector	**1293**	**768**	**1159**	**731**	**53**	**11**	**81**	**26**
Natural sciences	38	17	20	6	3	2	15	9
Engineering and technology	175	47	61	21	50	9	64	17
Medical and health sciences	1075	703	1074	703	-	-	1	-
Agricultural sciences	3	1	3	1	-	-	-	-
Social sciences	2	-	1	-	-	-	1	-
Government sector	**413**	**213**	**246**	**129**	**69**	**38**	**98**	**46**
Natural sciences	293	142	164	80	46	24	83	38
Engineering and technology	5	4	5	4	-	-	-	-
Medical and health sciences	11	6	11	6	-	-	-	-
Agricultural sciences	3	2	2	1	1	1	-	-
Social sciences	24	18	21	17	3	1	-	-
Humanities	77	41	43	21	19	12	15	8
Tertiary education	**469**	**199**	**413**	**165**	**12**	**5**	**44**	**29**
Natural sciences	152	73	122	53	-	-	30	20
Engineering and technology	57	15	57	15	-	-	-	-
Medical and health sciences	11	7	11	7	-	-	-	-
Agricultural sciences	196	75	187	69	1	1	8	5
Humanities	53	29	36	21	11	4	6	4
Non-profit sector	**2**	**1**	**2**	**1**	**-**	**-**	**-**	**-**
Social sciences	2	1	2	1	-	-	-	-
Region Vojvodine	**186**	**70**	**112**	**45**	**61**	**20**	**13**	**5**
Natural sciences	69	23	49	14	12	6	8	3
Engineering and technology	58	19	4	3	49	14	5	2
Medical and health sciences	7	7	7	7	-	-	-	-
Agricultural sciences	22	9	22	9	-	-	-	-
Social sciences	30	12	30	12	-	-	-	-
Business sector	**35**	**9**	**19**	**4**	**7**	**2**	**9**	**3**
Natural sciences	32	8	17	3	7	2	8	3
Engineering and technology	3	1	2	1	-	-	1	-
Government sector	**55**	**16**	**3**	**1**	**48**	**13**	**4**	**2**
Engineering and technology	52	15	-	-	48	13	4	2
Agricultural sciences	3	1	3	1	-	-	-	-
Tertiary education	**91**	**41**	**90**	**40**	**1**	**1**	**-**	**-**
Natural sciences	32	11	32	11	-	-	-	-
Engineering and technology	3	3	2	2	1	1	-	-
Medical and health sciences	7	7	7	7	-	-	-	-
Agricultural sciences	19	8	19	8	-	-	-	-
Social sciences	30	12	30	12	-	-	-	-
Non-profit sector	**5**	**4**	**-**	**-**	**5**	**4**	**-**	**-**
Agricultural sciences	5	4	-	-	5	4	-	-
SRBIJA – JUG	193	85	168	76	14	5	11	4
Natural sciences	25	13	18	9	7	4	-	-
Engineering and technology	85	29	68	25	7	1	10	3
Medical and health sciences	2	-	2	-	-	-	-	-
Agricultural sciences	1	1	1	1	-	-	-	-
Social sciences	13	11	12	10	-	-	1	1
Humanities	67	31	67	31	-	-	-	-
Business sector	**33**	**7**	**25**	**7**	**6**	**-**	**2**	**-**
Natural sciences	4	-	4	-	-	-	-	-
Engineering and technology	26	6	18	6	6	-	2	-
Medical and health sciences	2	-	2	-	-	-	-	-
Agricultural sciences	1	1	1	1	-	-	-	-
Government sector	**1**	**-**	**1**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	1	-	1	-	-	-	-	-
Tertiary education	**159**	**78**	**142**	**69**	**8**	**5**	**9**	**4**
Natural sciences	21	13	14	9	7	4	-	-
Engineering and technology	58	23	49	19	1	1	8	3
Social sciences	13	11	12	10	-	-	1	1
Humanities	67	31	67	31	-	-	-	-
Region Južne i Istočne Srbije	**119**	**60**	**108**	**55**	**9**	**4**	**2**	**1**
Natural sciences	21	13	14	9	7	4	-	-
Engineering and technology	18	5	15	5	2	-	1	-
Social sciences	13	11	12	10	-	-	1	1
Humanities	67	31	67	31	-	-	-	-

6.1. Engaged on the basis of work on contract and author contract (head count), 2017 (continued)

	Engaged on the basis of work on contract and author contract							
	Total		Researchers		Assistant researchers		Other	
	All	Women	All	Women	All	Women	All	Women
Business sector	**17**	**5**	**14**	**5**	**2**	**-**	**1**	**-**
Engineering and technology	17	5	14	5	2	-	1	-
Tertiary education	**102**	**55**	**94**	**50**	**7**	**4**	**1**	**1**
Natural scienes	21	13	14	9	7	4	-	-
Engineering and technology	1	-	1	-	-	-	-	-
Social sciences	13	11	12	10	-	-	1	1
Humanities	67	31	67	31	-	-	-	-
Region Južnne i Istočne Srbije	**74**	**25**	**60**	**21**	**5**	**1**	**9**	**3**
Natural sciences	4	-	4	-	-	-	-	-
Engineering and technology	67	24	53	20	5	1	9	3
Medical and health sciences	2	-	2	-	-	-	-	-
Agricultural sciences	1	1	1	1	-	-	-	-
Business sector	**16**	**2**	**11**	**2**	**4**	**-**	**1**	**-**
Natural sciences	4	-	4	-	-	-	-	-
Engineering and technology	9	1	4	1	4	-	1	-
Medical and health sciences	2	-	2	-	-	-	-	-
Agricultural sciences	1	1	1	1	-	-	-	-
Government sector	**1**	**-**	**1**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	1	-	1	-	-	-	-	-
Tertiary education	**57**	**23**	**48**	**19**	**1**	**1**	**8**	**3**
Engineering and technology	57	23	48	19	1	1	8	3
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

6.2. Engaged on the basis of work on contract and author contract, expressed in full-time equivalent, 2017

	Engaged on the basis of work on contract and author contract							
	Total		Researchers		Assistant researchers		Other	
	All	Women	All	Women	All	Women	All	Women
REPUBLIC OF SERBIA	**940,7**	**412,0**	**703,6**	**325,3**	**81,4**	**23,4**	**155,6**	**63,4**
Natural sciences	371,1	170,3	263,1	113,9	29,6	12,4	78,4	44,0
Engineering and technology	193,3	53,1	96,0	38,5	42,7	6,5	54,5	8,2
Medical and health sciences	122,8	80,1	122,6	80,1	-	-	0,2	-
Agricultural sciences	13,0	6,4	12,6	6,0	0,4	0,4	-	-
Social sciences	160,8	62,4	151,5	58,2	2,8	0,8	6,5	3,4
Humanities	79,7	39,7	57,8	28,6	5,9	3,3	16,0	7,8
Business sector	**308,2**	**123,2**	**197,1**	**103,1**	**44,2**	**6,7**	**66,9**	**13,4**
Natural sciences	47,7	13,8	25,2	4,8	8,6	2,6	13,9	6,4
Engineering and technology	140,1	32,3	52,7	21,2	35,6	4,1	51,8	7,0
Medical and health sciences	117,1	76,0	116,9	76,0	-	-	0,2	-
Agricultural sciences	1,3	1,1	1,3	1,1	-	-	-	-
Social sciences	2,0	-	1,0	-	-	-	1,0	-
Government sector	**224,5**	**111,5**	**144,3**	**73,6**	**27,6**	**11,6**	**52,5**	**26,4**
Natural sciences	157,9	73,7	103,9	46,7	15,6	7,6	38,4	19,4
Engineering and technology	12,7	5,8	6,0	4,0	6,3	1,6	0,3	0,3
Medical and health sciences	2,2	1,2	2,2	1,2	-	-	-	-
Agricultural sciences	2,2	1,3	1,8	0,9	0,4	0,4	-	-
Social sciences	22,4	16,4	20,2	16,2	2,2	0,2	-	-
Humanities	27,1	13,1	10,2	4,6	3,1	1,8	13,8	6,7
Tertiary education	**406,8**	**176,4**	**362,0**	**148,5**	**8,6**	**4,3**	**36,2**	**23,6**
Natural sciences	164,5	82,0	134,0	62,4	4,4	1,4	26,1	18,2
Engineering and technology	40,5	15,0	37,3	13,3	0,8	0,8	2,4	0,9
Medical and health sciences	3,5	2,9	3,5	2,9	-	-	-	-
Agricultural sciences	9,5	4,0	9,5	4,0	-	-	-	-
Social sciences	136,2	45,9	130,1	41,9	0,6	0,6	5,5	3,4
Humanities	52,6	26,6	47,6	24,0	2,8	1,5	2,2	1,1
Non-profit sector	**1,2**	**0,9**	**0,2**	**0,1**	**1,0**	**0,8**	**-**	**-**
Agricultural sciences	1,0	0,8	-	-	1,0	0,8	-	-
Social sciences	0,2	0,1	0,2	0,1	-	-	-	-
SRBIJA – SEVER	858,6	375,7	634,2	291,8	72,4	21,5	151,9	62,4
Natural sciences	355,9	161,3	252,3	106,3	25,2	11,0	78,4	44,0
Engineering and technology	155,5	40,9	66,4	27,6	38,1	6,0	50,9	7,3
Medical and health sciences	121,3	80,1	121,1	80,1	-	-	0,2	-
Agricultural sciences	12,0	5,4	11,6	5,0	0,4	0,4	-	-
Social sciences	156,3	58,5	147,1	54,4	2,8	0,8	6,4	3,3
Humanities	57,6	29,5	35,7	18,4	5,9	3,3	16,0	7,8

6.2. Engaged on the basis of work on contract and author contract, expressed in full-time equivalent, 2017 (continued)

	Engaged on the basis of work on contract and author contract							
	Total		Researchers		Assistant researchers		Other	
	All	Women	All	Women	All	Women	All	Women
Business sector	**289,4**	**119,9**	**183,6**	**99,8**	**40,1**	**6,7**	**65,7**	**13,4**
Natural sciences	45,7	13,8	23,2	4,8	8,6	2,6	13,9	6,4
Engineering and technology	125,8	30,0	43,7	18,9	31,5	4,1	50,6	7,0
Medical and health sciences	115,6	76,0	115,4	76,0	-	-	0,2	-
Agricultural sciences	0,3	0,1	0,3	0,1	-	-	-	-
Social sciences	2,0	-	1,0	-	-	-	1,0	-
Government sector	**223,5**	**111,5**	**143,3**	**73,6**	**27,6**	**11,6**	**52,5**	**26,4**
Natural sciences	157,9	73,7	103,9	46,7	15,6	7,6	38,4	19,4
Engineering and technology	11,7	5,8	5,0	4,0	6,3	1,6	0,3	0,3
Medical and health sciences	2,2	1,2	2,2	1,2	-	-	-	-
Agricultural sciences	2,2	1,3	1,8	0,9	0,4	0,4	-	-
Social sciences	22,4	16,4	20,2	16,2	2,2	0,2	-	-
Humanities	27,1	13,1	10,2	4,6	3,1	1,8	13,8	6,7
Tertiary education	**344,5**	**143,3**	**307,1**	**118,3**	**3,7**	**2,4**	**33,7**	**22,6**
Natural sciences	151,3	73,0	125,2	54,8	-	-	26,1	18,2
Engineering and technology	18,0	5,0	17,7	4,7	0,3	0,3	-	-
Medical and health sciences	3,5	2,9	3,5	2,9	-	-	-	-
Agricultural sciences	9,5	4,0	9,5	4,0	-	-	-	-
Social sciences	131,7	42,0	125,7	38,1	0,6	0,6	5,4	3,3
Humanities	30,5	16,4	25,5	13,8	2,8	1,5	2,2	1,1
Non-profit sector	**1,2**	**0,9**	**0,2**	**0,1**	**1,0**	**0,8**	**-**	**-**
Agricultural sciences	1,0	0,8	-	-	1,0	0,8	-	-
Social sciences	0,2	0,1	0,2	0,1	-	-	-	-
Beogradski region	**781,4**	**348,5**	**581,0**	**272,6**	**57,8**	**16,8**	**142,6**	**59,1**
Natural sciences	313,5	149,3	225,9	100,1	17,2	8,2	70,4	41,0
Engineering and technology	144,9	37,1	63,8	26,0	31,5	4,1	49,6	7,0
Medical and health sciences	119,2	78,0	119,0	78,0	-	-	0,2	-
Agricultural sciences	1,8	1,2	1,4	0,8	0,4	0,4	-	-
Social sciences	144,4	53,4	135,2	49,3	2,8	0,8	6,4	3,3
Humanities	57,6	29,5	35,7	18,4	5,9	3,3	16,0	7,8
Business sector	**254,4**	**110,9**	**164,6**	**95,8**	**33,1**	**4,7**	**56,7**	**10,4**
Natural sciences	13,7	5,8	6,2	1,8	1,6	0,6	5,9	3,4
Engineering and technology	122,8	29,0	41,7	17,9	31,5	4,1	49,6	7,0
Medical and health sciences	115,6	76,0	115,4	76,0	-	-	0,2	-
Agricultural sciences	0,3	0,1	0,3	0,1	-	-	-	-
Social sciences	2,0	-	1,0	-	-	-	1,0	-
Government sector	**216,1**	**109,5**	**142,6**	**73,4**	**21,3**	**10,0**	**52,2**	**26,1**
Natural sciences	157,9	73,7	103,9	46,7	15,6	7,6	38,4	19,4
Engineering and technology	5,0	4,0	5,0	4,0	-	-	-	-
Medical and health sciences	2,2	1,2	2,2	1,2	-	-	-	-
Agricultural sciences	1,5	1,1	1,1	0,7	0,4	0,4	-	-
Social sciences	22,4	16,4	20,2	16,2	2,2	0,2	-	-
Humanities	27,1	13,1	10,2	4,6	3,1	1,8	13,8	6,7
Tertiary education	**310,7**	**128,0**	**273,6**	**103,3**	**3,4**	**2,1**	**33,7**	**22,6**
Natural sciences	141,9	69,8	115,8	51,6	-	-	26,1	18,2
Engineering and technology	17,1	4,1	17,1	4,1	-	-	-	-
Medical and health sciences	1,4	0,8	1,4	0,8	-	-	-	-
Social sciences	119,8	36,9	113,8	33,0	0,6	0,6	5,4	3,3
Humanities	30,5	16,4	25,5	13,8	2,8	1,5	2,2	1,1
Non-profit sector	**0,2**	**0,1**	**0,2**	**0,1**	**-**	**-**	**-**	**-**
Social sciences	0,2	0,1	0,2	0,1	-	-	-	-
Region Vojvodine	**77,2**	**27,2**	**53,2**	**19,2**	**14,6**	**4,7**	**9,3**	**3,3**
Natural sciences	42,4	12,0	26,4	6,2	8,0	2,8	8,0	3,0
Engineering and technology	10,6	3,8	2,6	1,6	6,6	1,9	1,3	0,3
Medical and health sciences	2,1	2,1	2,1	2,1	-	-	-	-
Agricultural sciences	10,2	4,2	10,2	4,2	-	-	-	-
Social sciences	11,9	5,1	11,9	5,1	-	-	-	-
Business sector	**35,0**	**9,0**	**19,0**	**4,0**	**7,0**	**2,0**	**9,0**	**3,0**
Natural sciences	32,0	8,0	17,0	3,0	7,0	2,0	8,0	3,0
Engineering and technology	3,0	1,0	2,0	1,0	-	-	1,0	-
Government sector	**7,4**	**2,1**	**0,7**	**0,2**	**6,3**	**1,6**	**0,3**	**0,3**
Engineering and technology	6,7	1,9	-	-	6,3	1,6	0,3	0,3
Agricultural sciences	0,7	0,2	0,7	0,2	-	-	-	-
Tertirary education	**33,8**	**15,3**	**33,5**	**15,0**	**0,3**	**0,3**	**-**	**-**
Natural sciences	9,4	3,2	9,4	3,2	-	-	-	-
Engineering and technology	0,9	0,9	0,6	0,6	0,3	0,3	-	-
Medical and health sciences	2,1	2,1	2,1	2,1	-	-	-	-
Agricultural sciences	9,5	4,0	9,5	4,0	-	-	-	-
Social sciences	11,9	5,1	11,9	5,1	-	-	-	-

6.2. Engaged on the basis of work on contract and author contract, expressed in full-time equivalent, 2017 (continued)

	Engaged on the basis of work on contract and author contract							
	Total		Researchers		Assistant researchers		Other	
	All	Women	All	Women	All	Women	All	Women
Non-profit sector	**1,0**	**0,8**	**-**	**-**	**1,0**	**0,8**	**-**	**-**
Agricultural sciences	1,0	0,8	-	-	1,0	0,8	-	-
SRBIJA – JUG	82,1	36,4	69,4	33,5	9,0	1,9	3,7	1,0
Natural sciences	15,2	9,0	10,8	7,6	4,4	1,4	-	-
Engineering and technology	37,8	12,3	29,6	10,9	4,6	0,5	3,6	0,9
Medical and health sciences	1,5	-	1,5	-	-	-	-	-
Agricultural sciences	1,0	1,0	1,0	1,0	-	-	-	-
Social sciences	4,5	3,9	4,4	3,8	-	-	0,1	0,1
Humanities	22,1	10,2	22,1	10,2	-	-	-	-
Business sector	**18,8**	**3,3**	**13,5**	**3,3**	**4,1**	**-**	**1,2**	**-**
Natural sciences	2,0	-	2,0	-	-	-	-	-
Engineering and technology	14,3	2,3	9,0	2,3	4,1	-	1,2	-
Medical and health sciences	1,5	-	1,5	-	-	-	-	-
Agricultural sciences	1,0	1,0	1,0	1,0	-	-	-	-
Government sector	**1,0**	**-**	**1,0**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	1,0	-	1,0	-	-	-	-	-
Tertiary education	**62,3**	**33,1**	**54,9**	**30,2**	**4,9**	**1,9**	**2,5**	**1,0**
Natural sciences	13,2	9,0	8,8	7,6	4,4	1,4	-	-
Engineering and technology	22,5	10,0	19,6	8,6	0,5	0,5	2,4	0,9
Social sciences	4,5	3,9	4,4	3,8	-	-	0,1	0,1
Humanities	22,1	10,2	22,1	10,2	-	-	-	-
Region Šumadije i Zapadne Srbije	**51,4**	**25,2**	**43,9**	**23,7**	**6,4**	**1,4**	**1,1**	**0,1**
Natural sciences	13,2	9,0	8,8	7,6	4,4	1,4	-	-
Engineering and technology	11,6	2,1	8,6	2,1	2,0	-	1,0	-
Social sciences	4,5	3,9	4,4	3,8	-	-	0,1	0,1
Humanities	22,1	10,2	22,1	10,2	-	-	-	-
Business sector	**11,1**	**2,1**	**8,1**	**2,1**	**2,0**	**-**	**1,0**	**-**
Engineering and technology	11,1	2,1	8,1	2,1	2,0	-	1,0	-
Tertiary education	**40,3**	**23,1**	**35,8**	**21,6**	**4,4**	**1,4**	**0,1**	**0,1**
Natural sciences	13,2	9,0	8,8	7,6	4,4	1,4	-	-
Engineering and technology	0,5	-	0,5	-	-	-	-	-
Social sciences	4,5	3,9	4,4	3,8	-	-	0,1	0,1
Humanities	22,1	10,2	22,1	10,2	-	-	-	-
Region Južne i Istočne Srbije	**30,7**	**11,2**	**25,5**	**9,8**	**2,6**	**0,5**	**2,6**	**0,9**
Natural sciences	2,0	-	2,0	-	-	-	-	-
Engineering and technology	26,2	10,2	21,0	8,8	2,6	0,5	2,6	0,9
Medical and health sciences	1,5	-	1,5	-	-	-	-	-
Agricultural sciences	1,0	1,0	1,0	1,0	-	-	-	-
Business sector	**7,7**	**1,2**	**5,4**	**1,2**	**2,1**	**-**	**0,2**	**-**
Natural sciences	2,0	-	2,0	-	-	-	-	-
Engineering and technology	3,2	0,2	0,9	0,2	2,1	-	0,2	-
Medical and health sciences	1,5	-	1,5	-	-	-	-	-
Agricultural sciences	1,0	1,0	1,0	1,0	-	-	-	-
Government sector	**1,0**	**-**	**1,0**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	1,0	-	1,0	-	-	-	-	-
Tertiary education	**22,0**	**10,0**	**19,1**	**8,6**	**0,5**	**0,5**	**2,4**	**0,9**
Engineering and technology	22,0	10,0	19,1	8,6	0,5	0,5	2,4	0,9
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

7.1. Research works (projects and studies), by sectors and territories, 2017

	Research works (projects and studies), by sectors and territory, 2017							
	Number of works				Value of scientific works, thous. RSD			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
REPUBLIC OF SERBIA	**10093**	**4694**	**3705**	**1694**	**41531049**	**12371067**	**15521581**	**13638401**
Business sector	1174	195	468	511	15230986	342908	7079232	7808846
Government sector	2678	1389	881	408	11228148	5117088	3380352	2730708
Tertiary education	6215	3089	2351	775	15040402	6908199	5033356	3098847
Non-profit sector	26	21	5	-	31513	2872	28641	-
SRBIJA – SEVER	8122	3260	3414	1448	38623241	11408577	14454881	12759783
Business sector	1042	188	431	423	14639995	319755	6892133	7428107
Government sector	2647	1388	868	391	11070883	5115167	3332281	2623435
Tertiary education	4407	1663	2110	634	12880850	5970783	4201826	2708241
Non-profit sector	26	21	5	-	31513	2872	28641	-
Beogradski region	**5434**	**2527**	**1821**	**1086**	**27615381**	**10001109**	**10364757**	**7249515**
Business sector	979	187	402	390	10311555	308467	6476017	3527071
Government sector	2417	1378	704	335	9209743	5076664	2203767	1929312
Tertiary education	2032	960	711	361	8064889	4614014	1657743	1793132
Non-profit sector	6	2	4	-	29194	1964	27230	-
Region Vojvodine	**2688**	**733**	**1593**	**362**	**11007860**	**1407468**	**4090124**	**5510268**
Business sector	63	1	29	33	4328440	11288	416116	3901036
Government sector	230	10	164	56	1861140	38503	1128514	694123
Tertiary education	2375	703	1399	273	4815961	1356769	2544083	915109
Non-profit sector	20	19	1	-	2319	908	1411	-
SRBIJA – JUG	1971	1434	291	246	2907808	962490	1066700	878618
Business sector	132	7	37	88	590991	23153	187099	380739
Government sector	31	1	13	17	157265	1921	48071	107273
Tertiary education	1808	1426	241	141	2159552	937416	831530	390606
Region Šumadije i Zapadne Srbije	**644**	**389**	**151**	**104**	**1312829**	**521787**	**453133**	**337909**
Business sector	62	2	12	48	292609	15981	47412	229216
Government sector	13	-	13	-	48071	-	48071	-
Tertiary education	569	387	126	56	972149	505806	357650	108693
Region Južne i Istočne Srbije	**1327**	**1045**	**140**	**142**	**1594979**	**440703**	**613567**	**540709**
Business sector	70	5	25	40	298382	7172	139687	151523
Government sector	18	1	-	17	109194	1921	-	107273
Tertiary education	1239	1039	115	85	1187403	431610	473880	281913
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

7.2. Research works (projects and studies), by sectors and fields of science, 2017

	Research works (projects and studies), by sectors and fields of science, 2017							
	Number of works				Value of scientific works, thous. RSD			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
REPUBLIC OF SERBIA	**10093**	**4694**	**3705**	**1694**	**41531049**	**12371067**	**15521581**	**13638401**
Natural sciences	1769	1225	302	242	10700246	5079198	1560586	4060462
Engineering and technology	3537	464	2096	977	16090769	1095436	8328903	6666430
Medical and health sciences	558	406	121	31	2069398	827760	957743	283895
Agricultural sciences	537	34	319	184	4307166	316294	2250370	1740502
Social sciences	2678	2018	554	106	6662013	3595654	2238714	827645
Humanities	1014	547	313	154	1701457	1456725	185265	59467
Business sector	**1174**	**195**	**468**	**511**	**15230986**	**342908**	**7079232**	**7808846**
Natural sciences	261	94	78	89	4269671	83536	632494	3553641
Engineering and technology	600	31	236	333	9122087	168425	5493467	3460195
Medical and health sciences	108	38	46	24	1080342	77794	747582	254966
Agricultural sciences	43	-	27	16	682599	-	174537	508062
Social sciences	162	32	81	49	76287	13153	31152	31982
Government sector	**2678**	**1389**	**881**	**408**	**11228148**	**5117088**	**3380352**	**2730708**
Natural sciences	610	475	89	46	3601340	3034303	470012	97025
Engineering and technology	462	32	290	140	3184199	455544	1024426	1704229
Medical and health sciences	87	63	24	-	259286	197834	61452	-
Agricultural sciences	227	9	145	73	2691709	110382	1710439	870888
Social sciences	534	496	33	5	544412	482286	47287	14839
Humanities	758	314	300	144	947202	836739	66736	43727
Tertiary education	**6215**	**3089**	**2351**	**775**	**15040402**	**6908199**	**5033356**	**3098847**
Natural sciences	879	637	135	107	2828327	1960451	458080	409796
Engineering and technology	2472	400	1568	504	3767486	471287	1794193	1502006
Medical and health sciences	363	305	51	7	729770	552132	148709	28929
Agricultural sciences	267	25	147	95	932858	205912	365394	361552
Social sciences	1978	1489	437	52	6027706	3098431	2148451	780824
Humanities	256	233	13	10	754255	619986	118529	15740
Non-profit sector	**26**	**21**	**5**	**-**	**31513**	**2872**	**28641**	**-**
Natural sciences	19	19	-	-	908	908	-	-
Engineering and technology	3	1	2	-	16997	180	16817	-
Social sciences	4	1	3	-	13608	1784	11824	-
SRBIJA – SEVER	8122	3260	3414	1448	38623241	11408577	14454881	12759783
Natural sciences	1319	821	268	230	10081930	4664784	1392642	4024504
Engineering and technology	3057	374	1931	752	14664449	989261	7849303	5825885
Medical and health sciences	437	291	115	31	1921463	684195	953373	283895
Agricultural sciences	501	31	286	184	4145136	312921	2091713	1740502
Social sciences	1821	1218	502	101	6159398	3349917	1983085	826396
Humanities	987	525	312	150	1650865	1407499	184765	58601
Business sector	**1042**	**188**	**431**	**423**	**14639995**	**319755**	**6892133**	**7428107**
Natural sciences	241	93	68	80	4217467	83370	615144	3518953
Engineering and technology	494	28	212	254	8681486	150032	5417310	3114144
Medical and health sciences	105	35	46	24	1075748	73200	747582	254966
Agricultural sciences	40	-	24	16	589007	-	80945	508062
Social sciences	162	32	81	49	76287	13153	31152	31982
Government sector	**2647**	**1388**	**868**	**391**	**11070883**	**5115167**	**3332281**	**2623435**
Natural sciences	610	475	89	46	3601340	3034303	470012	97025
Engineering and technology	444	31	290	123	3075005	453623	1024426	1596956
Medical and health sciences	87	63	24	-	259286	197834	61452	-
Agricultural sciences	214	9	132	73	2643638	110382	1662368	870888
Social sciences	534	496	33	5	544412	482286	47287	14839
Humanities	758	314	300	144	947202	836739	66736	43727
Tertiary education	**4407**	**1663**	**2110**	**634**	**12880850**	**5970783**	**4201826**	**2708241**
Natural sciences	449	234	111	104	2262215	1546203	307486	408526
Engineering and technology	2116	314	1427	375	2890961	385426	1390750	1114785
Medical and health sciences	245	193	45	7	586429	413161	144339	28929
Agricultural sciences	247	22	130	95	912491	202539	348400	361552
Social sciences	1121	689	385	47	5525091	2852694	1892822	779575
Humanities	229	211	12	6	703663	570760	118029	14874
Non-profit sector	**26**	**21**	**5**	**-**	**31513**	**2872**	**28641**	**-**
Natural sciences	19	19	-	-	908	908	-	-
Engineering and technology	3	1	2	-	16997	180	16817	-
Social sciences	4	1	3	-	13608	1784	11824	-

7.2. Research works (projects and studies), by sectors and fields of science, 2017 (continued)

	Research works (projects and studies), by sectors and fields of science, 2017							
	Number of works				Value of scientific works, thous. RSD			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
Beogradski region	**5434**	**2527**	**1821**	**1086**	**27615381**	**10001109**	**10364757**	**7249515**
Natural sciences	1106	758	199	149	6785545	4510538	1165972	1109035
Engineering and technology	1551	234	767	550	11814159	741151	6679335	4393673
Medical and health sciences	302	167	104	31	1804493	598568	922030	283895
Agricultural sciences	329	29	176	124	2576882	311139	1041625	1224118
Social sciences	1170	817	270	83	3142376	2475561	472173	194642
Humanities	976	522	305	149	1491926	1364152	83622	44152
Business sector	**979**	**187**	**402**	**390**	**10311555**	**308467**	**6476017**	**3527071**
Natural sciences	211	93	55	63	1282575	83370	465309	733896
Engineering and technology	471	27	206	238	7347672	138744	5210763	1998165
Medical and health sciences	105	35	46	24	1075748	73200	747582	254966
Agricultural sciences	30	-	14	16	529273	-	21211	508062
Social sciences	162	32	81	49	76287	13153	31152	31982
Government sector	**2417**	**1378**	**704**	**335**	**9209743**	**5076664**	**2203767**	**1929312**
Natural sciences	610	475	89	46	3601340	3034303	470012	97025
Engineering and technology	275	22	165	88	2567186	415365	792532	1359289
Medical and health sciences	87	63	24	-	259286	197834	61452	-
Agricultural sciences	153	8	93	52	1290317	110137	765748	414432
Social sciences	534	496	33	5	544412	482286	47287	14839
Humanities	758	314	300	144	947202	836739	66736	43727
Tertiary education	**2032**	**960**	**711**	**361**	**8064889**	**4614014**	**1657743**	**1793132**
Natural sciences	285	190	55	40	1901630	1392865	230651	278114
Engineering and technology	802	184	394	224	1882304	186862	659223	1036219
Medical and health sciences	110	69	34	7	469459	327534	112996	28929
Agricultural sciences	146	21	69	56	757292	201002	254666	301624
Social sciences	471	288	154	29	2509480	1978338	383321	147821
Humanities	218	208	5	5	544724	527413	16886	425
Non-profit sector	**6**	**2**	**4**	**-**	**29194**	**1964**	**27230**	**-**
Engineering and technology	3	1	2	-	16997	180	16817	-
Social sciences	3	1	2	-	12197	1784	10413	-
Region Vojvodine	**2688**	**733**	**1593**	**362**	**11007860**	**1407468**	**4090124**	**5510268**
Natural sciences	213	63	69	81	3296385	154246	226670	2915469
Engineering and technology	1506	140	1164	202	2850290	248110	1169968	1432212
Medical and health sciences	135	124	11	-	116970	85627	31343	-
Agricultural sciences	172	2	110	60	1568254	1782	1050088	516384
Social sciences	651	401	232	18	3017022	874356	1510912	631754
Humanities	11	3	7	1	158939	43347	101143	14449
Business sector	**63**	**1**	**29**	**33**	**4328440**	**11288**	**416116**	**3901036**
Natural sciences	30	-	13	17	2934892	-	149835	2785057
Engineering and technology	23	1	6	16	1333814	11288	206547	1115979
Agricultural sciences	10	-	10	-	59734	-	59734	-
Government sector	**230**	**10**	**164**	**56**	**1861140**	**38503**	**1128514**	**694123**
Engineering and technology	169	9	125	35	507819	38258	231894	237667
Agricultural sciences	61	1	39	21	1353321	245	896620	456456
Tertiary education	**2375**	**703**	**1399**	**273**	**4815961**	**1356769**	**2544083**	**915109**
Natural sciences	164	44	56	64	360585	153338	76835	130412
Engineering and technology	1314	130	1033	151	1008657	198564	731527	78566
Medical and health sciences	135	124	11	-	116970	85627	31343	-
Agricultural sciences	101	1	61	39	155199	1537	93734	59928
Social sciences	650	401	231	18	3015611	874356	1509501	631754
Humanities	11	3	7	1	158939	43347	101143	14449
Non-profit sector	**20**	**19**	**1**	**-**	**2319**	**908**	**1411**	**-**
Natural sciences	19	19	-	-	908	908	-	-
Social sciences	1	-	1	-	1411	-	1411	-
SRBIJA – JUG	1971	1434	291	246	2907808	962490	1066700	878618
Natural sciences	450	404	34	12	618316	414414	167944	35958
Engineering and technology	480	90	165	225	1426320	106175	479600	840545
Medical and health sciences	121	115	6	-	147935	143565	4370	-
Agricultural sciences	36	3	33	-	162030	3373	158657	-
Social sciences	857	800	52	5	502615	245737	255629	1249
Humanities	27	22	1	4	50592	49226	500	866

7.2. Research works (projects and studies), by sectors and fields of science, 2017 (continued)

	Research works (projects and studies), by sectors and fields of science, 2017							
	Number of works				Value of scientific works, thous. RSD			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
Business sector	**132**	**7**	**37**	**88**	**590991**	**23153**	**187099**	**380739**
Natural sciences	20	1	10	9	52204	166	17350	34688
Engineering and technology	106	3	24	79	440601	18393	76157	346051
Medical and health sciences	3	3	-	-	4594	4594	-	-
Agricultural sciences	3	-	3	-	93592	-	93592	-
Government sector	**31**	**1**	**13**	**17**	**157265**	**1921**	**48071**	**107273**
Engineering and technology	18	1	-	17	109194	1921	-	107273
Agricultural sciences	13	-	13	-	48071	-	48071	-
Tertiary education	**1808**	**1426**	**241**	**141**	**2159552**	**937416**	**831530**	**390606**
Natural sciences	430	403	24	3	566112	414248	150594	1270
Engineering and technology	356	86	141	129	876525	85861	403443	387221
Medical and health sciences	118	112	6	-	143341	138971	4370	-
Agricultural sciences	20	3	17	-	20367	3373	16994	-
Social sciences	857	800	52	5	502615	245737	255629	1249
Humanities	27	22	1	4	50592	49226	500	866
Region Šumadije i Zapadne Srbije	**644**	**389**	**151**	**104**	**1312829**	**521787**	**453133**	**337909**
Natural sciences	167	148	11	8	482829	306308	149431	27090
Engineering and technology	216	50	73	93	450366	45278	94792	310296
Medical and health sciences	75	69	6	-	54623	50253	4370	-
Agricultural sciences	33	3	30	-	68438	3373	65065	-
Social sciences	151	117	31	3	238735	98737	139475	523
Humanities	2	2	-	-	17838	17838	-	-
Business sector	**62**	**2**	**12**	**48**	**292609**	**15981**	**47412**	**229216**
Natural sciences	10	-	2	8	32276	-	5186	27090
Engineering and technology	52	2	10	40	260333	15981	42226	202126
Government sector	13	-	13	-	48071	-	48071	-
Agricultural sciences	13	-	13	-	48071	-	48071	-
Tertiary education	**569**	**387**	**126**	**56**	**972149**	**505806**	**357650**	**108693**
Natural sciences	157	148	9	-	450553	306308	144245	
Engineering and technology	164	48	63	53	190033	29297	52566	108170
Medical and health sciences	75	69	6	-	54623	50253	4370	-
Agricultural sciences	20	3	17	-	20367	3373	16994	-
Social sciences	151	117	31	3	238735	98737	139475	523
Humanities	2	2	-	-	17838	17838	-	-
Region Južne i Istočne Srbije	**1327**	**1045**	**140**	**142**	**1594979**	**440703**	**613567**	**540709**
Natural sciences	283	256	23	4	135487	108106	18513	8868
Engineering and technology	264	40	92	132	975954	60897	384808	530249
Medical sciences	46	46	-	-	93312	93312	-	-
Agricultural sciences	3	-	3	-	93592	-	93592	-
Social sciences	706	683	21	2	263880	147000	116154	726
Humanities	25	20	1	4	32754	31388	500	866
Business sector	**70**	**5**	**25**	**40**	**298382**	**7172**	**139687**	**151523**
Natural sciences	10	1	8	1	19928	166	12164	7598
Engineering and technology	54	1	14	39	180268	2412	33931	143925
Medical and health sciences	3	3	-	-	4594	4594	-	-
Agricultural sciences	3	-	3	-	93592	-	93592	-
Government sector	**18**	**1**	**-**	**17**	**109194**	**1921**	**-**	**107273**
Engineering and technology	18	1	-	17	109194	1921	-	107273
Tertiary education	**1239**	**1039**	**115**	**85**	**1187403**	**431610**	**473880**	**281913**
Natural sciences	273	255	15	3	115559	107940	6349	1270
Engineering and technology	192	38	78	76	686492	56564	350877	279051
Medical and health sciences	43	43	-	-	88718	88718	-	-
Social sciences	706	683	21	2	263880	147000	116154	726
Humanities	25	20	1	4	32754	31388	500	866
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

8.1. R&D works, by ordering parties, fields of science

	Ordering parties							
	Enterprises				Ministries			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
REPUBLIC OF SERBIA	**773**	**110**	**398**	**265**	**6139**	**3157**	**2130**	**852**
Natural sciences	94	16	33	45	1368	1035	206	127
Engineering and technology	621	94	315	212	1748	230	1110	408
Medical and health sciences	-	-	-	-	296	225	64	7
Agricultural sciences	10	-	10	-	320	26	183	111
Social sciences	48	-	40	8	1683	1292	320	71
Humanities	-	-	-	-	724	349	247	128
Business sector	**151**	**-**	**53**	**98**	**465**	**132**	**156**	**177**
Natural sciences	68	-	29	39	130	88	14	28
Engineering and technology	74	-	21	53	170	12	52	106
Medical and health sciences	-	-	-	-	-	-	-	-
Agricultural sciences	3	-	3	-	12	-	9	3
Social sciences	6	-	-	6	153	32	81	40
Government sector	**62**	**16**	**44**	**2**	**2158**	**1209**	**670**	**279**
Natural sciences	18	16	-	2	486	371	77	38
Engineering and technology	44	-	44	-	339	26	212	101
Medical and health sciences	-	-	-	-	81	58	23	-
Agricultural sciences	-	-	-	-	109	6	86	17
Social sciences	-	-	-	-	492	454	33	5
Humanities	-	-	-	-	651	294	239	118
Tertiary education	**560**	**94**	**301**	**165**	**3516**	**1816**	**1304**	**396**
Natural sciences	8	-	4	4	752	576	115	61
Engineering and technology	503	94	250	159	1239	192	846	201
Medical and health sciences	-	-	-	-	215	167	41	7
Agricultural sciences	7	-	7	-	199	20	88	91
Social sciences	42	-	40	2	1038	806	206	26
Humanities	-	-	-	-	73	55	8	10
Non-profit sector	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Natural sciences	-	-	-	-	-	-	-	-
Engineering and technology	-	-	-	-	-	-	-	-
Social sciences	-	-	-	-	-	-	-	-
SRBIJA – SEVER	695	110	373	212	4892	2189	1963	740
Natural sciences	87	16	33	38	943	633	186	124
Engineering and technology	556	94	294	168	1498	177	1015	306
Medical and health sciences	-	-	-	-	267	202	58	7
Agricultural sciences	10	-	10	-	284	23	150	111
Social sciences	42	-	36	6	1203	827	308	68
Humanities	-	-	-	-	697	327	246	124
Business sector	**112**	**-**	**45**	**67**	**453**	**130**	**152**	**171**
Natural sciences	61	-	29	32	130	88	14	28
Engineering and technology	42	-	13	29	161	10	51	100
Medical and health sciences	-	-	-	-	-	-	-	-
Agricultural sciences	3	-	3	-	9	-	6	3
Social sciences	6	-	-	6	153	32	81	40
Government sector	**62**	**16**	**44**	**2**	**2127**	**1208**	**657**	**262**
Natural sciences	18	16	-	2	486	371	77	38
Engineering and technology	44	-	44	-	321	25	212	84
Medical and health sciences	-	-	-	-	81	58	23	-
Agricultural sciences	-	-	-	-	96	6	73	17
Social sciences	-	-	-	-	492	454	33	5
Humanities	-	-	-	-	651	294	239	118
Tertiary education	**521**	**94**	**284**	**143**	**2312**	**851**	**1154**	**307**
Natural sciences	8	-	4	4	327	174	95	58
Engineering and technology	470	94	237	139	1016	142	752	122
Medical and health sciences	-	-	-	-	186	144	35	7
Agricultural sciences	7	-	7	-	179	17	71	91
Social sciences	36	-	36	-	558	341	194	23
Humanities	-	-	-	-	46	33	7	6
Non-profit sector	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Natural sciences	-	-	-	-	-	-	-	-
Engineering and technology	-	-	-	-	-	-	-	-
Social sciences	-	-	-	-	-	-	-	-
Beogradski region	**627**	**96**	**334**	**197**	**3299**	**1742**	**989**	**568**
Natural sciences	87	16	33	38	799	590	138	71
Engineering and technology	495	80	262	153	676	128	305	243
Medical and health sciences	-	-	-	-	162	108	47	7
Agricultural sciences	7	-	7	-	192	21	105	66
Social sciences	38	-	32	6	779	570	151	58
Humanities	-	-	-	-	691	325	243	123

and type of research, 2017

Ordering parties								
Ministries				Other				
Total	Basic	Applied	Development	Total	Basic	Applied	Development	
1922	**878**	**680**	**364**	**1259**	**549**	**497**	**213**	**REPUBLIC OF SERBIA**
124	43	36	45	183	131	27	25	Natural sciences
813	114	454	245	355	26	217	112	Engineering and technology
121	120	1	-	141	61	56	24	Medical and health sciences
119	3	63	53	88	5	63	20	Agricultural sciences
624	479	124	21	323	247	70	6	Social sciences
121	119	2	-	169	79	64	26	Humanities
352	**31**	**158**	**163**	**206**	**32**	**101**	**73**	**Business sector**
36	1	29	6	27	5	6	16	Natural sciences
274	18	113	143	82	1	50	31	Engineering and technology
13	12	1	-	95	26	45	24	Medical and health sciences
27	-	15	12	1	-	-	1	Agricultural sciences
2	-	-	2	1	-	-	1	Social sciences
129	**16**	**51**	**62**	**329**	**148**	**116**	**65**	**Government sector**
5	2	2	1	101	86	10	5	Natural sciences
34	5	9	20	45	1	25	19	Engineering and technology
-	-	-	-	6	5	1	-	Medical and health sciences
83	2	40	41	35	1	19	15	Agricultural sciences
7	7	-	-	35	35	-	-	Social sciences
-	-	-	-	107	20	61	26	Humanities
1417	**810**	**468**	**139**	**722**	**369**	**278**	**75**	**Tertiary education**
64	21	5	38	55	40	11	4	Natural sciences
502	90	330	82	228	24	142	62	Engineering and technology
108	108	-	-	40	30	10	-	Medical and health sciences
9	1	8	-	52	4	44	4	Agricultural sciences
613	471	123	19	285	212	68	5	Social sciences
121	119	2	-	62	59	3	-	Humanities
24	**21**	**3**	**-**	**2**	**-**	**2**	**-**	**Non-profit sector**
19	19	-	-	-	-	-	-	Natural sciences
3	1	2	-	-	-	-	-	Engineering and technology
2	1	1	-	2	-	2	-	Social sciences
1468	530	620	318	1067	431	458	178	SRBIJA – SEVER
115	42	30	43	174	130	19	25	Natural sciences
739	102	436	201	264	1	186	77	Engineering and technology
33	32	1	-	137	57	56	24	Medical and health sciences
119	3	63	53	88	5	63	20	Agricultural sciences
341	232	88	21	235	159	70	6	Social sciences
121	119	2	-	169	79	64	26	Humanities
301	27	145	129	176	31	89	56	**Business sector**
29	-	25	4	21	5	-	16	Natural sciences
233	18	104	111	58	-	44	14	Engineering and technology
10	9	1	-	95	26	45	24	Medical and health sciences
27	-	15	12	1	-	-	1	Agricultural sciences
2	-	-	2	1	-	-	1	Social sciences
129	**16**	**51**	**62**	**329**	**148**	**116**	**65**	**Government sector**
5	2	2	1	101	86	10	5	Natural sciences
34	5	9	20	45	1	25	19	Engineering and technology
-	-	-	-	6	5	1	-	Medical and health sciences
83	2	40	41	35	1	19	15	Agricultural sciences
7	7	-	-	35	35	-	-	Social sciences
-	-	-	-	107	20	61	26	Humanities
1014	**466**	**421**	**127**	**560**	**252**	**251**	**57**	**Tertiary education**
62	21	3	38	52	39	9	4	Natural sciences
469	78	321	70	161	-	117	44	Engineering and technology
23	23	-	-	36	26	10	-	Medical and health sciences
9	1	8	-	52	4	44	4	Agricultural sciences
330	224	87	19	197	124	68	5	Social sciences
121	119	2	-	62	59	3	-	Humanities
24	**21**	**3**	**-**	**2**	**-**	**2**	**-**	**Non-profit sector**
19	19	-	-	-	-	-	-	Natural sciences
3	1	2	-	-	-	-	-	Engineering and technology
2	1	1	-	2	-	2	-	Social sciences
771	**313**	**249**	**209**	**737**	**376**	**249**	**112**	**Beogradski region**
56	22	15	19	164	130	13	21	Natural sciences
277	26	130	121	103	-	70	33	Engineering and technology
10	9	1	-	130	50	56	24	Medical and health sciences
112	3	57	52	18	5	7	6	Agricultural sciences
197	135	45	17	156	112	42	2	Social sciences
119	118	1	-	166	79	61	26	Humanities

8.1. R&D works, by ordering parties, fields of science

	Ordering parties							
	Enterprises				Ministries			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
Business sector	**105**	**-**	**42**	**63**	**436**	**130**	**146**	**160**
Natural sciences	61	-	29	32	119	88	14	17
Engineering and technology	38	-	13	25	161	10	51	100
Medical and health sciences	-	-	-	-	-	-	-	-
Agricultural sciences	-	-	-	-	3	-	-	3
Social sciences	6	-	-	6	153	32	81	40
Government sector	**52**	**16**	**34**	**2**	**1988**	**1201**	**547**	**240**
Natural sciences	18	16	-	2	486	371	77	38
Engineering and technology	34	-	34	-	211	19	124	68
Medical and health sciences	-	-	-	-	81	58	23	-
Agricultural sciences	-	-	-	-	67	5	51	11
Social sciences	-	-	-	-	492	454	33	5
Humanities	-	-	-	-	651	294	239	118
Tertiary education	**470**	**80**	**258**	**132**	**875**	**411**	**296**	**168**
Natural sciences	8	-	4	4	194	131	47	16
Engineering and technology	423	80	215	128	304	99	130	75
Medical and health sciences	-	-	-	-	81	50	24	7
Agricultural sciences	7	-	7	-	122	16	54	52
Social sciences	32	-	32	-	134	84	37	13
Humanities	-	-	-	-	40	31	4	5
Non-profit sector	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	-	-	-	-	-	-	-	-
Social sciences	-	-	-	-	-	-	-	-
Region Vojvodine	**68**	**14**	**39**	**15**	**1593**	**447**	**974**	**172**
Natural sciences	-	-	-	-	144	43	48	53
Engineering and technology	61	14	32	15	822	49	710	63
Medical and health sciences	-	-	-	-	105	94	11	-
Agricultural sciences	3	-	3	-	92	2	45	45
Social sciences	4	-	4	-	424	257	157	10
Humanities	-	-	-	-	6	2	3	1
Business sector	**7**	**-**	**3**	**4**	**17**	**-**	**6**	**11**
Natural sciences	-	-	-	-	11	-	-	11
Engineering and technology	4	-	-	4	-	-	-	-
Agricultural sciences	3	-	3	-	6	-	6	-
Government sector	**10**	**-**	**10**	**-**	**139**	**7**	**110**	**22**
Engineering and technology	10	-	10	-	110	6	88	16
Agricultural sciences	-	-	-	-	29	1	22	6
Tertiary education	**51**	**14**	**26**	**11**	**1437**	**440**	**858**	**139**
Natural sciences	-	-	-	-	133	43	48	42
Engineering and technology	47	14	22	11	712	43	622	47
Medical and health sciences	-	-	-	-	105	94	11	-
Agricultural sciences	-	-	-	-	57	1	17	39
Social sciences	4	-	4	-	424	257	157	10
Humanities	-	-	-	-	6	2	3	1
Non-profit sector	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Natural sciences	-	-	-	-	-	-	-	-
Social sciences	-	-	-	-	-	-	-	-
SRBIJA – JUG	78	-	25	53	1247	968	167	112
Natural sciences	7	-	-	7	425	402	20	3
Engineering and technology	65	-	21	44	250	53	95	102
Medical and health sciences	-	-	-	-	29	23	6	-
Agricultural sciences	-	-	-	-	36	3	33	-
Social sciences	6	-	4	2	480	465	12	3
Humanities	-	-	-	-	27	22	1	4
Business sector	**39**	**-**	**8**	**31**	**12**	**2**	**4**	**6**
Natural sciences	7	-	-	7	-	-	-	-
Engineering and technology	32	-	8	24	9	2	1	6
Medical and health sciences	-	-	-	-	-	-	-	-
Agricultural sciences	-	-	-	-	3	-	3	-
Government sector	**-**	**-**	**-**	**-**	**31**	**1**	**13**	**17**
Engineering and technology	-	-	-	-	18	1	-	17
Agricultural sciences	-	-	-	-	13	-	13	-
Tertiary education	**39**	**-**	**17**	**22**	**1204**	**965**	**150**	**89**
Natural sciences	-	-	-	-	425	402	20	3
Engineering and technology	33	-	13	20	223	50	94	79
Medical and health sciences	-	-	-	-	29	23	6	-
Agricultural sciences	-	-	-	-	20	3	17	-
Social sciences	6	-	4	2	480	465	12	3
Humanities	-	-	-	-	27	22	1	4

and type of research, 2017 (continued)

Ordering parties								
Ministries				Other				
Total	Basic	Applied	Development	Total	Basic	Applied	Development	
270	**26**	**126**	**118**	**168**	**31**	**88**	**49**	**Business sector**
13	-	12	1	18	5	-	13	Natural sciences
219	17	99	103	53	-	43	10	Engineering and technology
10	9	1	-	95	26	45	24	Medical and health sciences
26	-	14	12	1	-	-	1	Agricultural sciences
2	-	-	2	1	-	-	1	Social sciences
112	**14**	**41**	**57**	**265**	**147**	**82**	**36**	**Government sector**
5	2	2	1	101	86	10	5	Natural sciences
23	3	4	16	7	-	3	4	Engineering and technology
-	-	-	-	6	5	1	-	Medical and health sciences
77	2	35	40	9	1	7	1	Agricultural sciences
7	7	-	-	35	35	-	-	Social sciences
-	-	-	-	107	20	61	26	Humanities
384	**271**	**79**	**34**	**303**	**198**	**78**	**27**	**Tertiary education**
38	20	1	17	45	39	3	3	Natural sciences
32	5	25	2	43	-	24	19	Engineering and technology
-	-	-	-	29	19	10	-	Medical and health sciences
9	1	8	-	8	4	-	4	Agricultural sciences
186	127	44	15	119	77	41	1	Social sciences
119	118	1	-	59	59	-	-	Humanities
5	**2**	**3**	**-**	**1**	**-**	**1**	**-**	**Non-profit sector**
3	1	2	-	-	-	-	-	Engineering and technology
2	1	1	-	1	-	1	-	Social sciences
697	**217**	**371**	**109**	**330**	**55**	**209**	**66**	**Region Vojvodine**
59	20	15	24	10	-	6	4	Natural sciences
462	76	306	80	161	1	116	44	Engineering and technology
23	23	-	-	7	7	-	-	Medical and health sciences
7	-	6	1	70	-	56	14	Agricultural sciences
144	97	43	4	79	47	28	4	Social sciences
2	1	1	-	3	-	3	-	Humanities
31	**1**	**19**	**11**	**8**	**-**	**1**	**7**	**Business sector**
16	-	13	3	3	-	-	3	Natural sciences
14	1	5	8	5	-	1	4	Engineering and technology
1	-	1	-	-	-	-	-	Agricultural sciences
17	**2**	**10**	**5**	**64**	**1**	**34**	**29**	**Government sector**
11	2	5	4	38	1	22	15	Engineering and technology
6	-	5	1	26	-	12	14	Agricultural sciences
630	**195**	**342**	**93**	**257**	**54**	**173**	**30**	**Tertiary education**
24	1	2	21	7	-	6	1	Natural sciences
437	73	296	68	118	-	93	25	Engineering and technology
23	23	-	-	7	7	-	-	Medical and health sciences
-	-	-	-	44	-	44	-	Agricultural sciences
144	97	43	4	78	47	27	4	Social sciences
2	1	1	-	3	-	3	-	Humanities
19	**19**	**-**	**-**	**1**	**-**	**1**	**-**	**Non-profit sector**
19	19	-	-	-	-	-	-	Natural sciences
-	-	-	-	1	-	1	-	Social sciences
454	348	60	46	192	118	39	35	SRBIJA – JUG
9	1	6	2	9	1	8	-	Natural sciences
74	12	18	44	91	25	31	35	Engineering and technology
88	88	-	-	4	4	-	-	Medical and health sciences
-	-	-	-	-	-	-	-	Agricultural sciences
283	247	36	-	88	88	-	-	Social sciences
-	-	-	-	-	-	-	-	Humanities
51	**4**	**13**	**34**	**30**	**1**	**12**	**17**	**Business sector**
7	1	4	2	6	-	6	-	Natural sciences
41	-	9	32	24	1	6	17	Engineering and technology
3	3	-	-	-	-	-	-	Medical and health sciences
-	-	-	-	-	-	-	-	Agricultural sciences
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**Government sector**
-	-	-	-	-	-	-	-	Engineering and technology
-	-	-	-	-	-	-	-	Agricultural sciences
403	**344**	**47**	**12**	**162**	**117**	**27**	**18**	**Tertiary education**
2	-	2	-	3	1	2	-	Natural sciences
33	12	9	12	67	24	25	18	Engineering and technology
85	85	-	-	4	4	-	-	Medical and health sciences
-	-	-	-	-	-	-	-	Agricultural sciences
283	247	36	-	88	88	-	-	Social sciences
-	-	-	-	-	-	-	-	Humanities

8.1. R&D works, by ordering parties, fields of science

	Ordering parties							
	Enterprises				Ministries			
	Total	Basic	Applied	Development	Total	Basic	Applied	Development
Region Šumadije i Zapadne Srbije	**25**	**-**	**12**	**13**	**411**	**295**	**88**	**28**
Natural sciences	6	-	-	6	157	148	9	-
Engineering and technology	13	-	8	5	79	18	34	27
Medical and health sciences	-	-	-	-	23	17	6	-
Agricultural sciences	-	-	-	-	33	3	30	-
Social sciences	6	-	4	2	117	107	9	1
Humanities	-	-	-	-	2	2	-	-
Business sector	**13**	**-**	**2**	**11**	**3**	**2**	**-**	**1**
Natural sciences	6	-	-	6	-	-	-	-
Engineering and technology	7	-	2	5	3	2	-	1
Government sector	**-**	**-**	**-**	**-**	**13**	**-**	**13**	**-**
Agricultural sciences	-	-	-	-	13	-	13	-
Tertiary education	**12**	**-**	**10**	**2**	**395**	**293**	**75**	**27**
Natural sciences	-	-	-	-	157	148	9	-
Engineering and technology	6	-	6	-	76	16	34	26
Medical and health sciences	-	-	-	-	23	17	6	-
Agricultural sciences	-	-	-	-	20	3	17	-
Social sciences	6	-	4	2	117	107	9	1
Humanities	-	-	-	-	2	2	-	-
Region Južne i Istočne Srbije	**53**	**-**	**13**	**40**	**836**	**673**	**79**	**84**
Natural sciences	1	-	-	1	268	254	11	3
Engineering and technology	52	-	13	39	171	35	61	75
Medical and health sciences	-	-	-	-	6	6	-	-
Agricultural sciences	-	-	-	-	3	-	3	-
Social sciences	-	-	-	-	363	358	3	2
Humanities	-	-	-	-	25	20	1	4
Business sector	**26**	**-**	**6**	**20**	**9**	**-**	**4**	**5**
Natural sciences	1	-	-	1	-	-	-	-
Engineering and technology	25	-	6	19	6	-	1	5
Medical and health sciences	-	-	-	-	-	-	-	-
Agricultural sciences	-	-	-	-	3	-	3	-
Government sector	**-**	**-**	**-**	**-**	**18**	**1**	**-**	**17**
Engineering and technology	-	-	-	-	18	1	-	17
Tertiary education	**27**	**-**	**7**	**20**	**809**	**672**	**75**	**62**
Natural sciences	-	-	-	-	268	254	11	3
Engineering and technology	27	-	7	20	147	34	60	53
Medical and health sciences	-	-	-	-	6	6	-	-
Social sciences	-	-	-	-	363	358	3	2
Humanities	-	-	-	-	25	20	1	4
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

and type of research, 2017 (continued)

Ordering parties								
Ministries				Other				
Total	Basic	Applied	Development	Total	Basic	Applied	Development	
149	**70**	**37**	**42**	**59**	**24**	**14**	**21**	**Region Šumadije i Zapadne Srbije**
4	-	2	2	-	-	-	-	Natural sciences
69	12	17	40	55	20	14	21	Engineering and technology
48	48	-	-	4	4	-	-	Medical and health sciences
-	-	-	-	-	-	-	-	Agricultural sciences
28	10	18	-	-	-	-	-	Social sciences
-	-	-	-	-	-	-	-	Humanities
40	**-**	**10**	**30**	**6**	**-**	**-**	**6**	**Business sector**
4	-	2	2	-	-	-	-	Natural sciences
36	-	8	28	6	-	-	6	Engineering and technology
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**Government sector**
-	-	-	-	-	-	-	-	Agricultural sciences
109	**70**	**27**	**12**	**53**	**24**	**14**	**15**	**Tertiary education**
-	-	-	-	-	-	-	-	Natural sciences
33	12	9	12	49	20	14	15	Engineering and technology
48	48	-	-	4	4	-	-	Medical and health sciences
-	-	-	-	-	-	-	-	Agricultural sciences
28	10	18	-	-	-	-	-	Social sciences
-	-	-	-	-	-	-	-	Humanities
305	**278**	**23**	**4**	**133**	**94**	**25**	**14**	**Region Južne i Istočne Srbije**
5	1	4	-	9	1	8	-	Natural sciences
5	-	1	4	36	5	17	14	Engineering and technology
40	40	-	-	-	-	-	-	Medical and health sciences
-	-	-	-	-	-	-	-	Agricultural sciences
255	237	18	-	88	88	-	-	Social sciences
-	-	-	-	-	-	-	-	Humanities
11	**4**	**3**	**4**	**24**	**1**	**12**	**11**	**Business sector**
3	1	2	-	6	-	6	-	Natural sciences
5	-	1	4	18	1	6	11	Engineering and technology
3	3	-	-	-	-	-	-	Medical and health sciences
-	-	-	-	-	-	-	-	Agricultural sciences
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**Government sector**
-	-	-	-	-	-	-	-	Engineering and technology
294	**274**	**20**	**-**	**109**	**93**	**13**	**3**	**Tertiary education**
2	-	2	-	3	1	2	-	Natural sciences
-	-	-	-	18	4	11	3	Engineering and technology
37	37	-	-	-	-	-	-	Medical and health sciences
255	237	18	-	88	88	-	-	Social sciences
-	-	-	-	-	-	-	-	Humanities
...	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**Region Kosovo i Metohija**

9.1. Published R&D works, inventions and patents, by fields of science, 2017

	Published R&D works				Inventions and patents					
	Total	Published in			Tested inventions	Patents		Sold		Inventions and patents used for the first time in practice
		Own publications	Other publications in the Republic of Serbia	Foreign publications		Pending in the Patent Office	Registered in the Patent Office	In the Republic of Serbia	Abroad	
REPUBLIC OF SERBIA	**26559**	**6433**	**8479**	**11654**	**146**	**34**	**24**	**28**	**38**	**29**
Natural sciences	4776	943	746	3087	12	11	4	4	-	6
Engineering and technology	5999	1084	2151	2764	58	16	19	5	4	19
Medical and health sciences	1601	127	274	1200	-	-	1	-	-	-
Agricultural sciences	2863	242	965	1756	75	6	-	18	34	3
Social sciences	7014	2766	2676	1485	1	1	-	1	-	1
Humanities	4306	1271	1667	1362	-	-	-	-	-	-
Business sector	**956**	**130**	**333**	**493**	**14**	**7**	**7**	**3**	**1**	**8**
Natural sciences	173	31	47	95	6	6	3	-	-	6
Engineering and technology	566	28	237	301	7	-	4	2	1	1
Medical and health sciences	5	-	-	5	-	-	-	-	-	-
Agricultural sciences	58	24	16	18	-	-	-	-	-	-
Social sciences	154	47	33	74	1	1	-	1	-	1
Government sector	**7246**	**1616**	**2453**	**3270**	**97**	**15**	**14**	**22**	**34**	**3**
Natural sciences	2140	244	316	1580	6	4	1	4	-	-
Engineering and technology	1005	175	304	526	17	6	12	-	-	-
Medical and health sciences	131	-	25	106	-	-	1	-	-	-
Agricultural sciences	1101	147	484	570	74	5	-	18	34	3
Social sciences	800	430	234	135	-	-	-	-	-	-
Humanities	2069	620	1090	353	-	-	-	-	-	-
Tertiary education	**18357**	**4687**	**5693**	**7891**	**35**	**12**	**3**	**3**	**3**	**18**
Natural sciences	2463	668	383	1412	-	1	-	-	-	-
Engineering and technology	4428	881	1610	1937	34	10	3	3	3	18
Medical and health sciences	1465	127	249	1089	-	-	-	-	-	-
Agricultural sciences	1704	71	465	1168	1	1	-	-	-	-
Social sciences	6060	2289	2409	1276	-	-	-	-	-	-
Humanities	2237	651	577	1009	-	-	-	-	-	-
SRBIJA – SEVER	20504	4627	6495	9390	139	31	24	28	38	22
Natural sciences	4339	766	694	2879	12	11	4	4	-	6
Engineering and technology	3885	569	1419	1897	51	13	19	5	4	12
Medical and health sciences	1126	1	170	955	-	-	1	-	-	-
Agricultural sciences	2643	223	880	1640	75	6	-	18	34	3
Social sciences	5125	1966	1984	1089	1	1	-	1	-	1
Humanities	3386	1102	1348	930	-	-	-	-	-	-
Business sector	**785**	**122**	**274**	**389**	**14**	**7**	**7**	**3**	**1**	**8**
Natural sciences	171	29	47	95	6	6	3	-	-	6
Engineering and technology	412	22	185	205	7	-	4	2	1	1
Medical and health sciences	2	-	-	2	-	-	-	-	-	-
Agricultural sciences	46	24	9	13	-	-	-	-	-	-
Social sciences	154	47	33	74	1	1	-	1	-	1
Government sector	**7123**	**1596**	**2409**	**3211**	**97**	**15**	**14**	**22**	**34**	**3**
Natural sciences	2140	244	316	1580	6	4	1	4	-	-
Engineering and technology	955	155	294	506	17	6	12	-	-	-
Medical and health sciences	131	-	25	106	-	-	1	-	-	-
Agricultural sciences	1028	147	450	531	74	5	-	18	34	3
Social sciences	800	430	234	135	-	-	-	-	-	-
Humanities	2069	620	1090	353	-	-	-	-	-	-
Tertiary education	**12596**	**2909**	**3812**	**5790**	**28**	**9**	**3**	**3**	**3**	**11**
Natural sciences	2028	493	331	1204	-	1	-	-	-	-
Engineering and technology	2518	392	940	1186	27	7	3	3	3	11
Medical and health sciences	993	1	145	847	-	-	-	-	-	-
Agricultural sciences	1569	52	421	1096	1	1	-	-	-	-
Social sciences	4171	1489	1717	880	-	-	-	-	-	-
Humanities	1317	482	258	577	-	-	-	-	-	-
Beogradski region	**15728**	**3788**	**4605**	**7346**	**44**	**11**	**16**	**6**	**-**	**4**
Natural sciences	3657	647	564	2446	6	5	1	4	-	-
Engineering and technology	2352	287	867	1198	19	4	14	1	-	-
Medical and health sciences	1076	-	161	915	-	-	1	-	-	-
Agricultural sciences	1704	207	432	1165	18	1	-	-	-	3
Social sciences	3668	1549	1258	778	1	1	-	1	-	1
Humanities	3271	1098	1323	844	-	-	-	-	-	-
Business sector	**765**	**122**	**267**	**376**	**7**	**1**	**3**	**2**	**-**	**1**
Natural sciences	169	29	46	94	-	-	-	-	-	-
Engineering and technology	412	22	185	205	6	-	3	1	-	-
Medical and health sciences	2	-	-	2	-	-	-	-	-	-
Agricultural sciences	28	24	3	1	-	-	-	-	-	-
Social sciences	154	47	33	74	1	1	-	1	-	1

9.1. Published R&D works, inventions and patents, by fields of science, 2017 (continued)

	Published R&D works				Inventions and patents					
	Total	Published in			Tested inventions	Patents		Sold		Inventions and patents used for the first time in practice
		Own publications	Other publications in the Republic of Serbia	Foreign publications		Pending in the Patent Office	Registered in the Patent Office	In the Republic of Serbia	Abroad	
Government sector	**6445**	**1552**	**2154**	**2832**	**37**	**9**	**13**	**4**	**-**	**3**
Natural sciences	2140	244	316	1580	6	4	1	4	-	-
Engineering and technology	612	127	228	257	13	4	11	-	-	-
Medical and health sciences	131	-	25	106	-	-	1	-	-	-
Agricultural sciences	693	131	261	401	18	1	-	-	-	3
Social sciences	800	430	234	135	-	-	-	-	-	-
Humanities	2069	620	1090	353	-	-	-	-	-	-
Tertiary education	**8518**	**2114**	**2184**	**4138**	**-**	**1**	**-**	**-**	**-**	**-**
Natural sciences	1348	374	202	772	-	1	-	-	-	-
Engineering and technology	1328	138	454	736	-	-	-	-	-	-
Medical and health sciences	943	-	136	807	-	-	-	-	-	-
Agricultural sciences	983	52	168	763	-	-	-	-	-	-
Social sciences	2714	1072	991	569	-	-	-	-	-	-
Humanities	1202	478	233	491	-	-	-	-	-	-
Region Vojvodine	**4776**	**839**	**1890**	**2044**	**95**	**20**	**8**	**22**	**38**	**18**
Natural sciences	682	119	130	433	6	6	3	-	-	6
Engineering and technology	1533	282	552	699	32	9	5	4	4	12
Medical and health sciences	50	1	9	40	-	-	-	-	-	-
Agricultural sciences	939	16	448	475	57	5	-	18	34	-
Social sciences	1457	417	726	311	-	-	-	-	-	-
Humanities	115	4	25	86	-	-	-	-	-	-
Business sector	**20**	**-**	**7**	**13**	**7**	**6**	**4**	**1**	**1**	**7**
Natural sciences	2	-	1	1	6	6	3	-	-	6
Engineering and technology	-	-	-	-	1	-	1	1	1	1
Agricultural sciences	18	-	6	12	-	-	-	-	-	-
Government sector	**678**	**44**	**255**	**379**	**60**	**6**	**1**	**18**	**34**	**-**
Engineering and technology	343	28	66	249	4	2	1	-	-	-
Agricultural sciences	335	16	189	130	56	4	-	18	34	-
Tertiary education	**4078**	**795**	**1628**	**1652**	**28**	**8**	**3**	**3**	**3**	**11**
Natural sciences	680	119	129	432	-	-	-	-	-	-
Engineering and technology	1190	254	486	450	27	7	3	3	3	11
Medical and health sciences	50	1	9	40	-	-	-	-	-	-
Agricultural sciences	586	-	253	333	1	1	-	-	-	-
Social sciences	1457	417	726	311	-	-	-	-	-	-
Humanities	115	4	25	86	-	-	-	-	-	-
SRBIJA – JUG	6055	1806	1984	2264	7	3	-	-	-	7
Natural sciences	437	177	52	208	-	-	-	-	-	-
Engineering and technology	2114	515	732	867	7	3	-	-	-	7
Medical and health sciences	475	126	104	245	-	-	-	-	-	-
Agricultural sciences	220	19	85	116	-	-	-	-	-	-
Social sciences	1889	800	692	396	-	-	-	-	-	-
Humanities	920	169	319	432	-	-	-	-	-	-
Business sector	**171**	**8**	**59**	**104**	**-**	**-**	**-**	**-**	**-**	**-**
Natural sciences	2	2	-	-	-	-	-	-	-	-
Engineering and technology	154	6	52	96	-	-	-	-	-	-
Medical and health sciences	3	-	-	3	-	-	-	-	-	-
Agricultural sciences	12	-	7	5	-	-	-	-	-	-
Government sector	**123**	**20**	**44**	**59**	**-**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	50	20	10	20	-	-	-	-	-	-
Agricultural sciences	73	-	34	39	-	-	-	-	-	-
Tertiary education	**5761**	**1778**	**1881**	**2101**	**7**	**3**	**-**	**-**	**-**	**7**
Natural sciences	435	175	52	208	-	-	-	-	-	-
Engineering and technology	1910	489	670	751	7	3	-	-	-	7
Medical and health sciences	472	126	104	242	-	-	-	-	-	-
Agricultural sciences	135	19	44	72	-	-	-	-	-	-
Social sciences	1889	800	692	396	-	-	-	-	-	-
Humanities	920	169	319	432	-	-	-	-	-	-
Region Šumadije i Zapadne Srbije	**2392**	**887**	**806**	**698**	**7**	**-**	**-**	**-**	**-**	**7**
Natural sciences	157	157	-	-	-	-	-	-	-	-
Engineering and technology	667	135	300	232	7	-	-	-	-	7
Medical and health sciences	226	48	36	142	-	-	-	-	-	-
Agricultural sciences	208	19	78	111	-	-	-	-	-	-
Social sciences	907	406	311	189	-	-	-	-	-	-
Humanities	227	122	81	24	-	-	-	-	-	-
Business sector	**96**	**1**	**20**	**75**	**-**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	96	1	20	75	-	-	-	-	-	-
Government sector	**73**	**-**	**34**	**39**	**-**	**-**	**-**	**-**	**-**	**-**
Agricultural sciences	73	-	34	39	-	-	-	-	-	-

9.1. Published R&D works, inventions and patents, by fields of science, 2017 (continued)

	Published R&D works				Inventions and patents					
	Total	Published in			Tested inventions	Patents		Sold		Inventions and patents used for the first time in practice
		Own publications	Other publications in the Republic of Serbia	Foreign publications		Pending in the Patent Office	Registered in the Patent Office	In the Republic of Serbia	Abroad	
Tertiary education	**2223**	**886**	**752**	**584**	**7**	**-**	**-**	**-**	**-**	**7**
Natural sciences	157	157	-	-	-	-	-	-	-	-
Engineering and technology	571	134	280	157	7	-	-	-	-	7
Medical and health sciences	226	48	36	142	-	-	-	-	-	-
Agricultural sciences	135	19	44	72	-	-	-	-	-	-
Social sciences	907	406	311	189	-	-	-	-	-	-
Humanities	227	122	81	24	-	-	-	-	-	-
Region Južne i Istočne Srbije	**3663**	**919**	**1178**	**1566**	**-**	**3**	**-**	**-**	**-**	**-**
Social sciences	280	20	52	208	-	-	-	-	-	-
Engineering and technology	1447	380	432	635	-	3	-	-	-	-
Medical and health sciences	249	78	68	103	-	-	-	-	-	-
Agricultural sciences	12	-	7	5	-	-	-	-	-	-
Social sciences	982	394	381	207	-	-	-	-	-	-
Humanities	693	47	238	408	-	-	-	-	-	-
Business sector	**75**	**7**	**39**	**29**	**-**	**-**	**-**	**-**	**-**	**-**
Natural sciences	2	2	-	-	-	-	-	-	-	-
Engineering and technology	58	5	32	21	-	-	-	-	-	-
Medical and health sciences	3	-	-	3	-	-	-	-	-	-
Agricultural sciences	12	-	7	5	-	-	-	-	-	-
Government sector	**50**	**20**	**10**	**20**	**-**	**-**	**-**	**-**	**-**	**-**
Engineering and technology	50	20	10	20	-	-	-	-	-	-
Tertiary education	**3538**	**892**	**1129**	**1517**	**-**	**3**	**-**	**-**	**-**	**-**
Natural sciences	278	18	52	208	-	-	-	-	-	-
Engineering and technology	1339	355	390	594	-	3	-	-	-	-
Medical and health sciences	246	78	68	100	-	-	-	-	-	-
Social sciences	982	394	381	207	-	-	-	-	-	-
Humanities	693	47	238	408	-	-	-	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**	**...**

10.1. Inventions and patent by R&D intensity, 2017

R&D intensity	Inventions and patents					
	Tested inventions	Patents		Inventions and patents sold		Inventions and patents used for the first time in practice
		Pending in the Patent Office	Registered in the Patent Office	In the Republic of Serbia	Abroad	
REPUBLIC OF SERBIA	**146**	**34**	**24**	**28**	**38**	**29**
Natural sciences	12	11	4	4	-	6
Engineering and technology	58	16	19	5	4	19
Medical and health sciences	-	-	1	-	-	-
Agricultural sciences	75	6	-	18	34	3
Social sciences	1	1	-	1	-	1
Business sector	**14**	**7**	**7**	**3**	**1**	**8**
Natural sciences	6	6	3	-	-	6
Engineering and technology	7	-	4	2	1	1
Social sciences	1	1	-	1	-	1
Government sector	**97**	**15**	**14**	**22**	**34**	**3**
Natural sciences	6	4	1	4	-	-
Engineering and technology	17	6	12	-	-	-
Medical and health sciences	-	-	1	-	-	-
Agricultural sciences	74	5	-	18	34	3
Tertiary education	**35**	**12**	**3**	**3**	**3**	**18**
Natural sciences	-	1	-	-	-	-
Engineering and technology	34	10	3	3	3	18
Agricultural sciences	1	1	-	-	-	-
SRBIJA – SEVER	139	31	24	28	38	22
Natural sciences	12	11	4	4	-	6
Engineering and technology	51	13	19	5	4	12
Medical and health sciences	-	-	1	-	-	-
Agricultural sciences	75	6	-	18	34	3
Social sciences	1	1	-	1	-	1

10.1. Inventions and patent by R&D intensity, 2017 (continued)

R&D intensity	Inventions and patents					
	Tested inventions	Patents		Inventions and patents sold		Inventions and patents used for the first time in practice
		Pending in the Patent Office	Registered in the Patent Office	In the Republic of Serbia	Abroad	
Business sector	**14**	**7**	**7**	**3**	**1**	**8**
Natural sciences	6	6	3	-	-	6
Engineering and technology	7	-	4	2	1	1
Social sciences	1	1	-	1	-	1
Government sector	**97**	**15**	**14**	**22**	**34**	**3**
Natural sciences	6	4	1	4	-	-
Engineering and technology	17	6	12	-	-	-
Medical and health sciences	-	-	1	-	-	-
Agricultural sciences	74	5	-	18	34	3
Tertiary education	**28**	**9**	**3**	**3**	**3**	**11**
Natural sciences	-	1	-	-	-	-
Engineering and technology	27	7	3	3	3	11
Agricultural sciences	1	1	-	-	-	-
Beogradski region	**44**	**11**	**16**	**6**	**-**	**4**
Natural sciences	6	5	1	4	-	-
Engineering and technology	19	4	14	1	-	-
Medical and health sciences	-	-	1	-	-	-
Agricultural sciences	18	1	-	-	-	3
Social sciences	1	1	-	1	-	1
Business sector	**7**	**1**	**3**	**2**	**-**	**1**
Engineering and technology	6	-	3	1	-	-
Social sciences	1	1	-	1	-	1
Government sector	**37**	**9**	**13**	**4**	**-**	**3**
Natural sciences	6	4	1	4	-	-
Engineering and technology	13	4	11	-	-	-
Medical and health sciences	-	-	1	-	-	-
Agricultural sciences	18	1	-	-	-	3
Tertiary education	**-**	**1**	**-**	**-**	**-**	**-**
Natural sciences	-	1	-	-	-	-
Region Vojvodine	**95**	**20**	**8**	**22**	**38**	**18**
Natural sciences	6	6	3	-	-	6
Engineering and technology	32	9	5	4	4	12
Agricultural sciences	57	5	-	18	34	-
Business sector	**7**	**6**	**4**	**1**	**1**	**7**
Natural sciences	6	6	3	-	-	6
Engineering and technology	1	-	1	1	1	1
Government sector	**60**	**6**	**1**	**18**	**34**	**-**
Engineering and technology	4	2	1	-	-	-
Agricultural sciences	56	4	-	18	34	-
Tertiary education	**28**	**8**	**3**	**3**	**3**	**11**
Engineering and technology	27	7	3	3	3	11
Agricultural sciences	1	1	-	-	-	-
SRBIJA – JUG	7	3	-	-	-	7
Engineering and technology	7	3	-	-	-	7
Tertiary education	**7**	**3**	**-**	**-**	**-**	**7**
Engineering and technology	7	3	-	-	-	7
Region Šumadije i Zapadne Srbije	**7**	**-**	**-**	**-**	**-**	**7**
Engineering and technology	7	-	-	-	-	7
Tertiary education	**7**	**-**	**-**	**-**	**-**	**7**
Engineering and technology	7	-	-	-	-	7
Region Južne i Istočne Srbije	**-**	**3**	**-**	**-**	**-**	**-**
Engineering and technology	-	3	-	-	-	-
Tertiary education	**-**	**3**	**-**	**-**	**-**	**-**
Engineering and technology	-	3	-	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**

11.1. Gross domestic expenditure for R&D, by sectors and fields of science, 2017

Thous. RSD

	Gross domestic expenditure	Gross investments	Current costs		
			Total	Gross salaries and wages	Material costs
REPUBLIC OF SERBIA	**41531049**	**3211711**	**38319338**	**21588052**	**16731286**
Natural sciences	10700246	497048	10203198	6142655	4060543
Engineering and technology	16090769	1959147	14131622	5932717	8198905
Medical and health sciences	2069398	15624	2053774	1260439	793335
Agricultural sciences	4307166	379589	3927577	2843459	1084118
Social sciences	6662013	247577	6414436	4369329	2045107
Humanities	1701457	112726	1588731	1039453	549278
Business sector	**15230986**	**1815116**	**13415870**	**5458279**	**7957591**
Natural sciences	4269671	174125	4095546	1922681	2172865
Engineering and technology	9122087	1378413	7743674	2829056	4914618
Medical and health sciences	1080342	1930	1078412	517450	560962
Agricultural sciences	682599	246724	435875	149728	286147
Social sciences	76287	13924	62363	39364	22999
Government sector	**11228148**	**830633**	**10397515**	**7051972**	**3345543**
Natural sciences	3601340	200725	3400615	2598498	802117
Engineering and technology	3184199	418276	2765923	1204612	1561311
Medical and health sciences	259286	8808	250478	154827	95651
Agricultural sciences	2691709	111498	2580211	2110857	469354
Social sciences	544412	7599	536813	411046	125767
Humanities	947202	83727	863475	572132	291343
Tertiary education	**15040402**	**565893**	**14474509**	**9051089**	**5423420**
Natural sciences	2828327	122198	2706129	1621476	1084653
Engineering and technology	3767486	162458	3605028	1882703	1722325
Medical and health sciences	729770	4886	724884	588162	136722
Agricultural sciences	932858	21367	911491	582874	328617
Social sciences	6027706	225985	5801721	3908553	1893168
Humanities	754255	28999	725256	467321	257935
Non-profit sector	**31513**	**69**	**31444**	**26712**	**4732**
Natural sciences	908	-	908	-	908
Engineering and technology	16997	-	16997	16346	651
Social sciences	13608	69	13539	10366	3173
SRBIJA – SEVER	38623241	2949836	35673405	19936170	15737235
Natural sciences	10081930	477901	9604029	5748600	3855429
Engineering and technology	14664449	1737350	12927099	5209945	7717154
Medical and health sciences	1921463	12467	1908996	1146734	762262
Agricultural sciences	4145136	378655	3766481	2745114	1021367
Social sciences	6159398	231295	5928103	4091715	1836388
Humanities	1650865	112168	1538697	994062	544635
Business sector	**14639995**	**1615379**	**13024616**	**5215740**	**7808876**
Natural sciences	4217467	164847	4052620	1891983	2160637
Engineering and technology	8681486	1187954	7493532	2663463	4830069
Medical and health sciences	1075748	1930	1073818	516328	557490
Agricultural sciences	589007	246724	342283	104602	237681
Social sciences	76287	13924	62363	39364	22999
Government sector	**11070883**	**830105**	**10240778**	**6939947**	**3300831**
Natural sciences	3601340	200725	3400615	2598498	802117
Engineering and technology	3075005	418276	2656729	1127105	1529624
Medical and health sciences	259286	8808	250478	154827	95651
Agricultural sciences	2643638	110970	2532668	2076339	456329
Social sciences	544412	7599	536813	411046	125767
Humanities	947202	83727	863475	572132	291343
Tertiary education	**12880850**	**504283**	**12376567**	**7753771**	**4622796**
Natural sciences	2262215	112329	2149886	1258119	891767
Engineering and technology	2890961	131120	2759841	1403031	1356810
Medical and health sciences	586429	1729	584700	475579	109121
Agricultural sciences	912491	20961	891530	564173	327357
Social sciences	5525091	209703	5315388	3630939	1684449
Humanities	703663	28441	675222	421930	253292
Non-profit sector	**31513**	**69**	**31444**	**26712**	**4732**
Natural sciences	908	-	908	-	908
Engineering and technology	16997	-	16997	16346	651
Social sciences	13608	69	13539	10366	3173
Beogradski region	**27615381**	**2535099**	**25080282**	**13416743**	**11663539**
Natural sciences	6785545	354345	6431200	4550627	1880573
Engineering and technology	11814159	1570346	10243813	3386093	6857720
Medical and health sciences	1804493	10738	1793755	1040269	753486
Agricultural sciences	2576882	297895	2278987	1492091	786896
Social sciences	3142376	215904	2926472	2062048	864424
Humanities	1491926	85871	1406055	885615	520440

11.1. Gross domestic expenditure for R&D, by sectors and fields of science, 2017 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current costs		
			Total	Gross salaries and wages	Material costs
Business sector	**10311555**	**1438040**	**8873515**	**2974960**	**5898555**
Natural sciences	1282575	68375	1214200	769402	444798
Engineering and technology	7347672	1115737	6231935	1579663	4652272
Medical and health sciences	1075748	1930	1073818	516328	557490
Agricultural sciences	529273	238074	291199	70203	220996
Social sciences	76287	13924	62363	39364	22999
Government sector	**9209743**	**737202**	**8472541**	**5483056**	**2989485**
Natural sciences	3601340	200725	3400615	2598498	802117
Engineering and technology	2567186	397483	2169703	815494	1354209
Medical and health sciences	259286	8808	250478	154827	95651
Agricultural sciences	1290317	38860	1251457	931059	320398
Social sciences	544412	7599	536813	411046	125767
Humanities	947202	83727	863475	572132	291343
Tertiary education	**8064889**	**359857**	**7705032**	**4932350**	**2772682**
Natural sciences	1901630	85245	1816385	1182727	633658
Engineering and technology	1882304	57126	1825178	974590	850588
Medical and health sciences	469459	-	469459	369114	100345
Agricultural sciences	757292	20961	736331	490829	245502
Social sciences	2509480	194381	2315099	1601607	713492
Humanities	544724	2144	542580	313483	229097
Non-profit sector	**29194**	**-**	**29194**	**26377**	**2817**
Engineering and technology	16997	-	16997	16346	651
Social sciences	12197	-	12197	10031	2166
Region Vojvodine	**11007860**	**414737**	**10593123**	**6519427**	**4073696**
Natural sciences	3296385	123556	3172829	1197973	1974856
Engineering and technology	2850290	167004	2683286	1823852	859434
Medical and health sciences	116970	1729	115241	106465	8776
Agricultural sciences	1568254	80760	1487494	1253023	234471
Social sciences	3017022	15391	3001631	2029667	971964
Humanities	158939	26297	132642	108447	24195
Business sector	**4328440**	**177339**	**4151101**	**2240780**	**1910321**
Natural sciences	2934892	96472	2838420	1122581	1715839
Engineering and technology	1333814	72217	1261597	1083800	177797
Agricultural sciences	59734	8650	51084	34399	16685
Government sector	**1861140**	**92903**	**1768237**	**1456891**	**311346**
Engineering and technology	507819	20793	487026	311611	175415
Agricultural sciences	1353321	72110	1281211	1145280	135931
Tertiary education	**4815961**	**144426**	**4671535**	**2821421**	**1850114**
Natural sciences	360585	27084	333501	75392	258109
Engineering and technology	1008657	73994	934663	428441	506222
Medical and health sciences	116970	1729	115241	106465	8776
Agricultural sciences	155199	-	155199	73344	81855
Social sciences	3015611	15322	3000289	2029332	970957
Humanities	158939	26297	132642	108447	24195
Non-profit sector	**2319**	**69**	**2250**	**335**	**1915**
Natural sciences	908	-	908	-	908
Social sciences	1411	69	1342	335	1007
SRBIJA – JUG	2907808	261875	2645933	1651882	994051
Natural sciences	618316	19147	599169	394055	205114
Engineering and technology	1426320	221797	1204523	722772	481751
Medical and health sciences	147935	3157	144778	113705	31073
Agricultural sciences	162030	934	161096	98345	62751
Social sciences	502615	16282	486333	277614	208719
Humanities	50592	558	50034	45391	4643
Business sector	**590991**	**199737**	**391254**	**242539**	**148715**
Natural sciences	52204	9278	42926	30698	12228
Engineering and technology	440601	190459	250142	165593	84549
Medical and health sciences	4594	-	4594	1122	3472
Agricultural sciences	93592	-	93592	45126	48466
Government sector	**157265**	**528**	**156737**	**112025**	**44712**
Engineering and technology	109194	-	109194	77507	31687
Agricultural sciences	48071	528	47543	34518	13025
Tertiary education	**2159552**	**61610**	**2097942**	**1297318**	**800624**
Natural sciences	566112	9869	556243	363357	192886
Engineering and technology	876525	31338	845187	479672	365515
Medical and health sciences	143341	3157	140184	112583	27601
Agricultural sciences	20367	406	19961	18701	1260
Social sciences	502615	16282	486333	277614	208719
Humanities	50592	558	50034	45391	4643

11.1. Gross domestic expenditure for R&D, by sectors and fields of science, 2017 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current costs		
			Total	Gross salaries and wages	Material costs
Region Šumadija i Zapadne Srbije	**1312829**	**140272**	**1172557**	**869353**	**303204**
Natural sciences	482829	13017	469812	342738	127074
Engineering and technology	450366	111772	338594	212563	126031
Medical and health sciences	54623	1237	53386	35061	18325
Agricultural sciences	68438	934	67504	53219	14285
Social sciences	238735	13312	225423	209014	16409
Humanities	17838	-	17838	16758	1080
Business sector	**292609**	**105183**	**187426**	**118698**	**68728**
Natural sciences	32276	6922	25354	19800	5554
Engineering and technology	260333	98261	162072	98898	63174
Government sector	**48071**	**528**	**47543**	**34518**	**13025**
Agricultural sciences	48071	528	47543	34518	13025
Tertiary education	**972149**	**34561**	**937588**	**716137**	**221451**
Natural sciences	450553	6095	444458	322938	121520
Engineering and technology	190033	13511	176522	113665	62857
Medical and health sciences	54623	1237	53386	35061	18325
Agricultural sciences	20367	406	19961	18701	1260
Social sciences	238735	13312	225423	209014	16409
Humanities	17838	-	17838	16758	1080
Region Južne i Istočne Srbije	**1594979**	**121603**	**1473376**	**782529**	**690847**
Natural sciences	135487	6130	129357	51317	78040
Engineering and technology	975954	110025	865929	510209	355720
Medical and health sciences	93312	1920	91392	78644	12748
Agricultural sciences	93592	-	93592	45126	48466
Social sciences	263880	2970	260910	68600	192310
Humanities	32754	558	32196	28633	3563
Business sector	**298382**	**94554**	**203828**	**123841**	**79987**
Natural sciences	19928	2356	17572	10898	6674
Engineering and technology	180268	92198	88070	66695	21375
Medical and health sciences	4594	-	4594	1122	3472
Agricultural sciences	93592	-	93592	45126	48466
Government sector	**109194**	**-**	**109194**	**77507**	**31687**
Engineering and technology	109194	-	109194	77507	31687
Tertiary education	**1187403**	**27049**	**1160354**	**581181**	**579173**
Natural sciences	115559	3774	111785	40419	71366
Engineering and technology	686492	17827	668665	366007	302658
Medical and health sciences	88718	1920	86798	77522	9276
Social sciences	263880	2970	260910	68600	192310
Humanities	32754	558	32196	28633	3563
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**

12.1. Sources of funds spent on R&D activities, 2017

Thous. RSD

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
REPUBLIC OF SERBIA	**41531049**	**9751556**	**19334739**	**4173842**	**2345**	**8268567**
Natural sciences	10700246	1221219	5502870	790072	545	3185540
Engineering ant technology	16090769	3206739	6094963	3184316	-	3604751
Medical and health sciences	2069398	124533	912314	-	-	1032551
Agricultural sciences	4307166	2266369	1552936	155433	-	332428
Social sciences	6662013	2594973	3942323	44021	1800	78896
Humanities	1701457	337723	1329333	-	-	34401
Business sector	**15230986**	**3350252**	**1058602**	**3839266**	**-**	**6982866**
Natural sciences	4269671	462066	250356	761597	-	2795652
Engineering ant technology	9122087	2455813	677560	3075767	-	2912947
Medical and health sciences	1080342	107979	-	-	-	972363
Agricultural sciences	682599	307220	71573	1902	-	301904
Social sciences	76287	17174	59113	-	-	-
Government sector	**11228148**	**2419032**	**7997018**	**110720**	**310**	**701068**
Natural sciences	3601340	75454	3275931	23259	310	226386
Engineering ant technology	3184199	271500	2465570	25675	-	421454
Medical and health sciences	259286	6959	240992	-	-	11335
Agricultural sciences	2691709	1834884	797499	44779	-	14547
Social sciences	544412	11393	502714	17007	-	13298
Humanities	947202	218842	714312	-	-	14048

12.1. Sources of funds spent on R&D activities, 2017 (continued)

Thous. RSD

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Tertiary education	**15040402**	**3958838**	**10277571**	**223646**	**1800**	**578547**
Natural sciences	2828327	683671	1975968	5186	-	163502
Engineering ant technology	3767486	462809	2951633	82694	-	270350
Medical and health sciences	729770	9595	671322	-	-	48853
Agricultural sciences	932858	124265	683864	108752	-	15977
Social sciences	6027706	2559617	3379763	27014	1800	59512
Humanities	754255	118881	615021	-	-	20353
Non-profit sector	**31513**	**23434**	**1548**	**210**	**235**	**6086**
Natural sciences	908	28	615	30	235	-
Engineering ant technology	16997	16617	200	180	-	-
Social sciences	13608	6789	733	-	-	6086
SRBIJA – SEVER	38623241	9030045	17646098	3946891	545	7999662
Natural sciences	10081930	1122511	5001705	785967	545	3171202
Engineering ant technology	14664449	2999796	5350570	2961796	-	3352287
Medical and health sciences	1921463	110344	780471	-	-	1030648
Agricultural sciences	4145136	2186881	1470394	155433	-	332428
Social sciences	6159398	2272850	3764157	43695	-	78696
Humanities	1650865	337663	1278801	-	-	34401
Business sector	**14639995**	**3066213**	**979092**	**3694731**	**-**	**6899959**
Natural sciences	4217467	424631	250356	757492	-	2784988
Engineering ant technology	8681486	2288791	616654	2935337	-	2840704
Medical and health sciences	1075748	103385	-	-	-	972363
Agricultural sciences	589007	232232	52969	1902	-	301904
Social sciences	76287	17174	59113	-	-	-
Government sector	**11070883**	**2414532**	**7844253**	**110720**	**310**	**701068**
Natural sciences	3601340	75454	3275931	23259	310	226386
Engineering ant technology	3075005	271500	2356376	25675	-	421454
Medical and health sciences	259286	6959	240992	-	-	11335
Agricultural sciences	2643638	1830384	753928	44779	-	14547
Social sciences	544412	11393	502714	17007	-	13298
Humanities	947202	218842	714312	-	-	14048
Tertiary education	**12880850**	**3525866**	**8821205**	**141230**	**-**	**392549**
Natural sciences	2262215	622398	1474803	5186	-	159828
Engineering ant technology	2890961	422888	2377340	604	-	90129
Medical and health sciences	586429	-	539479	-	-	46950
Agricultural sciences	912491	124265	663497	108752	-	15977
Social sciences	5525091	2237494	3201597	26688	-	59312
Humanities	703663	118821	564489	-	-	20353
Non-profit sector	**31513**	**23434**	**1548**	**210**	**235**	**6086**
Natural sciences	908	28	615	30	235	-
Engineering ant technology	16997	16617	200	180	-	-
Social sciences	13608	6789	733	-	-	6086
Beogradski region	**27615381**	**6943541**	**12999885**	**2865484**	**310**	**4806161**
Natural sciences	6785545	965162	4681769	764520	310	373784
Engineering ant technology	11814159	2686907	4175104	1906187	-	3045961
Medical and health sciences	1804493	110344	710451	-	-	983698
Agricultural sciences	2576882	1141613	981979	152144	-	301146
Social sciences	3142376	1744561	1288011	42633	-	67171
Humanities	1491926	294954	1162571	-	-	34401
Business sector	**10311555**	**2837507**	**883488**	**2633390**	**-**	**3957170**
Natural sciences	1282575	359635	184719	736075	-	2146
Engineering ant technology	7347672	2132661	616654	1897265	-	2701092
Medical and health sciences	1075748	103385	-	-	-	972363
Agricultural sciences	529273	224652	23002	50	-	281569
Social sciences	76287	17174	59113	-	-	-
Government sector	**9209743**	**1347894**	**7246036**	**92096**	**310**	**523407**
Natural sciences	3601340	75454	3275931	23259	310	226386
Engineering ant technology	2567186	242550	2061408	8488	-	254740
Medical and health sciences	259286	6959	240992	-	-	11335
Agricultural sciences	1290317	792696	450679	43342	-	3600
Social sciences	544412	11393	502714	17007	-	13298
Humanities	947202	218842	714312	-	-	14048
Tertiary education	**8064889**	**2734734**	**4870021**	**139818**	**-**	**320316**
Natural sciences	1901630	530073	1221119	5186	-	145252
Engineering ant technology	1882304	295079	1496842	254	-	90129
Medical and health sciences	469459	-	469459	-	-	-
Agricultural sciences	757292	124265	508298	108752	-	15977
Social sciences	2509480	1709205	726044	25626	-	48605
Humanities	544724	76112	448259	-	-	20353

12.1. Sources of funds spent on R&D activities, 2017 (continued)

Thous. RSD

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Non-profit sector	**29194**	**23406**	**340**	**180**	**-**	**5268**
Engineering and technology	16997	16617	200	180	-	-
Social sciences	12197	6789	140	-	-	5268
Region Vojvodine	**11007860**	**2086504**	**4646213**	**1081407**	**235**	**3193501**
Natural sciences	3296385	157349	319936	21447	235	2797418
Engineering ant technology	2850290	312889	1175466	1055609	-	306326
Medical and health sciences	116970	-	70020	-	-	46950
Agricultural sciences	1568254	1045268	488415	3289	-	31282
Social sciences	3017022	528289	2476146	1062	-	11525
Humanities	158939	42709	116230	-	-	-
Business sector	**4328440**	**228706**	**95604**	**1061341**	**-**	**2942789**
Natural sciences	2934892	64996	65637	21417	-	2782842
Engineering ant technology	1333814	156130	-	1038072	-	139612
Agricultural sciences	59734	7580	29967	1852	-	20335
Government sector	**1861140**	**1066638**	**598217**	**18624**	**-**	**177661**
Engineering and technology	507819	28950	294968	17187	-	166714
Agricultural sciences	1353321	1037688	303249	1437	-	10947
Tertiary education	**4815961**	**791132**	**3951184**	**1412**	**-**	**72233**
Natural sciences	360585	92325	253684	-	-	14576
Engineering ant technology	1008657	127809	880498	350	-	-
Medical and health sciences	116970	-	70020	-	-	46950
Agricultural sciences	155199	-	155199	-	-	-
Social sciences	3015611	528289	2475553	1062	-	10707
Humanities	158939	42709	116230	-	-	-
Non-profit sector	**2319**	**28**	**1208**	**30**	**235**	**818**
Natural sciences	908	28	615	30	235	-
Social sciences	1411	-	593	-	-	818
SRBIJA – JUG	2907808	721511	1688641	226951	1800	268905
Natural sciences	618316	98708	501165	4105	-	14338
Engineering ant technology	1426320	206943	744393	222520	-	252464
Medical and health sciences	147935	14189	131843	-	-	1903
Agricultural sciences	162030	79488	82542	-	-	-
Social sciences	502615	322123	178166	326	1800	200
Humanities	50592	60	50532	-	-	-
Business sector	**590991**	**284039**	**79510**	**144535**	**-**	**82907**
Natural sciences	52204	37435	-	4105	-	10664
Engineering and technology	440601	167022	60906	140430	-	72243
Medical and health sciences	4594	4594	-	-	-	-
Agricultural sciences	93592	74988	18604	-	-	-
Government sector	**157265**	**4500**	**152765**	**-**	**-**	**-**
Engineering and technology	109194	-	109194	-	-	-
Agricultural sciences	48071	4500	43571	-	-	-
Tertiary education	**2159552**	**432972**	**1456366**	**82416**	**1800**	**185998**
Natural sciences	566112	61273	501165	-	-	3674
Engineering ant technology	876525	39921	574293	82090	-	180221
Medical and health sciences	143341	9595	131843	-	-	1903
Agricultural sciences	20367	-	20367	-	-	-
Social sciences	502615	322123	178166	326	1800	200
Humanities	50592	60	50532	-	-	-
Region Šumadije i Zapadne Srbije	**1312829**	**350394**	**785474**	**97402**	**1800**	**77759**
Natural sciences	482829	89444	387646	4105	-	1634
Engineering ant technology	450366	126505	156868	92971	-	74022
Medical and health sciences	54623	9595	43125	-	-	1903
Agricultural sciences	68438	4500	63938	-	-	-
Social sciences	238735	120350	116059	326	1800	200
Humanities	17838	-	17838	-	-	-
Business sector	**292609**	**135643**	**16627**	**91538**	**-**	**48801**
Natural sciences	32276	28171	-	4105	-	-
Engineering ant technology	260333	107472	16627	87433	-	48801
Government sector	**48071**	**4500**	**43571**	**-**	**-**	**-**
Agricultural sciences	48071	4500	43571	-	-	-
Tertiary education	**972149**	**210251**	**725276**	**5864**	**1800**	**28958**
Natural sciences	450553	61273	387646	-	-	1634
Engineering ant technology	190033	19033	140241	5538	-	25221
Medical and health sciences	54623	9595	43125	-	-	1903
Agricultural sciences	20367	-	20367	-	-	-
Social sciences	238735	120350	116059	326	1800	200
Humanities	17838	-	17838	-	-	-

12.1. Sources of funds spent on R&D activities, 2017 (continued)

Thous. RSD

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Region Južne i Istočne Srbije	**1594979**	**371117**	**903167**	**129549**	**-**	**191146**
Natural sciences	135487	9264	113519	-	-	12704
Engineering ant technology	975954	80438	587525	129549	-	178442
Medical and health sciences	93312	4594	88718	-	-	-
Agricultural sciences	93592	74988	18604	-	-	-
Social sciences	263880	201773	62107	-	-	-
Humanities	32754	60	32694	-	-	-
Business sector	**298382**	**148396**	**62883**	**52997**	**-**	**34106**
Natural sciences	19928	9264	-	-	-	10664
Engineering ant technology	180268	59550	44279	52997	-	23442
Medical and health sciences	4594	4594	-	-	-	-
Agricultural sciences	93592	74988	18604	-	-	-
Government sector	**109194**	**-**	**109194**	**-**	**-**	**-**
Engineering and technology	109194	-	109194	-	-	-
Tertiary education	**1187403**	**222721**	**731090**	**76552**	**-**	**157040**
Natural sciences	115559	-	113519	-	-	2040
Engineering ant technology	686492	20888	434052	76552	-	155000
Medical and health sciences	88718	-	88718	-	-	-
Social sciences	263880	201773	62107	-	-	-
Humanities	32754	60	32694	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**

12.2. Sources of funds for R&D, 2017

%

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
REPUBLIC OF SERBIA	**100,0**	**23,5**	**46,6**	**10,0**	**0,0**	**19,9**
Natural sciences	100,0	11,4	51,4	7,4	0,0	29,8
Engineering and technology	100,0	19,9	37,9	19,8	-	22,4
Medical and health sciences	100,0	6,0	44,1	-	-	49,9
Agricultural sciences	100,0	52,6	36,1	3,6	-	7,7
Social sciences	100,0	39,0	59,2	0,7	0,0	1,2
Humanities	100,0	19,8	78,1	-	-	2,0
Business sector	**100,0**	**22,0**	**7,0**	**25,2**	**-**	**45,8**
Natural sciences	100,0	10,8	5,9	17,8	-	65,5
Engineering and technology	100,0	26,9	7,4	33,7	-	31,9
Medical and health sciences	100,0	10,0	-	-	-	90,0
Agricultural sciences	100,0	45,0	10,5	0,3	-	44,2
Social sciences	100,0	22,5	77,5	-	-	-
Government sector	**100,0**	**21,5**	**71,2**	**1,0**	**0,0**	**6,2**
Natural sciences	100,0	2,1	91,0	0,6	0,0	6,3
Engineering and technology	100,0	8,5	77,4	0,8	-	13,2
Medical and health sciences	100,0	2,7	92,9	-	-	4,4
Agricultural sciences	100,0	68,2	29,6	1,7	-	0,5
Social sciences	100,0	2,1	92,3	3,1	-	2,4
Humanities	100,0	23,1	75,4	-	-	1,5
Tertiary education	**100,0**	**26,3**	**68,3**	**1,5**	**0,0**	**3,8**
Natural sciences	100,0	24,2	69,9	0,2	-	5,8
Engineering and technology	100,0	12,3	78,3	2,2	-	7,2
Medical and health sciences	100,0	1,3	92,0	-	-	6,7
Agricultural sciences	100,0	13,3	73,3	11,7	-	1,7
Social sciences	100,0	42,5	56,1	0,4	0,0	1,0
Humanities	100,0	15,8	81,5	-	-	2,7
Non-profit sector	**100,0**	**74,4**	**4,9**	**0,7**	**0,7**	**19,3**
Natural sciences	100,0	3,1	67,7	3,3	25,9	-
Engineering and technology	100,0	97,8	1,2	1,1	-	-
Social sciences	100,0	49,9	5,4	-	-	44,7
SRBIJA – SEVER	100,0	23,4	45,7	10,2	0,0	20,7
Natural sciences	100,0	11,1	49,6	7,8	0,0	31,5
Engineering and technology	100,0	20,5	36,5	20,2	-	22,9
Medical and health sciences	100,0	5,7	40,6	-	-	53,6
Agricultural sciences	100,0	52,8	35,5	3,7	-	8,0
Social sciences	100,0	36,9	61,1	0,7	-	1,3
Humanities	100,0	20,5	77,5	-	-	2,1

12.2. Sources of funds for R&D, 2017 (continued)

%

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Business sector	**100,0**	**20,9**	**6,7**	**25,2**	**-**	**47,1**
Natural sciences	100,0	10,1	5,9	18,0	-	66,0
Engineering and technology	100,0	26,4	7,1	33,8	-	32,7
Medical and health sciences	100,0	9,6	-	-	-	90,4
Agricultural sciences	100,0	39,4	9,0	0,3	-	51,3
Social sciences	100,0	22,5	77,5	-	-	-
Government sector	**100,0**	**21,8**	**70,9**	**1,0**	**0,0**	**6,3**
Natural sciences	100,0	2,1	91,0	0,6	0,0	6,3
Engineering and technology	100,0	8,8	76,6	0,8	-	13,7
Medical and health sciences	100,0	2,7	92,9	-	-	4,4
Agricultural sciences	100,0	69,2	28,5	1,7	-	0,6
Social sciences	100,0	2,1	92,3	3,1	-	2,4
Humanities	100,0	23,1	75,4	-	-	1,5
Tertiary education	**100,0**	**27,4**	**68,5**	**1,1**	**-**	**3,0**
Natural sciences	100,0	27,5	65,2	0,2	-	7,1
Engineering and technology	100,0	14,6	82,2	0,0	-	3,1
Medical and health sciences	100,0	-	92,0	-	-	8,0
Agricultural sciences	100,0	13,6	72,7	11,9	-	1,8
Social sciences	100,0	40,5	57,9	0,5	-	1,1
Humanities	100,0	16,9	80,2	-	-	2,9
Non-profit sector	**100,0**	**74,4**	**4,9**	**0,7**	**0,7**	**19,3**
Natural sciences	100,0	3,1	67,7	3,3	25,9	-
Engineering and technology	100,0	97,8	1,2	1,1	-	-
Social sciences	100,0	49,9	5,4	-	-	44,7
Beogradski region	**100,0**	**25,1**	**47,1**	**10,4**	**0,0**	**17,4**
Natural sciences	100,0	14,2	69,0	11,3	0,0	5,5
Engineering and technology	100,0	22,7	35,3	16,1	-	25,8
Medical and health sciences	100,0	6,1	39,4	-	-	54,5
Agricultural sciences	100,0	44,3	38,1	5,9	-	11,7
Social sciences	100,0	55,5	41,0	1,4	-	2,1
Humanities	100,0	19,8	77,9	-	-	2,3
Business sector	**100,0**	**27,5**	**8,6**	**25,5**	**-**	**38,4**
Natural sciences	100,0	28,0	14,4	57,4	-	0,2
Engineering and technology	100,0	29,0	8,4	25,8	-	36,8
Medical and health sciences	100,0	9,6	-	-	-	90,4
Agricultural sciences	100,0	42,4	4,3	0,0	-	53,2
Social sciences	100,0	22,5	77,5	-	-	-
Government sector	**100,0**	**14,6**	**78,7**	**1,0**	**0,0**	**5,7**
Natural sciences	100,0	2,1	91,0	0,6	0,0	6,3
Engineering and technology	100,0	9,4	80,3	0,3	-	9,9
Medical and health sciences	100,0	2,7	92,9	-	-	4,4
Agricultural sciences	100,0	61,4	34,9	3,4	-	0,3
Social sciences	100,0	2,1	92,3	3,1	-	2,4
Humanities	100,0	23,1	75,4	-	-	1,5
Tertiary education	**100,0**	**33,9**	**60,4**	**1,7**	**-**	**4,0**
Natural sciences	100,0	27,9	64,2	0,3	-	7,6
Engineering and technology	100,0	15,7	79,5	0,0	-	4,8
Medical and health sciences	100,0	-	100,0	-	-	-
Agricultural sciences	100,0	16,4	67,1	14,4	-	2,1
Social sciences	100,0	68,1	28,9	1,0	-	1,9
Humanities	100,0	14,0	82,3	-	-	3,7
Non-profit sector	**100,0**	**80,2**	**1,2**	**0,6**	**-**	**18,0**
Engineering and technology	100,0	97,8	1,2	1,1	-	-
Social sciences	100,0	55,7	1,1	-	-	43,2
Region Vojvodine	**100,0**	**19,0**	**42,2**	**9,8**	**0,0**	**29,0**
Natural sciences	100,0	4,8	9,7	0,7	0,0	84,9
Engineering and technology	100,0	11,0	41,2	37,0	-	10,7
Medical and health sciences	100,0	-	59,9	-	-	40,1
Agricultural sciences	100,0	66,7	31,1	0,2	-	2,0
Social sciences	100,0	17,5	82,1	0,0	-	0,4
Humanities	100,0	26,9	73,1	-	-	-
Business sector	**100,0**	**5,3**	**2,2**	**24,5**	**-**	**68,0**
Natural sciences	100,0	2,2	2,2	0,7	-	94,8
Engineering and technology	100,0	11,7	-	77,8	-	10,5
Agricultural sciences	100,0	12,7	50,2	3,1	-	34,0
Government sector	**100,0**	**57,3**	**32,1**	**1,0**	**-**	**9,5**
Engineering and technology	100,0	5,7	58,1	3,4	-	32,8
Agricultural sciences	100,0	76,7	22,4	0,1	-	0,8

12.2. Sources of funds for R&D, 2017 (continued)

%

	Total	Own	Government and local authorities	Private and public enterprises	Non-profit institutions	Foreign ordering parties
Tertiary education	**100,0**	**16,4**	**82,0**	**0,0**	**-**	**1,5**
Natural sciences	100,0	25,6	70,4	-	-	4,0
Engineering and technology	100,0	12,7	87,3	0,0	-	-
Medical and health sciences	100,0	-	59,9	-	-	40,1
Agricultural sciences	100,0	-	100,0	-	-	-
Social sciences	100,0	17,5	82,1	0,0	-	0,4
Humanities	100,0	26,9	73,1	-	-	-
Non-profit sector	**100,0**	**1,2**	**52,1**	**1,3**	**10,1**	**35,3**
Natural sciences	100,0	3,1	67,7	3,3	25,9	-
Social sciences	100,0	-	42,0	-	-	58,0
SRBIJA – JUG	100,0	24,8	58,1	7,8	0,1	9,2
Natural sciences	100,0	16,0	81,1	0,7	-	2,3
Engineering and technology	100,0	14,5	52,2	15,6	-	17,7
Medical and health sciences	100,0	9,6	89,1	-	-	1,3
Agricultural sciences	100,0	49,1	50,9	-	-	-
Social sciences	100,0	64,1	35,4	0,1	0,4	0,0
Humanities	100,0	0,1	99,9	-	-	-
Business sector	**100,0**	**48,1**	**13,5**	**24,5**	**-**	**14,0**
Natural sciences	100,0	71,7	-	7,9	-	20,4
Engineering and technology	100,0	37,9	13,8	31,9	-	16,4
Medical and health sciences	100,0	100,0	-	-	-	-
Agricultural sciences	100,0	80,1	19,9	-	-	-
Government sector	**100,0**	**2,9**	**97,1**	**-**	**-**	**-**
Engineering and technology	100,0	-	100,0	-	-	-
Agricultural sciences	100,0	9,4	90,6	-	-	-
Tertiary education	**100,0**	**20,0**	**67,4**	**3,8**	**0,1**	**8,6**
Natural sciences	100,0	10,8	88,5	-	-	0,6
Engineering and technology	100,0	4,6	65,5	9,4	-	20,6
Medical and health sciences	100,0	6,7	92,0	-	-	1,3
Agricultural sciences	100,0	-	100,0	-	-	-
Social sciences	100,0	64,1	35,4	0,1	0,4	0,0
Humanities	100,0	0,1	99,9	-	-	-
Region Šumadije i Zapadne Srbije	**100,0**	**26,7**	**59,8**	**7,4**	**0,1**	**5,9**
Natural sciences	100,0	18,5	80,3	0,9	-	0,3
Engineering and technology	100,0	28,1	34,8	20,6	-	16,4
Medical and health sciences	100,0	17,6	79,0	-	-	3,5
Agricultural sciences	100,0	6,6	93,4	-	-	-
Social sciences	100,0	50,4	48,6	0,1	0,8	0,1
Humanities	100,0	-	100,0	-	-	-
Business sector	**100,0**	**46,4**	**5,7**	**31,3**	**-**	**16,7**
Natural sciences	100,0	87,3	-	12,7	-	-
Engineering and technology	100,0	41,3	6,4	33,6	-	18,7
Government sector	**100,0**	**9,4**	**90,6**	**-**	**-**	**-**
Agricultural sciences	100,0	9,4	90,6	-	-	-
Tertiary education	**100,0**	**21,6**	**74,6**	**0,6**	**0,2**	**3,0**
Natural sciences	100,0	13,6	86,0	-	-	0,4
Engineering and technology	100,0	10,0	73,8	2,9	-	13,3
Medical and health sciences	100,0	17,6	79,0	-	-	3,5
Agricultural sciences	100,0	-	100,0	-	-	-
Social sciences	100,0	50,4	48,6	0,1	0,8	0,1
Humanities	100,0	-	100,0	-	-	-
Region Južne i Istočne Srbije	**100,0**	**23,3**	**56,6**	**8,1**	**-**	**12,0**
Natural sciences	100,0	6,8	83,8	-	-	9,4
Engineering and technology	100,0	8,2	60,2	13,3	-	18,3
Medical and health sciences	100,0	4,9	95,1	-	-	-
Agricultural sciences	100,0	80,1	19,9	-	-	-
Social sciences	100,0	76,5	23,5	-	-	-
Humanities	100,0	0,2	99,8	-	-	-
Business sector	**100,0**	**49,7**	**21,1**	**17,8**	**-**	**11,4**
Natural sciences	100,0	46,5	-	-	-	53,5
Engineering and technology	100,0	33,0	24,6	29,4	-	13,0
Medical and health sciences	100,0	100,0	-	-	-	-
Agricultural sciences	100,0	80,1	19,9	-	-	-
Government sector	**100,0**	**-**	**100,0**	**-**	**-**	**-**
Engineering and technology	100,0	-	100,0	-	-	-
Tertiary education	**100,0**	**18,8**	**61,6**	**6,4**	**-**	**13,2**
Natural sciences	100,0	-	98,2	-	-	1,8
Engineering and technology	100,0	3,0	63,2	11,2	-	22,6
Medical and health sciences	100,0	-	100,0	-	-	-
Social sciences	100,0	76,5	23,5	-	-	-
Humanities	100,0	0,2	99,8	-	-	-
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**	**...**

13.1. Gross domestic expenditure on R&D by groupings of activities, 2017

Thous. RSD

	Gross domestic expenditure	Gross investments	Current expenditure		
			Total	Gross earnings	Material costs
REPUBLIC OF SERBIA	**41531049**	**3211711**	**38319338**	**21588052**	**16731286**
Crop and animal production, hunting and related activities	97937	44	97893	78573	19320
Other mining and quarrying	2179567	11744	2167823	147884	2019939
Mining support service activities	953498	-	953498	939177	14321
Manufacture of food products	292932	108251	184681	9031	175650
Manufacture of beverages	14367	9571	4796	4550	246
Manufacture of chemicals and chemical products	32286	7912	24374	24024	350
Manufacture of rubber and plastic products	201668	110049	91619	81788	9831
Manufacture of other non-metallic mineral products	16491	-	16491	16063	428
Manufacture of basic metals	100	-	100	-	100
Manufacture of fabricated metal products, except machinery and equipment	27074	163	26911	16551	10360
Manufacture of computer, electronic and optical products	55228	2125	53103	35152	17951
Manufacture of electrical equipment	123172	84564	38608	18896	19712
Manufacture of machinery and equipment, n.e.c.	380294	23093	357201	92387	264814
Manufacture of furniture	33069	1825	31244	21034	10210
Other manufacturing	4860	580	4280	2020	2260
Electricity, gas, steam and air conditioning supply	1002552	986772	15780	2733	13047
Water collection, treatment and supply	6324	-	6324	6324	-
Remediation activities and other waste management services	12025	4346	7679	5789	1890
Specialised construction activities	1762	-	1762	-	1762
Wholesale and retail trade and repair of motor vehicles and motocycles	11288	3219	8069	-	8069
Wholesale trade, except of motor vehicles and motorcycles	74116	-	74116	31260	42856
Telecommunications	46885	-	46885	17767	29118
Computer programming, consultancy and related activities	314181	58889	255292	116876	138416
Information service activities	496	96	400	300	100
Activities of head offices; management consultancy activities	167047	1999	165048	152302	12746
Architectural and engineering activities; technical testing and analysis	61090	5966	55124	34463	20661
Scientific and research development	18965431	1084313	17881118	9635049	8246069
Advertising and market research	80406	448	79958	51053	28905
Other professional, scientific and technical activities	12370	4674	7696	3263	4433
Veterinary activities	1248226	128646	1119580	946700	172880
Education	15035322	565893	14469429	9046303	5423126
Human health activities	42988	3600	39388	24363	15025
Social work activities without accommodation	935	-	935	-	935
Libraries, archives, museums and other cultural activities	1666	-	1666	-	1666
Activities of membership organisations	29167	-	29167	26377	2790
Repair of computers and personal and household goods	4229	2929	1300	-	1300
Business sector – total	**15230986**	**1815116**	**13415870**	**5458279**	**7957591**
Crop and animal production, hunting and related activities	6943	-	6943	6773	170
Other mining and quarryig	2179567	11744	2167823	147884	2019939
Mining support service activities	953498	-	953498	939177	14321
Manufacture of food products	292932	108251	184681	9031	175650
Manufacture of beverages	14367	9571	4796	4550	246
Manufacture of chemicals and chemical products	32286	7912	24374	24024	350
Manufacture of rubber and plastic products	201668	110049	91619	81788	9831
Manufacture of other non-metallic mineral products	16491	-	16491	16063	428
Manufacture of basic metals	100	-	100	-	100
Manufacture of fabricated metal products, except machinery and equipment	27074	163	26911	16551	10360
Manufacture of computer, electronic and optical products	55228	2125	53103	35152	17951
Manufacture of electrical equipment	123172	84564	38608	18896	19712
Manufacture of machinery and equipment, n.e.c.	380294	23093	357201	92387	264814
Manufacture of furniture	33069	1825	31244	21034	10210
Other manufacturing	4860	580	4280	2020	2260
Electricity, gas, steam and air conditioning supply	1002552	986772	15780	2733	13047
Water collection, treatment and supply	6324	-	6324	6324	-
Remediation activities and other waste management services	12025	4346	7679	5789	1890
Specialised construction activities	1762	-	1762	-	1762
Wholesale and retail trade and repair of motor vehicles and motorcycles	11288	3219	8069	-	8069
Telecommunications	74116	-	74116	31260	42856
Computer programming, consultancy and related activities	46885	-	46885	17767	29118
Telecommunications	314181	58889	255292	116876	138416
Information service activities	496	96	400	300	100
Activities of head offices; management consultancy activities	165636	1930	163706	151967	11739
Architectural and engineering activities; technical testing and analysis	61090	5966	55124	34463	20661
Scientific and research development	9172664	382818	8789846	3667126	5122720
Advertising and market research	18553	-	18553	5081	13472
Other professional, scientific and technical activities	12370	4674	7696	3263	4433
Human health activities	3600	3600	-	-	-
Libraries, archives, museums and other cultural activities	1666	-	1666	-	1666
Repair of computers and personal and household goods	4229	2929	1300	-	1300
Government sector - total	**11228148**	**830633**	**10397515**	**7051972**	**3345543**
Crop and animal production, hunting and related service activities	85914	44	85870	67014	18856
Scientific research and development	9792767	701495	9091272	5967923	3123349
Advertising and market research	61853	448	61405	45972	15433
Veterinary activities	1248226	128646	1119580	946700	172880
Human health activities	39388	-	39388	24363	15025
Tertiary education - total	**15040402**	**565893**	**14474509**	**9051089**	**5423420**
Crop and animal production, hunting and related service activities	5080	-	5080	4786	294
Education	15035322	565893	14469429	9046303	5423126

13.1. Gross domestic expenditure on R&D by groupings of activities, 2017 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current expenditure		
			Total	Gross earnings	Material costs
Non-profit sector - total	**31513**	**69**	**31444**	**26712**	**4732**
Activities of head offices; management consultancy activities	1411	69	1342	335	1007
Social work activities without accommodation	935	-	935	-	935
Activities of membership organisations	29167	-	29167	26377	2790
SRBIJA – SEVER	38623241	2949836	35673405	19936170	15737235
Business sector - total	**14639995**	**1615379**	**13024616**	**5215740**	**7808876**
Crop and animal production, hunting and related activities	6943	-	6943	6773	170
Other mining and quarrying	2179567	11744	2167823	147884	2019939
Mining support service activities	953498	-	953498	939177	14321
Manufacture of food products	292932	108251	184681	9031	175650
Manufacture of beverages	14367	9571	4796	4550	246
Products of chemicals and chemical products	32286	7912	24374	24024	350
Manufacture of rubber and plastic products	74122	15000	59122	56671	2451
Manufacture of computer, electronic and optical products	52603	2125	50478	32559	17919
Manufacture of electrical equipment	25809	-	25809	10577	15232
Manufacture of machinery and equipment, n.e.c.	380294	23093	357201	92387	264814
Electricity, gas, steam and air conditioning supply	998756	986510	12246	-	12246
Remediation activities and other waste management	12025	4346	7679	5789	1890
Wholesale and retail trade and repair of motor vechicles and motorcycles	11288	3219	8069	-	8069
Wholesale trade, except of motor vehicles and motorcycles	73356	-	73356	30500	42856
Telecommunications	46885	-	46885	17767	29118
Computer programming, consultancy and related activities	299661	51967	247694	109278	138416
Activities of head offices; management consultancy activities	165636	1930	163706	151967	11739
Architectural and engineering activities; technical testing and analysis	61090	5966	55124	34463	20661
Scientific and research development	8920125	372542	8547583	3533999	5013584
Advertising and market research	18553	-	18553	5081	13472
Other professional, scientific and technical activities	12370	4674	7696	3263	4433
Human health activities	3600	3600	-	-	-
Repair of computers and personal and household goods	4229	2929	1300	-	1300
Government sector - total	**11070883**	**830105**	**10240778**	**6939947**	**3300831**
Crop and animal production, hunting, hunting and related activities	85914	44	85870	67014	18856
Scientific research and development	9635502	700967	8934535	5855898	3078637
Advertising and market research	61853	448	61405	45972	15433
Veterinary activities	1248226	128646	1119580	946700	172880
Human health activities	39388	-	39388	24363	15025
Tertiary education - total	**12880850**	**504283**	**12376567**	**7753771**	**4622796**
Crop and animal production, hunting, hunting and related activities	5080	-	5080	4786	294
Education	12875770	504283	12371487	7748985	4622502
Non-profit sector - total	**31513**	**69**	**31444**	**26712**	**4732**
Activities of head offices; management consultancy activities	1411	69	1342	335	1007
Social work activities without accommodation	935	-	935	-	935
Activities of membership organisations	29167	-	29167	26377	2790
Beogradski region	**27615381**	**2535099**	**25080282**	**13416743**	**11663539**
Business sector - total	**10311555**	**1438040**	**8873515**	**2974960**	**5898555**
Crop and animal production, hunting, hunting and related activities	6943	-	6943	6773	170
Other mining and quarrying	2179567	11744	2167823	147884	2019939
Manufacture of food products	281569	108138	173431	4773	168658
Manufacture of beverages	14367	9571	4796	4550	246
Manufacture of chemicals and chemical products	30301	7912	22389	22389	-
Manufacture of computer, electronic and optical products	52603	2125	50478	32559	17919
Manufacture of electrical equipment	25809	-	25809	10577	15232
Manufacture of machinery and equipment, n.e.c.	380294	23093	357201	92387	264814
Electricity, gas, steam and air conditioning supply	998756	986510	12246	-	12246
Remediation activities and other waste management	12025	4346	7679	5789	1890
Wholesale trade, except of motor vehicles and motorcycles	73356	-	73356	30500	42856
Telecommunications	46885	-	46885	17767	29118
Computer programming, consultancy and related activities	85388	3697	81691	80117	1574
Activities of head offices; management consultancy activities	165636	1930	163706	151967	11739
Architectural and engineering activities; technical testing and analysis	4394	796	3598	3470	128
Scientific and research development	5918510	270575	5647935	2355114	3292821
Advertising and market research	18553	-	18553	5081	13472
Other professional, scientific and technical activities	12370	4674	7696	3263	4433
Repair of computers and personal and household goods	4229	2929	1300	-	1300
Advertising and market research	61853	448	61405	45972	15433
Veterinary activities	1177086	125647	1051439	890584	160855
Human health activities	39388	-	39388	24363	15025
Government sector - total	**9209743**	**737202**	**8472541**	**5483056**	**2989485**
Crop and animal production, hunting, hunting and related activities	85914	44	85870	67014	18856
Scientific research and development	7845502	611063	7234439	4455123	2779316

13.1. Gross domestic expenditure on R&D by groupings of activities, 2017 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current expenditure		
			Total	Gross earnings	Material costs
Tertiary education - total	**8064889**	**359857**	**7705032**	**4932350**	**2772682**
Crop and animal production, hunting, hunting and related activities	5080	-	5080	4786	294
Education	8059809	359857	7699952	4927564	2772388
Non-profit sector - total	**29194**	**-**	**29194**	**26377**	**2817**
Social work activities without accommodation	935	-	935	-	935
Activities of membership organisations	28259	-	28259	26377	1882
Region Vojvodine	**11007860**	**414737**	**10593123**	**6519427**	**4073696**
Business sector - total	**4328440**	**177339**	**4151101**	**2240780**	**1910321**
Mining support service activities	953498	-	953498	939177	14321
Manufacture of food products	11363	113	11250	4258	6992
Manufacture of chemicals and chemical products	1985	-	1985	1635	350
Manufacture of rubber and plastic products	74122	15000	59122	56671	2451
Wholesale and retail trade and repair of motor vehicles and motorcycles	11288	3219	8069	-	8069
Computer programming, consultancy and related activities	214273	48270	166003	29161	136842
Architectural and engineering activities; technical testing and analysis	56696	5170	51526	30993	20533
Scientific research and development	3001615	101967	2899648	1178885	1720763
Human health activities	3600	3600	-	-	-
Government sector - total	**1861140**	**92903**	**1768237**	**1456891**	**311346**
Scientific research and development	1790000	89904	1700096	1400775	299321
Veterinary activities	71140	2999	68141	56116	12025
Tertiary education - total	**4815961**	**144426**	**4671535**	**2821421**	**1850114**
Education	4815961	144426	4671535	2821421	1850114
Non-profit sector - total	**2319**	**69**	**2250**	**335**	**1915**
Activities of head offices; management consultancy activities	1411	69	1342	335	1007
Activities of membership organisations	908	-	908	-	908
SRBIJA – JUG	2907808	261875	2645933	1651882	994051
Business sector - total	**590991**	**199737**	**391254**	**242539**	**148715**
Manufacture of rubber and plastic products	127546	95049	32497	25117	7380
Manufacture of other non-metallic mineral products	16491	-	16491	16063	428
Manufacture of basic metals	100	-	100	-	100
Manufacture of fabricated metal products, except machinery and equipment	27074	163	26911	16551	10360
Manufacture of computer, electronic and optical products	2625	-	2625	2593	32
Manufacture of electrical equipment	97363	84564	12799	8319	4480
Manufacture of furniture	33069	1825	31244	21034	10210
Other manufacturing	4860	580	4280	2020	2260
Electricity, gas, steam and air conditioning supply	3796	262	3534	2733	801
Water collection, treatment and supply	6324	-	6324	6324	-
Specialised construction activities	1762	-	1762	-	1762
Wholesale trade, except of motor vehicles and motorcycles	760	-	760	760	-
Computer programming, consultancy and related activities	14520	6922	7598	7598	-
Information service activities	496	96	400	300	100
Scientific research and development	252539	10276	242263	133127	109136
Libraries, archives, museums and other cultural activities	1666	-	1666	-	1666
Government sector - total	**157265**	**528**	**156737**	**112025**	**44712**
Scientific research and development	157265	528	156737	112025	44712
Tertiary education - total	**2159552**	**61610**	**2097942**	**1297318**	**800624**
Education	2159552	61610	2097942	1297318	800624
Region Šumadije i Zapadne Srbije	**1312829**	**140272**	**1172557**	**869353**	**303204**
Business sector - total	**292609**	**105183**	**187426**	**118698**	**68728**
Manufacture of rubber and plastic products	127546	95049	32497	25117	7380
Manufacture of other non-metallic mineral products	16491	-	16491	16063	428
Manufacture of basic metals	100	-	100	-	100
Manufacture of fabricated metal products, except machinery and equipment	27074	163	26911	16551	10360
Manufacture of computer, electronic and optical products	2625	-	2625	2593	32
Manufacture of electrical equipment	4749	465	4284	4284	-
Manufacture of furniture	33069	1825	31244	21034	10210
Electricity, gas, steam and air conditioning supply	3796	262	3534	2733	801
Specialised construction activities	1762	-	1762	-	1762
Computer programming, consultancy and related activities	6922	6922	-	-	-
Scientific research and development	68475	497	67978	30323	37655
Government sector - total	**48071**	**528**	**47543**	**34518**	**13025**
Scientific research and development	48071	528	47543	34518	13025
Tertiary education - total	**972149**	**34561**	**937588**	**716137**	**221451**
Education	972149	34561	937588	716137	221451

13.1. Gross domestic expenditure on R&D by groupings of activities, 2017 (continued)

Thous. RSD

	Gross domestic expenditure	Gross investments	Current expenditure		
			Total	Gross earnings	Material costs
Region Južne i Istočne Srbije	**1594979**	**121603**	**1473376**	**782529**	**690847**
Business sector - total	**298382**	**94554**	**203828**	**123841**	**79987**
Manufacture of electrical equipment	92614	84099	8515	4035	4480
Other manufacturing	4860	580	4280	2020	2260
Water collection, treatment and supply	6324	-	6324	6324	-
Wholesale trade, except of motor vehicles and motorcycles	760	-	760	760	-
Computer programming, consultancy and related activities	7598	-	7598	7598	-
Information service activities	496	96	400	300	100
Scientific research and development	184064	9779	174285	102804	71481
Libraries, archives, museums and other cultural activities	1666	-	1666	-	1666
Government sector - total	**109194**	**-**	**109194**	**77507**	**31687**
Scientific research and development	109194	-	109194	77507	31687
Tertiary education - total	**1187403**	**27049**	**1160354**	**581181**	**579173**
Education	1187403	27049	1160354	581181	579173
Region Kosovo i Metohija	**...**	**...**	**...**	**...**	**...**

Annexes

REPUBLIC OF SERBIA
Statistical Office of the Republic of Serbia

Form IR - 2

Law on Official Statistics,
"Official Statistics of the RS", number 104/2009..

Code of the survey: 021010

ANNUAL REPORT ON RESEARCH AND DEVELOPMENT FOR FACULTIES, R&D INSTITUTES IN 2017

Response obligation is based on Article 26, and punitive provisions for response refusal or provision of incomplete or incorrect data on Article 52 of the Law on Official Statistics („Сл. гласник РС", бр. 104/2009).
The data will be used exclusively for statistical purposes and will not be published as personal data.
All the data are confidential.

This report is to be filled in by faculties, scientific institutes and R&D institutes that carried out in 2017 R&D activities according to the law on Research and Development Activity, "Official Journal of the RS", numbers 110/05 and 18/2010.
The report is to be filled in and transmitted to the competent statistical office **not later than 20 April 2018.** Before completing the report, read carefully the general instructions on the last page of the questionnaire as well as the explanations with every table. **All financial indicators are to be expressed in thousands dinars.**

I FULL NAME OF THE REPORTING UNIT

_____

_____

Enter the name of the organization as indicated in the Court Register, i.e. application for the registration of scientific organizations and institutions.
The research unit should enter the full name of the scientific organization and institution it is incorporated in, as well as its own name; in tables are to be shown data **referring only to the unit,** but not to the whole scientific organization/institution.

Registration number

II ADDRESS – MUNICIPALITY _____

Street and number _____ Telephone _____

R&D units should enter **their address**, but not the address of the institution they are incorporated in.

III ACTIVITY _____
Enter the name and code according to the Classification of Activities, 2010

IV OWNERSHIP (circle the corresponding number)

state-owned	1
private	2
mixed	3

V SCIENTIFIC FIELD _____
Enter the name and code according to the Classification of Scientific Fields (annexed)

1. FULL-TIME AND PART-TIME EMPLOYEES ENGAGED ON R&D ACTIVITIES, EXPRESSED IN NUMBER OF PHYSICAL PERSONS AND FULL-TIME EQUIVALENT (as of 31/12/ 2017)

		Total employees engaged on R&D activities				Number of full-time employees engaged on R&D activities		Part-time employees engaged on R&D activities			
		Number of employees		Full-time equivalent				Number of employees		Full-time equivalent	
		Total (**5+7**)	Women (**6+8**)	Total (**5+9**)	Women (**6+10**)	Total	Women	Total	Women	Total	Women
	a	1	2	3	4	5	6	7	8	9	10
01	**Total (02+14+18+19+20)**										
02	**Researchers - total (03 до 13)**										
03	Researcher - apprentice										
04	Assistant researcher										
05	Scientific assistant										
06	Senior scientific assistant										
07	Scientific adviser										
08	Senior lecturer										
09	Associate professor										
10	Full professor										
11	Professor of vocational studies										
12	Lecturer										
13	Assistant lecturer										
14	**Assistant researcher - total (15 to17)**										
15	Assistant researcher										
16	Senior assistant researcher										
17	Assistant adviser										
18	**Technicians**										
19	**Managers**										
20	**Other personnel (auxiliary)**										

Do not enter in the table employees engaged on protection and safety, in restaurants, cleaning personnel and related personnel (concierges, porter, cleaning ladies, cooks, etc.). If an extramural assistant sign with a R&D organization during the year two or more service contracts, i.e. author contracts, this should be counted only once.

In columns 7, 8, 9 and 10 (Part-time employees engaged on R&D activities), are to be shown employees who work only part-time (less than 90%, and more than 10%).

Data in columns 3, 4, 9 and 10 are to be shown **in decimal numbers with one decimal place**.

Instructions for entering the data in columns 3, 4, 9 and 10 **on full-time equivalent.**

Equivalent: FTE

Employees in R&D, part-time (less than 90%, and more than 10%)		Number of employees	Full-time equivalent (FTE)
Total number of employees		**8**	**= 2,7**
3 persons work all the year round only half-time	(3 x 0,5)	3	= 1,5
2 persons work all the year round only 20% of work time	(2 x 0,2)	2	= 0,4
1 person works full-time	(1 x 0,5)	1	= 0,5
2 persons employed 8 months with 25% work time	(2 x 0,67 x 0,25)	2	= 0,3

Remark: Full-time employee engaged on R&D activities corresponds to the unit of full-time equivalent (= 1 FTE).

2. EMPLOYEES ENGAGED ON R&D ACTIVITIES *ON SERVICE CONTRACT (SC) OR AUTHOR CONTRACT (AC), EXPRESSED IN NUMBER OF PHYSICAL PERSONS AND FULL-TIME EQUIVALENT,* in 2017

		Employees engaged on AC or AU in R&D field				Full-time employees engaged on AC or AU, in R&D field		Part-time employees engaged on AC or AU, in R&D field			
		Number of employees		Full-time equivalent				Number of employees		Full-time equivalent	
		Total (5+7)	Women (6+8)	Total (5+9)	Women (6+10)	Total	Women	Total	Women	Total	Women
a		1	2	3	4	5	6	7	8	9	10
01	**Total (02 to 06)**										
02	Researchers										
03	Assistant researchers										
04	Technicians										
05	Managers										
06	Other employees (auxiliary)										

Remarks relative to Table 1 refer also to this table.

3. FULL-TIME AND PART-TIME EMPLOYEES ENGAGED ON R&D, ACCORDING TO EDUCATIONAL ATTAINMENT,
EXPRESSED IN PHYSICAL NUMBER OF PERSONS (as of 31/12/ 2017)

		Total		Educational attainment											
				Doctor's degree		Master's degree		Specialization		University education		Vocational education		Secondary and other education	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
a		1	2	3	4	5	6	7	8	9	10	11	12	13	14
01	**Total (02 to 06)**														
02	Researchers											X	X	X	X
03	Assistant researchers													X	X
04	Technicians														
05	Managers													X	X
06	Other employees (auxiliary)														

Remark: The table is to be filled in as follows: in columns 1 and 2, copy the values from **columns 1 and 2 of table 1**, then proceed with entering the data. Also, the sum of odd columns should equal the data from column 1, and the sum of even column should equal the data from column 2.

4. EMPLOYEES ENGAGED ON R&D ACTIVITIES, BASED ON SERVICE CONTRACT (SC) AND AUTHOR CONTRACT (AC), BY EDUCATIONAL ATTAINMENT

EXPRESSED IN NUMBER OF PHYSICAL PERSONS, in 2017

		Total		Educational attainment											
				Doctor's degree		Master's degree		Specialization		University education		Vocational education		Secondary and other education	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
a		1	2	3	4	5	6	7	8	9	10	11	12	13	14
01	**Total (02 to 06)**														
02	Researchers											X	X	X	X
03	Assistant researchers													X	X
04	Technicians														
05	Managers													X	X
06	Other employees (auxiliary)														

Remark: The table is to be filled in as follows: in columns 1 and 2, copy the values from **columns 1 and 2 of table 2,** then proceed with entering the data. Also, the sum of odd columns should equal the data from column 1, and the sum of even column should equal the data from column 2.

5. FULL-TIME AND PART-TIME EMPLOYEES ENGAGED ON R&D, BY EDUCATIONAL ATTAINMENT,

EXPRESSED IN FULL-TIME EQUIVALENT (as of 31/12/ 2017)

		Total		Educational attainment											
				Doctor's degree		Master's degree		Specialization		University education		Vocational education		Secondary and other education	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
a		1	2	3	4	5	6	7	8	9	10	11	12	13	14
01	**Total (02 to 06)**														
02	Researchers											X	X	X	X
03	Assistant researchers													X	X
04	Technicians														
05	Managers													X	X
06	Other employees (auxiliary)														

Remark: The table is to be filled in as follows: in columns 1 and 2, copy the values from **columns 3 and 4 of table 1,** then proceed with entering the data. Also, the sum of odd columns should equal the data from column 1, and the sum of even column should equal the data from column 2.

6. EMPLOYEES ENGAGED ON R&D ACTIVITIES, BASED ON SERVICE CONTRACT (SC) AND AUTHOR CONTRACT (AC), BY EDUCATIONAL ATTAINMENT

EXPRESSED IN FULL-TIME EQUIVALENT, (as of 31/ 12/ 2017)

		Total		Educational attainment											
				Doctor's degree		Master's degree		Specialization		University education		Vocational education		Secondary and other education	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
a		1	2	3	4	5	6	7	8	9	10	11	12	13	14
01	**Total (02 to 06)**														
02	Researchers											X	X	X	X
03	Assistant researchers													X	X
04	Technicians														
05	Managers													X	X
06	Other personnel (auxiliary)														

Remark: The table is to be filled in as follows: in columns 1 and 2 copy the values from **columns 3 and 4 of table 2,** then proceed with entering the data. Also, the sum of odd columns should equal the data from column 1, and the sum of even columns should equal the data from column 2.

7. FULL-TIME AND PART-TIME EMPLOYEES ENGAGED ON R&D, BY AGE AND SEX,

EXPRESSED IN NUMBER OF PHYSICAL PERSONS, (as of 31/ 12/ 2017)

		Researchers				**Assistant researchers**				**Technicians**				**Managers**			
		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
a		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
01	**Total (02 to 12)**																
02	Under 25 years																
03	25 – 29																
04	30 – 34																
05	35 – 39																
06	40 – 44																
07	45 – 49																
08	50 – 54																
09	55 – 59																
10	60 – 64																
11	65 – 69																
12	70 and over																

In the table, full-time and part-time R&D employees are to be broken down by age groups. It should be noted that **other personnel should not be broken down by age**
Shown are all those who are shown in column 1from table 1, for "total number of employees" and in column 2 for "women". The data by categories in row 01 of this table should match **with data from table 1** (full-time and part-time employees), as follows:

Full-time employees

Researchers	row 02, columns: 05, 06
Assistant researchers	row 14, columns: 05. 06
Technicians	row 18, columns: 05, 06
Managers	row 19, columns: 05, 06

Part-time employees

Researchers	row 02, columns: 07, 08
Assistant researchers	row 14, columns: 07. 08
Technicians	row 18, columns: 07, 08
Managers	row 19, columns: 07, 08

8. FULL-TIME AND PART-TIME RESEARCHERS, BY CITIZENSHIP AND SEX,
EXPRESSED IN NUMBER OF PHYSICAL PERSONS

Citizenship (by geographical position of the country)		Total number of researchers in 2017		Researchers who **came** in Serbia in 2017		Researchers who **went** abroad in 2017		Planned number of researchers for 2018
		Total	Women	Total	Women	Total	Women	
a		1	2	3	4	5	6	7
01	**Total (02 to 09)**							
02	Serbia							
03	EU member countries							
04	Other European countries							
05	North America							
06	Central and South America							
07	Asia							
08	Africa							
09	Other							

In table 8 full-time and part-time **researchers** are to be broken down by citizenship (geographical position of the country).
In columns 3 and 4, are to be shown all the researchers who came from abroad between 01/01/2017 and 31/12/2017 and worked in R&D activities more than 3 months.
In columns 5 and 6 are to be shown all the researchers who left Serbia between 01/01/ 2017 and 31/12/ 2017.

The data in row 01 in columns 1 and 2 of this table should **match the data in table 1 in columns 1 and 2,** i.e.:
Researchers – total
Women - total

9. EXPENDITURES FOR R&D ACTIVITIES IN 2017 (in thousands RSD)

	Expenditures for R&D			Spent in 2017	Planned for 2018
	a			1	2
01	**Total expenditure for R&D (02+07+12)**				
02	Current costs	Labor costs and employees' remunerations	**Total (03+05+06)**		
03			Gross salaries and wages **for all R&D employees**		
04			Of which gross salaries and wages of researchers		
05			Other personal income of R&D employees (scholarships, prizes, etc.)		
06			Other		
07		Other current costs	**Total (08 to 11)**		
08			For material costs for R&D work (raw materials, equipment, energy)		
09			For payments based on service contracts and author contracts		
10			For daily allowances, travel costs, etc.		
11			Other operating costs and expenses (without depreciation)		
12	Investment costs		**Total (13+14+16+17+18)**		
13			For land and buildings		
14			For machinery and equipment		
15			Of which for imported machinery and equipment		
16			For patent, licenses, studies and projects		
17			For software and hardware [1)]		
18			Other		

1) Are to be shown total costs for the acquisition of computers, components and equipment, as well as costs for the acquisition and development of software for own account.

In table 9 are to be shown all funds **spent** in 2017 for R&D activities, as well as planned funds for 2018.

Remark: The data in row 01, column 1 (total expenditures for R&D) should equal the data in **table 10, in row 01** (sources of funds spent for R&D activities - total).

10. SOURCES OF FUNDS SPENT FOR R&D ACTIVITIES IN 2017

	Sources of funds			Amount **in thousands RSD**
	a			1
01	**Funds spent for R&D by sources - total (02 to 21)**			
02	Domestic funding (from Serbia)	Planned budgetary funds dedicated R&D	From the Ministry of Science	
03			From the Ministry of Education	
04			From other ministries	
05		Funds for R&D from other government funds, agencies and foundations		
06		Funds for R&D from local authorities' bodies		
07		Funds for R&D from enterprises	from "small" (0 - 49 employees)	
08			from "medium" (50 - 249 employees)	
09			from "large" (250 and more employees)	
10		Funds for R&D from non-profit organizations		
11		Funds from patents, licenses, etc. (from inward sale)		
12		Other funds for R&D from own sources		
13	Funds from abroad	Funds from agreements on technological licenses		
14		Funds from services for foreign ordering parties		
15		Funds from joint investment in R&D		
16		Funds for R&D from other countries' governments		
17		Funds for R&D from the university and other tertiary education institutions		
18		Funds for R&D from non-profit organizations		
19		Funds for R&D from the European Commission		
20		Funds for R&D from international organizations		
21		Other		

In table 10 are to be shown funds **obtained** for R&D activities by sources.
Remark: The data in row 01 should equal the data in **table 9, row 01, column 1** (total expenditures for R&D).

11. VALUE OF R&D WORKS (PROJECTS AND STUDIES), BY SCIENTIFIC FIELDS AND TYPE OF RESEARCH (include also funded from own resources – in thousands RSD), 2017

Scientific field		Total	Type of research		
			Basic	Applied	Experimental (development)
a		1	2	3	4
01	**Total**				
02	Natural sciences, mathematics				
03	Engineering and technology				
04	Social sciences				
05	Humanities				
06	Medical sciences				
07	Agricultural sciences				
08	Multidisciplinary sciences				

The data in column TOTAL should match the data in column total in table 12.
For on-going projects (non-completed) is to be shown the value of completed phases of work up to the end of 2017.
Use the annexed classification to determine the scientific field of R&D works.

12. FUNDS FOR R&D BY PRIMARY SOCIO-ECONOMIC OBJECTIVES, 2017 (in thousands RSD)

Primary socio-economic objectives		Total	Of which budgetary funds
a		1	2
01	**Total (02+03+04+05+06+07+08+09+10+11+12+13+20+27)**		
02	Exploration and exploitation of the earth exploitation		
03	Environment		
04	Exploration and exploitation of space		
05	Transport, Telecommunication and other infrastructures		
06	Energy		
07	Industrial production and technology		
08	Health		
09	Agriculture		
10	Education		
11	Culture, recreation, religion and mass media		
12	Political and social systems, structures and processes		
13	General advancement of knowledge: R&D financed from GUF		
14	R&D related to Natural Sciences - financed from GUF		
15	R&D related to Engineering Sciences - financed from GUF		
16	R&D related to Medical Sciences - financed from GUF		
17	R&D related to Agricultural Sciences - financed from GUF		
18	R&D related to Social Sciences - financed from GUF		
19	R&D related to Humanities - financed from GUF		
20	General advancement of knowledge: R&D financed other sources than GUF		
21	R&D related to Natural Sciences - financed from other sources than GUF		
22	R&D related to Engineering Sciences - financed from other sources than GUF		
23	R&D related to Medical Sciences - financed from other sources than GUF		
24	R&D related to Agricultural Sciences - financed from other sources than GUF		
25	R&D related to Social Sciences - financed from other sources than GUF		
26	R&D related to Humanities Sciences - financed from other sources		
27	Defense		

13. NUMBER OF R&D WORKS (PROJECTS AND STUDIES, BY SCIENTIFIC FIELDS AND TYPES OF RESEARCH (include also projects funded from own resources), 2017

Scientific field		Total	Type of research		
			Basic	Applied	Experimental (development)
a		1	2	3	4
01	**Total**				
02	Natural sciences, mathematics				
03	Engineering and technology				
04	Social sciences				
05	Humanities				
06	Medical sciences				
07	Agricultural sciences				
08	Multidisciplinary sciences				

Remark: The row "**Total**" in this table should match the row "**Total**" in table **14**.

14. NUMBER OF R&D WORKS BY ORDERING PARTIES AND TYPES OF RESEARCH, 2017

Ordering party			R&D works			
			Total (2 to 4)	Basic	Applied	Experimental (development)
a			1	2	3	4
01	**Total (02+09)**					
02	Ordering parties from Serbia	**Inward – total (03 to 08)**				
03		For own account				
04		Enterprises in Serbia				
05		Ministry of Science				
06		Ministry of Education				
07		Other ministries				
08		Other				
09	Ordering parties from abroad	**Outward – total (10 to 16)**				
10		enterprises				
11		Other countries' governments				
12		Non-profit organizations				
13		Tertiary education institutions				
14		European Commission				
15		International organizations				
16		Other				

15. PUBLISHED R&D ARTICLES AND MONOGRAPHIES, 2017

	Total (actual number of projects)	Published in publications		
		Own	Others in Serbia	Abroad
	1	2	3	4
01				

In column every published paper should be counted only once regardless of the type of publications and the number of times it has been published.

16. INVENTIONS AND PATENTS, 2017

	R&D intensity	Tested inventions	Patents		Patents – inventions sold		First-time practical use of patents and inventions
			Pending patents in the Patent Office	Patents registered in the Patent Office	In Serbia	Abroad	
	a	1	2	3	4	5	6
01	**Total**						
02	High technology						
03	Medium high technology						
04	Medium low technology						
05	Low technology						

16a. SMALL INVENTIONS AND PATENTS, 2017

	R&D intensity	Small tested inventions	Small patents		Small patents – inventions sold		First-time practical use of small patents and inventions
			Pending patents in the Patent Office	Patents registered in the Patent Office	In Serbia	abroad	
	a	1	2	3	4	5	6
01	**Total**						
02	High technology						
03	Medium high technology						
04	Medium low technology						
05	Low technology						

on_____2018

Filled in by: Manager:

_____ (Seal) _____

(first name and surname) (first name and surname)

Contact telephone: | | | | | / | | | | | | | |

(area prefix compulsory)

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GENERAL DEFINITIONS AND EXPLANATIONS FOR FILLING IN THE FORM IR – 2

COVERAGE

This form serves to collect data on R&D activities which have been carried out in enterprises, as well as in: centers for technology transfer, innovation centers, business and technological incubators, and scientific and technological parks in Serbia in 2017.
An institute is a R&D organization that is engaged in R&D activity of general interest as laid down in the Law. An institute can be founded as an institution or enterprise.
Depending on the type of research and activity, organizational form and funding of own activity; an institute can carry out R&D activity as: scientific institute and R&D institute. As to ownership, an institute can be state-owned, private or in mixed ownership. A scientific institute is an institution which prevailing activity is relative to basic and applied researches, the latter serving to valorize the results of basic researches.
A research and development institute is an organization which primary activity is relative to applied and experimental (development) researches focused on satisfying the needs of direct users of research results.
Covered are all tertiary education institutions (faculties of science, arts academies, universities) whatever the ownership (state-owned, private or mixed).
The status of centers of excellence may be granted to an institute, i.e. tertiary education institution or their organizational part/s if they have achieved in a five-year period ultimate and internationally recognised scientific and professional results in a selected scientific discipline, having consequently developed international, technical and technological co-operation.
If the status of the centre of excellence acquires part/s of an institute, i.e. tertiary education institution, the centre does not have the capacity of a legal person.
Research and development organizations that can get accreditation for these activities are: institutes, faculties, integrated universities, centers of excellence and R&D organizations from the domain of defense and Serbian Armed Forces.

DEFINITION OF RESEARCH AND DEVELOPMENT ACTIVITY (R&D)

Research and development is a systematic creative work undertaken in view of discovering new stock of knowledge in order to raise the general civilization level of the society and use the knowledge in all social fields.
The scientific activity is realized through basic, applied and experimental (development) researches as well as through training personnel for R&D work.

- BASIC research is a creative, systematic activity focused on acquiring new knowledge on the origin and causes of phenomena and facts, without any particular application or use in view. The results of a basic research are often formulated a general principles, theories or rules.

- APPLIED research is undertaken whether to establish a possibility to use the results of a research, having in mind its practical application, or to find new methods or ways that facilitate the achievement of a particular objective set in advance. This survey starts from existing knowledge and examines it thoroughly in view of solving specific issues.

- EXPERIMENTAL (DEVELOPMENT) research is a creative systematic activity based on the results of the basic and applied research, and practical knowledge directed towards introducing new materials, products, devices, processes and methods.

The main difference between R&D activity and activities other than R&D is in the presence or absence of elements of novelty or innovation **to a greater extent**. If an activity introduces considerable improvements to technological characteristics, components, hardware and software, i.e. applies a new or significantly improved product, process or service, as well as new organizational methods, it is to be obligatorily **included** in this survey.

The coverage **excludes** activities that do not fall into R&D survey:
- routine tests and analyses of all forms, whether serving for the control of hardware, components or products or being focused on their quality and quantity (tests and analysis that are part of a R&D process should be however included);
- market research, operating research, work studies, costs analysis, management activities, etc;
- experimental production where product improvement is not the primary goal;
- design costs aiming at monitoring fashion trends and activities of art modeling;

- legal and administrative operations relative to the application and registration of patents, operations relative to the sale of patents and licenses, experimental activities carried out only for the purpose of patent registration.

OBJECTIVES OF R&D ACTIVITY:

1) development of science, technology and education in order to boost economic growth, increase the social product and raise citizens' living conditions;

2) preservation and development of general stock of knowledge, as a condition to inclusion to world integration processes;

3) preservation and development of total R&D potentials (R&D and educational institutions, scientific personnel and R&D infrastructure);

4) raising of the general level of technology in the economy and securing the competitiveness of goods and services on national and international markets;

5) establishing international scientific co-operation in view of faster integration into world scientific, economic, social and cultural trends, as well as inclusion in European research area;

6) orienting the society towards innovations, creation of cultural ambiance and creative education in order to preserve civilization patrimony and national identity.

FUNDING OF R&D ACTIVITY

Funds for R&D activity are secured from:

1) Founder's resources;
2) Budget of the Republic;
3) Budget of the autonomous province and units of local authorities;
4) Resources of enterprises, associations and other organizations;
5) Own income of R&D organizations;
6) Resources of domestic funds and foundations, gifts of legal and physical persons;
7) Resources of foreign foundations, legal and physical persons, donations;
8) Other sources provided that the autonomy and dignity of R&D activity is not exposed.

Sub-funding of programs and projects of regional significance for the development of R&D activity

Budgetary funds of the Republic of Serbia can be used to sub-finance programs and projects of regional significance for R&D activity, being:

1. projects of building R&D infrastructure;
2. R&D projects of regional significance (projects on international co-operation, projects on eco-systems and innovation projects carried out by small and medium enterprises);
3. program of development of R&D personnel.

METHODOLOGICAL BASIS

Methodological basis for this survey are the international standards set up by OECD and published in the FRASCATI Manual 2002. All international classifications are used and are annexed to the instructions for filling in the Annual Report on Research and Development Activity.

More explanations and instructions are available at the Statistical Office of the Republic of Serbia, Milana Rakica 5, Belgrade, Section for statistics of education, science and culture, telephone number: 011 2412922, extension 425 and 357.

ANNEX

For filling in the Annual Report on Research and Development – IR

CLASSIFICATION OF SCIENTIFIC FIELDS

1. Natural sciences

101 Mathematics
102 Computer and information sciences
103 Physical sciences
104 Chemical sciences
105 Earth and related environmental sciences
106 Biological sciences
107 Other natural sciences

2. Engineering and technology

201 Civil engineering
202 Electrical engineering, electronic engineering and information engineering
203 Mechanical engineering
204 Chemical engineering
205 Materials engineering
206 Medical engineering
207 Environmental engineering
208 Environmental biotechnology
209 Industrial biotechnology
210 Nano-technology
211 Other engineering and technology

3. Medical and health sciences

301 Basic medicine
302 Clinical medicine
303 Health science
304 Medical biotechnology
305 Other medical sciences

4. Agricultural sciences

401 Agricultural sciences, forestry and fisheries
402 Animal and dairy science
403 Veterinary science
404 Agricultural biotechnology
405 Other agricultural science

5. Social sciences

501 Psychology
502 Economics and business
503 Educational science
504 Sociology
505 Law
506 Political science
507 Social and economic geography
508 Media and communications
509 Other social sciences

6. Humanities

601 History and archeology
602 Language and literature
603 Philosophy, ethics and religion
604 Arts (history of arts, performing arts, music)
605 Other humanities

Source: FOS - Fields of Science and Technology, OECD – 2006

CLASSIFICATION OF ACTIVITIES – 2010
REVIEW OF THE SECTIONS AND DIVISIONS OF THE CLASSIFICATION OF ACTIVITIES

CODE	DESCRIPTION OF SECTIONS/DIVISIONS
A	**AGRICULTURE, FORESTRY AND FISHING**
01	Crop and animal production, hunting and related service activities
03	Fishing and aquaculture
B	**MINING AND QUARRYING**
05	Mining of coal and lignite
06	Extraction of crude petroleum and natural gas
07	Mining of metal ores
08	Other mining and quarrying
09	Mining support service activities
C	**MANUFACTURING**
10	Manufacture of food products
11	Manufacture of beverages
12	Manufacture of tobacco products
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products
16	Manufacture of wood and of products of wood, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
22	Manufacture of rubber and plastic products
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment, n.e.c.
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment
31	Manufacture of furniture
32	Other manufacturing
33	Repair and installation of machinery and equipment
D	**ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY**
35	Electricity, gas, steam and air conditioning supply
E	**WATER SUPPLY; SEWERAGE, WASTE MANGEMENT AND REMEDIATION ACTIVITIES**
36	Water collection, treatment and supply
37	Sewerage
38	Water collection, treatment and disposal activities; material recovery
39	Remediation activities and other waste management services
F	**CONSTRUCTION**
41	Construction of buildings
42	Civil engineering
43	Specialised construction activities
G	**WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES**
5	Wholesale and retail trade and repair of motor vehicles and motorcycles
46	Wholesale trade, except of motor vehicles and motorcycles
47	Retail trade, except of motor vehicles and motorcycles
H	**TRANSPORTATION AND STORAGE**
49	Land transport and transport via pipelines

CODE	DESCRIPTION OF SECTIONS/DIVISIONS
50	Water transport
51	Air transport
52	Wharehousing and support activities for transportation
53	Postal and courier activities
I	**ACCOMMODATION AND FOOD SERVICE ACTIVITIES**
55	Accommodation
56	Food and beverage service activities
J	**INFORMATION AND COMMUNICATION**
58	Publishing activities
59	Motion picture, video and television programme, production, sound recording and music publishing activities
60	Programming and broadcasting
61	Telecommunications
62	Computer programming, consultancy and related activities
63	Information service activities
K	**FINANCIAL AND INSURANCE ACTIVITIES**
64	Financial service activities, except insurance and pension funding
65	Insurance, reinsurance and pension funding, except compulsory social insurance
66	Activities auxiliary to financial services and insurance activities
L	**REAL ESTATE ACTIVITIES**
68	Real estate activities
M	**PROFESSIONAL, SCIENTIFIC, INNOVATION AND TECHNICAL ACTIVITIES**
69	Legal and accounting activities
70	Activities of head offices; management consultancy activities
71	Architectural and engineering activities; technical testing and analysis
72	Scientific and development
73	Advertising and market research
74	Other professional, scientific and technical activities
75	Veterinary activities
N	**ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES**
77	Rental and leasing activities
78	Employment activities
79	Travel agency, tour operator and other reservation service and related activities
80	Security and investigation activities
81	Services to buildings and landscape activities
82	Office administrative, office support and other business support activities
P	**EDUCATION**
85	Education
Q	**HUMAN HEALTH AND SOCIAL WORK ACTIVITIES**
86	Human health activities
87	Residential care activities
88	Social work activities without accommodation
90	Creative, arts and entertainment activities
91	Libraries, archives, museums and other cultural activities
92	Gambling and betting activities
93	Sports activities, amusement and recreation activities
S	**OTHER SERVICE ACTIVITIES**
94	Activities of membership organisations
95	Repair of computers and personal and household goods
96	Other personal service activities
T	**ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS AND SERVICE – PRODUCING ACTIVITIES OF HOUSEHOLDS FOR WON USE**
97	Activities of households as employers of personnel
98	Undifferentiated goods – and services – producing activities of households for own use
U	ACTIVITIES OF EXTRATERRITORIAL ORGANIZATIONS AND BODIES
99	Activities of extraterritorial organizations and activities

Classification of manufacturing according to research and development intensity
According to OECD methodology

High technology

Aircrafts and spacecrafts
Pharmaceuticals
Office accounting and computing machinery
Radio, TV and telecommunication equipment
Medical, precision and optical instruments

Medium low technology

Coke, refined petroleum products and nuclear fuel
Rubber and plastics
Other non-metallic mineral products
Building and repairing of ships and boats
Basic metals
Manufacture of fabricated metal products, except machinery and equipment

Medium high technology

Electrical machinery and apparatus
Motor vehicles, trailers and semi-trailers
Chemicals, excluding pharmaceuticals
Transports equipment, n.e.c.
Machinery and apparatus

Low technology

Manufacturing, n.e.c.
Wood and furniture
Paper, printing industry
Textile industry

CLASSIFICATION OF SOCIO-ECONOMIC OBJECTIVES
According to OECD methodology -- NABS 2007
(Nomenclature for the analysis and comparison of scientific programmes and budget)7)

Objective code number	SOCIO-ECONOMIC OBJECTIVE
001	**Exploration and exploitation of the Earth**
	- Exploration of the earth crust and mantle, seas, oceans and atmosphere and their exploitation
	- Climatic and meteorological research, polar exploration
	- Mineral, oil and natural gas prospecting
	- Exploration and exploitation of the sea-bed
	- Hydrology
	- Seas and oceans
	- Atmosphere
002	**Environment**
	- Control of pollution, identification and analysis of the sources of pollution
	- Pollutants, their dispersal in the environment and their effect of all living organisms
	- Development of monitoring facilities for the measurement of all kinds of pollution
	- Elimination and prevention of all kinds of pollution in all types of environment
	- Protection of atmosphere and climate
	- Waste management
	- Treatment of water
	- Protection of soil and underground water
	- Reduction of noise and vibration
	- Protection of species and habitats
	- Protection against natural hazards
	- Radioactive pollution
003	**Exploration and exploitation of space**
	- R&D related to civil space
	- Applied research programmes
	- Launch systems
	- Space laboratories and space travel
004	**Transport, telecommunications and other infrastructures**
	- Infrastructure and land development, including the construction of buildings
	- Protection against harmful effects in town and country planning

Objective code number	SOCIO-ECONOMIC OBJECTIVE
	- Transport systems
	- Telecommunication systems
	- General planning of land use
	- Construction and planning of buildings
	- Civil engineering (bridges, roads, machinery, ...)
	- Water supply
005	**Production and rational utilisation of energy**
	- Production, storage, transportation, distribution and rational use of all forms of energy
	- Processes designed to increase the efficiency of energy production and distribution
	- Efficient use of energy, study of energy conservation
	- CO2 capture and storage
	- Renewable energy sources
	- Nuclear fission and fusion
	- Hydrogen and fuel gas
	- Other power and storage technologies
006	**Industrial production and technology**
	- Improvement of industrial production and technology
	- Increasing economic efficiency and competitivenesss
	- All manufactures
	- Recycling (metal and non-metal)
007	**Health**
	- Prevention, surveillance and control of communicable and non-communicable diseases
	- Monitoring the health situation
	- Health promotion
	- Occupational health
	- Public health legislation and regulations
	- Health care for vulnerable and high-risk populations
008	**Agriculture**
	- Promotion of agriculture, forestry and fisheries
	- Fertilizers, biocides, biological pest control and mechanization of agriculture
	- Impact of forestry on the environment
	- Development and productivity of food productivity and technology
	- Agriculture, forestry and fisheries
	- Veterinary and other agricultural sciences
009	**Education**
	- General education, including training, pedagogy and didactics
	- Special education (for gifted persons, those with learning disabilities)
	- Pre- and primary school
	- Secondary education
	- Tertiary education
010	**Culture, recreation, religion and mass media**
	- Impact of cultural activities, religion and leisure on life in society
	- Racial and cultural integration and socio-cultural changes in these areas.
	- Covers: sociology, theology, art, sport and leisure.
	- Culture covers: language, social integration, libraries, archives and external cultural policy.
	- Recreational and sporting services
	- Cultural services
	- Broadcasting and publishing activities

Objective code number	SOCIO-ECONOMIC OBJECTIVE
	- Religious and other community services
011	**Political and social systems, structures and processes**
	- Socio-political system - Public administration issues and economic policy - Regional studies and multi-level governance - Social changes, processes and conflicts - Development of social security and social assistance systems - Social aspects of the organization of work - Gender-related discrimination - Development of methods of combating poverty on local, national and international level - Protection of specific categories of population - Methods of providing social assistance
012	**General advancement of knowledge: R&D financed from General University Funds:**
0121	**R&D related to natural sciences** - Mathematics, computer and information science, physics, chemistry, biology, earth and environmental sciences, other natural sciences
0122	**R&D related to engineering sciences** - Civil engineering (bridges, roads, machinery,...), electrical engineering, electronic engineering, information engineering, mechanical engineering, chemical engineering, technology, medical engineering, environmental engineering, biotechnology, nano-technology, other technologies.
0123	**R&D related to medical sciences** - General medicine, clinical medicine, medical biotechnology and other medical sciences
0124	**R&D related to agricultural sciences** - Agriculture, forestry, fishery, animal and dairy science, veterinary science, agricultural biotechnology, other agricultural sciences
0125	**R&D related to social sciences** - Psychology, economics and business, educational sciences, sociology, law, political sciences, economic and social geography, media and communications, other social sciences
0126	**R&D related to humanities** - History and archeology, languages and literature, philosophy, religion and ethics, art (fine arts, history of arts, applied arts, music, performing arts) and other humanities
013	**General advancement of knowledge: R&D financed from other sources than GUF**
0131	**R&D related to natural sciences** - Mathematics, computer and information science, physics, chemistry, biology, earth and environmental sciences, other natural sciences
0132	**R&D related to engineering sciences** - Civil engineering (bridges, roads, machinery,...), electrical engineering, electronic engineering, information engineering, mechanical engineering, chemical engineering, technology, medical engineering, environmental engineering, biotechnology, nano-technology, other technologies.
0133	**R&D related to medical sciences** - General medicine, clinical medicine, medical biotechnology and other medical sciences
0134	**R&D related to agricultural sciences** - Agriculture, forestry, fishery, animal and dairy science, veterinary science, agricultural biotechnology, other agricultural sciences
0135	**R&D related to social sciences** - Psychology, economics and business, educational sciences, sociology, law, political sciences, economic and social geography, media and communications, other social sciences
0136	**R&D related to humanities** - History and archeology, languages and literature, philosophy, religion and ethics, art (fine arts, history of arts, applied arts, music, performing arts) and other humanities
014	**Defence**

Republic of Serbia
Statistical Office of the Republic of Serbia

MANUAL

for filling in the questionnaire for „Annual Report on R&D" for: business entities and centres of excellence, faculties, R&D institutes and non-profit organisations/associations.

(Forms: IR-1, IR-2, IR-3).

Belgrade, February 2018

Manual

for filling in „Annual report on R&D for: business entities and centres of excellence, faculties, R&D institutes and non-profit organisations - associations. (Forms IR-1, IR-2 and IR-3).

The objective of this manual is to make easier the filling in of the questionnaire as well as to improve the quality of the latter. The questionnaires are to be completed for all institutions and/or entities having at least one full-time researcher, scientist or engineer (annual FTE) engaged in R&D.

The manual explains gradually each part of the questionnaire and presents through examples how the questionnaire should be completed properly.

As an example of a properly filled in questionnaire, shown below is a tertiary education institution that belongs to University (as a reporting unit). The data displayed in the mentioned examples are arbitrary and serve only as a demonstration.

Forms IR-1, IR-2, and IR-3 are completely identical, in terms of design and content.

First page of the questionnaire / form IR

The questionnaire refers to the measurement of entries in R&D: R&D employees and IR expenditure. R&D employees are classified by educational level, title, age and sex, expressed as the real number of persons and full-time equivalent (FTE). R&D expenditure presents generally so-called internal expenditure, i.e. expenditure on R&D within a reporting unit or sector which the unit belongs to. Encompassed are expenditure and investments in order to obtain the obtain information about who finances and who is conduct R&D. As the result of R&D, shown are also scientific works, projects and studies.

The first page of the IR questionnaire (1, 2 and 3) contains information on the name, registration number, address, activity and field of science of the reporting unit. The main difference between R&D activity and activities that are not R&D is in the presence or absence of elements of novelty or innovations to a larger extent. If an activity improves significantly technical characteristics, components and materials, software, user-oriented or other characteristics, i.e. uses a new or considerably advanced products, process or service, as well as new organizational methods in business and labour organization, one should include it in this survey.

The code of the corresponding activity is to be copied from the annexed Classification of Activities 2010 which is transmitted to the reporting unit along with the R&D questionnaire/form. Also, the code of the field of science is to be indicated on the basis of the Classification of Fields of Science being also annexed.

Table number 1

The first table to be filled in is on page two of the questionnaire bearing number 1 and entitled: *"Full-time and part-time employees engaged in R&D, expressed in number of physical persons and full-time equivalent (FTE) (in 201_.)"*

		Total number of employees engaged in R&D				Number of full-time employees engaged in R&D activities		Number of part-time employees engaged in R&D activities			
		Number of employees		Full-time equivalent				Number of employees		Full-time equivalent	
		All (**5+7**)	Women (**6+8**)	All (**5+9**)	Women (**6+10**)	All	Women	All	Women	All	Women
a		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
01	**Total (02+14+18+19+20)**	54	29	32,5	18,5	11	8	43	21	21,5	10,5
02	**Researchers – total (03 to 13)**	52	28	31,5	18	11	8	41	20	20,5	10
03	Researcher apprentice	4	3	4	3	4	3				
04	Assistance researcher	5	4	5	4	5	4				
05	Scientific assistant	1	1	0,5	0,5	0	0	1	1	0,5	0,5
06	Senior scientific assistant										
07	Senior adviser	2	1	2	1	2	1				
08	Senior lecturer	6	4	3	2			6	4	3	2
09	Associate professor	8	4	4	2			8	4	4	2
10	Full professor	17	7	11	5			17	7	11	5
11	Professor of applied studies										
12	Lecturer										
13	Assistant lecturer	9	4	2	0,5			9	4	2	0,5
14	**Assistant researcher - total (15 to17)**	2	1	1	0,5			2	1	1	0,5
15	Assistant researcher	2	1	1	0,5			2	1	1	0,5
16	Senior assistant researcher										
17	Assistant adviser										
18	**Technicians**										
19	**Managers**										
20	**Other personnel (support)**										

Table 1 should contain the total number of employees engaged in R&D activities full-time or part-time, by title, sex, and number of physical persons and full-time equivalent (FTE).

One should indicate in the table the number of employees being engaged in R&D, and the sum of full-time and part-time employees.

For part-time employees one should indicate the real amount of time spent on R&D activities in relation to full-time employees. The unit of measure for the data in question is full-time equivalent. The original name in English is Full-time Equivalent, abbreviated FTE. The abbreviation FTE will be used throughout the manual for Full-time Equivalent.

In concrete terms, our example shows that there are 43 employees being part-time engaged in R&D (the data is indicated in column 7 in table 1) and only 21.5 are engaged FTE. This means that their real contribution to R&D is 21.5 full-time employees being engaged in R&D.

Full-time equivalent (FTE) is the unit of measure of employees that makes possible the comparability of employees even if they work different hours of work during the week/year.

The employee working full-time is to be counted as one (1) full-time equivalent or abbreviated FTE = 1. The employee who does not work full-time is assigned a proportional value in relation to her/his hours

worked. For example: an employee not working full-time, but 20 hours a week, has FTE of 0.5 because full-time implies 40 hours of work per week. Numerically shown: 20/40 = 0.5[1]

The data relative to full-time equivalent, in columns 3, 4, 9 and 10, are shown in decimal numbers with one decimal.

Also, the page of the IR form with table 1 on it contains additional instructions for indicating data in columns 3, 4, 9 and 10 about full-time equivalent.

The second example shows that there are 54 employees being engaged in R&D activities. Among those 54 persons 29 are women. Full-time equivalent for the total number of employees is 32.5, of which 18.5 is FTE for women.

Titles under numbers from 03 to 13 in the category *"researchers – total"* are to be added up, which in the example amounts to 52 employees, of which 28 women. The full-time equivalent for this category is the summation value 31.5 FTE, of which the value of 18 FTE accounts for women.

Employees bearing the title assistant researcher are to be indicated in row 15 in the table. In our example, there are two employees, of which one is a woman. As the data concerning those persons are indicated in columns 7 and 8, which refer to part-time employees, it is evident from the example that both of them are engaged part-time in R&D activities. The two persons have an FTE of 1, of which 0.5 FTE accounts for the woman. The two assistant researchers work are engaged only part-time in R&D activities during the year.

As rows 16 and 17 concerning senior assistant researcher and assistant adviser are blank, the value in row 14 "*Assistant researcher – total"* is 2 employees with full-time equivalent 1.

At the end of table 1, one should add up the values under *"Researchers - total ", "Assistant researchers", „Technicians ", "Managers " and "Other personnel (support)".* Considering that, except for categories *"Researcher - total (02)"* and *"Assistant researcher - total "*(14), there are no data in the other categories, one should add up the values of the cited items and obtain the sum in the first row (01) *"Total":* 54 employees, of which 29 women, the full-time equivalent of the former being 32.5, and of the latter 18.5.

Also, the sum of columns 5 and 7 should equal the data from column 1, and the sum of columns 6 and 8 should equal the data from column 2.

Explanations from the Frascati Manual, OECD international standard used as a methodological basis in the R&D survey, are provided to better understand this table.

"There are three stages in evaluating R&D employees:

- Identification of the types of employees to be evaluated,
- Establishing their number,
- Establishing their activity in FTE,

Full-time equivalent (FTE) can be shown as:

Researcher/year

One FTE researcher can be presented also as researcher/year. Therefore, for persons who spend 30% of their time in R&D activities and the rest of it in other activities (teachers, university administration…) FTE should be 0.3. Similarly, if a FTE employee is engaged in a R&D institution for a six month period, the FTE will be 0.5. Knowing that the working hours vary between sectors, as well as between institutions, it is impossible to express FTE as researcher/hours.

[1] http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Full-time_equivalent

FTE at a specific date

In some cases it is more practical to express the FTE of R&D employees at a specific date. However, if there are considerable variations, it is necessary to make exceptions in order to secure comparability with FTE over a period of time. If fixed date approach is used, it is necessary to provide data for the first or for the last date which the expenditure refers to. The use of a two year average is recommended for comparison of expenditure data. Theoretically, FTE is determined for all engaged R&D personnel.

In practice, all the persons who participate with more than 90% of time should be counted as 1 FTE, while those who are engaged with less than 10% should be excluded from the evaluation. "[2]

Table 2

In table 2 entitled: *"Employees engaged in R&D activities on service contract (SC) or author contract (AC), expressed in physical number of persons and full-time equivalent (FTE), in 201_"* one should indicate the number of employees being engaged in R&D activities on service contract or author contract by titles/occupation.

		Employees engaged on SC and AC in R&D activities				Full-time employees engaged on SC and AC in R&D activities		Part-time employees engaged on SC and AC in R&D activities			
		Number of employees		Full-time equivalent				Number of employees		Full-time equivalent	
		All (5+7)	Women (6+8)	All (5+9)	Women (6+10)	All	Women	All	Women	All	Women
a		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
01	**All (02 to 06)**	1	1	0,3	0,3			1	1	0,3	0,3
02	Researchers	1	1	0,3	0,3			1	1	0,3	0,3
03	Assistant researchers										
04	Technicians										
05	Managers										
06	Other personnel (support)										

Table 2 follows the same principle as in table 1, except that certain categories of occupation are not broken down by types of titles that belong to a related category of occupation.

Our example shows one employee who was engaged as researcher on service contract and was actually involved in R&D activities during 85 working days. It is worth knowing that one calendar year has on average 252 working days when calculating FTE. The aforesaid is used to determine the full-time equivalent:

85/252 = 0.34.

As FTE is expressed with one decimal, the obtained quotient 0.34 is rounded to 0.3, which is at the same time the FTE of the activities performed in R&D by the employee.

Also, the sum of columns 5 and 7 should equal the data from column 1, and the sum of columns 6 and 8 should equal the data from column 2.

[2] **Frascati manual**, Belgrade, Organisation for Economic Co-operation and Development, 2000, p. 58-62

Table 3

In table 3 entitled: "*Full-time and part-time employees engaged in R&D activities, by educational attainment, expressed in physical number of persons (in 201_)* "one should indicate the number of employees by title and educational level. Read the remark below table 3: The table is to be filled in as follows: in columns 1 and 2, copy the values from columns 1 and 2 of table 1, and then proceed with entering the data. Also, the sum of odd columns should equal the data from column 1, and the sum of even column should equal the data from column 2.

Also, the sum of odd columns should equal the data from column 1, and the sum of even columns should equal the data from column 2.

		Total		Educational level											
				Doctor's degree		Master's degree		Specialisation		University education		Applied education		Secondary and other education	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
a		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
01	**Total (02 to 06)**	54	29	36	18	4	2			14	9				
02	Researcher	52	28	34	17	4	2			14	9	X	X	X	X
03	Assistant researcher	2	1	2	1									X	X
04	Technician														
05	Manager													X	X
06	Other personnel (support)														

Table 4

In table 4 entitled: *"Employees engaged in R&D activities on service contract (SC), author contract (AC), by educational level expressed in number of physical persons, in 201_"* one should indicate the total number of employees who were engaged on the mentioned contract, by occupation and educational level.

		Total		Educational level											
				Doctor's degree		Master's degree		Specialisation		University education		Applied education		Secondary and other education	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
a		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
01	Total (02 to 06)	1	1	1	1										
02	Researcher	1	1	1	1							X	X	X	X
03	Assistant researcher													X	X
04	Technician														
05	Manager													X	X
06	Other personnel (support)														

The example shows that one female employee, was engaged on R&D activities on service contract. The mentioned person is a researcher (title) and holds a doctoral degree (educational level).

The table is to be filled in as follows: copy into columns 1 and 2 of this table the values of columns 1 and 2 of table 2, then continue with entering other data.

Also, the sum of odd columns should equal the data from column 1, and the sum of even columns should equal the data from column 2.

Table 5

In table 5 entitled: *"Full-time and part-time employees engaged in R&D activities, by educational level, expressed in full-time equivalent (in 201_) "*one should indicate data expressed in full-time equivalent, by title and educational level.

The table is to be filled in as follows: copy into columns 1 and 2 of this table the values from columns 3 and 4 of table 1, then continue with entering other data.

Also, the sum of odd columns should equal the data from column 1, and the sum of even columns should equal the data from column 2.

		Total		Educational level											
		All	Women	Doctoral degree				Doctoral degree				Doctoral degree			
				All	Wo-men	All	Wo-men	All	Wo-men	All	Wo-men	All	Wo-men	All	Wo-men
	a	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
01	**Total (02 to 06)**	32,5	18,5	21,5	11	4	2			7	5,5				
02	Researcher	31,5	18	20,5	10,5	4	2			7	5,5	X	X	X	X
03	Assistant researcher	1	0,5	1	0,5									X	X
04	Technician														
05	Manager													X	X
06	Other personnel (support)														

Having in mind the aforesaid remarks, when filling in the tables, one should first copy FTE from columns 3 and 4 of table 1 into columns 1 and 2 of table 5. Once the total FTE of 32.5 copied into column 1 and FTE of 18.5 into column 2 of table 5, one should copy from the same columns of table 1 the values relative to the titles researcher and assistant researcher into table 5. The data for researchers are FTE of 31.5 and 18 and FTE of 1 and 0.5 for assistant researchers. Then these values should be broken down into educational levels.

Table 6

In table 6 entitled: *"Employees engaged in R&D activities on service contract (SC) or author contract (AC), by educational level, expressed in full-time equivalent, (in 201_)"* one should indicate the full-time equivalent by title and educational level for employees engaged on R&D activities on service contract or author contract.

		Total		Educational level											
				Doctor's degree		Master's degree		Specialisation		University education		Applied education		Secondary and other education	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
	a	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
01	**Total (02 to 06)**	0,3	0,3	0,3	0,3										
02	Researcher	0,3	0,3	0,3	0,3							X	X	X	X
03	Assistant researcher													X	X
04	Technician														
05	Manager													X	X
06	Other personnel (support)														

In table 4 the example shows that one female person is engaged on R&D activities on service contract and that this person is a researcher (title) holding a doctoral degree (educational level). The in table 2 one can notice that the FTE is 0.3 in relation to full-time. Therefore, the value 0.3 is to be copied in corresponding boxes in table 6.

The value 0.3 can be the result of work, where the researcher in question is engaged 2.5 hours in R&D activities, or 12 hours a week or about 30% of the working hours on annual level.

Table 7

In table 7 entitled: "*Full-time and part-time employees engaged in R&D activities, by age and sex, expressed in number of physical persons, (in 201_)"* one should cover the number of employees engaged in R&D activities by titles and age groups.

		Researcher				**Assistant researcher**				**Technician**				**Manager**			
		Full-time employee		Part-time employee		Full-time employee		Part-time employee		Full-time employee		Part-time employee		Full-time employee		Part-time employee	
		All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women	All	Women
a		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
01	**Total (02 to 12)**	11	8	41	20			2	1								
02	Less than 25	1	1														
03	25 – 29	6	4	4	1												
04	30 – 34	2	2	9	4												
05	35 – 39			8	4			1	1								
06	40 – 44			4	4												
07	45 – 49			4	2												
08	50 – 54	1	1	3													
09	55 – 59			1				1									
10	60 – 64			8	5												
11	65 – 69	1															
12	70 and over																

In the columns of table 7 employees categories are broken down by titles then the categories are divided into subcategories: *full-time employees and part-time employees*. The rows show age groups where employees should be indicated by age in given intervals. At the end, each row in the column should be added up for all the titles in order to obtain "*Total (02 to 12*) "under the ordinal number 01. Other (support) personnel are not to be classified by age.

The data in this table should equal the data presented in table 1, as follows:

Full-time employees:

- Researchers: row 02, columns: 05, 06
- Assistant researchers: row 14, columns: 05, 06
- Technicians: row 18, columns: 05, 06
- Managers: row 19, columns: 05, 06

Part-time employees:

- Researchers: row 02, columns: 07, 08

- Assistant researchers: row 14, columns: 07, 08
- Technicians: row 18, columns: 07, 08
- Managers: row 19, columns: 07, 08

Table 8

In table 8 entitled: "*Full-time and part-time researchers, by citizenship and age, expressed in number of physical persons* "one should indicate the number of researchers by citizenship (geographical position of a country). It is essential to emphasize with this table that the number in question refers to the **number of researchers**, not to the total number of employees. These data are particularly important to monitor the **mobility of researchers**.

Citizenship (by geographical position of the country)		Total number of researchers in 2014		Researchers who **came** in Serbia in 2014		Researchers who **went** abroad in 2014		**Planned** number of researchers for 2015
		Total	Women	Total	Women	Total	Women	
a		*1*	*2*	*3*	*4*	*5*	*6*	*7*
01	**Total (02 to 09)**	52	28	1	1			55
02	Serbia	52	28					
03	EU member countries							
04	Other European countries							
05	North America							
06	Central and South America							
07	Asia							
08	Africa							
09	Other							

In columns 3 and 4 one should indicate all the researchers who came from abroad and were engaged in R&D more than 3 months between 01/01/ 201(4)- 31/12/201(4).

In columns 5 and 6 one should indicate all the researchers who left Serbia between 01/01/2014-31/12/2014.

Data in row 01 in columns 1 and 2 of this table should **equal the data in table 1 in columns 1 and 2,** as follows:

Researchers – all and researchers – women (row 02).

Table 9

In table 9 entitled: *"Expenditure for R&D activities in 201_ (in thous. RSD) "*one should indicate all funds spent on R&D activity in 201_, as well as those planned for the following year.

Expenditures for R&D				Spent in 2014	Planned for 2015
a				*1*	*2*
01	**Total expenditure for R&D (02+07+12)**			39307	
02	Current costs	Labour costs and employees' remunerations	**All (03+05+06)**	32785	
03			Gross salaries and wages **for all R&D employees**	32785	
04			Of which gross salaries and wages of researchers	31690	
05			Other personal income of R&D employees (scholarships, prizes, etc.)		
06			Other		
07		Other current costs	**All (08 to 11)**	5989	
08			For material costs for R&D work (raw materials, equipment, energy)	2369	
09			For payments based on service contracts and author contracts	609	
10			For daily allowances, travel costs, etc.	1100	
11			Other operating costs and expenses (without depreciation)	1911	
12	Investment costs		**All (13+14+16+17+18)**	533	
13			For land and buildings		
14			For machinery and equipment	533	
15			Of which for imported machinery and equipment	65	
16			For patent, licenses, studies and projects		
17			For software and hardware [1)]		
18			Other		

In this table spent funds are grouped in two main categories: one refers to current costs, and the second to investment costs. The current costs are further broken down in subcategories named "*labour costs and employees' remunerations*"and "*other current costs* ". The categories and subcategories in question are further broken down in classes of costs. The subcategory "of which *gross salaries and wages of researchers "*is not counted in the sum of ALL (row 02) because it is part of gross salaries of all R&D employees.

Labour costs of R&D personnel represent the largest item of current costs. *Other current costs* include costs in materials and equipment necessary for R&D over a year. Additional costs and administrative costs are to be counted in this group of costs, but with the deduction of costs of activities other than R&D. Labour costs comprise social and pension contributions for R&D personnel. Costs of indirect services are also to be included, whether originating from the same reporting units or not (costs of storage, repair, maintenance of premises, printing of reports, etc.).

Investment costs are total annual costs of immovables used for R&D for the reporting unit. They are to be reported for the period they have incurred and do not comprise depreciation. They are made of: costs for land and buildings, instruments and equipment. Costs for land and buildings: land refers to land necessary for R&D work (land for testing, laboratories and pilot installations) and for buildings destined to be improved, modified and repaired. The part of these costs being difficult to determine, estimation method is used. The subcategory *"of which: for imported machines and equipment "* under investment costs is not to be counted in the sum of investment costs (ALL, row 12) as it represents the part of total investments into machines and equipment.

By indicating data under corresponding classes of costs in the example, one can see the purpose of expenditures. The funds are expressed in **thousands dinars**.

Table 10

In table 10 entitled: "*Sources of funds spend on R&D activity in 201_"*one should indicate the sources of financing R&D.

Sources of funds				Amount **in thousands RSD**
a				*1*
01	**Funds spent for R&D by sources - total (02 to 21)**			39307
02	Domestic funding (from Serbia)	Planned budgetary funds dedicated to R&D	From the Ministry of Science	37315
03			From the Ministry of Education	
04			From other ministries	
05		Funds for R&D from other government funds, agencies and foundations		
06		Funds for R&D from local authorities' bodies		202
07		Funds for R&D from enterprises	from "small" (0 - 49 employees)	
08			from "medium" (50 - 249 employees)	
09			from "large" (250 and more employees)	
10		Funds for R&D from non-profit organizations		
11		Funds from patents, licenses, etc. (from inward sale)		
12		Other funds for R&D from own sources		
13	Funds from abroad	Funds from agreements on technological licenses		
14		Funds from services for foreign ordering parties		1567
15		Funds from joint investment in R&D		
16		Funds for R&D from other countries' governments		
17		Funds for R&D from the university and other tertiary education institutions		
18		Funds for R&D from non-profit organizations		
19		Funds for R&D from the European Commission		
20		Funds for R&D from international organizations		223
21		Other		

The data in row 01 should equal the data in table 9, in row 1, column 1 (*total expenditure for R&D)*. The amounts are to be indicated in thousands of dinars.

The sources are divided into two categories: the first category refer to domestic funding and the second to funding from abroad.

Within categories there are subcategories of funding. Under domestic funding (from the Republic of Serbia), several sources are proposed (ministries, funds, agencies) grouped under *"budgetary funds dedicated to R&D*"and *"funds for R&D from enterprises ".* In row 12 indicated are funds from own sources spent on R&D activity. The amounts of total funds as well as budgetary funds (rows 01 to 06) are further broken down in table 12.

The example show funds for R&D from the Ministry of Science and a minor part from local authorities, as well as funds received from international organisations.

Table 11

In table 11 entitled: *"Value of R&D works (projects and studies), by fields of science and types of research (including also projects funded from own resources – in thous. RSD), 201_"one* should indicate the amount of funds spent on R&D, broken down by types of research and fields of science.

Fields of science		Total	Types of research		
			Basic	Applied	Development
a		*1*	*2*	*3*	*4*
01	**All**	39307	37 739		1568
02	Natural sciences, mathematics	39307	37 739		1568
03	Engineering and technology				
04	Social sciences				
05	Humanities				
06	Medical sciences				
07	Agricultural sciences				
08	Multidisciplinary sciences				

For ongoing projects (not completed), one should indicate the value of finishing stages of works up to 201_. It is important to stress out that the data in column "*Total"* should equal the data in column "*Total"* in table 12. Also, it should be identical to the data indicated in table 9 under ordinal number 1 *"Total expenditure for R&D in 201_"*

Use the annexed classification to determine the type of research a work belongs to.

- **BASIC RESEARCH** is a creative, systematic activity focused on acquiring new knowledge on the origin and causes of phenomena and facts, without any particular application or use in view. The results of a basic research are often formulated as general principles, theories or rules.

- **APPLIED RESEARCH** is undertaken whether to establish a possibility to use the results of a research, having in mind its practical application, or to find new methods or ways that facilitate the achievement of a particular objective set in advance. This survey starts from existing knowledge and examines it thoroughly in view of solving specific issues.

- **DEVELOPMENT RESEARCH** is a creative systematic activity based on the results of the basic and applied research, and practical knowledge directed towards introducing new materials, products, devices, processes and methods.

The main difference between the R&D activity and activities other than R&D is the presence or absence of elements of novelty or innovation to a greater extent. If an activity introduces significant improvement in technical characteristics, components and materials, software, user-orientation or other functional characteristics, i.e. uses a new or considerably improved product, process or service, as well as new organizational methods in business and work organization should be included in this survey.

The example above show the total funds invested in natural sciences and mathematics. A minor amount is invested in R&D, and more than 95% in basic researches.

Table 12

In table 12 entitle: *"Funds for R&D by primary socio-economic objectives, 201_ (in thous. RSD) "should* indicate the total funds spent by primary socio-economic objectives and the amount of budgetary funds.

Primary socio-economic objectives		Total	Of which budgetary funds
a		*1*	*2*
01	**All (02+03+04+05+06+07+08+09+10+11+12+13+20+27)**	39307	37315
02	Exploration and exploitation of the Earth		
03	Environment		
04	Exploration and exploitation of space		
05	Transport, telecommunications and other infrastructure		
06	Production and rational utilization or energy		
07	Industrial production and technology		
08	Health		
09	Agriculture		
10	Education		
11	Culture, recreation, religion and mass media		
12	Political and social systems, structures and processes		
13	General advancement of knowledge:- **R&D financed from General University Funds** (total 14 to 19):	39307	37315
14	R&D related to natural sciences, mathematics	39307	37315
15	R&D related to engineering sciences		
16	R&D related to medical sciences		
17	R&D related to agricultural sciences		
18	R&D related to social sciences		
19	R&D related to humanities		
20	General advancement of knowledge:- **R&D financed from other sources than GUF** (total 21 to 26):		
21	R&D related to natural sciences, mathematics		
22	R&D related to engineering sciences		
23	R&D related to medical sciences		
24	R&D related to agricultural sciences		
25	R&D related to social sciences		
26	R&D related to humanities		
27	Defence		

The amounts of funds are distributed in 13 categories. The category *"General advancement of knowledge "*is divided in two groups. The first group*: **R&D financed from general university funds**,* is then broken down in fields of science. The specified category of funds represents the amount of resources from university funds, financed from public sources.

The second group: ***R&D financed from other sources than GUF*** show the amount of funds spent on R&D from other sources, other than public.

In the example above the total amount of funds for financing R&D has been invested in"general advancement of knowledge ". Knowing the fact that the reporting unit is a faculty within the University, and that the funds are budgetary funds), *"General advancement of knowledge: **R&D financed from general university funds*** are to be indicated in the category under ordinal number 13.

The data in the first row of column 2 of table 12 should equal the sum of the data under ordinal numbers 02 to 06 in table 10, budgetary funds for R&D.

Also, it is important that the total funds for/from R&D by primary socio-economic objectives under ordinal number 01 "*All*" in table 12 equal to the values specified in table 10 in row 01 "All".

Table 13

In table 13 entitled: *"Number of R&D works/projects and studies), by fields of science and type of research (to include also projects financed from own funds), 201_"one should indicate the number of R&D works by field of science and type of research*.

With this table, one should make sure that the indicated number of researches is entered under headings relative to their financial value in table 11.

Fields of science		Total	Types of research		
			Basic	Applied	Development
a		*1*	*2*	*3*	*4*
01	**All (02 to 08)**	7	5		2
02	Natural sciences, mathematics	7	5		2
03	Engineering and technology				
04	Social sciences				
05	Humanities				
06	Medical sciences				
07	Agricultural sciences				
08	Multidisciplinary sciences				

This example shows seven works which belong to the field of science: natural sciences, mathematics. Five works belong to basic researches and two to development researches. By comparing tables 13 and 11 it is obvious that the tables match because the number of works in table 13 is indicated under the same headings as in table 11 relative to their value.

It is particularly important to check that the row "All"in table 13 matches the row "All" in table 14.

Table 14

In table 14 entitled: "*Number of R&D works by ordering party and type of research, 201_"one should indicate the works by ordering party. The ordering party may be from Serbia or from abroad*.

Ordering party			R&D works			
			Total (2 to 4)	Basic	Applied	Development
a			*1*	*2*	*3*	*4*
01	**All (02+09)**		7	5		2
02	Ordering party from Serbia	**Inward – all (03 to 08)**	5	5		
03		For own account				
04		Enterprises in Serbia				
05		Ministry of Science	4	4		
06		Ministry of Education				
07		Other ministries				
08		Other	1	1		
09	Ordering party from abroad	**Outward – all (10 to 16)**	2			2
10		Enterprises	1			1
11		Other countries' governments				
12		Non-profit organisations				
13		Tertiary education institutions				
14		European Commission				
15		International organisations	1			1
16		Other				

The example shows that out of seven works, five are ordered from Serbia, and two from abroad. The number in row 01 "*All*"is distributed according to the type of works.

Table 15

In table 15 entitled: "*Published R&D articles and monographies, 201_"* the reporting units are required to indicate the number of R&D works published in publications, whether own, someone else's in Serbia or abroad. Every published work is to be counted only once, whatever the type of publication and times it has been published.

Total		Published in publications		
		Own	Someone else's in Serbia	Abroad
1		*2*	*3*	*4*
01	141		62	79

Table 16

In table 16 entitled: "*Inventions and patents, 201_* „ one should indicated the number of inventions, number of pending patents in the Patent Office and registered patents in the Intellectual Property Office, number of inventions / patents sold in the country and abroad, as well as the number of inventions and patents being used for the first time in practice. The listed categories are further distributed according to R&D intensity.

R&D intensity		Tested inventions	Patents		Patents – inventions sold		First-time practical use of patents and inventions
			Pending patents in the Patent Office	Patents registered in the Patent Office	In Serbia	Abroad	
a		*1*	*2*	*3*	*4*	*5*	*6*
01	**Total (02 to 05)**		4				
02	High technology						
03	Medium high technology		4				
04	Medium low technology						
05	Low technology						

High R&D intensity ("high technology") would largely correspond to R&D costs/sale above 4%;

Medium R&D intensity ("medium technology") is R&D costs/sale ranging from 1 to 45 and **Low R&D intensity** ("low technology") is R&D costs/sale below 1%.

According to the Law of Patents, a patent is the right which is recognized as an invention from any technical domain, which is new, has an inventive level and is applicable in industry. This is a subjective right that belongs to a physical or legal person provided the fulfilment of material and formal conditions stipulated by the law. An invention being protected by patent may be a product, procedure, use of a product or procedure applicability.

Small patent is any patent that is new, applicable in industry and has a lower level than the inventive one, but that surpasses routine technical use by professionals.

Table 16

In table 16a entitled: “Small inventions and patents, 201_“ one should indicate the number of small tested inventions and patents according to the same principle as in the previous table 16.

R&D intensity		Small tested inventions	Small patents		Small patents – inventions sold		First-time practical use of small patents and inventions
			Pending patents in the Patent Office	Patents registered in the Patent Office	In Serbia	Abroad	
a		*1*	*2*	*3*	*4*	*5*	*6*
01	**Total (02 to 05)**						
02	High technology						
03	Medium high technology						
04	Medium low technology						
05	Low technology						

The example shows that there four patents pending in the Patent Office (table 16), that they belong to medium high R&D intensity. Further, the reporting does not have pending, registered or sold small patents and small inventions (table 16a).

At the end of the questionnaire one should indicate the date of data entry in the questionnaire, the interviewer’s name and surname, contact telephone and electronic mail, as well as the name and surname of the manager of the reporting unit.

For more information please contact the Statistical Office of the Republic of Serbia in Belgrade, at: ++ 381 (0)11 2412 922, extension 425 or 357

Annex: - Classification of Fields of Science

- Classification of Primary Socio-economic Objectives

- Classification of Activities CA-2010

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